# SECTION TWO Practical Preparation



# Chapter Nine



# Financial Preparation: Escaping the Leper Colony

"We should shun debt as we would shun the leprosy" (Testimonies for the Church, vol. 6, p. 217).

given a box of chocolates by their grandfather. The first boy took the package to his bedroom and stuffed the candies into his mouth until he was one big mess of smeared chocolate. The other boy unwrapped the package in front of his grandfather. He opened the box and looked at

all the different candies, then, with a big smile, he lifted the box up to his benefactor and said, "Thank you, Grandfather. Here, you have the first piece."

The boy, in letting his grandfather choose the first chocolate, demonstrated determined giving. This attitude is a choice we, as potential survivors, must begin practicing today. Determined giving reflects heaven's economy. Perhaps that is one reason the Lord will allow the dollar to phase out with the "no buy-no sell"—to reveal the ultimate financial integrity of the remnant. Often a new Christian's faith is increased when he learns the value of tithe. There are numerous stories written about the blessings we receive when we are willing to return ten percent of our income to the author of our financial blessings. However, tithe will not be the issue addressed in this chapter. We must develop an attitude such as the survivors of the death camps understood in World War II.

Studies of prisoners in Nazi concentrations camps have revealed that an attitude of determined giving was one of the things that distinguished survivors

from those who would likely die in the camp. If a prisoner, though on the verge of starvation himself, had a crust of bread or scrap of potato, and he shared it with a fellow inmate he became psychologically and spiritually stronger, and more capable of surviving. A survivor of Treblinka described it this way: "In our group we shared everything, and the moment one of the group ate something without sharing it, we knew it was the beginning of the end for him."

The accumulation of debt is a spiritual decision. To develop an attitude of determined giving with regard to money as well as other earthly blessings, we must acknowledge God as the author of all our financial blessings. In thankfulness, we can safely ask Him to show us how to manage that with which He has blessed us, thus becoming persons of financial integrity. We must not only be debt free in the crisis ahead, but in such a financial position that we can support the Lord's work when it will be most needed. By rendering to Caesar, paying our debts, and laying aside funds in reserve, we are better able to render service to God, giving faithful account of our stewardship.

"You can and should make determined efforts to bring under control your disposition to spend means beyond your income" (Counsels on Stewardship, p. 255; emphasis supplied).

# Financial Depression: Is it Really Coming?

What is man predicting for the world in terms of financial crisis? What can we do? What does God say about it? Will it really happen? The last depression was bad. Will the next one be the same—or worse? Back in 1929-1936 we had soup lines, 25 percent unemployment, dust bowl in the grain belt, and banks failed. If you had a garden you could eat. <sup>17,19,20</sup> Most people lost everything on which they owed money. Experts are predicting another financial crisis in the form of a depression. <sup>8,10,37,38</sup> Some of you went through the last depression. Your experience is invaluable to those of us headed for the coming crisis.

A Russian economist by the name of Nicholai Kondratief studied history in the light of economics. According to Kondratief, the economic woes of the world are repeated in a typical cycle of 45-60 years. <sup>1</sup> This cycle is one of slow "controlled" inflation followed by depression. This has proven to be an accurate prediction over the last few hundred years. <sup>2,33</sup> In further study, the parallels between our current day and the day of the last financial crash are unbelievably similar except for one factor—there is a greater danger today than there ever has been.<sup>3</sup>

In the late 1920s there was a period of financial prosperity. Everything was going fine, interest rates were at the highest level known (6 percent), wages had never

been better.<sup>3</sup> Today, we are on a peak of even higher prosperity than has ever been duplicated in the history of the world. Let's look at a few economic indicators, then zero in on the spiritual implication of these indicators.<sup>42</sup>

#### **Economic Indicators**

- An increased number of businesses are going bankrupt. 16
- Consumer credit is at a record level; 300 billion dollars plus in the United States. 4,17
- Over 50 percent of Americans depend on the government for some form of income.<sup>6</sup>
- Personal bankruptcies in the United States in 1981 were 350,000 a year. <sup>7,43,40</sup> There has been very little reduction in this figure to date.
- Most people are completely dependent on the grocery store. (In 1930, 40 percent of the population lived on the farm as compared to 4 percent today.)<sup>8, 31</sup>
- Loss of value of the American dollar; in 1945 it was worth 100 cents; now it is worth less than 24 cents.<sup>9</sup>
- Banks are failing. 10, 11, 35
- The usual bank safety net (FDIC) could be in hard times. 35, 38, 42, 46

It would be interesting for you to read some of the library literature on the economic situation today that parallels the Great Depression of 1929-1936.<sup>3,17,20</sup> After reading these articles, you will be impressed that businesses are grappling with huge financial problems, many of which cannot be solved.

"But there are not many, even among educators and statesmen, who comprehend the causes that underlie the present state of society. Those who hold the reins of government are unable to solve the problems of poverty, pauperism, and increasing crime. They are struggling in vain to place business operations on a more secure basis" (The Ministry of Healing, p. 183; emphasis supplied).

It is hard to realize that we are struggling in vain, isn't it? What, then, should we do with our property and funds? The Lord counsels that if we would have we must learn to give:

"Your means are far safer there [in the Lord's work] than if deposited in the bank or invested in houses and lands" (Counsels on Stewardship, p. 41).

#### **Bank Failure**

The economic predictions that men can supply are fallible, but from Dr. Kondratief's cycle and economic indicators of the day, coupled with divine predictions, it becomes clear that we are headed for financial difficulties. <sup>40, 41</sup> We are also headed for financial hard times as social groups and churches. A series of events predicted by inspiration will hasten an economic depression. Again, our survival may depend upon how well prepared we are.

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"The land boom has cursed this country, extravagant prices have been paid for lands bought on credit; then the land must be cleared and more money is hired; a house to be built calls for more money, and then interest with open mouth swallows up all the profits. Debts accumulate, and then come the closing and failure of banks, and then the foreclosure of mortgages. Thousands have been turned out of employment; families lose their little all, they borrow and borrow, and then have to give up their property and come out penniless. Much money and hard labor have been put into farms bought on credit, or inherited with an encumbrance. The occupants lived in hope of becoming real owners, and it might have been so, but for the failure of banks throughout the country." (Fundamentals of Christian Education, pp. 317, 18; emphasis supplied).

In Haggai 1:6, we read, "Ye have sown much, and bring in little; ye eat, but ye have not enough; ye drink, but ye are not filled with drink; ye clothe you, but there is none warm; and he that earneth wages earneth wages to put it into a bag with holes." Have you found that true with your funds today? There are so many holes in the bag you cannot hold onto your income!

# **Sunday Law and Financial Depression**

The national Sunday law will be established in an attempt to return to temporal prosperity. "It will be declared that men are offending God by violation of the Sunday sabbath; that this sin has brought calamities which will not cease until Sunday observance shall be strictly enforced; and that those who present the claims of the fourth commandment, thus destroying reverence for Sunday, are troublers of the people, preventing their restoration to divine favor and temporal prosperity" (The Great Controversy, p. 590; emphasis supplied).

The tragedy of natural calamities will eventually require funds our nation does not possess. People's losses will not be covered by the insurance upon which they depend. First there was Hurricane Andrew. Katrina, then Rita, swept through the southern U. S. at a cost of billions of dollars and many lives. These disasters have been followed by devastating earthquakes worldwide. If these natural disasters are to become more frequent and disastrous, it will cost our government more and more money until there is none left. People will lose their homes and possessions and there will be no money to rebuild. This could lead to a severe depression. Then the nation will become spiritually concerned and want to please an offended God. It is not God but the devil who brings these miseries to us.

The world will be tempted to think that God's people are preventing

them from gaining divine favor and economic prosperity. For this reason, we must be urgent in our preparation. "The Protestant world have set up an idol sabbath in the place where God's Sabbath should be, and they are treading in the footsteps of the Papacy. For this reason I see the necessity of the people of God moving out of the cities into retired country places, where they may cultivate the land and raise their own produce. Thus they may bring their children up with simple, healthful habits. I see the necessity of making haste to get all things ready for the crisis" (Country Living, p. 21; emphasis supplied).

God has many ways of protecting His people from financial ruin just as He protects them from cataclysmic events. In His mercy, God sees that we are not prepared for that crisis. The winds of strife are beginning to blow. Others have heard His voice in stormy times. What did they do?

# The Church in the Depression

In an article entitled "God Was Ready the Day the Banks Closed," from the Review and Herald, September 13, 1979, and reprinted August 31, 2000, Elder Williams, undertreasurer for the General Conference, was impressed to ask his secretary to place several envelopes containing \$1,000 each into the office safe. Elder Williams, himself, did not fully understand the implications of why he was transferring this money from the operating funds and placing it in reserve.

Then, on March 3, 1933, he felt pressure on his shoulder and a clear voice commanded, "Go to New York City tonight." Elder Williams responded instantly. He was instructed by the Lord to withdraw three months' overseas payroll from their accounts in New York and send it to the division leaders in the mission field. That Friday evening he returned home with the peace of God in his heart and went to bed. On Sabbath morning, March 4, he was awakened to the newsboy proclaiming, 'Banks fail nationwide!' Elder Williams dropped to his knees and thanked God that he had a small part in preserving the funds of God during a critical time. If His people listen to His instruction, God will protect them from financial ruin.

"As soon as it was sundown, Elder Shaw, treasurer for the General Conference, phoned Elder Williams arranging an emergency meeting. All the committee members felt that it was a day of gloom and doom for General Conference operations, except Elder Williams, who said: "I noticed that as the treasurers entered Elder Shaw's office, everyone was tense, and all were talking in subdued tones. All were especially concerned for our overseas workers. 'With the banks

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closed there will be no funds with which to support the missionaries in the field, neither will there be money with which to bring them home,' Elder Shaw explained. At that point, I requested permission to speak, and I quietly related to them my story. We had a prayer session that evening instead of a business meeting. Instead of agonizing for help there were prayers of praise and gratitude for God's wonderful guidance. Nor did we forget to beseech Him to keep us humble in the future. Oh, that He might always lead us as He had in this instance, we prayed.

"'As we rose from our knees, someone remarked that we had been so concerned for our overseas missionaries that we had given no thought to the need of our workers at headquarters. How would we provide for them? How long would the banks be closed? Then I remembered the thousand-dollar items in the safe in my office. Quickly we counted the envelopes and with care, there would be enough cash in which to meet our payroll for the next three months, the same length of time for which we had sent funds for our overseas divisions.'

During the time the banks were closed, workers were paid from the dated and marked envelopes in the little safe in Elder Williams' office. As a result of the 1933 experience, the General Conference adopted a policy stated in the Review and Herald, April 9, 1981: "The treasurer of the General Conference is required by policy to maintain in cash and readily available securities a working fund equal to 20 percent of the operating expenses for the previous 12 months so as to provide for the regular operations of the General Conference and to tide over a possible financial depression."

Banks follow this procedure too!<sup>39</sup> I would like to ask you two serious questions. First, Would it not be of extreme importance that we, in our personal finances, have a similar policy? Second, What is the source of the cash reserve in the church? It is our offerings! Cash reserves by families will help God's work in a time of crisis.

# **Interest Loss Insignificant**

You say, "Cash reserves cause a loss of interest!" But, if you have a cash reserve on hand when the depression hits, you will see your interest loss drop into insignificance compared to the buying power you can have at that time. When a bank fails, the loss is larger than just the interest, the principal is gone, too!

My prayer is that everyone of us will consider, on our knees and with hearts open to the Holy Spirit, what we have discussed in this study. I am sure much of it is new and different, but I believe our church is in the forefront in providing this counsel to us in regard to our personal finances. As has been men-

tioned, our biggest obstacle is our attitude toward our personal indebtedness. May God help each one of us to be free, not only of the indebtedness today, but of its ultimate destiny. May we stand free in Christ as practical Christians in every financial aspect of our Christian living. "Owe no man any thing." (Romans 13:8).

"When you can stand forth a free man again, owing no man anything, you will have achieved a great victory" (Adventist Home, p. 393-4; emphasis supplied).

Good financial preparedness is for all, especially for those who want to be true to God. There are a few debts which may be incurred of which the Lord approves: God cosigns for these debts, but never leaves us in them (see Counsels on Stewardship, p. 278). Most of the debt problems we incur have nothing to do with the Lord's work. The debts that God approves usually are for building a church or fulfilling pledges of special needs if there are indications of God's providence.

# **Inspired Financial Counsel**

King Solomon understood the essence of time. In Ecclestiastes 3:1, "To everything there is a season, and a time to every purpose under heaven." In the times ahead, we will have to be in step with God.

"I saw that if any held on to their property and did not inquire of the Lord as to their duty, He would not make duty known, and they would be permitted to keep their property, and in the time of trouble it would come up before them like a mountain to crush them.... Then, as the cause needs it, their duty is to sell.... The object of selling is not to give to those who are able to labor and support themselves, but to spread the truth" (Early Writings, p. 57; emphasis supplied).

"All that he [Noah] possessed, he invested in the ark" (Patriarchs and Prophets, p. 95).

God's people will be found having all their stewardship invested in the ark and deposited in the bank of heaven. We save money in order to give money, or use it for personal and church emergencies.

"The time is coming when we cannot sell at any price.... Now is our opportunity to work" (Testimonies for the Church, vol. 5, p. 152; emphasis supplied).

"If the love of Christ were found burning in the hearts of His professed people, we would see the same spirit manifested today. <u>Did they but</u> realize how near is the end of all work for the salvation of souls, they would sacrifice their possessions as freely as did the members of the early

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church" (Counsels on Stewardship, pp. 40, 41; emphasis supplied).

You may ask, "How will I know when to sell my goods and put my stewardship into the Lord's work?" First, let's consider this inspired counsel:

"If they [God's people] have their property on the altar and earnestly inquire of God for duty, <u>He will teach them when to dispose of these things</u>. Then they will be free in the time of trouble and have no clogs to weigh them down." (Early Writings, p. 57; emphasis supplied). God will teach us when to liquidate and put our funds in God's cause. They will be of no use to us during "no buy-no sell," as described in Revelation 13.

Our leadership is ready to lead. "When large sums of money are given to the work, let a portion of the means be laid by; for there will be emergencies to meet in the Lord's great vineyard" (Evangelism, p. 89).

As church members, our personal financial plan should include reserve funds as well. Our motivation is not just personal survival. Our motivation is to be a benefit and a help to the work of our church, the cause of God, the work of helping others. "Every week you should lay by in some secure place \$5 or \$10 not to be used up unless in case of sickness" (Selected Messages, book 2, p. 329).

"Get your means where you can handle it for the benefit of the cause of God" (Testimonies for the Church, vol. 5, p. 465). When you put a handle on something, you can get your hands on it, right? But, remember the motivation, "for the benefit of the cause of God." There will come a time when our "possessions cannot be disposed of to advance the cause of present truth." (Counsels on Stewardship, p. 57).

# **Debt—The Most Deadly Enemy to Economic Preparation**

In review, we have learned how the land boom cursed the country because we borrowed money to buy the land, we borrowed money to clear the land, we borrowed money to build the house, and then we borrowed money to plant the crop. Interest compounds debt. Interest swallows profit, tending to make our wages appear to be falling through the holes in our pockets. Is there danger in this need versus debt cycle?

Consider the possibility of a depression; property values would decrease greatly.<sup>45</sup> However, if God's people have cash on hand obtained during prosperity, that same money (gained from liquidation of their inflationary property) could be used in purchasing, debt-free, a less expensive country property enabling them to grow their own provisions.

God may use a depression to help His people leave the cities.<sup>31</sup> Purchasing and selling at the right time is all-important.<sup>13</sup>

# The Leper Colony

"We should shun debt as we should shun the leprosy" (Testimonies for the Church, vol. 6, p. 217). Who among us would choose leprosy over good health? Yet, today, many are living in modern leper colonies by incurring debt. Think how ridiculous our justification must sound to the great cloud of witnesses in heaven.

"Oh, I have always wanted leprosy. To be able to live in a leper colony—how mah-velous! I absolutely love the landscaping around the hovels, and the interiors are ultramodern! I can cover up my leprosy for a while, and maybe all the other lepers in the colony will think I'm rich. Oh yes, someday I'll have to pay for it, but for now, I'm really going to get a kick out of living in the leper colony. What a lifestyle! And maybe someone will have figured out a cure by the time the disease starts to show. Even if leprosy does come with the deal, it's thrilling! Well, actually, I've always wanted to help lepers, but now I find myself enjoying the disease!"

What if we do wake up and realize we have leprosy and desire healing from the disease? How do we get out of the colony? Is bankruptcy an option of escape for the Christian?

# Bankruptcy—A Christian's Cure for Debt?

Satan spins such a comfortable web around his unsuspecting victims, so totally anesthetizes them, that they sometimes don't even want to get out of debt. "When one voluntarily becomes involved in debt, he is entangling himself in one of Satan's nets which he sets for souls" (Counsels on Stewardship, p. 254).

But the counsel is strong. We must break his hold. "Redeem every pledge unless sickness lays you prostrate. Better deny yourself food and sleep than be guilty of keeping from others their just dues" (ibid., pp. 253, 254).

Indulging in debt effectively neutralizes our peace of mind. "It [the eighth commandment] forbids overreaching in trade, and requires the payment of just debts or wages" (ibid. p. 254). Not paying just debts and wages is stealing, and a violation of the eighth commandment, and what Christian could sleep well knowing he had stolen something? We are morally obligated to pay our debts.

Bankruptcy, for the Christian, is not a viable option. Can you begin to see why debt is likened to a leprosy? Failure to pay debts compromises our spiritual health because there is an increased chance that we will fail to pay increased indebtedness, thereby breaking the eighth commandment. Let's say, for example, in times of prosperity we incur debt. If a depression hits, everything drops in value except the dollar bill and your debt. **The policy of having cash on hand in case of emergency is sound economic advice,** but debts accumulated in inflationary

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times cannot be paid with dollars earned during a depression because our debt is so much more than our earning power. Christians are morally obligated to pay inflationary debts, even during times of depression. Ignoring the claims of honest debt compromises our spiritual integrity.

"The practice of borrowing money to relieve some pressing necessity, and making no calculation for canceling the indebtedness, however common, is demoralizing. The Lord would have all who believe the truth converted from these self-deceiving practices. They should choose rather to suffer want than to commit a dishonest act" (ibid. p. 255).

# **Forgiveness of Debt**

The Lord's Prayer is a possible solution to impossible economic problems, "And forgive us our debts, as we forgive our debtors" (Matthew 6:12). Forgiveness involves more than emotional release of our sins against God and our brothers and sisters. It is a financial option as well.

The gospel includes a story of compassion when a debt holder forgives his debtor millions of dollars! "The lord of that servant was moved with compassion, and loosed him, and forgave him the debt [money]" (Matthew 18:23-35). If we are called upon to forgive, we should forgive from our hearts. We are not obliged to forgive a debt, but if someone is sincerely trying to free themselves of the chains of slavery, we might consider releasing him if it is within our power to do so.

We can forgive debts and we can be forgiven debts. According to Luke 7:41, 42, and 16:5-7 we can forgive large or small debts. The Golden Rule, in Matthew 7:12, says that whatever we would like to have done to us is what we should do to others. The principle of forgiveness of debt was part of the lifestyle of God's people for centuries. Every seventh year was called a year of release (see Deuteronomy 31:10 and 15:1-3), in which the debts of poor brethren were remitted. During the Jubilee year (which was every fiftieth year) slaves were freed and lands which had been lost through debt were returned to their rightful owners. In Leviticus 25:8, 10, 35 we see that the debt holder completely relieves the debtor. "Take thou no usury of him" (verse 36). According to Scripture, the debt holder forgave the debt as well as the interest accumulated.

These celebrations of the Sabbatical and the Jubilee were not only joyous because people were free of debts, but also because the debt holders had the pleasant task of doing good for someone else. Those love most who are forgiven most (see Luke 7:43).

As a balance, remember that we should always pay our debts, even "if we have to live on porridge and bread" (Counsels on Stewardship, p. 257). To

forgive a debt is only an emergency measure and an act of love, not a requirement. (See <u>Christ's Object Lessons</u>, p. 247). There should be no oppression by debt holders or cheating by debtors where love dwells in the heart. None need fear that their liberality will bring them to want. "Obedience to God's commandments would surely result in prosperity" (Patriarchs and Prophets, p. 533). We can have complete faith that God will keep this promise (Hebrews 10:23). God has forgiven us great debts that we owe Him, more than we can ever pay. These debts include money (Counsels on Stewardship, p. 100), time (Christ's Object Lessons, p. 342), and sin (<u>ibid. p. 249</u>). No matter how far we have strayed from His plan for us, we can always humble ourselves and say, "Lord, forgive my sin." He will reward the honest and willing heart.

# From Debt to Slavery—Literal?

Historically, people have sold themselves, becoming what was known as indentured servants, because of indebtedness. In the troublous times ahead Christians may be facing this slavery again for the same reasons.<sup>24, 25</sup>

Slavery has come about through two main avenues: through conquest and through the sale of life in order to pay a debt. Indebtedness could put us in a position to sell what we have in order to pay our debt. We might be required to supply the only thing we have left: our potential to work for the rest of our lives! It has happened in the past and it may happen again!

"In ancient times criminals were sometimes <u>sold into slavery</u> by the judges; in some cases, <u>debtors were sold by their creditors</u>; and poverty even led persons to sell themselves or their children" (<u>Patriarchs and Prophets</u>, p. 310; emphasis supplied).

"As the defenders of truth refuse to honor the Sunday-sabbath, some of them will be thrust into prison, some will be exiled, some will be treated as slaves" (The Great Controversy, p. 608).

"But many of all nations and of all classes, high and low, rich and poor, black and white, will be cast into the most unjust and cruel bondage" (ibid. p. 626).

"But," you say, "would slavery be all that bad?" <u>Patriarchs and Prophets</u>, p. 211 says of past history that "<u>To become a slave was a fate more to be feared than death.</u>"

Have you ever heard someone say, "Everybody does it!" or "It's not really a debt, it's just a monthly payment! I can always get my money back out of my house and even more than what I paid for it!"? These are all common arguments justifying indebtedness.

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Let's say it another way, "Well, maybe I do have leprosy, but I can always get healed." I fancy I can hear flies on a flypaper carrying on the same conversation! One brother, stuck by a wing, says to one who is stuck by five legs, "I can get off anytime!" If a depression comes and you are still in debt, you are still obliged to pay. It is best to get out and stay out of debt, now.

# **VICE**

Vice is a monster
Of so frightful a mien
As to be hated,
Needs but to be seen
But, seen too oft,
Familiar with her face
We first endure,
Then pity, and embrace.

- Alexander Pope

Wouldn't it be presumptuous to think that even if we accumulate debt the Lord will swoop in and rescue us? The character that we shape today, by our choices, will be ours for eternity. The Lord counsels us to **shun debt like the leprosy.** Our health, spiritually and physically, may depend upon our financial response to God's counsel.

"How many have become insane over the loss of their bank deposits, or their failure in business! How many have devoted life and soul to acquiring wealth, but were not rich toward God; and when adversity came upon them, and their possessions were swept away, they had nothing laid up in heaven. They had lost all—both temporal and eternal riches. In despair and cowardice, they have taken their own lives, and put an end to the opportunities and privileges that had been purchased for them at an infinite cost to the Son of God" (The Review and Herald, Sept. 18, 1888; emphasis supplied).

# The Cleansing of the Leper

Down the street a cry was heard, "Unclean! Unclean!" Word spread rapidly ahead of the leper as he was coming to Jesus. Some of the people were close enough (without getting contaminated) to yell, "Go back! Go back to your hovel! Go back to your leper colony!" But he would not be refused. His disease caused him to seek healing. He proceeded right through the crowd. It parted. Jesus did not try to avoid him. The poor wretch dropped at Jesus' feet and said, "If thou wilt, thou canst make me clean" (Luke 5:12). Jesus touched him, and

immediately the leprosy was gone.

The cure for the modern leprosy of debt is the same—approaching Jesus. As you look at your financial condition you may just have to say, "Unclean!" When you look at your preparedness for what's ahead you may also have to say, "Unclean!" But, by God's grace, as you come to Jesus, personally, with your needs, you can be made as clean as was that man centuries ago. Jesus is still in the business of healing lepers, even leprosy due to debt! And He does it in a miraculous way! "The work of Christ in cleansing the leper from his terrible disease is an illustration of His work in cleansing the soul from sin" (The Desire of Ages, p. 266). This same Jesus who, in Matthew 8:3, said, "I will, be thou clean," can work miracles for you.

"Whatever your anxieties and trials, spread out your case before the Lord. Your spirit will be braced for endurance. The way will be opened for you to disentangle yourself from embarrassment and difficulty. The weaker and more helpless you know yourself to be, the stronger you will become in His strength. The heavier your burdens, the more blessed the rest in casting them upon the Burden Bearer. The rest that Christ offers depends upon conditions, but these conditions are plainly specified. They are those with which all can comply. He tells us just how His rest is to be found" (The Desire of Ages, p. 329; emphasis supplied). Pray and then get up and do the work to answer your prayer (see Amazing Grace, p. 166).

Go ahead, make your way through the crowd. Hear their taunts, hear their teasing. Endure. Make your way to Jesus. If you find yourself suffering from the leprosy of debt, unload your burden and all of its complications at Jesus' feet. Jesus is the **only** sure cure; He is the WAY. It will call for no small sacrifice to get our financial situations where they should be before the impending crises, but it will be worth it. Work to answer your own prayer for victory over debt.

"Let there be most earnest prayer, and then let us work in harmony with our prayers" (Testimonies for the Church, vol. 5, p. 714). Our prayer should include freedom from sin and debt, as well as the disease of selfishness that infected us in the beginning. We can forgive, and we can be forgiven of debt. Freedom follows faith.

# Steps in Financial Preparation

There will be as many plans for debt reduction as there are people, but a few simple principles can be followed by everyone. Remember, placing God first in your personalized financial plan is the best guarantee of success.

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- 1. To the best of your ability, total up your debt.
- 2. Record the interest rates on each debt.
- 3. Record your monthly/yearly income.
- 4. Record the value of what you might sell to raise money to pay debts, especially those with the highest interest rates.
- 5. Pay small debts first so you begin to feel free!
- 6. If your debts are overwhelming, consult a debt consolidation expert.
- 7. In any circumstance, make double and triple payments if possible without penalty.
- 8. Pray that God will help you providentially to be free of this leprosy.
- 9. Develop a savings plan that includes having liquid assets in your possession.
- 10. Allow a place in your financial plan for determined giving, including tithe-paying. "Bring ye all the tithes into the storehouse, that there may be meat in mine house, and prove me now herewith, saith the Lord of hosts, if I will not open you the windows of heaven, and pour you out a blessing, that there shall not be room enough to receive it" (Malachi 3:10; emphasis supplied).
  - "It has ever proved that nine tenths are worth more to them [God's people] than ten tenths" (Testimonies for the Church, vol. 3, p. 546).
  - 11. Once you're free of debt, don't use credit cards; this could be a temptation to get into debt again.

# FOR FURTHER STUDY

- 1. Testimonies for the Church, vol. 9, p. 131, "Money will perish"
- 2. The Advent Review and Sabbath Herald, May 27, 1902, "Higher interest rate"
- 3. Manuscript Releases, vol. 17, p. 286, "Not in banks"
- 4. Counsels on Health, p. 493, "Love Him supremely and our neighbor as ourselves"
- 5. It's Your Money, Isn't It?, G. Edward Reid, Review and Herald Publishing Association, Hagerstown, Maryland.
- 6. <u>Margins</u>, Swenson, Richard, A. M. D., Nav Press, Colorado Springs, Colo. (see especially chapter 10, "Margin in Finances").

# **Footnotes**

- <sup>1</sup> Futurist, Oct. 1979, p. 353.
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- <sup>4</sup> U.S. News, Mar. 31, 1980, p. 29.
- <sup>5</sup> Business Week, June 23, 1980, p. 122.
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- 8 Futurist, June 1980, p. 32.
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- <sup>10</sup> Clark, Douglas. <u>How to Survive the Money Crash</u>, Harvest House Publishing, Irvine, Calif., pp. 95, 98-104.
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Chapter Ten



# Country Living: A Taste of Elegance

"Fathers and mothers who possess a piece of land and a comfortable home are kings and queens" (Country Living, p. 18).

he following plea appeared among the letters to the editor in the May 28, 1998, edition of <u>USA Today</u>; "Will someone help me save my son? My son is two years old and is a reflection of complete innocence. His vulnerability to this harsh, violent, ignorant and uncaring world just rips my heart apart. He knows nothing of the killing within the schools.... He knows nothing of the abuse that happens within homes of children just his age. As he plays with his toys, he is oblivious to the tragedies that occur every day across the country. As he clutches his blanket, sleeping soundly, dreaming of the mommie and daddy who love him, he has no idea of the complete social and moral decay of our society.

"Does anyone care anymore? Will someone please, please help me save my son?" —Edward Moats, Belleair Beach, Florida.

I know, personally, of no better advice to give Mr. Moats when he asks for help in saving his son than to advise him to move to the country.

# **Protection by Escape**

Pollution comes in many forms. Social pollution is nearly impossible to escape in our cities today. Who among us has not longed for the refreshment of solitude? Our children, growing up in an artificial environment display modern diseases that reflect the lifestyle in which they are expected to perform. True, Satan can wedge himself into our quiet time no matter where we live, but where

do our city children go to watch spectacular sunset? How often are they up with the dawn and hear a bird song above the roar of engines and voices? Why do we see so much violence, hyperactivity, and a lack of respect? Who among our young people can feel comfortable sitting beside a quiet stream for an afternoon, cleansing his soul of artificial stimuli, without feeling obligated to accomplish something measurable? I love the country for I have seen it work miracles in the lives of emotionally disturbed and artificially overburdened youth.

In his autobiography, the late well-known naturalist John Muir states, "Thousands of tired, overcivilized people are beginning to find out that going to the mountains is going home; that **wildness is a necessity**; and that mountain parks and reservations are useful not only as fountains of timber and irrigating rivers, but as fountains of life" (The Story of My Boyhood and Youth, page 459).

Mark R. Rosenzweig, in his article "Brain Changes in Response to Experience," (Scientific American, February 1972) records a comparison study between two groups of genetically similar rats raised in two different environments. The first environment was crowded, stacked cage conditions. The second was referred to as a seminatural environment in a large enclosure with more space, logs, sand, plants, burrows, limbs, etc. At the end of the experiment it was found that the brain synapses were 50 percent larger and the brain weight was increased 6.4 percent in the rats living in the seminatural environment as compared to animals living in crowded cage conditions. The parallel to human development was noted.

Mark Reisner wrote an article for the L. A. Times on October 19, 1989 entitled "In Fifteen Seconds We Are Humbled." The summation of his article can be expressed in these words: **the more complex our society, the more subject we are to natural disasters.** His words make a strong appeal to a simpler life.

He continues, "The Ohlone Indians, who lived around San Francisco Bay for thousands of years, must have experienced earthquakes far more powerful than the World Series quake of 1989.... But to people living at that level of simplicity, earthquakes are just a terrifying curiosity. Their society is not utterly incapacitated by collapsing overpass pylons and falling bridge decks. They do not risk months without water when aqueducts break, or neighborhood conflagrations when water pressure disappears. ...

"As a species we can't resist flaunting our profound ability to defy nature with our dams, skyscrapers, freeways, and nuclear power plants. And the more spectacular this ability becomes, **the more vulnerable we make ourselves.** That is the oldest cliché in the world—the higher you rise, the farther you fall—but it seems we keep having to relearn it, and we never really learn from it.

"Freeways, bridges, tunnels, aqueducts, dams and all the rest—for this whole

century we have been fascinated by such gargantuan wizardry, partly because it snubs nature (or what we used to call reality) so wondrously; but mainly, and quite simply, because we could build it.

"How do you tell a society like ours that wisdom lies in reaching backward for old ideas?"

Is it really reaching backward? Are the "good old days" truly outdated? We are told, that "... the old, old times will be back (Series B, #7, p. 63)." Frenzied men and women long for a time of escape from the hectic pace of life. How often can a person's innocence be bombarded and not become calloused to even the most sensational reports? Does it matter to God how and where our character is formed?

Roberta Donovan, in "Victory in the Mountains," published in <u>Listen Magazine</u>, June 1985, quotes a young person who participated in their youth ranch program conducted in a wilderness setting: "I left the old me out in the woods, and I am a new person. I am going to make it."

# Glimpse of a Better World

Let me tell you about my high school years. I was born in a large north-western city. Self- preservation was a necessary art form. I was fourteen as I began my studies at a secondary church school. I looked up to my PE teacher, Mr. V. because he was so strong! He could do anything we boys could do and twice as easily; if we could lift one end of something, he could lift the whole thing! It seemed we were always comparing our strength to his. Mr. V. never raised his voice, but he could sure get our attention! I remember when he broke up a fist fight between two teenagers by lifting them each off the ground at the same time!

Back then I was classed among the troublemakers and it was Mr. V. who, one day, decided to do something about us rebels. He took six of us on a five-day camp out. It seemed to us that he picked the worst weekend he could find; mixed rain and snow, barely above freezing. Those of us he had chosen to attend the camp had never worked together on anything. When we arrived, we began doing things in our own way, independent as usual, and everything began to unravel. Before long, two of us were in a fist fight.

"Now boys," said Mr. V., pulling us away from each other by our wet coat collars as easily as we peeled the bananas in our lunch bags. "Let's be about this business of survival." So we did. We were all in the same boat—a wet sleeping bag, no shelter, and no skills with which to change our situation.

It soon became obvious to us that, next to loving rebels, Mr. V.'s very favorite thing was camping. That long weekend, he tried to teach us everything he knew, and his enthusiasm eventually rubbed off on us. It's hard to build a fire in the

rain, but Mr. V. took us under a big fir tree and showed us how to snap off the dry limbs. He explained fire building step by step. Our spirits soared with the flames. He explained things that I have never forgotten. During that weekend I glimpsed a better world. I began to learn to get along with others.

That camping trip was my first survival experience and my first glimpse of the person that Mr. V. believed I could be. It was the turning point of my life. True, it was five days of misery, but, oh, what I learned! I wonder if Mr. V. ever knew how much that weekend really meant to me. Those lessons of hardship, discipline,

and trust I learned on that camping trip helped me begin to understand some things about God's character that I had never considered, all because Don Van Tassel persevered and was patient with six young rebels. Those days spent camping with Mr. V. brought me out of the woods and

marked the beginning of my love for the wilderness and for the character of God I can look back on that weekend as the days that ignited my desire to enjoy the great outdoors. After that camping trip, I knew I wanted to live in the country, as far from the confines and corruption of the city as I could get.

# God's Plan to Protect Our Children

Living in the country does require what some might classify as sacrifice, but if we truly see the need and long for a country home with our whole heart, the Lord will provide a way of escape. Leaving the city behind us is the only way to escape its pollution. Lot had left his Uncle Abraham's farm to live in Sodom, perhaps justifying his move with the desire to evangelize the town. Instead of saving Sodom, he sacrificed his own spiritual purity and the innocence of his daughters. His wife remains the virtual reminder of the ultimate sacrifice of those whose heart is enamored with that which God will destroy.

"The children and youth should be carefully guarded. They should be kept away from the hotbeds of iniquity that are to be found in our cities" (Country Living, p. 12). "Out of the cities is my message for the education of our children" (ibid., p. 13).

It has always been God's call for His people to live a simple lifestyle in the country. From these locations, families were educated to do missionary work in the cities. Many of God's ambassadors received their training in a country environment. God felt it imperative that some of these men and women be examples of what we are to be when the last message is given, for "there are Enochs in this our day" (Sons and Daughters of God, p. 314.) These people found elegance in simple living. As we look at examples of Bible characters, we see that they experienced an ever increasing awareness of their need of preparation. Such plans produced sons and daughters of God, joint heirs with Christ, members of the royal line, and happy people.

True, you might have to sacrifice a few conveniences, but country living need not remove your appreciation of elegance. Even amid the practical virtues of work one can glimpse the truly elegant touches of the hand of God; a spider web's sparkling beauty as it collects dew, numberless diamonds strewn across a meadow glittering in the first light of dawn, the moments of blazing glory as the sun sets, the pastel sunrise, an autumn harvest, a snow-capped peak.

"When we are converted, our desire for ease and elegance will be changed" (The Upward Look, p. 330). Country living encourages a converted heart—our tastes change, almost imperceptibly—for we are closer to His works.

# **Principle of Separation**

One of the ways God can protect our families is found in 2 Corinthians 6:14-18; "Be ye not unequally yoked together with unbelievers: for what fellowship hath righteousness with unrighteousness? and what communion hath light with darkness? And what concord hath Christ with Belial? Or what hath he that believeth with an infidel? And what agreement hath the temple of God with idols? for ye are the temple of the living God; as God hath said, I will dwell in them, and walk in them; and I will be their God, and they shall be my people. Wherefore come out from among them, and be ye separate, saith the Lord, and touch not the unclean thing: and I will receive you, And will be a father unto you, and ye shall be my sons and daughters, saith the Lord Almighty." The principle of separation is a safety net for our families, churches, and schools.

There are several questions asked of us by God. It is His attempt to invite us to respond to His counsel affirmatively. Don't be affiliated with unbelievers. Come out and be separate, He advises. If we follow God's counsel then He will dwell in us and we will be His people. He will be our Father if we separate from the world. This is an irrefutable principle of living that will affect our survival. We must not be influ-

enced by the world to the detriment of our spiritual life. Yes, there is balance to this principle. We must not isolate ourselves in a hermit's existence but give the message of truth to the world.

"The followers of Christ are to be separate from the world in principles and interests, but they are not to isolate themselves from the world. The Saviour mingled constantly with men, not to encourage them in anything that was not in accordance with God's will, but to uplift and ennoble them" (Counsels to Teachers, p. 323; emphasis supplied). While we are to mingle with the world in mission work we are to be separate in attitude and in principles of living.

"The great Head of the church, who has chosen His people out of the world, requires them to be separate from the world" (Counsels to Teachers, p. 329).

Jesus' example and words are in clarion tones "Come out from among them and be ye separate."

"The baleful influence of sin poisons the life of the soul. <u>Our only safety</u> is in separation from those who live in its darkness. The Lord has enjoined upon us to come out from among them and be separate, and to touch not the unclean thing, and He will receive us and will be a Father unto us, and we shall be His sons and daughters. If we wish to be adopted into the family of God, to become children of the heavenly King, we must comply with His conditions; we must come out from the world and stand as peculiar people before the Lord, obeying His precepts and serving Him" (Testimonies For the Church, vol. 4, p. 109).

What is true for ourselves and our families is also true for our schools. They must also be separate from the world and its standards.

"Many have so far shown their lack of wisdom from above as to join with the enemies of God and the truth in providing worldly entertainments for the students. In doing this they bring upon themselves the frown of God, for they mislead the youth and do a work for Satan. This work, with all its results, they must meet at the bar of God. ... When the Lord requires us to be distinct and peculiar, how can we crave popularity or seek to imitate the customs and practices of the world?" (Testimonies for the Church, vol. 6, p. 143; emphasis supplied).

# Taste of Elegance

Living in the country can ennoble and refine us, which is as God would have it. The dictionary defines the word **elegance**: "richly ornamental; a refinement pleasing to good taste, graceful, neat, refined, nice." What is more richly

ornamental, a Ming vase or a mountaintop? A Renaissance painting or a sunset? Greek architecture or a log home you built yourself? A fountain downtown or a waterfall in the wilderness? A polluted city river or a mountain cataract? The best preparation for the lifework of the minister and the gospel worker takes place on the farm, in the country, and in the wilderness communicating with God. "The usefulness learned on the school farm is the very education that is most essential for those who go out as missionaries to many foreign fields" (Series B, no. 11, [The Madison School], p. 29). In living a simple lifestyle, we learn essential knowledge free of encumbrances dictated by city living. Health, both physical and spiritual, is built right in to country life.

"There are life-giving properties in the balsam of the pine, in the fragrance of the cedar and the fir healing in the spruce and pine..." (The Ministry of Healing, p. 264).

"All who are under the training of God need the quiet hour for communion with their own hearts, with nature, and with God. In them is to be revealed a life that is not in harmony with the world, its customs, or its practices; and they need to have a personal experience in obtaining a knowledge of the will of God. We must individually hear Him speaking to the heart when every other voice is hushed, and in quietness we wait before Him, the silence of the soul makes more distinct the voice of God. This is the effectual preparation for all labor for God" (ibid. p. 58; emphasis supplied).

The same principles that applied to early Christians apply to us today. Spirit of Prophecy explains that the training outlined by God cannot be bypassed by modern gadgets and technology.

"A return to simpler methods will be appreciated by children and youth. Work in the garden and field will be an agreeable change from the wearisome routine of abstract lessons, to which their young minds should never be confined" (Testimonies for the Church, vol. 6, p. 179). The simple lifestyle and training of the early days is needed for our children today. Parents and teachers wish to provide conveniences for young people that end in a softening which diminishes the pioneering experience they so desperately need and deeply desire. All children, including those with ADD and other nervous disorders, will benefit spiritually and psychologically from a life in the country. Parents can consider the option of home school when they move to the country. This training is extremely productive of growth, both spiritually and academically. We found this to be true with our own son as we home-schooled him through grade twelve.

"Children should virtually be trained in a home school from the cradle to maturity" (Child Guidance, p. 26).

Country living is a central training for our young people from the cradle to the grave. It is a truly classical experience, relevant to all ages. In God's book of nature, all may easily be taught by the Holy Spirit.

The rest of this chapter will report about great champions of truth and how they used the principle of separation and country living to live a life of purity. Because of this they were effective witnesses for God and His message.

# **Country Living From Creation to the Flood**

God has always used simple, beautiful methods to train His leaders and His people. The Godhead always planned the best for humans (see 1 Corinthians 3:11; Hebrews 4:3; and Ephesians 1:4). God set Adam and Eve in a garden to dress it and keep it (Genesis 2: 7-15). God will restore the same program in heaven (Isaiah 65:17, 21-25).

The Bible states that God has planned a garden home both before and after 6,000 years of sin. I wonder if His best plan for us during the 6,000 years since Eden has changed? Has he said anything about it? During sin's reign, is tending a garden in the country important? Is it just for our enjoyment or is the training gained from country living **essential** to spreading the gospel? Does country living really offer more educational potential? We can answer these questions from inspired sources and discover some reasons God wants His people in the country.

As we look at the lives of the characters in the Bible story we will discover some of the answers to our questions. From Eden lost to Eden restored God has not nor will He ever deprive His people; He has ever kept before them the true taste of elegance. "So with the great majority of the best and noblest men of all ages. Read the history of Abraham, Jacob, and Joseph, of Moses, David, and Elisha. Study the lives of men of later times who have most worthily filled positions of trust and responsibility, the men whose influence has been most effective for the world's uplifting. How many of these were reared in country homes" (Country Living, p. 15).

# Adam

Adam and Eve were placed by God in a garden, the splendor of which we can only imagine. Sky blue ceilings, a living carpet, tree lined walls, a surround-sound-system which they not only heard but with which they conversed! Untouched by decay or disease, the Garden of Eden must have been a wonder to behold. The first school was their garden home.

"Men, in their pride, delight in magnificent and costly edifices and

glory in the works of their own hands; but <u>God placed Adam in a garden</u>. This was his dwelling. The blue heavens were its dome; the earth, with its delicate flowers and carpet of living green, was its floor; and the leafy branches of the goodly trees were its canopy. Its walls were hung with the most magnificent adornings—the handiwork of the great Master Artist. In the surroundings of the holy pair was a lesson for all time—that true happiness is found, not in the indulgence of pride and luxury, but in communion with God through His created works. If men would give less attention to the artificial, and would cultivate greater simplicity, they would come far nearer to answering the purpose of God in their creation" (Patriarchs and Prophets, p. 49; emphasis supplied).

"In the beginning He placed our first parents amidst the beautiful sights and sounds He desires us to rejoice in today. The more nearly we come into harmony with God's original plan, the more favorable will be our position to secure health of body, and mind, and soul" (The Ministry of Healing, p. 365; emphasis supplied).

# Seth

Adam and Eve had to leave their garden home after sin entered. Their oldest son, Cain, killed their second son, Abel. The principle of separation emerged as wickedness spread. God's people chose to live separate from the followers of Cain.

"For some time the two classes remained separate. The race of Cain, spreading from the place of their first settlement, dispersed over the plains and valleys where the children of Seth had dwelt; and the latter, in order to escape from their contaminating influence, withdrew to the mountains, and there made their home. So long as this separation continued, they maintained the worship of God in its purity. But in the lapse of time they ventured, little by little, to mingle with the inhabitants of the valleys. This association was productive of the worst results" (Patriarchs and Prophets, p. 81; emphasis supplied).

# **Enoch**

Separation of lifestyle and geography was not the total answer to spreading the good news of the gospel. God used Enoch to exemplify His plan to do missionary work. We may gain spiritual and physical strength by communion with God in nature so that we can minister to those in the cities. Enoch accented the principle that if you love the cities, you are not ready to work them.

"He [Enoch] did not make his abode with the wicked. <u>He did not locate in Sodom, thinking to save Sodom.</u> He placed himself and his family

where the atmosphere would be as pure as possible. Then at times he went forth to the inhabitants of the world with his God-given message. Every visit he made to the world was painful to him. He saw and understood something of the leprosy of sin. After proclaiming his message, he always took back with him to his place of retirement some who had received the warning. Some of these became overcomers, and died before the Flood came. But some had lived so long in the corrupting influence of sin that they could not endure righteousness" (The Seventh-day Adventist Bible Commentary, Ellen G. White Comments, vol. 1, pp. 1087, 1088; emphasis supplied).

"He [Enoch] did not become a hermit, shutting himself entirely from the world; for he had a work to do for God in the world. ... Distressed by the increasing wickedness of the ungodly, and fearing that their infidelity might lessen his reverence for God, Enoch avoided constant association with them, and spent much time in solitude, giving himself to meditation and prayer" (Patriarchs and Prophets, p. 85; emphasis supplied).

It is interesting to see how God helped Enoch solve his dilemma. He did not want to leave his country home to go to the city where he witnessed crime and sin, yet he felt an urgency from God to minister. Let's look back over the centuries to see how Enoch did it.

"The greater and more pressing his labors, the more constant and earnest were his prayers. He continued to exclude himself, at certain periods, from all society. After remaining for a time among the people, laboring to benefit them by instruction and example, he would withdraw, to spend a season in solitude, hungering and thirsting for that divine knowledge which God alone can impart. Communing thus with God, Enoch came more and more to reflect the divine image. His face was radiant with a holy light, even the light that shineth in the face of Jesus. As he came forth from these divine communings, even the ungodly beheld with awe the impress of heaven upon his countenance" (ibid., p. 86; emphasis supplied).

"The godly character of this prophet represents the state of holiness which must be attained by those who shall be 'redeemed from the earth' (Rev. 14:3) at the time of Christ's second advent" (ibid, pp. 88, 89; emphasis supplied).

*"And there are Enochs in this our day"* (Christ's Object Lessons, p. 332; emphasis supplied).

"Enoch, separating himself from the world, and spending much of his time in prayer and in communion with God, <u>represents God's loyal people</u> <u>in the last days</u>, who will be separate from the world" (The Story of Redemp-

tion, p. 60; emphasis supplied).

"By faith Enoch was translated that he should not see death; ... for before his translation he had this testimony, that he pleased God" (Gospel Workers, p. 54). "To such communion God is calling us. As was Enoch's so must be their holiness of character who shall be redeemed from among men at the Lord's second coming" (Maranatha, p. 65; emphasis supplied). (See also Spiritual Gifts, vol. 3, pp. 53-60).

Enoch brought people back with him to an environment more nurturing to spiritual growth. Some made spiritual progress and some did not. Those that didn't, couldn't because of having lived in the filth of the cities too long. God's plan for Enoch was for him to live outside of the contaminated cities in a place as pure as possible, communing with God, working hard to support his family, and even though it was painful to him, to witness in the cities. If there are Enochs in this our day, then there are some people following Enoch's plan today.

# Noah

Noah's call emphasizes God's plan for the training of His people in all ages and especially for the last days. "But as the days of No'e were, so shall also the coming of the Son of man be" (Matthew 24:7).

"As in the days of Noah and Lot, there must be a marked separation from sin and sinners" (Patriarchs and Prophets, p. 167). Noah was aware of the principle of separation.

"For a time the descendants of Noah continued to dwell among the mountains where the ark had rested. As their numbers increased, apostasy soon led to division. Those who desired to forget their Creator and to cast off the restraint of His law felt a constant annoyance from the teaching and example of their God-fearing associates, and after a time they decided to separate from the worshipers of God" (ibid. p. 118).

The Flood itself separated the wicked from those who were dedicated to God's plan.

# **Country Living From the Flood to Jesus**

# Abraham and Lot

Abraham was a man who experienced great blessings from the hand of God. Abraham knew he could trust Him in all circumstances. He knew, by a practical personal experience that God always keeps His word. By studying

what composed Abraham's farm, perhaps we can get an idea of God's plan for His people today (see <u>Testimonies for the Church</u>, volume 6, page 177).

Abraham was called by God to go to a strange country. He didn't know where or how. He only knew that God asked him to go, and trusted God to show him.

"Who will accept new duties and enter untried fields doing God's work with firm and willing heart, for Christ's sake counting his losses gain? He who will do this has the faith of Abraham" (Patriarchs and Prophets, p. 127).

Abraham had a nephew by the name of Lot who came with him in his journey to the land of promise. Strife and division occurred between the two families, so Abraham proposed a solution. Separation was obviously needed, and Lot chose the rich, fertile valley near the cities. Dazzled by the potential of financial gain, Lot overlooked the moral and spiritual evils that existed there.

