



PACKRAFTING!

An Introduction & How-To Guide

Roman Dial

FOREWORD BY
JON KRAKAUER

BACKPACKINGLIGHT®



What People Are Saying About Packrafting!

“Roman takes his unparalleled experience packrafting in the wilds of Alaska and breaks it down so anyone can understand. With this guide, readers have the opportunity to discover how packrafting can change the way they read a map – inviting them on adventures that explore rugged landscapes by foot and wild waters by boat.”

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Whitewater and other boating is inherently dangerous with drowning a real possibility. The reader is their own agent and must be responsible for making their own decisions. While the author and publisher feel the principles and recommendations described here make for safer boating, moving water is dangerous and potentially lethal. Readers are encouraged to seek professional training in both swift-water rescue and river reading. We assume no responsibility for any errors, inaccuracies, misrepresentations, omissions, or inconsistencies. THERE ARE NO WARRANTIES, WHETHER EXPRESS OR IMPLIED, THAT INFORMATION PROVIDED IN THIS BOOK IS ACCURATE OR RELIABLE. THERE ARE NO WARRANTIES OF FITNESS OR TIMELINESS FOR A PARTICULAR PURPOSE OR THAT THIS BOOK IS MERCHANTABLE. YOUR USE OF THIS BOOK INDICATES YOUR ASSUMPTION OF THE RISK THAT IT MAY CONTAIN ERROR AND IS AN ACKNOWLEDGMENT OF YOUR OWN SOLE RESPONSIBILITY FOR YOUR HIKING, BACKPACKING, MOUNTAINEERING, BICYCLING, WATER TRAVEL, AND PACKRAFTING SAFETY.

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From Dick – who found it.

To Cody Roman – who shared it.

For Peggy – who made it happen.



Expedition packrafting in Gates of the Arctic National Park.

Table of Contents

FOREWORD	12
ACKNOWLEDGMENTS	16
PREFACE	20

Part One

The Philosophy, Equipment, & Technique of Packrafting

1	WHAT IS PACKRAFTING?	26
2	A BRIEF HISTORY OF PACKRAFTING	30
3	PACKRAFT RATING (PR) SYSTEM	38
	<i>Ratings</i>	39
	<i>Learning to Packraft: A Suggested Sequence of Waters</i>	40
	Step 1: Stillwater Basics	41
	Step 2: Moving Water Basics	41
	Step 3: Technical Moving Water	42

	Step 4: Day Hiking & Packrafting.....	43
	Step 5: Day Trekking & Packrafting	43
	Step 6: Weekend Packraft Trekking	44
	Step 7: Technical Packrafting.....	44
	Step 8: Expedition Packrafting	44
	<i>Summary</i>	46
4	PACKRAFTING GEAR.....	48
	<i>Boating Gear</i>	49
	Raft	50
	Bow Lines and Tie-Downs.....	51
	Repair Materials	51
	Kayak Paddle.....	52
	Dry Bag.....	55
	Spray Covers.....	55
	Seat	57
	<i>Safety Gear</i>	57
	Personal Flotation Device (PFD).....	57
	Helmet	58
	Throw Rope.....	58
	Knife	59
	Fire Starter	59
	Sun Protection.....	60
	Whistle.....	60
	<i>Clothing</i>	60
	Layers.....	60
	Footwear.....	61
5	HOW TO PACKRAFT.....	62
	<i>Paddling Approach</i>	63
	Inflation and Tempering.....	64
	First Time.....	65
	Getting into the Boat.....	66
	Moving into the Current	68
	Getting Out	70
	Ferrying	70
	Front or Forward Ferry	71
	Back Ferry.....	73
	Back-Paddling.....	74

	Rapids	75
	Rocks	76
	“Snickersnack” – Pivots and Pirouettes in the Rock Garden...	77
	Spray Decks and Skirts: Considerations	79
	<i>Safety</i>	80
	Flipped Boats	82
	Other Obstacles	84
	<i>Packing the Boat</i>	87
	Day Packs and Weekend Packs	87
	Four-day to Expedition-packs	88
	Bicycles	89
	<i>Two People, One Boat</i>	90
	<i>Crossing Rivers and Streams</i>	93
6	PACKRAFT PLANNING	96
	<i>Sport Boating</i>	98
	<i>Day Boating</i>	102
	<i>Wilderness and Adventure Racing</i>	103
	<i>Weekend Boating</i>	104
	<i>Expedition Boating</i>	105
	<i>Adventure Boating</i>	106
	<i>Conclusion</i>	107

