


**PRIMITIVE SKILLS FOR SHORT-TERM SURVIVAL
AND LONG-TERM COMFORT**



**WILDERNESS
SURVIVAL
HANDBOOK**



MICHAEL PEWThERER

WILDERNESS SURVIVAL HANDBOOK

This page intentionally left blank

WILDERNESS SURVIVAL HANDBOOK

**PRIMITIVE SKILLS FOR SHORT-TERM SURVIVAL
AND LONG-TERM COMFORT**

MICHAEL PEWATHERER



New York Chicago San Francisco Lisbon London Madrid Mexico City
Milan New Delhi San Juan Seoul Singapore Sydney Toronto



Copyright © 2010 by Michael Pewtherer. All rights reserved. Except as permitted under the United States Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of the publisher.

ISBN: 978-0-07-174304-4

MHID: 0-07-174304-9

The material in this eBook also appears in the print version of this title: ISBN: 978-0-07-148467-1, MHID: 0-07-148467-1.

All trademarks are trademarks of their respective owners. Rather than put a trademark symbol after every occurrence of a trademarked name, we use names in an editorial fashion only, and to the benefit of the trademark owner, with no intention of infringement of the trademark. Where such designations appear in this book, they have been printed with initial caps.

McGraw-Hill eBooks are available at special quantity discounts to use as premiums and sales promotions, or for use in corporate training programs. To contact a representative please e-mail us at bulksales@mcgraw-hill.com.

The information contained in this book is intended to provide helpful and informative material on the subject addressed. It is not intended to serve as a replacement for professional medical advice. A health-care professional should be consulted regarding your specific situation. Neither McGraw-Hill nor the author shall have any responsibility for any adverse effects that arise directly or indirectly as a result of the information provided in this book.

TERMS OF USE

This is a copyrighted work and The McGraw-Hill Companies, Inc. (“McGrawHill”) and its licensors reserve all rights in and to the work. Use of this work is subject to these terms. Except as permitted under the Copyright Act of 1976 and the right to store and retrieve one copy of the work, you may not decompile, disassemble, reverse engineer, reproduce, modify, create derivative works based upon, transmit, distribute, disseminate, sell, publish or sublicense the work or any part of it without McGraw-Hill’s prior consent. You may use the work for your own noncommercial and personal use; any other use of the work is strictly prohibited. Your right to use the work may be terminated if you fail to comply with these terms.

THE WORK IS PROVIDED “AS IS.” MCGRAW-HILL AND ITS LICENSORS MAKE NO GUARANTEES OR WARRANTIES AS TO THE ACCURACY, ADEQUACY OR COMPLETENESS OF OR RESULTS TO BE OBTAINED FROM USING THE WORK, INCLUDING ANY INFORMATION THAT CAN BE ACCESSED THROUGH THE WORK VIA HYPERLINK OR OTHERWISE, AND EXPRESSLY DISCLAIM ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. McGraw-Hill and its licensors do not warrant or guarantee that the functions contained in the work will meet your requirements or that its operation will be uninterrupted or error free. Neither McGraw-Hill nor its licensors shall be liable to you or anyone else for any inaccuracy, error or omission, regardless of cause, in the work or for any damages resulting therefrom. McGraw-Hill has no responsibility for the content of any information accessed through the work. Under no circumstances shall McGraw-Hill and/or its licensors be liable for any indirect, incidental, special, punitive, consequential or similar damages that result from the use of or inability to use the work, even if any of them has been advised of the possibility of such damages. This limitation of liability shall apply to any claim or cause whatsoever whether such claim or cause arises in contract, tort or otherwise.

*To Mark Elbroch for helping me on this journey
with his wisdom, fine example, and
encouragement in making this book better than
it otherwise would have been.*

*To Raif Pomeroy, an inspiration to those who
knew him and who now walks the other side of
life: journey well my friend.*

*And to my wife, Diane, for her constant support,
as I left her with the kids while I went
gallivanting all over North America
for this book.*

This page intentionally left blank

CONTENTS

Preface xi

Acknowledgments xiii

Introduction xv

PART I

SEVEN-DAY SURVIVAL

CHAPTER 1

PREPARING TO SURVIVE3

Clothing 3

Survival Kits 6

CHAPTER 2

SHELTER13

Location, Location, Location 14

Types of Shelter 15

Finding Shelter 16

Woodland Shelters 17

Snow Shelters 25

Desert Shelters 37

CHAPTER 3

WATER.....43

Finding Water 43

Purifying Water 44

Springs 44

Digging 45

Dew Gathering and Catchments 46

Solar Stills 46

Sap Gathering 48

CHAPTER 4

FIRE.....51

Materials 51

Tipi Fires 52

Fire Pits and Rings 53

CHAPTER 5

NAVIGATION57

What to Do if Lost 57

Basic Direction Finding 59

Map and Compass 61

Using Map and Compass Together 68

Declination 70
Following a Bearing 74
Planning a Route 76

CHAPTER 6

MEDICAL EMERGENCIES79

First Aid 79
Heat-Related Problems 82
Cold-Related Injuries 83
Physical Injuries 85