Abraham chose the hills and upland plains, but he did not shut himself away from witnessing to his neighbors. "In the free air of those upland plains, with their olive groves and vineyards, their fields of waving grain, and the wide pasture grounds of the encircling hills, he dwelt, well content with his simple, patriarchal life, and leaving to Lot the perilous luxury of the vale of Sodom" (ibid. p. 133).

Abraham's farm grew. "Those who were led by his teachings to worship the true God found a home in his encampment; and here, as in a school, they received such instructions as would prepare them to be representatives of the true faith." (ibid. p. 141; emphasis supplied).

In Patriarchs and Prophets, page 142, we read that Abraham's farm was a witness to all around. Members of Abraham's family were characterized by integrity, honesty, and mutual respect by all members of the family. Meanwhile, the cities of the valley where Lot dwelt were having severe problems. Evil was everywhere, and God decided to destroy them. Messengers were sent to Lot asking him to leave the cities and escape to the mountains. To Lot this was a severe trial. To leave all of his possessions and not even look back was almost more than he could bear. Lot's hesitancy caused his wife and family to lightly regard the warning. Lot's wife perished at the border of Sodom. The strong tide of evil influenced Lot by dimming his faith and paralyzing his spiritual perceptions while Abraham prospered and influenced many for God living in the hills (see Patriarchs and Prophets, p. 133 and 161).

The flames of the consumed cities of the plain flashes a warning beacon to our day. In these last days, there will be a movement, by God's people, from their properties in the city to homes in the country. We need to separate from evil where we can live free from their influence. When Lot entered Sodom, he fully intended

to keep separate from similar evils. By a simple choice of where we live, our families will be influenced for good or evil. "Lot could have preserved his family from many evils had he not made his home in this wicked, polluted city. All that Lot and his family did in Sodom could have been done in a place some distance away from the city" (Evangelism, p. 78; see also Testimonies for the Church, vol. 4, p. 112).

# Joseph

With the passage of time, God's promise to Abraham was realized. Their numbers increased, even when they were captured as slaves. Their bondage in Egypt was a result of their rebellion against God. When famine threatened the survival of Egypt as a nation, Joseph was God's man of the hour, thwarting the devil's purposes in his own life and averting a catastrophe for the entire nation. Joseph had learned lessons of integrity as a boy having been raised in a country setting before he was sold into slavery by his brothers.

"How was Joseph enabled to make such a record of firmness of character, uprightness, and wisdom? In his early years he had consulted duty rather than inclination. ... A <u>pure and simple life</u> had favored the vigorous development of both physical and intellectual powers. <u>Communion with God through His works</u>, and the contemplation of grand truths entrusted to the inheritors of faith had elevated and ennobled his spiritual nature, broadening and strengthening the mind <u>as no other study could do</u>" (Patriarchs and Prophets, p. 222; emphasis supplied). This was Joseph's secret; it should be and can be ours (see Education, p. 52).

# Moses

Moses was one of God's greatest leaders (see Deuteronomy 34:10). How and where did Moses obtain the training that prepared him for the huge task God had planned for him? In the mighty military school in Pharaoh's palace?

"In the military schools of Egypt, Moses was taught the law of force, and so strong a hold did this teaching have upon his character that it required forty years of quiet and communion with God and nature to fit him for the leadership of Israel by the law of love" (Education, p. 65; emphasis supplied).

One of God's greatest leaders had to unlearn what he had been taught, exchanging man's intellectual strategies for God's wisdom. Where did he do this? In quiet communion with God and nature. But it took 40 years for Moses to unlearn the worldly ways.

"Amidst the solemn majesty of the mountain solitudes Moses was alone with God. Everywhere the Creator's name was written. Moses seemed to stand in His presence and to be overshadowed by His power. Here his self-sufficiency was swept away. In the presence of the Infinite One he realized how weak, how inefficient, how shortsighted is man" (ibid., p. 63).

There are many lessons we can learn from Moses' experience. "Before God could talk with Moses, He educated him in the mountains, among the sheepfolds. Exiled from the courts of Egypt and from the temptations of city life, Moses held communion with God.... For forty years Moses dwelt in the wilderness, receiving from God an education that made him a wise, tender, humble man. When this time was ended, his self-confidence was gone; he was meek and lowly, so divested of self that God could communicate to him His will in regard to the people He had chosen, and whom He designed to educate and discipline in their wilderness life, while He was preparing for them a home in the land of Canaan" (The Youth's Instructor, Dec. 13, 1900; emphasis supplied).

God's wilderness curriculum for Moses' education in ministry might well have been overlooked or counted as useless, a waste of time.

"And there were other lessons that, amid the solitude of the mountains, Moses was to receive. In the school of self-denial and hardship he was to learn patience, to temper his passions.... Man would have dispensed with that long period of toil and obscurity, deeming it a great loss of time" (Patriarchs and Prophets, p. 247; emphasis supplied). God did not see the wilderness education as a loss of time. His plan for Moses is a plan we can follow today. In close contact with nature, our families may commune with God as did Moses.

"If many who are connected with the work of the Lord could be isolated as was Moses, and could be compelled by circumstances to follow some humble vocation until their hearts became tender... they would not be so prone to magnify their own abilities, or seek to demonstrate that the wisdom of an advanced education could take the place of a sound knowledge of God" (Counsels to Parents, Teachers, and Students, p. 417; emphasis supplied).

Moses' example shows us that to skip a spiritual preparation or substitute a worldly education for the proper spiritual preparation is not God's plan. We must have our time of conversion, a time of wilderness solitude, a time of communion with nature and with God in order to rightly discern our calling. (See The Ministry of Healing, p. 58).

Because of his training in the wilderness, Moses was able to lead God's

people out of Egypt. Why do you suppose that Israel had to have a similar experience before going into the Promised Land?

"The history of the wilderness life of Israel was chronicled for the benefit of the Israel of God to the close of time.... The varied experience of the Hebrews was a school of preparation for their promised home in Canaan. God would have His people in these days review with a humble heart and teachable spirit the trials through which ancient Israel passed, that they may be instructed in their preparation for the heavenly Canaan" (Patriarchs and Prophets, p. 293).

God again chose separation from the world to train His people for higher spiritual attainments.

"God desired to take His people apart from the world and prepare them to receive His word. From Egypt He led them to Mount Sinai, where He revealed to them His glory. Here was nothing to attract their senses or divert their minds from God; and as the vast multitude looked at the lofty mountains towering above them, they could realize their own nothingness in the sight of God" (Testimonies for the Church, vol. 6, p. 9).

# Samson

Samson's story contrasts obedience to the requirements of God and the results of poor choices and close association with worldly youth.

"The town of Zorah being the country of the Philistines, Samson came to mingle with them on friendly terms. Thus in his youth, intimacies sprang up, the influence of which darkened his whole life.... Whoever voluntarily enters into such relations will feel it necessary to conform, to some degree, to the habits and customs of his companions.... Thoughts are entertained... that tend... to weaken the citadel of the soul" (Conflict and Courage, p. 131; emphasis supplied).

# Samuel

Samuel, like David and Daniel, was influenced by the teachings of nature. "The stars of heaven, the trees and flowers of the field, the lofty mountains, the babbling brooks, all spoke to him [the Hebrew student], and the voices of the prophets, heard throughout the land, met a response in his heart. Such was the training of Moses in the lowly cabin home in Goshen; of Samuel, by the faithful Hannah; of David, in the hill-dwelling at Bethlehem; of Daniel, before the scenes of the captivity separated him from the home of his fathers" (Fundamentals of Christian Education, p. 96).

# David

The influence of seclusion and nature was very important in David's life. "The Lord was preparing him [David] in his solitary life with his flocks, for the work He designed to commit to his trust in afteryears" (The Seventh-day Adventist Bible Commentary, Ellen G. White Comments, vol. 2, p. 1018).

"The history of David affords one of the most impressive testimonies ever given to the dangers that threaten the soul from power and riches and worldly honor—those things that are most eagerly desired among men. Few have ever passed through an experience better adapted to prepare them for enduring such a test. David's early life as a shepherd, with its lessons of humility, of patient toil, and of tender care for his flocks; the communion with nature in the solitude of the hills, developing his genius for music and poetry, and directing his thoughts to the Creator; the long discipline of his wilderness life, calling into exercise courage, fortitude, patience, and faith in God, had been appointed by the Lord as a preparation for the throne of Israel. David had enjoyed precious experiences of the love of God, and had been richly endowed with His Spirit; in the history of Saul he had seen the utter worthlessness of mere human wisdom. And yet worldly success and honor so weakened the character of David that he was repeatedly overcome by the tempter" (Patriarchs and Prophets, p. 746; emphasis supplied).

"Notwithstanding the high position which he was to occupy, he quietly continued his employment, content to await the development of the Lord's plans in his own time and way. As humble and modest as before his anointing, the shepherd boy returned to the hills and watched and guarded his flocks as tenderly as ever. But with inspiration he composed his melodies and played upon his harp. Before him spread a landscape of rich and varied beauty. The vines, with their clustering fruit, brightened in the sunshine. The forest trees, with their green foliage, swayed in the breeze. He beheld the sun flooding the heavens with light, coming forth as a bridegroom out of his chamber and rejoicing as a strong man to run a race. There were the bold summits of the hills reaching toward the sky; in the faraway distance rose the barren cliffs of the mountain wall of Moab; above all spread the tender blue of the overarching heavens. And beyond was God. He could not see Him, but His works were full of His praise. The light of day, gilding forest and mountain, meadow and stream, carried the mind up to behold the Father of lights, the Author of every good and perfect gift. Daily revelations of the character and majesty of his Creator filled the young poet's heart with adoration and rejoicing. In contemplation of God and His works, the facul-

ties of David's mind and heart were developing and strengthening for the work of his afterlife. He was daily coming into a more intimate communion with God.... Who can measure the results of those years of toil and wandering among the lonely hills? The communion with nature and with God, the care of his flocks, the perils and deliverances, the griefs and joys, of his lowly lot, were not only to mold the character of David and to influence his future life, but through the psalms of Israel's sweet singer they were in all coming ages to kindle love and faith in the hearts of God's people, bringing them nearer to the ever-loving heart of Him in whom all His creatures live.... His opportunities of contemplation and meditation served to enrich him with that wisdom and piety that made him beloved of God and angels" (ibid, pp. 641, 642; emphasis supplied). David was a man after God's own heart, due largely to his early training, communing with God out in nature.

# Elijah

Elijah was one of the greatest prophets in Israel. He reestablished the schools of the prophets (see <u>Prophets and Kings</u>, pp. 224, 225) and was God's representative of reform on Mount Carmel, challenging the children of Judah with the classic Christian question, "How long halt ye between two opinions? if the Lord be God, follow him" 1 Kings 18:21.

Let's look at how Elijah lived. "Among the mountains of Gilead, east of Jordan, there dwelt in the days of Ahab a man of faith and prayer whose fearless ministry was destined to check the rapid spread of apostasy in Israel. Far removed from any city of renown, and occupying no high station in life, Elijah the Tishbite nevertheless entered upon his mission confident in God's purpose to prepare the way before him and to give him abundant success. The word of faith and power was upon his lips, and his whole life was devoted to the work of reform. His was the voice of one crying in the wilderness to rebuke sin and press back the tide of evil" (Prophets and Kings, p. 119; emphasis supplied).

#### Elisha

The prophet Elisha desired a double portion of Elijah's spirit to carry on the work of God. What was his early training and where did he live? "Elisha did not live in the thickly populated cities. His father was... a farmer. Far from city and court dissipation, Elisha had received his education. He had been trained in habits of simplicity, of obedience to his parents and to God" (Sons and Daughters of God, p. 93; emphasis supplied). We can see, again, how early

training with God in the country was the best training, even for a prophet.

"The early years of the prophet Elisha were passed in the <u>quietude of</u> <u>country life</u>, <u>under the teaching of God and nature and the discipline of useful work</u>" (Education, p. 58; emphasis supplied).

#### Solomon

Solomon was the wisest king who ever wielded a scepter (1 Kings 3:12) and yet he failed horribly in his conduct. To what does inspiration attribute these failures in the life of Solomon?

"Compare the early history of David with the history of Solomon and consider the results.... The discipline of David's early experience was lacking in that of Solomon" (Education, p. 152). Even the wisest man on earth, a man whom God blessed with great knowledge, would have been a better Christian witness had he had the early training his own father, King David, received but neglected to give his son.

# **Country Living from Jesus to the Apostles**

# John the Baptist

Jesus said of John the Baptist that there had not risen a greater born of woman (Matthew 11:11).

"An angel from heaven came to instruct Zacharias and Elizabeth as to how they should train and educate their child, so as to work in harmony with God in preparing a messenger to announce the coming of Christ. As parents they were to faithfully co-operate with God in forming such a character in John as would fit him to perform the part God had assigned him as a competent worker.

"John was the son of their old age, he was a child of miracle, and the parents might have reasoned that he had a special work to do for the Lord and the Lord would take care of him. But the parents did not thus reason; they moved to a retired place in the country, where their son would not be exposed to the temptations of city life, or induced to depart from the counsel and instruction which they as parents would give him. They acted their part in developing a character in the child that would in every way meet the purpose for which God had designed his life (Child Guidance, p. 23; emphasis supplied)

"The experience of Enoch and of John the Baptist represents what ours should be" (Testimonies for the Church, vol. 8, p. 329; emphasis supplied). "In this age, just prior to the second coming of Christ in the clouds

of heaven, such a work as that of John is to be done" (ibid. p. 332).

"In order to give such a message as John gave, we must have a spiritual experience like his. The same work must be wrought in us. We must behold God, and in beholding Him lose sight of self" (ibid. p. 333). All of God's people are called to live in the country for purposes of education, spiritual growth, safety and food (see Country Living, pp. 9, 10).

"God had directed John the Baptist to dwell in the wilderness, that he might be shielded from the influence of the priests and rabbis, and be prepared for a special mission" (The Desire of Ages, p. 150).

"John did not feel strong enough to stand the great pressure of temptation he would meet in mingling with society. He feared his character would be molded according to the prevailing customs of the Jews; and he chose to separate himself from the world, and make the wilderness, his home. He denied himself the ordinary comforts of life; his food was simple; his clothing, a garment made of camel's hair, and confined about the waist by a leather girdle. But although John passed his childhood and youth in the desert, he was not unreconciled to his life of hardship and seclusion. So far from being lonely, gloomy, or morose, he enjoyed his life of simplicity and retirement, and his temperate habits kept all his senses unperverted" (The Youth's Instructor, Jan. 7, 1897; emphasis supplied).

To gain a spiritual experience like John's, we must have an education like his. "He [John] chose rather to have his home in the wilderness, where his senses would not be perverted by his surroundings. Should we not learn something of this example of one whom Christ honoured and of whom He said: 'Among them that are born of women there hath not risen a greater than John the Baptist?' (Matthew 11:11)" (Testimonies for the Church, vol. 4, p. 109).

How effective was John's ministry? "The whole nation was stirred. Multitudes flocked to the wilderness" (The Desire of Ages, p. 104).

How did he do it? "In solitude, by meditation and prayer, he sought to give up his soul for the lifework before him.... John found in the wilderness his school and his sanctuary" (ibid. p. 102).

"I was pointed down to the last days and saw John represented those who should go forth in the spirit and power of Elijah to herald the day of wrath and the second advent of Jesus" (Early Writings, p. 155; emphasis supplied).

John's preparation included witnessing to, but separation from, the world. He spent much time in meditation and prayer in the beautiful expanse of natural solitude.

# Jesus

Jesus was born in the humble surroundings of a barn, His first bed a manger. Our Father had an eternity to plan the life and education of Jesus and decided on a home in the Galilean hills.

"What were the conditions chosen by the infinite Father for His Son? A secluded home in the Galilean hills; a household sustained by honest, self-respecting labor; a life of simplicity; daily conflict with difficulty and hardship; self sacrifice, economy, and patient, gladsome service; the hour of study at his mother's side, with the open scroll of Scripture; the quiet dawn or twilight in the green valley; the holy ministries of nature; the study of creation and providence; and the soul's communion with God—these were the conditions and opportunities of the early life of Jesus. (The Ministry of Healing, p. 365).

Jesus' education was not in the schools of His day. From His mother He learned Scripture; from His father He learned the carpenter's trade, and He learned to communicate with His heavenly Father from His simple life in the country.

Jesus' greatest happiness was found in communion with His Father and in nature and creation. "He studied the word of God and His hours of greatest happiness were found when He could turn aside from the scene of His labors to go into the fields, to meditate in the quiet valleys, to hold communion with God on the mountainside or amid the trees of the forest" (The Ministry of Healing, p. 52).

Isn't it amazing? He had made it all, and yet He learned from it and loved it! (John 1:10). Even as a child, Jesus "could not be persuaded to change His habits of contemplating the works of God and seeking to alleviate the suffering of men or even... animals.... He shared their burdens and repeated to them [people] the lessons He had learned from nature, of the love, the kindness, the goodness of God" (The Desire of Ages, p. 90).

He wants us to follow His example. "The life and spirit of Christ is the only standard of excellence and perfection, and our only safe course is to follow His example" (Testimonies for the Church, vol. 1, p. 408).

This He found to be "more in harmony with the lessons of self-abnegation. He desired to teach them [the disciples].... By communion with God in nature, the mind is uplifted, and the heart finds rest" (The Desire of Ages, p. 291).

Jesus, our example, obeyed His Father's plan and grew up in the country. He had a "school" for His disciples there. Those of us who read this counsel can look at it three ways. **First,** we can **reject** it like Samson did and reap the consequences. **Second**, we can **wait** like Lot did (and barely make it) losing part of our family in the last-minute escape (see <u>Patriarchs and Prophets</u>, pp.

160, 161). **Third**, we can **accept** it as a gift from God as did Enoch, and, in our love for Him, enjoy it. Jesus is the focus of the ages, and as in all things else He desires us to have a higher experience. This, then, makes Him the Desire of Ages, whom we can hear speaking to us along the streams and in the hills of His own creation. No one had a larger or higher calling than did He, yet His education and His life were free of complexity and so-called "higher education." He did not live in the cities, but He did work there.

"His education was gained from heaven-appointed sources, from useful work, from the study of the Scriptures and of nature, and from the experiences of life—God's lesson books, full of instruction to all who bring to them the willing heart, the seeing eye, and the understanding heart" (Testimonies for the Church, vol. 8, pp. 222, 223).

#### Paul

Paul was a highly educated man with many talents. Before His conversion, he occupied a high position in the Jewish hierarchy. He was zealous in defense of the faith and felt it was an offense to God to believe in a Messiah that was his contemporary. He obtained letters of authority from Jerusalem to bring people back, bound as prisoners, who followed this Messiah. He set out to Damascus to enforce the edict when our Lord appeared to him and asked him to stop hurting Him. Paul arose blind, was led to Damascus, and eventually became converted to the Messiah, whom he had once persecuted.

There was yet a preparation he had to make. The Lord saw that he needed a wilderness experience to adequately train him to be a powerful spokesman for Him. An angel appeared to him and told him to leave Damascus. So he went to Arabia, where he found a retreat (see The Acts of the Apostles, p. 125). Here in the solitude of the desert Paul could study and meditate with Jesus. In such communion is found the highest education. (see The Acts of the Apostles, p. 126). In The Story of Redemption, page 274, we find that this preparation was, for Paul, of lasting comfort to him throughout his ministry.

"He went into Arabia; and there, in comparative solitude, he had ample opportunity for communion with God and for contemplation" (Education, p. 65). To Paul, nature's solitudes became a school whose Teacher was the source of truth.

#### John

The apostle John, just after being rescued by God from a cauldron of boiling oil, was banished to the island of Patmos. It was a barren, rocky island where criminals were removed from society. To John it was the gate of heaven.

"Here, shut away from the busy scenes of life, and from active labors of former years, he had the companionship of God and Christ and the heavenly angels, and from them he received instruction for the church for all future time" (The Acts of the Apostles, p. 570).

In his isolated home, John was able to study more closely than ever before the manifestations of divine power as revealed in the book of nature and in the pages of inspiration (see <u>Courage and Conflict</u>, p. 362).

"To him it was a delight to meditate on the work of creation and to adore the Divine Architect" (The Acts of the Apostles, p. 571).

"The history of John affords a striking illustration of the way in which <u>God can use aged workers</u>.... Even in Patmos he made friends and converts" (<u>ibid</u>. pp. 572, 573; emphasis supplied).

"And it was after John had grown old in the service of his Lord that he received more communications from heaven than he had received all the former years of his life" (ibid. p. 573) We find in The Acts of the Apostles, page 572, that the visions of the book of Revelation were given to John as he enjoyed his banishment in nature.

Even in our sunset years, God may give us a wilderness experience, such as He did for John, in order to deepen our relationship with Him. "Among the cliffs and rocks of Patmos, John held communion with his Maker.... Peace filled his heart" (The Acts of the Apostles, p. 571; emphasis supplied).

# Country Living from the Apostles to the Reformation

#### Columba

In the early centuries, after the passing of John, the last of the twelve apostles, God continued to have witnesses who prepared the way and operated according to His plan.

"From Ireland came the pious Columba and his co-laborers, who, gathering about them the scattered believers on the lonely island of Iona, made this the center of their missionary labors. Among these evangelists was an observer of the Bible Sabbath, and thus this truth was introduced among the people. A school was established at Iona, from which missionaries went out, not only to Scotland and England, but to Germany, Switzerland, and even Italy" (The Great Controversy, p. 62).

Columba believed in having the school separated from contaminating influences so that the students might have an experience with God. The school operated for many years and sent missionaries to many lands and was a long-lasting influence for good.

"For hundreds of years after the churches of England submitted to Rome, those of Scotland maintained their freedom" (ibid. p. 249).

#### The Waldenses

From the high mountain valleys of the Alps came words of truth sounded by the Waldenses. Picture beautiful snow-capped peaks surrounding each valley of northern Italy and southern France. In these valleys were small villages and farms with flocks and vineyards. The Waldenses believed that it was necessary to live in these secluded glens and rocky fastnesses of the mountains to maintain separation from the world. The wilderness church maintained its integrity in the face of extreme persecution for many, many years.

"Behind the lofty bulwarks of the mountains,—in all ages the refuge of the persecuted and the oppressed,—the Waldenses found a hiding place" (The Great Controversy, p. 65).

"God had provided for His people a sanctuary of awful grandeur, befitting the mighty truths committed to their trust.... The mountains that girded their lowly valleys were a constant witness to God's creative power, and a never-failing assurance of His protecting care.... They were never lonely amid the mountain solitudes" (ibid. p. 66; emphasis supplied)

"Thoughts of God were associated alike with the sublime scenery of nature and with the humble blessings of daily life.... Every spot of tillable land among the mountains was carefully improved; the valleys and the less fertile hillsides were made to yield their increase.... The process was laborious and wearisome, but it was wholesome, just what man needs in his fallen state, the school which God has provided for his training and development" (ibid., pp. 67, 68; emphasis supplied).

"Far from the monuments of human pomp and pride the people assembled, not in magnificent churches or grand cathedrals, but beneath the shadow of the mountains, in the Alpine valleys, or, in time of danger, in some rocky stronghold, to listen to the words of truth from the servants of Christ" (ibid. p. 68)

The youth received instruction in this wilderness setting and it had a protecting influence on them and a profound effect on their ministry. "From their

schools in the mountains some of the youth were sent to institutions of learning in the cities" (ibid. p. 70). They were "exposed to temptation, they witnessed vice, they encountered Satan's wily agents, who urged upon them the most subtle heresies and the most dangerous deceptions. But their education from childhood had been of a character to prepare them for all this" (ibid., emphasis supplied). What a wonderful formula for saving our youth today! Yes, it required sacrifice for them, as it will for us, but God's plan will be as successful today as it was for the Waldenses.

"Thus the Waldenses witnessed for God centuries before the birth of Luther. Scattered over many lands, they planted the seeds of the Reformation that began in the time of Wycliffe, grew broad and deep in the day of Luther, and is to be carried forward to the close of time by those who are willing to suffer all things for 'the Word of God, and for the testimony of Jesus Christ'" (ibid. p. 78; emphasis supplied).

We are counseled to study the history of the Waldenses because we will need the training and the experience they received. "It would be well for all our workers to study the history of the Waldensian missionaries and to imitate their example of sacrifice and self-denial" (Testimonies for the Church, vol. 5, p. 400). (See also the chapter entitled "Waldenses" in The Great Controversy and J. A. Wylie's History of the Waldenses.)

#### **Huss and Jerome**

During the days of Huss and Jerome, persecution was rampant. They were teaching the truth that Wycliffe had advocated. "The fears of the hierarchy were roused, and persecution was opened against the disciples of the gospel. Driven to worship in the forests and the mountains, they were hunted by soldiers, and many were put to death" (The Great Controversy, pp. 97, 98). Again the trail of truth leads to the forests and mountains where God's people are taking a stand (ibid., p. 65). A new church called the United Brethren was formed.

"Forced to find refuge in the woods and caves, they still assembled to read God's word and unite in His worship" (ibid. p. 119).

#### **Martin Luther**

Martin Luther spent his early years in a miner's cabin with his German parents. Hardship, privation, toil, and strict discipline were the schools where Luther was trained. Luther's preparatory work here outlined gave him strength for the great work God had planned for him (see <u>The Great Controversy</u>, pp. 120, 121).

## Ulrich Zwingli

Ulrich Zwingli was born in a herdsman cottage situated in the Alps. He early learned an appreciation for the elegance of the alpine valleys. "Zwingli's surroundings in childhood, and his early training, were such as to prepare him for his future mission. Reared amid scenes of natural grandeur, beauty, and awful sublimity, his mind was early impressed with a sense of the greatness, the power, and the majesty of God. The history of the brave deeds achieved upon his native mountains kindled his youthful aspirations" (ibid. pp. 171, 172; emphasis supplied).

As we study the lives of those who, in the past, committed themselves wholeheartedly to God, we can readily discern that His plan for training workers is in the beautiful school of nature where one can sense God's presence. Surrounded by true elegance, our eyes are more readily opened to that which He desires us to see, and our hearts are more readily weaned from that which will perish. Such training will produce strong people for God (see Education, p. 211).

# Healing in the Hills

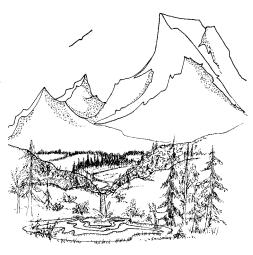
I feel the lure of the mountains, As day after day it calls; I hear the voice of the fountains— The music of waterfalls

I love the air of the mountains The scent of the fragrant pine; And there by the flowing fountains On nature's green carpet recline.

There's therapy on a mountain, While gazing on snow-crowned peaks; You cleanse your soul in the fountain, When the God of nature speaks.

If ever men needed a mountain, They need it much more today; O come and plunge in the fountain And wash your worries away!

—Adlai A. Esteb



# Country Living from the Reformation to the Present

#### William Miller

William Miller was an honest-hearted farmer. He had early learned the essential lessons of self-denial and morality. These lessons he combined with integrity and benevolence. His life on the farm, living in the country, taught him the value of practical work and perseverance. His work climaxed in the interpretation of the great 2300-day prophecy that affected most of the world. God had prepared William Miller for his work.

When God's people sensed the nearness of His coming in 1844, they spent much time in prayer communing with God in retired places. They did not rest until they were right with God and with each other. They chose a retired place in the country because they could commune with God much easier. They were in such earnestness that they would do without food and sleep in order to be right with God and with each other (see <u>The Story of Redemption</u>, p. 371).

"In the movement of 1844, when we believed the coming of Christ was at hand, night after night, when bidding good night to those of like-faith we would grasp their hands, feeling we might not clasp them again until we meet in the Kingdom of Glory. Thus it will be again as we draw near to the close of time. I urge our people to make it their lifework to seek for spirituality. Christ is at the door. This is why I say to our people, do not consider it a privation when you are called to leave the cities and move into country places. Here there awaits rich blessings for those who will grasp them. By beholding the scenes of nature, the work of the Creator, by studying God's handiwork, imperceptibly you will be changed into the same image" (Manuscript 85, 1908, portion in Country Living, p. 14).

#### Ellen White

Through visions, God used Ellen White to guide the early Seventh-day Adventist church. Her work load of writing, traveling, speaking, and resolving conflicts of opinion was tiring. Her health was not robust, but God continually strengthened her.

Ellen and her husband, James, kept a secluded cabin in the Rocky Mountains entirely surrounded by God's created works. There she was refreshed and strengthened. The mountain solitudes put her in touch anew with her Creator. In her words, "From our cottage I could look out upon a forest of young pines, so fresh and fragrant that the air was perfumed with their spicy odor.... Through the works of creation we communed with Him who inhabiteth eter-

nity. As we looked upon the towering rocks, the lofty mountains, we exclaimed, 'Who is so great a God as our God?'" (Life Sketches, p. 256).

"But when we considered God's love and care for His creatures, as revealed both in the book of nature and on the pages of inspiration, our hearts were comforted and strengthened. Surrounded by the evidences of God's power and overshadowed by His presence, we could not cherish distrust or unbelief. Oh, how often have peace, and hope, and even joy, come to us in our experience amid these rocky solitudes!" (ibid. p. 257; emphasis supplied). Such an experience always lifts the spirit and invigorates the soul. Brother and Sister White felt the need to spend many weeks in succession at their mountain cabin. All of us in modern society need this experience. The call of Jesus is, "Come ye yourselves apart into a desert place, and rest a while" (Mark 6:31).

## Schools that Chose a Rural Setting

## **Oberlin College**

The founders of Oberlin College prior to 1844 chose land of unbroken forests in Ohio. "The founders of Oberlin were guided by a wisdom higher than human, since a location, almost forbidding in its physical aspects, and for years quite difficult of access, was a condition indispensable to the formation of the character and the performance of the work to which Oberlin was clearly called" (Studies in Christian Education, E. A. Sutherland, p. 36).

## **Madison College**

Madison College was located on a farm near Nashville, Tennessee. "The usefulness learned on the school farm is the very education that is most essential for those who go out as missionaries to many foreign fields" (Madison School, p. 29). This program was so successful that it was lauded by the world as the correct model of education in The Reader's Digest, May 1938.

## **Avondale College**

The pioneers of Avondale College, with counsel from the Lord to Sister White, chose a spot in a retired country location. Various questions were asked by church leaders, "Do we need workers for the foreign fields? Do we need missionary nurses and young people who love God and who love to minister?" Sister White responds publicly in the church newspaper:

"What can we do in response to these demands? Shall we go into the city, and build up our school where there will be the most ease and comfort? Shall we use the circumstances and surroundings of the country as a means

of developing, as far as possible, the traits and characteristics required? We have chosen the country, and we do not regret the choice" (The Review and Herald, Oct. 11, 1898). But why be so isolated?

In a later issue of <u>The Review and Herald</u>, Mrs. White told the students, "In His providence the Lord had directed us to this place, and had established us here in the woods, away from the large cities and their influences, which are constantly ensnaring the young" (Oct. 25, 1898).

This school was located in the forest a quarter of a mile from the road. One hundred students gathered there (see <u>The Review and Herald</u>, Oct. 11, 1898).

"As we draw near to the close of time the cities will become more and more corrupt, and more and more objectionable as places for establishing centers for our work. The dangers of travel will increase, confusion and drunkenness will abound. If there can be found places in retired mountain regions where it would be difficult for the evils of the cities to enter, let our people secure such places for our sanitariums and advanced schools" (Manuscript Releases, vol. 10, p. 260; emphasis supplied). This counsel will help us today.

#### Present to the Future

We have seen, in our scan of the past, that God has trained His men and women through practical work, communion with God in nature, in the experiences of life, and by studying the pages of inspiration. These were essentials in God's plan in the past, and so it is today.

"But in Joseph and Daniel, in Moses and Elijah, and many others, we have <u>noble examples of the results of the true plan of living. Like faithfulness today will produce like results</u>" (Testimonies for the Church, vol. 9, p. 165; emphasis supplied).



## The Out-Doors Man

He must come back a better man, Beneath the summer bronze and tan, Who turns his back on city strife To neighbor with the trees;

He must be stronger for the fight And see with clearer eye the right, Who fares beneath the open sky And welcomes every breeze.

The man who loves all living things Enough to go where nature flings Her glories everywhere about, And dwell with them awhile,

Must be, when he comes back once more,
A little better than before,
A little surer of his faith
And readier to smile.

-Edgar Guest

## God's Plan Unchanged

God's plan today is the same as it has always been, and that plan will produce results such as it produced when God needed leaders among His past remnant. Persons of character like Joseph, Daniel, Moses, Ruth and Elijah who stood for truth when forces all around were against them, will again be produced.

As did Ellen and James White, so we may have to seek a retreat for a time to get our perspective on life adjusted back to God. By making God first in this enjoyable way, we begin to be changed into His image. Then, as God opens the way, we should make our permanent move into the country. We will have troublous times ahead (see Country Living, pp. 9, 10), which will include persecution, imprisonment, and martyrdom (see Maranatha, p. 199). We will then want to leave the cities and not be able (see Country Living, p. 11).

If we decide to make this move, we are preparing "for a place on the Lord's farm in the earth made new" (Testimonies for the Church, vol. 6, p. 177). "The more nearly we come into harmony with God's original plan, the more favorable will be our position to secure health of body, and mind, and soul" (Country Living, p. 6; emphasis supplied). Our need for God's plan will not decrease but increase as we near the end of time.

"Well," you might say, "that was written for another time-long past, but now

it doesn't apply." This is not true, according to the Lord. "All our health institutions, all our publishing houses, all our institutions of learning, are to be conducted more and more in accordance with the instruction that has been given" (Counsels to Parents, Teachers, and Students, p. 57; emphasis supplied).

"Time and trial have not made void the instruction given, but through years of suffering and self-sacrifice have established the truth of the testimony given. The instruction that was given in the early days of the message is to be held as <u>safe</u> instruction to follow in these its <u>closing days</u>" (Selected Messages, book 1, p. 41; emphasis supplied). (See also <u>Selected Messages</u>, book 1, p. 48 and <u>Selected Messages</u>, book 3, pp. 83, 84).

The impact of this next statement requires a serious second look. "It is Satan's purpose to attract men and women to the cities, and to gain his object he invents every kind of novelty and amusement, every kind of excitement" (Selected Messages, book 2, p. 355).

## A Call to Agrarian Living is a Call to be Spiritually Prepared

The dictionary defines the term **agrarian** as; "rural and agricultural, related to land, the advancement of agriculture." Not long ago, I came across an article in which a comparison was made between two farms. The first one was operated by a farmer of the Amish religion and the other was a large, individually owned, commercial farm. The Amish property was cultivated and harvested with horses, while the second one was tilled and harvested with engine-powered machinery.

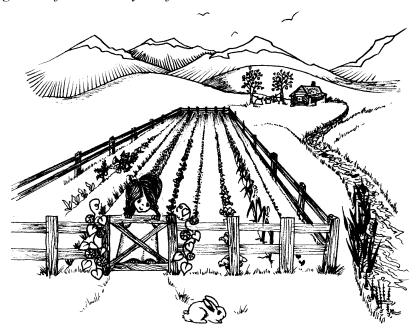
The Amish farmer had all of his equipment paid for, while the second farmer owed \$250,000.00 on his equipment. The Amish farmer owned his 160 acres, while the second farmer had one and a half sections of inherited land.

The conclusion of the article included some salient comments. When an Amish farmer buys a piece of land, it takes him three years to loosen the soil that has been packed by the weight of tractors and combines. The Amish farmer, using horses, made \$30,000.00 per person in his family in one year, while the second farmer lost money and incurred further indebtedness. Simple farming pays in many ways. I am not trying to make a case for horse-drawn machinery or diesel powered machinery, but only to point out that a simple lifestyle will pay dividends.

We, like the Amish, Hutterites, and other similar religious groups, are called to be an **agrarian** church. We may differ in our beliefs regarding the sanctuary, the Sabbath, and health reform, but we are agrarian. Psalm 104:14 states, "...and herb for the service of man: that he may bring forth food out of the earth."

It has always been God's plan for His children to eat the fruit of their own hands. When the prophet saw heaven in vision, he recorded what he saw in Isaiah 65:21, 22: "And they shall build houses, and inhabit them; and they shall

plant vineyards, and eat the fruit of them. They shall not build, and another inhabit; they shall not plant, and another eat." In heaven we are going to be planting and eating what we grow. From Eden to Eden it has been God's plan for His people; even the kings He sets up and takes down are to be served from the field. Ecclesiastes 5:9 says, "Moreover the profit of the earth is for all: the king himself is served by the field."



We should have a knowledge of how to grow our own food and preserve it. If agriculture is the A, B, and C of our education, then we can conclude that we should be an agrarian church (see Testimonies for the Church, vol. 6, p. 179). We can actually use agriculture as part of our missionary work.

"There are multitudes of poor families for whom <u>no better missionary work</u> could be done than to assist them in settling on the land and in learning how to make it yield them a livelihood" (The Ministry of Healing, p. 192; emphasis supplied).

How can we be sure that we can depend on the soil to feed us?

"If the land is cultivated, it will, with the blessing of God, supply our necessities" (Testimonies for the Church, vol. 6, p. 178).

"God can bless twenty acres of land and make them as productive as one hundred" (Testimonies for the Church, vol. 5, p. 152). A promise like this is worth remembering.

We have assurance that, as we work and cultivate the land, He will supply our necessities. But gardening involves much more than just providing food for our

table. Gardening protects our health in many ways; it improves our diet, it is good outdoor exercise, and it keeps us from spending time in less spiritual pursuits.

"Exercise in the open air should be prescribed as a life-giving necessity. And for such exercises there is nothing better than the cultivation of the soil" (The Ministry of Healing, p. 265).

#### Schools—Vital Part of the Church

"It is God's plan that agriculture shall be connected with the work of our sanitariums and schools. Our youth need the education to be gained from this line of work. It is well, more than well,—it is essential,—that efforts be made to carry out the Lord's plan in this respect." Counsels on Health, p. 223; emphasis supplied).

"The usefulness learned on the school farm is the very education that is <u>most essential</u> for those who go out as missionaries to many foreign fields" (Series B, No. 11, p. 29; emphasis supplied).

Valuable lessons are learned when teachers, students, and families work together with God.

"Look at nature. There is room within her vast boundaries for schools to be established where grounds can be cleared and land cultivated. This work is essential to the education most favorable to spiritual advancement; for nature's voice is the voice of Christ, teaching us innumerable lessons of love and power and submission and perseverance. Some do not appreciate the value of agricultural work. These should not plan for our schools, for they will hold everything from advancing in the right lines. In the past their influence has been a hindrance" (Testimonies for the Church, volume 6, page 178; emphasis supplied).

# Sanctuary Ranch School Song

Chorus:

The wilderness, so wild so free, Holds secrets of eternity. Lord, take my hand, how dear to me, This sanctuary then will be.

—Linda Franklin

## "Nature Day" Activities

Those of you who plan to move to the country may enjoy scheduling "nature days"; days in which family activities include only non utility-based projects. Ideally, this would be a day when the whole family is home. There are many activities to enjoy together. Here are a few suggestions:

- 1. Use a wood cook stove for meals and baking.
- 2. Practice using a crosscut saw and a splitting maul for firewood.
- 3. Hand carpentry.
- 4. Camping.
- 5. Story time; children especially love stories about when their parents and grandparents "made-do" with what they had.
- 6. Hiking and picnicking.
- 7. Gardening—use only hand tools, paint and/or print row markers, order seeds, plan a layout.
- 8. Singing (with nonelectrical instruments).
- 9. Write letters.
- 10. Trim and fill kerosene lamps and use them for light.
- 11. Dry clothes outdoors.
- 12. Take a "bird bath."
- 13. Use your wood heater.

Overcoming inertia is the hardest part of this decision. Far from being a "boring" day, children find it exciting to learn skills from their parents. It is especially rewarding to begin the day with prayer together that the Lord will use the experiences of the day to strengthen family bonds and help us to be ready for the coming of Jesus.

# **Guidelines for Moving to the Country**

Even though it is late in earth's history and God wanted us out of the cities years ago, we should move no faster than God opens the way. There are guidelines for our move to the country. You will recognize providence when you begin to act on God's plan. Pray often for help.

"Get out of the cities as fast as possible" (Medical Ministry, p. 310).

"For years we have been instructed that our brethren and sisters, and especially families with children, should plan to leave the cities as the way opens before them to do so. <u>Many will have to labor earnestly to help open the way</u>" (Country Living, pp. 24, 25; emphasis supplied).

"Those who have felt at last to make a move, let it not be in a <u>rush</u>, in an <u>excitement</u>, or in a <u>rash manner</u> or in a way that hereafter they will deeply regret that they did move out. Do nothing without seeking wisdom of God.... All that anyone can do is to <u>advise</u> and <u>counsel</u>, and then leave those who are convicted in regard to duty to <u>move under divine guidance</u>, and with their whole hearts open to learn and obey God" (Country Living, p. 25; emphasis supplied).

"The parents should get as suitable a place as their means will allow.

Though the dwelling may be small, yet there should be land in connection with it, that may be cultivated" (Country Living, p. 24).

By choosing a dark area and setting up a family outpost in the country, we can work the cities as did Enoch.

"Choose some locality where you will have opportunity to let your light shine forth amid the moral darkness" (Fundamentals of Christian Education, p. 495).

"God will help His people find such homes outside the cities" (Medical Ministry, p. 310).

It will take some work and determination, but no move you have ever made will be more rewarding than moving your family to the country. (See pages 24-28 in <u>Country Living</u>, "Guided by God's Providences.")

## **Looking for Property**

Every property has advantages and disadvantages. It might be a good idea to make a list, in order of importance, of what you envision as being the best for you. Do not feel obligated to make a certain property work which is not right for you.

- 1. Clean air is vital.
- 2. **Good water**—A spring that arises on the property will reduce the possibility of contamination from adjoining parcels. The best location for water is at a higher elevation than the house; this enables gravity flow without the need for pumping. Other water sources are useful and desirable; creeks, rivers, lakes, or ponds for irrigation.
- 3. Good soil-River or creek bottom for growing food.
- 4. **Wood**—Your property should have hardwood or evergreen trees. Wood is essential as a fuel source for cooking and heating. Log cabins can be built and/or lumber can be cut by hand methods for use in construction.
- 5. **Location**—It is important that you choose a **quiet**, secluded place, an attractive country setting, a place you would love to visit or live. It should be a place of scenic beauty, if it is to no one else but you.
- 6. **Financial** consideration—Make arrangements to get your property **paid for** as soon as possible. Watch for a providence in price or provision from family and friends.
- 7. A place with **buildings** already on it is often advantageous (see Loma Linda Messages, p. 474).
- 8. **Invite others** to your new outpost.
- 9. Seek counsel of others who are experienced in country living.

#### Youth Ranches and Retreats

Rehabilitation centers have recognized, for some time, the value of using beautiful natural surroundings to enhance the educational process and to recover young people from the cesspools of city life.

Deep Springs College, located near the California/Nevada border, is a remote ranch, where the students are academically advanced, but where nature and practical work play a large part in their success (<u>Campus Voice</u>, 1986, p. 25).

The Wilderness Retreat is located on a 4,560-acre working cattle ranch in northwestern Montana. It is in a beautiful, remote location where the youth live in small cabins. The director had previous experience with witnessing first-hand how the wilderness had helped rehabilitate drug-addicted teens.

Richard Jeffries, in <u>Countryside Ideals</u>, July 1971, agrees: "If you wish your children to think deep thoughts, and to know the holiest emotions, take them to the woods and hills and give them the freedom of the meadows; the hills purify those who walk upon them."

"Here among the scenes of nature <u>Christian character is more easily formed</u> than amid the wickedness of city life" (<u>Evangelism</u>, p. 46; emphasis supplied).

"Send the children to schools located in the city, where every phase of temptation is waiting to attract and demoralize them, and the work of character building is tenfold harder for both parents and children" (Country Living, p. 13).

"Never can the proper education be given to the youth in this country, or in any other country, unless they are separated a wide distance from the cities. The customs and practices in the cities unfit the minds of the youth for the entrance of truth" (Life Sketches, p. 351; emphasis supplied).

Young people are quick to respond to nature. Cari was a student at Sanctuary Ranch when she wrote this poem reflecting her understanding of God's plan for survival.

# Oh, Deep Still Hills

Oh, deep still hills of misty shade, To blue infinity you fade, The tranquil front that you display Will be our hiding place someday.

When weary tears fall to the earth, Fulfill the purpose of your birth, And shield His hunted ones with care So only God can see them there.

-Cari Strand-Mutch

Our choice of lifestyle and the location of our home affects our spiritual life. This is not a new thought. Country living has been a part of a higher plan for thousands of years. It is of special importance now that we move out of the cities to the country in order to survive. Before any move, plan well and ask God to help and to lead by His providences.

#### FOR FURTHER STUDY

#### **Schools**

- 1. Education, pp. 211-12: "They lived close to the heart of nature.... Such training produced strong men.... It would be a great aid in educational work could every school be so situated as to afford the pupils land for cultivation and access to the fields and woods."
- 2. Testimonies for the Church, vol. 8, p. 216: "The Lord will make the wilderness a sacred place, as His people, filled with the missionary spirit, go forth to make centers for His work, to establish sanitariums, where the sick and afflicted can be cared for; and schools, where the youth can be educated in right lines" (emphasis supplied).
- 3. Fundamentals of Christian Education, p. 325: "It will take time to develop the true missionary spirit, and the farther they [the young people] are removed from the cities and the temptations that are flooding them, the more favorable will it be for them to obtain the true knowledge and develop well-balanced characters" (emphasis supplied).
- 4. Counsels to Parents, Teachers, and Students, pp. 203-4: "Intermediate schools are highly essential. In these schools thorough work is to be done; for many students will go forth from them directly into the great harvest field.... The Word of God is to lie at the foundation of all the work done in our intermediate schools. And the students are to be shown the true dignity of labor.... He will open ways before us to establish small schools in retired places for the education of our youth, not only in the Scriptures and in book learning but in many lines of manual labor" (emphasis supplied).
- 5. <u>Testimonies for the Church</u>, vol. 6, p. 152: "Our schools must be more like the schools of the prophets. They should be training schools, where the students may be brought under the discipline of Christ and learn of the Great Teacher. They should be <u>family schools</u>, where every student will receive special help from his teachers as the members of the family should receive help in the home" (emphasis supplied)
- 7. Manuscript Releases, vol. 10, p. 260: "If there can be found places in re-

tired mountain regions where it would be difficult for the evils of the cities to enter, let our people secure such places for our sanitariums and advanced schools" (emphasis supplied).

- 8. Fundamentals of Christian Education, p. 526: "In the night season these words were spoken to me: 'Charge the teachers in our schools to prepare the students for what is coming upon the world'" (emphasis supplied).
- 9. Testimonies for the Church, vol. 7, p. 281: "Young men and young women, gather a stock of knowledge. Do not wait until some human examination pronounces you competent to work, but go out into the highways and hedges, and begin to work for God.... Constantly improve.... Tax the powers of mind and body, ever keeping eternal realities in view.... Become more and more refined, more spiritually cultured. Then you will have the best diploma that anyone can have—the endorsement of God" (emphasis supplied).

## **God's Promises for Country Living**

Psalm 37:3: "Trust in the Lord, and do good; so shalt thou dwell in the land, and verily thou shalt be fed."

II Chronicles 7:14: "If my people, which are called by my name, shall humble themselves, and pray, and seek my face, and turn from their wicked ways; then will I hear from heaven, and will forgive their sin, and will heal their land."

Ecclesiastes 5:9: "Moreover the profit of the earth is for all: the king himself is served by the field."

Psalm 104:14: "He causeth the grass to grow for the cattle, and herb for the service of man; that he may bring forth food out of the earth."

Ezekiel 38:7: "Be thou prepared, and prepare for thyself, thou, and all thy company that are assembled unto thee, and be thou a guard unto them."

Education, p. 126: "Every command is a promise; ... God does not give commands without giving power to obey."

<u>Testimonies for the Church</u>, vol. 6, p. 166: "He will not give commands without giving with them power for their performance."

Testimonies for the Church, vol. 6, p. 178: "If the land is cultivated, it will, with the blessing of God, supply our necessities. … the blessing of God, which spreads a table for His people in the wilderness, will never cease."

Country Living, p. 13: "Send the children to schools located in the city, where every phase of temptation is waiting to attract and demoralize them, and the work of character building is tenfold harder for both parents and children."

Country Living, p. 10: "The work of the people of God is to prepare for the events of the future, which will soon come upon them with blinding force." Country Living, p. 21: "I see the necessity of making haste to get all things ready for the crisis."

Country Living, p. 9: "Our cities are increasing in wickedness, and it is becoming more and more evident that those who remain in them unnecessarily do so at the peril of their soul's salvation."

<u>Testimonies for the Church</u>, vol. 5, p. 152: "Could our brethren remember that God can bless twenty acres of land and make them as productive as one hundred..." <u>Country Living</u>, p. 11: "But erelong there will such strife and confusion in the cities, that those who wish to leave them will not be able. We must be preparing for these issues. This is the light that is given me."

Medical Ministry, p. 310: God will help His people to find such homes outside of the cities."