Part Two

Packrafting Adventures

7	DICK GRIFFITH: THE GRANDFATHER OF PACKRAFTING	110
8	PACKRAFTING WITH PEGGY	120
9	MOOSE BOAT	128
10	MEMORIAL DAY WEEKEND	136
11	MOUNTAIN BIKES AND PACKRAFTS: THE LENGTH OF THE ALASKA RANGE	150
12	PACKRAFTING AUSTRALIA’S FRANKLIN RIVER	162



Jon Krakauer on the upper Alatna River, Brooks Range, Alaska.

Foreword

In August 1994, Roman Dial, his wife Peggy, and I flew into Alaska's Brooks Range and began walking south from the headwaters of the Alatna River on the Arctic Divide, headed for the Arrigetch Peaks some sixty miles to the south, hoping to do some rock climbing. Our backpacks were heavy with ropes and climbing hardware, food and fuel for twenty-one days, camping gear, and two packrafts. We fought our way through thickets of willow and alder, stumbled over spongy mounds of tussock tundra, waded across sucking bogs. The going was slow as we trudged downstream in the rain beside the ankle-deep Alatna.

By late afternoon we had covered only four miles on foot. The river had grown slightly more robust, however, and was now marginally deep enough to float the tiny rafts, so we pulled them out of our packs, and Roman showed me how to inflate them by mouth.

I'd never seen a packraft before. I thought the tiny yellow boats looked ridiculous, like pool toys for small children. But for more than a decade Roman had been using packrafts to explore remote corners of Alaska, and he assured me they weren't toys.

I climbed into one of the boats with most of our gear, Roman and Peggy squeezed into the other, and we started paddling downriver. Initially the water was so shallow the boats bounced and scraped along the bottom. Roman and Peggy almost immediately tore a hole in the bottom of their badly overloaded craft, forcing us to stop and make camp on a gravel bar in order to dry the boat over a willow fire and patch the leak. At that point I was less than impressed with packrafting.



PHOTO BY JON KRAKAUER

Repairing a homemade packraft.

When we got underway again the next morning, however, feeder creeks rapidly bolstered the Alatina's volume, transforming it into a flume of whitewater that carried us south at three or four times our walking speed with scandalously little effort. The comical boats were surprisingly stable and maneuverable as we cruised down Class I and II rapids. Sometimes we paddled steadily, other times we lay back in the rafts and did little more than contemplate the magnificence of the Brooks Range, letting the river do most of the work. At day's end, by which time we had covered more than forty miles, I was a packraft convert.

Before that trip I had nearly drowned on more than one occasion attempting to ford fast, icy streams with a big load on my back. Not surprisingly, I regarded most wilderness rivers as terrifying obstacles to avoid whenever possible. After a day in a packraft, my perspective had changed completely. Thereafter I considered rivers opportunities for adventure, big fun, and rapid backcountry travel.

It was no accident that Roman was among the first people on the planet to understand that the packraft would revolution-

ize wilderness exploration. I don't know of anyone who has traveled more miles through the Alaska bush under his or her own power in the last quarter century, and he is deservedly renowned throughout the state for his brash backcountry escapades — several of which are recounted wonderfully by Roman in the pages that follow. Among his many impressive feats, he has traversed the entire 1,000-mile length of the Brooks Range by foot, ski, and paddle; traversed the 800-mile crest of the Alaska Range by mountain bike; pioneered dozens of first ascents of technical climbing routes; and, most recently, made numerous first descents — in a packraft, needless to say — of gnarly Alaskan rivers.

I consider myself enormously lucky to count Roman Dial as a friend. He's taught me many valuable skills over the past two decades, not least of which is how to packraft. Not everyone can have the good fortune to know Roman personally, of course. But if you enjoy the backcountry and want to make the most of your experiences there, reading this book may be the next best thing.

~ Jon Krakauer

Alaska Pacific University students put-in on a frosty September morning.



