

Born to Explore

How to Be a Backyard Adventurer

Richard Wiese

With illustrations by Kimberly Wiese Lanza

 HarperCollins e-books

*I would like to dedicate this book to the explorers
who have come before me and to the people
who made this book possible.*

*This would not have happened if I did not play
softball with Scott Waxman who, between innings,
said, “You ought to write a book,” and became my
literary agent. He introduced me to Matthew
Benjamin at HarperCollins, who “got me.”*

*My sister, Kim, illustrated this book between
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pregnant with our first child, Sabrina. But mostly
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whose unconditional love enabled me to follow
my inner explorer.*

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Inspired by the giant redwood cross section at the American Museum of Natural History

Inspired by the Great Hall of Dinosaurs at the American Museum of Natural History, *New York City.*

The creative people of Africa for all the neat things that they make and recycle

My imaginary friend who taught me about rainbows, *whom I have not seen in years*

The wilderness has been my playground ever since my mother told my brothers and me to “quit roughhousing and go outside and play.” We went outside and began to climb trees, take hikes, and ascend hills. To me, wandering in the great outdoors is as natural as breathing.

On my first real mountain, the Tooth—a fang of rock that sticks out of a jawbone ridge in the Cascade Mountains—I was absolutely terrified of the height. I made a vow that if I got off the mountain alive, I would never climb again. Needless to say, I broke that promise and a fascinating new world was revealed to me.

Throughout my life I have been drawn forcefully to the outdoors, to the forests and mountains, seacoasts and oceans, drawn by both a conscious delight in the grandeur and diversity of the planet and an unconscious spiritual yearning to be in the natural world. It is in the wild places—in the damp clean air of an ancient forest, on a heaving ocean in unpredictable winds, on a snowy summit at the top of the world—that I enter my own personal cathedral.

When I met Richard Wiese while he was president of the Explorers Club in New York, I found a kindred spirit. He, too, is intimately familiar with wild places—the wonders and beauty to be found in the depths of a forest, on a river, on a beach, in high alpine country amid the snow, ice, and rocks, and on the oceans that connect us all.

Richard’s book, *Born to Explore*, is not only a story about adventure and how to survive while exploring the wonders of the great outdoors, but also about exploration and how to find nature everywhere and at any time. He has written this book with fun projects that will immediately get your imagination soaring and have you thinking like an explorer.

Of concern to all explorers are the basic questions of food, shelter, weather, and navigation. Richard deals with all these issues in a modern and unique way. He not only has information on “Starting a Fire without a Match,” but also includes chapters on how to use the “Miracle Material: Duct Tape” for just about everything, along with other fascinating projects that will have you counting the minutes till you can get outdoors.

The knowledge gained from this book can give you what is needed to go places that are still waiting for the first human footprint or to make discoveries that you never thought possible in your own backyard.

Those who have lived the adventurous life know that the benefits are many. It is a healthy, vigorous lifestyle that promotes physical and mental well-being. Wilderness experiences can be the seed of positive growth for many individuals. Practical knowledge of the outdoors enables one to feel comfortable while enjoying its beauty and the transformative journeys waiting for all. That is exactly what this book delivers.

Another long-term benefit is what this book can do for our planet. If we can get young adults into the natural world—“No Child Left Inside”—they will learn to love it. When they love it, they will want to take care of it, to preserve it. They will want to pass this magical planet on to the next generation, and the next generation, and on and on.

Richard’s book, *Born to Explore*, can help make this happen.

—Jim Whittaker

First American to summit Mount Everest

INTRODUCTION

I was inspired to write *Born to Explore* during a trip I took to Antarctica with a group of 70 high school students in December 2002. The students were mostly from the United States and Canada, and the trip was intended to expose them to Antarctica's wondrous ecosystem in a time of notable global warming.

Aboard a burly icebreaker, we were traveling along the Drake Passage, which separates South America from Antarctica and is considered the roughest body of water in the world, when our ship came upon a pod of approximately 50 whales. The whale biologist onboard nearly tripped overboard as he ran to the rails because he had never seen so many whales in one place at the same time. It was an extraordinary spectacle of nature that none of us would likely ever again witness.

Much to my surprise, about a dozen students did not look up from their Gameboys to catch what probably was a once-in-a-lifetime sight. Their lack of interest in the world beyond electronics saddened and frustrated me. Since then, I have spent a lot of time thinking about my experience on the boat that day and how to reintroduce the spirit of exploration to a new generation.

I created this book not only for those boys on the icebreaker but for those of us who are constantly amazed by the little—and big—occurrences in our daily lives. The title *Born to Explore* is meant to reflect an innate curiosity for discovery that I believe all of us possess. Discovery does not just occur in the Amazon or deep in the ocean but everywhere around us.

