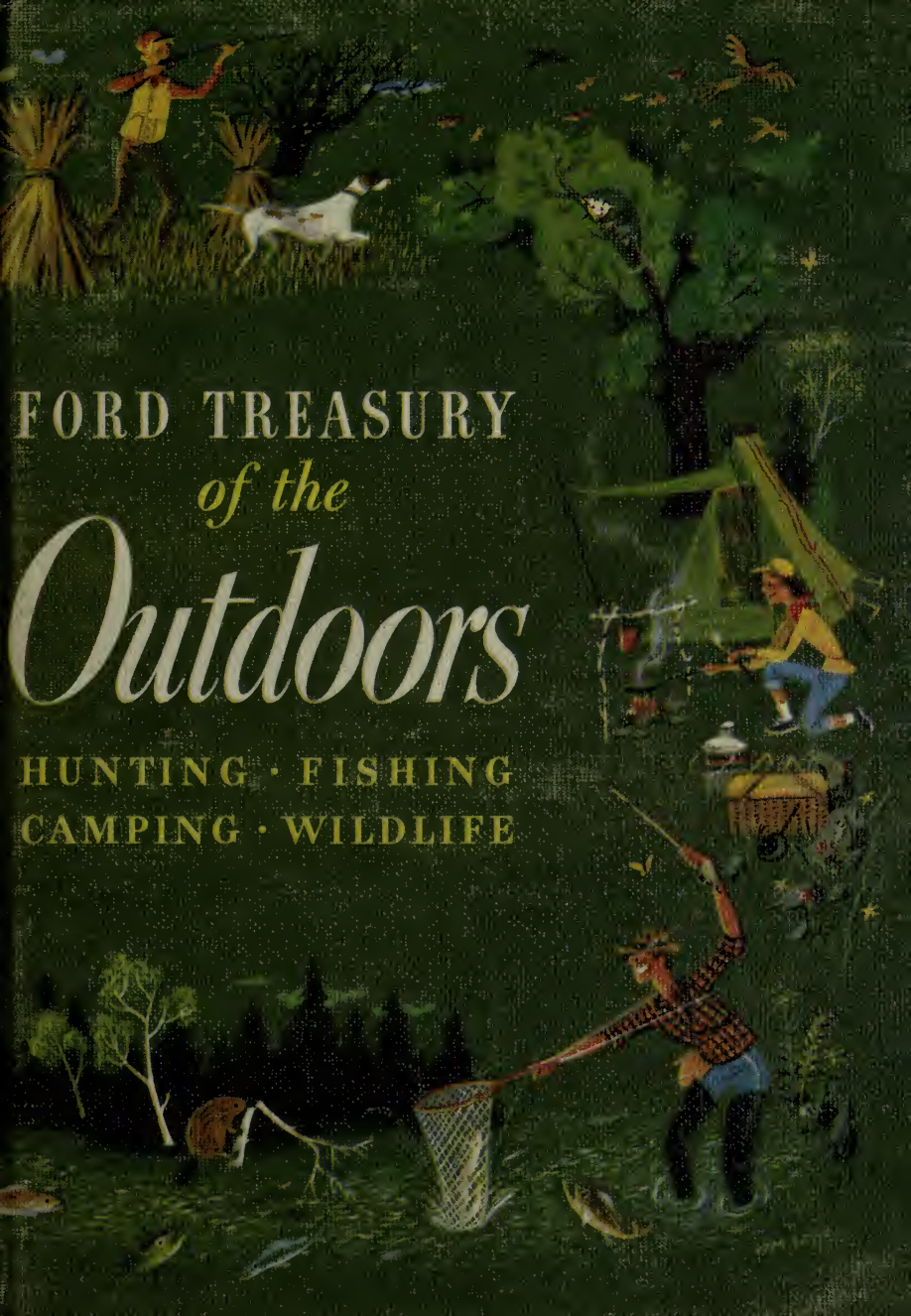
FORD TREASURY
of the
Outdoors
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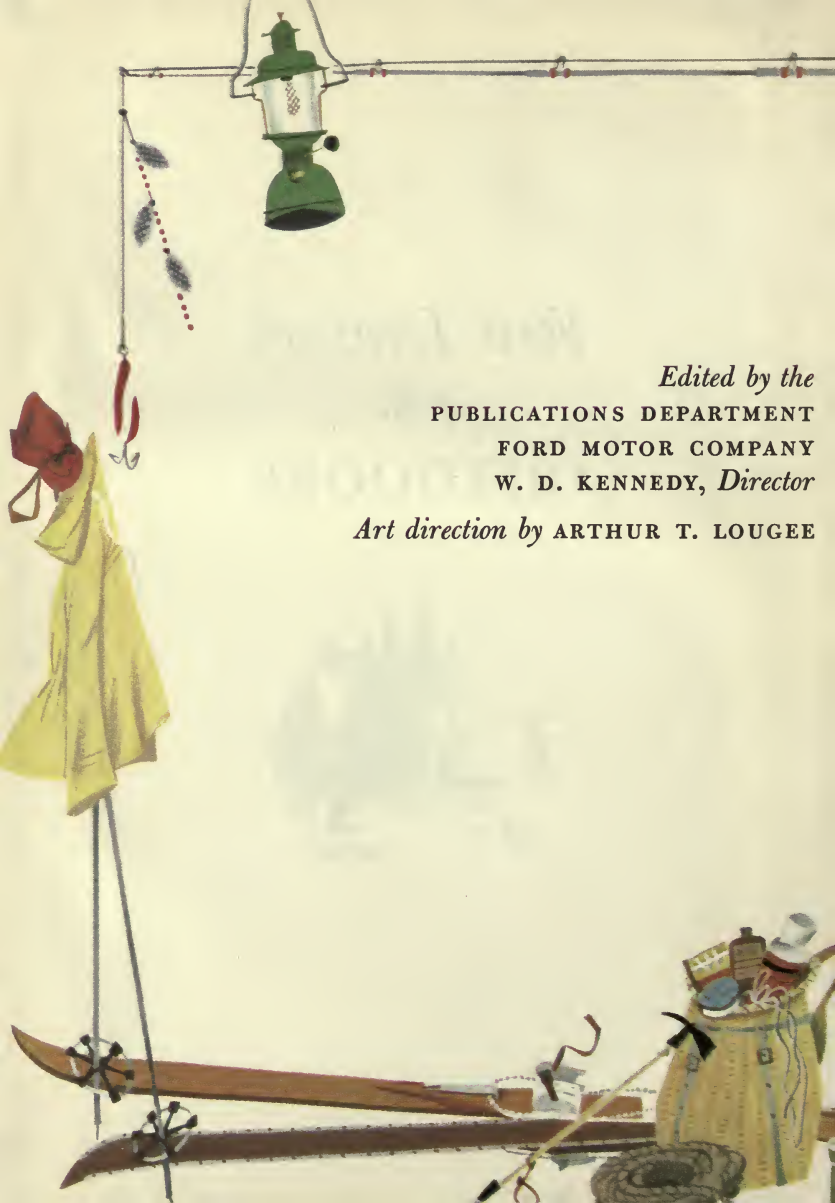

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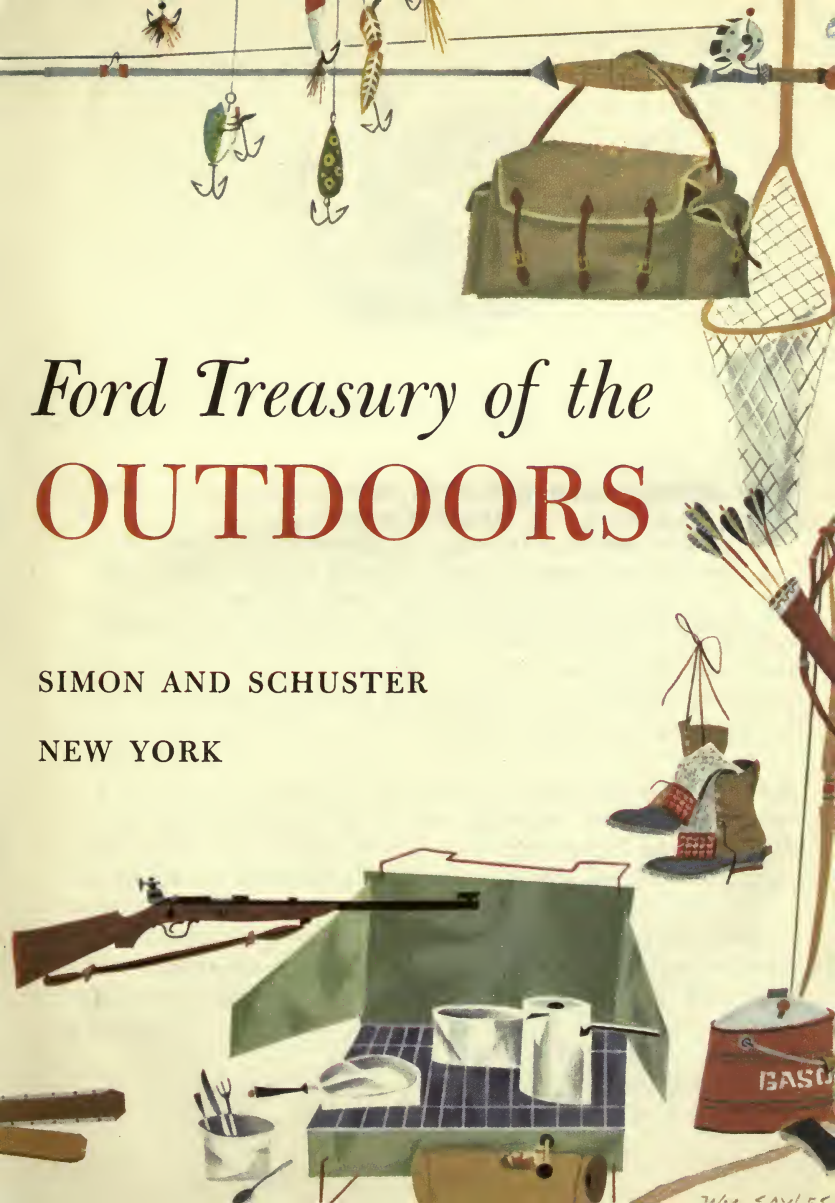

Ford Treasury of the OUTDOORS

SIMON AND SCHUSTER

NEW YORK

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Foreword

The purpose of this book is quite simple. It is to help American motorists get more pleasure out of the recreational opportunities offered by their family cars.

It has been stated—this is probably more of a guess than a statistic—that Americans depend on their motor cars for 80 per cent of their outdoor recreation. In any event, it can hardly be denied that over the past fifty years the automobile has given us an increasingly greater participation in outdoor activities. It is a fact that nowadays every trout in America is in danger for its life.

This, then, is a tourist's-eye view of America outdoors, made up of selected articles which have appeared during the past few years in the *Ford Times* and *Lincoln-Mercury Times,* periodicals which are distributed by Ford, Lincoln, and Mercury dealers as a courtesy to their neighbors and customers.

Modest in purpose, the book may perhaps suggest a concept which stands simple, clear, and understandable in a confused world—the concept of a young, vigorous people at play in a great land.

W. D. Kennedy
Director, Publications Office
Ford Motor Company

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A map of the Bays de Noc region

Biggest Fishing Hole in America

by Harold Titus . . . map by John Davenport

THEY'D walked out of their Indiana offices at five on a June afternoon, and by mid-afternoon next day were renting a boat for their outboard motor on Little Bay de Noc in Michigan's upper peninsula. The stories of fabulous walleye fishing were too good to be true. How could such fishing erupt suddenly anywhere on the Great Lakes? But they came anyway.

"Look at the parked cars!" muttered Joe. "If we've fallen for a tall story, we've got plenty of company."

Two hours and 35 minutes later they were back at the dock with their daily limit of walleyes—five each—ranging up to 5 pounds.

For nearly half a century impatient anglers have used the automobile to get to favored spots on the Great Lakes where sports fishing is famous. But vast reaches of these inland seas are still a neglected sports paradise, as the stampede to the Bays de Noc in recent years has proved. Until 1946 almost no one had tried to take walleyes there by hook and line. Then local lads began trolling and coming in with their limits in no time at all. The story got around, and last May, when the season opened, cars were on the scene from southern Ohio and western Nebraska.