#### **Possible Home Industries**

"My business is serving the Lord. I cobble shoes to pay expenses." William Carey

Gardening and Greenhousing: cut flowers, vegetables, herbs, dried foods

Yardwork: landscaping, tree trimming, tree planting, nursery

Wood: firewood, cabinet work, furniture making

Art: printing, photography, crafts, signs, carving, window painting, writing

Computer Arts: web page designs, bookkeeping, trouble-shooting

Tradesman: mechanic, electrician, plumbing

Carpentry: contracting, laborer, remodeling, house painting, drywall, roofing

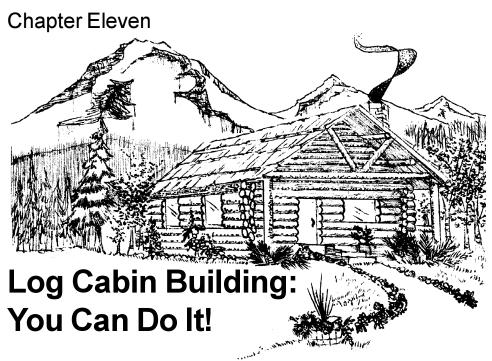
Janitorial work: custom cleaning, window washing, carpet care

Teaching: home school, tutoring, specialty classes, music lessons

Sewing: upholstering, mending, customized

#### **Books**

History of the Waldenses, J. A. Wylie, Pacific Press Publishing Association, Nampa, Idaho, 1977. Country Living, Ellen White, Pacific Press Publishing Association, Nampa, Idaho. The Great Controversy, Ellen White, Pacific Press Publishing Association, Nampa, Idaho. The Desire of Ages, Ellen White, Pacific Press Publishing Association, Nampa, Idaho. Life Sketches, Ellen White, Pacific Press Publishing Association, Nampa, Idaho. The Wilderness World of John Muir, Edwin Way Teale, Houghton-Mifflin, Boston, MA, 1954. Experimenting With God in Families and Schools, Raymond and Dorothy Moore, Box 1, Camas, WA 98607, 2001.



"Go up to the mountain, and bring wood, and build the house..." (Haggai 1:8).

everal years ago, I was invited to teach a log cabin seminar in western Tennessee. As I backed out of the driveway, I heard an ominous clunk. It took me about three hours to find and replace the rear universal joint in my old 4x4 Ford pickup. By then, I knew it would be impossible, even with a police escort, to meet my appointment on time.

With only one stop for fuel, we drove across the state, arriving at the National Guard Armory half an hour late. A uniformed army officer opened the razor-wired gate and signaled us into a parking lot. Another man motioned us to the other side of the building, and a third man signaled someone inside the building. A huge door opened. There, in front of us, sat the entire class of over 100 people waiting patiently for our arrival. Everyone pitched in and we unloaded our model cabin and tools in record time.

One message came through to me loud and clear: I was as ready as I could be—my tools were sharp and I knew how to use them. I had my notes and model cabin ready. I even knew the day and hour I would be needed. But without God's intervention and the help of many willing hands working in unity, I would not have been able to fill my place properly.

So it is with our end time survival preparations. No matter how well we prepare, we will never outgrow our need of each other and of God.

## **Invitation to Cooperate With God**

There is a verse that makes me think God likes log cabins. "Go up to the mountain, and bring wood, and build the house; and I will take pleasure in it, and I will be glorified, saith the Lord" (Haggai 1:8).

In an article entitled "Cooperation" by Ellen G. White, (Review and Herald, May 28, 1908), building forest homes are considered a blessing. "God desires every human being in our world to be a worker together with Him. This is the lesson we are to learn from all useful employment, making homes in the forest, felling trees to build houses, clearing land for cultivation. God has provided the wood and the land, and to man He has given the work of putting them in such shape that they will be a blessing" (emphasis supplied).

A whole new frontier emerges for students, "<u>Our schools should not depend upon imported produce</u>, for grain and vegetables, and fruit so essential for health. Our youth need an education in felling trees and tilling the soil as well as in literary lines" (Testimonies for the Church, vol. 6, p. 179; emphasis supplied).

I consider these counsels an invitation to learn the joys of working with our hands in cooperation with God, in order that, even in building our home, He may be glorified. Here are a few reasons to consider learning to build a simple house made of logs:

First: People will be leaving the cities at the eleventh hour to escape persecution. They will be leaving because they have accepted the Sabbath truth in spite of the wrath of the beast (see Revelation 13).

Second: People will be leaving the cities; from streets, tenements, condos and even 50-floor apartments, penthouses and multi-million dollar homes; coming to our outposts with very few earthly possessions (Compendium of City-Outpost Evangelism, p. 229).

Third: They will need shelter, the first rule of survival. We will need to provide this shelter during a time when we can't buy and sell.

Fourth: With a little planning, practice and forethought, logs are one way to build in a time of financial strain.

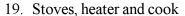
#### Tools of the trade

Tools are of primary importance. Tools and materials can be purchased from a number of sources. Used tools can be found at yard sales and second hand shops. (For a picture of these tools see back cover and last page of this book.) It is a good plan to collect your tools before the crisis when you can't buy them.

1. Chain saw (speeds up building process but not used in "no buy-no sell")

- 2. Crosscut saw, one and two-man (for no buy-no sell situation)
- 3. Frow, for shake splitting (described later in this chapter)
- 4. Splitting axes, chopping axes, and hatchets
- 5. Splitting maul, six- or eight-pound, and wedges
- 6. Claw hammer
- 7. Hand drill with bits from 1/8 to 1 inch (metal)
- 8. Drawknives for peeling logs and planing
- 9. Four-or six-foot level
- 10. Plum bob
- 11. Scribe or locking tape
- 12. Hand plane
- 13. Wood chisels and gouges
- 14. Log tongs
- 15. Peavey
- 16. A rake (clean up)
- 17. A mattock, or grubbing hoe

18. Brace with bits from ½ to 1-inch (wood)

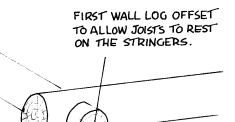


- 20. Chimney
- 21. Stovepipe
- 22. Hinges
- 23. Windows, clear plastic
- 24. Plastic water pipe
- 25. Alaska mill or pit saw

## **Preparing the Building Site**

The property for your log cabin must be just right; it will have wood, water, and a good garden spot. Its view and location will be beautiful. It must be well drained; do not build on a low spot (Ministry of Healing p. 274). After you have chosen the place to build your cabin, prepare your site and begin the foundation by "squaring up."

Diagonals in any four-sided figure will determine its squareness. Use a long tape measure, a string, or rope.



SCRIBE

PEAVEY

TIE LOG

Compare the measurements. When the diagonals are equal, your building is square. Mark each corner with a stake so that you will know where to put your footings or foundation.

A simple way that footings may be constructed is by using flat rocks or concrete pads placed on the ground. Concrete building blocks may also be used as piers. Plan eight feet of distance between piers.

## **Falling Trees**

Choosing timber, falling trees and getting them to the building site is a big job. I like to encourage beginners by telling them that when the logs are at the cabin site, stacked and peeled, the cabin is half finished.

Select trees that are straight and show the least amount of taper. Where we live, lodge pole pine is best for cabin building. Ideally, all the trees you cut should be of the same diameter or within one inch of the standard measurement you choose. Smaller logs are lighter in weight but do not insulate as well and it takes more logs to achieve the height of wall you desire. A simple method for maintaining proper diameter is to cut a length of string the circumference of the "ideal" tree you have selected. For example, if you select a 7-inch tree, your circumference would be 22 inches.

To determine the straightness of a tree, stand at the base of the tree and sight straight up from two different positions. Don't be concerned if it is leaning, just check to see if it is straight. Measure the circumference of the tree with your string to see if it meets your requirements for size. Next, check to see if there is at least one section in the tree the length of your cabin wall. If there are several limbs on the log, it will be harder to fit, but it can be used.

A tree will fall in the direction it leans. If it is standing straight, the side with the most limbs will determine the direction of fall. **Never fall trees when the wind is blowing!** With an ax or saw, make an undercut facing the direction in which you want the tree to fall. Then make a back cut, leaving a hinge of wood one inch thick to keep the tree connected **full width** of the stump. **Never cut the tree off the stump!** If the tree is large enough, adjustments can be made in directing the fall of a tree by inserting a wedge in the back cut.

Because this is dangerous work, be sure that no objects are in the falling path of the tree. You should clear all debris and brush from around the base of the tree so that it will not interfere with your saw or your escape route when the tree begins to fall. Make sure all of your helpers, including your dog, are far from the tree before you start to cut it.

As the tree is falling, step straight back about ten feet and then to either

side of the tree butt so that you will be out of the way in case of a kick back. The tree could hang up on another tree and move to the left or right. You should wear ear protection against chainsaw noise, eye protection (goggles) and a hard hat to protect yourself from falling limbs. If you are using a chain saw, always be aware of the position of your saw tip, and inform your coworkers that you need a 5-foot working radius. For safety's sake, no one should ever reach into your workspace trying to help you while you are operating a chain saw!

Once the tree is on the ground, cut it to length and limb it. The length will be determined by your floor plans plus two feet; a foot beyond the notches at each end.

CAUTION: When using blowdown (trees ripped up by the roots during a previous windstorm) do not allow children to play in the hole left by the tree roots. The stump can fall back into the hole when the tree is cut off and cause serious injury!

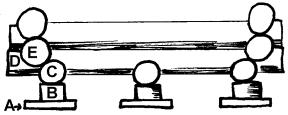
Cabin logs should be cut and peeled in the late spring. Let them dry over the summer and then begin building your cabin in the fall. I have built log cabins using dry trees (dead standing) and I have used green ones. It is much easier to use dead trees than green! Be careful when you stack the logs as they can "belly" on you and become crooked when they dry out. One of the best methods to ensure straightness is to simply girdle the green tree in the early springtime (cut through the bark all the way around the tree to keep the sap from flowing) while it's standing and let it cure over the year; by the following spring it will be ready to cut down and the bark will peel easily. The tree remains straighter by leaving it to dry in an upright position. Your available time will determine which method to use.

In a single-room log cabin, you will need approximately 40 to 60 wall logs, plus purlins. The number of logs, will depend upon the size of your cabin, your floor plan, and the size of the logs you choose to use.

## Piers, Stringers, and Tie Logs

You are now ready to place the stringers. These must be straight logs with a minimum diameter of 10 inches and hardly any taper. The stringers are placed directly over upright piers (**B**). Piers are sections of treated or untreated wood set on flat rocks or concrete blocks (**A**) to prevent contact with the ground. Inserting

a piece of tarpaper between **A** and **B** will help prevent insect invasion and rot. Stringers are the logs on which you will place the two outside tie logs (**D**). Wall logs (**E**) are the first logs on the

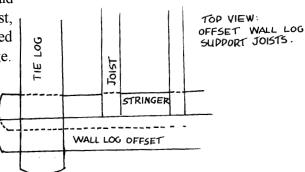


front and back of the cabin. The stringers (**C**) are held in place by the tie logs (**D**). Stringers should not be notched. A **slight bit** of flattening on the lower side of the stringers may be required so that they will sit firmly on the piers. The stringers should be eight feet apart. The tie logs (**D**) are doweled or nailed to the stringers (**C**).

## Floor Joists and Flooring

Floor joists are constructed from smaller logs (approximately five inches in diameter) laid across the stringers on two-foot centers (see illustration on page 193). Floor boards are then laid

across the joists. The quickest, most stable floor is constructed of two-by-six joists on edge. Floor boards can be applied at random lengths to center over the joists. I have used my Alaska Mill to cut boards for flooring, door sills, windowsills, window



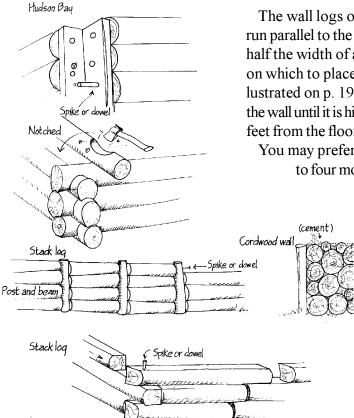
framing, and door framing, and it works well. This is one way to provide the boards for construction as needed. If no Alaska Mill is available, a one-man crosscut saw can also be used to cut lumber. A pit saw may be used, if available, as part of your survival tool kit.

Floor boards may be doweled, planed, and sanded for a nice rustic look which only improves with use. Finished flooring may also be applied as desired.

Moss sprinkled with lime and sulfur can be used for floor insulation and as a deterrent to vermin. This is a dry mixture requiring a second layer of floorboards (or plastic) beneath the floor to hold it in place.

## Wall Logs

Now, you're ready to begin your first round of wall logs. There are many styles of log cabin construction; Hudson's Bay, stack log, cordwood, saddle notch, and dovetail, to name a few. We have chosen the saddle notch method to illustrate. In building your walls, it is worthwhile to take the time to fit the logs well to each other to increase the insulating factor. Saddle notching is a simple and sturdy way to fit logs together. But, for whatever style of notch you choose, the insulation factor is greatly enhanced if you take the time to fit the logs into the wall properly. Plumb the logs center over center.



The wall logs on the sides of the cabin run parallel to the stringers, and are offset half the width of a log so as to have a sill on which to place your floor joists (as illustrated on p. 199 and 201). Add logs to the wall until it is high enough; at least seven feet from the floor for a finished wall.

You may prefer to continue on up two to four more rounds above the loft

support logs before beginning the gables, thus giving more head room in the attic or loft. The gables are very simply constructed. Continue with your wall logs into the gables, tying them together with purlins running full length of the building. In determining the

pitch of your roof and gable, you will need to consider geography. Any pitch less than a five-twelve pitch (5 inches of rise for every 12 inches of run) is not desirable in snow country. Two jigs may be constructed on each gable end of the cabin at a six-twelve pitch so that purlins may be moved against the inside of the jig to maintain an accurate pitch. At the desired pitch purlins are tied to the gable logs. Do not notch the purlins.

Continue on up with the gables and the purlins until the ridge pole is placed. The gable logs are notched and pinned to the purlins. Then the gable log ends are cut off flush with the angle of the roof pitch and you are ready to begin the roof.

The ridge pole should be your straightest log with the least taper of any log in the building. Choose your ridge pole early and set it aside. This will provide a good strong support for the roof of the cabin.

## **Saddle Notching**

Always cut the notch from the under side of the upper log to prevent mois-

ture retention. All notching and limbing can be done with an ax.

- 1) Determine the distance between log **A** and **C** with a locking tape measure.
- 2) The contour of the notch is dictated by the shape of the crosswise log, **B**. To create a notch pattern, keep the tape measure **perfectly vertical** following the contour across the top half of log **B**. Use the locked tape as a scribe, marking dots in several locations on the outside of log **A**. Connect the dots into a smoothly arched line.
- 3) Repeat this pattern on the opposite side of  $\log \mathbf{A}$ .
- 4) Roll the log so that the portion to be notched faces upward.
- 5) Using your chain saw, cut 1 inch serial sections through the notch pattern. **Do not cut past your pattern marks.**
- 6) Using your ax, remove the slices of wood from log **A**.
- 7) Smooth the newly shaped notch with the tip of your chain saw.
- 8) Roll log **A** into place. Slide log **A** back and forth over log **B** to reveal high spots along the length of the log and in the notch.
- 9) While log **A** is resting on its new notch, run your chain saw full length between logs **A** and **C**. The approximate ½ inch width of your saw blade indicates a good fit.

# ck B C h, gs A and C. The approximate 1/4 inch d fit.

В

#### Lofts

A portion of the attic, or even the whole attic can be used as a sleeping loft or for storage. Loft beams are placed across the room on top of the last round of wall logs. The loft support beams are hefty logs, about 10 inches in diameter, placed on three- or four-foot centers. To secure these beams to the wall, flatten them where they rest on top of the wall so they won't roll then spike or dowel them into place. Place flooring over your loft joists, using two by six lumber.

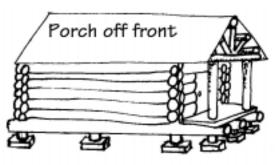
After the roof is on your cabin, a decorative safety railing is constructed inside the cabin across the front of the loft supporting the overhead purlins. This

railing strengthens the structure and assists in building the roof. A ladder can be provided for loft access. The ends from the loft support beam may be cut to the angle of the roof.

#### **Porches**

There are probably as many floor plans as there are log homes, but keep your first cabin simple. A beaver can cut down a pretty big cottonwood,

but I have seen even that busy little animal leave a tree half finished because he bites off more than he can chew! Log building is not a difficult, but it is time-consuming and can get discouraging to the beginner. For the sake of simplicity, we have considered only a single room cabin. This could in-

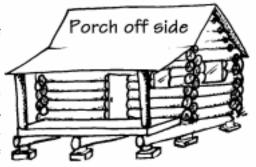


volve a porch off the gable end or off the side. Making a porch for a small cabin is relatively easy, and either style is widely used.

In the case of a porch off the front, using 18-foot logs, our cabin will end up with a room 16-feet square. When you begin to build, allow for the porch to be supported by the same stringers that support the cabin floor. This means the stringers will extend to 6 or 8 feet beyond the front gable end. Then, when you reach the top log of the cabin wall, allow it and the purlins to extend out in front of the cabin (to the same length as your stringers) to give roof support over the porch. The floor of the porch is constructed over stringers; the porch roof is built on the purlins. You will place upright posts on top of the porch floor to support the two outside purlins. On top of upright posts, a horizontal cross-tie is placed to support the front end of the ridge pole. Fasten the cross-tie by flattening it on the underneath side over the upright. Spike it or dowel down through the purlin, cross-tie

and into the upright. Roof the porch as you would the rest of the cabin.

For a cabin with the porch off the side, extend the tie logs (that are notched over the stringers) six- to eight-feet beyond the outer wall of the cabin to support the porch floor. As the walls are finished, the top wall logs will be extended the same length as the



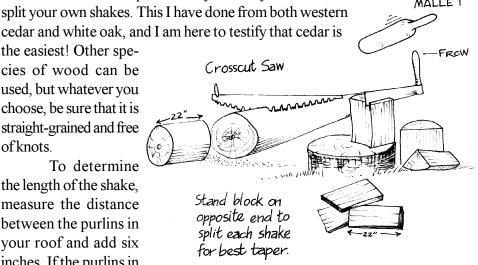
tie logs in order to support the porch roof. Upright posts are placed under these extended top wall logs and down to the porch floor to support the beam which forms the outer edge of the porch roof. These upright posts must be supported from beneath with a block and pier. Additional support for the porch floor can be built by adding a beam under the floor. These additional support beams may be attached to the cabin across the porch floor with dowels or heavy spikes. These additional beams are supported from the ground at the outer edge of the porch with a concrete block and pier. Attach rafters to outer log beam and cabin wall. Then strapping, such as one-by-fours are placed over the rafters in the porch in preparation for shake roofing.

## **Shake-splitting**

The most inexpensive way to roof your cabin is to split your own shakes. This I have done from both western

the easiest! Other species of wood can be used, but whatever you choose, be sure that it is straight-grained and free of knots.

To determine the length of the shake, measure the distance between the purlins in your roof and add six inches. If the purlins in your roof are 16 inches



HARDWOOD

apart, plan on your shakes being 22 inches long. You need not use sheathing or any other material on your roof. Shakes may be applied directly to the purlins.

The art of shake-splitting begins with the selection of straight-grained wood, that is, wood without knots. Yellow or western cedar seems to be the best, but redwood, white oak, or any knot-free straight grain wood can be used. Select and peel the log you will be using for shakes, then cut the log into blocks that are the length of the shakes that will fit your roof. Then quarter the blocks.

Next, you will need a frow. A frow is an old-fashioned tool our grandfathers used in shake-making. A frow may be purchased or is easily made from a piece of steel attached to a 16-inch handle, as illustrated. The back edge of the frow is about 1/4 inch thick and tapers to the edge of the blade. Place the sharp

edge of the frow blade about 1/2 -3/4 inch into the block; this will be the thick edge of the shake. Experiment with the least amount of thickness that will allow a full-length shake. Use a wooden mallet to drive the frow into the shake block about the width of the frow blade. Then separate the shake from the block by pushing forward on the handle until the shake pops free of the block. Turn the quarter block over and place the edge of the frow at the 3/4-inch thickness and repeat this process until the block is less than 4 inches in width. Use the remainder of the block for fuel in cooking or heating.

## **Roofing the Cabin**

Lay shakes side by side across the bottom edge of the roof, in a random wide/narrow, thick/thin pattern. You may use either 3/8 inch hardwood dowels (if you do not have nails) or 1<sup>1</sup>/<sub>4</sub> inch ring-nails (preferably with a rubber washer) to attach the shakes to the purlins. Over the cracks (the spaces where your shakes meet), lay a second row of shakes, making sure each crack has at least a two-inch

3/8"DRILL

3/8" DOWEL

ENTER CAP

width of shake over it to prevent rain from seeping through. To say it another way, each row of shakes on your cabin will have two layers of shakes. Repeat this process on each row all the way to the ridge.

The easiest way to cap the ridge, to keep it from / leaking, is to use flashing; aluminum is preferred. If aluminum flashing is unavailable, you may use one of two other methods for sealing the ridge. The first is to

extend the last row of shakes on the windward side of your cabin over the shakes on the leeward side. The second method is to come down the center with overlapping, pre-fitted shakes. All of these methods can yield a leak-proof roof, and, properly done, a shake roof will last many years. The roof may be insulated with friction fit insulation between purlins under the shakes. A sod roof is financially inexpensive and relatively easy to build, too. Cover purlins with heavy plastic sheeting and tack boards or poles around the outside edge of the roof to hold the sod from slipping. Lay sod strips directly on the roof in a mat no less than 4 inches thick to give the roots room to grow. A sod roof is homey and artistic, but will need reworked every few years.

#### **Doors and Windows**

When cutting the doors and windows, nail a two-by-four, or some other straight edge, precisely opposite each other on the inside and the outside of the wall of your cabin in the exact location of the window or door you have chosen. Be sure these guides are straight up and down. Be sure to allow for two by six framing or casing material when you measure and mark your opening. With a chain saw, or crosscut saw, cut beside the two-by-fours so that the logs fall free of the opening. Let the cut logs fall outside the building. The two-by-fours that you first nailed to both the outside and inside as wall guides will continue to hold the loose ends of the wall from falling out while you prepare your framing or casing material. The framing material is constructed of two-by-sixes nailed or lag-screwed into the ends of the logs. Dowels may also be used. Lag screws or dowels are

particularly valuable in a door casing because

they hold more firmly.

A door may be made from hand-sawn lumber and doweled together as shown. Allow 1/4 inch on each side of door opening to ensure closure. A door can then be shut from the outside, as in the case of a root cellar. Hinges may be made of heavy truck mud flap material.

A hook and eye type latch is easily constructed from bent nails which will enable closure from the inside or outside.



Unique handles can be made from limbs. Windows are optional, but remember that

log buildings tend to be dark inside, so additional light from windows adds cheer to your cabin. Having clear plastic on hand helps in the construction of simple windows. Plastic can be stretched over a frame and fastened by use of dowels and wooden strips. You can also use glass windows if available.

Once you have constructed your window, set your window in the opening against a window jamb constructed of ½ inch square wooden strips. When the window is inserted into the opening, another strip of wood may be nailed inside to hold the window in place.

In warmer climates, opening shutters can be built to allow light to come in through just an opening in the log walls. These shutters can be built as a scaleddown version of the door. They can also be built as two doors closing together.

## The Chimney

You may want to build a chimney from chimney block and mortar (three parts sand, one part cement, no lime). These are simple to lay. Be sure to level each block. The use of concrete chimney blocks next to wood walls is safer than stovepipe. Many people find metal chimneys easiest to use. If a metal chimney is used, you will need flashing and a waterproof unit in the roof itself so that leaks are prevented and that the heat produced will not cause a fire hazard. You may wish to put such a 7-inch insulated chimney into your "tool box" before "no buy-no sell."

A chimney may also be built from "scratch" using 2- or 3-inch diameter logs, notched together in approximately a 2 by 3 foot rectangle and lined inside and out with clay. The pioneers used this method, but were troubled with chimney fires as the clay fell out. Yet another approach is to use the clay to set stones in a chimney form. Because of mass, the stones tend to hold heat. **Do not use river rocks as they may explode when heated.** 

Whatever method of chimney construction you use, the chimney should be situated as near the peak (center of cabin) as possible. This keeps the heat in the cabin longer as it travels up the pipe inside the cabin and also allows you to get the chimney farther above the cabin without extra support outside. Locating the chimney above the peak will aid in drafting your stove. The chimney, outside the roof, should be extended at least two feet above the ridge **so that sparks do not fall down and ignite your roof.** Many cabins have burned down because there was simply not enough clearance between the roof level and the height of the chimney.

# **Log Preservation**

The first step in preservation of logs is to remove the bark. If your cabin was built with the bark still on the logs, take a wide-blade chisel and remove all the bark you can, even the bark between the logs. If your cabin has already been permanently chinked, just remove the bark that shows.

Bark is very moisture absorptive and sets up wet conditions for rotting the logs. The removal of this bark is laborious but worthwhile. It is easier to peel logs before using them in your cabin. If the bark is left on the new cabin and is not yet dry, allow a little time for this drying to take place then use your wide-blade chisel to peel it off. After the bark is removed, you can paint the logs outside with any petroleum based-oil, such as diesel, kerosene, etc. Linseed oil is also a good preservative.

## Chinking

No matter how tight your scribed or saddle notching may be, it is necessary to chink every crack where logs fit together to prevent drafts. However hot

your fire, drafts will suck the heat out of your house. Even the scribing method of log building requires insulation between the logs. Chinking seals the outside and inside of the logs. The comfort factor of your cabin is greatly increased by your attention to this detail.

Chinking your cabin can be done in a number of ways. Mortar is made by mixing three parts sand, one part cement and  $\frac{1}{2}$  part lime. Lime will allow the cement to stick more readily. To be sure that it sticks properly, however, drive nails or pegs into the logs in the cracks to help hold the cement in the crack.

Another method I have used is packing fiberglass insulation into the log joints, and painting this with linseed oil. The oil causes the outside layer of fiberglass to dissolve, forming a waterproof crust.

You may also use a mixture of wet lime mixed in moss; this will stick to the wood as it dries. There are also many excellent commercial chinking compounds available.

#### The Finished Cabin

Your finished cabin, with stairs, ladders, furniture, kitchen decks, cabin skirting, along with customized finishing touches will give you a feeling of success like no other practical job that you've ever completed. Here is something you built yourself. It is solid, inexpensive, and something I believe is part of the Lord's plan; a simple means of construction where you can be comfortable in the wilderness, even at 40 below. You've learned many practical skills; from the falling of the trees to the finishing touches. You have learned perseverance when the work was hard. Spiritually, you have followed the Lord's plan in being as close to nature as possible.

"God desires every human being in our world to be a worker together with Him. This is the lesson we are to learn from all useful employment, making homes in the forest, felling trees to build houses, clearing land for cultivation" (The Advent Review and Sabbath Herald, May 28, 1908, p. 4).



## The Cabin in the Trees

There's a little old log cabin Tucked away among the trees In a valley 'way up yonder; It's as pretty as you please.

You can hear the birds a-singing As they greet the morning sun. And the chatter of the red squirrel As he takes his morning run.

You'll hear the whispering breezes And the laughter of the rill; You can watch cloud shadows wander Here and there along the hill.

So, friend, when troubles get you And you find it hard to smile, Just wend your way up yonder And stay a little while.

You'll find your cares will vanish, The sun will rise again When you're at the old log cabin In the pretty mountain glen.

--- George Clark

## **The Water System**

It is important to keep your drinking water separate from the water you have used for cleaning. The simplest water system is easily constructed from two buckets and a shoulder yoke. A few trips to the spring and your indoor storage tank is full. If your well is not too deep, a hand pump may be installed. This pump may be hooked up to a storage tank in the cabin if your water source is not too far away. Thirty gallon plastic containers can be used for water storage.

For a simple drain, hook up a short pipe to the sink that drains into an open five-gallon pail. This bucket is then carried out and dumped in a dry well or previously prepared place. Since it is gray water, it will not help your compost pile as it has antibacterial agents in it.

Your water source was given consideration before you built. If your water source was located above the building site, you are fortunate to have the potential of a gravity-fed water system. With a gravity flow system, getting water into your cabin is quite simple. Plastic pipe requires less specialized skill to assemble than the old galvanized pipe assembly method. If you have a gravity-fed water system, many

laborious chores can be eased. You will then have pressured water at your sinks and toilets if you opt for indoor facilities. A gravity flow hot water system may be hooked up to a gas hot-water heater with a separate supply tank. The pressure of the gravity-fed water system will make hot-water accessible at your sinks. This system may be used as long as you can buy gas to heat the hot-water tank.

Another simple hot-water system is made from coils of copper pipe inside the firebox of your wood cook stove. The incoming cold water moves into the firebox from the bottom of the storage tank. A line from the top of the tank goes to the sink for your domestic hot water supply or recycled as cooled water, going back to the cook stove.

A gravity system provides water pressure for sinks and toilets which must be connected to a septic system. This system requires 4-inch lines to a septic tank. Connected to the septic tank is a drain field of perforated 4-inch line, 150 feet in length. Drain lines and drain fields need to be at least 150 feet from your water supply. In our country, drain fields need to be 8 feet underground to prevent freezing, so consider the climate factor when digging your field. Use at least 1 inch sized gravel or larger, covering the pipe gently so as not to damage it. Then finish by covering it with dirt.

#### The Use of Wood for Fuel

Picture this; it is evening on a beautiful lake. Your campfire begins to die down, but glows a little brighter as twilight descends. You stir the sticks and send a rush of sparks heavenward. It is cool outside, but, here beside your fire, you are warm.

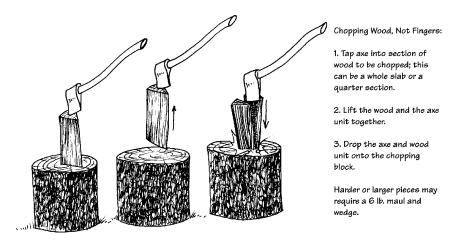
A campfire is the most elegant of necessities. It cooks our food, warms us, burns our garbage, keeps us safe, and relaxes our over stimulated brains. Building a good fire is an art form. Fires, like love of family and friends, must be tended gently, steadily, but with purpose.

Consider the type of wood you will use to build this campfire. Although a campfire is often built from scrap wood, the same conditions that guide the selection of firewood for a campfire may be used in choosing firewood for home use.

Choose dry wood. Wet wood does not generate as much heat. Choose dry standing trees or leaners still off the ground. A tree is dry if it has a crack in the trunk and the bark is sloughing off.

Follow the same rules when falling a dry tree as when falling a green one, being sure to watch the top of a dry tree as it may break out easily and come straight down. A hard hat should always be worn during any work in the woods. Leave a little thicker "hinge" in a dry tree than in a green one. **Do not cut it free of the stump** or you will lose the direction of fall.

When the tree is on the ground, limb the tree with either an ax or saw and



cut the lengths of firewood you want. Wood cook stoves usually use shorter lengths of wood than do heaters. Use a power or crosscut saw for the larger parts of the tree nearer the butt.

Once the tree is cut to the desired lengths, splitting it into lengths which are easily handled is good exercise. It is said that "wood heat warms you twice: once getting it and once burning it." Set the blocks on end and use a 6- or 8-pound splitting maul or a combination of maul and wedges. Use wedges particularly when splitting hardwood that is not straight-grained or where knots occur.

If your tree had a crack in it, then split through the face of the block that connects with the crack. If no crack exists in your wood, then sight a line through the face of the block where no knots occur. Begin your splitting process on the outside edge and line each blow right across the block face, following your line of sight. With practice, you will be able to strike repeatedly in a straight line.

Wood may be stacked anywhere, but, if no woodshed is available, stack it between two trees or posts. If no such supports are available, "square-end" it. At the ends of your stacks, put the split pieces together as you would a log cabin, but fill in all spaces and then cross another layer of pieces at 90 degrees to the existing pile. This forms a pillar you can stack against, even up to 4 or 5 feet high.

It is good to keep your wood dry by putting a tarp or plastic over the top of the stack. I like to have a woodshed to keep snow and rain off my wood. Happy warming to you; it is a matter of survival!

## **Cooking and Heating**

Since one of the reasons we build a log cabin is to decrease building expense, we may also keep down the heating cost by using wood stoves. Heaters are available that have a thermostat governing the damper. By placing a log or two in the firebox every few hours, heat may be produced all day. At night fill the stove with

wood and turn the damper down. The stove will hold heat all night. These are attractive furnishings, in appearance much like any other heater. There are many models available, even with catalytic converters that definitely save on total wood consumption.

#### The Outhouse

When the children of Israel were wandering in the desert, learning all kinds of lessons, the Lord instructed them to be careful with waste. "Thou shalt have a place also without the camp, whither thou shalt go forth abroad: And thou shalt have a paddle upon thy weapon; and it shall be, when thou wilt ease thyself abroad, thy shalt dig therewith, and shalt turn back and cover that which cometh from thee: For the Lord thy God walketh in the midst of thy camp, to deliver thee, and to give up thine enemies before thee; therefore shall thy camp be holy: that he see no unclean thing in thee, and turn away from thee" (Deuteronomy 23:12-14). (Ministry of Healing, p. 277-286.)

Indoor facilities are easily taken for granted until a power failure deprives us of water. As in the previous discussion about gravity fed systems, toilets are easily maintained. But with a nongravity-fed water system the outhouse is used. Some folks find outhouses intimidating, but there are a few things that can be done to make them more comfortable. First, your outhouse must be located at least 150 feet, from your water supply.

The outhouse may be constructed similar to your cabin, with notched logs. If you have access to lumber, you can frame the structure. A knee-high bench built inside the outhouse sits over a three foot deep hole. Deeper holes can be dug, but for a family this is plenty of volume since the solids do break down. Odors are controlled, and the rate of disintegration increased, by adding wood ashes or lime.

When you cut the hole in the bench, be careful not to cut the hole too big; the usual diameter of a toilet seat is  $8\frac{1}{2}$  inches wide by 10 inches long. A toilet seat may be used to cover this hole or you may customize a piece of 1-inch Styrofoam for additional comfort against cold.

#### The Burn Barrel

In most every household located where neighbors are a half mile or more away, there is always refuse that is not recyclable yet burnable. Obtain one or two 55-gallon (45-gallon in Canada) metal barrels to burn this refuse. As the barrel accumulate ashes, lay the barrel on its side to keep moisture from activating the ashes and increasing the rate of rust. Be sure your burn barrel is in a location where the smoke does not come into the house and the ground is clear for an area of ten feet square. This will prevent the start of grass fires that could cause damage.

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# Tools

## **Selection of Tools**

Good-quality tools are easy to choose. In general, "You get what you pay for," but that is not always true. I remember buying a drawknife from a farmer who had it hanging in his barn. It was well-worn, the handles were loose, and it was dull. He wanted \$2 for it, and I took it home and removed the rust. I discovered a blacksmith mark on it. I smiled to myself as I sharpened it and tightened the handles. It is my favorite drawknife. The steel was hand-forged and tempered. It holds an edge better than any of the drawknives I bought at the hardware store for \$25 to \$40 each.

The Oxhead brand of chopping ax is excellent, though there may be other brands that are comparable. Here is a good test for chopping axes: thump the edge of the blade with your finger and see if it "rings." If it does, you have the best steel. If it does not ring but "thuds," you probably have a splitting ax or a poor-quality chopping ax. A chopping ax is thin, used for cutting cross grain as in chopping logs into lengths. A splitting ax is thicker, more wedge-shaped, making it easier to split wood. Consult with those who can share their experience about how to recognize tool quality.

# **Making Handles**

In the south, hickory is the best wood for handles. In the north, hedge apple or alder is best. These choices are based on lightness in weight and length of tree fiber. If you have neither of these woods, choose a wood that has the aforementioned qualities. Be sure your selection is straight-grained and not curved. All wood used in handle-making should be thoroughly dry. For most tools, the carving of straight rather than curved handles is easiest to do. A straight handle works best for such tools as hatchets, hammers, frows, chisels, and saws. Handles are carved to fit the tool required. To learn the art of making handles, one must first attempt a relatively simple handle, such as a hammer.

Notice the shape and dimensions of the hole in the hammer head where the new handle will fit. Measure the entrance through the head and mark it out on the end of your dry, seasoned handle wood. Take note also of how far the handle goes through the hammer and mark it accordingly.

Using a drawknife and placing the handle wood in a vise or shave horse, remove wood down to your lines. You might want to practice making your handle on a piece of waste wood until you have mastered the skill.

Your new handle should have a snug fit on all sides. Snug enough so that it will have to be driven on with a wood mallet. Before you hammer it on, cut a slot in the top of the handle (the end which will go into the hammer) for inserting a hardwood wedge to expand the handle once it is in place. This will secure the handle in the tool.

Leave a definite hub ring so that the hammerhead cannot move down the handle, then shape and smooth the handle with your drawknife until it fits your hand. Then leave a smooth tapering knob at the end; a gradual thickening of the handle wood to the length desired. Cut the handle off there and save what is left to make another handle or some hardwood wedges. Sand smooth as desired.

The handles for larger tools such as splitting mauls, peaveys, rakes, shovels, and hoes are all straight handles. I recommend straight handles whenever possible because cutting a curve weakens the handle allowing it to break more easily along the grain lines. Some woods will bend allowing the integrity of the grain to remain intact. Such bending may be done with steam or soaking in hot water and applying pressure at each end of the handle wood.

An important object lesson comes from the Lord's carpenter shop 2,000 years ago. He made handles for tools as well as furniture and conveyances. The God of heaven had an eternity to plan the life of His Son on this earth and He chose carpentry for the education of His Son. He did not choose the schools of His day, but was educated at the feet of His mother, from the scrolls of the prophets, and from nature. (See <u>The Desire of Ages</u>, pp. 69, 70.) He did chores in the home and gained lessons from parables in nature and in the handling of tools in His father's shop. (See <u>The Desire of Ages</u>, p. 72.)

"Dear Lord, let me be a piece of handle wood in Your hand is my prayer. Amen."

# Tool Repair and Sharpening

A loose handle is a common tool repair. This repair may be done by soaking the handle a few days in water or oil. If this doesn't tighten the handle sufficiently, remove the wedge and put in slightly larger wedge. If the handle is broken, it will need to be replaced (see section on handle-making). Save your old handles, as they may be used in smaller tools or reshaped if they are broken near the end.

Sometimes a small piece is broken out of the blade requiring the blade to be reground. This can be done with a hand grinder, but it requires two people: one to turn the crank and one to hold the tool. There are old-fashioned pedal grinders requiring only one person to run them—a worthwhile addition to the tool box. A new bevel angle will need to be cut the full length of the blade in order to eliminate the notch in the broken blade.

Steps in the sharpening process:

- Step 1: Take a close look at the angle of the dull blade and maintain that angle as you file or grind.
- Step 2: Take the angle to a new sharp edge. A burr will form on the opposite side.
  - Step 3: Take your file or stone and remove the burr. In some cases, blades

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are only sharpened on one side (broadax, draw knives, etc.). These must be sharpened only on the tapered side. The burr that is left on the back side must be removed holding your file or stone completely flat against the blade. Be sure to use water on the pedal grinders as you sharpen.

*"Iron sharpeneth iron"* (Proverbs 27:17). "Dear Lord, help me to be a usable tool in Your hands to give satisfaction to the Craftsman. In Jesus' name Amen"

# Blacksmithing

Blacksmithing may be used to repair metal straps, loops, or other parts of broken tools. A forge may be made from a discarded brake drum of a <sup>3</sup>/<sub>4</sub>-ton truck. A bellows may be constructed from two paddle-like pieces of wood hinged at the opposite end from the handles and the sides closed in with 6 mil plastic. Handles should be extended another 12 inches beyond the plastic. A spout may be made of 1-inch plastic pipe so that as the bellows are compressed, air will be forced through the tube into the forge containing charcoal. A set of metal tongs can be used to remove the red-hot metal from the forge so that it may be shaped on an anvil.

Welding may also be done by placing the two pieces of metal in the forge, heating to red-hot, and allowing them to melt together. Then remove and beat to shape on the anvil. A larger forge can be made from bigger brake drums. Tools may be repaired in this way. (Refer to page 271 on how to make charcoal. Before it is ground for medicinal purposes, the larger chunks may be used for fueling your forge.)

# Lamps

It has always interested me that the children of Israel, at the time of the plague of darkness upon Egypt, had light in their dwellings (see Exodus 10:23). This leaves no doubt in my mind that the Lord can keep our dwellings filled with light in the end times. We can wean ourselves away from the need for utility web lighting. Simplifying our lifestyle, going to bed with the chickens and rising with the sun, we can become people of the day. Outside chores can be finished before dark.

I recall the heavenly glow of the little candle lanterns our students at Sanctuary Ranch used to construct from tin cans. They would cut little designs with tin snips, or pound a pattern with a hammer and nail through which the light would escape.

Candles, kerosene lamps, lanterns, and gas lamps are alternative sources of light. One candle in a dark room sheds an immense amount of light. Kerosene lamps can be a part of your basic tools in readiness for the future. Five gallons of kerosene will supply the needs of a family for quite some time. You should also obtain extra wick to fit your lamps. Wicks should be trimmed once a week if your lamps are used regularly. To trim your lamp, cut the corners ever so slightly at a 45 degree angle with a pair of scissors and then straight across the burnt wick. This will give you a

rounded full flame inside the chimney. Keep lamp chimneys clean to ensure the best illumination. Be sure they are cool before washing.

If you don't have a lamp, you can make one by constructing a container made of clay in the shape of a Roman lamp and fill it with vegetable oil. This oil may be extracted from oil seeds such as sunflower, peanuts, canola, soybeans, etc.

To make oil, first, soak the seeds in warm water till soft, then place them in containers and apply pressure with a hydraulic car jack. Build a bracket in which the jack can be placed to apply pressure. The oil will come from the seeds and float on top of any water in your container.

Having obtained the oil, place it in your Roman lamp and insert a strip of clean rag in the oil. Allow the cloth to soak up oil for a couple of hours and light the end. It will yield a candle-like light.

## At Home in the Woods

It is better to have cabins built before the crisis hits, but now you know what is necessary in order to build later, even without money. Construction in the end times will require that certain tools and supplies are on hand in order to build without money.

Your log cabin with its simple accessories may assist you in physical survival, but it is only a shell to support the lives within; much as our bodies were created to house our spiritual temple. You did not build the cabin just for yourself, you were thinking of others. Your house, no matter where it is, can only be a home when your Best Friend lives there with you. The best laid plans, open to His divine direction, can help your home to be a heaven on earth.

# FOR FURTHER READING

<u>Compendium of City-Outpost Evangelism</u>, James Lee, HCR 77 Box 64, Coalmont, TN 37313

Country Woodcraft, Drew Langsner, Rodale Press, Emmaus, PA, 1978.

Handmade Hot Water Systems, Art Sussman and Richard Frazier, Garcia River Press, P.O. Box 527, Point Arena, CA 95468, 1978.

How to Build and Furnish a Log Cabin, W. Ben Hunt, Collier Books, New York, NY, 1974.

Chapter Twelve



# Garden to Kitchen: Food for the Future

"If my people, which are called by my name, shall humble themselves, and pray, and seek my face, and turn from their wicked ways; then will I hear from heaven, and will forgive their sin, and will heal their land" (II Chronicles 7:14).

he leaned on her hoe, removed her old straw hat, and fanned herself. Though she did not have robust health, I would often see this elderly lady tending the little plot of stubborn red Tennessee clay she called a garden.

"You must enjoy gardening," I said, coveting her love of the soil.

"On the contrary, Jere. I garden from principle!" She shook her head and took a drink from her water jug. "The little red books say it's good for me, so I do it. I do learn a spiritual lesson nearly every day and it's not as grueling as it once was, but I don't yet enjoy it. I hope to one day, though. I need to practice up for my **big** one," she said, pointing upward.

Maybe you, too, share the feelings of some who don't really enjoy spending time in the garden. Perhaps your parents forced you to hoe seemingly endless rows of corn, potatoes, sugar beets, and beans when you'd rather have been chasing grasshoppers. When I enter the garden and humble myself to the hoe, I get a valuable object lesson. Have you discovered, as have I, that produce from your own garden always tastes so much better? Miracle of miracles, now I find I must limit myself to an hour in the garden in order to accomplish the rest of my chores!

In the coming crisis, we may not only be responsible for feeding ourselves without money, but feeding others on our acreage. Sometimes I wonder how this will happen, then I read: "... God can bless twenty acres of land and make them as productive as one hundred..." (Testimonies for the Church, vol. 5, p. 152).

Throughout history, famines have occurred in which people who followed the Lord's instructions were fed. Our position, stature, or rank is irrelevant when it comes to our need for food—we are all served from the field.

"The king himself is served by the field" (Ecclesiastes 5:9).

What we grow will, both now and at the end of time, be a blessing to those who gather around our table. Very often, today, we depend upon others to grow our food. But, as we are learning in this book, the time is soon coming when this will change and we will need to know how to grow our own food; not to hoard it, but so that we will have something to share.

Solomon advised us a long time ago with these words recorded in Proverbs 24:27: "Prepare thy work without, and make it fit for thyself in the field; and afterwards build thine house." Solomon, the richest king ever to have lived, advised his people that their first **priority** was to provide a means for growing food, and then to build their house. Certain circumstances may dictate that your need for shelter is greater than your need for food. But we do need both.

In planning your move to the country, consider moving in the springtime, so as not lose a year's worth of produce. Then follow the counsel of the wisest man—plant your garden as soon as you can—even before you build your house!

# **Historical Gardens**

The first gardening instructions were given to Adam and Eve regarding their diet as recorded in Genesis 1:29: "Behold, I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat." The last part of Genesis 3:18 says, "Thou shalt eat the herb of the field." The original diet consisting of fruits, nuts, grains, and then vegetables was the diet designed for man by God Himself. God made us and knows the best food for us.

An incident in history, when recorded in Jeremiah 29 contains admonition, in verses 5 and 28, regarding what the children of Israel were to do while they were in Babylonian captivity. "For therefore he sent unto us in Babylon, saying, This captivity is long: build ye houses, and dwell in them; and plant gardens, and eat the fruit of them" (Verse 28).

Where we can provide for ourselves, we must acquaint ourselves with the lessons and blessings the earth has to offer. When we eat from our garden, meals

become very special.

"The cross of Christ is stamped on every loaf. It is reflected in every water spring... The family board becomes as the table of the Lord and every meal a sacrament." (The Desire of Ages, p. 660).

# **Preparation for the Future**

There is a time coming in which God's people will not be able to buy and sell, as clearly stated in Revelation 13:17; "And that no man might buy or sell save he that had the mark, or the name of the beast, or the number of his name."

Preparations are needed. The instructions in this chapter will help us to be in harmony with God's plan for the future. The short time of trouble is soon to come. Country Living, p. 9-10 states the importance of being in the country where we can grow our own food. "Again and again the Lord has instructed that our people are to take their families away from the cities, into the country, where they can raise their own provisions; for in the future the problem of buying and selling will be a very serious one."

Can you imagine what it would be like not being able to go and buy food at the grocery store?

## **Unknown Bread**

No discussion of diet would be satisfactory without at least mentioning our elder Brother's outlook on food. He was not gluttonous, though he was accused by some because he did not fear to be judged by association. He, on the other hand, appeared to be quite familiar with fasting. When His disciples voiced their concerned that he was not eating enough, He assured them, "I have meat to eat that ye know not of. ... My meat is to do the will of him that sent me, and to finish his work" (John 4:31-34). Perhaps, in the last days, God's chosen people will be more concerned, as was Jesus, about getting the work done than about their bread and water.

Hopefully, before troublous times are upon us, we will find that place of surrender where even our tongue, the most unruly member, will have been subdued. That special place is the point at which we sense that it is important to allow the Lord to fill us than to fulfill our own desires. Our survival will not be dependent upon the filling of our stomach, but the infilling of the Spirit. With our body temple properly yielded, might it not be possible for Him to supply even our physical needs in a spiritual manner?

One of the best ways to nourish our body temple is to eat as much of our food as possible just as it came from the hand of the Creator. Growing your food helps you appreciate it. Gardens are the foundation of the food chain!

# Preparation of the Ground

The ideal spot for a garden is one that gently slopes to the southwest. Deep sandy loam is ideal because it warms up fairly fast, contains a good proportion of sand to clay, and usually has a good content of organic matter. Other ground soil types can be used but need more attention. Sand, clay, and gravel soils can be built up by using organic matter. To build soil, spread four inches of organic matter (deciduous leaves, grass, compost) over the surface of the garden to condition the soil and encourage microbial activity. Conditioning your soil helps prevent extremes such as drought and flooding.

Begin working with your soil as soon as possible in the spring. Allow plenty of time for it to warm up if you live in the Far North. You can encourage soil to earlier warmth by spreading black plastic over the area you want to use first. Thoroughly pick out roots and rocks. Make sure there are no trees within 20 feet of your garden. Try to situate your garden in such a way that there will be some sort of shelter-belt to protect it if wind is a problem. Keep the south side reasonably open to allow for plenty of sunlight.

# **Cultivating**

"Whatsoever thy hand findeth to do, do it with thy might," Solomon tells us in Ecclesiastes 9:10. Of all the time spent in gardening, cultivating and weeding is the most demanding of our time. When we can see weeds, we wish they were gone, but it takes effort, on our knees, to rid both ourselves and our garden of that which is undesirable.

As in character building, so with the garden: weeds are most easily controlled when they are small. Planting the garden, and taking care of the weeds for the first few weeks is fun, but by the time August arrives, unless the garden is weeded regularly, it may be difficult to distinguish the potato vines from certain weeds.

One effective method of weed control is to cultivate your soil and allow the weed seeds to germinate, then torch them before you plant the garden seeds. This burning technique is especially helpful for carrots and beets, which take some time to germinate and whose tiny seedlings may tend to get lost in the faster-growing weeds. Continued cultivation will eliminate weeds.

"Man is not to fail of doing his part. ... The harvest is proportionate to the energy he has expended" (In Heavenly Places, p. 157). What is our part? — weeding, seeding, watering, cultivating, just as in the Garden of Eden, when Adam and Eve were appointed to dress and keep it. When we have done our best, God will take care of the rest and fulfill His promise. Here are some points to remember:

- 1. Every weed you leave is robbing the more valuable plants of what they need.
- 2. When hoeing avoid digging deep holes and cutting vegetable roots; hill (scoop dirt, building it up around the stem of) potato plants as you weed so as not to overexpose them. Hoeing while soil is dry will kill weeds faster.
- 3. Try to uproot all weeds at the seedling stage.
- 4. Hand weeding deeper roots is easiest in damp soil.
- 5. If you let weeds mature to seed stage, they will reseed themselves.
- 6. Rake the weeds so that they don't re-root. Put them on the compost pile.
- 7. Water daily; use a sprinkling can where a hose system is not available.
- 8. Be sure to pray for God's blessing before you begin your garden.