I hope *Born to Explore* inspires both the nature enthusiast and the nature-impaired and provides information on the tools needed to discover and love the outdoors. In these pages you will find cool projects to do alone, with friends, or even with the entire neighborhood. This book is meant to be a tool and a companion you turn to for fun and creative ideas. Whether it's building an igloo on a snow winter day, learning to measure trees and buildings in an innovative way, or creating a species-finding competition, it's all in here, just waiting for you to get busy exploring.

Growing up, I couldn't wait to get home from school so I could hop on my bicycle and spend hours snooping around the neighborhood, digging in the sand for lost treasures, and always looking for the next adventure. I was lucky to have my father, Richard Wiese Sr., as a fantastic mentor who nurtured my interests and challenged my brain. He was a pilot with an affinity for weather and astronomy, which he still shares with me to this day. My uncle, Dr. Richard Lanza, a physicist at M.I.T., was a guiding force as well, and he was (and still is) readily available to answer the goofiest of my questions without judgment.

My passion for exploration ultimately led me to become the youngest president of The Explorers Club in New York City in 2002. Members of the 105-year-old organization for field explorers include legends such as Sir Edmund Hillary, the first man to reach the summit of Mount Everest in 1953 with Tenzing Norgay; Neil Armstrong and Buzz Aldrin, the first people to step on the moon; and virtually every great explorer of the twentieth century.

During the four years I was president of The Explorers Club, I had the honor of working with world-class scientists, explorers, and heads of state whom I had idolized as a kid. Being the youngest president had its advantages, as I was young enough to participate in many of the club's expeditions. One of my most memorable experiences was actually in New York City when I teamed up with E. O. Wilson, who is perhaps the most beloved and respected naturalist in the world. Together with several other environmental organizations, we created two biodiversity awareness projects ("Bio-Blitzes"), which involved cataloging organisms in New York City's Central Park over a 24-hour period. I was

also able to collaborate on a number of innovative projects with Jim Fowler, professional zoologist and host of the television show *Mutual of Omaha's Wild Kingdom*.

It is amazing what we can see and find when we know what to look for. Observation is a powerful tool that can turn a simple hike in the woods into an exotic journey. I am frequently asked, what is left to explore. The answer is everything. For example, there are an estimated 100 million living species of organisms on Earth, yet we have identified only about 1% of them. As an explorer, scientist, and educator I look at life as an adventure in progress. When I began writing this book upon returning from a medical expedition to Mount Everest in Nepal, I was physically exhausted but energized by the possibility that I might inspire others to explore. Beginning with the ordinary, each of us has the ability to find and uncover the extraordinary. It's what ignites curiosity and keeps us exploring ordinary life for the extraordinary magic hovering within.

Born to Explore promotes a wide range of skills and activities that draw on science, creative arts, physical and mental challenges, interpersonal skills, and bush craft. This book is as much about learning skills and doing projects as it is about expanding your imagination to see possibility where only obstacles might be obvious.

I was born to explore, and so were you!

EXPLORER TOOL BOX



An explorer must be able to adapt to changing conditions and always be a step or two ahead of any situation so as to avoid disaster or unnecessary danger. “Be prepared” is the Boy Scout motto, and it is still the best advice for getting out of sticky situations.

Field and Stream magazine once ran an article about creating small survival kits that fit inside an Altoids tin. It was an interesting experiment that initiated a stir among explorers, raising thought-provoking questions about which safety essentials to pack for an exploration if given only the space of an Altoids tin. It was a terrific exercise in paring down and packing light and smart. We also had curiously strong, minty-fresh breath.

Some of the experts disagreed on particular items to include, such as duct tape versus a fishing hook. (Are you really going to have time to go fishing when you are trying to find your way out of the woods?) But all agreed on two basic elements critical for short-term survival: water purification tablets and a fire-starting substance.

When putting together your own survival kit, choose items that will enable you to perform nearly any minor life-saving task. Think about things with multiple uses. For instance, take duct tape instead of Band-aids. The latter are primarily for covering cuts, whereas duct tape can be used not only to seal wounds and blisters, but also to fix tools and eyeglasses, patch holes in shoes and clothes—pretty much anything (See Chapter 4, *Miracle Material: Duct Tape*). Instead of toting the entire roll along on your adventure, transfer what you think you’ll need—plus a little more—onto a stick by rolling it over itself (shiny side up) around the base of the stick. Tricks like this optimize space and weight.