Early-season luck is the best here, and until late June the fish are schooled on shoals. During July they go to deeper water and are harder to locate. As summer wanes, however, yields pick up again.

Biologists are naturally interested in such an eruption of a species. The peak 1950 year was apparently the result of exceptional spawning conditions in 1945.

There was some decline in 1951, but many undersized walleyes were observed recently, indicating another preponderant year class developing. These are expected to show up in anglers' catches during the next few following years.

But the above is only one brief chapter in the story I'm trying to tell. How excellent smallmouth bass grounds turned up under my own nose will drive home the theme of this piece. Most of my life has been spent within sight and sound of Grand Traverse Bay, an indentation of Lake Michigan. We've taken Mackinaw trout regularly; we've had excellent perch and cisco fishing; but none of us dreamed we had bass until some lads, trying shoaler-than-usual water for trout, accidentally boated a brace of lunkers one summer afternoon five years ago. We at once gave the vicinity a combing and found smallmouth fishing of a quality to take away your breath.

This spot happens to be off Michigan's Wilderness State Park, and most of the fishing is done on boulder flats in hip boots or waders and holds up throughout the summer. The guess is that in these stingingly cold waters the bass must go to the shallows to find their supply of forage fish. In the beginning only a few anglers tried the spot, because the shoreline, being a dedicated wilderness area, was closed to automobile traffic and getting there involved a 3-mile hike. But now a one-way fire road is open to the public. I've seen eighty cars parked along the beach at one time during the summer.

Countless miles of Lake Superior's shore line, too, have never been thoroughly explored by rod-and-reel fishermen, and some highly productive grounds long known to natives have only recently become widely used. The new Mackinaw trout-trolling facilities at Whitefish Point are an example. For years, ports on the Keweenaw peninsula have been popular embarkation ports for deep-water trollers. Then Munising, Grand Marais, and others began providing boats and overnight lodgings. Whitefish Point began beckoning customers two summers ago, and luck has been excellent.

Many rivers emptying into the upper Great Lakes have been famous for their spring rainbow trout runs for a generation and more. Perhaps a few lads knew about the rainbow in famous Two-Hearted River, which flows into Lake Superior, but they kept it to themselves. Three years ago fishermen who weren't so close-mouthed tried the lower waters of the stream in May and June, showed catches with specimens up to six pounds or better, and another rush was on.

Biologists will tell you that in all probability there have always been fish at these recently discovered spots. Nobody happened to find them before. There are ups and downs in supply, of course, as is true with any other crop. But, with the exception of the introduced smelt, many species have undoubtedly followed their life cycles in various points about the Great Lakes for centuries without discovery by anglers. So—the resourceful, prospecting sportsman has a large chunk of a world to conquer right here in the heart of America!

Nature's Model T

by Pete Barrett . . . paintings by Charles Culver

ANYONE who has seen what my Southern friend Emmett Gowen calls a "passel of possums" has witnessed the unique in animal transportation. An old lady possum will come trudging along on flat feet while her family rides up top, rubbernecking like typical country kids. Sometimes there will be six or seven beady-eyed youngsters hanging on to fistfuls of fur in opposing rows along their mother's back.

It is a slightly swayful ride, but the passengers never seem to mind. Perhaps they know that no other creature in the country travels in such plushy elegance, cradled between the axles, so to speak.

You could say that the mother possum serves as a roadster, since she has a rumble seat too, even if this is underneath in the form of a pouch. Once when I surprised a possum family traveling as a group, the mouse-sized youngsters pulled a magic disappearing act. There was a brief, lively scene as they scrambled about the mother's sides, then she appeared alone—her offspring had taken cover in her pouch.

Nearly everything else about the animal is equally astonishing. It produces broods of up to eighteen in only twelve and a half days. The babies are so tiny at birth that an entire litter can be contained in a tablespoon.

Blind, with only the front feet fairly well developed, the mites crawl into their mother's pouch to begin nursing.

As there are at most thirteen nipples and a baby usually remains fixed to the first one it comes to for five or six weeks, casualties occur. In fact, after a month the pouch may contain only seven or eight young. But the survivors are well cared for. Two or three litters are raised in a year.

Possums spend a lot of time in trees and often make their dens in hollow trunks. For the fancy footwork of the treetops, nature has given the animal hind feet that resemble human hands. The big toe can be opposed to the other toes—which have claws for climbing—the way a person's thumb opposes his fingers. But the big toe has a nail. Tracks look like a child's hand prints.

A long, scaly tail, which the possum can wrap around a branch, serves as an aerial emergency brake. In fact, the creature can do just about anything with its tail that a monkey can, many feats being attributed to this appendage.

I doubt, though, that a possum ever sleeps while dangling by its tail, as folklore has it. Or that a female ever carries her young suspended over her back, their tails gripping her tail.

A farmer once warned me never to pick up a live possum by the tail. Said it would squeeze my hand in two. I'm sure he believed this.

Possums are night gadabouts and will eat just about anything from bats to blueberries. Because they forage at night and are of a retiring nature, few people realize that the animals are to

be found in nearly every state. Sometimes they succeed in living in almost complete anonymity close to big towns.

Around the turn of the century the possum was considered pretty much a Southern animal. Down in Dixie it had been hunted for generations with any breed of hound that could make music in the night, and still is. But gradually it extended its range, particularly northward. Recently possums have turned up in southern Ontario.

This northward migration has led to certain discomforts. The animals are not true hibernators, and only remain in their dens for a few weeks at a time in bitter weather. In Northern states the merest hint of a let-up may bring them out, with frostbitten ears and tails as the price. Twice of an early morning near my home in Connecticut I have seen possums with badly split ears, the reward of chilly night work.

The expression "playing possum"—meaning to feign injury or death—has been around so long that many are unaware of its origin. But every possum knows about it and, if forced to, will play the game to the hilt.

I remember the time a friend and I came upon a possum cornered by a farm dog. The possum was backed against a split-rail fence, flashing an ugly mouthful of teeth at the dog. Apparently our presence was just too much, for suddenly the animal fell on its side as if dead. I picked it up. The critter was as limp as a widow's veil. Shaking it produced no reaction at all.

When I put the possum down its mouth came open and its tongue lolled on the dirt. Death seemed absolute. And the dog showed no interest in the "carcass" now.

We withdrew a few yards and Howie threw a stick for the dog. A moment later the possum got up and slipped under the fence.

This was an average performance, solid and convincing. There is some medical evidence that the death scene may be a genuine faint brought on by fright. But what about the fortuitous escape? This is always so deft a part of the routine that I prefer to believe it is the act of a master showman. Since the Model T possum gives free rides, why not a free show once in a while?

The palace of the wilderness is the marquee or umbrella tent.

Get the Right Tent

by Franklin M. Reck . . . photographs by John Calkins

A TENT gives us title to all parts of the map where town names disappear and the road becomes a trail. If we own a tent, the streams, the lakes, and the mountains are ours. Wherever we can go with a canoe, packhorse, automobile, or afoot, there we can set up housekeeping. Since the tent is our shelter and our home, it is the camping outfit's First Item—and should be selected with care.

All tent designs and variants trace themselves back to a few main kinds, five of which are described here. The tents pictured in this article were loaned to the *Ford Times* by courtesy of the David T. Abercrombie Co., 97 Chambers Street, New York,

outfitters to Admiral Byrd, and one of America's best-known tent designers and manufacturers.

These tents are of a light, close-woven duck, strengthened and waterproofed by a green-copper treatment that keeps them soft and pliable. They're long-lasting and light for their size.

Tents have undergone a traceable evolution from simple to complicated types. Perhaps the simplest is the lean-to, which is nothing more than a sheet of canvas rigged at a slant.

Put one lean-to against another, add front and rear wall, and you have the wedge tent. The wedge tent, designers decided, was easy to erect but you couldn't use the space near the sides. So they added low walls, two or three feet high. Wall tents enabled the camper to lay his bed along the side of the tent.

Designers then added height to the walls, creating standing room in all parts of the tent, and thus the umbrella tent came into existence. In pursuit of ventilation, comfort and convenience, designers went on to add bobbinet (mosquito netting) doors, bobbinet windows, canopies over the entrance, and sewn-in ground cloths to keep out vermin. All these items are illustrated herewith.

The lean-to. We pitched this on the clay banks overlooking Michigan's famed trout stream, the Pere Marquette. Two people can sleep comfortably in this shelter—three in a pinch. As shown, it isn't suitable for the black-fly-and-mosquito season, but it can be made bugproof with a bobbinet front and a ground cloth. In the fall, with a fire in front, reflecting its heat into the interior, it's a snug shelter just as it stands.

The model illustrated is 5 feet wide, 7 feet deep, 5 feet high, and weighs 6 pounds.

The Baker tent. This is an elaboration of the lean-to, the most important addition being a large canopy in front. There's a low wall in back to give foot room at the rear. The Baker, too, can be made vermin-proof with bobbinet front and ground cloth. Tents come in various sizes. The one shown is 8 feet square and 7 feet high at the entrance, and weighs 16 pounds.

The wall tent, with ground cloth and bobbinet door, is bugproof →

The wall tent. This is perhaps the most universally used tent. The model pictured has a sod cloth, which is a border of canvas around the inside bottom, to keep out undesirable inhabitants. Woods-fashion, it is put up with a framework of saplings—two shear poles front and rear, a ridgepole resting in the crotches of the shear poles, and side poles to hold out the eaves. The tent was pitched near the tall pine on the upper Baldwin, another well-known Michigan trout stream. This wall tent is just right for two campers. It's 6½ by 8, 5½ feet high, and weighs 13 pounds.

The explorer's tent. Here's an all-purpose all-weather tent for two people that's a dandy. It's a combination of Baker tent, wall tent, pyramidal miner's tent, and the lean-to, borrowing the best features of each. The 29-inch ridge gives the camper room to stand up inside. The walls at side and rear enable him to use all the inside area for bedding. The canopy provides an outdoor shelter. The slanting rear saves canvas and therefore weight. This model has a sewn-in ground cloth and a zipper-fastened bobbinet front, making it completely vermin-proof. There's a bobbinet window at the rear for ventilation and light. We pitched it in the bend of a southern Michigan stream near South Lyon. Dimensions are 6½ by 7: comfortable quarters for two and not too bad for three. The height is 7 feet; weight, 15 pounds—satisfactory for canoe or back-packing.

The marquee or umbrella tent. This is the palace of tents. We rigged it on the shore of Little Star Lake, a fine bass and bluegill lake near Baldwin, Michigan. An aluminum center pole with spreaders, like the framework of an umbrella, holds up the structure. It takes one man to raise the interior while the outside man stakes the corners and guy ropes. Note the porch with side wall. Ground cloth, mosquito-proof entrance, and window give the umbrella tent bug protection, air, and light. There's standing room in all parts of it.

This one, 8 by 8, will accommodate four people in comfort. The weight—28 pounds for the tent and 30 pounds for the poles —makes it feasible only for pack animal or automobile.

The lean-to was the first step in the evolution of all tents →

Ladies of the Night

by Joe Brooks . . . paintings by Bernard Lippman

INNUMERABLE bridges and causeways tie the twin cities of Miami and Miami Beach into a Venice-like maze of natural and man-made islands. These bridges offer a fine assortment of spots from which to cast a fly into the waters of famous Biscayne Bay. A keen ladyfish angler will have that whole layout mapped in his mind.

When the tide is on the outgo very late at night or in the early hours of the morning, a jaunt after ladyfish means that you must keep nightwatchman's hours and find yourself crawling into the downy at 6 a.m. And judging from personal observation and participation, there are plenty of anglers on this night shift.

Ladyfish are particular, and with the tide pouring out, you must toss your lure up into it and retrieve along with the tide because that's the way the shrimp are coming. You must be sure to make a fast retrieve: certainly as fast as the flow of the tide, or even faster.