## **Garden Tools**

- 1. Hoe–excellent for weeding, has an easily replaced handle. Keep it sharp.
- 2. Mattock—used for chopping out roots and digging out sod.
- 3. Pick-also used for grubbing out rocks.
- 4. Pitchfork–for spreading loose straw and compost.
- 5. Potato Fork–for digging potatoes, has heavy flat tines.
- 6. Rake–for leveling ground and piling weeds.
- 7. Pointed shovel—for digging.
- 8. String-for making straight rows.
- 9. Stakes–for marking rows.

# Northern Garden Calendar (Zones 2 and 3)

**January**—Start planning your garden and calculating how much food you will need for the coming year. Seed catalogs help increase gardening enthusiasm during winter months.

**February**—Prepare your greenhouse, or starter area for planting. Start celery, tomatoes, and peppers in the house in seedling trays. Flowers such as marigolds and nasturtiums are good for bug control and may be started early for this purpose. The easiest way to start seeds is under grow lights in the house. Plant them rather thickly (less than ¼ inch apart). When the plants are an inch or two tall, transplant them into single pots or in small six-pack boxes. Water only in the morning to prevent fungus growth. Sunlight from a south window will substitute when grow lights are not available.

**March**—Start lettuce, herbs, onions, marigolds and other flowers to plant among your vegetables.

April–Start cucumbers, corn, cabbage, broccoli, and brussels sprouts.

Start squash at the end of the month.

May—At the beginning of the month, begin preparing the garden soil. You may preheat soil by covering the ground with plastic, either clear or black. Begin hardening the greenhouse plants by placing them outside in the shade on calm days; this will prevent them from wilting when you plant them in the garden. In northern climates, the last killing frost is usually toward the end of May. Seeds to plant early—peas, lettuce, onion sets. Seed the rest of your garden after the earth feels warm to your touch, otherwise beans, corn, and squash seeds will rot. Set out your bedding plants after getting them used to the sun for a few days and after frost danger is over. Another planting of lettuce, broccoli, onions, peas, beans, etc. will give you a second crop later in the season. Berries, rhubarb, asparagus, and some herbs are perennial and should have a portion of the garden that is undisturbed by the plow, but must be weeded early.

**June**—Weed, cultivate, thin carrots and beets; begin enjoying your harvest with young lettuce, herbs, green onions, and spinach.

**July**–Most lettuce, radishes, strawberries are picked now. Dry herbs. Can baby carrots and berries. Winter preparation should begin.

August-Pick raspberries. Begin food preservation.

September-Harvest root vegetables and store in root cellar.

**November**– Check the root cellar, making sure the temperature is right; as temperature decreases, you will need to plug root cellar vents with insulation. Set mouse traps.

December-Start thumbing through seed catalogs and dreaming of May!

# **Bug Trouble**

Pests in many forms may attack your garden, but the attacks will often invade only the weaker plants. The best advice regarding "bugs" is prevention–keep the weeds away; keep the plants moist and growing well so that they have a good start. Here are some of the more common pests: slugs, snails, aphids, cutworms, fungus gnats (root maggots), and cabbage worms. Can they be controlled, naturally? Here are some suggestions:

- 1. If possible, plant a disease-resistant variety of plants.
- 2. Fungus gnats are discouraged by covering brassicas (broccoli, cauliflower, cabbage, kohlrabi, and Brussels sprouts) with a white row crop cover at least until mid-July. The cabbage butterfly may become a problem at that time, so some years it is best to keep the plants covered until harvest.
- 3. Remove unhealthy plants; sick plants can contaminate each other.

- 4. Keep a tidy garden; pests thrive on garbage.
- 5. Plant marigolds (seeds and mature flowers), garlic, onions, and hot peppers near the plants with which you usually have the most bug trouble; sometimes the strong smells make life miserable enough for them that the bugs will leave. Marigolds seem to help prevent root maggots.
- 6. A spray made from garlic, hot pepper, and a little dish soap will help repel bugs.
- 7. Remove larger bugs from your plants by hand and drop them into a bottle of alcohol. Aphids can be daily sprayed off of plants with a strong stream of water; natural enemies in the soil will often inhibit them from returning.
- 8. Encourage children to catch the white cabbage butterflies by providing them with butterfly nets.
- 9. Rotate crop types each year, on a three-year cycle, including one year of summer fallow.

Some growers claim that certain nematodes will attack tomato roots if grown in the same soil a second year, but we have not had this experience. The most serious threat currently, both indoors and outdoors, is the fungus gnat, which lays her eggs in the soil adjacent to cabbage, cauliflower, broccoli, and Brussels sprouts, turnips and rutabagas, as well as certain flowers. Growing these vegetables under a row crop cover usually saves the plants. The row crop cover admits water and enough light to permit growth.

Plant Nutrients

The chart below shows the three main foods that plants require for proper growth.

	Nitrogen	Phosphorus	Potassium
Effects	Promotes rapid growth	Promotes better fruit formation	Seed production and root growth
Signs of lack	Leaves turn yellow; stunted growth	Leaves dull green with purple tint. Stunted growth	Slow growth, yellow tips and edges look scorched
If in excess	Plants grow too fast; weak; produce too late in season	Little danger	Little danger
Organic sources	Animal manure, compost, green manure	Dry manure, fish fertilizer, rock phosphate	Wood ashes, manure, unwashed sand

### Blood and bonemeal

New scientific discoveries regarding the use of blood bonemeal have revealed that users are at risk of exposure to **prions**, a protein known to cause mad cow disease. Manure may also have to be discarded as a fertilizer.

# Fish Fertilizer

Fish may be used by allowing it to decompose in a covered bucket over winter. In spring, add some water and stir with a gyprock mud mixer attached to a half-inch drive drill. This slurry is then diluted in a barrel of water: 1-6 quarts in a 30 gallon plastic garbage can. Though is it smelly, and will attract animals, it grows good plants. Your garden should be fenced. If the fish you catch are from industrially polluted waters, you will have to discontinue its use as a source of soil nutrients.

### Green Manure

Trace elements may also be supplied by green manure. Green manure results from turning under a crop that is allowed to break down in the soil. Such crops as peas, (many varieties) rye (before seed formation), clover, and alfalfa.

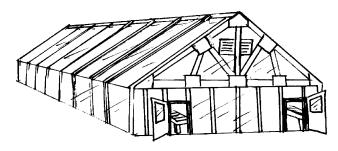
# **Compost**

Layer compost (kitchen waste, grass cuttings, leaves) with straw and keep it watered and turned occasionally. Compost is valuable when it is completely rotted to the crumbly stage. This takes more time in colder climates because of lack of heat. Find a method that works for you. In any case, it is better to return these organics to the soil, even if you don't tend the pile. Be sure to keep your compost pile 100 yards from the house, unless you want wildlife close by!

## **Greenhouse Construction**

Although you may never have the picture-perfect structure that you might desire, a greenhouse is of benefit. Certain crops, especially young bedding plants, need extra protection from spring frost. Later in the summer there are those that

require a boost of heat in order to mature. There are a few simple facts to consider. Never be discouraged about having a greenhouse! Growing food in a greenhouse is fun and simple.



Build your greenhouse where water is readily available; a gravity flow system is ideal. Our first greenhouse was watered with a sprinkling can, but as we increased the size of our structures, we included a pump and hose in our design.

It is much easier to maintain even temperatures in a larger greenhouse (over 1000 square feet) than in a smaller structure. A greenhouse frame is easily constructed from two-by-fours. Plastic should be of a greenhouse grade and can be attached in a number of ways. Check out a plan at your local bookstore or garden shop. There are greenhouse kits available, using metal oval tubing which are very cost effective and much longer lasting than wooden structures.

In northern climates where permafrost or freeze-up occurs, 6 inches of gravel should be leveled under your greenhouse site if you are just using it for bedding plants. If you use it for growing produce, leave the dirt intact. If your greenhouse is constructed on unusable land, such as gravel, rocks, or sand, then build growing boxes in whatever design you like, at a height of one or two feet and fill with a the best organic soil you can find. We recommend a blend of dirt, and some well decomposed compost. The free use of chemical fertilizer kills the good bacteria in the soil and should never be used in the garden. Natural fertilizers accentuate growth; compost, kelp, and green manure crops (rye, clover, or peas) tilled under before they bloom are very helpful to your soil.

Bears especially are attracted to the smell of fish fertilizer. If used in the garden bury it several inches underground.

Greenhouses require no foundation. Long spikes are angled into the gravel to hold the upright supports in place. Side wall supports and rafters can be spaced at least four feet apart. The side walls should be high enough to allow you to work inside comfortably.

If you choose to build from wood, be sure to smooth the edges where the outer wood touches the plastic to prevent wearing when the wind blows. Attach the plastic only where necessary; raw edges at ground level may be stapled and rolled over a two-by-two, then pulled tight and tacked to the uprights at the bottom of the structure. The plastic need not be tacked on the ridge or the rafters, only at the very ends. A layer of plastic may be attached to the inside of the structure; the air space between the two layers will guard against extreme temperatures. Roof pitch should be of such an angle to encourage snow to slide off easily. Plastic, made especially for greenhouses, lasts at least ten years and, when properly installed, won't be ripped in the wind. Panels of fiberglass, make a satisfactory greenhouse covering, but they are expensive and not as resilient as regular greenhouse plastic. Glass is not the best material to use as it magnifies heat too much on sunny days, tends to burn plants, and filters out some UV.

If you use wood heat, keep a large pan of water directly on the stove for added moisture. The potential for fungus growth is decreased by; confining watering procedures to morning hours, and keeping your greenhouse clean and well ventilated. Water the soil, not the plants; moisture on plants tends to incubate unwanted growths such as molds. Any plant that enjoys a little extra heat will thrive in a greenhouse: tomatoes, squash, beans, corn, peppers. Supplement your garden with early produce from the greenhouse. By starting lettuce early and growing a few plants in the greenhouse, you will easily be eating salad by the first of June, even in northern Canada.

Growing food in the greenhouse is much the same as growing it in the garden. Our experience has been very rewarding in the north, for we can increase heat (without a heater) and extend both ends of the growing season just enough to mature our beans, corn, squash, and tomatoes: the hot weather crops. There are some vegetables that do better out-of-doors: cabbage, cauliflower, broccoli, and most root crops.

The greenhouse limits air circulation. Keep both front and rear doors open and/or a fan blowing during daylight hours. Open the greenhouse as soon as you can on warm days. On cool days, you should still open the doors for an hour or two to exchange the air. Fungus and bacterial infections are avoided in this way.

As your plants mature in the greenhouse, you will have to keep leaves to a minimum in order to allow for circulation around tomatoes, cucumbers, and squash. Keep suckers pruned off of tomato plants to divert all the energy possible into the fruit. To prevent the spread of fungi, plunge your scissors or knife into boiling water when you cut into moldy or rotten plants. Corn leaves never need pruned.

Preparing the greenhouse and garden, looking at seed catalogs, and making out seed orders is a good "nature day" activity for the family. Including your children as you plan the garden helps them to know that their input is valued. Their little hands are needed when weeding and harvesting approaches.

# **Saving Seed**

A hybrid plant does not produce true to kind. Collect seeds from your best non-hybrid plants. In so doing you might refine a breed particularly suited to your region. Sometimes you'll have to buy seeds for the second year, even if you decide to grow your own, simply because your plants won't produce seed till their second year. There are many good books available on seed-saving techniques. Baby-food jars work well for seed storage by adding a desiccant, keeping them

sealed, cool, and dark.

Such crops as spinach or leaf lettuce, where leaves are generally harvested, select a plant where leaves are not taken and allow that plant to go to seed. With root crops such as radishes and carrots, use those plants that go to seed first, since this could mean earlier crops the next year. Many seeds can be sprouted for winter salads: alfalfa, radish, broccoli, wheat, and lentils to name a few. Never eat treated seed!

**Beets:** If your winters are mild, beets can be left out in the garden. If not, store the best roots in sand in a cool, dark, damp place (root cellar). Come spring, replant the beets, and when the seed stalk develops, tie it to the stick to keep it from breaking off. Cover with cheesecloth as it matures; birds love beet seeds! Once the stalk is mature, break it off and hang it indoors with your seed onions. Remove the seeds when dry. On good years, you may have seeds in time for a late crop the same year. In any case, you'll have plenty for the following year. Store in a glass jar.

**Cabbage:** Cross-pollinates readily. If you want seeds to be true, grow only one species. Store the firmest, largest heads by hanging them individually in a root cellar or other cold spot over the winter. Replant cabbage the second year in order to obtain seed.

Cantaloupes and Muskmelons: Remove seeds from ripest fruit. Wash, making sure all pulp is removed from seed, and let seeds sit in a shallow dish of water for a day. Wash them again, pick out all the pulp, pat dry with clean, dry towel—not paper towels as they contain unfriendly chemicals. When absolutely dry, store in a tight glass container in a cool place. Check often to make sure no mold has started. If mold begins, discard the seeds.

Carrots: If your winters are mild, carrots can be left out in the garden. If not, store the best roots, set in sand, in the root cellar. In the spring, replant the carrots, and when the seed stalk develops, tie it to a stick to keep it from breaking off. Cover with cheesecloth as it matures as birds love carrot seeds. Once the stalk is mature, break it off and hang it indoors with your onions. Remove the seeds when dry. You'll have seed in time for a late crop the same year. In any case, you'll have plenty for the following year. Store seeds in a glass jar. Note: Don't try replanting if there are wild carrots in your region or you'll end up with worthless hybrids.

**Corn:** Select the earliest and best ears and let them ripen on the stalk. Then strip back the husks and hang the full cobs in a dry place. When the kernels have thoroughly dried, shell them out and store in tight glass jars.

Cucumbers: Let them vine-ripen to yellow-orange, even slightly musty.

Remove seeds, wash, and let them sit in shallow dishes of water to ferment for two days. Wash them again, pat dry in a clean towel, and dry further by air-drying. When seeds are absolutely dry, store them in a tight glass container in a dry place. Check often to make sure no mold has started.

**Eggplant:** Pollination is like peppers, so separate two varieties by the length of your garden or by a taller crop. Leave the best fruits on several of your plants for as long as possible. When fully mature, scrape out seeds, dry and store in a glass jar.

**Kohlrabi:** Grow and harvest same as turnips.

Lettuce: Cross-pollinates readily. If you want seeds to be true, grow only one species. The flower stalk will develop in the fall of the first year, so you don't have to replant the head the following spring. When the seed stalk develops, tie it to a stick to keep it from breaking off. Cover with cheesecloth as it matures. Once the stalk is mature, break it off and hang it indoors with your other seeds. Remove the seeds when dry. With luck, you should have seeds in time for a late crop the same year. In case you don't, you'll have plenty for the following year. Store seeds in a glass jar.

**Okra:** Okra is self-pollinating, so you may grow more than one variety without danger of crossbreeding. Leave several of your best plants completely alone. When the pods are dry, but before they open enough to drop the seeds on the ground, shell them out and save in a glass jar.

**Onions:** Most large onions are biennial. Save large, fully developed bulbs through the winter and set them out the following spring. Support the tall blossom stalks and harvest the seeds when they mature. Store dry.

**Peas:** Leave on the vine until the leaves turn color and begin to die. Pick the pods and shell the peas. Dry them for several days near the wood stove. Larger seeds take much longer to dry thoroughly. Watch closely for signs of mold. Store in dry glass jars.

**Peppers:** Peppers are mostly self-pollinating, although bees may cause some crossing. If growing both sweet and hot peppers (or more than one variety of either), separate them by the length of your garden, or with a tall crop, or you may be in for a hot surprise. Select several of your largest and best peppers from your best plants. Let them ripen on the plant until red and starting to soften, scrape out the seeds, dry and save in glass jar.

**Potatoes:** Pick your plumpest, best-shaped, scab-free tubers. Store whole, in burlap bags or buried in dry sand in your cold cellar. For planting, cut each piece, with an eye or two.

**Pumpkins:** After the pumpkins have vine-ripened in the field, remove seeds, wash, and let them sit in a shallow dish of water for one day. Wash them again, pat dry in an old towel, and dry for a few days at room temperature or

beside the wood stove. When absolutely dry, store them in a tight glass container. Check once in a while to make sure no mold has started to grow on them.

**Radishes:** The flower stalk will develop in the fall of the first year, so you don't have to replant the radish root the following spring. When the seed stalk develops, tie it to a stick to keep it from breaking off. Cover with cheesecloth as it matures; birds love radish seeds. Once the stalk is mature, break off and hang it indoors with your other seeds. Remove the seeds when fully dry. You should have seeds in time for a late crop the same year, or to sprout indoors for salads. Store in a glass jar.

**Rutabagas:** Mulch heavily over the winter and uncover rutabagas early in the spring and collect seeds as you would for herbs. Rutabagas are hardy enough so that you don't have to transplant them if they are well mulched.

**Spinach**: Spinach cross-pollinates readily. If you want seeds to be true, grow only one species. The plant to save from is the last one to ripen. Cut the seed stalks after they reach full maturity, let them dry, and hull out the seeds.

**Squash:** Pick out the largest squash you want to save for seed and let vine-ripen. Then remove seeds, wash, making sure all pulp is removed, and set in a shallow dish of water for a day. Wash them again, removing any pulp that was left, pat them dry with clean towel and then let them dry near wood heat. When absolutely dry, store them in a tight glass container. Check once in a while to make sure no mold has started. Discard moldy seed.

**Tomatoes:** Let them vine-ripen to a slightly mushy stage. Remove seeds, wash, and set them in shallow dishes of water for two days until they get bubbly. Wash them again, pat dry in an old towel, and dry further by allowing to air-dry. When thoroughly dry, store them in a tight glass container and check them every so often to make sure no mold has started.

**Turnips:** Mulch heavily over the winter and uncover turnips in early spring. Collect seeds as for beets. Turnips are hardy enough so that you don't have to transplant them if they are well mulched.

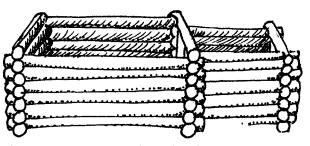
**Watermelon:** Pick out your best watermelon—let it vine-ripen to a good size. Then remove the seeds. Wash, making sure all pulp is removed. Let seeds sit in shallow dish of water for one day. Wash again, pat dry between sheets of clean cotton toweling. When seeds are absolutely dry, store in a tight glass container. Check once in a while to make sure no mold has started.

Someday we may not be able to buy seed, and some of the old varieties are already extinct. There's no mystery to gathering your own seed except for the ever everlasting mystery of nature. Farming and gardening is truly the way to self-sufficiency and a better way of life.

## How to Build a Root Cellar

Root cellars were a way of life for the early settlers. No winter was too harsh but that a tasty and nourishing meal could be collected from its earthy depths. Root cellars are very simple to build and well worth the effort. To begin, choose a

south-facing bank if you live in northern climates, northfacing slopes if you live in the South. Choose your site where it is convenient and is easily accessible. In addition to storing fruits and vegetables, the cellar can be used

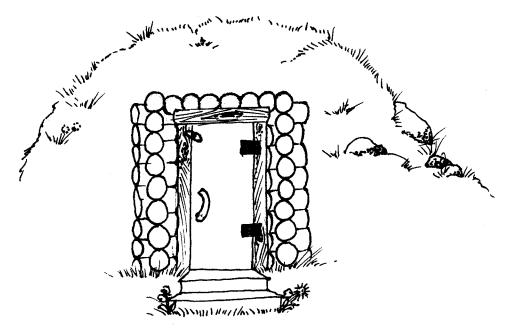


for emergency shelter in case of severe storms: tornadoes, hurricanes, etc. Storms will pass over a root cellar without doing damage because they are level with the ground. Cellars should be equipped with latches inside.

Dig a level-floored hole in the bank about 8 feet square plus a 4' x 8' entranceway. When the hole is ready, 6" x 6" log beams of wood or logs are stacked similar to a log cabin structure up to a height of 7 feet. Planks or gravel can be used for flooring. Bins and shelves can be built to suit your storage purposes before you build the roof. The roof consists of solid beams across the roof side by side. A vent is constructed of planks making a 10" x 10" chimney structure reaching from about 12 inches from the floor to about 3 feet above the ground and covered with an open tepee vent cover. This will help keep cool air at floor level allowing warm air to rise, keeping vegetables cool and dry. The roof beams are then covered with thick plastic sheeting (6 mm) before replacing four feet of dirt over the top and replanting the sod.

The front of the root cellar is constructed of the same solid beams used in the main walls and ceiling. Plumb in two two-by-fours vertically about 30 inches apart. These are used as guides for sawing two cuts on the wall for the inner door frame. When the two cuts are made, a 2' x 6' face plate (door frame) is nailed to the ends of the cut beams to hold them in place. They serve as a doorjamb against which the inner door will be attached.

The doors can be built of planking and a "Z" reinforcement. Frame them to fill the hole to about 1/4" from each edge: right, left, top and bottom. Insulate the door and cover the framework with plywood. The doorjamb may be insulated with sponge tape. This seals the door against drafts and light. The closing apparatus consists of two 1'x 4's sliding into a slots at the top and bottom of the door. This slot is at an angle to permit friction/lever closure.



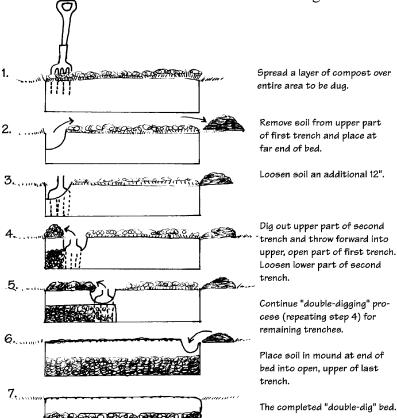
The entrance may be built using the same 6" x 6" beams or logs as in the main cellar. These beams should be 8 feet long, spiked to the main root cellar room, approximately 4' to 5' apart on either side of the inner door. These are stacked in the same manner as the main cellar room with a solid beam roof over the full 8 feet. This also is covered with 6 mil plastic and gently backfilled with dirt to insulate. In the construction of both the main room and the 4' x 8' entranceway, all corners should be lapped butt to joint. This is also true for the corners in the entranceway where the outer door is built in exactly the same manner as the inner door. This entranceway provides frost protection. In warmer climates the entranceway can be shorter.

Cautions: Store fruits and vegetables in separate cellars; apples can soon taste like potatoes if stored together! Root cellars are good hiding places, but children should not play inside. There is danger of being trapped and forgotten by their playmates. Before severe winter temperatures plummet, plug the vent with insulation to keep produce from freezing. Mice can do a great deal of damage in a short time; keep traps baited and set and a screen over the vents.

# Planting a garden

There are many ways to plant a garden. One of the ways I recommend is the raised bed, double dig method. This is labor intensive, but will produce more food in less space, especially in hard packed soil. It is one way of keeping the topsoil "on top" while loosening the lower layers of dirt. To prepare such a bed, start at one end of the bed area and dig with a shovel or, better yet, a spade fork.

Push the fork into the ground the full length of the tines and lean back on the handle. This spadeful of surface dirt is then deposited at the opposite end of the bed. By sticking the fork into the bottom of the trench several times, you can loosen the soil in the second layer down. When this second layer of dirt (scoop number two forward) has been dug, it is placed in the first hole. Next, loosen the second layer down in hole number two. Continue this through the rest of the bed. This method



loosens the soil to a two spade depth allowing the roots to go deeper and produce healthier plants. Be careful to replace dirt in their proper layer, and approximately their same position, with the topsoil on top, the subsurface soil in the bottom of the bed. upper, open part of first trench. Following the instructions on the package, or on spacing charts (next page), plant seeds or bedding plants a consistent distance in all directions

If you have

plenty of garden space and the demand for food is not as high, planting in rows is much less demanding of your time in early spring. Rototillers cultivate approximately 4 to 6 inches below the surface, so if you are growing a crop that needs root room, you may want to loosen the soil a little deeper with your spade fork.

When you locate your new garden, use only soil that has not had commercial fertilizers or insecticides sprayed on it. The row method works especially well in new soil; root crops really reward first year gardeners.

To begin a row garden, use a string (small gauge nylon cord) fastened to two stakes. Press the stake into the ground at the beginning of the row, then walk the length of the row and press the second stake into the ground at the end of the row.

# **Necessary Spacing for Planting**

Vegetable	Spacing (in inches)	
Asparagus	11-17	
Beans (green)	3-5	
Beans (lima)	3-8	
Beets	1-5	
Broccoli	14-17	
Brussels sprouts	14-17	
Cabbage	14-17	
Carrots	1-2	
Cauliflower	14-17	
Celery	5-8	
Collards	11-14	
Corn	17	
Cucumbers	17-35	
Eggplant	17-23	
Garlic	14-17	
Kale	1-5	
Leeks	1-5	
Lettuce (head)	9-11	
Lettuce (leaf)	5-8	
Melons	23-35	
Okra	11-17	
Onions (bulb)	3-5	
Onions (bunching)	1-2	
Parsnips	3-5	
Peas	1-5	
Peppers	11-14	
Potatoes	12	
Pumpkins	23-35	
Radishes	1-2	
Rhubarb	23-35	
Spinach	3-5	
Squash (summer)	23-35	
Squash (winter)	23-35	
Tomatoes	17-23	
Turnips	3-5	

Three feet is a handy measurement to lay out rows which will be tilled between. Two feet of width is plenty of space between the rows of a hand-hoed garden.

Just a few tips on planting once you have chosen a method. Potatoes have to be cut so that at least one "eye" appears on every piece of potato you plant. Plant about 12 inches apart. For carrots and other root vegetables plant seeds 2 inches apart. This is hard to do, so you will have to thin them later as they tend to come up much too thick to allow for proper maturation. Keep your garden soil loose and free of weeds, but don't forget to enjoy it!

"Brethren, when you take time to cultivate your garden, thus gaining the exercise needed to keep the system in good working order, you are just as much doing the work of God as in holding meetings" (Gospel Workers, p. 240).

# The Gardener's Prayer

The kiss of the sun for pardon, The song of the birds for mirth. One is nearer God's heart in the garden Than anywhere else on earth.

-Dorothy Frances Gurney

## How Much to Grow?

No matter how well you plan, some foods will grow better than you might expect resulting in an abundance. Some may not grow quite as well as you may have hoped. Every day brings a new surprise from your garden. Make a habit of bringing at least a little something, if only a parsley garnish, from your garden to your kitchen every day. Not only will you realize that the food budget has been stretched but you will find your family asking, "Did we grow this ourselves?" Garden treats often tempt even the most finicky into eating more healthfully.

Planning meals around garden produce is a rewarding challenge. How much should you plant of each variety? Since you have chosen your property with the idea of growing your food, you want to prepare your garden considering what you want to harvest.

Most gardens grow certain plants better than others. Climate dictates some of the limitations you may experience. Ask the advice of some gardeners in your area if you are unfamiliar with frost patterns, but do not fear to experiment. Most of North America will grow everything we need. Your family's preferences may dictate that you grow more peas or less tomatoes than another family, but learning to live from the garden is a rewarding experience for the whole family.

Calculating how to grow enough food for your family from your own garden is a developing experience—allow for a few visitors as well as emergencies. For the

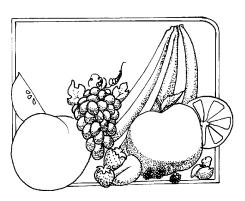
sake of illustration, we will assume you live in a fairly severe climate, such as we experience here in northern British Columbia. Grow as many items on the following list as possible. Store the remainder in bulk. Planning a year-long menu is a challenge, but let's project some approximate needs for a family of about eight:

# A Year's Supply for a Family of Eight

Apples	400-500 lb.
Berries	300 qt.
Others as available in your climate.	
2. Grains	
Wheat	1,200 lb.
Brown Rice	100 lb.
Oats	225 lb.
Barley	150 lb.
Rye	100 lb.
Flax	50 lb.
Millet	200 lb.
3. Herbs—Grow the ones you like best for flavorings, teas, and re	emedies. Many of
these are perennials (grow every year without replanting, even in n	orthern climates).
4. Legumes	
Kidney or Pinto Beans	75 lb.
Other Dry Beans	50 lb.
Peas (dried, split)	
	25 lb.
6. Vegetables	25 lb.
6. Vegetables A. Root Cellar (Plan on a 10 percent loss)	25 lb.
$\varepsilon$	
A. Root Cellar (Plan on a 10 percent loss) Potatoes	500 lb.
A. Root Cellar (Plan on a 10 percent loss)	500 lb.
A. Root Cellar (Plan on a 10 percent loss) Potatoes Soybeans	500 lb. 100 lb. 20 lb.
A. Root Cellar (Plan on a 10 percent loss)  Potatoes	500 lb. 100 lb. 20 lb.
A. Root Cellar (Plan on a 10 percent loss)  Potatoes  Soybeans  Lentils (sprouting or cooking)  Shelled Raw Peanuts	500 lb. 100 lb. 20 lb. 100 lb.
A. Root Cellar (Plan on a 10 percent loss)  Potatoes  Soybeans  Lentils (sprouting or cooking)  Shelled Raw Peanuts  5. Seeds	500 lb. 100 lb. 20 lb. 100 lb.

Beets	100 lb.
Cabbage	50 heads
Carrots	500 lb.
Onions	200 lb.
Garlic	15 lb.
Parsnips	100 lb.
Squash	
B. Canned Vegetables (Be careful to proces	
Tomatoes	400 qt.
Green Beans	200 qt.
Greens	100 qt.
Corn (150 lb. dried)	100 qt.
Peas	-

# **Preserving Food**



# **Canning Preparations**

- 1. Clean and peel the fruits and/or vegetables. Peaches and tomatoes may be scalded in boiling water for one minute to more easily remove skins.
- 2. Wash jars in hot, soapy water, rinse, and set out to drain.
- 3. Pack food firmly into quart jars.
- 4. Add 2 to 3 tablespoons of sugar or other sweetener per quart of fruit. In place of sugar, apple juice or pineapple juice may be used. For vegetables use 1 teaspoon of salt per quart.
- 5. Fill jars with hot water or juice, leaving about one inch of space from the top.
- 6. Wipe jar rims clean.
- 7. Cover with warmed lids and twist ring firmly into place.
- 8. Invert gently back and forth until sweetening or salt no longer settles out.

## Water Bath Method

In this method, the packed quart jars are placed in a large canner and barely covered with cool water (hot water will crack your jars, so always pour off enough boiling water from the last batch and add some cold water to the boiler). A rack should be placed in the bottom of the boiler so that the jars do not touch the bottom. Place the lid on the canner. Bring the canner to a rolling boil (this takes 15-20 minutes, depending on the intensity of your heat source). Maintain a rolling boil for 20 minutes when canning quarts of fruit, 30 minutes for two-quart jars. Jars will break if heat is too intense. For vegetables maintain a rolling boil for 45 minutes on quart jars. Canning two-quart jars of vegetables is not recommended.

# **Pressure Cooking Method**

The pressure cooking method is the best way to can vegetables. Vegetable canning temperatures must reach 212° F in order to deactivate a toxin that causes food poisoning. Follow the directions that come with your specific pressure canner regarding the length of time and proper weight (10-15 lb.) on the pressure valve. By adding pressure, you can attain temperatures of 240° F. **Take care to follow the directions that come with your pressure cooker to avoid accidents. Never open a pressure canner until it has cooled and released its pressure.** 

Always check your jars to be sure they are sealed before storing them. Refrigerate unsealed jars and use them the next day or reprocess them in another batch, using a new lid. Date your jars. Nothing will warm your heart quite like the beauty of your colorful rows of these summer memories throughout the cold winter months. Here's a colorful idea for using garden leftovers:

## "Summer Rainbows"

Collect and wash your small or late vegetables from the garden: potatoes, carrots, onions, tomatoes, peas, beans, corn, celery, garlic—anything that is a little small for storage in the root cellar. Chop vegetables as for stew, filling several large serving bowls with a different type of vegetable. Layer the produce into several clean canning jars, contrasting colors against each other into a tasty, healthy and colorful instant winter stew. You may wish to add a clove or two of garlic to each quart along with a half teaspoon of salt. Process jars of stew the same as for vegetables, 45 minutes in hot water bath or 15 minutes at 15 pounds of pressure. When ready to serve, heat to boiling point and add flour or cornstarch dissolved in cold water to thicken it after it comes to a boil. Serve Summer Rainbow Stew hot with homemade crackers. These colorful jars look especially beautiful lined up on your pantry shelves. It is the ideal fast food on a cold winter's day.

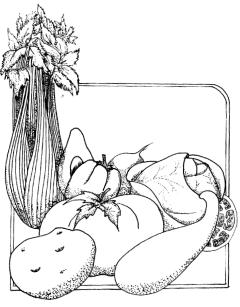
# Serving

After opening, always boil home-canned vegetables for at least 5 minutes before serving; this will deactivate the toxin that causes food poisoning. Be especially careful of high-protein and low-acid foods: gluten, beans, beets. Refrigerate leftovers immediately in shallow cooking pans, quart jars, or containers that will cool quickly and not culture bacterial growth.

# **Drying Foods**

Don't overlook this simple method of food preservation. It takes a

little planning. A drying rack is very easily made out of framed screen, suspended by a 1/4 inch rope from the ceiling above your heating stove or cook stove. This is good for drying everything from apples, bananas, tomatoes, and celery, to herbs for tea and flavorings. Slice fruits thin and allow them to dry thoroughly. Herbs such as dill, mint, basil, et cetera, can be picked as a bouquet, washed, and hung outside in the sun and wind to dry. Store dried foods in large glass jars or plastic bags in a cool, dark area. A sheet of lightweight plastic draped over the food will prevent it



getting dusty while drying. Food may also be sun dried during hot weather.

# **Root Cellar Storage**

Beets, carrots, potatoes, turnips, rutabagas, parsnips, can all be wintered successfully in the root cellar. Storage cabbage (tight heads) will keep well if hung by the root from the ceiling of the root cellar. Store fruit in a separate cellar or your apples will taste like potatoes! I recently visited a friend who kept his carrots in plastic 5 gallon buckets without sand or any other material. The carrots were nice and crisp after winter storage.

# Vegetable Storage

Crop	Place	Humidity	Period
Cabbage	root cellar	dry	All winter
Cauliflower	root cellar	dry	3-4 months
Celery	roots in soil	dry	6-8 weeks
Onions	hung, in cool dry place	dry	fall and winter
Parsnips	basement	dry	fall and winter
Potatoes	root cellar	dry	several months
Pumpkins/Squash	cellar or basement	moderately dry	fall and winter
Carrots, Beets	root cellar in sand	dry	fall and winter

# Harvest and Preparation of Common Vegetables

#### **Artichokes**

When Harvesting: Look for plump globes that are compact with fresh, green inner leaves.

To Prepare: Remove any discolored leaves and the small leaves at the base of the artichoke. Trim stem off, even with the base of the artichoke. Cutting straight across, slice 1 inch off top and discard top. Snip off points of the remaining leaves. Rinse artichoke in cold water. To prevent discoloration, invert in cold water with small amount of lemon juice.

To Boil: Heat 6 quarts of water to boiling in large kettle with 2 table-spoons of lemon juice and a clove of garlic which has been cut into fourths. Add artichokes. Simmer uncovered 30-40 minutes, rotating occasionally, until leaves pull out easily and bottom is tender when pierced. Remove artichokes carefully with tongs or two large spoons and place upside down to drain.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place the artichokes in the basket. Cover tightly and heat to boiling; reduce heat. Steam 20-25 minutes or until the bottom of the artichoke is tender when pierced.

# Asparagus

When Harvesting: Look for smooth, round, tender, medium-sized green spears with closed tips.

To Prepare: Break off tender ends where they snap easily. Wash asparagus; remove scales if sandy or tough. Remove sand particles with a vegetable brush if necessary. Asparagus may be cooked in spears or pieces.

To Boil: Place asparagus in 2 inches of boiling water. Boil uncovered for 5 minutes. Cover and boil 7-10 minutes longer or until stalk ends are crisp-tender; drain. Serve immediately. Asparagus may also be canned.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place asparagus in basket. Cover tightly and heat to boiling; reduce heat. Steam 6-8 minutes or until crisp-tender.

# Beans, Green and Wax

When Harvesting: Look for bright, smooth, crisp pods. Just-picked beans are crisp and velvety.

To Prepare: Wash beans and remove ends. Leave beans whole or snap into smaller pieces.

To Boil: Place beans in 1 inch of water, salted if desired. Heat to boiling; reduce heat. Boil uncovered 5 minutes. Cover and boil 5-10 minutes longer or until crisp-tender; drain.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place beans in basket. Cover tightly and heat to boiling; reduce heat. Steam 10-12 minutes or until crisp-tender.

# Beans, Lima

When Harvesting: Look for broad, thick, shiny pods that are plump with seeds.

To Prepare: Shell lima beans just before cooking. To shell beans, remove thin outer edge of pod with sharp knife. Slip out beans.

To Boil: Heat 1 inch of water, salted if desired, to boiling. Add beans. Heat to boiling; reduce heat. Boil uncovered 5 minutes. Cover and boil 15-20 minutes longer or until tender; drain.

### **Beets**

When Harvesting: Dig with fingers around top of plant; if beet is large (more than 2 inches in diameter) it is ready for harvest. Store large beets in root cellar. Can smaller beets, as they do not store well.

To Prepare: Cut offall but 1 inch of beet tops. Wash beets; leave whole with

root ends attached. Do not cut the skin in any way, or you will lose color and nutrition.

To Boil: Heat 6 cups water, salted if desired, to boiling. Add beets. Cover and heat to boiling; reduce heat. Boil 40-50 minutes or until tender; drain. Run cold water over beets; slip off skins and remove root ends. Slice, dice, or cut into julienne strips.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place beets in basket. Cover tightly and heat to boiling; reduce heat. Steam 45-50 minutes or until tender. Add boiling water during the steaming process if necessary. Run cold water over beets; slip off skins and remove root ends. Slice, dice, or cut into julienne strips.

### Broccoli

When Harvesting: Look for firm, compact dark green clusters. Cut or break clusters from plant. Most broccoli will continue to sprout tender heads through the summer, but the largest heads will be first.

To Prepare: Wash broccoli; peel if desired. Cut into pieces of desired size.

To Boil: Heat 1 inch of water, salted if desired, to boiling. Add broccoli. Cover and heat to boiling; reduce heat. Boil 10-12 minutes or until crisp-tender; drain.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place broccoli in basket. Cover tightly and heat to boiling; reduce heat. Steam 10-11 minutes or until stems are crisp-tender.

# **Brussels Sprouts**

When Harvesting: Wait until the heads are well formed, removing leaves to give the heads enough space to form. Look for unblemished, bright green sprouts with compact leaves.

To Prepare: Remove any discolored leaves; cut off stem ends. Watch for worms. Wash sprouts; cut large ones in half.

To Boil: Heat 1 inch of water, salted if desired, to boiling. Add Brussels sprouts. Cover and heat to boiling; reduce heat. Boil 8-10 minutes or until tender; drain.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place Brussels sprouts in basket. Cover tightly and heat to boiling; reduce heat. Steam 20-25 minutes or until tender. Serve immediately.

# Cabbage, Red and Green

When Harvesting: Look for firm heads. Depending on variety, most outer leaves should have good color. Cut head from plant at base unless storing in root cellar, at which time the cabbage is pulled and hung by the root. A good storage variety will keep all winter.

To Prepare: Remove outside leaves. Wash cabbage; cut into 4 wedges. Trim core to within ¼ inch of leaves, or shred cabbage to the core. Core may be peeled and used in stir fry as a replacement for water chestnuts.

To Boil: (wedges) Heat 1 inch of water, salted if desired, to boiling. Add cabbage. Cover and heat to boiling; reduce heat. Boil 10-17 minutes, turning wedges once, until crisp-tender; drain.

(Shredded): Heat ½ inch of water, salted if desired, to boiling. Add cabbage. Cover and heat to boiling; reduce heat. Boil 5-8 minutes or until crisp-tender; drain.

To Steam: (wedges) Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place cabbage in basket. Cover tightly and heat to boiling; reduce heat. Steam 18-24 minutes or until crisp-tender.

(Shredded): Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place cabbage in basket. Cover tightly and heat to boiling; reduce heat. Steam 5-7 minutes or until crisp-tender.

Sauerkraut: Finely shred 5 pounds cabbage into an earthen crock. Sprinkle with 3 tablespoons of non-iodized salt. Mash the cabbage, with a potato masher or wooden mallet, until it begins to form juice. Add layers of shredded cabbage generously sprinkled with salt in the same way until crock is full. Put a plate with a weight (a large clean rock) on top of the crock to keep cabbage submerged in the brine. Drape the crock with plastic: this prevents odors coming out and dust getting into your crock. Let set 5-6 weeks in a cool place. Pack into quart jars and process for 20 minutes. Note: kraut will not "work" in plastic buckets or with iodized salt.

#### **Carrots**

When Harvesting: Loosen the sides of the dirt with a garden fork and move the carrots from side to side until they pull easily from the ground. Clip tops if storing in root cellar. Carrots are delicious canned as pickles.

To Prepare: Pare carrots thinly and remove ends. Leave carrots whole, shred, or cut into julienne strips crosswise into ½ inch slices.

To Boil: Heat 1 inch of water to boiling, salted if desired. Add carrots. Cover and heat to boiling; reduce heat. Boil whole carrots 25 minutes, shredded 5 minutes, julienne strips 18-20 minutes, slices 12-15 minutes or until tender; drain.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place carrots (slender whole or slices) in basket. Cover tightly and heat to boiling; reduce heat. Steam whole carrots 12-15 minutes, slices 9-11 minutes or until tender. Serve hot.

### Cauliflower

When Harvesting: Cut cauliflower head from plant at base.

To Prepare: Remove outer leaves and stalk; cut off any discoloration. Wash cauliflower. Leave whole, cutting cone-shaped center from core, or separate into flowerets.

To Boil: Heat 1 inch of water, salted if desired, to boiling. Add cauliflower, cover, heat to boiling, then reduce heat. Boil whole cauliflower 20-25 minutes, flowerets 10-12 minutes or until tender; drain.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place cauliflower in basket. Cover tightly and heat to boiling; reduce heat. Steam whole cauliflower 18-22 minutes, flowerets 6-8 minutes or until tender.

# Celery

Celery can be harvested at any stage for flavoring stir-fry, soups, patties, roasts, or fresh celery sticks. Simply wash and cut off root ends. Add to favorite recipe as instructed. Your garden celery may not mature as large as the grocery variety, but has the same amount of flavor. You may encourage a milder flavor and a larger plant by keeping celery "bound" with newspaper as it matures.

### Corn

When Harvesting: Look for bright green, tight-fitting husks, peel husk back to see if ear is filled out. Ears will generally be filled to the tip when ready to eat. Corn may be hung to dry for long term storage as soon as it is ripe.

To Prepare: Corn is best when eaten as soon after picking as possible. Husk ears and remove silk just before cooking. (Husks can be used in making tamales.)

To Boil: Place corn in enough unsalted cold water to cover. (Salt toughens corn). Heat to boiling. Boil uncovered 2 minutes; remove from heat. Let stand uncovered 10 minutes before serving.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place corn in basket. Cover tightly and heat to boiling; reduce heat. Steam 6-9 minutes or until tender.

# Eggplant

When Harvesting: Look for smooth, glossy taut-skinned eggplant.

To Prepare: Just before cooking, wash eggplant; pare if desired. Cut eggplant into ½ inch cubes or ¼ inch slices.

To Boil: Heat small amount of water, salted if desired, to boiling. Add egg-

plant. Cover and heat to boiling; reduce heat. Boil 5-8 minutes or until tender; drain.

To Sauté: Heat 3-4 tablespoons of oil in 10-inch skillet over mediumhigh heat. Sauté eggplant 5-10 minutes or until tender.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place eggplant in basket. Cover tightly and heat to boiling; reduce heat. Steam 5-7 minutes or until tender.

**Greens:** Beet, Chicory, Collards, Escarole, Kale, Lamb's Quarters, Mustard, Spinach, Swiss Chard, or Turnip.

When Harvesting: Look for tender, young leaves of bright green color.

To Prepare: Remove root ends and imperfect leaves. Wash **several times** in water, lifting out each time to inspect for dirt particles; curly varieties need more intense rinsing.

To Boil: Cover with a lid and cook with just the water that clings to the leaves until tender: beet tops 5-15 minutes; chicory, escarole, mustard and Swiss chard, 15-20 minutes; collards 10-15 minutes; spinach 3-10 minutes; kale and turnip greens 15-25 minutes; drain.

### Kohlrabi

When harvesting: Look for the bulb forming above the ground. Harvest when bulb is 2-4 inches in size for best taste. Large ones tend to be woody.

To Prepare: Eat raw in stick form.

To freeze: cut in half-inch cubes, boil 15-20 minutes, place in freezer bags. To Cook: Place steamer basket in half-inch of water. Cover with lid. Steam 15-20 minutes. May be boiled in salted water same as potatoes, turnips, carrots.

## Leeks

When Harvesting: Look for white bulbs with pliable, crisp green tops. Bulbs less than  $1\frac{1}{2}$  inches in diameter are the most tender.

To Prepare: Remove green tops to within 2 inches of white part (reserve greens for soup or stew). Peel outside layer of bulbs. Wash leeks several times in cold water; drain. Cut large leeks lengthwise into fourths. Leeks are most often used as flavorings for roasts, soups, etc., but can be eaten as a cooked vegetable.

To Boil: Heat 1 inch of water, salted if desired, to boiling. Add leeks. Cover and heat to boiling; reduce heat. Boil 12-15 minutes or until tender; drain.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place leeks in basket. Cover tightly and heat to boiling; reduce heat. Steam 13-15 minutes or until tender. Serve hot.

#### Lettuce

Wash and prepare fresh in salads. When storing leftover salad, rinse it with cold water, let drain as dry as possible, and place in an airtight container to keep it fresh for one day. This prevents oxidation and browning of leaves. Romaine lettuce is best kept fresh by separating the leaves, washing each and patting dry. Place dry leaves side by side on a dry dishtowel, roll firmly, refrigerate until ready to use.

#### Mushrooms

When Harvesting: Look for creamy white to light-brown caps, closed around the stems; if slightly open, gill should be light pink or tan. Know your mushrooms! **Never eat any mushroom which you cannot identify.** 

To Prepare: Depending on variety, brush off dirt or peel as necessary or rinse mushrooms and trim off stem ends. Cut into ½ inch slices if desired.

To Sauté: Heat 2 tablespoons of oil in 10-inch skillet over medium-high heat. Roll mushrooms in breading meal. Sauté mushrooms 6-8 minutes or until tender.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place medium-sized whole mushrooms or pieces in basket. Cover tightly and heat to boiling; reduce heat. Steam 6-8 minutes or until tender.

#### Okra

When Harvesting: Look for tender, unblemished, bright green pods, less than 4 inches long.

To Prepare: Wash okra; remove ends and cut into ½ inch slices.

To Boil: Heat 1 inch of water, salted if desired, to boiling. Add okra. Cover and heat to boiling; reduce heat. Boil about 10 minutes or until tender; drain.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place whole okra in basket. Cover tightly and heat to boiling; reduce heat. Steam 6-8 minutes or until tender.

To Fry: Roll in breading meal and brown for 5 minutes. Cover with lid and cook on low heat until tender.

# Onions: White, Yellow, or Red

When Harvesting: Late summer, early fall or first frost, onions can be dug with a spade fork or pulled up by the tops.

To Prepare: Peel onions in cold water to help prevent eyes from watering.

To Boil: Heat several inches of water, salted if desired, to boiling. Add onions. Cover and heat to boiling; reduce heat. Boil small onions 15-20 minutes, large onions 30-35 minutes or until tender; drain.

To Sauté: Cut onions into ¼ inch slices. Heat 3-4 tablespoons margarine, butter, olive, or vegetable oil in 10-inch skillet over medium-high heat. Sauté onions 6-9 minutes or until tender. Serve as garnish over roasts, patties, mushrooms, etc.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place small white onions in basket. Cover tightly and heat to boiling; reduce heat. Steam 15-20 minutes or until tender.

Onions may be used fresh in green salads, potato salads, and more.

# **Parsnips**

When Harvesting: With a spade fork, dig as you would carrots. Late in the season, after first frost.

To Prepare: Scrape or pare. Leave whole or cut in half, fourths, ½ inch slices or strips.

To Boil: Heat 1 inch of water, salted if desired, to boiling. Add parsnips. Cover and heat to boiling; reduce heat. Boil whole parsnips or halves 15-20 minutes, slices or strips 7-9 minutes or until tender; drain.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place parsnips (whole or slices) in basket. Cover tightly and heat to boiling; reduce heat. Steam whole parsnips 20-25 minutes, slices 8-10 minutes or until tender.

# Peas, Green

When Harvesting: Look for plump, tender, bright-green pods.

To Prepare: Wash and shell peas just before cooking.

To Boil: Heat 1 inch of water, salted if desired, to boiling. Add peas. Boil uncovered 5 minutes. Cover and boil 3-5 minutes longer or until tender. Drain.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place peas in basket. Cover tightly and heat to boiling; reduce heat. Steam 10-12 minutes or until tender.

Sugar peas may be eaten fresh, whole.

# Peppers, Bell

When Harvesting: Look for well-shaped, shiny, bright-colored peppers with firm sides.

To Prepare: Wash peppers; remove stems, seeds, and membranes. Leave whole to stuff and bake, cut into thin slices or rings to use fresh, chop for seasoning in salads.