Acknowledgments

The techniques described in this book emerged through collaborations with many others. The often wet – but always good – sports include the original rain-gear packrafters Dick Griffith, Jim Lokken, Dave Manzer, my wife Peggy, son Cody Roman, and daughter Jazz, Carl and Nora Tobin, Bob Kaufman, Chris Flowers, Jon Underwood, Jon Krakauer, Paul Adkins, Mark Stoppel, Andrew Liske, John Harpole, Nancy Pfeifer, Vern Tejas, David Hooper, Jim Baughman, Chuck Comstock, and Jack Heron; Wilderness Classic racers Barney Griffith, Clark Saunders, John Lapkiss, Bob Groseclose, Adrian Crane, Tom Possert, Brant McGee, Michael Martin, Dave Cramer, Hank Timm, Claire Holland, Harlow Akens, Dave Lucy, Andy Embick, Rourke Williams, Hollis French, Jim Jager, Craig Medred, Jacques Boutet, Hans Neidig, Ben Summit, Butch Allen, Jim McDonough, Jeff Bannish, Gordy Vernon, and Thai Verzone; the “ART Hikers” Kevin Armstrong, Doug Woody, Jeff Ottmers and John Burcham; early accepting Alpacka Rafters Kevin Hodder, Jason Geck, Bill Hatcher, Brad Meiklejohn, Jeff Conaway, Jay Jay Brooks, JT Lindholm, Jim Spickler, and Forrest McCarthy; the amazing, adventure racing

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Hig Higman, Addie Morstad and Ryan Jordan helped with the manuscript and editing of the book — many thanks to them.

Finally, without Sheri Tingey and her marvelous Alpaca Raft there would be no packrafting renaissance and no audience for this book. She has been a real exponent in research, development, and encouragement. Indeed, she is responsible for the emerging popularity of what many see as a new sport. A heartfelt and grateful thank you to her, the mother of the sport.



Packrafts are river craft well suited to wilderness. Charley River, Interior Alaska.



Cody Roman Dial looking for falcon nests in a wild canyon.

Preface

This book is about exploring wilderness and whitewater by packraft, a lightweight, portable boat.

Twenty-five years ago, after hiking fifty miles across Alaska's Kenai Peninsula's trail system in one day, bushwhacking fifteen miles through brush, bogs, and boulders the next, then skinning across the Harding Icefield the day after that, I climbed into the bow of a Sherpa Packraft as a passenger, clutching a cross-country racing ski as a kayak paddle. Behind me sat Jim Lokken, a talented multi-sport athlete who steered us through a sweeper-infested river as we raced to win the original adventure race, the Alaska Mountain Wilderness Classic, "Hope to Homer."

I knew little on that first packraft trip. Freewheeling down rivers in a packraft seemed little more than survival boating. The only technique seemed to be well-timed prayer. How wrong I was. Packrafting may be the easiest type of boating to learn and the most forgiving, yet it is still best to master the elements of control and maneuverability.

During the two decades since first sitting my bum into a packraft, I have discovered how versatile these little boats can be. As a

small band of “hellbikers” and “wilderness racers,” a handful of us paddled Class III and IV rivers like Alaska's Nenana, Charley, and Sixmile, even Arizona's Colorado and Tasmania's Franklin. We used them alone, with a passenger, as a group. We carried moose meat, dogs, skis, sleds, and bicycles. Classes in packrafting at Alaska Pacific University have shown that it is preferable to teach others how to packraft and that learning how in a structured way not only makes boating more fun, but far safer.

This book is aimed at helping you learn how to packraft. It is meant as an introduction to packrafting, an opportunity to learn techniques and approaches developed over the last two decades by my packrafting partners and myself. This book is meant to provide the kind of guidance that might allow you to cross a river and even float it, without flipping and without simply “paddling like hell!” as one novice claimed was all the technique he needed.

The packraft may be the single most liberating tool for exploring wilderness developed in the last few decades. It is far cheaper than a bush plane and easier to maintain than a yard full of huskies — it even fits in an airliner's overhead bin. You can sleep on it beneath the stars or under it during a rain. You can strap a packraft on a bike, pedal onwards, and then later inflate it to cross and even float rivers with both you and your bike together. You can load a packraft into an over-sized fanny pack and hike upstream, scouting the run as you go, then paddle the Class IV whitewater — even “steep-creeking” — back down. You can strap your boat on an expedition pack, use it for a big mountain approach and retreat, carrying skis, sled, ice axe, and crampons. Between the two extremes of steep-creeking and expedition support boating is a whole new world of possibilities. It's really up to your imagination, skill, and pluck.