Some of the best fishing found on the bridges in metropolitan Miami is located immediately under the signs which proclaim "No Fishing." And as sure as hominy and butter, smack under those signs and spreading far out on either side, is the greatest concentration of anglers. Many a time midnight motorists will see a circle of anglers with fly rods pointing heavenwards, standing meekly about a blue-clad figure who waves his arms and points at the sign. The crowd disperses, the cop climbs onto his

Fishing off the south jetty of Baker's Haulover.

motorcycle, and once again quiet descends on the ladyfish scene.

As manager of the Metropolitan Miami Fishing Tournament, I used to receive all records of fish entered in the contest. When an exceptionally big one was caught, the angler would appear at the office, as per instruction, with his fish bundled under his arm so we could take a picture of it. So while we waited for the photographer, I often questioned the successful fisherman about his catch. The last big ladyfish that came to the office weighed 5 pounds 5½ ounces, a giant of the species.

"I took it at 3:25 a.m.," the angler said. He told me the name of the bridge. "There's a lot of big ladyfish there!"

That's all it took to start me squirming. The next morning, just one hour later so as to catch the tide right, I was at the same location putting my fly-fishing outfit together. The bridge was beside a rather pretentious-looking mansion, darked out while

Casting from MacArthur Causeway.

the residents were no doubt sleeping heavily, never dreaming than an angler was practically rapping at their windows with his backcast.

The true ladyfisherman figures the tide eccentricities down to the last ripple. He knows each bridge from which it is possible to fish and can perform a calculation that enables him to hit the best fishing right on the nose. Ten minutes at one bridge, an eight-minute drive, and he hits twelve minutes of the pay-off time at another bridge.

There was the time I was spending a quiet evening with a friend and another mutual friend came rushing up, bubbling over with his fishing of the previous night at the north end of Miami Beach. Loads of fish and big ones, too. He'd show us. The tide was wrong and we knew it, but the urge for ladyfish drove us on.

Our spot was, of all places, the end of the Haulover Beach Docks. Charter boats lined both sides, and a forest of outriggers rose high all around us. It was close figuring on the backcasts.

The guy who had brought us here gazed at the unbroken surface of the water, looked at the maze of stuff in back, and said: "The fish were breaking last night."

Just then a splash resounded twenty feet out from us.

"There they are!" shouted our friend. "Out there!"

"A hound fish," I ventured, but added: "Well—it *could* have been a ladyfish."

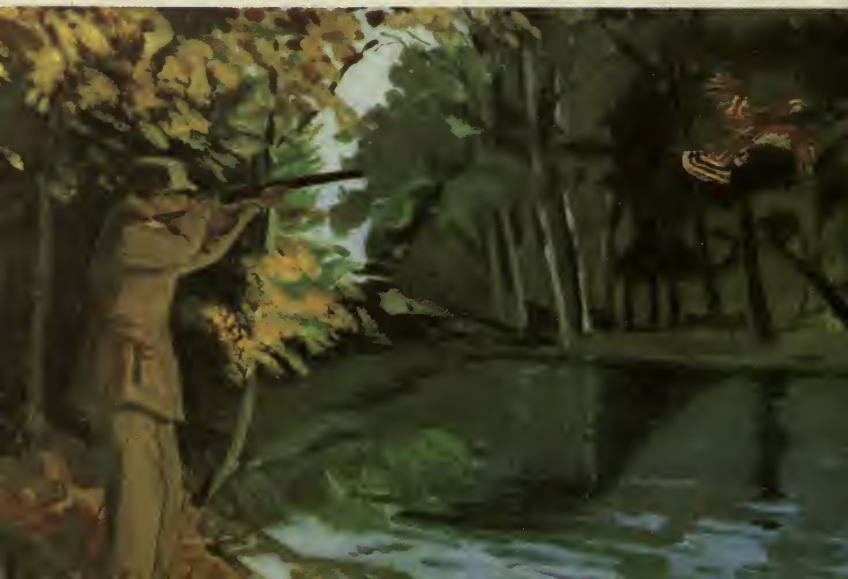
I stripped off my reel, shot out a backcast, held my breath, delivered a forward cast, and watched my white popper settle quietly on the surface. I popped it once, then struck as the water flew apart and the biggest ladyfish in the world started emerging from the water. On and on he came and finally leaped clear. He looked as long as a singing birthday telegram, and as he reached the apex of his leap I saw the popper continue up free into the night.

By the time I had retrieved my fishless lure, all hands were throwing bugs to the spot where that elongated silvery thunderbolt had disappeared beneath the surface.

When things had quieted down, I helped the anglers unhook lures from the flying bridge of the *Huskee,* the port outrigger of the *Lady Luck II,* the fighting chair of the *Anhow,* and another from the seat of my friend's pants. After that, the ladyfish didn't hit any more, as I should have expected, because this bird had caught his the night before at 1:35 a.m. and here we were at only 10:36 p.m. with the tide still coming in and having no intention of going out until exactly 2:44 a.m.

Two nights later I went back there in the wee small hours, haunted by two days of thinking about the length of that fish, and what did I see but a new sign, hung from a rope stretched across the dock, with these words: "This dock closed to all fishing."

What can a guy do? The trouble is that it's beginning to get too civilized around these parts. But now I've found me another bridge—so long!



Shooting Grouse from a Canoe

by Harold Titus . . . paintings by Morgan Douglas

WHEN I took my first look at the originals of Morgan Douglas' paintings, here reproduced, it took me back to Model T days, to Charlie Carver, and to my introduction to grouse hunting from a canoe.

You see, ruffed-grouse hunting is my top sport, my passion—my vice, perhaps. I'd rather shoot at a thunder bird and miss than bring home my limit of anything else that flies—and the older I get the happier I am about the misses. I started out after birds with a water spaniel named Jigger and a single-barreled twelve-gauge I acquired for $1.25 cash and a bicycle pump. Because of maternal misgivings, I was forced to hide the gun in the family barn between hunts, but I never had to hide the birds because there never were any. The reason, I found out later, was that the barrel was bent.

Now this Charlie Carver was one of the finest men that ever lived. He built bridges and things but only because it enabled him to hunt and fish. And, praise be, he brought me up in the way a lad should go. He was one of those rare grownups who enjoy being with youngsters, passing on knowledge and wisdom in quiet, unostentatious ways.

"Now, I'll tell you," he said one evening when we were homeward bound in the Tin Lizzie with birds at our feet and the tired setter sprawled in back, "there's nothing finer than plastering a grouse that your own dog has handled well for you. But

there are other ways of hunting birds," he said. "And when you get the time, I'd like to show you how it goes. This thing calls for a canoe and maybe quite a walk at the day's end. But," he said, "I'll bet you'll like it!"

I couldn't get the time to try the new way until the next morning when sunrise found us on the Manistee, one of Michigan's finest trout streams. Charlie was in the stern, his own unloaded gun at his feet. I was in the bow, my loaded double across my knees. It was October. Soft maple flared its crimson at us above the cedars. The sky was as brittle blue as a robin's egg. Small jackpines gave a shadowy undertone to the fall brilliance, and the air was something you could drink.

"Around the next bend," said Charlie, who was giving the canoe no more than steerageway, "are wild grapevines. It's ten to one a bird will be feeding there. You try to take him. *But,*"

he said, "don't lift that gun until I count three—remember that. It's part of the game."

Oh, yes, a bird was there! The grouse was busily feeding, his rich brown plumage blending with the background. Charlie whistled through his teeth and the bird stretched its neck sharply upward, crest rising in alarm. We were within 30 yards. Charlie whistled again. The head snapped our way. Then the paddle thumped the gunwale and the bird was on the wing and my hands were sweating on barrel and stock.

"One!" snapped Charlie as the bird left its perch. "Two!" he said as it swung to cut downstream. "Three!" he yelled as the target banked for a dive.

I slapped butt plate to shoulder and cheek to stock and pulled, and missed by yards!

"Didn't lead," Charlie remarked mildly. "Stopped your swing when you pulled. Bad," he said, "but the next grapes are on the left."

Two birds were there and Charlie counted again. I missed both and swore some, but he refused to change places. Not until I'd dropped one, he said. I wangled it on my next try. The bird rose nicely, and as it wheeled across the bow, there was no trouble about covering it with the end of the gun. As we retrieved the grouse from the river's surface, I turned to see Charlie's happy grin.

"Ain't it fun?" he chuckled.

"Fun?" I echoed. "No name for it!"

We changed places, then, and he insisted that I count for him. He took one, then another. I missed several in a row because I always *was* a lousy shot and shooting from a canoe is tough, but I finally downed my second. The misses bothered Charlie not at all. The lone hit brought a nod of approval.

Then Charlie scored on two black ducks as we rounded a sharp bend. I can still see the jeweled drops of water spattering back as they made their characteristic bound, with Charlie holding his fire for that precise split second of poise before they started yonder.

There were moments of comedy in which I was the uninten-

tional clown. I knew well that one must sit in the center of a canoe and keep his weight low, yet who could resist rising to a crouch when a bird wheeled overhead? Only Charlie's balancing act saved us that time.

We went ashore at an alder flat and tramped it for woodcock. They were there and we took a brace. A big swamp rabbit bounded through the browning brakes and Charlie sent him spinning, too. In a marshy flat we had a try at jacksnipe and dropped a half dozen.

We boiled our tea water and ate our sandwiches there and Charlie's dark eyes glowed because I liked it all and he'd had a deal to do with making me like it.

So when I looked at Morgan Douglas' pictures, it all came back. The thrill of trying a new twist to a noble sport, the challenge of jumping such resourceful birds and trying to get on them from the seat of a canoe.

Not many hunters try for grouse this way. Since Charlie's active days ended I've coaxed a few to go with me. But not many. Mert McClure, of the Michigan Department of Conservation, is a canoe-grouse hunter. We had a day on the Au Sable's South Branch not too long ago. The bag was little enough, but, mister, it was a *day!* With October's tapestry all about and trout dodging the canoe shadow, and we, never knowing what's around the next bend! We saw a deer, coy and dainty, looking at us from behind a poplar, seemingly aware that we weren't shooting at her because the deer season hadn't started yet. Deer seem to have an understanding of the calendar.

The technique illustrated by Douglas is something to try. With a dogless hunter on either bank and another gun in the creek, the kill isn't going to be heavy no matter how many birds are flushed. Counting three after they're on the wing keeps a man clear of the charge of potting 'em. And, with such a bird, such a charge must be avoided.

Parts of all the northern states should offer chances for this sort of fun. And what if the birds avoid the water but stick to the far uplands? Unless you're just another meat hunter you've had a wonderful time!

Foldboaters ride "haystacks" on the Yakima, north of Ellensburg.

Foldboating: West

by Norma Spring . . . photographs by Bob and Ira Spring

FOLDBOATERS think the Cascade Mountains are terrific territory. To the devotees of the collapsible kayaks, the region has everything, and a good week end will include lazy drifting on a placid stream, nervy maneuvering down a "horizontal waterfall," and pleasant yachting under sail on a mountain lake—in other words, the best that the talented craft has to offer.

The Seattle Foldboat Club capitalizes on this splendid set of circumstances, with the result that it is one of the most active

clubs of its kind in the country. Its activity is not confined merely to what a foldboater can do on open water. During the winter, when lakes and streams are under lock and key, the members are busy at classes held in the Seattle Y.M.C.A. They learn navigation, the fastest methods of assembling boats, how to repair a hull that's been ripped on a sharp rock (a tire repair kit does the job in jig time)—and they learn that discretion is the better part of valor, especially when the water is white.

Basic training is usually over by the time the ice goes off the lakes. Then the club members go in for the practical side of the sport. A gang will assemble on the banks of the Yakima River just outside of Cle Elum, in the eastern foothills of the Cascades, about ninety miles from Seattle. The boaters and boats are unloaded at the starting point, and by a system of shuttling, the cars are left at the spot where the trip ends. This gives the maximum amount of boating per trip.

At the outset, the Yakima dawdles through a wide valley and the boaters drift on lazily. There is an idyllic shaded sandbar near the head of the canyon which is an excellent place for a noon siesta and a swim.