To Sauté: Heat 1-2 tablespoons of margarine or oil in 10-inch skillet over

medium-high heat. Sauté slices or rings 3-5 minutes or until crisp-tender.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place peppers in basket. Cover tightly and heat to boiling; reduce heat. Steam 8-10 minutes or until tender.

# Potatoes, Small New

When Harvesting: Dig with a spade fork.

To Prepare: Wash potatoes; do not peel.

To Boil: Heat 1 inch of water, salted if desired, to boiling. Add potatoes. Cover and heat to boiling; reduce heat. Boil slowly 20-25 minutes or until tender; drain.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place potatoes in basket. Cover tightly and heat to boiling; reduce heat. Steam 18-22 minutes or until tender.

### **Potatoes**

When Harvesting: First frost will kill the vines. Dig with a spade fork. Allow to air dry for several hours, put in burlap bags for root cellar storage. This procedure can be followed for any species of potato: reds often keep longer than the white varieties.

To Prepare for boiling: Scrub potatoes. Leave skins on whenever possible, or pare thinly and remove eyes. Leave whole or cut into large pieces.

To Prepare for baking: Scrub potatoes. Pierce with fork to allow steam to escape. To save time, potatoes may be cut in half and baked on cookie sheet.

To Boil: Heat 1 inch of water, salted if desired, to boiling. Add potatoes. Cover and heat to boiling; reduce heat. Boil whole potatoes 30-35 minutes, pieces 20-25 minutes or until tender; drain.

To Bake: Bake 350° F oven for 1 hour.

To Steam: Place steamer basket in  $\frac{3}{4}$  inches of water. Water should not touch the bottom of the basket. Place whole potatoes in basket. Cover tightly and heat to boiling; reduce heat. Steam 30-35 minutes or until tender.

# Rutabagas

When Harvesting: After first frost, dig with spade fork. If tops are green, they may be eaten, prepared like spinach. Rutabagas may be kept in a root cellar over winter.

To Prepare: Wash rutabagas; pare thinly. Cut into  $\frac{1}{2}$  inch cubes or 2 inch pieces.

To Boil: Heat 1 inch of water, salted if desired, to boiling. Add rutabagas. Cover and heat to boiling; reduce heat. Boil cubes 20-25 minutes, pieces 30-40

minutes or until tender; drain.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place rutabaga cubes in basket. Cover tightly and heat to boiling; reduce heat. Steam 25-28 minutes or until tender.

May also be served raw.

# Squash, Winter: Acorn, Buttercup, Butternut, or Spaghetti

When Harvesting: These may be gathered through the summer. Some varieties will keep well in the root cellar for two or three months.

To Prepare: Wash squash. For boiling, pare squash if desired; cut into 1 inch slices or cubes. Or, cut each squash lengthwise in half; remove seeds and fibers.

To Bake: Place squash halves in ungreased rectangular baking dish. Sprinkle cut sides with salt. Cover and bake in 400° F oven 30-40 minutes, or a 350° F oven about 40 minutes, in 325° F oven about 45 minutes or until tender. For spaghetti squash, remove strands with two forks, serve with spaghetti sauce.

To Boil (for large squash): Heat 1 inch of water, salted if desired, to boiling, then add squash (sliced, peeled, or cubed). Cover and heat to boiling; reduce heat. Boil 15-20 minutes or until tender; drain. Remove peeling if desired and reheat before serving.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place squash (slices or cubes) in basket. Cover tightly and heat to boiling; reduce heat. Steam slices 12-15 minutes, cubes 7-10 minutes or until tender.

# Squash, Summer: Chayote, Crookneck, Pattypan, Straightneck, or Zucchini

When Harvesting: These may be gathered through the summer. Smaller zucchini and crookneck are more tender than the larger squash.

To Prepare: Wash squash; remove stem and blossom ends but do not pare. If squash are small, cut in half. For larger squash, cut into ½ inch slices or cubes.

To Boil: Heat 1 inch of water, salted if desired, to boiling. Add squash. Cover and heat to boiling; reduce heat. Boil slices 5-10 minutes, cubes 3-6 minutes or until tender; drain.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place squash (slices or cubes) in basket. Cover tightly and heat to boiling; reduce heat. Steam 5-7 minutes or until tender.

To Bake: Slice thinly, roll in savory breading meal, place on oiled cookie sheet. Bake at 375° F for 15 minutes on each side, until golden and crispy.

To Sauté: Chop onions, peppers and zucchini or crookneck squash and sauté together with a little oil until tender. Serve hot.

#### **Tomatoes**

When Harvesting: Look for nicely ripened, well-shaped tomatoes. Fully ripe tomatoes should be slightly soft but not mushy. Most varieties have a rich red color when ripe.

To Prepare: Wash tomatoes; cut into 8 wedges or ½ inch slices. Peel tomatoes before cutting if desired. To remove skin easily for canning, dip tomato into boiling water for 30 seconds, then plunge into cold water.

To Eat: Tomatoes are delicious raw, and very high in vitamin C. They may be sliced for sandwiches, diced for salads or cubed finely for fresh salsa (see recipe section). They may also be canned in a variety of ways.

## **Turnips**

When Harvesting: Dig with spade fork, remove tops. Store in root cellar. If tops are green, they may be eaten, prepared like spinach.

To Prepare: Cut off tops. Wash turnips; pare thinly. Leave whole or cut into  $\frac{1}{2}$  inch pieces.

To Boil: Heat 1 inch of water, salted if desired, to boiling. Add turnips. Cover and heat to boiling; reduce heat. Boil whole turnips 25-30 minutes, pieces 15-20 minutes or until tender; drain.

To Steam: Place steamer basket in ½ inch of water. Water should not touch the bottom of the basket. Place turnip pieces in basket. Cover tightly and heat to boiling; reduce heat. Steam 15-20 minutes or until tender.

Turnips are also very good eaten as a raw vegetable.

# **Legumes: The Key to Complete Protein**

Legumes grow in pod form and are often dried. They should be soaked, covered with water overnight, before cooking. Season as desired. There are many good recipes available for cooking beans. With the exception of lentils, all legumes should be boiled uncovered for a couple of minutes, with the first water drained off before cooking; this boiling period destroys the enzyme that causes illness in some people who feel they are allergic to beans. Some folks are surprised when their legumes triple in volume when they are soaked! Common legumes include: split peas, peanuts, lentils and all kinds of beans—lima, pinto, great northern, navy, kidney, soy, garbanzo, and black.

A vegetarian meal is more properly balanced if a legume is present. Eat at least one serving of any legume per day with any whole grain. This combination makes a complete protein.

Doctors Agatha and Calvin Thrash, in their book <u>Nutrition for Vegetarians</u>, address the challenge of a complete protein in the vegetarian diet: "In certain

selected areas there are isolated traditions involving food items such as breads, pastas, food combinations, etc. These combinations either enhance or reduce the quality of food served on the table. Every ethnic group has a traditional legume/grain combination. Orientals have rice and soybeans. Latins have tortillas and frijoles. Indians have chapatis and garbanzos. Americans have the peanut butter sandwich. Surely this wisdom about the desirability of combining legumes and grains came to the world through Inspiration to be a blessing to mankind before the science of nutrition had sufficiently developed to recognize the need for balancing amino acids." It is highly recommended that unless you eat your grains as sprouts, that they be thoroughly cooked.

B	asic	Grain	n Pre	paration

Grain	Water	Salt	<b>Cooking Time</b>		
1 c. Barley	4 c.	$\frac{1}{2}$ t.	45 minutes		
1 c. Brown Rice	$2 \frac{3}{4} c$ .	¹∕₄ t	50 minutes		
1 c. Cornmeal	4 c.	1 t.	30 minutes		
1 c. Millet	4 c.	1 t.	1 hour		
1 c. Oats	3 c.	1 t.	30 minutes		
1 c. Quinoa	2 c.	$\frac{1}{2}$ t.	15 minutes		
1 c. Wheat	4 c.	$\frac{1}{2}$ t.	45 minutes		
1 c. White Rice	2 ½ t.	¹⁄₄ t.	20 minutes		

# Simple Eating Plan

"Grains, fruits, nuts, and vegetables constitute the diet chosen for us by our Creator" (The Ministry of Healing, p. 296).

Once, not so long ago, there were no supermarkets, no oil refineries, no cars and trucks, and no gas stations. Life was quiet with the exception of bird songs, the clopping of horses hooves, and the squeak of a wagon wheel. When great-grandma made dinner, she didn't go to the freezer to get prepared meat substitutes or frozen mixed vegetables. She never added hot water to powder to create mashed potatoes; nor did she ever mix up a package of instant pudding for dessert. When she ran out of peanut butter, she didn't hop in the car and putt down to the local grocery store. She had to "make do" and wait until great-grandpa was ready to go to the city to bring back supplies. She went to the garden, root cellar, or the barn. But this never kept her from putting together a feast. Home cooking is one of the best parts of the "good old days."

The hub of the home was the kitchen and its hearth; living out of the orchard

and garden required effort and planning. The time is coming when we will again be unable to buy from the supermarkets for there is a time prophesied when no man can buy or sell unless they compromise God's ideals and accept the mark of the beast. We will have to know how to prepare healthy meals in a simple way right from the garden.

Great-grandma juggled her time and talent between garden and kitchen with a skill that would leave most of us standing in awe. It was her way of life, so she did not consider it a hardship. It was all she had known, and the bigger the garden the more blessings she was able to share with her family and friends. Living from the garden was expected, but not taken for granted. Even very little girls were taught how to gather produce and peel potatoes and apples in those "good old days."

James and Ellen White's home was a very busy one. Ellen greatly valued her cook and has passed down a few words of encouragement to those who are skilled or seek to become knowledgeable in food preparation.

"Cooking may be regarded as less desirable than some other lines of work, but in reality it is a science in value above all other sciences.... The one who understands the art of properly preparing food, and who uses this knowledge, is worthy of higher commendation than those who engage in any other line of work. This talent should be regarded as equal to ten talents; for its right use has much to do with keeping the human organism in health. ...it is the most valuable of all gifts" (Counsels on Diet and Foods, p. 251).

# **Cooking With Wood**

My wife has learned the art of cooking on a wood cook stove, and, though she may claim to have once been totally without knowledge, she still laughs about one student's first attempt. Several of the girls who had previously helped her with the meals seemed to take quite naturally to their country kitchen duties. A few, however, had no knowledge of where food came from or how to prepare it; one girl had never been allowed in the kitchen and could not even use a can opener! One newcomer exuded an air of efficiency in the kitchen, so she was left to prepare scalloped potatoes, tripling the batch according to the recipe, for the 14 people eating in our home. My wife returned to reading her students' English papers and tending our then 3-year-old son, but was jolted to attention when the strong smell of smoke drifted through the house. Her terror melted into amusement when she opened the door from whence the smoke billowed. Her helper had built the fire in the oven instead of the firebox!

What is amusing today may be of grave consequence when we must depend upon our garden, our faithful cook stove, and our God. Among the many challenges great-grandmother faced, and among those we will also have to demonstrate, was cooking on a wood stove. Since great-grandmother grew up using this method, it was not such

a challenge to her as it might be to most women today who have grown up with the electric range. Cooking with wood was a skill, like so many others, that was passed down from generation to generation. Even the simplest home had a stove on which to cook.

We, as a society, are used to having others do for us the things our ancestors did for themselves. Learning survival skills is not difficult, but they must be learned from someone familiar with these skills, and teaching may be challenging to an independent soul. Persevere, make friends with old timers who may share secrets when they realize you sincerely wish to preserve a heritage. These skills are invaluable and rapidly disappearing.

A practical lifestyle dictates certain requirements for survival; the simpler the life, the more we must depend upon practical skills. Children deprived of doing for themselves, of developing their imagination, of thinking for themselves, may have a poor survival rate. For those who have become dependent upon the utility web, simplifying cooking methods will require some time, patience and vision. Simple does not mean timesaving. Simple means doing for ourselves whatever we can learn to do. Here are a few simple pointers for learning to cook with wood:

- 1. Search for a good wood-burning cook stove (with an oven and firebox that is not rusted out) and set it up as soon as possible. A wood cook stove is a comforting addition to the family kitchen.
- 2. Empty ashes regularly—including those collected over the oven. Whisk ashes across the top of the oven to the right side, where they will fall down under the oven to be scraped out with the clean-out tool that comes with your stove. The oven will not heat if the ashes are insulating it.
- 3. Stove black and elbow grease will make your wood cook stove an attractive addition to the most modern kitchen.
- 4. Take time to master the art of maintaining a steady oven temperature for baking. Each stove is unique; you must learn when and how to damper your stove; when to admit more air under the firebox and when to damper the chimney to hold the fire at a more steady temperature. If your oven has no temperature gauge, you must buy one which will hang on the oven rack.
- 5. Know your wood: the size and type of wood you are using will dictate how hot your fire is and how long it will hold. Dry aspen and cottonwood burn hot and fast, leaving more ash than other wood. Spruce and pine leave less ash, tend to hold fire much longer and burn cooler. Birch holds the longest with the hottest flame, but takes a hot fire to get it started, especially if it is not completely dry. Learn what wood is best for your particular needs.
- 6. Design a large wood box that will last you through the cooking day. Encourage family members to keep the wood box filled during morning chore time.
- 7. If you use a wood cook stove you will have to live in the country.

# When Mother Cooked With Wood

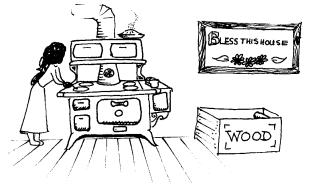
I do not quarrel with the gas,
Our modern range is fine,
The ancient stove was doomed to pass
From Time's grim firing line,
Yet now and then there comes to me
The thought of dinners good
And pies and cake that used to be
When mother cooked with wood.

The axe has vanished from the yard, The chopping block is gone, There is no pile of cordwood hard For boys to work upon; There is no box that must be filled Each morning to the hood; Time in its ruthlessness has willed The passing of the wood.

And yet those days were fragrant days And spicy days and rare;
The kitchen knew a cheerful blaze And friendliness was there.
And every appetite was keen For breakfasts that were good When I had scarcely turned thirteen And mother cooked with wood.

I used to dread my daily chore, I used to think it tough When mother at the kitchen door Said I'd not chopped enough. And on her baking days, I know, I shirked whene'er I could In that now happy long ago When mother cooked with wood.

I never thought I'd wish to see
That pile of wood again;
Back then it only seemed to me
A source of care and pain.
But now I'd gladly give my all
To stand where once I stood,
If those rare days I could recall
When mother cooked with wood.



-Edgar Guest

#### Care of Ironware

The very best cookware, whether you cook with wood, electricity or gas, is cast iron. These are easy to care for and distribute heat evenly. They do not add chemicals to your food. Clean them after every use with warm water only (no soap) as soon as they are emptied (before the meal is served). Place the ironware back on the stove to dry during the meal. Hang it on the wall as soon as it dries. It is important that ironware not be allowed to rust. Keep it clean, dry, and cured.

Ironware must be cured when new or when the cure wears off. To cure a pot or pan, clean it thoroughly with soap, water, and a scratch pad to remove buildup or rust. After it is thoroughly dried (on the stove), wipe a thin layer of cooking oil over the entire surface, inside and out, then turn the pan upside down in the oven, and bake at 350° F. for one hour. An outdoor kitchen is ideal for curing ironware as it keeps the resulting smoke out of the house. Ironware should always appear to have a smooth finish that requires much less oil for cooking and prevents them from rusting.

# **Dutch Oven Cooking**

A Dutch oven is a heavy cast iron pot with a lid. It can be used over an open fire to cook soup, beans, porridge, and bake vegetables. It can also be used for baking bread. To bake bread, place a three inch slab of your favorite bread dough in the well-cured Dutch oven. Let it rise, as usual, while you tend your coals. When the dough has risen properly, bury the Dutch oven in a bed of hot coals, placing a layer of coals over the container. Bake the same length of time as for oven-baked bread. Check it periodically. To decrease oven temperature about 25 degrees, remove a few coals from the top layer.

Keeping the inside of your Dutch oven seasoned, or cured is important, just as for any other ironware. Wash it in hot water, without soap, rinse it and lay it on the cook stove to dry as soon as you are finished using it.

# Garden to Kitchen Cookbook

Think of your garden as your grocery store; watch it closely, for every day some new treat will appear along its aisles. Salt, bread yeast, oil, and other flavorings are necessary storage items to keep on hand. Since legumes are more difficult to grow in some areas, we suggest storing the items listed on page 237 under "legumes." Milling grains can be done at home; consider obtaining some hand-operated equipment for this purpose. The following recipes were designed for practicing for the time when your garden will be your paycheck. For a simple refrigeration system, consider using your water source or root cellar. The fruit of your own hand is as sweet as the rest it brings you.

## Soups

# **Split Pea Soup**

Soak 1 cup split peas in 4 cups of water overnight. Add 2 carrots (diced), 1 large onion (diced), 2 stalks celery (diced), 1 teaspoon salt. Simmer at least one hour until tender and creamy. For a creamier soup, mash the cooked ingredients with a potato masher.

# "Miracle" Soup—The Gardener's Diet

This is a soup that burns more calories than it supplies; good for those who want to shed a few pounds. For weight loss, fast for the first day, drinking only water. Through days 2 and 3 drink a gallon of water with ½ cup of lemon juice and 2 teaspoons of salt added. On days 4 and 5, eat "Miracle" soup and raw veggies, then add raw fruit and bread as you ease back into regular food. This makes a large pot of soup.

3 large onions, chopped

1 head of cabbage, cut in bite-sized pieces

2 carrots, cut in bite-sized pieces

1 green pepper, chopped

1 bunch celery, chopped

2 whole tomatoes, canned or fresh

Cover with water, bring to a boil, add ½ cup of soy sauce and other seasonings, such as garlic, as desired. Cook until tender.

# Cresta's Simple Vegetable Stew

4 large potatoes

1 large onion

3 carrots

1 c. green beans

1 qt. canned tomatoes

1 T. salt

Clean and chop vegetables into soup kettle. Cover with water and cook until tender. Add tomatoes. Cook 5 minutes more. Serve with bread or crackers. For variation, add celery, omit tomatoes, or thicken with flour or cornstarch. Serves 6.

# **Summer Dillight**

4 c. water (divided) 1/2 finely diced onion 1 c. raw cashew pieces\* (if available) 1 clove finely diced garlic

1/2 T. salt 1/2 t. fresh dill

1/3 c. nutritional yeast flakes (if available) 1/8 c. pimientos (or red pepper)

In soup kettle, steam 4 cups finely chopped broccoli.

In blender: 1 cup of cold water plus all ingredients, except broccoli, until very smooth. Put all in a kettle and add remaining 3 cups of water. Cook very slowly on low heat, **stir often to prevent scorching,** until mixture boils. Simmer 15 minutes. Serves 4. \*(½ c. flour may be substituted, or thicken with potatoes.)

# Potato Soup

3 qt. water

6 c. peeled and cubed potatoes

2 large onions, diced

1 ½ t. salt

2 stalks celery (optional)

Simmer until tender. Variation: thicken with ½ c. flour dissolved in 1 c. cold water. Adding about 2 cups of creamed or canned corn turns this soup into a wonderful corn chowder. Serve with home made crackers (p. 261).

# McClure's Lentil Soup

1 ½ c. lentils1 clove garlic2 qt. water2 T. oil2 medium onions2 t. salt

2 stalks celery 3 T. lemon juice (optional)

1 carrot  $\frac{1}{2}$  c. tomatoes

Soak lentils ½ hour. Sauté diced vegetables, including garlic in oil. Combine all ingredients and bring to boil; simmer ½ hour. Add salt, lemon juice, and tomatoes. Served with whole wheat crackers this is a tasty and nutritious meal, satisfying all the requirements for complete protein.

#### Rushin' Borscht

2 qt. water
2-4 large tomatoes
4 beets
2 carrots, grated
2 c. shredded cabbage

½ c. celery, chopped

1 large onion, diced 3 cloves garlic

1 large potato, diced 1 c. precooked navy beans

1 t. lemon juice (optional) ½ t. dried dill (or fresh flower and leaves)

Salt to taste

Combine ingredients in soup kettle; simmer 2 hours. A good way to use canned cabbage.

## **Navy Bean Soup**

Soak 2 cups of navy beans overnight. Drain and parboil 15 minutes in fresh water. Drain off water to remove toxins. Rinse beans. Refill bean pot with 8 cups of water and 1 tablespoon of oil. Bring to boil and simmer at least 2 hours in covered pot. Add seasonings: 1 clove garlic, 1 large onion (diced fine), 1 ½ t. salt. Variation: 1 T. bacon flavored bits.

#### **Breads**

"It is a religious duty for every Christian girl and woman to learn at once to make good, sweet, light bread from unbolted wheat flour" (Counsels on Diet and Foods, p. 316)

The best way to learn to make good bread is to be taught by someone who has mastered the art. Copy a friend's recipe; there are as many bread recipes as there are folks who make bread! It just takes a little practice and perseverance to make a good loaf. Those who suffer from wheat allergies will be encouraged to know that other grains can be adapted to make good bread. The Lord has promised two provisions in the troublous times ahead: bread and water (Isaiah 33:16).

# Easy Whole Wheat Bread (yield: 6 loaves)

- 1. **Mix water with flour**: In large mixing bowl, mix vigorously with potato masher: 6 cups of warm water with 10 cups whole-wheat flour until dough becomes stringy (gluten development). ½ cup of gluten flour will keep bread more limber.
- 2. **Yeast:** In small bowl: 1 cup warm water, 1 Tbs. sugar (not honey), then sprinkle 2 Tbs. of bread yeast into the water. DO NOT mix the yeast; let it rise, undisturbed, until foamy. Pour yeast mixture into the dough mixture.
- 3. **Salt, flour, seeds, grains:** Add 1 Tbs. salt, and seeds (sunflower seeds, fresh-ground flax, etc.) as desired. A cup of soy flour will make your bread a complete protein, as it is ground from a legume. 1-2 Tbs. lecithin and ½ cup of molasses may also be added at this time if desired. Mix dough with a potato masher, adding remaining flour a cup at a time (total of 15 cups) until it is too stiff to beat.
- 4. **Kneading:** Pour 2 more cups of flour onto the countertop, place the dough on top and add another cup of flour. Fold the dough in upon itself repeatedly with the heel of your hand around the edge of the lump to work the rest of the flour, about 5 more cups, 1 cup at a time so that dough will not become heavy and dry. Knead for at least 10 minutes. If the dough is still sticky, add more flour until it feels like memory foam when pressed gently. The mass of

dough should be neither tough nor sticky, but should hold its shape and still be tender to the touch. (Adjust your height by standing on a stool and lean your weight into kneading.)

- 4. Let rise: Place the kneaded dough on counter top with your mixing bowl over the mass to keep it moist, warm, and free of contamination or drafts. Allow dough rise undisturbed for about 1 hour in a warm kitchen.
- 5. **Forming Loaves:** Divide the dough into 6 equal parts. Dough that squeaks when the bubbles escape as you flatten it before forming loaves will be good bread! Shape into 6 loaves with smooth tops, and place into oiled loaf pan. For a softer crust, roll loaf in the pan so that the top crust has some oil on it. Let rise until double in bulk in warm kitchen, but not too near a heat source as it will cause it to raise too quickly or pre-cook it and sour the bread. (Always discard soured dough.)
- 6. **Bake:** When bread has risen above the pans and no longer resists a gentle touch at the corner of a loaf (about 1 hour), bake the bread in preheated oven at 350° F. (When using a wood cook stove, be sure the oven has been at 350° F and holding constant temperature for a half hour or more and stoked with larger pieces of wood.) Oven racks should be centered so that the bread will bake evenly, top and bottom. Bake 25-30 minutes until well browned. Loaf will sound hollow when thumped. (In a wood cook stove rotate loaf positions after they have cooked for 15 minutes, or those nearest the firebox may burn while others may not be thoroughly cooked.)
- 7. **Cool:** Empty the loaves immediately out of the bread pans and allow to cool on a rack. Cover your bread with a designated towel (if flies are present) until it is cool enough to bag. Bread molds quickly when not refrigerated. Share it with a neighbor while it's fresh! Though it may require great self-denial, for the sake of health, let the bread remain uncovered for at least four hours before serving. Bread, eaten too fresh can be upsetting to the digestive system because of the alcohol content resulting from yeast growth. (Counsels on Diets and Foods, p. 316-321 for commentary on breads.)
- 8. **Clean-up:** Using cold or cool water for clean-up prevents "cooking" the dough into your dishcloth or sponge.

"There is more religion in a good loaf of bread than many think" (Counsels on Diet and Foods, p. 316).

# **Honey Buns**

Roll out a portion of whole wheat bread dough into a square, as for cinnamon rolls, drizzle with honey and nuts, roll into a log, slice, and bake as for rolls.

# Sourdough Starter

Boil one minute:  $\frac{1}{4}$  c. soy milk  $\frac{1}{2}$  c. water  $\frac{2}{4}$  tsp. Oil

In separate bowl: \( \frac{1}{4} \text{ C warm water} \) 1 tsp. Sugar \( 2 \text{ Tbs yeast} \) When ingredients are cool, pour them all together in large mixing bowl and add:

2 ½ C warm water 2 c. unbleached white flour 1 ½ tsp. salt Mix and let stand at room temperature for 8 hours. Refrigerate until baking day. To use: pour the whole culture into your bread bowl, mix it with warm water (5 cups for five loaves) and flour (5 cups) and remove a portion of this dough to save as a refreshed starter in a clean jar. Mix the remainder as bread dough. Keep loaves warm (to activate growth) as this leavening agent will rise more slowly than regular yeast. Refresh starter once every week or two and replace in a clean jar.

## **Pull-Aparts**

Use the same amount of bread dough as for a regular loaf, but form dough into 12 balls. Mix a syrup of: 4 T. oil, 4 T. honey, 2 T. water, and pour into bread pan. Nuts and/or berries may be added before the balls of dough. Let rise, then bake the same as bread. Deliciously sweet, simple treat!

# **Squash Rolls**

Blend: 1 c. cooked, peeled squash (butternut/pumpkin/acorn) with

½ c. sugar 1½ t. salt 1 c. scalded milk (soy or dairy)

Put 1 T. yeast in  $\frac{1}{4}$  cup of warm water, let rise and add to the above mix. When cool, add  $\frac{1}{2}$  cup of oil and 5 cup of flour. Mix, knead, and let rise to two times its original size. Form into rolls, place on baking sheet, let rise again. Bake at  $350^{\circ}$  F for 20-25 minutes. This soft dough makes great dinner rolls or hamburger buns.

#### **Crackers**

Mix the following ingredients in blender, threading oil in last to make mix fluffy:

1 ½ c. cold soy milk 1 t. lecithin (if available)

1 ½ t. salt 1 c. oil

Add wet ingredients to 4 cups flour to form a stiff dough. Flatten onto cookie sheet and bake for 10 minutes at 400° F.

# Pie Crust or Simple Crackers (makes two pie crusts)

 $2\frac{1}{2}$  c. flour (sifted whole wheat)  $\frac{1}{2}$  c. oil

 $\frac{1}{2}$  t. salt  $\frac{1}{2}$  c. cold water

Mix flour and salt in mixing bowl. Add oil and stir with fork until well blended. Pour in water and mix only until blended. Roll out the dough for pie crust, or press into a cookie sheet for crackers. Bake 400° F 10 minutes, or until golden at edges.

## **Corn Tortillas** (makes 6 tortillas)

1 c. fine cornmeal 1 t. salt

1 ½ c. white flour

Mix dry ingredients together and add 1 c. cold water. Knead slightly and divide into six equal parts. Form tortillas on floured surface with a rolling pin, as for pie dough, only much thinner. Bake on ungreased skillet, on low heat until golden spots appear. Eat while hot. May be used for burritos, or dipped in salsa. Older tortillas may be baked in oven and broken up as corn chips.

## **Breakfast Crepes (unleavened)**

Blend together: 1 C cold water 1/2 c. oats 1/4 C flour 1 t. oil 1 t. honey 1/2 t. salt

½ t. vanilla (when available)

In well-cured iron skillet, heated to 350°F (medium temp.), pour ½ C of mixture and spread it quickly to about 7 inches in diameter. Cook for 3 minutes, or until it is tough enough to flip. Cook for another 3-5 minutes until done. Place on top of each other to keep moist and limber. Serving suggestion: Spread with nut butter or tofu cheese, roll up, three to a plate, and cover with hot fruit sauce, such as blueberries.

#### **Croutons**

To use old bread: dice, sprinkle with garlic/onion salt, stir in lightly oiled skillet until toasted, or baked slowly in oven. Serve with soup or salad. Store in tight container.

#### Zwieback: "Twice-baked Bread"

Slice older bread very thin and bake slowly until crispy. This bread will keep for months. It is good for camping, as it is lightweight and takes awhile to chew.

# **Entrées and Specialty Dishes**

# No Lump Savory Gravy

1 c. whole-wheat flour ½ diced onion 6 c. cold water salt to taste

1 T. soy sauce (if available)

Heat dry skillet and "brown" the flour by stirring it in the skillet on medium-high heat for 10 minutes, until it begins to smell toasty and turns brown. Be careful not to burn it. Stir in the 6 cups of cold water **all at once**; bring to a boil, stir; all the lumps disappear! Add flavorings. Simmer for 15 minutes. Add sautéed onion or meat substitutes for variety. Serve hot over biscuits, bread, potatoes, or patties.

## Millie's Garden Gravy

In blender, combine:

3 cooked carrots

1 medium potato, cooked

1 raw onion

1 c. flour

And enough water to fill the blender. Pour contents of blender into a skillet or saucepan. Add water to thin gravy as it cooks; if you are cooking potatoes to go with the gravy, use the potato water to thin the gravy. Season with soy sauce or salt to taste.

## **Asparagus Toast**

Edge a large serving platter with diagonally-sliced toast. Place steamed asparagus spears at each end of this arrangement and pour a white sauce over the center of the dish. Serve immediately. For white sauce: blend together 2 cups of cold water, 1/2 cup flour, 1 T. oil, 1/2 t. salt. Boil until thick.

#### **Corn Tamale Casserole**

Place 2 cups of cornmeal in dry skillet and stir constantly over medium heat till toasted. Place the hot, dry cornmeal in a mixing bowl, add 2 cups of water then add:

 $3\frac{1}{2}$  c. whole canned tomatoes or 4-5 fresh tomatoes  $\frac{1}{2}$  c. oil

2 c. black pitted olives (if available) 1 large onion, chopped

1 ½ c. corn off the cob after it has been cooked 2 t. salt

½ c. chopped green pepper

Mix well with cornmeal put in oiled casserole dish and bake 1-1 ½ hours at 350°F.

#### **Don's Gluten Steaks**

Mix 10 cups of warm water with 20 cups of high-gluten whole-wheat flour, or white flour. Knead into a firm bread-like dough. Cover this ball of dough with water and let it remain under water for at least four hours. Prepare broth:

2 gallons water 2 T. oil

1 c. soy sauce, or 3 T. salt1 large onion, dicedSeveral celery leaves2 cloves garlic

While broth comes to a boil, wash starch and bran out of the dough mass with repeated kneading under several changes of water. To keep gluten tender, leave a little starch; do not wash it completely clean. Shape gluten dough into a 2-inch log; slice dough very thin and press out thinner with your hands. Drop the dough, one piece at a time, into the boiling broth. Boil at least 15 minutes. Place steaks on deep cookie sheets and cover with broth. Bake at 400° F turning steaks occasionally, basting with remaining broth at 10 minute intervals. Bake until broth has been ab-

sorbed then remove from oven and serve hot. Store in refrigerator. Variation: After steaks are shaped, they may be rolled in breading meal and fried on each side until golden and crisp. Use within 2 days. Gluten has a high protein content. If it is canned, it should always be heated above boiling point for five minutes. Watch for puffy lid (indicating release of gas), and discard the contents of any unsealed jar.

# Haystacks

Soak 2 cups of pinto beans overnight. Parboil 15 minutes. Pour off water. Cover beans with water and simmer at least 2 hours before serving. To make haystack: each person at the table builds their own stack. Favorite ingredients include corn chips (dried, broken tortillas), lettuce, tomatoes, onions, olives, salsa, pimiento cheese, and pickled beets. The beauty of this dish is that folks can create it as they like; an excellent choice for potluck dinners!

## **Lentil Sandwich Filling**

Grind 11/2 cups of dry lentils; set aside.

Bring to boil in saucepan:

4 c. water 2 t. salt

1 large onion, chopped 2 T. soy sauce (if available) Pinch of each, garlic powder (or 1-2 fresh cloves), sage, dill, thyme.

When broth is just coming to a boil, add the dry lentil meal and stir while cooking for 3 minutes. Remove from heat and place in oiled container to slice after it has chilled overnight. Good for making sandwiches with alfalfa sprouts, pickles, leaf lettuce and/or onion slices.

# **Oat Burgers**

Boil together:

8 c. water ½ c. nutritional yeast (if available)

5 cloves garlic salt to taste

1 large onion, diced fresh or dried herbs to taste (basil, sage)

1/4 c. oil 8 c. oat flakes (regular or quick)

Mix and boil everything together **except oats** for 2 minutes. Add oats and stir only until moistened. Cover, set aside for ½ hour or until cool enough to handle. Form into patties with an oiled jar lid and ring, or dip lid and ring in warm water after each patty is formed. Bake or fry lightly on both sides. Serve with buns, ketchup, and mayonnaise, pickles and/or alfalfa sprouts. Sandwich idea: Sandwiches can be made from fresh garden produce, especially lettuce, tomatoes, and onions. An oat burger patty and some sprouts on whole wheat bread provides a quick, nutritious meal.

## **Scalloped Potatoes**

Into shallow baking dish slice together: peeled potatoes, onions, garlic. Smother with uncooked gravy mixture (1 quart cold water to ½ c. flour with seasonings of choice; seasoned salts, or soy sauce.) Bake 375° F for 1 hour.

## Vegetable Bake

In a casserole dish place clean, sliced fresh garden vegetables: potatoes, carrots, peas (in the pod are fun to skim through your teeth), green beans, onions, garlic, and some pre-flavored pieces of gluten. Drizzle with a little oil and season with your favorite herbs. Bake at 375° F for one hour. Serve hot with gravy.

## **Stir Fry**

Simple, attractive, delicious way to use fresh garden produce. Clean and imaginatively cut cabbage (peel and slice as a water-chestnut substitute), broccoli, onions, carrots, cauliflower, and peppers. Heat a large iron skillet, rub with garlic and oil, stir in the vegetables until crispy-tender (about 5 minutes). When ready to serve, pour a seasoned thickening mix of 1 c. cold water, 3 T. cornstarch (or ½ cup flour), 2 T. soy sauce (or salt to taste) over the cooked vegetables and stir until the mix thickens quickly to a glossy shine. Serve over rice with toasted sesame seeds or slivered almonds as a garnish.

#### **Baked Garlic**

Leave the garlic whole, trimming the tips off of each clove. Arrange garlic in a baking dish, pour in two inches of water, then bake at 400° F for 45 minutes. Serve as a spread for bread, a garnish for baked potatoes, or flavoring for pasta.

# **Zucchini Chips**

Slice small to medium-sized zucchini into ¼-inch rounds and dip in breading meal: 1 c flour, 1 c nutritional yeast (if available), 1 T salt, 1 T onion powder. Bake on oiled cookie sheet for ½ hour at 375° F until golden. Flip chips over and bake until done. Serve hot or cold. They become more crisp as they cool if properly cooked.

#### Salads

# **Alfalfa Sprouts**

Three tablespoons of alfalfa seeds in a quart jar will yield a quart of alfalfa sprouts in four to six days, depending upon temperature and germination rate. Special lids may be purchased for sprouting seeds, but a section of cheesecloth or a nylon stretched over the mouth of the jar with a rubber band works well. Fill jar about half full of

warm water and let seeds soak overnight. Rinse thoroughly twice a day in cool water and leave on countertop until well-sprouted. Then place in a sunny windowsill until leaves form and turn the surface green. To remove sprouts from hulls and unsprouted seeds, place the contents of the jar in a large bowl of water and agitate with hands. Hulls will float off and unsprouted seeds will sink. This sprouting method can be used for lentils, wheat, mung beans, radish and broccoli seeds. **Always** use **untreated seed** for sprouting.

#### Taco Salad

To a tossed salad of lettuce, onions, tomatoes, and other vegetables as desired add: 2 c. Cooked and cooled kidney beans, some corn chips, and Catalina-type dressing or fresh salsa just before serving.

# Simple Cabbage Salad

Cut 1½ inch cabbage wedge, serve with almonds or peanuts, either fresh or toasted. This is a unique, fulfilling taste combination requiring no dressing.

# Everybody's Favorite Fresh Salsa

1 c. tomatoes (diced)

1 c. onions (diced)

½ c. green peppers (diced)

<sup>1</sup>/<sub>4</sub> c. lime juice (if available)

Mix all ingredients. Add salt and chili powder, and other favorite herbs (cilantro, parsley, etc.) to taste. Serve as a tasty and colorful garnish or dressing over any kind of beans, squash, potatoes, or salad. Keeps for one week in the refrigerator.

**Quick Pickles** (Don't like cukes? You'll like these! Makes a gallon of pickles) Brine: Bring to boil 2 quarts water, ½ c. salt, and 1 c. lemon juice.

In a gallon jar: layer sliced cucumbers, sliced onions, 3-5 cloves of whole garlic, fresh dill. Pour hot brine into jar, apply lid, cool until room temperature, then refrigerate 24 hours before serving. Keeps 2 weeks.

#### **Substitutes**

# Soy Base

Blend, bring to boil, then simmer 30 minutes on medium heat, stirring occasionally. 2 1/2 c. water

1 c. soy flour (very finely ground soybeans)

1 t salt

## Egg Substitute

Soak 1 tablespoon of ground flaxseed in 1 cup of water for ½ hour, then simmer for 15 minutes. Strain immediately and store in refrigerator. ¼ cup equals 1 egg.

## Soy Milk

Blend together for a nice cereal milk:

1 c. soy base

2 c. water

1 1/2 t. honey

1/2 t. vanilla

1/4 t. salt

Strain through a fine stainless steel mesh sieve. Chill and serve. For substituting soy milk in a savory recipe, omit the vanilla and honey.

## Soy Kreem

Blend until creamy.

1/2 c. soy base

2 c. pears and pear juice

1 T. honey

1/4 t. salt

1/4 c. oil

This may be used as a topping over fruit sauces, waffles or desserts.

#### Fruit

#### Fruit Leather

Can you preserve food when you have no freezer or run out of jars? Yes! Leather is simple to make and is ideal for sack lunches. Any type of fruit may be used. The key to good leather is drying the paste slowly. A waxed paper inserted between layers or rolls prevents sticking. Recipe: Blend or mash any type of fruit to a paste. Make sure there are no lumps or whole berries, as they tend to mold because they do not dry properly. If fruit is not too runny when blended or mashed, it can be made into leather without using apples, though adding a fresh apple to any fruit blend will make the leather more pliable. Pour the paste, to about 1/4-inch thickness, onto cookie sheet lined with plastic wrap or a lightly oiled glass casserole dish. Dry at about 100° F for a day until it is "tough enough" to lift. Turn it over for a few hours to assure that it is dry on both sides. Cut and roll it as you desire. May be cut into shapes or letters for special occasions. There are many types of drying racks available. (Keep in mind that you may not always have electricity!)

#### Breakfast Ideas

Wise man says, "Breakfast like a king, lunch like a prince, supper like a pauper."

#### **Fruit Toast**

Blend or slice canned fruit. Sauce may be thickened by stirring in a mixture of 3 Tablespoons of cornstarch or flour to ½ cup of the cold juice. When sauce mixture is boiling, add thickening mixture, and then boil, stirring one minute, until thick. Serve hot over toast. Fresh apples may be sliced thin, cooked in water, sweetened and thickened. Leftover sauce may be used as pie filling for a quick dessert.

## Fruit Crisp

In large mixing bowl, mix dry ingredients:

½ c. white flour
¼ c. whole-wheat flour
¼ c. honev
1 T. whole wheat flour

Mix wet ingredients separately:

1 t. vanilla (if available) ½ c. oil

½ c. water

Sprinkle crisp over precooked, thickened fruit by dissolving 2 tablespoons of cornstarch in ½ cup cold fruit juice and bring to boil. Bake at 350° F.

# **Baked Apples**

2 c. unbleached flour (half whole wheat), 2 T. honey, 1 t. salt, 1/3 c. oil Mix flour and salt. Add oil. Rub dough between fingers and thumb until well mixed. (A pastry tool can be used, as for pies, but this method works well.) Add enough soy milk ½ cup), forming a tender dough. Roll dough on a lightly floured board and cut into 4- or 5-inch squares. On each square of dough, place two or three peeled, cored, apple quarters with a teaspoon of honey, dates, nuts and/or dried currants. Wrap dough up around apples, place the balls in a covered casserole dish and bake for approximately 35 minutes at 350°F. Bake uncovered until golden brown. Serve hot, with soy milk, "soy kreem," eaten plain, hot or cold, for breakfast, as a lunchpail treat, or as a dessert.

#### **Hot Cereal**

See cooking chart in previous section entitled "Basic Grain Preparation." Bring the water to a boil, add salt and grain. Simmer undisturbed.

# **Toast and Gravy**

Break the monotony of cold cereal breakfasts with your favorite leftover gravy served over toast or biscuits. Hot, savory and quick!

#### Linda's Granola

In large bowl, mix dry ingredients:

7 c. quick oats ½ c. whole wheat flour

 $\frac{1}{2}$  c. nut pieces, (if available)  $\frac{1}{2}$  t. salt

Mix together liquid ingredients in separate bowl and pour over dry ingredients:

½ c. water1½ t. vanilla (if available)½ c. oil½ c. honey or brown sugar

Bake at 225° F for 1 hour, stirring occasionally, until very lightly toasted. Store in airtight container. Coconut, sunflower seeds, other nuts or grains may be added or substituted. Any granola recipe can be adjusted for food allergies. Substitute equal amounts of dry ingredients.

#### Oat Waffles

Blend together until creamy and let stand overnight in refrigerator:

5 c. water 3 T. oil 1 t. salt 4 c. oats

1 T. wheat germ ½ c. cashews or sunflower seeds (if available)

1 T. honey

Pour batter into waffle iron (these are available in ironware to be used with a wood cook stove). Cook until golden brown.

## **Baked Oatmeal**

Mix together:

6 c. oatmeal 2 T. honey

 $1\frac{1}{2}$  c. chopped dates (if available) 1 c. soy base (p. 236)

¹⁄₄ c. oil

Put ingredients in shallow baking pan, pour in 4 cups of boiling water. Bake at 375° F for 30-40 minutes.

# **Meal Planning**

Eating from the garden requires a planning and forethought, but it is not difficult. Think about what you have, and what makes a balanced meal, nutritionally and artistically. Remember to eat whole grains and legumes at least once a day in order to form a complete protein. When planning meals for your family, remember the rule of the green thumb cook: use what you have. The following is a sample menu. (B = breakfast, L = lunch, S = supper.)

#### Sunday

- B: Hot oatmeal porridge with honey and soy milk, fresh strawberries.
- L: Stir-fry with brown rice (if available)
- S: Lentil soup, whole wheat crackers

## Monday

- B: Baked apples, soy kreem (p. 236), filberts
- L: Gluten steaks, green beans, mashed potatoes, gravy, green salad
- S: Summer Dillight soup, croutons

## **Tuesday**

- B: Bulger wheat cereal, toast, peanut butter (if available), hot applesauce
- L: Cresta's Simple Vegetable Stew, crackers, carrot sticks
- S: Canned fruit and toast

## Wednesday

- B: Oatmeal waffles, fruit sauce, peanut butter (if available)
- L: Oatburgers, squash buns, pickles, onions, lettuce, and baked potatoes
- S: Borscht and crackers

# **Thursday**

- B: Baked oatmeal, fresh or canned fruit, toast
- L: Pinto beans, corn tamale casserole, fresh salsa, corn on the cob
- S: Fresh or chilled canned fruit, whole wheat toast

# **Friday**

- B: Cornmeal mush, soy milk, dried currants
- L: Sandwiches-lentil sandwich filling, dill pickles, tomato slices, lettuce, carrot sticks, baked squash
- S: Potato soup and zwieback

#### Sabbath

- B: granola, canned fruit, fruit juice or soy milk
- L: haystacks (chips or tortillas, beans, lettuce, onions, salsa, etc.)
- S: Fresh fruit and bread, hot apple juice

# United States Recommended Daily Allowances (RDA)

					10 (1411005 (11	<u> </u>		
Compound	Units Adult Adult Children I males females		Infants 7-12 months	Pregnant & lactating women				
Protein	gram	63	50	28	14	65		
Vitamin A	Re	1,000	800	700	375	1,300		
Vitamin D	IU	200	200	200	200	200		
Vitamin E	Mg alpha TE	10	8	7	4	12		
Vitamin K	ug	80	65	30	10	65		
Vitamin C	mg	60	60	45	35	95		
Folate	ug	400	400	200	80	500-600		
Thiamine (B <sub>1</sub> )	mg	1.2	1.1	0.6	0.3	1.4		
Riboflavin (B <sub>2</sub> )	mg	1.3	1.1	0.6	0.4	1.4-1.6		
Niacin	mg	16	14	8	4	17-18		
Pyridoxine (B <sub>6</sub> )	mg	1.3	1.3	0.6	0.3	1.9-2.0		
Cyanocobalamine (B <sub>12</sub> )	ug	2.4	2.4	1.2	0.5	2.6-2.8		
Biotin	ug	30	30	12	6	30-35		
Pantothenic Acid	mg	5	5	3	1.8	6-7		
Choline	mg	550	425	250	150	450-550		
Calcium (Ca)	mg	1,000	1,000	800	270	1,000		
Phosphorus (P)	mg	700	700	200	275	700		
Iodine (I)	ug	150	150	120	50	200		
Iron (Fe)	mg	10	15	10	10	30		
Magnesium (Mg)	mg	420	320	130	75	320-360		
Copper (Cu)	mg	1.5-3	1.5-3	1-2	0.6-0.7	1.5-3		
Zinc (Zn)	mg	15	12	10	5	19		
Selenium (Se)	ug	70	55	30	15	75		
Chromium (Cr)	ug	50-200	50-200	50-200	10-60	50-200		
Molybdenum (Mn)	ug	75-250	75-250	50-150	15-40	75-250		
Manganese (Mn)	mg	2-5	2-5	2-3	0.3-1.0	2-5		
Fluoride (F)	mg	4	3	1	0.5	3		
Sodium (Na)	mg	500	500	400	120-200	500		
Chloride (Cl)	mg	750	750	600	180-300	750		
Potassium (K)	mg	2,000	2,000	1,600	500-700	2,000		

Mg= milligrams (0.001g)

Ug= micrograms (0.000001g)

IU= International Units

RE= Retinol Equivalent (1 Retinol Equivalent is equal to 5 International Units)

Alpha TE= alpha Tocopherol equivalent

G= grams

# Basic Food Values (Quantities based on 100 gram edible portion)

				_	` `	_		_						
	Food Energy	Pro.	Fat	СНО	Cal.	Phos.	Iron	Sodi- um	Pota- ssium	Vit.A	Thi.	Ribo.	Nia.	VitC
	Calories	gm	gm	mg	gm	mg	mg	mg	mg	IU	mg	mg	mg	mg
Min. Daily Req.	3,000	20%	30%	50%	0.8	.88-1.5	12	500	750	5,000	1.2-2.0	1.6-2.6	12-20	75-100
Legumes:					•				•		•			
navy beans	118	7.8	0.6	21.2	50	148	2.7	7	416		0.14	0.07	0.7	
kidney	118	7.8	0.5	21.4	38	140	2.4	3	340		0.11	0.06	0.7	
lima	138	8.2	0.6	25.6	29	154	3.1	2	612		0.13	0.06	0.7	
soy	130	11	5.7	10.8	73	179	2.7	2	540	30	0.21	0.09	0.6	
Vegetables:														
green beans	24	1.4	0.2	5.2	45	25	1.5	236	95	470	0.03	0.05	0.3	4
yellow beans	24	1.4	0.3	5.2	45	25	1.5	236	95	100	0.03	0.05	0.3	5
raw beets	43	1.6	0.1	9.9	16	33	0.7	60	335	20	0.03	0.05	0.4	10
cooked beets	32	1.1	0.1	7.2	14	23	0.5	43	208	20	0.03	0.04	0.3	6
broccoli	26	3.1	0.3	4.5	88	62	0.8	10	267	2,500	0.09	0.2	0.8	90
Brussels sprouts	36	4.2	0.4	6.4	32	72	1.1	10	273	520	0.08	0.2	0.8	87
raw cabbage	24	1.3	0.2	5.4	49	29	0.4	20	233	130	0.05	0.05	0.3	47
cooked cabbage	20	1.1	0.2	4.3	44	20	0.3	14	163	130	0.04	0.4	0.3	33
raw carrots	42	1.1	0.2	9.7	37	36	0.7	47	341	11,000	0.06	0.05	0.6	8
cooked carrots	31	0.9	0.2	7.1	33	31	0.6	33	222	10,500	0.05	0.05	0.5	6
celery	14	0.8	0.1	3.1	31	22	0.2	88	239	230	0.02	0.03	3	6
chard	18	1.8	0.1	3.3	73	24	1.2	86	329	5,400	0.04	0.11	0.4	16
corn	84	2.6	0.8	19.8	5	49	1.8	236	97	350	0.03	0.05	0.9	4
cucumber	15	0.9	0.1	3.4	25	27	1.1	6	160	250	0.03	0.04	0.2	11
lettuce	18	1.3	0.3	3.5	68	25	1.4	9	264	1,900	0.05	0.05	0.4	18
onion	29	1.2	0.1	6.5	24	29	0.4	7	110	40	0.03	0.03	0.2	7
parsnip	66	1.5	0.5	14.9	45	62	0.6	8	379	30	0.07	0.08	0.1	10
peas	88	4.7	0.4	16.8	26	76	1.9	236	96	690	0.09	0.06	0.8	8
radish	17	1	0.1	3.6	118	31	1	18	322	10	0.03	0.03	0.3	26
spinach	24	2.7	0.6	15.4	28	26	2.6	236	250	8,000	0.02	0.12	0.3	18
squash	63	1.8	0.4	4.3	6	48	0.8	1	461	4,200	0.05	0.13	0.7	13
tomatoes	21	0.1	0.2	4.9	35	19	0.5	130	217	900	0.05	0.03	1.7	17
turnip	23	0.8	0.2	3.1	25	24	0.4	34	188	tr.	0.04	0.05	0.3	22
veg. marrow	15	1	0.2	3.6	25	25	0.4	1	141	444	0.05	0.08	0.8	11
veg. spaghetti	14	0.9	0.1	3.1	7	25	0.4	1	141	390	0.05	0.08	0.8	10
potatoes	76	2.1	0.1	17.1	7	53	0.6	3	407	tr.	0.09	0.04	1.5	16

# Basic Food Values (Quantities based on 100 gram edible portion) Cont.

	Food Energy	Pr.	Eat	СНО	Cal.	Phos.	Iron	Sodium	Potas- sium	Vit. A	Thi	Ribo.	Nia.	Vit. C
	Calories	gm	gm	mg	gm	mg	mg	mg	mg	IU	mg	mg	mg	mg
Minimum Daily Requirements	3,000	20%	30%	50%	.08	88-1.5	12	500	750	5,000	1.2-2.0	1.6-2.6	12-20	75-100
Fruit														
fresh apples	58	0.2	0.6	14	7	10	0.3	1	110	90	0.03	0.02	0.1	4
apple sauce	41	0.2	0.2	10.8	54	0.5	0.5	2	78	40	0.02	0.01	tr.	1
blueberries	39	5	2	9.8	10	9	0.7	1	60	40	0.01	0.01	0.2	7
sweetened cranberries	146	1	0.2	37.5	6	4	0.2	1	30	20	0.01	0.01	tr.	2
raspberries	35	0.7	0.1	8.8	15	15	0.6	1	114	90	0.01	0.04	0.5	9
rhubarb	141	0.5	0.1	36	78	15	0.6	2	302	80	0.02	0.05	0.3	6
strawberries	22	0.4	0.1	5.6	14	14	0.7	1	111	40	0.01	0.03	0.4	20
groundcherries	53	1.9	0.7	11.2	9	40	1	-		720	0.11	0.04	2.5	11
currants	50	1.4	0.2	12.1	32	23	1	2	257	120	0.04	0.05	0.1	41
gooseberries	26	0.5	0.1	6.6	12	10	0.3	1	105	200				11
cherries	43	0.8	0.2	10.7	15	13	0.3	2	130	680	0.03	0.02	0.2	3
plums	33	0.4	0.1	8.6	9	13	0.2	1	82	160	0.01	0.02	0.3	2
Grains:														
barley	348	9.6	1.1	77.2	34	290	2.7		296	0	0.21	0.07	3.7	0
oats, cooked	55	2	1	9.7	9	57	0.6	218	61	0	0.08	0.02	0.1	0
rye flour	327	16.3	2.6	63.1	54	536	4.5	1	860	0	0.61	0.22	2.7	0
rye, whole	334	12.1	1.7	73.4	38	376	3.7	1	467	0	0.43	0.22	1.6	0
wheat flour	333	13.3	2	71	41	372	3.3	3	370	0	0.55	0.12	4.3	0
wheat, whole	330	14	2.2	69.1	36	383	3.1	3	370	0	0.57	0.12	4.3	0
Seeds:														
sunflower	560	24	47.3	19.9	120	837	7.1	30	920	50	1.96	0.23	5.4	

#### **Brooms**

Various sweeping devices were made by the pioneers: grasses, long pine needles, or rushes tied to the end of a stick. Brooms, similar to commercial varieties, can be made from broom corn where that plant has enough hot days to mature.