PART II

BEYOND SURVIVAL

PRIMITIVE SKILLS FOR WILDERNESS LIVING

CHAPTER 7

SHELTERS FOR THE LONG TERM91

Pit Shelters 91
Thatched Huts 94

CHAPTER 8

FIRE-MAKING TOOLS101

Bow Drill 101
Hand Drill 106
Fire Saw 109
Fire Plow 112
Long Match 114

CHAPTER 9

FOOD AND DRINK117

Eating in the Wild 118
Flavored Drinks 120
Meal Preparation and Cooking 121
Pit Cooking 129
Rock Boiling 132
Storing Food 132
Preserving Food 133

CHAPTER 10

FISHING139

What Method? 139
Hand Fishing 140
Spearfishing 142
Hook and Line 144
Fish Poison 147

CHAPTER 11

TRAPPING149

Set Locations and Baits 149
Types of Traps 150

CHAPTER 12

HUNTING WEAPONS157

Rabbit Stick 157
Thrusting Spear 159
Throwing Spear 160
Bolas 161
Atlatl 162
Field Bow 168
Arrows 173

CHAPTER 13

HUNTING METHODS181

The Mental Game 181
Moving and Seeing 183
Preparing Yourself 185
Camouflage 187
Carcass Care 189

CHAPTER 14

RAWHIDE, TANNING HIDES FOR BUCKSKIN, AND SINEW195

Rawhide 195
Tanning 198
Sinew 205

CHAPTER 15	CHAPTER 17
CORDAGE AND CRUDE CLOTH207	CONTAINERS229
Harvest and Storage 207	Baskets 229
Spinning Fibers into Cordage 210	Bark Canteens 233
Splicing 211	Cooking Containers 235
Weaving 212	Primitive Pottery 237
CHAPTER 16	CHAPTER 18
OTHER TOOLS AND MATERIALS.....215	COMFORT AND CLEANLINESS253
Working with Stone 215	Camp Layout 253
Working with Pitch 219	Hygiene 255
Hand Tools 220	
	Appendix: Recommended Reading 257
	Index 261

This page intentionally left blank

PREFACE

We loped through the valley, two barefooted, suntanned boys, feeling a true levity of being. We stopped under the spreading branches of a large sycamore tree, and Sylvan reached up and snapped off a dead branch. Where it had broken was a split that he exploited with his knife to make a board of sorts. With another broken branch, a pine knot, some cordage, and a bow, he soon found his hand gliding back and forth with the new bow and drill set. In no time he had a coal glowing and smoking in a cedar tinder bundle that he dropped at my feet as it burst into flames. Collecting the bow and drill, he handed them to me with a joyful smile playing on his young face. I knelt down, determination fairly oozing from my pores. I was going to repeat the miracle I had just witnessed. Little did I know then that it would take two years of unguided determination and frustration before I would realize my goal. I was twelve years old.

With no books or teachers, I worked on that bow and drill, often becoming livid with anger and hurling the set into the woods or across my basement. For some reason I always stopped short of breaking the bow, and never did I leave the pieces of the set where I had thrown them. Instead, I listened to some inner wisdom suggesting that I collect them and leave them on the shelf.

Within two weeks, give or take, I would once again return to the set and another session of determined practice. Why I kept at it I do not know, but I knew that it was important; this determination has helped me ever since.

As a youngster, I only wanted to learn enough skills to survive. At least, that is what I told myself. But with the introduction of each new skill came a clear knowledge that there was so much more to learn. As my proficiency grew with a skill, I learned how little I actually knew; it was both depressing and heartening. Now I revel in the fact that I never will really master any of these skills. Even if I learn more than any other person on the planet, I will only be a master if I am graded on the curve. However, in relation to what there is to know of it, I will continue to be a student, and that is exciting.

What is the point in learning wilderness skills? Some people have a genuine interest in knowing how to interact and function in the wild, whether on a camping trip, taking an extended stay in the backcountry, or being unexpectedly stranded between populated areas. Others may expect to find themselves in a situation requiring these skills for the short term and want to be prepared. Still others want to know their place in the world or where their food comes from, and how

to go without the benefits of the modern world. And there are those who, in combination with all of the above, merely enjoy knowledge.