An afternoon spent in the upper Yakima Canyon is a top test of a foldboater's endurance. The river gets progressively more frisky; first there are riffles, which change to rapids; the rapids turn to "haystacks," and the foldboater often finds himself perched in the air six feet above the trough. Then down he plunges, to plow on to the next wave. The peaceful foldboat has become, willy-nilly, a hot rod.

The party pulls to shore at Ellensburg, where the cars have been parked, and the caravan makes its way to Lake Kachess to camp out and spend the next day paddling or sailing or using a half-horse motor to chug around the lake and look at mountains.

It's amazing that so much fun can be had with a boat that comes out of two tidy bags weighing only 65 pounds. The thing is assembled in half an hour or less once you have the knack of it—it will take longer the first time, floats 500 pounds of people and gear, slides over submerged rocks like an otter, takes to mountain water happily as a trout and to shoulders lightly as a

cork, and afterward is docked in a Ford-size luggage compartment with room left over for another. For fold-ability and water-ability it can't be matched.

Some happy convert to this sport once wrote a story called "Farewell to Tippy Canoe," in which he predicted that the day of the colorful Indian canoe was at an end. The foldboat, he stated positively, is its successor.

Foldboats have been tested on some of the finest water in the West: Lake Chelan, which winds fifty-five beautiful blue miles through the Cascades, the Bow River in the Canadian Rockies, the Rogue in Oregon, the Salmon in Idaho, the Columbia, even the Colorado. Some of them take a little nerve, of course—nerve, a good eye, powerful shoulders, and Band-aids.

But fun? Boy!

The party stops to lunch and swim off an island in Lake Kachess.

—*When riding the Housatonic, you must keep both eyes on the road.*

Foldboating: East

by Robert Hodesh . . . paintings by Sascha Maurer

I AM not much of a white-water man myself—which is one of the reasons I prefer to do my foldboating on some of the more patient rivers of the East. I won't argue against the "rough-string" boating on western rivers—the roar, the speed, and the sharp edge of danger—and I have learned on springtime streams in the Berkshires, lollapaloosas like the Housatonic, that white water "doth spice the dish." But tell me the months are June through October and offer me a choice. I'll take the lòw road.

Once I put my boat into the Connecticut River at Wethersfield, and for two hours I floated down between the green fields, planted mostly in tobacco, partly in potatoes. On either side the meadows slanted upward, to be punctuated here and there by the clusters of houses and elm trees that are the towns of New England, with a white church spire to authenticate the scene.

I would have wanted no other kind of river there, for on no other could I have left my responsibilities so completely ashore. Had the scenes I was witnessing appeared by chance beside the Salmon in Idaho, or the Rogue in Oregon, or the Colorado, I would have enjoyed them at my peril, for scenes like these can cause one's thoughts to wander, and in a mountain torrent an absent-minded foldboater might wander upside down.

What I want in a foldboating river is a chance to call my own shots. When the prospect on the Connecticut appeals to me, I want to slow down or haul over and tie up for an hour beneath a willow tree. I can't imagine doing this on the hot-rod rivers of the West. They will exhilarate you, but once you're in them they won't let go of you until they're good and ready. I don't often get pooped out on eastern streams that aren't going over three miles an hour, but when I do I can make for shore and relax.

This sedentary attitude, of course, makes me more of a tourist

—*White water and quiet water await the foldboater in Quebec.*

than a foldboater, but an unfettered tourist I prefer to be. When I float through the town of Farmington in Connecticut on the little river of the same name, I like to be able to moor at either bank and gaze for as long as I like at the old homes there. It's wonderful to paddle through a museum.

I feel the same about the lower stretches of the Hudson. The cliffs above this noble river are magnificent, and the great estates on its headlands are wondrous to behold. I am therefore grateful that the Hudson is wide and slow. I like the Potomac for the same reason, although sections of it have a bit more dash than the others. The Susquehanna, the Shenandoah, and the Delaware fit into the placid pattern. In all these, the action is suited to the scene. You have old hills, old towns, places on which men have gazed long and thoughtfully, places filled with what to me is a prime requisite for scenery: human association.

The foldboat does not fit into my predilections merely by accident. I like to be able to carry my transportation in two light bags, assemble it with ease on any shore, and take it apart speedily. Moreover, I can do something that no partisan of the bronco-busting western rivers can do. I can paddle ten miles upstream before I float back to where the car is, or I can float down first and paddle back, which eliminates the car shuttle that is a necessary part of western foldboating.

To me, a foldboat is a nearly perfect vehicle for seeing the East. That region, particularly New England, calls for walking, slow motoring, or foldboating—or some combination of the three. When I set my little cockleshell down in any languid eastern water, I know I am going to indulge all the sentimental urges of the inner man. Of course I miss the views from the modest hills of the East, but I have found that I'd as soon look up at my scenery as down.

I don't wish to establish a rule on foldboating. I merely state a preference. This talented craft is a natural for cocky streams, for vigor and the plunge. I can see it as a chip in a waterfall, but I prefer to see it imbedded in easy-going water—that is, if I'm in it. Besides, I often take a copy of Thoreau along with me and I like to keep the pages dry.

This Is the Champ

design by Charles Harper

TO MIDWESTERN HOUSEWIVES, Pacific salmon is a name on a label, but to Westerners he is a torpedo who delivers explosive sport in all the bays and rivers from Monterey to Bering Straits. There are salmon clubs and salmon derbies, with cups, prizes, and television dates for the man who lands the biggest fish. Practically all trout except the brook are close relatives, and carry the salmon's belligerence into inland streams and lakes, but the salmon's heft, which runs up to a hundred pounds, makes him the champ. This is the king, or chinook, the best of the five Pacific varieties.

Tapstick Hunt

by Henry P. Davis . . . photograph by James G. Moore

On a Saturday afternoon in fall or winter, from the sedge-covered hills or the cotton-furrowed bottoms of almost any Southern plantation, you may hear an exultant cry which sounds in the distance like: "Yonna 'ee goes! Hyeah, hyeah, hyeah!"

This is the rallying cry of the tapstick brigade, and, decoded, it means, "Yonder goes the rabbit! Here, here, here!" The clientele of the tapstick hunt is usually made up of the sons of the plantation tenant farmers. The object of the hunt is rabbit stew for Sunday dinner. But most interesting of all are the weapons—tapsticks.

A tapstick is a slender but stout hickory shaft, weighted at one end with a tap or heavy iron nut. The tapstick is the main item of equipment in the most primitive, if not the most picturesque, method of hunting still known in America.

What the boomerang is to the Australian tribesman, the tapstick is to the sons of the plantation tenant farmers. While it is distinctly an American implement of chase, it had its origin in antiquity when man's only weapon was a club.

The tapstick is from 2 to 3 feet long, and usually peeled of its bark. Thus it shows up better on the ground, and may be more easily found after it is thrown at the bouncing and dodging cottontail. On the large end of the shaft, the tap or nut is securely fastened. This gives the instrument added weight and better direction. The taps may come from a buggy, cultivator, or rail joint. When taps are not available, plain sticks are used, preferably with knobs or knots on one end.

A tapstick hunt is a loose, informal, and highly jubilant activity. Each young hunter is equipped with several tapsticks and a dog or two of casual ancestry.

The hunters approach the hiding place of the cottontail, who stands the tumult and the shouting as long as she can, and then bursts from her form. At sight of the rabbit, the real hue and cry begins.

"Yonna 'ee goes!" rings the warning, and the tapsticks fly. Sweeping end-over-end through the air, the weighted sticks make telling missiles, and lucky is the rabbit that escapes the barrage. Given a fair shot in the open at from 10 to 15 yards, the young marksman is pretty sure of rabbit for Sunday. The bagging of three out of four rabbits jumped is a fair estimate of the ability of three good tapstickers hunting as a group. If the first stick does not connect, it will generally come close enough to cause the rabbit to dodge. Dodging slows the quarry down, keeping it within range for a second or third "shot."

All in all, it is an effective way of rabbit hunting, and, in many sections, supplies meat for sometimes scanty larders. The pulse-quickening chorus of "Yonna 'ee goes!" reminds us that the most primitive form of hunting known to man is still enjoyed.

Take Your Fly Rod to Florida

by Dick Splaine and George X. Sand . . .
photographs by Paul Burress

THE JUDGE of this court is a sunburned man wearing hip boots and a hat with streamer flies stuck in the crown. Directly behind the bench is a mounted tarpon. A brass plate attests the fact that the tarpon was caught on a fly rod. The courtroom is packed with men and women, many of whom are dressed like the judge. It is evident that a hearing is taking place, and that it concerns salt-water fishing—specifically, *fly-rod fishing*. The judge, after an affectionate glance at his mounted tarpon, addresses a witness.

"You say your name is Dick Splaine?"

"Yes, Your Honor."

"Is it true that you caught a bonefish on a fly rod, using a fly as a lure?"

"No fooling, Your Honor. My bonefish broke the world's fly-rod record, too. But then Joe Brooks caught one on a fly rod, and his bonefish weighed 10 pounds 9 ounces. That's the current record."

"Who is Joe Brooks?"

"He is an authority on salt-water fly fishing."

"Now, Mr. Splaine, there are many sportsmen who fish exclusively in salt water by other methods. Yet you specify fly fishing. How long has this fly-rod fishing been going on?"

"Well, Your Honor, it has been going on in isolated cases for many years—a few men, here and there. There was a man in Buzzards Bay, Massachusetts, who took striped bass on a fly rod. Some others on the Pacific Coast. A few down here in Florida. They were looked upon as strange characters, with loose bolts in their noggins."

"Ah," says the judge, "this is interesting. I hear that four short years ago a lone angler strode forth on the bonefish flats of the Florida Keys to learn if this great fighting fish would take a fly.

Flies and salt-water fish. Top to bottom: channel bass, bluefish, salt-water trout, snook, mangrove snapper, and ladyfish.

And today more than 3,000 fishermen make the venture with one thought in mind—bonefish on a fly rod. Is this true?"

"Yes, indeed."

"And now, Mr. Splaine, tell the court if you get a thrill from salt-water fishing with your fly rod."

The witness has been hoping for this question. He replies with such superlative affirmation that the court resounds to cries of "Hear! Hear!" and "Bravo!" There are no dissenting voices. The judge wallops the bench with his gavel, but it is more congratulatory than punitive.

In fact, the judge beams. He shows partisanship. He beguiles the court—and himself—with an anecdote of fly fishing for sea trout near Sebastian Inlet on the Indian River, Florida. Before

he has landed his trout, the judge is interrupted by a man from Cape Cod, Massachusetts, who wants to get in a word about his success with bluefish on large, white bucktails. The judge, while frowning at the interruption, accepts it in evidence, and turns the case over to the jury.

The jury, let us say, is composed of Captain Stewart Miller, veteran Miami charter boat skipper and salt-water fly-rod pioneer; Erl Roman, head of Miami University's angling faculty; Allen Corson, fishing editor of the Miami *Herald;* some tanned men from the Pacific Coast carrying fly-rod cases; a young lady from Martha's Vineyard, Massachusetts, bearing a make-up kit full of streamer flies and leaders; and George X. Sand, who is the jury foreman.

Addressing his remarks through George X. Sand, the judge instructs the jury with great care. He points out that more than a million salt-water fishermen will hang on their verdict.

"And I caution you," concludes the judge, "that since you are

Jim Lee, of Charles Lee Ranch, proves that the numerous canals draining Florida's ranch grazing lands provide good fly fishing.

dealing with the subject of fish and fishing, you must pay extra heed to the difference between evidence and hearsay. Is this salt-water fly-rod stuff rumor? Or is there evidence that it is really growing fast?"

After due deliberation the jury files in. Mr. Sand gives the verdict, as follows: "Your Honor, the fly rod in salt-water fishing is giving new sport to thousands. We are perplexed that it has not come into general use in salt water long before. Our verdict is unanimous."

If our court scene is imaginary, the verdict is very true indeed. And the members named in the hand-picked jury are very real indeed. So are their findings on the fly rod in salt water.

For example, Captain Miller, whose authority is indisputable, has this to say: on a fly rod you can boat large, surface-fighting fish, such as dolphin and sailfish, in one-quarter to one-third the time it takes with conventional heavier equipment. There is no appreciable line drag on the fly rod. Therefore the fish jumps repeatedly in its efforts to shake loose the light hook, and thus tires much more rapidly.