# **Useful Items in a Country Home**

#### Kitchen

- 1. Bowls (set of stainless steel)
- 2. Containers
  - a. glass or plastic ash container for lye
  - b. burn barrel
  - c. storage-plastic, gallon jars, garbage bins, jars
  - d. slop buckets
  - e. water containers-for heating, storage, pitcher, dipper
- 3. Dish-washing equipment
  - a. sinks or dishpans (metal)
  - b. dish drainer
- 4. Eating equipment
  - a. containers-bowls, plates, saucers, cups, glasses
  - b. utensils-forks, knives, spoons
- 5 Linens
  - a. tablecloths
  - b. hot pads
  - c. drying towels, dishcloths, hand towels
  - d. towels to cover bread
- 6. Baking pans
  - a. bread pans
  - b. cookie sheets
  - c. casserole dishes
  - d. pie pans
- 7. Pots and pans
  - a. saucepans
  - b. set of cast iron skillets and a Dutch oven
  - c. teakettle
- 8. Preserving equipment
  - a. pressure cooker and canner
  - b. sealer jars, rings, lids (glass lids/reusable rubber rings)
  - c. drying rack

# 9. Handy Utensils

- a. mixing spoons, serving spoons, and dippers
- b. spatulas, pancake turner
- c. eggbeater
- d. potato peelers
- e. knives, bread and paring
- f. rolling pin
- g. vegetable grater/chopper
- h. manual grain grinder
- i. manual blender

# Other handy household equipment:

## 1. Cleaning

- a. broom and dustpan
- b. rug sweeper
- c. soap
- d. scouring pads, rags

## 2. Heating

- a. wood cook stove and heater
- b. wood box
- c. ash shovel and metal bucket

# 3. Sewing

- a. treadle sewing machine
- b. sewing kit: threads, needles, etc.
- c. spinning wheel
- d. treadle-type leather sewing machine (shoe repair)
- e. awl and heavy thread for leather repair

# 4. Laundry

- a. large boiler with lid for heating water
- b. washing machine-plunger type
- c. tubs
- d scrub board
- e. hand operated wringers
- f. flat irons
- g. ironing board
- h. clothesline and clothespins
- i. laundry soap

# **Simplify**

Many topics have been addressed in this chapter. The information that you have learned will allow you to grow a garden, construct a greenhouse and root cellar, preserve both food and seed, balance your diet, cook healthfully, obtain necessary kitchen equipment and garden tools. You have a few recipes to get you started using fresh and healthy produce from your own garden. Not only are these enjoyable activities, they will help reduce your fear of the time of "no buy-no sell" when you will be dependent upon what you grow.

We are told, in 1 John 4:18, that perfect love casts out fear; this applies to the fear of the unknown. Familiar with His Word, with what has been predicted, we can be prepared for the events of the future. As we learned in the introduction, preparation reduces the fear factor. When we have prepared our garden and grown our own food, we better appreciate it as it comes from the hand of the Creator: healthful, naturally delicious, and simple.

Nutrition, like life, need not be complicated. The simpler the better, in fact. To the benefit of our own health and those for whom we are responsible, we would do well to return, as close to "natural" as possible, in our choices: food, clothing materials, cleaning supplies, entertainment, and education.

One can begin simplifying at any time, by taking little steps. Simplify your home. Discard the clutter that has collected in the corners, in storage boxes, and book shelves. Eliminate what you don't need, or share items with friends who will appreciate them. Have a yard sale. Keep a bag or box for donations to your local thrift store or community service center. Your discards may bless someone in need. When we have less to dilute our time and attention, we can establish priorities with ease. Not only is it a comfort to realize that we can get along with less than most of us possess, it may eventually become an obligation to those who are anticipating a heavenly home.

"It is now that our brethren should be cutting down their possessions instead of increasing them. We are about to move to a better country, even a heavenly. Then let us not be dwellers upon the earth, but getting things into as compact a compass as possible" (Testimonies for the Church, vol. 5, p. 152; emphasis supplied).

Simplification is not meant to be overwhelming. Like any other chapter in life, simplification comes in stages. One such stage will be considered in the next chapter as we step into the realm of natural remedies.

## FOR FURTHER READING

How to Grow More Vegetables, by John Jeavons, Ten Speed Press, P.O. Box 7123, Berkeley, CA 94707, 1979.

Silver Hills Cookbook, by Eileen Brewer, RR 2, Lumby, BC, Canada V0E 2G0.

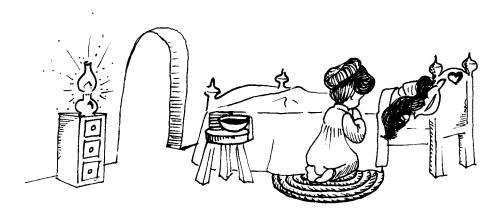
<u>Seed Saver's Catalogue</u> (non-hybrid seed source), 3076 Winn Rd., Decorah, Iowa, 52101. www.seedsavers.org.

100% Vegetarian, a cookbook, by Julianne Pickle, Pickle Publishing, www.picklepublishing.com

Nutrition for Vegetarians, by Agatha Thrash, MD, and Calvin Thrash, MD, Thrash Publications, 1982, Yuchi Pines Institute, 30 Yuchi Pines Rd., Seale, Alabama 36875.

Composition of Foods, Agriculture Handbook #8, U.S. Dept. of Agriculture, Washington, DC 20402

# **Chapter Thirteen**



# Medical Preparation: Basic Skills and Natural Remedies

"It is far better to prevent disease than to know how to treat it" (Ministry of Healing, p. 128).

Till and Louise were vital members of our staff at Sanctuary Ranch, a small school in northern British Columbia. When Louise had her first child, they were living in a log cabin that Will had planned and built. Louise had been nursing their new baby, Isaiah, for a few weeks when she contracted a breast infection that caused her temperature to rise to 104° F. We were all concerned, so Will took her to the hospital in town, a trip that took 45 minutes to an hour even though it was only 15 miles away. The jarring ride caused by the two-rut dirt road caused Louise severe pain.

When Louise arrived at the hospital, the doctor discovered that the milk glands in one breast were infected. He ordered bed rest and a prescription for a powerful antibiotic. But the infection progressed and her temperature did not decrease during the next two days. Because of the side-effects of the antibiotics, Louise quit taking her prescription. She was very ill and Isaiah was not getting proper nourishment. Will and I knelt beside her bed and prayed for her healing.

As we were praying together it occurred to us that a charcoal poultice might help Louise. Although I was familiar with the healing properties of charcoal, we did not have enough charcoal on hand for a large poultice. Will disclosed what he had been learning about charcoal's toxin-removing properties in the Natural Remedies class. I sensed that we were in unity about using charcoal on Louise.

#### **MEDICAL PREPARATION**

We brazed up an old square galvanized washtub so it was airtight and fitted a piece of sheet metal over the top. We built an outdoor fire and gathered dead standing willow wood. Each piece of wood was no larger than 1 inch in diameter and broken into lengths that would fit into the tub. We filled the tub about half full of these willow "pencils," discarding the residual bark, and placed the tub over the fire with the lid on it. This created a reduced oxygen atmosphere inside the tub. We let it cook for one and one half hours.

At the end of the cooking time, we pulled the tub off of the fire and let it cool with the lid on. (If the lid is removed while the charcoal is still hot, it will burst into flame when the oxygen enters.) When it cooled, we found perfect little one-inch black "pencils" intact.

We then ground the charcoal into powder with a mortar and pestle. (Use a smooth flat rock and a thinner, elongated stone if these instruments are not available. These unground charcoal pencils can be used for drawing, or in blacksmithing as a fuel that will produce a hot flame when the bellows pumps air into the forge.)

After we had ground the charcoal pencils to powder, we made a poultice about six inches square. This poultice was made by taking a clean cotton cloth and placing the charcoal in the center of the material about one half inch deep and folding the cloth square. The poultice is moistened with water and placed on the affected area

Louise had a high fever and was in great pain when Will placed the poultice on the infected breast. Will then joined our little group of concerned staff and students in prayer shortly after he had prayed with Louise. Trust in divine power offers the real healing when we follow God's plan and use His remedies.

The next half hour seemed like a miracle; Louise had relief from pain, the swelling was reduced, her fever decreased, and she slept soundly for the first time in several days!

# **Simple Remedies Needed**

As we consider future opportunities for service, planning should be given to helping people in emergencies. Catastrophes are prophesied to happen in our world and in our community. We may sometimes be limited to simple remedies as we try to help disaster victims. The following references emphasize the fact that we need to prepare for calamities in ways that will provide caring emergency services.

"These calamities will increase more and more; one disaster will follow close upon the heels of another" (Christian Service, p. 155).

"In accidents and calamities by sea and land, in great conflagrations, in fierce tornadoes and terrific hailstorms, in tempests, floods, cyclones, tidal waves, and earthquakes, in every place and in a thousand forms, Satan is

exercising his power. He sweeps away the ripening harvest, and famine and distress follow. He imparts to the air a deadly taint, and thousands perish by the pestilence. These visitations are to become more and more frequent and disastrous" (The Great Controversy, pp. 589, 590; emphasis supplied).

"You hear of calamities by land and sea, and they are constantly increasing" (Selected Messages, book 2, p. 51).

"Disasters by sea and land follow one another in quick succession. <u>How</u> frequently we hear of earthquakes and tornadoes, of destruction by fire and flood with great loss of life and property" (Prophets and Kings, p. 277; emphasis supplied).

Some of these disasters could occur in your area. Accordingly, we need to prepare our emergency medical services to accommodate the possibility of disaster victims. We must learn what to do when they come.

The following statement accents the need for medical preparation: "The ability to prepare food, to deal with accidents and emergencies, to treat disease, to build a house, or a church if need be—often these make all the difference between success and failure in his lifework" (Education, p. 221; emphasis supplied).

In the following pages, written by physicians, you will discover the medical approaches to several emergencies. These approaches may be used as needed by people unacquainted with medical procedures. We highly recommend training be obtained in local medical first aid courses and updated annually, especially those courses taught by physicians, nurses or emergency medical personnel.

#### Resuscitation

Question: When is it appropriate to revive a person?

It will not be possible to revive persons who have died from germ diseases or those who have been dead quite some time prior to your arrival. You should merely pray for the comfort of the survivors. If, however, the person was healthy, and appeared to die of an acute injury or drowning, but not one otherwise having death-dealing significance, you should make every effort to revive them. Such is the case when the trauma is an electric shock, lightning bolt, head injury, drowning, etc.

# Steps to Take in Reviving a Person

- 1. First, evaluate for level of consciousness and for signs of life. "Shake and shout" are the watchwords. With a gentle nudge at the shoulder or hand, say, "Are you all right!" or "Can you hear me?" Then, check for signs of breathing, or airway obstruction, and feel the pulse to be sure the heart is beating.
  - 2. Be sure the airway is open. Since a person can live only 3 to 4 minutes

#### **MEDICAL PREPARATION**

without breathing, it is mandatory that you make certain there are no airway obstructions. Tilting the head back will usually open the air passage in the throat. Press the back of the jaw forward to bring the back of the tongue forward. Then, listen at the nostrils for air exchange, and make sure the person can breathe. If you don't know, assume that there is a spinal column injury and follow C-spine procedures. (Industrial First-aid Reference and Training Manual, Workmen's Compensation Board of British Columbia, Canada, p. 16.)

- 3. Check the mouth, and as far as possible in the throat, for foreign bodies. Food, toys, cotton, plastic, etc.—anything that may interfere with breathing must be removed. If you suspect that the person has choked, or the victim grasps their throat to signify such, you may do the Heimlich maneuver. If the person is sitting, stand behind the chair, make a fist, and with both of the hands clasped just below the rib cage and over the stomach, thrust forcefully two times in the region described above (called the solar plexus). This thrust, known as the Heimlich maneuver, can also be performed when the victim is lying supine on the floor, by pushing up toward the heart in the stomach area. It will simulate a cough and often help the person dislodge the suffocating material out of the windpipe (trachea).
- 4. Only after the airway is cleared do you begin to pay attention to the heart and arteries. If there is no pulse or detectable heartbeat, strike the chest sharply two or three times with your closed fist. If an electrical shock of some kind stopped the heart's pacemaker, or if choking caused a cardiac arrest, this maneuver may start the heart beating again. If the rhythmic beating of the heart does not commence spontaneously, you can maintain a pulse by rhythmic compression of the chest (over the lower two-thirds of the sternum). It is pointless, however, to attempt to maintain a pulse unless you or your assistant is also maintaining artificial respiration. All parents, and anyone interested in medical missionary work, should take a class in cardiopulmonary resuscitation (CPR), for training and practice are vital when preparing for accidents and emergencies.
- 5. Next, examine the person for signs of hemorrhage. If bleeding has been evident before this time, while you were doing steps 1-4, ask someone to hold firm pressure on the spot where blood is seen to be flowing. You may use a clean hand-kerchief, a handful of facial tissues, or a folded cloth if these are available. If these are not available, use the hand or a finger to apply the pressure. Bear in mind the possibility of a transmissible disease from blood and other body fluids. You may want to slip on a latex glove, which is often found in first-aid and CPR kits. Advanced training in Life Support is valuable, too.

body fluids contaminate breaks in your skin or get into your nose, eyes, or mouth, you could get an infection. Remember, too, that blood flow always indicates some heart action, as bleeding stops at death.

American Heart Association materials in basic CPR are available.

#### Instant Guide to First Aid

Be calm! Examine the victim carefully. Stop arterial bleeding immediately! Don't touch wounds with fingers. Don't move the victim unnecessarily. Don't forget shock treatment. Compress firmly over wound to aid clot.

INJURY	SYMPTOMS	TREATMENT
ASPHYXIATION	Lips, earlobes, blue; breathing stopped; unconscious	Move to fresh air; give artifical respiration (CPR)
BLEEDING (from arteries)	Spurting, bright-red blood coming from wounds	Cover with pressure bandage. Apply hand pressure to nearest pressure point. Use tourniquet when other methods fail to stop bleeding. Once applied, it should be released by a physician.
BLEEDING (from veins)	Steady flow; dark red blood.	Apply sterile compress firmly over wound to aid clotting.
Bleeding (internal)	Pale face; faintness; thirst, sighing; weak rapid pulse.	Lay with head low; apply cold packs to point you think might be source of bleeding.
Burns (thermal)	Redness; pain; blisters; charred or cooked tissue.	Exclude air by applying burn spray or other ointment, or cover with dry bandage.
Burns (chemical)	Redness; pain.	Wash thoroughly eyes or skin with 8 to 32 ounces of NEUTRALIZE or irrigate with clean water for 10 to 15 minutes.
Drowning	Unconscious, not breathing.	Remove from water; cleanse mouth; pull tongue forward. Loosen clothing. Give artifical respiration (CPR)
DISLOCATIONS	Deformity compared to uninjured limb; pain.	Bandage to stabilize in lines of deformity. Do not adjust dislocation unless trained to do so.
ELECTRIC SHOCK	Unconscious; breathing stopped; burns at contact point.	Insulate self and rescue the victim. Give artificial respiration (CPR) if indicated. Dress burns.
FAINTING	Unconscious; face pale; cold sweat; pulse weak and rapid.	Lay with head low; keep warm; loosen clothing, apply cool cloth to forehead; give water if thirsty.
FRACTURES (simple)	Pain; swelling; deformity; inability to move limb.	Support and stabilize above and below the fracture; apply well-padded splint.
Fractures (compound)	Open wound; possibly bone protruding, bleeding	Apply sterile compress to wound to control bleeding; apply padded splints to stabilize deformity. Do not attempt to replace bone or reduce fracture.
Fractures (skull)	Possibly clear fluid or bleeding from eyes, nose, mouth; unconscious or dazed.	Raise head keeping neck stable, dress wounds, do NOT give stimulants; keep warm and quiet.
Frostbite	Affected part is white; no sensation.	Thaw slowly with lukewarm (not hot) water, or by gently wrapping warm blanket or clothes. Make patient as warm as possible.
Gas Poisoning (carbon monoxide)	Yawning; giddiness; weariness; throbbing pulse; bright-red lips	Move to fresh air; give artificial respiration (CPR) if needed.
HEAT EXHAUSTION	Pale face; cold sweat; weak pulse; shallow breathing.	Keep warm; rub limbs toward heart; give stimulants.
SHOCK	Pale face; cold sweat; dazed condition; partly or totally unconscious.	Lay with head low and feet elevated; keep warm; rub limbs; give stimulants if conscious.
SNAKEBITE	Pain; swelling; fang marks.	Apply tourniquet above bite; open fang marks lengthwise; use suction. Keep quiet.
SUNSTROKE	Unconscious; face flushed; skin hot and dry; breathing labored; pulse rapid.	Raise head; reduce body temperature with cold packs; hydrate with water when conscious. Keep head cool.

#### MEDICAL PREPARATION

# **Special Kit of Supplies for Medical Emergencies**

- 1. Large scissors for cutting away clothing, straps, etc.
- 2. Small scissors, one with rounded points, and another with very sharp points (almost needle sharp), for lancing boils, cleaning up wounds, etc.
- 3. Activated charcoal, two quarts of powder
- 4. Charcoal tablets, for use as lozenges
- 5. Elastic compression bandages, two or three different sizes
- 6. Black or white nylon and silk thread for suturing
- 7. Rubbing alcohol; hydrogen peroxide, tincture of iodine
- 8. Safety pins-about 10 large and 5 small
- 9. Tongue blades (usually made of wood)
- 10. Mirror, for signals, and to reflect light into body cavities, wounds, etc.
- 11. One large hemostat (Kelly clamp)
- 12. One curved and one straight hemostat, five to six inches long
- 13. Sewing needles, assorted sizes for suturing (or suture packs, if you can get them)
- 14. Tinctures, goldenseal, Echinacea, grapefruit seed extract, garlic, and Kyolic (garlic extract)
- 15. Old, well-worn bed sheet for bandage material
- 16. Adhesive tape, one inch wide, can be torn lengthwise for smaller strips
- 17. Rolls of gauze
- 18. A female urinal (works well for men also)
- 19. A pocketknife, such as a Swiss Army knife with a saw, scissors, and punch
- 20. Thumb forceps with and without teeth and/or eyebrow tweezers
- 21. Needle holders
- 22. Flashlight and extra batteries
- 23. Large towels (6-8) and washcloths, for fomentations and childbirth
- 24. Several rolls of toilet tissue, in wrapper
- 25. One roll of paper towels, in a wrapper
- 26. Blanket, one or more, washable
- 27. Two or three sheets-top sheets, not necessarily fitted sheets
- 28. Plastic sheet or shower curtain
- 29. A six-inch stack of clean newspapers for childbirth
- 30. Salt, two to three pounds
- 31. Epsom salts, one to two pounds (salts should be kept in tightly closed jars)
- 32. Curved needles, large and small for suturing
- 33. Bar soap and liquid soap

- 34. A small bottle of Lysol
- 35. A small bottle of bleach
- 36. Clean or new white shoestrings to tie cord at childbirth
- 37. Plastic bags, miscellaneous sizes, clean, 15-20
- 38. Box of facial tissues
- 39. Ear syringes
- 40. Washbasins and baby bathtub, plastic or metal
- 41. Vinegar, one gallon, as fungicide
- 42. Tea tree oil as antiseptic/fungicide

# **Suturing**

Often, even for large lacerations, the wound can be closed quite satisfactorily by cleaning up the surrounding skin, drying it very carefully, pulling the wound edges together, perfectly matching the skin lines if they are visible, and taping the wound securely in place with adhesive tape or "butterfly" bandages. Space should be left between the tape "sutures" for the wound to be able to air dry; otherwise, the tape will be lifted off as the wound weeps, or the wound may become infected. Finally, put absorptive bandages over the wound, such as sterile gauze or torn strips from an old bed sheet that have been ironed to sterilize them.

Immobilize the laceration with tongue blades or splints until danger of its pulling apart is past—three to 10 days, depending on how much movement and tension will be placed on the wound. Wounds on the face need only about three days, but wounds over elbows or other moving parts may need immobilization for seven to 14 days, even longer over the knees. If bleeding cannot be stopped, or the wound edges cannot be pulled together satisfactorily without tension, you may need to put sutures in. Be sure the skin edges do not curl under, regardless of the kind of closure you do. The skin will not heal well if the edges curl under.

If you must put in sutures, there are a few points you should remember:

1. Remove all dirt, glass, foreign material, pieces of detached skin or flesh, and old blood clots from the wound before finishing the suturing and applying a bandage. If these objects are embedded in the tissue, irrigate the wound with clean water or saline if you cannot pick them from the wound. Sometimes, you may need to use sharp scissors and forceps with teeth to remove every particle of foreign matter. This may take a while. Fat and fibrous tissue may be trimmed to remove debris that is embedded. The wound will not heal well with foreign matter in it. However, do not cut away a lot of the tissue if it can be avoided, since a sunken area will be left if excess tissue is removed

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- 2. The skin may be tough, like soft leather. Quite a lot of effort is often needed to push the needle through.
- 3. Stabilize the skin by holding it as lightly as possible with the forceps (with small teeth, rather than mere grippers, if available), but firmly as needed to put counter pressure against the force of the needle.
- 4. Do not suture wounds that are more than six to 10 hours old. It is better to simply pull the edges together. On older wounds, place adhesive tape followed by a bandage and let them heal without suturing.
- 5. Put the needle through the skin about one-quarter to one-third inch from the wound edge. A curved needle held in a needle holder works best, but a regular sewing needle and thread can be used in an emergency. Sterilized materials are best, if they are available. Simply boil two needles and needle holders, with suture material, for five minutes to supply needed sterility precautions. If this is not possible, at least be sure they are clean, washed with water and soap.
- 6. Do not leave an air pocket in the base of the wound or blood clots will form inside the wound. If it is a deep space between the skin surface and the muscle below it, more than half to three quarters of an inch, it is best to take the first "bite" of muscle with a needle from the skin surface to the bottom of the wound and bring out the needle. Then take a second bite from the bottom of the wound to the top, making the needle come out of the skin about one quarter to one third of an inch from the edge of the wound. Make the sutures as neat as possible and pull the skin edges exactly, matching its position before laceration as well as you can. Do not allow the skin edges to curl. They have a tendency to do so.
- 7. Do not make the sutures so tight that the skin is pushed in or turns pale where you put in the sutures.
- 8. Leave the suture ends about ½ inch long so you can easily find them when it is time to remove the sutures.
- 9. Remove the sutures after three days on the face, but up to 10 to 14 days over knees and elbows.
- 10. A laceration on the hairy areas or scalp should not be shaved, but you should avoid letting the hair invert into the wound edges. On the scalp, you may be able to tie or braid the hair from one side of the wound across to hair on the other side of the wound. If you can do so, this will easily hold the wound edges together.

Note: You will find diagrams of various suture techniques in Dr. Richard Hansen's book, <u>Get Well at Home</u>. Study the chapter on accidents and injuries for a more in-depth discussion of this subject.

## Women's Hygiene

Life for women changed considerably with the modern invention of disposable sanitary napkins. Baby diapers and feminine hygiene pads make life easier today, and we tend to take them for granted. But what about that time when we might not be able to get these necessities? Sometimes, under severe stress or continued physical exertion, a woman's hormones prevent her regular menses, and such may be the case in the end times. This is yet another way in which we should be prepared.

What did great-grandma do? Persecution may still dictate the use of ancient methods in developing countries. Though the Bible indicates that certain privileges were afforded to women during their menses, it is not clear as to how these women provided for their inconvenience. Though it is true that certain cultures make no special provisions today (gravity alone serves some women). With ingenuity, a few inexpensive, reusable, and environmentally friendly, alternatives are feasible.

Native women wore a leather thong padded with dried moss. Soft, absorbent, and disposable, these materials also served as baby diapers and bandages. The women harvested and piled the moss to dry for a few weeks before it was used. In earlier white cultures, each woman had her own set of "rags"—several sets of absorbent cloths which she kept clean and folded, ready for use. These were pinned or snapped into the underwear. These are still available, ready-made through certain stores. They are also easily handmade. Old rags should be rinsed as soon as a new one is applied since blood is good growth media for bacteria. Rinsed rags can be dried and accumulated until you have a load to wash. Rags are best rinsed in cold water to remove blood, then boiled, scrubbed with soap, rinsed again, and hung to dry in the sun. And, as with any preparation, the best plan is being ready before the need arises. Small amounts of blood may be removed from garments with one's own saliva.

# **Toilet Paper Alternatives**

In times past, men and women who were voiding waste washed after each defecation. In later times, various plant leaves were used. In some societies, the cleansing after defecation was ignored altogether, causing disease problems.

In the hills of the Ozarks and Appalachians, specially treated corncobs were used. These cobs were treated with lye to soften them, rinsed clean, and dried. Small rags may be used which are washed and dried for reuse. It is important to keep the anal area washed and clean.

#### Childbirth

Most births should be allowed to progress without interference, simply keeping the labor environment clean and making the mother as comfortable as pos-

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sible. You can rub her back, legs, and so forth, as she desires. Give her water and food as she desires. She should walk at intervals, and sit in a chair as long as she feels comfortable. She may wish to squat or kneel for the actual birth, or recline in bed with her legs drawn and spread. The assistant must use care to catch the baby and protect it from injury. Remember that the baby is very slippery and should be "caught" in a towel to prevent slipping or dropping. The baby will usually cry on its own. You do not need to spank the infant. Do not hold the baby by the heels, but keep the baby's head supported. Brain hemorrhage is more likely to occur if a prolonged head-down position is used.

Wipe the baby's mouth of mucus with a clean cloth or tissue. It is sometimes necessary to suction the nose and mouth with a bulb syringe, so be sure you have a clean syringe handy. Otherwise, use a dry cloth or tissue. As soon as the baby and placenta (sometimes called afterbirth) are born, have the mother lie in bed with her thighs together to retard bleeding. Massage the top of the uterus, which you can easily feel as a very firm lump in the lower abdomen. It may be almost as high as the umbilicus, but will get smaller in the first hours after birth. Rubbing it vigorously will retard hemorrhage and help stop bleeding.

These two measures are all one normally needs to do to prevent excessive bleeding in a home birth. Postpartum hemorrhage is not very common in home births, but when it occurs it can be serious. Dry the baby as soon as possible and wrap the baby in a warm blanket and give the baby to the mother for immediate nursing. As the baby nurses the breasts, a hormonal reflex (oxytocin) causes contraction of the uterus, which slows or stops bleeding. Vigorous assistance from the father will be additionally effective in stopping a serious postpartum hemorrhage by vigorously sucking on each nipple. Applying an ice pack over the uterus may also assist this process. The baby will usually nurse immediately, but will not have as much interest in nursing over the next 24 hours as during the first 10 minutes after birth. It needs rest, too, from the birth process.

You may now turn your attention to the baby, as the mother does not need much care for the next few minutes. Give the baby's skin a good rinsing in plain, lukewarm water. Be very careful not to allow the infant to get chilled or overheated immediately after birth. Chilling produces acidosis of the blood, which can depress respiration and depress the baby's nervous system. A lukewarm bath is very soothing to the baby. Wash the baby's face and irrigate the eyes to prevent complications of conjunctivitis. Rinse off all blood and amniotic fluid, and dry the infant all over, especially the hair. Dress the infant quickly, and again place the baby with the mother unless she is too tired to nurse again or to cuddle the newborn.

Check the mother frequently (every five to 10 minutes), to make certain

there is not a lot of blood flowing from the vagina. A large ball of dry toilet tissue could be placed against the perineum, or you can use a sanitary napkin. The drainage should be reddish-pink but not bright red. If a gush of bright-red blood flows from the vagina, you will recognize a postpartum hemorrhage. Dark-red blood is due to pooling of blood in the vagina, and although it empties when she moves, the flow does not continue. Keep frequent checks on the pulse, and if the heart rate goes over 105 to 110, especially if it is normally closer to 80, apply an uncomfortably hot fomentation across the lower abdomen and upper thighs for two minutes. If the hot compress is kept on for more than three minutes, it will begin to dilate blood vessels rather than contract them. The fomentation must be quite hot (but not enough to blister), or it will not be effective. Such extremes in temperature will often slow down bleeding. As soon as the two minutes are up, put an ice-cold compress, squeezed from ice water, across the same area for precisely 30 seconds. Then dry the area and check again for continued bleeding.

Finally, if the bleeding is not checked by these simple means, you should insert your fist inside the vagina. Use that fist to make compression against the other hand on the abdomen, pressing against the top of the uterus, thus compressing the uterus between two hands to hinder the bleeding.

The pulse is a more sensitive indicator than the blood pressure as to the status of the hemorrhage or shock. If the mother complains of a loud ringing in her ears, this may also signify serious blood loss. Rarely, it may be necessary to transport the mother to a hospital if one is available. In an emergency, however, you may pack the vagina with clean strips of an old bed sheet or towels, pushing the strips tightly into the vagina to further stop the hemorrhage.

## **Natural Remedies**

## **Healing Properties of Charcoal**

One of our personal favorite remedies is charcoal. It has been around for years and is still standard procedure for poisoning even in well-equipped hospitals. The story of Will, Louise, and baby Isaiah introduced us to charcoal at the beginning of this chapter. We have had many interesting and amazing experiences with the healing properties of this simple remedy.

## **Aspirin**

Aspirin is used medicinally for bringing down a fever, to relieve pain, and for anticoagulation. To perform the same functions, you can use a number of herbs—white willow bark, meadow sweet, wild lettuce, etc. You can also apply hydrotherapy—hot packs, hot foot baths, ice massage, etc. At times, massage or muscle

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stretches are useful in relieving pain. Pain in the abdomen or elsewhere can sometimes be eased by drinking a glassful of water every 10 minutes for an hour. Headaches can be relieved in this way as well.

For reducing a fever, very few things are as effective as a warm bath. Water temperature for this treatment should be slightly below the mouth temperature. The goal is to induce perspiration, which is nature's air conditioner, and this will lower the fever by evaporation of sweat from the skin.

Massage may also help to lower a fever by opening the pores, helping the skin to perspire. Drinking a glassful of water every 10 minutes for an hour helps bring the fever down.

Instead of taking aspirin as an anticoagulant, we should use some of the herbal or food anticoagulants such as five ounces of purple grape juice a day; garlic in moderation (one clove daily or four to eight tablets daily); hawthorne berry tea (four cups daily). Other herbal anticoagulants include feverfew and *Ginkgo biloba*.

Aspirin may be given to a patient suspected of having a heart attack. This may help break up potentially life-threatening clots.

#### Remedies for Colds

At the very first sign of a cold, elderberry extract can be taken to good advantage. It may help to stop a cold, even after symptoms begin. *Echinacea* and goldenseal can be taken to alleviate the symptoms of a cold, or shorten its course. These herbs may also make the person less likely to spread viruses to others but should not be taken other than for illness or preventive medicine. Tepid sponge baths and the wet sheet pack are recommended to help reduce fevers. For related headaches, take a hot foot bath, along with the herbs, feverfew, white willow bark, and valerian. Garlic blended in hot water along with lemon makes a valuable drink to treat viral infections.

#### Laxatives

For a laxative, ground flaxseed (one to two tablespoons daily), psyllium seed, slippery elm, and Epsom salts (magnesium sulphate) can be used. Herbal agents such as senna and *Cascara sagrada* should be used only for difficult cases of constipation, as they can be irritating and cause laxative habituation in some instances. Get medical advice, though, if your bowel habits change abruptly, or if you notice any bleeding from the rectum or blood in the stool.

## **Antiseptics**

For an irrigation fluid, you may use goldenseal tea or garlic tea (one clove of

garlic in one cup of freshly boiled water blended until fine and three additional cups of boiling water added to the blender). When it has "cooked" until it is cool, it should not be irritating. The solution should not actually be boiled, only "cooked" in freshly boiled water, which is poured into the blender. These may be used as antiseptics. It should also be noted that soap and water can cleanse the skin sufficiently so that in most cases it is not necessary to use an antiseptic. Rubbing alcohol and hydrogen peroxide are two widely available chemicals for disinfecting wounds. Some microbes will survive both peroxide and alcohol.

#### Diet

The most beneficial diet for combating any affliction or disease is the total plant-based diet composed of fruits, nuts, grains, and vegetables. Starting this diet builds the immune system. You may use soy milk in place of dairy products, and tofu in place of eggs, for many dishes. Consult a good vegetarian cookbook or recipe guide for suggestions in meal planning, or, better yet, attend a class in vegan cooking for hands-on help in learning how to prepare both healthful and tasty dishes (see Silver Hills Cookbook under Further Reading at the end of this chapter).

#### **Immunity**

The eight natural laws of health do more to keep your immune system functioning properly than any drug. If an infection has occurred, *Echinacea* helps the immune defenses more than any other known herb. Other immune enhancers are contrast showers, mild fever baths, astragalus, and garlic. Remember to get plenty of sunshine, practice deep-breathing exercises, get extra sleep and rest, and avoid sugar and high fat foods. Sometimes a short-term fast can help cleanse the system and renew vigor and body defenses. The best way to enhance immunity is by building our general health. An ounce of prevention goes a long way in resisting disease.

#### Herbs

The use of herbs has been recommended by the Spirit of Prophecy.

"There are simple herbs and roots that every family may use for themselves and need not call a physician any sooner than they would call a lawyer" (Selected Messages, book 2, p. 279; see also pages 288, 294).

Here are some recommendations from inspired writings on the use of herbs. "A cup of tea made from Catnip herb will quiet the nerves" (ibid., p. 297). "Hop tea will induce sleep. Hop poultices over the stomach will re-

lieve pain" (ibid.).

#### **MEDICAL PREPARATION**

"When the head is congested, if the feet and limbs are put in a bath with a little mustard, relief will be obtained" (ibid.).

"For some forms of indigestion it [charcoal] is more effective than drugs. A little olive oil into which some of this powder has been stirred tends to cleanse and heal. I find it is excellent" (ibid., p. 298).

"For several days he has had a painful swelling on the knee, supposed to be from the bite of some poisonous insect. Pulverized charcoal, mixed with flaxseed was placed upon the swelling, and this poultice gave relief at once" (ibid., p. 300).

"I cannot advise any remedy for her cough better than eucalyptus and honey" (ibid.).

"Light was given that there is health in the fragrance of the pine, the cedar, and the fir. ... Let not such trees be ruthlessly cut down. Let them live" (ibid., p. 301)

For more detailed information on the use of herbs in healing and recovery, please see <u>Get Well At Home</u>, Richard Hansen, M. D., Chapter 18 "Medical Botany" and <u>Home Remedies</u>, by Agatha and Calvin Thrash (see For Further Study at the end of this chapter).

## The Eight Natural Remedies

No discussion of simple recovery would be complete without a mention of the use of these health principles. They are useful for the prevention of disease as well as in the restoration of health.

"Pure air, sunlight, abstemiousness, rest, exercise, proper diet, the use of water, trust in divine power—these are the true remedies. Every person should have a knowledge of nature's remedial agencies and how to apply them. It is essential both to understand the principles involved in the treatment of the sick and to have a practical training that will enable one rightly to use this knowledge.

"The use of natural remedies requires an amount of care and effort that many are not willing to give. Nature's process of healing and upbuilding is gradual, and to the impatient it seems slow. The surrender of hurtful indulgences requires sacrifice. But in the end it will be found that nature, untrammeled, does her work wisely and well. Those who persevere in obedience to her laws will reap the reward in health of body and health of mind.

"Too little attention is generally given to the preservation of health. It is far better to prevent disease than to know how to treat it when contracted. It is the duty of every person, for his own sake, and for the sake of humanity, to

inform himself in regard to the laws of life and conscientiously to obey them. All need to become acquainted with that most wonderful of all organisms, the human body. They should understand the functions of the various organs and the dependence of one upon another for the healthy action of all. They should study the influence of the mind upon the body, and of the body upon the mind, and the laws by which they are governed" (The Ministry of Healing, pp. 127, 128; emphasis supplied).

These natural remedies are essential to the best recovery of health.

## Hydrotherapy

Having had personal experience with the miracles of hydrotherapy, I can highly recommend this simple home remedy. There are a few instances when the simple application of hot and cold water is contraindicated, but most conditions will respond well to proper technique. Since it is a rather extensive subject, I highly recommend these books:

- 1. Home Remedies, by Calvin Thrash, M.D., and Agatha Thrash, M.D., Thrash Publications, Route 1, Box 273, Seale, AL 36875. (175 pages, illus).
- 2. <u>Get Well at Home</u>, by Richard Hansen, M. D., Shiloh Medical Publications, P.O. Box 1057, Creswell, OR, 97426. (464 pages, illustrated, \$19.95).

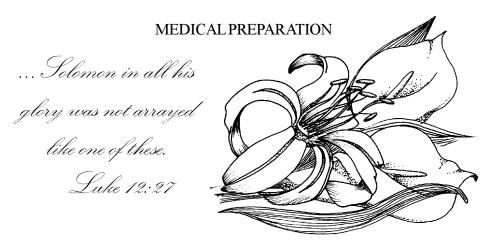
# **Simple Home Hygiene**

## **Clothing**

When we first moved to Canada, our neighbors called us chechakos—I think that may be a Cree word for "white man who knows absolutely nothing about life." This title lasted until we had one winter behind us. One thing, among many we had to learn, was how to dress. We don't often think of our clothing as having much to do with our health, but tight restrictions, chilling of the extremities and exposure to filth by dragging portions of our clothing through the mud or dust, are things we must avoid Dressing comfortably and properly is part of caring for our body temple.

Although we have been given instructions regarding our dress throughout the Spirit of Prophecy, we are advised not to make it the main point of our religion. (For further study, see chapter in this book entitled "Education for the Future" a portion on dress reform.) There are a few practical principles in how we dress that can make our life in the country a little more pleasant.

**Durable:** Can you wear your clothes in the garden or sit on an unplaned bench? Will they protect you from hay and thistles? Can they be scrubbed clean



on a scrub board and hung in the sun to dry? Are they sturdy enough to last?

**Comfortable:** Does your clothing restrict natural movement and permit freedom of exercise? Cotton and wool tend to "breathe" best.

**Modest:** Clothing should cover you without undue exposure.

**Neat and Clean:** Garments should be kept repaired, clean, and unwrinkled. Flatten while hanging wet, and fold clothes as they come off the clothesline.

**Healthy:** Your body should be covered completely, preventing drafts. Women are especially prone to chilling; when women's extremities are covered as adequately as men's, a host of diseases are prevented. Clothes that drag in the dirt should be hemmed to prevent soiling and chilling of limbs.

**Layers:** One layer of clothing is adequate for warm weather. For cold weather, layer your clothing. A long skirt in winter is a good way for women to disguise how well-clad their limbs really are!

**Color:** Choose colors that match your complexion and complement each other. Avoid bold and loud prints. Consider the products your clothes advertise (T-shirts, hats with messages, etc.). Keep clothes simple so that others do not receive mixed signals as to your allegiance.

#### Sanitation

Study <u>The Ministry of Healing</u>, pages 277-286: "Hygiene Among the Israelites." This chapter outlines general principles of cleanliness as given to God's ancient people. (See also, <u>Ministry of Healing</u>, page 208

## Soap Making

Always use rubber gloves and protective goggles when making soap. Do not allow children to help; lye burns deep! Neutralize lye burns with vinegar. It is relatively easy to make your own soap. It takes four to six weeks for soap to cure properly. We favor this recipe requiring no special weighing or measuring.

Equipment required:  $9\frac{1}{2}$  oz. lye crystals,  $4\frac{1}{2}$  pounds vegetable shortening, 5 cups distilled water, two candy thermometers, large stainless bowl, 2 quart glass jar, wooden spoon, Vaseline, rubber gloves, goggles, soap molds, and a picnic cooler.

## **Purely Simple Bar Soap Recipe**

- 1) Prepare soap molds by greasing with Vaseline
- 2) Melt shortening over low heat
- 3) Slowly stir lye crystals into distilled water
- 4) Wait until respective thermometers register:

Lye solution: 80-85 degrees F Shortening: 90-110 degrees F

- 5) Stir lye solution slowly into shortening
- 6) Stir 10-20 minutes, until soap solution thickens like pudding
- 7) Optional: Additives, such as essential oils for fragrance, herbs, spices, oats, almonds, Borax (degreaser), are added just prior to pouring the liquid soap solution into molds and placing them into the cooler.
- 8) Pour into Vaseline-greased soap molds or non-aluminum pans
- 9) Place soap molds immediately into your cooler and wrap with blanket
- 10) Let soap cool very gradually for two days, undisturbed
- 11) After 48 hours, open cooler, remove soap from molds, or cut into squares
- 12) Stack the fresh bars like bricks, as soon as they are removed from the molds, leaving space between bars so they can air dry for about four weeks before using or even wrapping them.

If you use the bars as gifts, scrape or trim the cured bars after drying (save the flakes), but while they are still a bit soft, then wrap each bar in waxed paper, plain brown paper, or in fancy gift wrap tied with rafia or ribbon.

Lamb's quarters may be used as a soap substitute by crushing the dried roots of the first green shoots in the spring.

## **Making Lye Water**

Hardwood ashes are more alkaline than soft wood and, hence, produce stronger lye. Ashes (from the cook stove or heater) are suspended in a burlap bag, a nylon stocking or a layer of straw. By pouring rainwater through the ashes, a dilute solution of lye water is formed. Pour this solution back through the filtering process until the solution is strong enough. If tap water (from a treated source) is used, remember to allow for the fact that there are salts in the solution that will weaken the strength of the lye produced. When a freshly boiled egg will float in the

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lye solution, it is strong enough for soap-making. Lye is sodium hydroxide, a strong base, and will eventually eat out the bottom of a metal barrel. Never allow pets or children access to lye.

Larger volumes of lye may be produced in a wooden barrel in which tree limbs and a layer of straw are placed on the bottom to act as a rough filter. Burlap bags are then laid over the straw. The barrel, one third full of "filter" is then filled with hardwood ashes. A slight depression is made in the top of the surface of the ashes to catch water. Pioneers added two quarts of lime dissolved in boiling water to neutralize any salts that could affect soap making, then added jug after jug of cold soft water (rainwater) to effect leaching, sometimes taking all day. The barrel could then be drained by a spigot at or near the bottom.

For most people in a family setting, the burlap bag/nylon stocking method will produce enough lye for soap making. For larger groups of people, the barrel method may be used. It takes time to produce the ingredients for soap making, but cleanliness is important to survival.

## Laundry

Here is a humorous recipe that an Alabama grandmother gave to the new bride (complete with spelling errors!):

"Warshin' Clothes-- Build fire in backyard to heat kittle of rain water. Set tubs to smoke so smoke won't blow in eyes if wind is pert. Shave one hole cake of lie soap in boilin' water. Sort things. Make three piles; 1 pile white, 1 pile colored, 1 pile work britches and rags. To make starch, stir flour in the water to smooth, then thin down with boilin' water. Take white things, rub dirty spots on board, scrub hard, and boil, then rub colored, but don't boil just wrench and starch. Take all things out of kittle with broom stick handle, then wrench and starch. Hang old rags on fence. Spread tea towels on grass. Pore wrench water on flower bed. Scrub porch with hot soapy water. Turn tubs upside down. Put on clean dress. Smooth hair with combs. Brew cup of tea, set and rock a spell and count yore blessings."

Keeping clothes clean is essential in order to eliminate germs and toxins given off and gathered as we work. This skill in a simple lifestyle will require some practice to get clothes free of ground-in dirt from outdoor work. We have all wondered how women in third world countries can actually get their clothes clean by scrubbing them on rocks. We depend on our automatic washers, but what if we were no longer able to plug in our washer? The following discussion will help you approach wash day much as great-grandma did.

To wash your clothes, you need a couple of large, square, galvanized

wash tubs. Fill one wash tub about one-third to one-half full of warm to hot water. Put your scrub board in the tub and lean it back against the side closest to you. Place your bar of laundry soap on the tray at the top of the scrub board. If you can find scrub boards with a Pyrex glass scrubbing surface, they would be superior to metal surface scrubbers. But get one or two of any kind.

Start with the less soiled, white clothes. Different clothes get different treatments on the scrub boards. If you are doing underwear, scrub harder on places that absorb perspiration. Place the garment to be cleaned in your tub of hot water. Soap the whole garment, top to bottom, front and back. Then place a portion of the garment full length of the scrub board. Gripping the top of the garment, push repeatedly down and up and down again until that part is clean. Then grip another handful of the garment and repeat the same rhythm on the scrubbing surface. Keep going until you have gathered up the whole garment, then flip it over full length and repeat—"scrub, gather, up, down, scrub, gather, up, down."

Jeans, coveralls, and heavy clothing will require more scrubbing and a new start on your grip-and-gather method as you move down the garment. The reason for this is that you cannot hold the whole garment in your hands while scrubbing. Removing greasy spots or grass stains will require additional scrubbing on those areas.

Your rinse tub, the second tub mentioned at the first of this discussion, will be where the rinsing of each garment occurs. One or two rinses in the lukewarm water will be sufficient to remove the soap. Then the clothes can be hung to dry.

Your clothing should be sorted and washed in this order: whites, light colors, darker colors, then jeans and greasy clothes. As the wash water gets dirty, begin using the rinse water as the wash water, adding some boiling water, and putting clean water in the wash tub for the rinsing cycle.

Another method of doing laundry requires the same square galvanized tub (there are round ones) and a long-handled, metal plunge washer available in some stores. Grind your soap bar into shavings or powder and add one-half cup to a tub of water and clothes. Mix everything together and then apply the plunge washer to the clothes in a vigorous up-and-down motion. Grease spots or stains should be scrubbed before you use this method. Rinse one or two times as desired and hang to dry.