The question of what gear to bring on a trip into the backcountry is not addressed in this book because of the constant changes in materials, styles, and techniques of employing said gear. How to modify clothing is covered, although it is recommended to get the right gear for a trip via an expedition outfitters or other knowledgeable organization.

Some people are happy in their preparedness with a purchased survival kit in their car, home, or pack, while others want to know what to do should they be stripped of all modern tools and amenities. Which group you fall into is the first step in learning survival skills, because knowing this will show you how best to proceed. It must be noted that modern survival skills and tools can be augmented by the skills of the past peoples of the world and vice versa. Use both to further your knowledge in whichever bent you follow. It is true that survival situations appear to arise infrequently, but the bulk of the ones that make the news end poorly or are close calls, while those that are averted through correct action seldom make the headlines.

I encourage all people to get out into the land and work on skills of survival, not because I believe that they will someday need them, but

because we have become aliens on our own planet. We don't speak the language, we don't want to learn it, and we don't realize that our TVs, cell phones, tires, blenders, shoes, and countertops all come from the natural world. We as a species need to know how to take the pulse of our home. If we never take interest in its workings, we will continue to cause damage and forever change the world in which our children and grandchildren will dwell.

My hope is that those who can will not only visit the natural world but bring children and friends with them, building a reservoir of good memories and connections involving the outdoors.

If you wish to further pursue the skills of survival and/or primitive living, I urge you to learn from many schools, people, and books. All have something to offer, and the worst mistake that students can make is to cut themselves off from a source of knowledge. Form an allegiance with a source of knowledge if you will, but not to the exclusion of others.

Practice what you know. You do not need to be in the Alaskan wilderness to do this, because survival skills can serve you in any environment. Break a task, skill, or tool down to its simplest components so that you can come up with improvements on existing techniques plus rediscover those of old.

ACKNOWLEDGMENTS

Many people helped me to get on the path that I now walk. First and foremost, I would like to thank my wife, Diane, for her steady support and encouragement and for caring for our boys while I traveled to different parts of this continent in search of answers. Thanks to my two little men, Wyatt and Torrin, who didn't give their mother too hard of a time while Daddy was away. A special thanks to Mark Elbroch, who encouraged and advised me on this and other projects.

Many skilled people offered help in reviewing and editing parts of the manuscript, and they are among the very best, if not *the* best, in ensuring that solid information gets out to the public. To them, I send a profound thank you. They are: Matt Richards, Estabon Fire, Keith Badger, Craig Childs, Henry Glick, David Wescott, Steve Watts, Darren Wells, and Mors Kochanski.

Thanks to my parents for raising me in a rural area and giving me from dark until dark to roam the woods, and to my Grandpa Jack and my Uncle Jimmy Ferrigno for teaching me not only to fish, but to love it. Many others aided me in various ways for which I am grateful: Jonathan Talbott; Dana Stevens; Henry Glick; Paul-Ivan Derreumaux; Eric Muller; Raif Pomeroy; Ricardo Sierra; William Ward; my sisters, Alicia, Holly, and Kylie; my brother Galen; and Sylvan Incao, for getting me hooked on primitive technology.

Thanks to the folks at McGraw-Hill for their incredible amount of support, Jonathan Eaton for this opportunity, Bob Holtzman for his patience, and the editing team for their insightful recommendations that make this a better book than it might otherwise have been.

This page intentionally left blank

INTRODUCTION

The commonly accepted “survival situation” is one in which people are involuntarily detained in a potentially hazardous setting. A plane crash, a shipwreck, a broken-down vehicle far off the beaten path, or becoming injured or lost while hiking are just a few of the more common ways in which survival situations arise. These scenarios are usually resolved within a week—often in as little as three days—due to rescue or death.

“Wilderness living,” on the other hand, implies a longer-term stay far outside of settled society, undertaken intentionally. Strictly construed, the term may differ from “camping” only in the duration of the stay, but to me, it has additional implications. It means relying upon natural resources and learned skills to satisfy all of your needs. It means avoiding modern camping and hunting gear like nylon tents, gas stoves, and rifles. It means the practice and appreciation of what are commonly called *primitive skills*—the skills practiced by aboriginal peoples of any part of the globe, from any period in history or prehistory.

This book is divided into two parts. Part I: Seven-Day Survival addresses the short-term needs of individuals who find themselves unintentionally stuck in the wilderness and looking to get out or get rescued as quickly as possible.

Because none of us know when we might encounter such a situation, this material is for anyone who ever travels beyond the borders of their city or rural residence.