Erl Roman tells his Miami University angling classes, with equal authority, that the life-like action imparted to fly-rod lures brings two to three times as many strikes in salt water. In fact, Mr. Roman believes that in salt-water bays and rivers a fish will hit a fly in preference to live bait!

Your 4-ounce trout rod will be too light for the winds you'll encounter, and the long casts you'll make to feeding fish. The ideal outfit is your single-handed salmon rod, 9 to 9½ feet long, 6 to 7 ounces in weight, with stiffish action extending to the butt. A GAF torpedo head line, spliced to 150 yards of 6-thread linen backing on your fly reel, is a good choice. Nylon leaders testing 10 to 12 pounds are adequate. For lures, use streamers, bucktail or feathered, with or without spinners. It is probably best to buy these locally.

Florida in winter and spring is the gathering place for salt-water fly-rod fishermen. Water levels in the St. Johns River watershed are low enough to insure superb fishing.

The fly rod goes to sea! Take one and come along.

Boss of the Woods

by James B. Hendryx . . . paintings by Charles Culver

JUDGES of fauna seldom classify moose among the handsome creatures of the wild.

With their overdone heads and underdone rumps, upper lips that hang flabbily over their chins, a ridiculous tuft of chin hair, and a shoulder hump just large enough to interrupt the streamlining, they place well to the rear of the beauty parade.

The most complimentary adjective that can be applied to a moose is "lordly," and that goes only for the male with his great spread of antlers. His wife, with her huge ears, drooping snout, and tapering body is somewhat less than alluring. And undoubtedly the most ungainly object in nature is the youngster, with spindly legs so long that his nose won't reach the ground unless he kneels or spraddles his front legs widely apart.

But the moose has his claims to fame. He may be awkward, but he's the world's largest deer. He ranges through Canadian provinces and some of the forested states that border on Canada. He reaches his greatest size in the Kenai Peninsula of Alaska, where specimens weighing three-quarters of a ton, with 6-foot antlers, have been reported.

These antlers are unique in nature. In front they branch like a deer's horns but at the rear they unite into broad, flat surfaces from which six to twelve points protrude. When you look at this impressive array of head armor you wonder how a moose can possibly make his way through the woods without getting hung up. Yet he can travel through a thicket through which a man has

to chop his way. He does this by thrusting his nose forward and upward so that his palmated antlers lie back over his shoulders like a shield. Thus protected he wades through heavy brush by sheer power.

In summer, the moose feeds alone and likes it. He seeks out the broad, thin leaves of the striped maple and varies this diet by kneeling down and nibbling on moss and low shrubs. In winter he gets by on bark and twigs.

The moose regularly takes a ducking to get at one of his favorite dishes, the meaty roots and stems of the water lily. He'll stand withers-deep in a stream for hours nosing the bottom and taking in roots with his pendulous lips.

Like other members of the deer family the moose's eyesight is nothing to brag of. On several occasions I have stood motionless in the brush while a moose looked me over from a distance of only a few yards and went quietly on with his feeding.

I can personally testify to a moose's power as a swimmer and tugboat. I well remember a certain morning many years ago when Charlie Virgin and I were hunting ducks along the eastern shore of Lake of the Woods. We had decided to move camp to a bay six or eight miles down the lake where an Indian had told us the ducks congregated by the hundreds to feed on wild rice.

We struck camp, loaded the outfit into the canoe, and shoved off. Half an hour later a heavy fog settled over the water, reducing visibility to zero. We paddled for a time by compass, and when a ripple gently rocked the canoe, Virgin, who was paddling the bow, called out that a big bull moose was swimming just ahead. Making one end of a coil of light line fast to the bow we paddled close enough for Virgin to toss a loop over a horn of the swimming bull, and after paying out some thirty or forty feet of line we settled down to enjoy the tow.

After fifteen or twenty minutes of gliding smoothly and effortlessly through the opaque fog in the V-shaped wake, I happened to think of something, and reminded Virgin that when the moose hit shore he probably wouldn't stand to be unhitched.

Charlie agreed and began to haul in on the line in order to salvage as much as possible before cutting it. Just as he was about to cut the line it was torn from his grasp, the canoe was jerked from under us, and we were floundering about in ice-cold water armpit deep, while all about us floated the tent, the packsacks, and the bedroll. Guns, ammunition, and cooking utensils lay on the bottom.

We spent the better part of an hour wading about locating objects with our feet. Later we found some Indians who sold us a canoe, but I have never tied onto a moose in the water since.

When it comes to gaits, a moose will never rival a thoroughbred or even an antelope. His only successful gait is a stiff high trot, but with this he gets over the ground with fair speed. I clocked one a few years ago near Blind River, Ontario, when a cow moose stepped into the road ahead of my car. She did thirty-five as long as she held to a trot. But when I crowded her and she broke into the moose's ludicrous version of a gallop, her speed dropped below thirty.

Lonely, lordly and ungainly, King Moose is amiable enough most of the time. Like most animals, he'll run from man when startled. That is, except in rutting season. Then, apparently, any man, truck, or automobile is a rival for the affections of the girl. He has wrecked hoods and fenders and even charged broadside into trucks. He is a very formidable customer, his weight and size inspiring great respect and a large fund of rumor. He also gives off loud breathing and grunting noises, and is in no haste to depart.

A lady at a card party in a northern cabin once pondered the moose's belligerence. She recalled that while blueberry picking that same day she had noticed fresh moose tracks so large as to be fearsome. Debating measures all to herself, she said, "What would happen if you said *boo* to a moose?"

No intelligent answer was forthcoming, but there was a general unexpressed opinion that a bull moose in rutting season is unbooable.

Rapelling is spectacular, but may be the safest method of descent.

Mt. Shuksan Climb

by Patricia Spring . . . photographs by Bob and Ira Spring

PERHAPS a climb up Mt. Shuksan wouldn't rate a footnote in the history of mountaineering but it has an excitement all its own. On our first night out, 4,000 feet up, on the shores of Lake Anne, the thunder of ice falling off the edge of upper Curtis Glacier was like a freight train going through camp.

We started without any illusions that this would be an Everest-like affair, a great assault on some heaven-piercing peak; Mt. Shuksan rises a little more than a modest 9,000 feet in northern Washington. In spite of this shortcoming it demands all the intricate and varied climbing techniques of major mountains. It can scare you and freeze you as much as Mt. McKinley, and it can pay off in a great amount of adventure, fun, and scenery.

The party consisted of the leader, John Klos, Bob and Norma Spring, Walt Gonnason and Julie Marty, Ira Spring, and me. It was our seven heads that popped out of the tents in a hurry when we first heard Curtis Glacier roaring.

Shuksan is in the Cascade Range, which intercepts the moist, eastbound air off the Pacific and wrings it out. Five hundred inches of snow will fall around it in a winter, leaving fifteen to twenty feet of hard snow by March. The accumulation of this snow results in the massive ice sheets that wind their way downward on Shuksan's slopes.

When we finally left Lake Anne—after five days of waiting out a rainstorm—we went two miles through flower-strewn meadows to the lower Curtis Glacier, the place where the earthquaking roars originate. Curtis Glacier makes its trip in two sections.

The author leads the group in a difficult maneuver.

← *Rope leader belays his party; pitch in rock safeguards him.*

Starting from the summit, it oozes its way down to a cliff and breaks off in colossal chunks that fall a thousand feet. At the base of the cliff the smashed glacier collects itself, melts together again, and continues on down.

We had to "rope up" and ascend sheer rock walls away from the falling ice. Most of the ledges were wide enough to allow for walking and breathing simultaneously, but there was a narrow place called "Fat Man's Misery" where we clung to rock face only with fingernails and toes and didn't dare breathe too deeply. When we got beyond the spot, Johnny heaved a boulder over the rocky prominence that hid us from the cliffs below. Conversation stopped while we waited for the crash. It didn't come. The silence grew bigger. Finally we thought we'd explode, and then a faint crash sifted up to us from far below. We went on in silence for a long time.

After eleven hours of almost equally nerve-wracking activity, we reached Mt. Shuksan's summit. The sun, a wet ball of fire, was just dropping behind Mt. Baker. A mountain treacherous enough in daytime can become the very embodiment of terror by night, and we lost no time turning back. Just above "Fat Man's Misery" we called a halt because a misstep could mean disaster.

The boulders that had protected us from the sun earlier now sheltered us very little from the icy winds. It was the coldest night that any of us had ever experienced. Our wet mittens and socks froze solid and the chattering of our teeth was transmitted unabated to our toes. Finally our feet grew numb. We chucked our boots off and stuck fourteen assorted feet into three available knapsacks. I don't know whether I gave off any heat to my huddled companions, but I know they gave off very little to me. Down below, the lights of Mt. Baker Lodge twinkled frigidly.

As dawn first pinked the sky, we were up, beating our solidly-frozen boots against the rocks to limber them enough to put on. Soon we were descending the rocky cliffs below and by the time we were crossing the lower glacier the sun was hot on our backs. In the upper end of our valley we breakfasted on blueberries and in another hour were sound asleep in our tents at base camp.

← *Climbers search for a route around the massive ice cliff.*

White ibis in the swamps off the Tamiami Trail.

Ducks Below the Tamiami Trail

by Charles E. Cox, Jr. . . . paintings by Bernard Lippman

THE BROWN grass of the Everglades whispered past the gunnels as we cleared the narrow channel. Ahead, from an unseen pocket of starlit pond, teal spattered out. Farther in, heavier water explosions spoke of jumping mallards or pintail.

"Walt, you get out here."

I felt Ted steady the canoe while from amidships Walt transferred gun, shells, and his 180 pounds onto a high-grown grassy point. "Luck!" he whispered.

"Now," Ted said as we pulled away, "I'll skin on through to the other side of these mangroves and let you out. I'll boat down through the pockets and rouse us some birds."

I stood in shoulder-high cattails and watched day brighten on one of the last free duck-hunting areas in the United States. By "free" I mean a great reach of wilderness marsh where a hunter can go out on his own and be pretty sure of gathering in a limit of wildfowl.

And what a land it is—this vast sweep of water and grass and mangrove below the Tamiami Trail in southwestern Florida. South of the Trail are thousands of wild acres, not heavily hunted or fished and not too difficult to penetrate, yet north just a mile from my grass point blind I could hear the hum of auto traffic speeding tourists eastward into Miami for the Christmas holidays.

Guns whoomed to the southeast. Now with sun, the marsh was awakening. Bitterns squawked and curlews called. South toward the Gulf, ducks were milling and climbing. Nose high, two bluewings cut past my hat brim. Before my gun was half up, they were around the point and gone.

The birds Ted had moved swung wide and circled up our channel. I whistled. The flock tightened their turn—with wings cupped they came low over the mangroves, looking for the whistler.

A blast from Walt's stand broke the flight open; a bird went down in a long, slanting fall. A lone drake broke away, circling over me. I didn't tighten the curve on my lead enough the first shot. But the second barrel, as he towered, brought him down.

Our cannonade moved other small formations into the sky. Reports sounded below in Ted's neck of the swamp. Guns boomed behind us to the west.

There were too many cruising flocks to watch. Squatting low, I marveled for the first time in years at the sight of a duck-filled sky.

Two mallards were flying in from ahead. The first one I centered hard. But the second was home free by five feet. They're never as slow as you figure, I alibied. And, well-scared by the blast of high velocity, can those big babies pick up speed!

Two down and two to go. "Slow up," I told myself.

Now, over the great sweep of marsh reaching to the Gulf of

Mexico ten miles south, there were colorful birds other than ducks—ibis, herons of all sizes and hues, pelicans sailing in comic silhouette. Why hadn't I found this country years before? Why be bitten by frost and snow when this hospitable land was here to enjoy?

The day before, I'd flown over the Everglades area from Naples south to Shark River, north to Immokalee. Extending for 30 miles east of Naples were dozens of small fresh waterways flowing into the salt water of the Ten Thousand Islands that laced the Gulf. Between these waterways were hundreds of ponds and meandering lakes. And on the airplane flight I hadn't spotted twenty boats in all that big domain.