~ R.D.



Packraft Rating (PR) System

Standard whitewater ratings are not always a good indicator of packrafting difficulty. Some very technical rapids that are low volume and shallow – dangerous in a kayak – feel easier and safer in a packraft. Meanwhile, big, high volume but technically easy rapids can be tough in a packraft. Hence the following system, which should be considered open ended.

Ratings

- PR 1** Flat water, little or no current, no obstacles. No special techniques or gear needed. Lakes and slow rivers.
- PR 2** Gentle current, small waves. Ferrying technique necessary to maneuver and avoid sweepers, strainers, and shallows. Floating is relaxed. Rain gear and garbage bags sufficient to keep dry.
- PR 3** One to two foot tall wave trains, eddy lines, and holes can swamp and/or flip boat. Ferrying and back-paddling

necessary to avoid obstacles, miss holes and rocks. Drysuit or wetsuit is insurance against swims and waves. Dry-bag protects gear. Requires novice boating-with-a-backpack skills. Bicycles or passengers manageable in boat.

- PR 4** River powerful, often Class III for canoes, kayaks, and paddle rafts, meaning water reading necessary and scouting recommended. Flip potential high with loaded boats. Swamping avoidable with good technique or spray cover. Throw ropes and swift-water rescue training advised, although self-rescue easy.
- PR 5** Generally Class IV or high volume Class III for canoes, kayaks, and paddle rafts. Scouting of rapids necessary. Spray skirts or decks, drysuits, helmets, and unloaded boats strongly recommended as well as safety personnel. Bracing, forward paddling, and confidence while big waves crash overhead needed. Precise maneuvering necessary through intense and powerful water. Swimming is risky. Throw ropes and swift-water rescue training strongly advised.

Practice wet exit and entrance — getting out of and into the boat without touching the bottom.

Learning to Packraft: A Suggested Sequence of Waters

Below is a suggested progression from first-time in a boat to longer trips. The progression was developed successfully through month-long classes in packrafting I have taught at Alaska Pacific University from 1997-2007. It is meant to be a step-by-step guide — using skills described in the following chapters — to quickly get beginners to the stage that took many of us years to reach.

Step 1: Stillwater Basics

Pool or lake boating to learn paddling strokes, both side to side and backwards, and to learn where the tipping point is on the boat. Practice wet exit and entrance — getting out of and into the boat without touching the bottom. Paddle with no pack first, then with a pack tied to boat. It is useful to try paddling with differing pack weights and different paddle lengths.

Points to consider:

- How strongly to paddle.
- How to back-paddle.
- How to turn the boat.
- How to position the paddle to keep the boat straight.
- What it takes to tip the boat.
- How to get in a flipped boat while swimming.
- Paddle with no pack first, then with a pack tied to the boat.
- How quickly the boat loses pressure without tempering.
- How well or poorly clothing keeps you dry and/or warm.

Step 2: Moving Water Basics

Gentle, slow-moving current with some riffles and bank debris to learn how to paddle moving PR 2 water and to learn the basics of ferrying. First without a pack, shifting weight to find a good balance point, then with pack.

New points to consider:

- How the boat moves across the current during ferry — be sure to make multiple crossings.
- How to get in and out of the boat from the bank.
- Where the best position is for sitting in the boat.
- How to temper the boat — inflate, cool, inflate.
- Where deep and fast vs. shallow and slow water is.



Jason Geck running PR 4 rapids on "Flower Power," a ninety mile mountain wilderness traverse from Girdwood to Palmer, Alaska.

- Where best to position the boat in current.
- What an eddy is, how it behaves, and how your boat responds to it.
- Where passage through an upstream-opening "V" is located.
- How easily the boat pivots.

Step 3: Technical Moving Water

Unobstructed but moving PR 3 water with rocks, holes, waves to two feet, learning the basics of ferrying and river reading. Do the stretch several times, including with a pack tied to the bow.

New points to consider:

- How to read faster-moving water.
- What an eddy-line feels like.
- How back-paddling keeps water out of an open boat when passing through wave trains.
- How to avoid rocks by not looking at them.
- Dumping the boat when swamped with water.
- Back-ferrying with bow downstream.
- Front-ferrying with bow upstream.
- How to swim in moving water with your paddle.
- How to right a loaded boat while swimming.
- How to make a wet entrance into a loaded boat.
- How to grab your partner's boat while swimming.
- How to catch your swimming partner's boat.