Part II: Beyond Survival: Primitive Skills for Wilderness Living is for readers who have a deeper interest in the natural world and man’s role within it. Although this section is not a camping manual, it will inevitably improve the outdoor skills of anyone who does camp, hike, hunt, or otherwise intentionally spend limited amounts of time in the wilderness. But it goes much beyond that in attempting to teach how to live a complete and comfortable material life not merely “off the grid” but out of sight and sound of the grid entirely. To gain, through these skills, an understanding of how aboriginal people lived is to gain a deeper appreciation for what it means to be human and a resident of the earth.

Wilderness survival and wilderness living overlap in many ways. The skills needed to survive in the short term can come into play when you are living for longer periods outside of society and vice versa. Regardless of your situation, man requires the same things to maintain comfort, health, and life.

While there are exceptions to every rule, the Rule of Threes is a good way to remember the pri-

orities with regard to what the human body can handle in adverse wilderness settings: three minutes without air, three hours without shelter, three days without water, and three weeks without food. Sure, some people can hold their breath for more than three minutes, and three hours naked in the wilderness is not necessarily a death sentence. But step outside on cold day in winter with only your indoor clothes on and see how long it takes for you to lose the ability to touch your pinky fingertip to the thumb tip of the same hand. When you can't, say hello to the early stages of hypothermia!

Assuming, then, that you're not in imminent danger of drowning, the first and foremost need is to maintain your body temperature. This is done by providing an insulating barrier between the body and the elements, be they heat or cold in their various forms (wind, water, direct sun, etc.). Sometimes the insulation may be clothing; other times the protection is offered by the walls and roof of a building or other structure. Additionally, in warmer climates, nights can be cold, and the cumulative effect of trying to get all of your chores done at night or in the daylight when you are not sleeping will soon leave you exhausted and prone to accidents and miscalculations—with potentially deadly results. Among other things, shelter can keep you warm and dry, provide you with a place to sleep in comfort, and allow you to recover valuable energy.

Water is available in many ways. Our very surroundings are loaded with it, but knowing how to capture it and make it potable is critical, and you must be able to do this on a regular, ongoing basis.

Inserted into the Rule of Threes is the ability to make fire. In the right configurations, fire can act as a shelter against cold, it can prepare foods

for easier digestion, and it can purify water. The heat can be applied to tools for fire hardening, or the coals can be used in direct contact to fell trees or shape wood. The power of fire to raise morale should not go unnoticed either, because that is of great importance if you are to survive.

It is possible for a healthy individual to last quite some time without food. Yet the idea of hunger often consumes us after missing our first meal. (People with diabetes or who have low blood sugar must keep much better track of what and when they eat as well as have ready access to food and are thus in a much more dangerous situation in any survival scenario.) Unless you hunt or harvest wild edibles as part of your lifestyle now, chances are that, if you were in a survival situation tomorrow, you would use far more energy in the pursuit of food than you would gain from what you found, if in fact you found anything. This is why I chose not to discuss food in Part I. For the short-term survival scenario, food should be lowest on the list of priorities, and actively seeking game or forage should be avoided.

That said, being ready to harvest or kill game that presents itself is something that I do advise. Whether you are sitting tight and waiting for rescue or trying to find your own way out of the wilderness, there is no harm in grabbing a couple of stones or rabbit sticks and keeping an eye out for a dinner guest or gathering easily accessible, edible plants, including fruit.

Regardless of where I am, I take note of all kinds of resources as I move over the land. These include food and water resources but also sites of available shelter and shelter-building materials, wood for tools and fires, and other useful raw materials like pitch, clay, certain types of stone, and natural fibers. Not only does this give me an

idea of the frequency with which I can expect to encounter them, I can also go back and collect them when and if they are needed.

Through practice, I know how much time is required to construct a shelter in almost any situation. A warm and waterproof home in the pine forests of the U.S. Southwest takes me less than an hour to build; an igloo, when I am working under prime conditions, takes me three hours or less, depending on the snow-cutting tools I have at my disposal. If I am hoping for rescue, I'll still make a shelter just in case I'm not found before nightfall. If I am intent on staying out for a few weeks or more, I'll build a simple, temporary shelter to stay in while I'm building something more permanent. In any situation, simple shelters are better than no shelter, and in dire situations, they are the fastest and easiest to build.

Over the years, as I have pursued my love of wilderness survival along with primitive technology, I have been disturbed by the acrimonious relationships that seem to prevail between the different bents and different schools or programs. I hold knowledge above the petty allegiances to one instructor, book, or school and urge all people who are interested in these skills to read many books, attend different schools, and learn under a variety of instructors. We all have our prejudices, bad habits, gems of knowledge, and skills backgrounds. I believe that, from around 1500 A.D. back to the dawn of man, we have perhaps retained 10 percent of the myriad skills that we

developed. To me, this means that we should be collaborating to unearth many of these lost technologies and forge our way forward to the past.