Most local hunters confine duck shooting to Saturdays and Sundays. The concentration of guns moves birds and increases the flight shooting. On a week day you may have to pole through the winding channels for two or three hours to jump-shoot a limit. Of course, you can take a fly rod along and tie into tackle-busting snook to fill out a reasonable day.

The secret of the good shooting is partly the game preserve north of the Trail. The preserve provides a rest ground and concentration area for waterfowl.

Are guides required? The answer is no.

Access to the area in a practical sense is keyed to bridge numbers. Beginning at the north Collier County line on Route 41, you cross Bridge Number One. You'll cross a hundred more before you are halfway to Miami on the Trail. These bridges are your landmarks, or milestones.

Could you get lost, spend a night of horror in the insect- and reptile-ridden "glades"? It's possible, but it would take a lot of mismanagement.

Rudimentary precautions are these: Before you go, tell a friend your bridge number of departure. Plan to get back to the Trail by dark. Take a compass. If ever in doubt, prepare for the trip by snitching a piece of old bedsheet from home, tear it in strips and tie the strips on prominent snags as you work in from your starting bridge.

In dry years rugged individualists hunt into the sea of grass

and water on foot. It's tough going but productive. Canoes or small boats of car-top category are by far the best means of entry.

There *are* snakes; the moccasin, and perhaps rattlers on higher islands. But if you drop your birds in open water and use care in looking for those that drop on land, danger is far less than in highway driving.

Doubling a heavy swatch of wild hay under me, I relaxed, watching the clouds and cattails leaning before a slowly rising wind. By now the first flight of the day had left the sky. Only singles and an occasional small formation traveled over high.

A lone teal came upwind, zigging and quartering the long way of the pond. I dropped it out front and settled back. Walt's gun roared twice and he yelled. That would mean his limit.

Another teal corkscrewed in and I dropped it with the only prideful shot I could claim for the morning. Five minutes later the bow of the canoe poked out from the grass.

I pointed out my birds and Ted collected them.

Walt waved us toward a down bird on the water as we rounded

Fishing, too, is good along the Tamiami Trail.

the line of mangrove. He climbed in with two mallards and a pintail. With limits aboard we broke out lunch.

Stripping paper from a sandwich, Walt said, "I heard you whistle those pintails down, Chaz. Get plenty of shooting without it, but a man from Minnesota down here two or three years ago sure worked the mallards over with one. He'd pinch his fingers around the mouth of his call—sort of choke it down into a thin quack and make the teal come for it, too."

"Remember old Doc?" Ted asked. "He always used a dozen or so decoys. Right on this pond."

"Quite a guy, the Doc. Once he wrote up north for some duck food plantings and tried to start it in here. But it never took hold. According to him, with more food the area could support ten times the ducks it has now."

Back in the grass, mudhens fussed. Presently we threaded our way through the channel toward the Trail. A carload of snook fishermen were fly-rodding the canal on the north side of the road. We asked what luck.

"Slow," a rod wielder replied. But two 4-pounders lay in the grass beside the pavement. A baby tarpon jumped a yard and threw a yellow streamer fly five feet.

As we rolled west toward Royal Palm, we saw 2-foot alligators sunning themselves on the canal bank. Grass ended and pines began. At the distant end of a long ridge, tops of heavy cypress raised a barrier of lighter green.

"Always turkey in there," Ted said.

Driving, Walt opined he'd like to get the dogs and spend the afternoon on quail.

"I'll buy it," Ted said. "But first, I just happened to remember it's an extra low tide today, and under the bridge going into town is a scrumptious oyster bed. How about gathering a bushel to stuff the Christmas turkey?"

So we bought that first.

Everyman's Game Fish

design by Charles Harper

THE LARGEMOUTH BASS brings game-fishing within reach of practically any fisherman in North America. This brilliant fighter, an inhabitant of both lakes and streams, is the backbone of the nation's major artificial bait industry, for it is to him that the bulk of all plugs, spoons, and spinners are cast. He also strikes wet and dry flies. The largemouth, like its cousin, the smallmouth, will take live bait as well and, once netted, he provides a flavorsome meal. The largest one on record was a 22¼-pounder taken from a Georgia lake.

Strange Beasts of the Border

by Oren Arnold . . . paintings by C. H. Roberts

On a golf course near Fort Worth an Easterner socked his ball down the fairway. "Look!" he cried—then, "There's a big bird after it! Pecking it along, trying to swallow it!"

It was true. It has happened many times on golf courses in the Mexican border states. The bird was *paisano*—meaning "fellow citizen" in Spanish—but better known as the Road Runner or Chaparral Cock. A member of the cuckoo family, he is distinguished for his long bill, longer legs, and ludicrously long tail. He is the comedian of the desert. He will pop out of the brush and challenge your car to a race—and win until you pass his clocked speed of forty m.p.h. He is agin flying, although he can take off for a hundred feet or so if need be. Surveyors, dragging their bright chains, will find *paisano* running along pecking at the links. If they stop, he will stop and glare, waiting for the fun to resume.

His coat is a speckled patchwork of many colors, making him resemble a skinny guinea. His voice is an "oo-oo" at mating time and a "cook-cook" chatter when he is around human beings. He eats lizards and snakes, even including large rattlers, which he is able to attack and kill. You can find him with a reptile half swallowed, the tail dangling for hours; as the front end digests, more is swallowed. He also may bedevil the larger snakes, making them strike repeatedly until exhausted, but always nimbly hopping out of danger.

Because of his popularity, strict moral law protects *paisano*. New Mexico has made him its state bird. *Paisano* is but one of

Cliff Roberts

Cliff Roberts

many strange creatures Nature has placed exclusively in the Texas-to-California border country.

Arizona's state bird, the cactus wren, is almost as renowned. Travelers come there prejudiced in its favor, expecting the dainty little feathered wren of the Eastern states. But this cactus fellow is tough and he-man in both stature and habits. He is bigger than a mocking bird, and as fearless. He builds a long, bottle-shaped nest in a cactus, then builds two or three dummy nests some hundreds of yards away to mislead enemies; he will hang around a dummy home while Mrs. Wren does the hatching. Mrs. E. D. Ryder, wife of a rancher near Phoenix, hung Mr. Ryder's white shorts on her clothes line, and two days later found that cactus wrens had built a nest in one leg! Mr. Ryder ordered all disturbances around the clothes line to cease until those nestlings could fly away.

The horned toads—which are really lizards—are common in the Southwest. Many children keep them as pets, and many more are tied with dainty ribbons and shipped east as tourist sou-

The Gila Monster

venirs. A large one is no bigger than a lady's hand. Horns are all over its body, but are short, stubby, and harmless to human flesh. Some species can "spit" blood from tiny eye sacs as far as four or five feet—apparently a provision for frightening such enemies as dogs and cats. No other animal is known to do this. Other species have a vestigial eye in the middle of the forehead. The little creatures inhabit the sand and rocks, eat mostly ants and small insects, and live with very little drinking water. A mother horned toad with ten or fifteen postage-stamp-size babies around her is one of the most intriguing families in the region.

A beast armored in orange and black is much more fearsome. It is one of two known poisonous lizards; a stubby, sluggish one about 18 inches long, called the Gila monster because it is most plentiful in the Gila River country of Arizona. It seldom attacks man, but if provoked will bite. It has no hypodermic teeth, but has grooved lower fangs. Thus when it strikes it must turn upside down to allow poison to flow into the wound. Death can result, although authorities disagree as to the potency of the Gila monster.

Real villain of the Southwest—if we can believe the tellers of lurid tales—is the rattlesnake. He supposedly lurks everywhere, but many people live in the Southwest for a lifetime and never encounter one rattler. Moreover, *every* state has rattlesnakes, and one on the Atlantic seaboard has quite a few.

The bite of any rattler is extremely dangerous, even of young ones only a few inches long, but 85 per cent of the people who do get bitten by rattlers live to boast about how brave they were.

Strangest of the border rattlers is the side-winder. Making him, Nature obviously was in whimsical mood; she designed him to move not forward as most creatures and all automobiles do, but *sideways.*

No traveler to the arid Southwest—if he be outdoor-minded at all—can be fully happy until he has "taken" at least one set of rattlesnake rattles as a trophy to show the folks back home. Hence, there is an active business in selling them through souvenir stores—just as fish markets tactfully help out fishermen whose terrific catches get away.

"Salmon Fishing," a Currier and Ives print in the collection of the Boston Museum of Fine Arts.

Poor Man's Salmon Fishing

by Edmund Ware Smith
paintings photographed by Sargent Collier

THERE used to be such a thing as a traditional, or standard, salmon fisherman. You don't see him so often these days except in Scotland. He was interesting—not so much as a person as an inventory. He was prevalent in June in Boston's North Station boarding the night train for Fredericton, or Saint John, New Brunswick.

This nameless old curmudgeon was more forbidding than distinguished. He had dined at the Union or Somerset Club, and the barber had trimmed his white mustaches. He wore

Harris tweeds, plus fours, plus heather cap. His porter stowed several leather cases in the drawing room, and got the old gentleman settled. In return for these attentions, the porter received a one-dollar bill, which, along with others of much doughtier denomination, had been withdrawn from the State Street Trust that afternoon.

It is likely that this grim old citizen owned or leased some of Canada's creamiest Atlantic salmon water, say on the Restigouche, Upsalquitch, or Margaree. You may be sure it was sternly patroled.

Assuming that he is now dozing over his Barron's *Financial Weekly,* let us examine his tackle, which he calls gear. The reels are Hardys or Vom Hofes, and are equipped with Hardy Corona Superba, or Mills Transpar lines. The old gaffer's gaff, leather-cased, hand-sewn, is a wondrous thing of steel and mahogany. His flies and leaders come respectively from Scotland and Spain. His waders are Scotch, and so is his whisky.

He is accompanied by four rods, two of them 16 feet long, with a grip above and below the reel seat. They weigh about 1½ pounds each. The other two are grilse rods of about 12 ounces, useful these days for beating rugs, if your vacuum cleaner is on the blink.

There sits your one-time standard salmon fisherman. He has created a fallacy that salmon fishing is more expensive than horse racing. He is not dead yet, but he is fading away. There is, at last, such a thing as poor man's salmon fishing.

We are dealing mainly with Atlantic salmon, which return at intervals to their parent streams from the sea to spawn, and do *not,* like all five Pacific species, die shortly thereafter.

A "bright" salmon is fresh run from the sea into its parent river; a "black" salmon is one which has spawned, has wintered in the river, and is running down to sea again; and a "grilse" is a young salmon making its first return to fresh water to spawn. The grilse is indistinguishable from the landlocked salmon of Maine, New Brunswick, and Quebec Lakes, except by microscopic examination of the scales. Growth rings on the grilse's scales would indicate salt-water feeding. Both salmon run from

2½ to over 5 pounds, and their tactics when hooked are the same—which is to say, aerial—especially when taken in fast water.

The landlocked salmon, because of the connotation of its name, is often supposed to be strictly a lake fish. The fact is that the landlock is happiest and most sprightly when in fast water, especially in spring and early summer. Soon after the ice leaves the inland lakes, the landlock likes to find a swift-water inlet or outlet, where he seeks food or aeration. Best landlock fishing in the United States, bar none, is in Maine. It seems a pity to name so few of Maine's so many notable streams, but take a cast in Kennebago, the upper Kennebec, parts of the Penobscot and Grand Lake Stream.

However, lake fishing occupies a majority of landlock specialists—chiefly because there is more lake room. The landlocks are most active for about six weeks right after the ice goes out. Thousands of winter-weary fishermen await those brief bulletins broadcast by newspaper and radio that run something like this: "April 27. Ice cleared Grand Lake. Salmon fishing good."

Fly-casting the lake shores from a canoe is second only to stream fishing. Early in the season, landlocks are near the surface and close to shore in search of smelt and chub—their favorite spring diet till the first big hatch of flies. Standard bucktails or streamer flies are first choice in early season—Mickey Finn, Supervisor, Gray Ghost, Black Ghost, and the Tiger series.

The two most famous Maine lakes are Moosehead and Sebago, with Grand Lakes (two of them) and Eagle Lake in place position, for my money.