- How to tow a swimming partner from your boat.
- How to paddle a boat without a paddle.
- How to toss throw ropes from shore to a swimmer.
- How to catch throw ropes if swimming.

Step 4: Day Hiking & Packrafting

Easy four-hour trail walk carrying all packraft gear, followed by three hours of rafting, up to PR 3. Learn how to pack and carry a day-pack with raft gear and hiking gear. Experiment with clothing, shoes, and how to keep gear dry.

New points to consider:

- How to pack the rafting gear for hiking.
- Clothes and shoes that are best for rafting and walking.
- How to pack gear and keep it dry while rafting.
- How the raft handles with a load.
- How best to bail the boat.
- How to read the water with a load on the front of the boat.
- How to tell waves from barely submerged rocks.
- How to tell shallow from deep moving water.

**Paddle with
no pack first,
then with a
pack tied to
boat.**

Step 5: Day Trekking & Packrafting

Longer day trip, six- to eight-hour walk, perhaps with bushwhacking, followed by PR 2 paddle. Purpose is to extend range of travel and see how you paddle when already tired.

New points to consider:

- How you feel rafting after a longer walk.
- How to stretch out, stay comfortable in boat.

- How the raft handles with a bigger load.
- More water reading: pay careful attention to current locations.

Step 6: Weekend Packraft Trekking

Weekend trip, heavier pack than day trip. Idea is to mix PR 3 rafting in two or more watersheds, hiking, and camping. Experiment with multi-tasking gear like raft paddle and PFD.

Note well:

- Sluggishness of boat handling.
- Camping with boat.
- How pack can obscure view of water.
- How to keep gear dry.

Step 7: Technical Packrafting

Challenging four-hour, off-trail walk followed by three-hour rafting, up to PR 3-4 at low water. Best to follow more experienced boaters through rapids.

Focus on:

- Improving your boat handling.
- Improving your water reading skills.
- Improving your load tying.

Step 8: Expedition Packrafting

Week-long wilderness trip, 50% walking and 50% floating up to PR 3 across two or more watersheds.

Goals and objectives:

- Adventure.
- Excitement.
- Challenge.
- Accomplishment.



"Hellbiking" by definition. Paul Adkins hauls a big load off the Copper River and onto the Bremner Dunes, Chugach Mountains.

Summary

Like all boats, packrafts are subject to the physics of moving water. However, due to the combination of several factors — their inflatable nature, their small size, their low center of gravity, their vulnerability to swamping and puncturing, and especially their slow hull speed and high skin drag — packrafts are more sensitive to water volume than bigger rafts and cannot move as quickly as longer, narrower boats like canoes or kayaks.

Consequently, typical white-water ratings are not the most precise gauge of difficulty. Beginning packrafters can also progress more quickly in their development if they learn the basics of boating in calm, unobstructed water first, before jumping into the “fun stuff.”

About the Author

Roman Dial has packrafted throughout Alaska and around the world. He has published articles and photos in *National Geographic*, *Smithsonian*, *Outside*, *Alaska Magazine* and the *Patagonia Catalog*, among others, and has been featured on the Discovery Channel, PBS, and YouTube. He is a professor of environmental science, mathematics, and outdoor studies at Alaska Pacific University. He has two grown children and lives with his wife, Peggy Dial, in Anchorage, Alaska.



En route to the next paddle, Mark Stoppel hikes high in the Talkeetna Mountains.

Index

A

- Accessory straps, 49-50, 53, 88-89
- Adkins, Paul, 45(ill.), 91, 151-160, 159(ill.), 169
- Adventure boating, 106-107
- Alaska, 111-118, 121-126, 129-134, 151-160
 - Alaska Range, 133, 151-160
 - Brooks Range, 121-126, 177-184
 - Denali National Park, 154, 187-191
 - Gates of the Arctic National Park, 121-122
 - Hulahula River, 177-184
 - moose hunting, 129-134
 - Mountain and Wilderness Classic, 33, 36, 103
 - mountain bike/packrafting, 34, 151-160
 - Mt. McKinley, 133, 138-149, 154
 - Okpilak River, 177-184
 - Sanctuary River, 187-191
- Alaska Mountain and Wilderness Classic, 33, 36, 103
- Alaska Range, 133
- Allen, Lieutenant Henry, 31, 106
- Alpacka Llama Raft, 171
- Alpacka Rafts, 35-36, 50, 55, 57, 71, 79, 84, 97, 99