Being in the wilderness requires a bit of compromising: You should take essentials and leave (most) luxuries home. When packing, bring items that will help in building a fire, constructing shelter, purifying drinking water, gathering food, signaling for help, navigating back to civilization, and administering basic first aid. Let these principles (not necessarily in this order) dictate your gear list.

Survival Kit Gear List

My two biggest priorities are building a fire for warmth and drinking clean water.

Let’s begin by stocking our kit with something to start a fire.

Fire

Matches are a waste of space, as they damage easily and are good only for one use. Instead, I’m a big fan of magnesium fire-starting sticks (See Chapter 5, *Starting a Fire without a Match*) with a sharp metal striker. Give me a good magnesium stick and I’ll start a thousand fires. Don’t skimp on space by planning to use your knife instead of a separate striker. The magnesium will dull your blade, limiting its ability to cut. Strikers cost about \$5 in any camping store.



I often include a couple of birthday candles (use the trick ones that you cannot blow out), and I have friends who swear by Tinder-Quik fire tabs, which can ignite even when wet. They are also great for cramming into the extra spaces of a survival tin to keep loose items from rattling.

Water

Drinking unpurified water can result in disease and diarrhea (See Chapter 13, Rumble in the Jungle) or just ruin your trip. Dehydration can lead to muscle cramping and miscellaneous medical night-mares—including death—so what do you do if you run out of water and only unquestionable water sources (streams, rivers, lakes) are available?

That's where water purification tablets come in. Each tablet can purify 1 or 2 quarts of water, depending on the pollution level. These pills are iodine-based, so the water can also be used to sterilize wounds. To use them, add one or more tablets to your water source (water bottle or bladder), let them dissolve for 20 minutes, and shake the container vigorously until most of the chunks have dissolved. Iodine can taste pretty gross, so I like to add a scoop of energy drink to sweeten the flavor and add an electrolyte kick. I recommend including at least 20 iodine tablets in your survival kit. Also pack a couple of nonlubricated condoms or balloons, which can serve as water containers. But you can also boil water, so you may not need 20 tablets, right?

Tools for Constructing a Shelter

Building a shelter is critical to staying warm and dry in bad weather, and it's easy to do with a couple of basic tools like a sharp knife and sturdy cord. Equipment is no place to skimp, so choose the best equipment to allow for the swift construction of a survival structure. Here are some of my favorites.

GEAR LIST

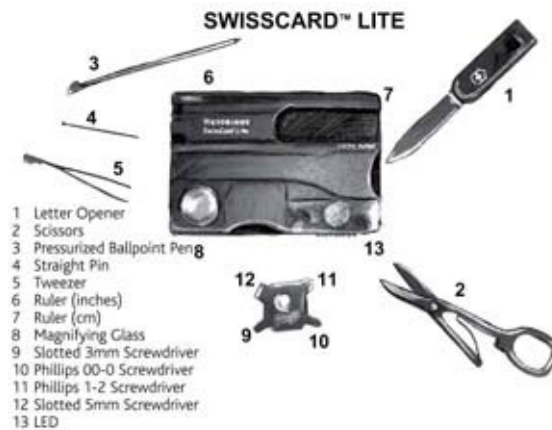
Suggested Shelter-Building

- Sharp knife with a brawny blade:

Large: X-acto knife

Compact: Victorinox Swiss Card or Swiss Army Swiss Card Lite. These amazing kits measure 2¼ by 3¼ inches, about the size of a credit card (they can fit into an Altoids box). They include a letter opener/striker, scissors, ballpoint pen, nail file, screw driver, tweezers, toothpick, needle, and ruler. Swiss Card Lite also has a magnifying glass and a tiny LED light.

- Parachute cord (550 cord or Paracord). Wrap a wad of cord around an Altoids tin. Paracord (not the cheaper versions) is great because it is strong, sturdy, and can be split into seven separate strands, which can be used individually for sewing, fishing, and other assorted things.



Food

It drives my friends crazy when I say that I think food is overrated—I really only mean this in the context of short-term survival situations. I would put the obligatory fishing hooks, lures, and 50 feet of line (30-pound) in my kit, but realistically I would probably forage for edible insects and plants instead of fishing. While chomping my crickets and berries, I’d use the fishing line and hooks to set snares and construct shelters. Naturally, if it were a long-term situation I would opt for fishing if possible.

The only food I’d pack into my Altoids tin is a stick of wintergreen gum (my favorite flavor, but any flavor works), as it can ward off thirst, give you a quick fix of energy, and kill bad breath. Your buddies will thank you. Or you could opt for an Altoids mint instead.