When the first long hot spell comes, the landlocks take to the cool, deep holes, and you troll for them with a long line, live bait, spoons and sinkers. Sometimes there is surface feeding again in early September.

To return to the landlock's larger sea-going relative, the Atlantic salmon: "Black" salmon fishing in New Brunswick has increased startlingly during the past few years. Not as plump and streamlined as its "bright" counterpart, the blacks are powerful, theatrical, and far more dependable. That is to say, in April, having wintered in their spawning river, they are so

"Saguenay River, Lower Rapids," a Winslow Homer watercolor in the collection of the Worcester Art Museum.

hungry that they provide quick action. Remember that the only difference between a black salmon and a bright one is that the black is headed down river, and the bright up.

Many a fisherman gets results on black salmon on the Miramichi merely over a week-end. New Brunswick alone gave an even thousand non-resident Americans good black salmon fishing in six weeks last spring. Recommended rivers are the northwest and southwest branches of the Miramichi, and the Tabusintac, all flowing toward New Brunswick's east coast. For some reason a spring run of fish seems peculiar to these rivers. But the great prize, of course, is the bright salmon, fresh run from the sea. You can reach his parent river, find him, and catch him on a single-handed 6-ounce trout rod, today, for about three per cent of what it cost that old gaffer to get himself aboard a train. Use your sturdiest trout or bass fly rod, and splice a hundred yards of backing-line to your casting line.

The first authentic record of an Atlantic salmon taken on a trout rod on a dry fly dates back over thirty years. The fisherman was Dr. Charles E. B. Chase. The place was the mouth of Burnt Hill Brook on the southwest Miramichi. The rod weighed 5¼ ounces; the salmon, if I am not mistaken, 18 pounds. The fly was a Gray Palmer. The event was the most thrilling of Dr. Chase's long experience as a salmon fisherman. Ten years later, from the same pool, Kenneth A. Reid, of the Izaak Walton League, hooked a similar fish on a Fanwing Royal Coachman on a 5½-ounce rod. That fish got away. I saw it. It jumped all over the river, the bright, white fly still in its jaw.

This second episode is significant. There were six of us in the party, and four of us were using ordinary trout rods. That was in 1928. A season's salmon license (plus trout, pickerel, and bass) costs you only $20.50, and *includes* your wife and your children under eighteen. For $7.50 you can get a seven-day license, with the same inclusions!

This is for New Brunswick, which believes in poor man's salmon fishing. Whereas once much choice Crown water was under lease, New Brunswick now has 1,438 miles of open angling water (rivers) and 132 open lakes. Total leased water is now only 357 miles (rivers) and 11 lakes. The policy is to return leased waters to the open-water status, whenever possible. The result is that almost anyone can catch a salmon without paying forty dollars per day, per rod.

Seventeen stretches of formerly leased water opened up to poor man's fishing in 1947 and another 123 miles of rivers and forty-five lakes in 1952. These freed waters are on such famous rivers as the Tobique, Nipisiguit, Tabusintac, Cains, and northwest and southwest Miramichi. Complete information may be obtained from the Hon. R. J. Gill, Minister of Lands and Mines, Fredericton, New Brunswick, Canada, or from Ministers of Lands and Mines of Quebec and Nova Scotia.

Interesting rumors of Atlantic salmon have been coming out of Maine recently—dividends to landlock fishing. George Stobie, Commissioner of Inland Fisheries and Game, substantiates them. Maine's better known Atlantic salmon rivers are the

Penobscot, St. Croix, Pleasant, Narraguagus, and Dennys. These rivers have been under development for several years and are showing results.

There are four main points of encouragement to poor man's fishing: (1) More salmon. (2) Canada's marked increase in open-water mileage. (3) Explosion of the expensive tackle myth. (4) Transportation—the old gaffer blew many crisp bills on railroad transportation, but the roads in his day were not inviting; in our day, they are. (A party of five salmon fishermen can drive from Boston to Bathurst, New Brunswick, where the Nipisiguit empties into Chaleur Bay, for less than ten dollars worth of gasoline—not two dollars apiece.)

The season opens in April on the Restigouche. It closes on the Big Tracadie, Jacquet, and Tabusintac not until October 31. Overall, that's seven months. Poor man's salmon fishing has arrived.

"Canoe in Rapids," a Winslow Homer water-color in the collection of the Fogg Art Museum.

Duck country such as this is easily reached by swamp buggy

Swamp Buggies

story and photographs by Robert P. Holland

Down in the palmetto swamps of southern Florida, in one of the country's sweetest patches of duck country, necessity has mothered another invention.

The necessity is for hunters to get over gummy land often covered inches deep with water and feet deep with grass that conceals differential-cracking tree stumps. The invention is the swamp buggy.

Fit four airplane tires and a six-speed transmission onto a Model A and you have a swamp buggy. It is getting to be quite a common sight in places where the average asphalt-loving car can't go. Not only duck hunters, but quail hunters and surf-casters are discovering them.

Nothing much will faze a swamp buggy. It can leave the concrete, go across open country, traverse the logging roads and spin across soft beach sand, all with equal nonchalance. It takes joyfully to any terrain that would make a city-bred car balk and head back to the garage.

Judge D. C. Jones of Naples, Florida, owns one of these web-footed hot rods. The front wheel tires are 42 × 15.00, the rear 45 × 18.00. There are four forward speeds, two reverse. The Model A body has been converted into a light truck to carry dogs, or bench seats can be let down to accommodate half a dozen hunters. Gun boxes have been installed above the rear fenders.

The beauty of Judge Jones' buggy is in the clearance as much as the support given by the big tires. The outfit will clear a 16-inch stump between the wheels and the differential, and there is a 14-inch clearance under the differential itself. For extra-tough going Judge Jones carries a set of chains for the rear wheels, and brother, do *those* make the mud fly!

Muck and swampland won't faze this converted Model A

These are young barn owls. Staunch friends of farmers, they will eat many rodents before old age.

Kind Words for Bad Birds

by O. A. Fitzgerald . . . paintings by Charles Culver

THOMAS D. BURLEIGH, a bird expert with the U.S. Fish and Wildlife Service, has spent much time and traveled many miles just looking at birds. He started at the age of six, when he was just big enough to raise his eyes over the rim of a robin's nest, and has continued through the years, and through forty-four states, six provinces of Canada, most of Labrador and Mexico, and part of Europe. Mr. Burleigh has become a one-man Book of Knowledge on everything in feathers, and also the fastest man to raise his voice when a bird's reputation is slurred.

Anyone who makes an unkind remark about an owl, a hawk, a magpie, a woodpecker, or even a buzzard, within earshot of Mr. Burleigh will soon find himself eased gently into a corner and firmly given a lecture on the good qualities of so-called bad birds. Shooting them indiscriminately, says he, is one of the great mistakes of this generation.

Quartet of baby long-eared owls, also great eaters of mice. On the opposite page is a golden eagle.

His attitude goes even so far as to include the rough-legged hawk, whose very name causes farmers to reach for their shotguns. This saddens Mr. Burleigh greatly. He has found hawks among the finest pest-control experts in feathers. They keep field mice in line, and when they attack they go after sick and injured animals first. Moreover, they dispose of the bodies of dead animals and help prevent disease in field and forest.

Not long before Christmas, Mr. Burleigh had a rather ironical experience with a rough-legged hawk. A forestry student at the University of Idaho had found the body of one of these predators hanging from a farmer's fence. Whoever had shot that bird had hung it up as a lesson to other hawks or a symbol of his contempt for them. Mr. Burleigh opened the bird up to examine its last meal. This had consisted of exactly twelve mice. The irony lay

in the fact that the farmers of the region had been complaining of mice and were about to spend money exterminating them.

Even the great horned owl—generally regarded as the meanest of all flying killers—gets credit for some good deeds in Mr. Burleigh's book. He was studying quail along the Gulf Coast a few years ago at a time when the birds' eggs were being devoured wholesale by skunks. Investigation showed that the great horned owls—there were only a few left—were the quail's only friend. They delight in skunk meat. Mr. Burleigh examined one that had eaten so many skunks it had to be handled out of doors.

Although he is in the vanguard of the minority party where predatory birds are concerned, Mr. Burleigh does not automatically place a halo on every feathered killer. He has seen more than one hawk with a chicken in its claws, more than one owl ripping up a peaceful nest, and more than one kingfisher with a trout in its bill.

"When a bird becomes a persistent killer," Mr. Burleigh says, "there is, of course, justification for getting rid of it. But seldom is there any justification for shooting hawks and owls out in the woods."

With his name attached to 175 books, pamphlets, and technical papers on birds, and with twenty years in the Wildlife Service, Mr. Burleigh finds himself justified in applying Father Flanagan's philosophy—that there is no such thing as an all-bad boy—to some of the birds that get the smoky end of the gun from trigger-happy humans. He will come to their defense just as readily as a poet will write about a nightingale.

"Some individual birds have bad habits," he says, "but so do some people. Just because a left-handed thug cracks a safe do we jug all left-handed people? The important thing is to consider the eating habits of a whole species, not those of a single bird.

"Besides,"—here Mr. Burleigh went back to hawks and came up with a generally unknown aspect of their character—"hawks get penalized for having a sense of humor. I've seen them swoop down and scatter a covey of birds without touching a single one. They probably fly off chuckling with glee. Many people see this

Pelican

and assume the hawk tried and missed. Don't underestimate him. When a hawk has blood in his eye he never misses, but often he dives for fun—and the reward is a hail of buckshot.

"Turkey buzzards come in for the same rough treatment. Some years ago there was an epidemic of hog cholera in the South. Farmers blazed away whenever they spotted a turkey buzzard over some carcasses. The scientists of the Wildlife Service moved in when they heard of the buzzard slaughter, and they found that the buzzards weren't spreading cholera—they were helping to confine it. They were eating dead hogs, and their digestive juices were killing the germs.

"Twenty years ago people were massacring pelicans in Florida on the grounds that they were eating too many fish. Once again the Wildlife Service moved in—and again they found the birds not guilty. It was true that the pelicans were eating fish, but 99 per cent of them were eating non-commercial fish, the kind fishermen had no use for."

Out in the Rocky Mountains, golden eagles are currently under indictment, but Mr. Burleigh is, has been, and will be volunteer attorney for the defense. That they are responsible for the disappearance of lambs and goats he stoutly denies. He has examined the entrails of many golden eagles and found absolutely no evidence for a conviction.

Mr. Burleigh is even a friend of the long-eared owl. He says he never saw a long-eared owl touch anything but a rodent. He insists that the bird has as much right to full citizenship in the bird world as peacocks and swallows.

After studying the habits and manners of almost every kind of bird over a considerable period of years, Mr. Burleigh feels they all belong in songs and poems along with the warblers and the thrushes. He proclaims friendship even with magpies, preferring to consider their appetite for insects more important than their noise and nasty habits.

"Even the robins get cussed out during cherry season," Mr. Burleigh says. "People are overjoyed at their arrival in spring, but when they peck into some fruit I get calls asking how to drive them away. They sing and they eat insects, so why not let them have a few cherries? They earn them."

This carries forbearance to lengths that might give a cherry grower some dismay. But Mr. Burleigh has marshalled the evidence for the defense. He is one of the birds' best friends.

Kingfishers

Cecil True of Spokane, Washington, holds a giant Kamloops trou

World's Biggest Trout

by Bob Miller. . . photograph by Ross Hall

WHEN Idaho sportsmen stocked Pend Oreille Lake with Kamloops trout, they weren't expecting miracles, but a miracle happened. Lake conditions were so favorable that the fish reached phenomenal size—even the whopper shown here is commonplace. Catches here have made northern Idaho the unchallenged Rainbow Trout Capital of the World.

The panorama that rolls past the windows of your car as you drive Highways 95 or 10-A through northern Idaho is pure Technicolor. This land of shining waters and big mountains includes the ten counties which form the long narrow panhandle separating Washington and Montana. It is an area of unspoiled beauty.

In it are the Bitterroot Mountains on the Idaho-Montana border; the Selkirks, rolling in blue waves up into Canada; the Cabinet Range, shouldering down into the Coeur d'Alenes; and the majestic slopes of the vast Selway-Bitterroot primitive area.