Anodopetalum thickets, Australia, 174
Armstrong, Kevin, 160, 169
Australia
 Franklin River, 163-175
 packraft environmental protest blockade, 32, 165, 169
 walking/rafting adventuring, 163-175

B

Back-paddling, 69, 74-76
Bacon, Eric, 112, 115
Bailing of boats, 56, 68
Bander-snatched, 76-80
Bicycle tie-down, 89-90
Boating gear, 49-57
 bow lines and tie downs, 49-51, 66, 68, 86, 88-90
 dry bag, 55, 88
 paddles, 52-55
 raft, 50-51
 repair materials, 51, 171
 seats, 57, 67-68, 90-92
 spray covers, 55-56, 79-80, 82
Boating signals, standard, 82
Bow lines, 51
Brooks Range, Alaska, 121-126, 177-184
Brown, Bob, 31-32
Burcham, John, 156

C

Callahan, Richard, 117
Carroll, Lewis, 78
Carter, Jimmy, 183
Cascade Design Z-Rest pad, 67, 92
Castenada, Carlos, 193
Charley River rig, 89
Chouinard, Yvon, 139, 146
Chouinard Equipment, 122
Clothing, 60-61
 drysuits and wetsuits, 60-61
 footwear, 61, 122
Comstock, Chuck, 143
Conservation protesting, 32
Crossing rivers, 93-94
Curtis, Brian, 32
Curtis, Don and Walt, 32

Curtis Designs Rafts, 31, 32

D

Day packs, 87–88

Day tripping, 102, 187–191

Definitions

abstraction, 122

bander-snatched, 76

ferrying, 64, 70

hole, 76

packrafting, 27–28, 63–64

river-reading, 43, 64

rock gardens, 78

squirting, 80

starfishing, 77

technology, 122

Denali National Park, Alaska, 154, 187–191

Dial, Cody Roman, 78, 169, 177–184, 178(ill.), 187–191, 193–195

Dial, Peggy Mayne, 90, 96(ill.)–97(ill.), 112, 120(ill.)–121(ill.)

Dombrovskis, Peter, 173

Drip rings, 52–53

Dry bags, 55, 88

Drysuits, 60–61

Ducky, rubber, 27, 32–33, 164–165

E

Eco-Challenge race, 103

Embick, Andrew, 99

Environmental raft blockade, Australia, 32, 165, 169

Eskimo roll, 79, 99

Expedition packs, 88–89

Charley River rig, 89

Tutuaca tie-down, 89

Expedition boating, 105–106

F

Ferrying, 42–43, 70–74, 93–94

Fire starters, 59

Flipping, 79–80, 82–84

Flournoy, Peter, 115

Flowers, Chris, 147

Footwear, 61, 122

Franklin River, Tasmania, 32, 163–175

G

- Garbage bags, 39, 55, 87, 104, 112
- Gates of the Arctic National Park, Alaska, 121–122
- Gear, 49–61
 - boating, 49–57
 - clothing, 60–61
 - safety, 57–60
- Geck, Jason, 42(ill.), 169, 177–184
- Getting into the boat, 66–68
- Getting out of the boat, 70, 92, 94
- Glude, Bill, 117
- GORE-TEX, 55, 61, 112
- Grab loops, 51, 66, 89
- Griffith, Dick, 30(ill.)–31(ill.), 31, 33, 68, 106, 111–118, 110(ill.)–111(ill.), 169, 194

H

- Hatcher, Bill, 177–184
- Higman, Bretwood “Hig,” 106
- Hoffman, Russ, 152–161
- Holes in current, 76, 86–87
- Hulahula River, Alaska, 177–184

J

- Jabberwocky, 78

K

- Kaufman, Bob, 137–149, 141(ill.), 169
- Knife, fixed or locking blade, 59, 80, 85–86, 89

L

- Learning progression for river rafting, 40–46
 - day hiking and packrafting, 43
 - expedition packrafting, 44
 - moving water, 41–43
 - stillwater, 41
 - trekking and packrafting, 43–44
- Log jams, 84–86
- Loop day trips, 102