If you have a stove outside, clothes may also be boiled clean. If the weather is good, you can hang your clothes outside on a clothesline with clothespins. There are portable drying racks that can be used inside. When hanging clothes outside, wipe the line with a wet cloth. While clothes are wet, use a

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quick shaking motion to "snap" them. This will straighten them out, smooth the collars and sleeves, skirts, pillowcases, etc. and will save ironing time. Many garments are sufficiently smoothed in this manner. Collect and keep your clothespins indoors to prevent unnecessary weathering.

## **Washing Dishes**

One of the best ways to insure a healthy home is by washing hands and dishes properly. Cleanliness is not difficult if you remember that germs are heat liable. You can never have too much hot water. Keep water on your heater stove, cook stove, or outdoor fire at all times. Place pre-rinsed dishes in uncomfortably hot water. Soak as many dishes as possible, especially the silverware and glassware (to kill bugs), while you put food away and wipe the counters. By the time you finish putting the kitchen in order, your wash water will be about the right temperature. When you are ready to wash dishes, fill your rinse water basin with water so hot that your dishes will quickly air dry. Many germs are transferred back onto clean dishes by wiping them dry. If the rinse water is hot enough, the first dishes placed in the drain rack are generally dry enough to put away by the time you need their space. Cleanup always takes less time if you can wash your cooking pots before the meal is served. Using ironware, this is not difficult; scrape as necessary, rinse them (in non-soapy water so as to preserve the cure), and place them on the hot stove to dry, then hang them up when cool after the meal.

Make sure anyone who washes, rinses or dries dishes have washed their hands with soap before helping. The germs that cause illness in youngsters are just as potent as those that make their parents sick!

## **Ironing**

If you use flat irons get a set of at least two, three is better. Flat irons come with a handle to pick them up from the stove after they are heated. When they become cool again, the flatiron is placed on the stove and a hot one is used. Be sure that the irons and stove top or iron trivet on the stove is clean and that the stove top is clean.

Another easy way to de-wrinkle clothing is to hang the garment on a hanger and mist it with water from a spray bottle will straighten wrinkles. This works especially well for denim, cotton knits, and "dry-clean only" items. It is a good way to touch up garments that have acquired traveling wrinkles in your suitcase. The only disadvantage to this technique is that you must allow the garment time to dry before it is worn. The advantage is that the misting system is portable and requires no ironing.

## **Bathing**

The equipment necessary for bathing can vary according to the amount of hot water available and the number of people. With a large number of people, scheduling bathtime will be essential. If you have a gravity-fed water system with a gas-fired hot water tank, bathing is as simple as installing a tub, shower, and drain. Should you not have gravity-fed water, or you can't buy gas for a hot water heater, there are alternatives.

As part of your basic household simple lifestyle equipment, you should have a galvanized boiler and one or two square galvanized tubs (as mentioned in the laundry section). Place the boiler on the wood cook stove or the wood heater and fill it with water. It is a good idea to keep the boiler full throughout the day for dishes, hand washing, laundry, and bathing. Let the water heat to as high a temperature as possible. This will require more dilution with cold water, allowing your hard-earned hot water to go further.

Once the water is hot, dip it out of the boiler with a pan or small bucket into your square bathtub. Dilute with cold water until comfortably hot to the touch. Have a chair or bench close by the tub in a private room.

**Tub bath:** Have extra water on hand in order to rinse off after this procedure. Kneel next to the tub and wash hair first. Then get into the tub and soap up. Rinse with a pan of clean, warm water. Rinsing with cool or cold water is very stimulating and will effect the release of more white blood cells to increase immunity to disease. After you have dried and dressed, the process of cleanup begins. You need to haul the bath water out to your gray water dump if you do not have a septic system. You can dip it out of the tub into a five-gallon can and carry it out.

**Bird bath:** Fill two washbasins with slightly diluted hot water; one for washing and one for rinsing. Wash your entire body with the soapy washcloth, starting at the face and neck and washing on down to the waist. Then rinse. Wash the lower part of the body. Rinse.

**Shower:** A rather enjoyable method of outdoor bathing in the summer involves a shower bucket. Commercial black solar shower bags with a hose and nozzle are available from outdoor stores. But you can make a shower bucket: the bucket must be metal and have a 4 inch by-1½ inch nipple brazed in near the bottom. On the exposed threaded end, use plumber's tape and attach a ½ inch valve and a shower head of your choosing. A shower stall may be made from tarps or wood to ensure privacy. Install a sturdy hook that will support a five-gallon bucket of water.

The showering procedure: When the bucket is full of water at the right temperature, hang the bucket in the shower stall. Step into the shower and open the valve to wet yourself down. Shut the valve off and soap yourself and

#### **MEDICAL PREPARATION**

shampoo your hair. Open the valve and rinse. You may refill the bucket to ½ full with cool or cold water for an excellent tonic (see <u>The Ministry of Healing</u>, p. 237). Don't be afraid to use all of the water. You earned it!

Simple comforts makes you feel good about yourself. In a simple lifestyle, one can be just as clean as a person who lives in a utility web. It is not difficult, but it must be planned. Your health will improve as you take time to be clean. (See <u>Testimonies for the Church</u>, vol. 3, p. 70.)

Study to simplify. When you are cleaning house ask yourself: Will this item be of use when there is no electricity available? Could someone use this today more effectively than I use it? Have I used this in the past year or two?

Study to be prepared. Since the Lord has told us that calamities will increase and become more disastrous, it becomes apparent that God's people should be trained in emergency response as well as having practical skills in growing and preparing food, building a house, and be able to assist in disease recovery. Most importantly, we need to prepare our hearts.

#### FOR FURTHER STUDY

Eat For Strength, Thrash, Calvin and Agatha, Uchee Pines Institute, Seale, AL, 36875-5703

<u>Home Remedies</u>, Thrash, Calvin and Agatha, Uchee Pines Institute, Seale, AL, 36875-5703

Get Well At Home, Hansen, Richard A., Shilo Publications, P. O. Box 1057, Creswell, OR 97426

Where There is No Doctor, Werner, David, Hesperian Foundation, Box 1692, Palo Alto, CA 94302

The Best of Silver Hills, a cookbook by Eileen and Debbie Brewer, 1996, Silver Hills Publishing, Lumby, British Columbia, V0E 2G0, Canada

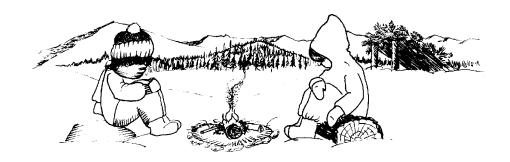
For more information on further medical missionary training:

Eden Valley Institute: 6263 N. County Rd. #29, Loveland, CO, 80538-9519 Uchee Pines Institute: 30 Uchee Pines Rd., Seale, AL 36875 Wildwood Lifestyle Center: P.O. Box 129, Wildwood, GA 30757

For more information on how to prevent major problems such as various cancers and heart disease, Type II diabetes, etc. please contact the three institutions listed above and:

Dr. Hans Diehl
Director of CHIP (Cardiac Health Improvement Program)
c/o Better Health Productions
P. O. Box 1761
Loma Linda, CA 92354
1-909-825-1888

# Chapter Fourteen



# Wilderness Survival: Making a Friend of Nature

"In His written word and in the great book of nature, He has revealed the principles of life." (The Ministry of Healing, p. 115).

It has been said that the true measurement of our IQ is in how well we adapt to new situations. Very often, physical survival depends upon our ability to adapt. In this chapter we will discuss everyday, basic survival skills. Though our survival in the end time will be assisted by God, feeling at home in the wilderness may help remove our fear of the unknown. As you acquaint yourself with the great out-of-doors, keep a few pointers in mind. Being lost or injured does not mean you should panic. There are things that can be done to aid yourself and others. Consider a few verses from the Ultimate Survival Manual about being prepared.

Proverbs 22:3: "A prudent man foreseeth the evil, and hideth himself: but the simple pass on, and are punished."

Matthew 25:1-4: "Then shall the kingdom of heaven be likened unto ten virgins, which took their lamps, and went forth to meet the bridegroom. And five of them were wise, and five were foolish. They that were foolish took their lamps, and took no oil with them: but the wise took oil in their vessels with their lamps."

Proverbs 30:24-28: "There be four things which are little upon the earth, but they are exceeding wise: the ants are a people not strong, yet they prepare their meat in the summer; the conies are but a feeble folk, yet make they their houses in the rocks; the locusts have no king, yet go they

forth all of them by bands; the spider taketh hold with her hands, and is in kings' palaces."

Psalm 34:7: "The angel of the Lord encampeth round about them that fear him, and delivereth them."

Matthew 28:20: "And lo, I am with you alway, even unto the end of the world."

Isaiah 33:14-16: "Who among us shall dwell with the devouring fire? who among us shall dwell with ever lasting burnings? He that walketh righteously, and speaketh uprightly; he that despiseth the gain of oppressions, that shaketh his hands from holding of bribes, that stoppeth his ears from hearing of blood, and shutteth his eyes from seeing evil; he shall dwell on high: his place of defense shall be the munitions of rocks: bread shall be given him; his waters shall be sure."

All of the things that we need to survive are available in the wilderness. Native peoples have been making use of them by "living off the land" for thousands of years, and all of the things we need for survival are still there. Wilderness survival does not necessarily have to infer an emergency. If we learn how to recognize the things we need, and learn the skills that enable us to get them, we can be "at home" in the wilderness. Though we may not think about it this way, we are all "surviving" in our present situation—otherwise we would not even be alive. We do not consider it survival, because that with which we have become familiar is not life threatening. We have surrounded ourselves with a lifestyle that provides us with the things we need to stay alive. In the process of growing up within this system, we have learned the necessary skills to obtain what we need from this system.

Whether we are in town or in the wilderness, the things that we need in order to stay alive are basically the same. In the wilderness it is considered "survival" because most people nowadays are not acquainted with the "wilderness system." When we are not familiar with the woods and wilderness systems, situations can seem more threatening. Making friends with the wilderness is essential to our relationship with nature's God. But, as beautiful and inspiring as nature is, there is nothing on earth that should attract us to stay here and miss heaven.

There will be a time when we will be forced from urban societies to a more simple existence. This is not to be feared. Living in the cities will not always be as comfortable for us as it is today.

"Often the follower of Christ is brought where he cannot serve God and carry forward his worldly enterprises. Perhaps it appears that obedience to some plain requirement of God will cut off his means of support. Satan would make him believe that he must sacrifice his conscientious con-

victions. But the only thing in our world upon which we can rely is the word of God" (The Desire of Ages, p. 121; emphasis supplied).

Satan would have us believe that unless we compromise our integrity, it will be impossible to survive. Learning to survive in the wilderness will require knowledge in three areas: Skills, Experience, and Trust. Although there is considerable overlap, the three areas all work together.

Skills: This includes the whole area of primitive skills, such as shelter and fire building, whittling, making rope cordage, cooking on an open fire, staying warm, purifying water, and finding your way in the woods. It also includes observation and identification skills such as recognizing which plants have edible and useful parts and knowing which types of rocks are good for making different types of tools. Another important observation skill is "awareness." Being aware means watching and understanding the way things in nature interact, the ways you can know what to expect from animals, plants, streams, weather, and seasons. Awareness skills allow you to act in harmony with nature.

Experience: The experience you get from the actual time that you spend in the wilderness is extremely valuable. Experience in the wilderness gives you a chance to learn awareness and practice your skills and trust. Spending time in nature will help you understand the wilderness better. From your experience you will realize that all the things you need to stay alive are really out there, and by being close to nature, you will have an opportunity to obtain what you need.

Trust: Trust is believing that the Creator has provided all the things that we need in nature. It also means that He will give us the ability to find and get them, too. The term "Sacred Hunt" was used by some Native Peoples to describe this idea. Trust grows with your experience. You are not left to just hope that the things you need might be out there somewhere. Instead, you can have the assurance that they **are** there, and that as you look for them, the Creator will help you find them.

An anthropologist may know many of the primitive skills. A naturalist may have had a lot of experience with nature and learned much about it. A believer in God may be exercising faith on a regular basis. A survivalist needs all three of these skills to be competent at living in the wilderness.

A Christian survivalist must also be sensitive to the surrounding wilderness environment. It is important for us to have the attitude of a caretaker, rather than the attitude of an exploiter or conqueror. As in life, our goal should be to leave things in a better condition than we found them. It is necessary to practice awareness and work with nature. This is possible, even when gathering live plants. For example, study the plants you want to gather. Look around; is there somewhere that the same plants are growing where they are too close together and could use some

thinning? Do your gathering there, rather than taking ones that are growing by themselves. Is there some way to gather the part you need without destroying the whole plant? If so, "prune" out a crowded section. In this way you will be making room for the other plants to grow, and their growth will be healthier as a result! The area will be better off because you have been there.

Most of us, unfortunately, have the wrong idea about the wilderness and survival. The wilderness is frequently seen as something that must be conquered and/or endured. Looking at nature, and nature's Creator, in this way makes it to be an opponent or an enemy. In reality, both are quite friendly and helpful—if one is willing to be humble and accept their terms. There is nothing in the wilderness that is "out to get us." If we work with nature rather than against it, both man and nature can enjoy a symbiotic relationship. The real enemy is the natural hostility and rebelliousness of our own human nature. Survival depends more on personality than danger, weather, terrain, or nature of the emergency. If a person remains calm, trusts God, and uses common sense, he will be able to survive almost anything he encounters.

When we find ourselves in a survival situation, we all have a tendency to panic. But to panic would be the worst thing we could do. There is an acronym based on the word **STOP**. The first thing we should do when we realize that we are in a survival situation is to **STOP**, and work through these steps and develop a plan:

STAY The opposite of running. It may not be wise to stay in that

particular spot for the whole survival situation, but it is best to

stay put until you have worked through these steps.

THINK The opposite of panicking. "Your brain is your best survival

tool." Relax as you can. Pray.

**O**BSERVE Take note of what you have with you and what is around you.

Also observe what the weather is likely to do and how many

hours of daylight are left.

PLAN Put together a plan based on the Survival Priorities and your

observations.

#### **Survival Priorities**

Survival priorities are the things we need in order to stay alive. They are listed here in order of importance. Trusting that "...my God shall supply all your need according to his riches in glory by Christ Jesus" (Philippians 4:19).

- 1. SHELTER-From cold, rain, wind, or sun. Select your camp area carefully.
- 2. FIRE- For keeping warm, purifying water (boil 3-5 minutes), cooking, and tool making. Be sure to use fire safely.

- 3. WATER- Purify the water before you drink it if you have any doubts.
- 4. REST- Allow yourself adequate rest. It's dangerous to become exhausted.
- 5. FOOD- Identify and prepare wild edibles.

## Priorities-Why This Order of Importance?

You can go for a couple of weeks without food; that is why it is last on the list. Under good conditions, you could even last a couple of days without water, that is why it is third—you would be okay until tomorrow. But, most likely it will get cold at night, so shelter and fire are first on the list, because you will need to avoid hypothermia. Rest is number four. You will need it too, possibly not as urgently as shelter, fire, or water, but probably before food. Before you begin your camping trip, consider including these items in your backpack. It is also recommended that the following survival kit be kept together in a "day-pack," shoulder bag, or belt pouch so it will be ready to grab in an emergency.

## Suggested Survival Kit Items

**Knife:** Your basic tool, learn how to use it safely, and how to keep it sharp.

"Space Blanket": It will help you keep warmer, and it's waterproof.

Large Plastic Bag for Poncho: For rain covering and shelter.

7' x 7' Clear Plastic Sheet: Take with you into dry desert areas to be used for making a Solar Still or for improvising a shelter and rain cover.

Water Bottle or Canteen: At least 1 quart/liter.

Water Purification: Recommend using a .2 micron filter system.

**Stainless Steel Cup or Can:** 1 pint is best, can be used for cooking and purifying water. One that fits into the bottom of your canteen/water bottle would be easiest to pack.

**Matches or other fire starter:** Keep matches in a waterproof case. Learn how to build fires safely and efficiently.

**Candle:** To help start fires—it will stay lit longer than a match—and can be used for light.

**Food:** Something that is lightweight, nutritious, and will not be easily crushed such as sunflower seeds, nuts, whole-grain crackers, granola bars, dried fruit, etc.

Fish Hooks: There may be a body of water nearby with fish in it.

Fish Line: For fishing, but could also be used for cordage.

**Bandanna:** Has many uses: bandaging, slings, splints, padding, washcloth, towel, filtering water, tablecloth, headband, carrying bag, etc.

**Compass:** Know how to use your compass.

Map: One that shows terrain features of the area you will be in.

First-aid Kit: Keep your first-aid kit in a readily recognizable container.

**Rope:** About 25 feet of 1/8 inch cord. This is used for tying up shelters, improvising equipment, safety lines, etc. Learn how to tie knots properly and efficiently.

**Whistle:** For signaling: 3 whistle blasts, 3 flashes, 3 fires—3 of any signal is the recognized distress signal.

Metal Mirror: Also for signaling.

Flashlight: A small, lightweight flashlight may come in handy when it gets dark.

**Toilet Paper:** Keep it in a waterproof plastic bag.

## Larger Home Survival Kit

This larger kit should be kept in a 5-gallon plastic bucket with lid. In a survival situation, it would be used for water and food storage. Keep it in a place where it could be easily and quickly grabbed in an emergency, such as an earth-quake or other natural disaster. Blankets and/or sleeping bags were not included in this list because of their bulk, but you would want to take them with you when you evacuate, too. Many of these items would be useful in lesser emergencies, such as candles when lights go out. Just remember to replace them so they will be there next time. These items can be kept in or on a good backpack. Each person in the home should have their own pack.

Knife: Your most basic survival tool.

Hatchet/Machete: For heavier cutting jobs.

Hand Trowel/Small Shovel/Hand Pick: For digging

Whetstone: For sharpening above tools.

**Water jug:** Minimum of 1 gallon. A 5 gallon jug is recommended (because of its size this might not be kept in the kit, but should be close beside it).

Bucket/Washbasin: For washing, hauling water, etc.

**Food:** Dried fruit, sunflower seeds, hard tack, etc. Nonperishable, nutritious, and lightweight.

**Cooking Pot:** For cooking and purifying water.

Stainless Steel Cups: For drinking and eating utensils.

**Spoons:** For cooking and eating. **Aluminum Foil:** For cooking.

Matches: Keep some in a waterproof container; a couple of packs of book

matches will save the waterproof ones for when you need them.

Candles: For fire starting and light.

Milk Carton Strips: For fire starting.

Plastic Trash Bags: For rain covering, ground sheets, etc.

**Tarp:** Approximately 10' x 10' for shelter.

1/8" Rope: 25' length, some shorter lengths may also be helpful.

First-aid Kit: A well-stocked home type kit.

First-aid Manual: To provide necessary information.

**Soap:** For washing.

**Towel and Washcloth:** Bandannas may be substituted for washcloths. **Bandannas:** Can be used for many things, from bandages to tablecloths.

**Toothbrushes:** For brushing your teeth.

**Toilet Paper:** Keep this in a waterproof plastic bag.

Whistle: For signaling.

Metal Mirror: For looking at yourself and signaling.

**Rope:** A 50' length of 1/4 or 3/8 inch rope for obstacle safety.

**Compass:** For route finding.

**Pack:** To put all of this equipment in when traveling. **Survival Book:** For how-to information, ideas.

**Notepad and Pencil:** For writing notes, maps, messages.

Sewing Kit: For mending clothes.

**Insect Repellant:** For preventing bug bites.

Bible: Don't forget God when you need Him most.

## Larger Basic Equipment

#### Water

2 Buckets (for hauling water)

Water Barrel and Dipper

Washtub (size 3)

Canning Kettle (or large pot for hot water)

Bucket for waste water

Washbasin

0.2 Micron water purification system for drinking.

#### **Food**

Pots, Pans and Cooking Utensils

Table Service for each family member

Containers for Food Storage (some sealable, metal garbage can with lid)

Ice Chest

Table (collapsible)

Grain Grinder

### **Clothing**

Suitcase, Duffel, Chest for each family member's clothing

Warm Weather Clothing

Cool Weather Clothing

Blankets, Sleeping Bags, Foam Pads

Towels, Washcloths

Clothesline (1/4 or 1/8 inch rope)

Scrub Board

Sewing Equipment

#### **Shelter**

Tent (large size cabin-type or wall tent; a four-season tent could be selected in some areas)

Ground Cloth, Tarp

Broom and Dustpan

Lantern and Fuel Can (kerosene or white gas)

#### Heat

Wood Heater and Cook Stove and Stove Pipe (type that could be used inside your tent)

Ax

Bow Saw or Pruning Saw

Stove Poker

Ash Shovel

Note: The above list has been compiled with regard to utility and portability if it became necessary to evacuate your family. Primary considerations when choosing a site to set camp are availability of (1) water, (2) fuel, and (3) food.

## Helpful Tools and Skills

(at home and in emergencies)

## **Woodworking Tools**

Whittling Knife

Ax (broad hatchet)

Brace and Auger Bits (drill)

Gouge

Handsaw

Rasp

Plane

Drawknife

Tape Measure

Square

**Crosscut Saw** 

Level

Hammer and Assorted Nails

Wood Chisel Set

#### **Mechanical Tools**

Screwdrivers

Box/End Wrench Set

Socket Wrench Set

**Pliers** 

Cold Chisel, Punch

Crescent Wrench

## **Metalworking Tools**

Pliers, Vise-Grips

Ball-peen Hammer

Hacksaw

Tin Snips

Vise

Anvil

File, Whetstone

## **Gardening Tools**

Shovel or Spade

Hoe

Rake, Pitchfork

Watering Can

Wheelbarrow, Cart, or Wagon

Seed

#### **Survival Skills**

**Shelter Construction** 

Fire Building

Identification of Edible Plants

Signaling

Knife/Tool Sharpening

Knots and Rope Safety Techniques

Route Finding (orienteering)

Cooking

First-aid

Home Nursing (natural remedies)

Woodworking (whittling)

**Basket Weaving** 

Making Cordage (rope)

Sewing

Gardening

Pottery

Mechanical Skills

Candle Making

Weaving

**Tanning** 

Spiritual Skills

## **Shelter and Rest**

"And ye shall take you... the boughs of goodly trees, branches of palm trees, and the boughs of thick trees, and willows of the brook... Ye shall dwell in booths" (Leviticus 23:40-42).

"Go up to the mountain, and bring wood, and build the house; and I will take pleasure in it, and I will be glorified, saith the Lord" (Haggai 1:8).

"He giveth his beloved sleep" (Psalm 127:2).

"The sleep of a labouring man is sweet" (Ecclesiastes 5:12).

"Love not sleep, lest thou come to poverty; open thine eyes, and thou shalt be satisfied with bread" (Proverbs 20:13).

"By communion with God in nature, the mind is uplifted, and the heart finds rest" (The Desire of Ages, p. 291).

Depending on your situation, you may need shelter from cold, rain, wind, or sun. Ideally, a shelter will provide protection from all of these, but in a survival situation you may only have time and energy to build according to your immediate needs.

First, look for a natural shelter that you could modify to suit your needs. A

fallen tree, a large hollow log, an overhanging rock, or a cave. All of these have the possibility of making a good shelter. Use your imagination and ingenuity. Exercise caution when entering a natural shelter for the first time in case another animal already occupies the spot.

If possible, choose a level area with a safe place for a fire near a source of water and firewood for your camp. To avoid becoming flooded, do not make your camp in a low area or a ravine. Also avoid windswept areas if possible. However, a somewhat open area with a breeze can be helpful if insects, like mosquitoes, are a problem.

Warmth is directly related to the amount of insulation you have around you. Anything that is light and fluffy, and can provide "dead air" space can be used for insulation, even if it's wet. The thicker the insulation material around you, the warmer you will be. When lying down, insulate yourself from the ground. Because you are in direct contact with it, you will lose more heat to the ground than to the air.

#### **Debris Hut Construction**

Sticks

A simple debris hut may be the best shelter for many situations. It can be easily constructed using only natural materials.

Begin making a debris hut by interlocking forks or branches, or tying together two crossed sticks and then laying a ridgepole on top of them to make a tripod. The ridgepole could also be set against a tree or rock. This framework should enclose an area about 6 inches wider and longer than the outline of your body as you lie down. Since heat rises, it should be as low as possible, yet steep enough to shed water. Think in terms of a "sleeping bag" rather than a "bedroom," realizing that you will not be able to sit up inside. If practical, have the door of your shelter facing east so you can get the morning sun. In North America, this also places the back of the shelter toward the prevailing incoming weather.

Leaving a place for the door, lay more sticks and branches against this frame to form the ribbing. Use sticks that are as big around as your forearm if possible. Thicker sticks will increase the warmth of your shelter, and

the heavier sticks will be less likely
to be disturbed if you bump
against them during
the night. If large
sticks are scarce,
you can use smaller
branching sticks to

form a lattice that will hold

Moss and bark

the thatching material. The ribbing must not extend above the ridgepole more than 1 or 2 inches, so that it will be completely covered by the thatching. If a stick pokes through the thatching, water will run down it and into the shelter.

For thatching, gather leaves, grass, pine needles, moss, or any similar debris. It does not matter if the debris is wet, it will still keep you dry. Start at the bottom and put a layer of thatching against the ribbing, laying the thatching on in layers from the bottom up like shingles so water will run out and down over each layer to keep out the rain. Keep adding debris until it is about 1 foot thick all over the shelter. In cold weather, make the debris 3-4 feet thick. Finally, lay branches or pieces of bark against the shelter to keep the wind from blowing your thatching away. Make the door just big enough to squeeze through. Save a pile of thatching material to plug the door after you crawl in for the night.

For bedding, place a 1-foot-thick layer of the cleanest and driest debris on the floor of the shelter (it will smash down as you lie on it). For warmth, it is a good idea to completely fill the inside with this clean, dry material, then burrow into it. Since bits and pieces of the thatching debris fall through the ribbing as you put it on, you will probably want to put the bedding material in the shelter last to keep it as clean as possible. Enter the shelter feet first.

The thatching will shed rain quite well. If it does leak, rebuild the shelter making the top more pointed, or the sides steeper. Be sure the thatching is "shingled" so the rain will run out and down. If rain is likely, be sure to make your camp where natural drainage will not cause flooding or puddling inside the hut.

Most thatching burns easily, so be careful with fire around the shelter! With this type of shelter you do not need a fire to stay warm, just thicker thatching. Remember: insulation equals thickness equals warmth. If you were cold during the night, improve your shelter by adding more thatching to be warmer the next night.

The debris hut shelter works best for one person. For small groups, 2-to 3-person shelters are workable. However, greater width requires greater height, so unless the shelter is stuffed with debris, it will not be as warm. One possibility is to arrange several single person shelters in a spoke-like pattern with the doors facing the center. Over the center a common vestibule could be built. This would also provide a work and storage area. For larger groups consider building a circular wickiup. The construction of a wickiup is similar to a debris hut, except that it is shaped like a tepee. A small controlled fire could be built in the center of the wickiup providing for the heat lost to the additional height. Leave a smoke hole in the top of the shelter.

#### **Snow Shelters**

Snow is an excellent material with which to build shelters. It provides good insulation and protects from wind exposure. It may be modified to personal need and is limited only by the imagination.

- 1. Mark out a suitable area and size of shelter.
- 2. Dig out the area including a tunnel-type entrance—leave a good amount (1 foot) of snow on the sleeping shelf/bench.
- 3. With small trees make roof rafters, then cover with boughs to a good depth: 6" to 1'.
- 4. Cover with snow—make an air vent and move in. An air vent is a must, and it may be necessary to enlarge and/or make smaller depending on inside temperature and fresh air requirements.

Another method for making snow shelters is the use of snow blocks. Gently pack an area of approximately  $10^{\circ} \times 10^{\circ}$ . Then with a stick or machete cut your packed area into  $1^{\circ} \times 2^{\circ}$  squares. Remove these blocks in whatever condition you can, and begin stacking them in the form of a shelter. Northern peoples use the igloo design by leaning the blocks toward the center of the structure. Cut a door and build an entranceway that will allow for ventilation.

## **Sleeping Bags**

The sleeping bag is one of the outdoorsman's most valuable items of equipment. A good bag is a lifetime investment. The more it is used, the more it is appreciated. The 100 percent waterfowl down bag still holds first place as the lightest, most compact and efficient. Used properly, a quality sleeping bag will meet the manufacturer's claims; however, the effects of its misuse are cumulative and unforgiving. On a practical level, misuse robs the camper of needed sleep. If down bags are not acceptable, check Quallofil or other synthetic fiber-filled bags.

There is much that can be done to improve sleeping bag comfort and assure a good night's rest. The user, however, must be willing to put forth some time and effort if he or she expects his or her sleeping bag to perform as intended by the manufacturer.

For the attainment of a good night's rest in your sleeping bag, it might be well to consider some of the techniques that have been tried and proven over the years. "Make your bed carefully and lie in it comfortably."

1. Do not leave a sleeping bag stuffed, tightly rolled, or compressed

- except when on the trail or transporting it. When not in use, hang it from the foot or fold loosely. A large plastic dry cleaning bag will protect the bag.
- 2. Do not cover your sleeping bag when in use with plastic sheeting or other waterproof fabric. Moisture will condense on the underside of waterproof materials.
- 3. Your sleeping bag should be insulated from the ground. Use a water-proof ground cloth first, then a foam pad, and then the sleeping bag. If extra comfort is desired and gear weight is not a factor, include an air mattress between the ground cloth and foam pad.
- 4. A polyfoam pad is an excellent insulator. It is preferred by many over the air mattress for cold-weather sleeping.
- 5. Your bag must be kept dry if you are to sleep warmly. A wet sleeping bag is difficult to dry in the field.
- 6. Do not cover or draw your head completely into the sleeping bag so that you breathe into it. Your nose and mouth should always be left uncovered. In very cold weather it is advisable to cover your face with a piece of woolen clothing.
- 7. Many who live and work on the trail in the Arctic carry two sets of two-piece long underwear. One pair for day wear and the other for night. Extra clothing for night wear, such as pajamas, only adds weight to your equipment if you are backpacking and is limited in use. A pair of loose-fitting wool socks and a loose-fitting wool cap that can be pulled down over your ears are the proven cold-weather sleeping bag wear. For those who can't endure wool underwear next to their body, consider the two-layer type such as Duofold, cotton inside and wool outside. Long underwear should not fit snugly.
- 8. Do not sleep in clothing that you wore during the day. Clothing worn during the day, especially long underwear, will be warm, however, it will also contain moisture which will soon chill you. If you do not have a change of long underwear, you are better off to sleep in your lighter underwear.
- 9. Eating a light snack, such as a candy bar, just prior to entering your sleeping bag will step up your metabolic rate and produce more body heat. A hot drink will also help.
- Don't sleep under the stars. This practice will eventually lead to problems. Dampness, unexpected rain or snow, and wind will rob your body heat in survival situations.

#### Sanitation

"Designate a place outside the camp where you can go to relieve yourself. As part of your equipment have something to dig with, and when you relieve yourself, dig a hole and cover up your excrement. For the Lord your God moves about in your camp to protect you and to deliver your enemies to you. Your camp must be holy so that He will not see among you anything indecent and turn away from you" (Deuteronomy 23:12-14, NIV).

- "Cat holes" should be dug 6-8 inches deep. A digging stick can be used, or if the dirt is soft, the toe of your boot may be used to kick out a hole. Use the same dirt to refill the hole when finished.
- If the ground is too rocky to dig a hole, turn over an appropriate-sized rock using the cavity beneath. Replace the rock when finished.
- Clean hands: a washbasin may be made with a sheet of plastic by digging a hole and lining it with plastic, then filling with water.

## Beware of Hypothermia

Hypothermia, sometimes referred to as "exposure sickness," can kill you. It occurs when the inner-core temperature of the body falls to a level at which the vital organs no longer function effectively. Hypothermia is caused by cold, wet, and/or wind chilling the body so that it loses heat faster than can be produced. Frequently the advent of hypothermia is hastened by a deficiency of energy-producing food. However, the greatest single factor to bring on hypothermia is improper clothing.

Hypothermia can occur anywhere that the environmental temperature is low enough to reduce the inner-core temperature of the body to the danger level. It occurs most frequently in rugged mountain terrain where a person on foot can pass from a calm and sunny valley into wind and rain-lashed mountains in a time lapse of only a few hours. Most hypothermia accidents occur in outdoor temperatures between -1° and  $10^{\circ}$  Celsius ( $30^{\circ}$  and  $50^{\circ}$  F). It is more difficult to keep dry at these temperatures.

Fortunately, the approach of hypothermia is noticeable by its easily visible symptoms; its advance is marked by recognizable steps or stages. If the warning signs are heeded and countermeasures introduced, tragedy can be averted.

The noticeable signposts along the way to a hypothermia accident are:

- 1. A person feels cold and has to exercise to warm up.
- 2. They start to shiver and feel numb.
- 3. Shivering becomes more intense and uncontrollable.

- 4. Shivering becomes violent. There is difficulty in speaking. Thinking becomes sluggish and the mind starts to wander.
- 5. Shivering decreases and muscles start to stiffen. Muscle coordination becomes difficult and movements become erratic and jerky. Exposed skin may become blue or puffy. Thinking becomes fuzzy. Appreciation of the seriousness of the situation is vague or may be totally lacking. However, the victim may still be able to maintain the appearance of knowing where they are and what is going on.
- 6. The victim becomes irrational, loses contact with the environment, and drifts into stupor. Pulse and respiration are slowed.
- 7. The victim does not respond to the spoken word. Falls into unconsciousness. Most reflexes cease to function and heartbeat becomes erratic.
- 8. Heart and lung control centers of the brain stop functioning. A healthy person who is alert and aware of the potential danger of hypothermia can help themselves during stages 1 through 3. Once the condition has advanced to stage 4 and the person's mind starts to wander, they may not realize what is happening to them and may very well need assistance. If the condition deteriorates beyond this stage, they will definitely need help.

If a member of your party shows any of the symptoms of hypothermia—uncontrollable fits of shivering; vague, slow, slurred speech, memory lapses, incoherence; immobile, fumbling hands; frequent stumbling, lurching gait; drowsiness, apparent exhaustion, and inability to get up after a rest—he is in trouble and needs your help.

A victim of hypothermia may deny that he is in trouble, but you must believe the symptoms, not the victim. Even mild symptoms demand immediate and positive treatment:

- a. Get the victim out of the cold, wind, and/or rain.
- b. Strip off all wet clothes.
- c. If the person is only mildly impaired, give him warm drinks (nonalcoholic, alcohol increases susceptibility to cold) and get him into dry clothes and a warm sleeping bag. Well-wrapped warm rocks placed near the victim will hasten recovery.
- d. If the victim is semiconscious or worse, try to keep him awake and give him **warm** drinks. Leave him stripped; put him in a sleeping bag with another person (also stripped); if you have a double sleeping bag, put the victim between two warm persons. Skin-to-skin contact is the most effective treatment

- e. When the victim has recovered sufficiently to be able to eat, feed him. Make sure he is dressed in dry clothing and well rested before starting out again.
- f. If the victim has to be carried out, make sure his body temperature has been brought up to normal and wrap them in a good sleeping bag before starting out. With the exception of cases involving personal body injury, most hypothermia accidents can be prevented.

Hypothermia can occur anywhere, anytime the air temperature drops low enough so that a body is exposed to the elements, leaves a dangerously reduced inner-core temperature. Wind chills the air. If you leave home or camp in a warm  $5^{\circ}$  Celsius ( $41^{\circ}$  F) temperature and feel comfortable traveling at a leisurely pace, a 25 mph wind on the ridge will reduce the  $5^{\circ}$  Celsius to a cold minus  $10^{\circ}$  C or  $14^{\circ}$  F)

Wet clothing in cold weather extracts the heat from the body nearly 200 times faster than dry clothing. Wool clothing provides better protection than cot-

## WIND-CHILL CHART

ESTIMATED WIND SPEED IN MPH	ACTUAL THERMOMETER READING (°F)											
	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
	Equivalent Temperature (°F)											
Calm	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
5	48	37	27	16	6	-5	-15	-26	-36	-47	-57	-68
10	40	28	18	4	-9	-21	-33	-46	-58	-70	-83	-95
15	36	22	5	-3	-18	-36	-45	-58	-72	-85	-99	-112
20	32	18	4	-10	-23	-39	-53	-67	-82	-96	-110	-124
25	30	16	0	-15	-29	-44	-59	-74	-86	-104	-113	-133
30	28	13	-8	-18	-33	-48	-60	-79	-94	-109	-125	-140
35	27	12	-4	-20	-35	-49	-57	-82	-98	-113	-129	-145
40	26	10	-6	-21	-37	-53	-69	-85	-11	-116	-132	-148
(wind speeds greater than 40 mpg have little additional effect.)	LITTLE DANGER (For properly clothed person)				Increasing Danger			Great Danger				
					DANGER FROM FREEZING OF EXPOSED FLESH							

ton clothing in wet weather.

In cold weather, an uncovered head can account for up to 60 percent of body heat loss. Carry a good wool toque or cap. The most common contributors to the development of problems during cold, wet, and windy weather are: lack of proper clothing, inadequate shelter, and exhaustion. The best defense against the advent of hypothermia is to be prepared.

- 1. Dress appropriately.
- 2. Take along rainwear, extra dry clothes, food, and matches.
- 3. If a member of your party is not properly dressed and equipped, bring the potential danger to his attention. It could save his life.
- 4. If you are the leader of a party of novices, state the basic rules of conduct for trail safety and tell them you expect these rules to be observed.
- 5. Travel at the speed of the slowest member of the party.
- 6. Break at frequent intervals for rest and gear check.
- 7. Distribute candies or other nibble food. It helps keep up energy.
- 8. If one member of your party is improperly dressed or under-equipped and you encounter adverse conditions, immediately turn back or head for shelter, build a fire, and concentrate on making your camp as secure and comfortable as possible.
- 9. Keep watching all members of your party for signs of fatigue or discomfort. It is far better to cancel an outing than to risk a life.
  - Please refer to chapter 13, "Medical Preparation," for emergency response.

## Accidental Hypothermia

Predisposing Factors: poor physical condition; inadequate nutrition and hydration; thin build; non-woolen clothing; inadequate protection from wind, rain and snow; getting wet; exhaustion.

Signs (observed by others): poor coordination, slowing of pace, stumbling, thickness of speech, amnesia, irrationality, poor judgment, hallucinations, loss of contact with environment, blueness or puffiness of skin, dilation of pupils, decreased heart and respiratory rate, weak or irregular pulse, stupor.

Symptoms (felt by person): intense shivering, muscle tensing, fatigue, feeling of deep cold or numbness, poor articulation, disorientation, decrease in shivering, followed by rigidity of muscles, blueness or puffiness of skin, slow, irregular or weak pulse.

Prevention: conditioning, good rest, and nutrition prior to climb, continued intake of food, waterproof/windproof clothing (some woolen), emergency bivouac equipment, early bivouac in storm or if lost or darkness has descended, exercise to keep up body's heat production (isometric contraction of muscles).

Treatment/Reduce Heat Loss: shelter the victim from wind and weather, insulate them from the ground, replace wet clothing with dry, put on windproof, waterproof gear, increase exercise level if possible. **Add heat**: put in warmed sleeping bag with another person, give hot drink, provide heat from hot stones or hot canteen of water, huddle for body heat from other hikers, immerse in tub of hot water (110° F).

#### Six Basic Rules for Keeping Warm

- 1. Remember–thickness of insulating materials equals warmth.
- 2. Keep your torso warm so that it sends its excess heat to your less insulated extremities.
- 3. Avoid sweating by ventilating your insulation before you start to sweat.
- 4. Keep wind and rain out of your insulation by suitable outer covering or protection.
- 5. Keep your head covered to help force heat to your extremities. Uncover it early to avoid sweating.
- 6. Increase your metabolism by straining one muscle against another if you are all buttoned up and still cold.

## **Fire Building**

A fire needs air, heat, and fuel to keep burning. Build the fire to provide for each of these.

AIR: If the pieces of wood are laid (or fall) too close together, there will not be sufficient oxygen to allow burning to take place.

HEAT: The flames that you see when a fire is burning, are actually burning gases released from the wood by the heat of the fire. (Coals are the actual burning of the wood, after all of the gases have been released.) One stick, burning by itself, may be able to generate enough heat to cause a sufficient amount of its gases to be released to keep itself burning.

In a fire, the pieces of burning wood heat each other, causing gases to be released and the fire to burn. If the sticks are too far apart, the fire will not burn well, if at all, because too much heat will be lost. This is especially true when first starting the fire, as there is very little collective heat. So, when starting a fire, it is necessary to take full advantage of all available heat in order to cause more gases to be released and the fire to burn well. Always use dry kindling.

FUEL: The size and amount of wood is of primary importance. Small diameter sticks, or kindling, can be heated quickly, releasing their gases and burning rapidly. Larger pieces of wood become heated more slowly, therefore they burn slower. So small sticks are good for starting fires, while larger pieces allow

the fire to burn longer. The amount of fuel on the fire will regulate the size of the fire, assuming the fire is built in a way that it can take advantage of that fuel.

Start the fire with very small pieces, and add progressively larger pieces as the heat of the fire grows. Before you start the fire, prepare the spot by clearing away all organic matter for several feet in all directions. Make a pit or ring of rocks (16-20 inches in diameter is usually sufficient) to contain the fire. These rocks also help the fire to burn by reflecting heat back to the sticks in the fire. **Do not use river rocks**, as they may explode when the moisture inside them turns to steam when heated.

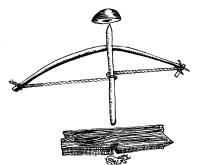
Gather at least 2-3 armloads of wood before starting the fire. (You will need about 10 armloads for an overnight fire.) Sort the sticks roughly according to sizes (fuel wood and kindling). Be sure you have a good bundle of pencil-sized sticks. Break these into 6-8 inch lengths. You will need a similar bundle of finger-sized sticks also.

Start the fire with a fist-sized ball of tinder: dried grass, pine needles, wood shavings, shredded bark—something fine, dry, flammable, and airy. Lay 2-3 layers of pencil-sized sticks over the ball of tinder before lighting. Building the fire against a large piece of fuel wood or between two large pieces (spaced 6-8 inches apart) gives something to lean the sticks on so they will stay in position. As the fire begins to burn, add larger and larger sticks until the fire is the size you want it. Then only add fuel as necessary to keep the fire going.

## Fire-starting Tips

Build fire so the wind will blow the flames and heat into the sticks rather than out of them. If the wood is damp, use a candle to help get it started as it has a hotter flame and will last much longer than a match.

Here are a few objects that can be used for starting a fire without matches. Be sure to practice before you have to use any of these methods.



- 1. Sun and glass-camera lens, flashlight, magnifying glass.
- 2. Flint and steel-dry tinder, charred rags.
- 3. Wood friction-dry, soft-grained woods: balsa, yucca, elm, root of willow, cottonwood, cedar.
- 4. Bow drill

Making a fire with a bow drill is a simple matter if the apparatus is constructed correctly. It has four parts: a fire board, a drill, a socket, and a bow.

The fire board should be about one-half inch thick. A split piece from a

dead branch of cottonwood is excellent. A slight depression must be drilled along one edge. The depression can be smoothed and deepened by a few turns of the bow and drill. A notch is cut in the side of the board so that it reaches to the center of the pit. This notch catches the fine powder ground off by the drill, and it is in this fine powder that the spark is formed.

The drill may be of the same wood as the fire-board, but it is often better if the wood is soft, such as willow. It should be about one foot long and about three-fourths of an inch in diameter. The top end is sharpened to a point, while the bottom is blunt.

The socket is made by drilling a depression in any piece of hardwood that fits the hand. When in use, the drill runs smoother if the socket is lubricated with grease. Rubbing the top of the drill stick through the hair or on each side of the nose will give it enough lubrication. Using water to lubricate a wooden socket only makes it swell and bind.

The bow should be 18-25 inches long and about one-half inch in diameter; a branch with a fork on one end is excellent. The best string is a strip of one-fourth inch wide buckskin or other leather. Substitutes can be made from plant fibers, shoelaces, or some other cord. The cord is attached to one end of the bow and twisted until it is tight and round before being tied to the other end. It is a good idea to fix one end in such a way that it may be loosened or tightened as needed. This can be accomplished by tying a small stick to one end of the cord and fixing it in the forked end of the bow. If the bow drill does not run smoothly, it may be that a little more twist in the cord is needed.

To use the bow drill the fire-board is placed on a flat piece of bark or wood. The spark will fall onto this piece, and it can then be placed on the tinder. Another way is to dig a small depression under the fire-board and place the tinder in the hole in a position under the board so the spark will fall directly onto it. The proper position for working the set is to get down on one knee and place one foot on the fire-board to hold it steady. The drill, with the bow cord twisted once around it, is placed in the fire-board socket. Using the hand socket to apply pressure, the bow is moved back and forth in a sawing motion with steady, even strokes until the drill tip is smoking well. Gradually the drill is spun faster and more pressure is applied with the hand socket. When a lot of black dust from the drill starts collecting in the notch and there is plenty of smoke, there should be enough heat for a spark. The drill is quickly lifted away and the black pile of dust in the notch is lightly fanned with the hand. If there is a spark, the pile will begin to glow, and then the spark is carefully placed in the tinder and blown into the flame. Always light tinder from windward side.

## Four Main Types of Fires

- 1. The Tepee fire is easy to build, burns quickly, and can be used for cooking. Place tinder in center of fire site. Wedge a stick into the ground slanted across the tinder, the upper end pointing into the wind. Lean kindling sticks against it in circles. Add a layer of large branches. Leave an opening on the side from which the wind is coming so you can light the tinder.
- 2. The Trench fire is best for a windy area, the coolest on a hot day, and excellent for cooking. Dig a trench four feet long. The bottom should slope from ground level at the end from which the wind is blowing to one foot deep at the other end. Build a tepee fire in the end of the trench. Lay several logs across the trench on which to put cooking pots.
- 3. The Reflector fire is good for baking and roasting food and for reflecting heat into an open tent or shelter. Drive sticks into the ground several feet apart. Pile logs against these two sticks. If possible, cover the front with sod. Build tepee or crisscross fire in front of this wall. If you find a large rock, you could use this as a reflector.
- 4. The Crisscross fire is excellent for cooking because it produces an even bed of coals quickly. Build a tepee fire in the center of the fire site. Place two logs across them. Build up your fire by adding layers of small logs and thin branches in this crisscross fashion.

#### Water

Under ideal conditions, you could live up to two days without water, but expect your physical condition to steadily worsen during that time. Therefore, it is important to find a safe and adequate supply of water early in the survival experience. Isolated springs, wells, plants, and solar stills are the safest kinds of water. Other sources should be purified before drinking.

Springs: Look for areas with exceptionally lush greenery. If the water is only seeping out of the spring, dam off an area to make a catch basin. If there is no visible water, try digging a well in the dampest spot. Dig as deep as practical and remember that it may take a while for the water to seep in and fill the bottom of the well. Attempt to keep animals out of all water sources.

Wells: Shallow wells can be successfully dug in spring areas as described above. They can also be dug in the bends of dry stream beds. Choose sandy/gravelly places where the water may have pooled in the bedrock.

Tanks or Water Pockets: Natural water tanks are depressions in rocks where water pools after it rains. These are frequently found in canyon-like dry stream beds

Streams and Lakes: Go downhill to look for streams and lakes. Though

not necessarily pure, streams and lakes are frequently an abundant source of water. Very likely there will also be many useful plants and animals living in or near the water

Dew: Early in the morning dew can be collected from grass, rocks, etc. Use your bandanna or a bundle of grass to mop it up and squeeze it into a container, or if necessary, directly into your mouth.

Plants: The pulp of some plants, such as cacti, can be pounded or shredded and squeezed through a bandanna, or in your hand, to yield usable moisture. Cottonwood trees generally have their roots in or near water.

Solar Still: Though it requires additional equipment, a solar still can give you water almost anywhere. You will need a 6' x 6' piece of plastic (clear plastic works the best), and a container in which to catch the water. Some type of tubing to suck the water out of the still is also helpful, otherwise you will have to take the still apart to get the water.

Making a solar still: Make a pit about 3 feet across and  $2\frac{1}{2}$  feet deep in a location that will receive full sun all day. Put the container in the center of the pit. Then lay the plastic over the pit, placing a stone or other weight on it to form a cone shape over the container. Be sure that the sides of the plastic slope steeply enough so that as the moisture forms, it will run down into the container. Be sure that nothing is touching the inside of the plastic cone or the water will be lost. The top of the plastic cone must be sealed off against the ground with a small amount of dirt all the way around.

Any moist material that is placed inside the pit will increase the amount of water collected. Expect to get only about a pint to a quart of water per day; therefore, each person will actually need several solar stills if this is your only water source.

#### **Water Purification**

There are three simple ways to purify water: boiling, chemicals, or a 0.2 micron filter. In a long-term situation, after the chemicals have been depleted, it would eventually be necessary to resort to boiling or filtering.

If your water source is not seriously contaminated, 3-5 minutes may be adequate boiling time. However, in situations in which the water is seriously contaminated, it may be wise to boil the water for up to half an hour.

Two chemicals will be discussed here: chlorine bleach (2 drops per quart) and water purification tablets (follow the directions on the bottle). **Filter purification of microbes other than viruses is preferred to chemical treatment.** 

With the chemical method, it is important to treat the lid area as well as the

water inside the container to avoid recontamination. This is done by first mixing the chemical with the water in the container. Then turn the container upside down, loosen the lid, and shake the container so that the treated water gets in and around the lid area. Retighten the lid, and let the water sit for the required 15-20 minutes before drinking. Follow the instructions included when using your 0.2 micron filter.

If you suspect chemical contamination, distilling the water is your only option for purification. Indications of chemical contamination may be foam or sheen. Distilling may be done by boiling the water on a fire, allowing the vapors to precipitate on a cold plate or collection tube. The droplets may be poured into another container. If the water is chemically polluted before distillation, you may have a clue that you are near help.