No book on this subject can be truly complete. The skills that I have chosen to include were attained through much personal experience and consultation with many outdoor, wilderness, and primitive technology instructors, and they were informed by what readers of this type of book ask for in their reviews. In this book, it is assumed that you are dressed for the climate—and there is guidance on that subject in Chapter 1. Some skills will cover what to do if you have less, while other skills will require additional items; for example, orienteering requires a compass as well as a map of the area, and some fire-making techniques are greatly eased with a reliable cutting edge like a knife.

A topic that is covered to a lesser degree is that of wild edible plants. The reason for this is twofold. While I know about plants and their uses, I am not as well versed in this subject as would be necessary to give the plants their due diligence for *all* of North America. Second, there are a number of great books on the subject that I would be hard pressed to top, and these are listed in the Appendix. In a nod to the value of plants as part of a survival diet, I have included ten plants found widely in North America. These plants were chosen for two reasons: their widespread availability and their nutritional value, primarily their high content of vitamin C and carbohydrates.

This page intentionally left blank

WILDERNESS SURVIVAL HANDBOOK

This page intentionally left blank



PART I

SEVEN-DAY SURVIVAL

This page intentionally left blank



PREPARING TO SURVIVE

Camping equipment, cookstoves, tents, sleeping bags, and the like are not addressed in this book because, well, then it would be a book on camping. If you practice surviving only with a tent, a sleeping bag, and all of your other camping amenities, then you will suffer if you find yourself without one or more of these items. If you prepare for the worst, then anything short of that is a bonus. Clothing, however, *is* covered, because most people don't leave home without it, and if you are putting together a survival kit for your car, boat, plane, pack, or home or are venturing into areas in which any of the aforementioned survival situations is a possibility, then dressing appropriately is a wise move. Whether I'm in an arctic or a desert environment, with a car or on foot, I make sure that I have clothing, including footwear, that is sufficient for dealing with local weather should the need arise.

CLOTHING

Different climates and weather conditions call for a great variety of clothing. It is to this end that I strongly recommend that you pack for any excursion, short or long, with the most severe weather

the region can offer in mind. It may be warm now, but what will the temperature drop to at 2:00 or 3:00 A.M.? Or at seven thousand feet? Do you have enough clothing to change into if you become soaked? Are you prepared for any eventuality? Keep these questions in mind as you prepare for a trip.

For colder weather, this includes an outer shell that effectively blocks the wind and repels the rain and an inner layer (or layers) that creates plenty of dead air space that can be heated effectively by your body. In cool weather, just the outer shell may be all that is required, but as the temperature drops, more of the insulating layer is called for in order to slow the heat exchange with the outside air.

In warmer areas, the outer shell is called for, but this time it is to protect your skin from the sun. The insulating layer used in cold-weather garments will provide no benefit here, because the goal is to promote heat exchange. Thus, loose-fitting outerwear is the name of the game. In excessively hot and humid climates, forgoing underwear is sometimes a good idea, as jock itch and heat rash can become issues.

I have been surprised, when spending extended periods of time in hot climates, at how quickly my body has adjusted to the high temper-

sample content of Wilderness Survival Handbook: Primitive Skills for Short-Term Survival and Long-Term Comfort

- [Bread Science: The Chemistry and Craft of Making Bread for free](#)
- [read online Beans, Greens & Sweet Georgia Peaches: The Southern Way of Cooking Fruits and Vegetables pdf](#)
- [read online Learning Puppet 4: A Guide to Configuration Management and Automation](#)
- [Secret Societies: Inside the Freemasons, the Yakuza, Skull and Bones, and the World's Most Notorious Secret Organizations for free](#)

- <http://www.satilik-kopek.com/library/Julius-Caesar--A-Life.pdf>
- <http://www.shreesaiexport.com/library/Beans--Greens---Sweet-Georgia-Peaches--The-Southern-Way-of-Cooking-Fruits-and-Vegetables.pdf>
- <http://studystategically.com/freebooks/The-Philadelphia-Chromosome--A-Mutant-Gene-and-the-Quest-to-Cure-Cancer-at-the-Genetic-Level.pdf>
- <http://www.mmastyles.com/books/Secret-Societies--Inside-the-Freemasons--the-Yakuza--Skull-and-Bones--and-the-World-s-Most-Notorious-Secret-Organ>