M

- Manzer, Dave, 26(ill.)–27(ill.), 113, 115–117
- Marshall, Bob, 122
- McCarthy, Forrest, 103(ill.), 193–195
- McKittrick, Erin, 106
- Mexico
 - Tutuaca River, Copper Canyon, 193–195
 - Urique River, Copper Canyon, 31, 193–195
- Mitchell, Graham, 163–165
- Moose hunting, 129–134
- Mountain bike/packraft adventuring, 34, 151–160
- Mt. McKinley, Alaska, 133, 138–149, 154
- Muir, John, 122

N

- Nike footwear, 122

O

- Obstacles in river, 74–75, 84–87
- Okpilak River, Alaska, 177–184
- Ottmers, Jeff, 160

P

- Packing a raft, 43–44, 87–90
- Packraft protest blockade, Australia, 32
- Paddles, 52–55
 - blades, 53–54
 - four-piece kayak, 53
 - kayak, 52–53
 - long, 53, 92
 - shafts, 54
 - short, 53, 92
 - as tent poles, 53–54
 - tied to boat, 55, 86
- Paddling, 41–43, 69–70, 93–94
 - back-paddling, 69, 74–76
 - ferrying, 42–43, 70–74, 93–94
 - forward-paddling, 70
 - moving water, 41–43
 - stillwater, 41
- Personal flotation device (PFD), 57–58, 80, 123
- Pima Indians, 194

R

- Rapids, 75-76
 - bander-snatched, 76-80
 - freewheeling, 76
 - holes, 76-77
 - rock gardens, 77-79
 - rocks, 76-77
 - shore eddy, 75-76
 - snicker-snack, 77-78
 - starfishing, 77
 - Vs, 75-76
 - wave train, 75
- Repair materials, 51, 171
- Righting a raft, 82-84
- Ripley, George, 112-118
- River-reading, 43, 64, 75-78, 84-87
- Rock gardens, 77-79
- Rocks in raft, 65
- Rocks in rivers, 76-79

S

- Safety gear, 57-60
 - fire starter, 59
 - helmet, 58, 79
 - knife, 59, 80
 - personal flotation device (PFD), 57-58, 80, 123
 - sun screen, 60
 - throw rope, 58-59, 80-81
 - whistle, 60, 80
- Sanctuary River, Alaska, 187-191
- Seats and sitting, 57, 67-68, 90-92
- Sevylor Trailboat, 35, 49-51, 97
- Sherpa Packrafts, 31, 34, 71
- Shiver boats, 35, 97, 189
- Signals, standard safety, 82
- Simpson, Joe, 144-145
- Skin boats, 31
- Smith, Paul, 31-32, 169
- Snicker-snack, 77-78
- Sport boating, 98-99
- Spray covers, 55-56, 79-80, 82
- Squirting, 80
- Stafford, Bruce, 113-116
- Starfishing, 77

Stoppel, Mark, 48(ill.)-49(ill.), 132
Strainers, 84-86
Sweepers, 84-85
Swimming with flipped boat, 83-84, 86

T

Tandem boating, 124
Tarahumara Indians, 194
Tejas, Vern, 147
Tempering a raft, 64-65
Thomas, Ian, 187-191, 188(ill.)-189(ill.)
Throw ropes, 58-59, 80-81
Tie-downs, 49-51, 66, 68, 86, 88-90
Tingey, Sheri, 35, 193-195
Tingey, Thor, 35
Tip point of raft, 66
Tobin, Carl, 147, 150(ill.)-151(ill.), 151-161, 169
Tolle, Cindy, 193-195
Trenchfoot, 61, 157-158
Tubing, 77
Tutuaca River, Copper Canyon, Mexico, 193-195
Tutuaca tie-down, 89
Two people in one raft, 90-92, 121-126

U

Urique River, Copper Canyon, Mexico, 31

V

Verzone, Thai, 108(ill.)

W

Walking/rafting adventuring, 163-175
Waterproofing, 55
Weekend boating, 104
Weight distribution, 65-66
Wet entry, 41, 66, 82-83
Wetsuits, 60-61
Whistle, 60, 80
Whitewater packrafting, 99, 163-175
Whitewater ratings, 39-40
Wilderness racing, 33
Woody, Doug, 160



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