#### Rest

Strange as it may seem, outdoorsmen can perish in a very short period of time (as little as 6 hours) from hiking in wind, cold, and other hostile environments. A person away from civilization is wholly dependent upon a limited supply of usable energy and the insulation qualities of the body shelter they wear or carry. As long as a hiker's complex mass of living tissue remains quiet in a still air, room temperature-like environment, it requires little special body shelter or energy in maintaining a nearly constant internal temperature of 99° F. When muscle energy is used, it produces body heat as a by-product. Increased production of heat triggers the thermostat nerves to open the sweat glands and cool the body down by water evaporation. If the body gets too cool, the cold sensors call for the muscles to move (shiver) and produce body heat.

The use of muscle power for travel burns available energy, producing heat and some detrimental by-products. This energy is derived from food and water. Through a complex process, this food is converted to glycogen, part of which is stored as reserve in the liver. Some is converted to sugar, which is stored in the muscles for quick use.

When strenuous muscle activity produces these by-products faster than the body can dissipate them, the body can become oversaturated with waste products, causing muscle failure or exhaustion. Exhaustion will remain until the body is given time to automatically flush out the lactic acid buildup and disperse the carbon dioxide. When you rest you can get rid of about 30 percent of the lactic acid buildup in the first 5 to 7 minutes of the rest stop. But in the next 15 minutes you get rid of only about 5 percent more. The best method of preventing a buildup of by-products is to travel slower, giving the body a chance to eliminate these as you travel. Only sleep does a thorough job of regeneration. When muscle energy loss is compounded by loss of body heat through wetness and wind chill, body heat is lost faster than it can

be produced. The result will first be fatigue, then exhaustion. When a person is so exhausted that they can no longer move their muscles, their body cools—possibly beyond the recovery point.

### **Edible Wild Plants**

by Earl Qualls

There are six types of wild food that can be found in northern climates: seeds, berries, grasses, cattails, bark, leaves and nuts.

#### Berries

Seasons dictate the availability of berries. Berries are high in natural sugars and are an energy food, generally high in vitamin C, and a good source of moisture. Rose hips can be found most all year, but be careful to spit out the seeds as they can cause an anal rash. Most black and blue berries are edible. Red berries are sometimes edible. White berries are not edible. It is good to know the fruits in the region in which you are spending time outdoors.

#### Grasses

Almost everyone has chewed on the tender parts of grass stems, it's not much, but it's better than nothing. Young shoots of grass stems, leaves, and roots can be eaten in the same way. A nourishing broth can also be made from chopped grass. Probably the most nutritious part of grasses, though, are the seeds, which can be ground up and used as meal or flour. Avoid any seeds that look like they have a dark fungus growing in them.

#### Cattails

Cattails have been called the "supermarket of the swamps" because so many of the cattail's parts are edible. The root stems that run underground between the plant stalks can be dug up year-round. If these are young and tender, they can be washed, peeled, and cut up for stew, or cut in strips and dried for vegetable jerky. Older tough root stems can be washed, then crushed in a container of water. Let the water settle, skim off the fibers, and pour off the water to leave a white starchy layer that can be used as flour. The very young root stems that appear as "horns" around the base of the stalks can be broken off, washed, and boiled.

The centers of the base stalks can be peeled, cooked, and eaten if they are not too old and tough. If they are, they can be crushed in water to yield a flour the same as you would do the root stems. Peel the outer green leaves away from the center of the young shoots and eat the lower white part like celery. A little later



in the season, the young flower heads can be cooked and eaten. Toward autumn, the bright-yellow pollen from the mature male flower can be collected for a highly nutritious flour.

There are other uses for the cattail as well. The long leaves can be used for making baskets and mats, and as thatching for shelters. The fluffy down from the mature seed head makes excellent insulation material and can also be mixed with other shredded materials for tinder to start fires. • Be aware that more than one person has succumbed to the roots of the poison hemlock (illustration at left), which can grow in conjunction with cattails! It grows to a height of 2-6 ft.

### Pine

Pine needles make a good tea that is high in vitamin C. In the spring when they are still young and tender, the needles can be eaten raw or cooked. The most delicious part, especially from the Pinyon, Digger, Gray, and Sugar

pines, are the pine nuts, which grow between the scales of the cones, but you will have to beat the squirrels to them.

The inner bark of all evergreens is edible. Some species taste better than others, and all are quite chewy. Anytime of the year, this inner bark can be peeled in strips, dried, and ground into meal or flour.

#### Oak

The inner bark from the oak trees is also edible, though it is not as nutritious or as palatable as that of the pines. Acorns from the oaks, are excellent food. Unfortunately, they are available only in the fall, and most acorns contain enough tannic acid to make them too bitter to eat raw. They must be leached before eating.

Begin the leaching process by shelling the acorns and grinding them into

meal. Make a bowl-shaped depression in the sand, line it with your bandana, and pour in the meal. The Native Americans sometimes lined the depression with large leaves. You could also use a basket instead of a depression in the sand. Boil some water and pour it over the meal. Continue pouring hot water over the acorn meal until it no longer tastes bitter. Cold water can be used, but it will take considerably longer. One method is to put the meal in a cloth sack and submerge it in a stream overnight. After leaching, the meal can be eaten as is, or cooked in a mush or baked.

## **General Rules Concerning Edible Wild Plants**

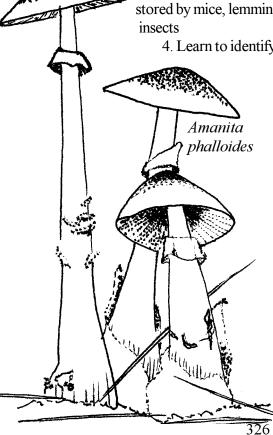
- 1. Study ecology—interrelationship of plants and animals, typical in life zones. Example: a soaring hawk may indicate rodents such as squirrels or rabbits, which eat (and store) food used by man. Food eaten by rodents, monkeys, and raccoons is usually safe.
- 2. Plants on land or water have edible parts, such as seeds, pods, nuts, tubers, roots, shoots, stems, flowers, leaves, buds, sap, and bark. Edible nuts are the most nutritious.
  - 3. Animal caches: eggs, honey, fruit, nuts, seeds, and roots stored by mice, lemmings, squirrels, chipmunks and birds and insects
    - 4. Learn to identify plants and recognize typical habitats.

Never guess. If you are not a botanist, first have an expert point them out to you.

5. Be cautious concerning mushrooms. Amanita is deadly poisonous! Other species closely resemble edible ones. Be sure of your choice before you eat any mushroom!

### **Edibility Rules**

- 1. Most black and blue berries are edible, red berries are sometimes edible, and white berries are never edible.
- 2. Never eat large quantities of unknown food.
- 3. When in doubt, chew a berry or small portion of a plant to taste



possible bitterness or astringency, or first cook a plant 5-15 minutes. Take a teaspoonful of the plant and hold it in your mouth for 5 minutes. If no burning sensation is noted, then swallow. Wait 8 hours. If there are no ill effects such as nausea, cramps, or diarrhea, eat more and wait another 8 hours. If all is well, go ahead and eat the plant.

- 4. Cook all plant foods when in doubt about the edibility.
- 5. The growing tissues of plants are generally edible, e.g., bright-green tips, crown, or heart of grasses.
- 6. Most grasses are edible. Avoid grasses with fungus growth and discoloration.
- 7. Eat ferns only in the fiddle-head stage.
- 8. Gather greens. If they are bitter, cook in more than one water; changing water until greens are mild.
- 9. Purify (with Clorox, Halazone, or filtration) water used in washing watercress, cattail, and other raw foods from possibly contaminated water.

It is quite impossible to define all edible plants, so take time to get acquainted with the wild edibles in your area.

### **Edible Foods in Temperate Climates**

Start simple. Everyone knows about dandelions (*Taraxacum officinale*)—well, almost everyone. All parts (flowers, leaves, and roots) are edible, raw or cooked. They are extremely high in vitamin A, and a good source of potassium, calcium, phosphorus, and other nutrients, including magnesium, manganese, selenium, zinc, and vitamin  $B_1$ ,  $B_2$ ,  $B_3$ , and C. In addition, dandelions have many medicinal properties.

#### Fruits

Many wild fruits are available in season for the picking. Blackberries, blueberries, gooseberries, persimmons, elderberries, and strawberries, are abundant and mouth-watering. Pick when ripe.

#### Nuts

Several kinds of nut trees grow in the wild—for example, all kinds of hickory nuts are edible except the bitternut. The bitternut has a yellow bud. Shagbark hickory has a thinner shell and is delicious. The mockernut (hickory nut also) is plentiful. Give the squirrels some competition! Other nut trees such as black walnuts, pecans, and hazelnuts are available in some areas.

#### Roots

Many nutritious roots can be found in the wild. Jerusalem artichokes (*Helianthus tuberosus*) grow wild or can be grown in your garden. They are very tasty either raw or cooked. Frost will kill the tops, but you can leave the tubers in the ground during winter and dig when needed.

Groundnut (*Apios americana*) is a vine that spreads over bushes and other vegetation growing near streams and moist bottom lands. As a legume, it has typical pea-like blossoms which appear mid to late summer, and are brownish-purple. The tubers grow on a string-like root, several on each string, and range in size from marbles to small eggs. They contain 13 percent protein by dry weight, almost 3 times the amount in a potato. Groundnuts may be eaten raw, but are better cooked. Use them like potatoes.

Solomon's Seal (*Polygonatum biflorum*) grows in shady woods and mountains from southern New England south to Florida and Texas. It is one of my favorites. The plant may range anywhere from one to six feet in height, depending on the richness of the soil. Several bell-shaped greenish yellow flowers hang down under the arc of the stem. These later turn into dark ball-like fruit. The white root grows horizontally. It has a number of round "seals" from previous years where the stem has fallen off. These are about one inch apart. Age is determined by counting the spaces between seals. Solomon's seal may be eaten raw or cooked. It is very mild. Roots are eaten raw or cooked. Leaves may be eaten only in the early spring.

There are many other tasty edible tubers, including Spring Beauty (Claytonia virginica) and false garlic (Nothoscordum bivalve). As the name implies, the latter is very mild. Its leaves are narrow and grass-like. The six-petaled flowers appear in early spring, and are light greenish-yellow. There are several toothworts (Dentaria) belonging to the mustard family (Cruciferae), which have edible roots that are whitish and shaped like a tooth. Some are rather "peppery."

Indian cucumbers (Medeola virginiana) are delicious. A few others might include nodding and other wild onions, chives and trout-lily (Erythronium americanum).

## **Leafy Greens**

Wild leafy greens are abundant. Lambs Quarters (*Chenopodium album*) may be eaten raw or cooked. It is high in calcium, vitamin A, and other minerals and vitamins. Pigweed (*Amaranthus retrofluxus*) which has a red root, is a common garden and field weed. It should be cooked before it gets too old. An excellent

source of potassium, calcium, phosphorus, and/or vitamins A and C, it is even richer in food value than Lamb's quarters. Both of the last two are mild, and you might wish to cook a little onion with them to spice them up.

Lamb's quarters and pigweed are available in the summer, when kale and other cultivated greens don't do well because of hot weather. Another favorite is Purslane (*Portulaca oleracea*). It contains glutathione (a common antioxidant compound), and vitamins A, C, and E. It is a good source of calcium, phosphorus, and iron, and is rich in omega-3 fatty acids. You can find it in both gardens and fields. Curled Yellow Dock (*Rumex crispus*) grows from a large tap root. The very young leaves can be eaten in a salad. Cook the larger leaves. It is also called "Sour Dock." It has almost as much vitamin A and potassium as dandelion does.

In the early spring, common chickweeds (*Stellaria media*), and common blue violets (*Viola papilionacea*) may be gathered for salad material.

The inner bark of the Slippery Elm Tree ( $Ulmus\ rubra$ ), besides being a soothing medicine, is nutritious. It contains calcium, iron, magnesium, manganese, phosphorus, potassium, selenium, zinc and vitamins  $B_1$ ,  $B_2$ ,  $B_3$ , and C. Scrape the outer bark off and make a small rectangular cut in the inner bark, then peel off. Do not cut all around (gird) the tree or it will die.

With gradual experience, you will be able to see not only beauty as you walk through nature, but—a complimentary fresh market! "From His resources, He can spread a table in the wilderness" Prophets and Kings, p. 242.

# **Primitive Cookery**

## Roasting:

Food may be roasted on a flat rock with heat under the rock, or with reflected heat.

Place food on a stick and roast or dry over a fire or bed of hot coals. Wrap food in leaves and bury in sand under the fire.

### Baking:

Food can be baked in a reflector oven made of bark, rocks, or other materials.

Bake in a clay bank oven. Preheat oven by fire kindled inside.

Scrape fire and ashes out.

Place food inside. Seal.

Cover food with moist clay about an inch thick, and bake in coals.

To bake breads in ashes, make balls of dough, cover with flour and place in ashes.

### Steaming:

Dig hole. Fill hole with rocks and build a hot fire on the rocks.

Rake away the fire and leave hot rocks in the hole.

Cover with wet green leaves. Lay on food.

Add another layer of damp vegetation, and fill the rest of the hole with sand or loam.

Water can be added by making an inlet with a stick. Cover inlet.

# Boiling:

Water may be boiled in a bark container, green bamboo joint, or concave rock.

Put heated rocks beneath the container.

### **Knives**

"If the ax is dull and you don't sharpen it, you'll need more strength to do the same amount of work. So it's wise to think things through before you do them" (Ecclesiastes 10:10 Clear Word).

Suppose, in a survival situation that you have only a knife. Since water is one of the priorities, you set out to find some. You realize that it needs to be purified. Therefore, you would need to make a bowl in which you could boil water. A bowl of this type can be made by burning out a piece of wood with hot coals. So therefore you would need to make a fire. To make a fire, though, you would need to carve a set of "fire sticks." To make the bow-drill set you would need a cutting tool. Since you have a knife, you can use it, but if it needs to be sharpened that may have to be done first. We would diagram this situation as follows:

Water ← Bowl ← Fire ← Bowdrill ← Knife ← Sharpening

All of these survival tools are interrelated. And once you have carved a bow-drill set, it can be used to start several fires. The fire itself can be used for many things. And there is also more than one use for the bowl.

Because of the interrelatedness of almost all of the survival skills and tools, and since many of these start with a sharp knife, a knife is your most important piece of survival equipment. Therefore learning how to select a good knife, keep it sharp, and use it safely should be one of the first skills you learn.

#### **Knife Selection**

In general, be sure that the handle is firmly attached. For sheath knives, check the attachment between the handle and the blade, the blade's tang (the part

that goes into the handle) should extend at least halfway into the handle and be firmly attached.

On folding knives, a quality blade should feel almost at one with the handle, moving only in the direction the blade opens and closes. It should not feel loose or "wiggle" from side to side on the pivot pin. If it is loose, this is a sign of poor construction. A lock blade folding knife is safer, as it will not close up while you are working with it. For all knives, a  $2\frac{1}{2}-4\frac{1}{2}$  inch blade is adequate. Longer blades can be harder to manage because you have less leverage when you are carving. A folding knife with a large and a small blade can be quite useful.

Survival knives with multiple tools are also available, but be prepared to pay a good price. The value of a Leatherman® or a Swiss Army Knife can hardly be overestimated. Beware of inferior copies.

You might also want to add a 1 inch wood gouge to your survival tools. This gouge is handy for hollowing out bowls and spoons.

# **Knife Sharpening**

When sharpening a knife, what you are actually doing is grinding off excess metal to make a new sharp edge on the blade. In order to sharpen it, the rounded metal must be ground off with a sharpening stone.

While sharpening, the most important thing is to maintain a proper angle of the knife to the whetstone. This must be done in order to grind a keen edge. If the same angle is not maintained, it will be rounded again and the knife will not be sharp.

At first, press fairly hard using a circular motion. Work all along the knife edge from the point to the base, changing sides every so often. Rinse or wipe off the knife and the whetstone face frequently to remove the small pieces of metal and stone that are ground off. Rinsing in water works well.

When the roundness of the dull edge has been ground off, the metal at the very edge will have a tendency to turn upward rather than being ground off. This is called a "burr" or "wire edge." It is useful in that it can let you know when the roundness is removed. You can feel it by lightly rubbing your thumb or finger across the blade from the back of the knife toward the edge. The burr will catch slightly in the grooves of your fingertip. Note that it will be only on the side opposite the whetstone. Check for this burr frequently during the sharpening process. Continue grinding with the whetstone until you have this burr all along the edge. When this happens, all the roundness has been ground off, and there is a good edge all along the knife.

The last thing to do is to grind off the burr. To do this, continue grinding as

before, but press **very lightly** and change sides after every couple strokes. Check for the burr each time you change sides. When the burr has been ground off, the knife should be sharp.

For a superfine edge, use a leather strap. Lay the knife flat on the leather and draw it across so that the leather presses gently up across the newly ground blade, removing the last remnant of a burr from the blade. Use these same procedures for sharpening other tools such as hatchets and axes.

### **Knife Safety**

When using your knife, always work with the sharp edge of the blade pointing away from you. Be sure, as you hold on to your work, that a finger (or other body part) is not out in front of the blade! Watch out for other people, too; keep them out of range in case you happen to slip. When you hand the knife to someone, hold on to the back of the blade and offer them the handle of the knife.

# **Finding Directions**

## Point of Reference/Landmark Practice Activity No. 1:

Suppose that you are going on an imaginary hike (don't actually go anywhere; just choose an arbitrary direction out across the landscape). Close your eyes and turn around a couple of times. Then open your eyes and face, once again, in the direction you were to go. How did you know which way to face? You probably used some point of reference or landmark that was in the direction of the imaginary hike. If there was not a landmark in that particular direction, possibly you used some landmark off to one side and remembered the angle from that landmark to the direction you wanted to go. Subconsciously, we all use landmarks or points of reference, and angles from these landmarks to determine directions. Learn to do this consciously, then you can use it as a tool whenever you need to "keep track of your tracks."

## The-Star-That-Does-Not-Move Practice Activity No. 2

This activity is best done at night under a star-filled sky. Begin turning around, rotating slowly to your left. Notice how you first see objects on the left, then they move across your field of view and "set" on the right. As you continue to rotate, slowly look higher and higher. Notice how things still "rise" and "set" but make a shorter arc. Keep turning around looking higher still; high overhead you should find a spot that does not move, but everything seems to "rotate" around. When you find

this spot, stop turning around. Where is this spot in relation to you? The answer is straight above you.

Lie face up on the ground with your arms outstretched at right angles to your body with your left arm toward the direction the sun comes up (east), and your right arm toward the direction the sun sets (west). Imagine yourself lying there for a full day visualizing what will be happening in the heavens above you. On a summer morning, you would see the sun at your far left; it would rise, and about noon be straight above you. Through the afternoon it would continue to cross the sky, and in the evening set on your far right. After sundown, it would get dark and the stars would come out. Choose a star on your far left and keep track of it through the night. What path would it take? It, too, would rise, about midnight be straight up, and toward early morning set on your far right.

As you watch the sky through the night, would a certain star that the others seem to rotate around, correspond to this spot that you found above you at the beginning of this activity? Where would that star be in relation to the globe? Some Native Americans called this star "The-Star-That-Does-Not-Move." It is located almost directly above the North Pole. We call it Polaris, or the North Star. Find it by following the dipper end of the Big Dipper constellation.

For us, on Planet Earth, the North Star is an excellent reference point. Everywhere on the planet, we are affected by the rotation of the earth. The directions of the rising and setting sun are also good reference points. Because of the tilt in the earth's axis, the sun does not rise and set in exactly the same location throughout the year; therefore, neither sunrise nor sunset is as good a point of reference as the North Star. The classical way to locate the North Star is to find the Big Dipper. Having found the Big Dipper, locate the two stars on the edge of the "dipper" known as "The Pointers." The North Star is approximately in line with these two.

## Earth Compass Practice Activity No. 3

With the above activities in mind, scratch a short north-south line on the ground and make an east-west line that crosses the north-south line at its center. Label the ends of the lines with N, E, S, and W, representing the four directions. Using these initials, starting with north and going around clockwise you can remem-

ber the rhyme, "Nancy Eats Shredded Wheat."

If you were only able to determine one of the four directions, can you see how easy it would be to figure out the rest of them? For example: if you were to observe the sun coming up, that would tell you which way was east. By drawing a line in that direction, then making a line crossing it and labeling the ends, you could determine all directions.

### **Keeping Track of Your Tracks**

If you were to leave camp and go west, ask yourself which direction you would need to go to come back to camp. By keeping track of your tracks, you instinctively know which direction to return. But suppose you left camp not paying attention to which way you went, and you began wandering around. Would you know which way to go to come back? Probably not. To know your way, you need to "keep track of your tracks."

There is no such thing as an inherent "sense of direction." People who appear to have this so-called "sense" have learned, albeit subconsciously, to keep track of their tracks. They make mental notes of the direction and which way they are going at all times. When they arrive at a new location, one of the first things that they do is pick out the directions and any significant landmarks. As a result they are rarely, if ever, lost.

## Orientation by the Lay of the Land

People with this so-called "sense of direction" also notice, perhaps subconsciously, which way different terrain features lie. For instance, which way does the river run? Or what direction does a mountain ridge lie? Having made mental notes of this, they are free to roam wherever they wish. For example, if we were to hike upstream, all we would have to do to get back to camp is to return downstream.

## Things to remember:

- 1. When leaving camp, be sure you are adequately dressed and properly equipped.
- 2. Never leave camp alone–keep at least two in any party. The buddy system not only helps in prevention and early treatment of frostbite, but also, if you fall into the water, your buddy's efforts will probably save you. If you break a leg, you have assistance and someone who knows which direction to go for help.
- 3. Always anticipate accidents and have a plan for survival.

- 4. If lost in the wilderness, conserve your strength and body heat. Make yourself as comfortable as possible where you are and have faith.
- 5. If you feel cold, remember that exercise produces heat. A particularly good exercise is to tense both the extensors and the flexors of the arms and legs at the same time. This produces heat without motion. However, don't overdo it. There is a limit to work that can be done sagely, and some rest is required to avoid exhaustion and danger of freezing.
- 6. Perspiration is dangerous because it predisposes frostbite and freezing. Keep clothes dry internally and externally. Change and dry socks and inner sole at least daily (twice daily if on the trail). Underdress rather than overdress on the trail. Put on additional clothing when the body begins to cool.
- 7. Move slowly until the amount of energy available after necessary heat production is known.
- 8. Clothing must be kept clean and free of oils and grease. Ties, or drawstrings on parkas, etc., are put there to keep out snow and cold air, but they must **not** be tied so tight as to diminish circulation.
- 9. Impaired local circulation is the primary cause of frostbite of the feet. An effort should be made to avoid anything that is known to have even a mildly adverse effect on normal circulation. Do **not** wear stretch or tight top socks.
- 10. Shoes, and socks in particular, must not be tight. Do **not** wear too many socks unless they are successively larger in width as well as length. (Socks that are too big give folds that cause pressure points and increased tendency to cold and injury.) If your feet hurt **investigate\_immediately**, rewarm and exercise your feet until sensation returns, change to dry socks and dry inner soles if necessary.
- 11. Heavy, bulky clothing makes you clumsy and prone to accidents from lack of normal agility. Loose clothing allows freedom of movement, better insulation, and proper breathing.
- 12. Hot drinks add actual warmth to survival food, and they help maintain water requirements. Cook survival rations with plenty of water if possible. This makes them more palatable and far more digestible. Boiled foods are more digestible than fried foods, and the juice gives you more vitamins, minerals, and needed water.
- 13. Whether you eat regularly or not, be sure you take in **at least** one to two quarts of water per day. The vast majority of common ailments are prevented and treated by forcing fluids. Eating snow excessively uses body

energy. Melt it and drink it warmer.

14. To make a poncho from a black plastic garbage bag, cut slits in corner of sides for arms, and in center of bottom cut a T-shaped slit for the neck, the vertical cut of the "T" coming down in front. Other uses for the bag: ground cloth, "tablecloth," gathering bag, solar still, washbasin

#### First-aid Kit

Ideally, every hiker venturing more than a few miles and hours from civilization should have first-aid training and a complete kit. Certainly anyone who spends much time in the back country should avail themselves of instruction offered by the Red Cross or mountaineering clubs and assemble a kit with sufficient materials to cover a wide range of eventualities.

At the very least, the novice must be equipped to handle common ailments of the trail, some of which can be disabling even though not "serious" in a medical sense. If each hiker carries a small kit, supplies can be pooled for crises; if the group (say, a family) carries only two single kits, they should be correspondingly more elaborate. The following items constitute a **one-man first-aid kit:** 

Band-Aids: several, for minor cuts

**Charcoal Tablets:** for detoxification in case of poisoning or flu symptoms

**Gauze Pads:** several, 3 and 4 inches square, for deep wounds with much bleeding

**Adhesive Tape:** a 1 or 2 inch roll for holding bandages in place, covering blisters, taping sprained ankles, etc.

**Salt Tablets:** to prevent or treat symptoms of heat exhaustion (including cramps) when sweating heavily

**Aspirin:** for relieving pain and reducing fever **Needle:** for opening blisters, removing splinters

First-aid manual: one of the booklets or books discussing diagnosis and

treatment

Moleskin or Mole foam: for covering blisters

Razor Blade (single edge): for minor surgery, cutting tape and moleskin to

size, and razor for shaving hairy portions of skin before taping **Gauze Bandage:** a 2 inch wide roll for bandaging large cuts

Butterfly Band-Aids: for closing deep cuts that normally require stitching

Triangular Bandage: for large wounds

Large Compress Bandage: to hold dressings in place

**Halazone Tablets:** for treating drinking water of doubtful purity **0.2 Micron Water Filter System:** best system for water purification

Antacid: for settling stomachs upset by overexertion, unaccustomed altitude,

and the cook's mistakes

Wire Splint: for sprains and minor fractures Sam Splint: for fractures of arms or legs

Elastic Bandage and safety pin: 3 inches wide, for sprains, applying pres-

sure to bleeding wounds, etc.

First-aid Cream: for sunburn, itches, scrapes, and rashes

Antiseptic: Bactine, Zepherine Chloride, Polysporin, or other for cleansing

agents in cuts and abrasions

Antihistamine: Benedryl for allergic reactions to bee stings

Oil of Cloves: for toothache

**Ibuprofen:** for severe pain (prescription required) **Antidiarrhetic Pills:** for severe cases of liquid loss

Laxative and/or Glycerin Suppositories: for prune-resistant constipation in

persons congenitally suffering this affliction

**Snakebite Kit:** Authorities generally advise carrying a snakebite kit, but in the unpracticed hands of semi-hysterical first-aiders the kit can be more dangerous than the bite; the rule is to seek instruction before entering an area where it may be needed.

**Crazy glue:** can be used to close wounds until arrival at a hospital.

**Antibiotics:** the use of any antibiotics is not advocated for treating sore throats or virus infections. Their use, even if a physician is a group member, should be banned, since an adverse reaction in the wilderness could be serious.

Splints, bandages, litters, and other items for extreme emergencies can be improvised from tree limbs, ice axes, clothing, pack frames, and similar available gear.

# **Signaling**

The recognized distress signal is 3 signals of anything that would attract attention. Such as: 3 whistle blasts, 3 shouts, 3 flashes of a mirror, 3 fires, 3 blocks stamped out in the snow.

### Signaling With a Metal Mirror

Hold mirror next to cheek below eye with one hand. Rotate mirror to find reflection on ground in front of you and bring other hand, with arm extended in line with the reflection so reflection falls on outstretched thumb. Now swing

upper body toward object you wish to signal, keeping reflection on thumb. Sighting along mirror-thumb object line will ensure that the reflection can be seen from the object you are signaling. Move thumb out of the way for full-strength reflection.

### **Ground to Air Emergency Code**

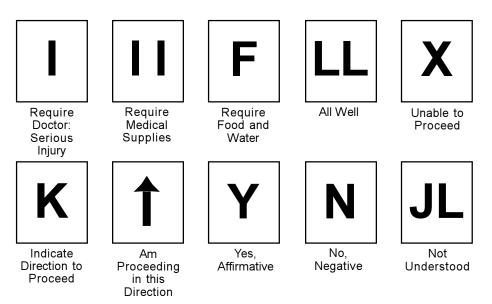
Make these patterns on the ground with rocks, brush, turned-up soil, stomped snow, etc. in a clear area so it can be easily seen from the air.

Signaling is the only **active** thing you can do to aid in your rescue, but praying **always** helps. Smoke is the best signal in forest. During summer, fire spotters will see it. After fire is well on, add green branches and leaves to increase smoke.

Snow Signals: Find clearing, scatter branches, rocks, dirt and/or tramp out largest possible "X" (minimum size 18 feet) to attract aerial searchers. They **must** be aligned north and south so that the shadows stand out in the sun moving east to west.

Desert Signals: In the desert, do the same on sand as described previously for snow. If such ground markers cannot be made and help approaches, use mylar, mirror reflector, whistle or bright-colored jacket, or any colorful contrasting moving object to attract eyes.

Summertime: Messages may be spelled out with sod blocks, logs, or rocks. The more different variety of messages the better; from smoke, flares, mirror, waving arms, or gun shots. The key with gunshots is "three in a row," but don't waste ammunition.



Here is an easy way to remember the rules we have covered in this chapter.

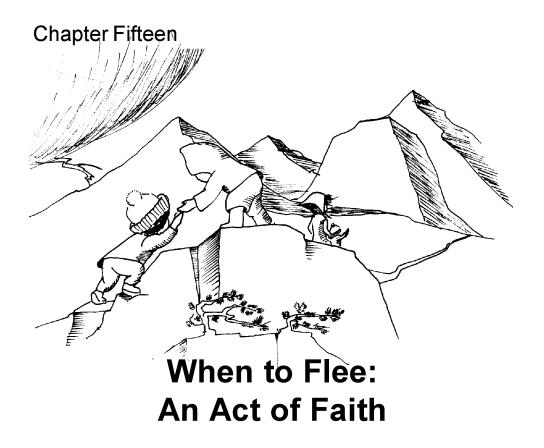
- S Size up the situation.
- U Undue haste makes waste.
- $\mathbf{R}$  Remember where you are.
- **V** Vanquish fear and panic (positive attitude).
- I Improvise; make what you need.
- V Value living.
- $\mathbf{A}$  Act like you are at home.
- L Learn basic skills.

#### FOR FURTHER READING

<u>The Wilderness, God's People, and the End-Time</u>, Jim Buller, 3520 Harmon Road, Bakersfield, CA 93307. Phone: 661-366-0324. E-mail: jabuller@juno.com <u>Outdoor Survival Skills</u>, Larry Dean Olsen, Brigham Young University Publications, Provo, UT 84601. 1967

Edible Wild Plants, by Miriam Kramer, c/o Outdoor Eduquip, 24414 University Ave., No. 34, Loma Linda, CA 92354. 1-800-500-7342

Earl Qualls, P.O. Box 129, Wildwood, GA 30757. Phone: 423-822-7002



"If necessary, He would send the ravens to feed us." (Early Writings, p. 56).

orrie ten Boom tells of the time she arrived in Moscow to smuggle a suitcase full of Russian Bibles behind the iron curtain. Her big red suitcase was so heavy she could hardly lift it. The closer she approached the customs desk, the more fearful she became. Her fears were justified. Russia was closed to Christianity and smuggling Bibles was a crime severely punished. Corrie had spent time in Ravensbruck, a notorious Nazi concentration camp where she had watched her sister die. Her father and brother also died in other camps. Corrie did not want to go to prison. Panic seized her as she saw the Russian customs officers ransacking all of the suitcases of the people in line ahead of her. She feared she would be discovered. But instead of running, she prayed.

"Lord, You have promised to 'hasten and perform Your Word.' You have promised it; now You must perform it! The same moment I prayed, I saw angels surrounding that big red suitcase! When I saw who was on my side, my fear left me!" "After my prayer the angels disappeared. Well, not really," she chuckles.

#### WHEN TO FLEE

"I just couldn't see them anymore!"

"Your suitcase is a heavy one!" exclaimed the customs officer as he lifted Corrie's suitcase.

"Yes, sir," Corrie stammered.

"I have some time. I can carry it for you," he offered.

Corrie finishes her story with her unique blend of Dutch accent and Christian joy, "He not only did not inspect my suitcase, he carried it all de vay to my car!"

Think what Corrie would have missed had she fled when tempted by her fears! We have all read and perhaps coveted the experience of others who, like Corrie, have an extraordinary faith and sense of timing. They seem to know when to pray, when to stand, and when to flee. In the future, discerning these times may mean survival. The moving accounts we read of Christians who stood for the right in the face of adversity did not attain their faith by chance. True faith is learning to trust completely in God's guidance when we are in a vulnerable position; when we cannot see beyond human reasoning. Faith is learning to lean on God and maintaining our Christian integrity when human wisdom says, "Run." This kind of faith is a gift of the Holy Spirit.

### Events Leading up to Flight for Christians Living at the End Time

Surviving the end times will require faith, courage, and discipline of the highest order. We shall eventually have to flee, but we must be careful to discern the time for flight. Until it is time to flee, we are to deliver His Word unto all the world.

"And this gospel of the kingdom shall be preached in all the world for a witness unto all nations; and then shall the end come" (Matthew 24:14).

Like Corrie, we may be frightened because the truth will not be popular, but angels will be with us. Though events may appear to be chaotic, we are promised that nothing will ever be out of control.

"Above the distractions of the earth He sits enthroned; all things are open to His divine survey; and from His great and calm eternity He orders that which His providence sees best" (Ministry of Healing, p. 417).

Trouble, in the end times, will also be held in check. "At that time, while the work of salvation is closing, trouble will be coming on the earth, and the nations will be angry, <u>yet held in check</u> so as not to prevent the work of the third angel" (Early Writings, pp. 85, 86; emphasis supplied).

Previously in this book we have documented several events that take place just prior to the close of probation. The Loud Cry will be given, under the power of the Latter Rain of the Holy Spirit. This is the most powerful evangelistic crusade ever experienced on earth (see Closing Events Chart, p. 458).

Subsequent to the finishing of the work will be a time of flight, and it is impor-

tant to know when we should be doing evangelism and when we should be fleeing to the rocks and mountains, completely dependent upon God. We will be leaving our gardens and homes, which we have depended upon for sustenance during the Loud Cry and the time of no buy- no sell. When it is time to flee, we will be relying on the promise of Isaiah 33:16 that our bread will be given us, and our water will be sure.

Before the time for flight, we will be traveling as witnesses. As persecution increases, our movements are motivated by evangelism. We will receive special help during the last evangelistic effort.

"Servants of God, with their faces lighted up and shining with holy consecration, will hasten from place to place to proclaim the message from heaven. By thousands of voices, all over the earth, the warning will be given. Miracles will be wrought, the sick will be healed, and signs and wonders will follow the believers" (The Great Controversy, p. 612).

Angels will strengthen us today to give the message to a perishing world. They will also help us know when to flee. While in flight, they will feed us when we can no longer feed ourselves and will protect us when we must, at last, live in desolate, and perhaps unfamiliar, solitary places. Is there something we can do to prepare for this future time? Yes, there is a call for each of us today:

"It is no time now for God's people to be fixing their affections or laying up their treasure in the world. The time is not far distant, when, like the early disciples, we shall be forced to seek a refuge in desolate and solitary places. As the siege of Jerusalem by the Roman armies was the signal for flight to the Judean Christians, so the assumption of power on the part of our nation in the decree enforcing the papal sabbath will be a warning to us. It will then be time to leave the large cities, preparatory to leaving the smaller ones for retired homes in secluded places among the mountains. And now, instead of seeking expensive dwellings here, we should be preparing to move to a better country, even a heavenly. Instead of spending our means in self-gratification, we should be studying to economize" (Testimonies for the Church, vol. 5, p. 464, 465; emphasis supplied).

# Time for Flight Separated from Time for Evangelism

"Decree enforcing" in the above reference, refers to the National Sunday Law. This will be our **last signal** to leave the cities and find homes in the country. It will no longer be safe to live in or operate businesses in the cities, but we will still be doing mission work because probation has not closed.

It is true that the Lord, through His servant, told us to leave the cities long ago, but "decree enforcing" refers to the **last warning; the warning to** 

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**move to retired homes among the mountains.** Since we are told that we should make no preparations for the time of flight, these "retired homes among the mountains" refer to dwellings in the country where we will live before probation closes. These outposts and homes will require preparation and planning before the enforcement of the National Sunday Law. Why not move out now and be ready, having our home in the mountain prepared?

"As the approach of the Roman armies was a sign to the disciples of the impending destruction of Jerusalem, so may this apostasy be a sign to us that the <u>limit of God's forbearance</u> is reached, that the measure of <u>our nation's iniquity is full</u>, and that the <u>angel of mercy is about to take her flight</u> never to return. The people of God <u>will then</u> be plunged into those scenes of affliction and distress which prophets have described as the time of Jacob's trouble" (Testimonies for the Church, vol. 5, p. 451; emphasis supplied). Jacob's time of trouble occurs after probation closes (see also <u>Early Writings</u>, pp. 284-285).

This reference, in many ways, is a parallel to the one in <u>Testimonies for the Church</u>, volume 5, page 464, but, many interesting differences occur. The terms "limit of God's forbearance," "nations iniquity is full," and "angel of mercy about to take her flight never to return" are all references specifically about the close of probation. Notice the one little key word in "the angel" phrase—the word "**about.**"

When the angel of mercy takes her flight, that is the moment of the close of probation. But the word "about" indicates that probationary time is still open for yet a little while **the angel of mercy has not yet left this earth.** This reference indicates two things: first, that we are approaching the close of probation, and second, that the time of Jacob's trouble will follow shortly. The term "will then" indicates just a little more time for mercy. The NSL and its enforcement is filling up the cup of the world's iniquity. Events are happening very quickly. The total culmination of Satan's program of misery is about to occur.

The close of probation occurs after all evangelism is finished. "When the third angel's message closes, mercy no longer pleads for the guilty inhabitants of the earth. The people of God have accomplished their work.... Then Jesus ceases His intercession in the sanctuary above. He lifts His hands, and with a loud voice says, 'It is done'" (The Great Controversy, p. 613).

## Preparation Necessary Prior to the Time of Flight

"Again and again the Lord has instructed that our people are to take their families away from the cities, into the country, where they can raise their own provisions; for in the future the problem of buying and selling will be a very serious one. We should <u>now</u> begin to heed the instruction given us

over and over again: get out of the cities into the rural districts" (Country Living, pp. 9, 10; emphasis supplied).

Since we are growing our own food, no buy-no sell does not signal the time for flight. While we are raising our food, we are still in probationary time. Provisions raised in our own garden will be our paycheck. When it is time to flee, we leave our gardens behind. Then God provides our food. When increased enforcement of Sunday laws escalates from fines, to imprisonment, inducements, to "no buy-no sell," and finally the death decree. The death decree is when we will need to flee. This next reference outlines a most essential preparation for last day events.

"All who are under the training of God need the quiet hour for communion with their own hearts, with nature, and with God. In them is to be revealed a life that is not in harmony with the world, its customs, or its practices; and they need to have a personal experience in obtaining a knowledge of the will of God. We must individually hear Him speaking to the heart. When every other voice is hushed, and in quietness we wait before Him, the silence of the soul makes more distinct the voice of God" (The Ministry of Healing, p. 58; emphasis supplied). (See also The Desire of Ages, p. 668.)

## Steps of Sunday Law Enforcement

We are told that Sunday law enforcement will be mild at first, but will intensify as time progresses. "The Sunday movement is now making its way in darkness.... Its professions are mild and apparently Christian, but when it shall speak it will reveal the spirit of the dragon. It is our duty to do all in our power to avert the threatened danger" (Testimonies for the Church, vol. 5, p. 452).

"As the movement for Sunday enforcement becomes more bold and decided, the law will be invoked against commandment keepers. They will be threatened with fines and imprisonment, and some will be offered positions of influence, and other rewards and advantages, as inducements to renounce their faith. But their steadfast answer is, 'Show us from the word of God our error'—the same plea that was made by Luther under similar circumstances" (The Great Controversy, p. 607; emphasis supplied).

The next step of Sunday enforcement is the edict preventing God's people from buying and selling (Rev. 13:17). If we cannot buy or sell, we will have to raise our own food on country properties.

This reference indicates that the event of "no-buy, no-sell" is just prior to the death decree. "Fearful is the issue to which the world is to be brought. The powers of earth, uniting to war against the commandments of God, will

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decree that no man may <u>buy or sell</u>, save he that has the mark of the beast, and, finally, that whoever refuses to receive the mark shall be <u>put to death</u>" (<u>Spirit of Prophecy</u>, vol. 4, p. 422; emphasis supplied).

God, who loves us, knows that being located outside the cities is the safest place for us. Communion with God is vital to our preparation; He can talk to us better in the country where the noise and distractions are decreased. We will have to develop this communication with Him now in order to have it in the last days. When the Sunday law is first initiated we are told we will preach the Sabbath fully (Evangelism, p. 77: "The cities are to be worked from outposts").

"At the commencement of the <u>time of trouble</u>, we were filled with the Holy Ghost as we went forth and proclaimed the Sabbath more fully. This enraged the churches and nominal Adventists, as they could not refute the Sabbath truth. And at this time <u>God's chosen all saw clearly that</u> we had the truth, and they came out and endured the persecution with us" (Early Writings, p. 33; emphasis supplied).

"The commencement of the 'time of trouble,' here mentioned, does not refer to the time when the plagues shall begin to be poured out, but to a short period just before they are poured out, while Christ is in the sanctuary. At that time, while the work of salvation is closing, trouble will be coming on the earth, and nations will be angry, yet held in check so as not to prevent the work of the third angel. At that time the 'latter rain,' or refreshing from the presence of the Lord will come, to give power to the loud voice of the third angel, and prepare the saints to stand in the period when the seven last plagues shall be poured out" (ibid. p. 85; emphasis supplied).

# **Angels Protect and Provide**

Angels will provide protection in a special way after the close of probation. There will be no more martyrdom. In Maranatha, p. 199, we are told that, "When this grand work is to take place in the battle, prior to the last closing conflict, many will be imprisoned, many will flee for their lives from cities and towns, and many will be martyrs for Christ's sake in standing in defense of the truth." There will be many martyrs for Jesus before probation closes. Though having faced death, these martyrs are classified as true survivors, and, at the resurrection, they have a very special place of honor, in His Kingdom. After the close of probation God's people will have finished their work, and martyrdom ceases. God will protect His people.

"So I saw that the people of God, who had faithfully warned the world of His coming wrath, would be delivered. God would not suffer the wicked to destroy those who are expecting translation and who would not

bow to the decree of the beast or receive his mark. I saw that if the wicked were permitted to slay the saints, Satan and all his evil host, and all who hate God, would be gratified" (Early Writings, p. 284).

"I saw the saints leaving the cities and villages and associating together in companies, and living in the most solitary places. Angels provided them food and water, while the wicked were suffering from hunger and thirst. Then I saw the leading men of the earth consulting together, and Satan and his angels busy around them. I saw a writing, copies of which were scattered in different parts of the land, giving orders that unless the saints should yield their peculiar faith, give up the Sabbath, and observe the first day of the week, the people were at liberty after a time to put them to death.... In some places, before the time for the decree to be executed, the wicked rushed upon the saints to slay them; but angels in the form of men of war fought for them" (Early Writings, pp. 282, 283; emphasis supplied).

"The people of God will not be free from suffering; but while persecuted and distressed, while they endure privation and suffer for want of food they will not be left to perish. That God who cared for Elijah will not pass by one of His self-sacrificing children. He who numbers the hairs of their head will care for them, and in time of famine they shall be satisfied. While the wicked are dying from hunger and pestilence, angels will shield the righteous and supply their wants" (The Great Controversy, p. 629; emphasis supplied).

When we can no longer feed ourselves the angels will feed us. Isn't this a reassuring promise for us today, as we face the future?

## Today—the Most Important Time of All

How important it is to start each day with God and to keep ourselves unspotted from the world?

"Pure religion and undefiled before God and the Father is this, To visit the fatherless and widows in their affliction, and to keep himself unspotted from the world" (James 1:27).

"The time is not far distant when the <u>test will come to every soul</u>. The mark of the beast will be urged upon us. <u>Those who have step by step yielded to worldly demands</u> and conformed to worldly customs will not find it a hard matter to yield to the powers that be, rather than subject themselves to derision, insult, threatened imprisonment, and death" (<u>Last Day Events</u>, p. 173; emphasis supplied).

How important is today? The decisions we make today will strengthen or

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weaken our preparations for this eternal decision at the time when the mark of the beast hovers over all the world. In a moment, our destiny will be decided by our answer to one question.

"The Lord has shown me clearly that the <u>image of the beast will</u> be formed before probation closes; for it is to be the great <u>test for the people of God, by which their eternal destiny will be decided</u>" (The Seventh-day Adventist Bible Commentary, Ellen G. White Comments, vol. 7, p. 976; emphasis supplied). Our eternal destiny will be decided at the enforcement of the National Sunday Law!

We can be on the right side of this decision by learning to love and obey Him now, following a "thus saith the Lord" even when it is not popular and appears extreme.

"There is a period of time just before us when the condition of the world will become desperate, when that true religion which yields obedience to a 'Thus saith the Lord' will become almost extinct" (Testimonies for the Church, vol. 5, p. 523).

If we neglect the preparation which includes spiritual, practical, geographical, and financial adjustments, we will not be ready for the times spoken of during the enforcement of the Sunday law. It is important that we do the right thing at the right time in order to be a part of God's closing work.

"It is the <u>very essence of all right faith</u> to do the right thing at the right time" (Testimonies for the Church, vol. 6, p. 24; emphasis supplied).

## There will be no make-up time if we neglect preparation.

There are those who would have us believe that we need to lay up food and build a secret hideaway for this time of flight. But we are told that we should not make any provision for this time.

"The Lord has shown me repeatedly that it is contrary to the Bible to make any provision for our temporal wants in the time of trouble. I saw that if the saints had food laid up by them or in the field in the time of trouble, when sword, famine, and pestilence are in the land, it would be taken from them by violent hands and strangers would reap their fields. Then will be the time for us to trust wholly in God, and He will sustain us. I saw that our bread and water will be sure at that time, and that we shall not lack or suffer hunger; for God is able to spread a table for us in the wilderness. If necessary, He would send ravens to feed us, as He did to feed Elijah, or rain manna from heaven, as He did for the Israelites" (Early Writings, p. 56; emphasis supplied).

Clearly this reference refers to the time of flight, after probation is closed when we will no longer be growing our own food. While we are in flight, we

trust completely in God to provide for our every need, including food and protection. Like Corrie, we may not always see our angel guides, but we can rest assured that we are never alone when we are within the circle of His will.

#### God Will be With Us

Elder Robert Pierson tells the story of literature evangelist Jens Hokland's difficult experience in crossing a dangerous mountain range in order to canvass homes in the valley. The path was so steep he removed his shoes and finally his socks to improve his grip on the treacherous path that clung to the side of the mountain. Anxious for his safety he asked God to send His angel to help Him. After reaching the valley safely, he called at the first cottage where an elderly couple lived.

"Where is your companion?" asked the husband.

"I have no companion; I'm alone" replied the colporteur.

"There was someone with you. We saw someone helping you down that steep place," answered the old man.

Then Jens was reminded of his prayer to God for help, and of the word of the Lord in Psalm 34:7, 'The angel of the Lord encampeth round about them that fear him and delivereth them.' (501 Illustrations, by Robert H. Pierson)

God's people need not shrink in fear. God has promised repeatedly that He will be with us in times of trouble. Angels will guard us when it is beyond our power to protect ourselves. Even if we experience martyrdom prior to the call to flee, God will be with us (see <u>Desire of Ages</u>, p. 354). After the call to flight, there will be no more martyrs, for witness by death cannot advance the truth after probation is closed. Our signal for flight will be the death decree. It will take great faith to flee to the wilderness completely depending upon His promises for survival. Very troublesome times will come to us before the Lord's return. But He will return. This is a long-standing promise. **We have a choice. We can be ready.** 

#### FOR FURTHER STUDY

<u>Early Writings</u>, Ellen G. White, Pacific Press Publishing Association, Nampa, ID, pp. 254-258, pp. 279-288

The Great Controversy, Ellen G. White, Pacific Press Publishing Association, Nampa, ID, pp. 61-79, pp. 563-653

 $\begin{array}{l} \textbf{The Story of Redemption}, Ellen G. \ White, Pacific Press \ Publishing \ Association, Nampa, ID, \\ pp. \ 409-413 \end{array}$ 

Maranatha, Ellen G. White, Review and Herald Publishing Association, Hagerstown, MD 21740, pp. 221-312

#### WHEN TO FLEE

# To Look In His Eyes

A tiny black cloud in the blue eastern sky— In wonder we gaze as it's fast drawing nigh, As lighter, and whiter, and brighter it seems, While ten million angels on bright shining wings Come winging and singing a triumphant song, Till heaven seems filled with their radiant forms.

A cloud of such glory, so dazzling white,
The bottom like fire! Oh wondrous the sight!
A rainbow above it with colors so rare,
What splendor, the glorious scene in the air!
And, Oh, in the midst rides the great King of kings!
No pen can portray how majestic the scene.

He rides forth in glory, how great His renown,
Upon His fair head many glittering crowns.
His hair is pure white, oh, as white as the snow.
His voice like the sound as when great waters flow.
His countenance shines like the sun at its height.
His eyes are like fire! Oh fearful the sight.

And now all is silent. Oh, look in His eyes!
He reads ev'ry motive and ev'ry disguise.
The secrets of life His eyes read like scroll,
And pierce to the depths, oh the depths of the soul!
Oh terrible, wonderful, awful surprise!
Oh, friend, are you ready to look in His eyes?

Are you ready for Jesus' coming, Or would you be surprised? He's coming in heaven's bright glory; Oh friend, can you look in His eyes?

-Warren C. Wilson