Signal for Help

If you get lost or are in a serious emergency, use your Altoids can—as you would a signal mirror—to signal for help. Use the sun’s reflection to shine off the inside of the tin. I also recommend gluing an ultra-thin mirror to the inside bottom and putting a strip of reflective tape across the top of the tin to attract rescuers searching with lights, in case you get lost at night. Reflective tape can be seen from a surprisingly long distance away.

Tiny LED lights (often used on key chains) are great for short durations, when you need to locate items at night. Choose white or yellow (not red), as they are easier to see from a distance. Photon Freedom Micro-Light, a bright LED flashlight that also has variable brightness and three speeds of signaling strobe and an automatic SOS mode that can run for four days and can be seen for a mile, is fantastic.

Navigation

Although I can navigate using the sun and stars (See Chapter 16, Sky), I am at a loss in rain and snow. So I always bring an ultra-thin compass, such as a 20-millimeter, AA liquid-filled button compass.

Your first-aid supplies are meant for wound and pain management. Pack pills, which are space efficient, in a small, watertight capsule. Here is a suggested survival medical kit packing list.

GEAR LIST

- 4 anti-diarrhea pills
- 6 ibuprofen or aspirin tablets
- 1 small packet of antibiotic ointment
- A small suture kit
- A small wad duct tape neatly rolled over itself, shiny side up
- 2 safety pins
- 2 feet aluminum foil folded into a tiny rectangle (for making cups, signals, cooking, etc.)

Stranded-at-Sea Altoid Survival Kit

The principles of survival are just about the same everywhere, but being out at sea presents a new set of challenges (and opportunities) that you do not have on land.

Items for fire starting are for the most part unnecessary and in some cases can be very dangerous. The modification to my Altoid land kit mostly reflect differences in obtaining drinking water and preventing dehydration. At sea, the only drinking water available is from rain, dew or, surprisingly, fish. While I minimized the need for fishing hooks in my Altoid land kit, out on the water it is different—a fishing hook and line are vital. Your little micro light may also be useful in catching fish; they have been known to jump into boats because they are attracted to light. To get rid of the temptation of drinking salt water, chew gum or suck on a button, as it will create saliva in your mouth.

To extract water from salt water fish, which have a high percentage of fresh water, you can simply chew on the raw fish and spit out the solids. A variation of this method is to put the fish in cloth and twist and squeeze the water into a container or your mouth. Surprisingly, water obtained this way does not taste that bad, but it is nice to add a little powdered flavor such as Gatorade to sweeten it.

Reflection from the sun can be a real problem out at sea. Sunburn will compromise your skin's ability to regulate your body's temperature and the damage caused by a burn can lead to dehydration. To that end, I would add a fingernail-width amount of waxy sunscreen (I use Neutrogena Stick). Strip of duct tape can also be used to make a sun mask or pin-hole sunglasses.

Here is what's in my stranded-at-sea Altoid kit.

- Tiny LED lights, such as the Photon Freedom Micro-Light, which can be used to locate items at night and can be seen from a long distance.
- Chewing gum to ward off thirst. The aluminum wrappers can be used as fishing lures.
- Small amount of powdered Gatorade to give water collected a better taste and to add some electrolytes.
- Ultra-thin mirror.
- Strip of reflective tape across the top of the tin to attract rescuers searching with

lights.

-
- ~~3 condoms or balloons for collecting water.~~
 - Ultra-thin compass, such as a 20-milimeter, AA liquid-filled button compass.
 - Sharp knife with a brawny blade:
 - Large X-acto knife.
 - Compact Victorinox Swiss Card or Swiss Army Swiss Card Lite.
 - Parachute cord (550 cord or Paracord); this may come in handy for boat repairs, although if you have to give up one item, it might be this as fishing line is quite versatile.
 - Monofilament line 50 feet (30-pound test).
 - 4 fish hooks of various sizes.
 - 6 sea-sickness tablets (Dramamine).
 - 6 iodine tablets for purifying water.
 - 4 anti-diarrhea pills.
 - 6 ibuprofen or aspirin tablets.
 - 1 small packet of antibiotic ointment.
 - A small suture kit.
 - A small wad duct tape neatly rolled over itself, shiny side up.
 - 2 safety pins.
 - 2 feet aluminum foil folded into a tiny rectangle—for making cups, signals, fishing lures, etc.

Packing Thoughts

When making your Altoids mini-survival kit, choose carefully, picking compact, essential survival items. Be innovative in selecting multi-functional items, and don't get discouraged if everything on your first list doesn't fit in the tin. Repack and rethink how to reduce size while maximizing efficiency.

Parting Thoughts

Here's another cool use for an Altoids tin: Make a candelabra by filling the tin with candles. This could score you big points on an outdoor-survival date.

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