In this land of mountains are three of the grandest lakes ever fished by man. Southernmost of them is Coeur d'Alene, and far to the north is Priest Lake, nestled in the Selkirks. In the middle is the Big Hole—Pend Oreille Lake, the Rainbow Trout Capital of the World.

Pend Oreille defies superlatives. Nearly two hundred miles of shoreline circle its tremendously deep water. In it are the world's largest rainbow trout.

In 1942, the sportsmen of Bonner County, much of which is under the cold, green water of Pend Oreille Lake, obtained some Kamloops trout from British Columbia and planted them. Conditions in the big lake were so ideal that the fish hurriedly outgrew their Canadian forebears.

In 1947, at the close of the opening day's fishing, an angler weighed in his catch at an even 36 pounds, an all-time record. In November the record was broken—by a 37-pounder.

The big fish are taken all summer long, until the season closes November 30; and every strike is a potential world's record.

If your tackle is not heavy enough for a fight with one of these leaping, smashing hunks of brute strength, have no worries. You can get complete gear from the charter boat operator or the resort owner. If you come equipped for salt-water fishing, you probably have about the right tackle. This is what you will use: a steel or stout bamboo trolling rod equipped with a big star-drag reel, at least 600 feet of 18- to 36-pound test line, a 27-pound test steel leader, and several lures.

Lures, of course, come in as many assorted sizes and shapes as do the fishermen who use them. Real killers have been the Roy Self wobblers, FST spoons, Martin and Minzer salmon plugs. But the fish, small or large, are not particular. One 36-pounder was landed on a surface bass plug less than 2 inches long.

The limit of Kamloops is one a day, and you won't want to quit when you have that. So out comes your favorite trout rod or trolling pole, and you change to different lures—flies, flashers, or just plain worms—and go out after fish which fit better into a frying pan.

Bluebacks swarm in the lake, and there is no limit to the amount you may catch. In addition, native cutthroat trout, big and fat Dolly Varden or charr, bass, perch, bluegills, whitefish, and bullheads make mighty interesting fishing.

Tourist accommodations at Big Hole are good, with a wide variety of lodgings available. The Sandpoint Chamber of Commerce maintains an up-to-date list of accommodations for which reservations may be made.

Idaho has a special five-day tourist license for $3, and a season license for non-residents is only $10. Bag limits are generous, and your family can eat fish to their heart's content, whether you stay in town or at a lake cabin, or camp in a Forest Service clearing in the Kaniksu National Forest, which surrounds the lake.

Heavyweight Fighter

design by Charles Harper

THE RAINBOW is the heavyweight of the trout family and a leaping bronco on the end of a wet line. He's a Westerner, but transplanting has introduced his iridescent coat and brilliant side band of color to most of the United States. His cousin, the steelhead, goes to sea, grows silvery and large, and returns to fresh water to spawn and provide outsize sport for fishermen. Rainbows run up to 8 pounds in streams and fresh-water lakes, but steelhead may reach 40 pounds of untamable fury. The Kamloops is another outsize rainbow, found in British Columbia and Idaho.

Plug casting for shad is a growing sport in the East.

Florida Shad Run

by W. D. Kennedy . . . photographs by Charles O'Rork

THE STRANGEST character among our fresh-water game fishes is the shad.

His permanent home is not in fresh water at all, but deep in the ocean. To enable him to withstand the pressure of the water at the great depth where he lives, his bone structure contains an amazing assortment of arches, struts, cantilevers, spreader-bars, angle irons, and I-beams. He's the best engineered of all fishes. And the bones may be responsible for the shad's renown among epicures, for it is well known that the best meat is nearer the bone.

For some reason, shad parents find the bottom of the sea unsuitable for bringing up their young. Therefore, early in the spring, millions of them run up our Eastern rivers to spawn. Thereupon begins a feast which, in some localities like Chesapeake Bay, rivals Thanksgiving in importance.

After placidly devouring thousands of tons of net-caught shad during the last three hundred years, the sporting world was electrified a few years ago to discover that a shad would strike a fly or a spoon. More than that, he is a tough, stubborn fighter when hooked.

One recent January, while we were in Orlando, Florida, the news broke that the shad were running in the St. Johns River, a 200-mile swim upriver from the ocean. Thereupon the aroused citizenry assembled rods, reels, outboard motors, and fish boxes and took off for the fishing grounds, a few miles to the east.

We sent Charley O'Rork, local photographer, out in a borrowed float-plane to cover the event in color. Late the same afternoon we drove over to get the story. The method was simply

Casting from pontoons requires technique and equilibrium.

to find the right pools and troll over them at the right speed with the lure at the right depth. The lure used was said to have come from the Keys and was called a Barracuda Spoon. We learned later that down on the Keys it is called a Shad Spoon. High boat of the day was Arthur Yale's, with forty-two fish ranging up to 5 pounds.

The Connecticut River, near New York, claims to have been the scene of the earliest and most extensive experiments in catching shad by hook and line. There are many other places where similar experiments would undoubtedly be worth trying; in fact, the shad run is thought by many to represent one of the most important undeveloped sport-fishing resources of the Eastern states.

And the experiments are very rewarding. Not only is the meat pleasing to the palate, but the female shad is a double benefactor of mankind—she carries roe rivaled in flavor only by the eggs of the sturgeon. In terms of modern mythology, the she-shad is a sea-going shmoo.

Shad fishing on St. Johns River, Florida.

A band, pouch, frame, and tie-strings make up a slingshot.

Slingshot Huntsmen

by Noel Jordan
photographs by J. P. Breeden, Jr., and Robert MacKenzie

WHEN John "Slingshot" Milligan came to Detroit to work at Ford's from "a little wide space in the road near Marysville, Tennessee"—this was back in '29—he brought an idea with him. He was convinced that the old forked-hickory slingshot he had used as a boy in school could be made into a real hunting weapon. He saw it as a strong rival to the bow and arrow for sportsmen who wanted to give their quarry a fighting chance.

Since then Slingshot Milligan has gone a long way toward proving his point. A club of enthusiastic slingshot hunters is now a recognized unit in the Ford recreation program, an indi-

—The proper grip insures a steady aim with the "Milligan Special."

cation that the sport is becoming formalized. The club takes turnabout with the riflemen and the bowmen on the range.

Milligan's chief contribution to the sport, aside from his enthusiasm, is the Milligan Special—a 7-ounce alloy aluminum crotch with a special gum rubber band 11 inches long, which is good for some 1600 shots.

The ammunition is fully as important as the sling. For hunting, the club uses a 7/16-inch lead ball which is heavier than the steel ball-bearing normally used for target practice. The true flight of one of these balls is a thrill to anyone accustomed to the erratic course of a pebble from a homemade slingshot.

Slingshot Milligan claims as kills hundreds of rabbits and squirrels, numerous crows, pheasants, groundhogs, frogs, and an occasional snake. He has shot with the Detroit police at their pistol range, scoring an 87% average at a distance of 30 feet.

The slingshot, more than any other weapon, puts a premium on continuous practice. There are no gunsights and no arrow for sighting. It is all hip-shooting.

To practice at home, advises Milligan, just throw an old piece of medium-weight canvas over a clothesline or over a water pipe in the basement. Then shoot at a marked target in the center, and the balls will drop harmlessly to the floor.

A fascinating thing about slingshot hunting is that there are so many records still to be made. Has anyone killed the first fox with this weapon? The first wild duck or goose on the wing? The silence of the slingshot has advantages, too. One man is going for partridge in the north woods with a gun-shy setter.

The club hunts small game in the fall and varmints—especially crows—the rest of the year. Crows, when they flock up, will attack a stuffed owl en masse, making a fine target for the hunters concealed below the decoy. When hunting with a crow-call, the men use the stalking method—take a step and wait—take a step and wait.

"The slingshot is an interesting weapon, and provides a good, clean sport," Milligan insists. "There is no reason why it shouldn't have an honorable place in recreation. It is quiet and inexpensive. All emphasis is on skill. Try it and see."

—A stuffed-owl decoy will attract crows to waiting hunters.

Full Moon Music

by Burgess H. Scott . . .
decorations by C. H. Roberts

WHEN a full moon beats down on the hills outside of town, and a dampness hangs close to the earth, hounds are whining in their kennels and foxhunters are stirring to life.

This foxhunting is not to be confused with the sport engaged in by mounted ladies and gentlemen in pink coats. For the country hereabouts is a stronghold of a type of foxhunting which never fails to baffle the uninitiated.

This East Tennessee type of foxhunting consists, briefly, of standing out in the open and listening to the baying of an unseen pack of hounds hot on the trail of an unseen fox.

Once, maybe twice, the trained pack will aim the chase so that the hunters can get a glimpse of the fox and his pursuers, but that isn't necessary. The music of the pack is the thing.

For all the fervor of the hunt, neither the men nor the hounds care a hoot about catching the fox. After they have had their fill of hunting—usually about dawn—they pile into their cars and go home, giving the fox free run of the hills.

Dewey Graybeal and Homer Jones were among a group of local sportsmen who arranged a chase to show a flatlander the pleasures of their type of hunting.

Although several hound breeds were represented in the pack, the most prevalent was the Walker hound, a big, tireless,

black-tan-and-white hunter. To the newcomer the Walkers all look alike and sound alike, and he puzzles over the hunter's ability to identify this dog and that dog from the midst of the din.

But to the fox-hunter's acute ear the voices of hounds have as much individuality as the voices of people. They have separated the baying of hounds into neat categories and, although it is impossible to describe them, fox-hunters know exactly what is meant when a dog is said to have a "short, choppy mouth," a "coarse, flat mouth," or a "big, round mouth."

A round hilltop, covered with ox-eye daisies and overlooking a broad valley, was the place the hunters chose for listening to this hunt. A fire was built, for warmth and to heat coffee, and the hunters' activities for the night were over. All that remained was to stand by the fire and listen blissfully to the distant baying.

The hunters stood in a solemn circle, backs to the fire and hands clasped behind. The sound of the chase came clearly to the hilltop, and the men would comment now and then.

"There's Old Scott coming up fast," one would say.

"Old Daddy Wheeler's out there in front," another would put in.

One by one the hunters would single out the dogs, recognizing Doughboy and Gale, Mike and Snow, Stumpy and Fletcher.

They identified the individual dogs, and named their positions in the pack. One hunter heard enough to enable him to describe the fox.

"That's a nice fox," the man said. "He's a long-legged little scutter."

Since the hounds start barking as soon as they are released, it would appear difficult to determine when they are actually on the trail of a fox. But not for the hunters. Dewey Graybeal explains it this way: "They bawl lonesome-like on a cold trail, but as it gets hotter they whine and cry like they're gonna die."

Fences hereabouts have taken terrific wallops from the hounds. Say the chase is on at a furious pace and a fence looms in the fox's path. The fox filters through as if nothing were in the way, but the pack whams it at full throttle.

"When that happens," said Homer Jones, "you can hear staples squeakin' ten or fifteen rods either way."

A grown, fully trained dog costs from $150 to $300, although there are many, principally those at stud, which bring vastly higher prices.

But Homer Jones summed up the average hunter's feeling about the value of a hound: "Some nights you wouldn't take $10,000 for him; other nights you'd be willing to give him away."

To the summit of General Stark Mountain, Mad River Glen, Vermont.

Summer Ski Lifts

by Frank Elkins . . . photographs by Eric M. Sanford

SUMMER tourists today can be grateful to skiing, the sport which has made it possible for them to reach mountain tops hitherto beyond reach except for the nimble-footed. The skimobile, the aerial tramway, and chair lifts designed to give thrill-bent skiers the most of a day's running down the snowy landscape are growing popular during the warm months.

Throughout this country's snowbelt—the lofty Presidential Range of New Hampshire to the Cascades of Washington—these uphill contrivances are heavily used to lift visitors easily and comfortably, sitting down, to new worlds with breath-taking vistas.

Chair lift in the Belknap Range of New Hampshire's White Mountains.

At the summit, where in winter the skiers concentrate on their schusses and slaloms, the summer tourist finds many things to interest him in his more leisurely program. There are picnic sites and camp sites complete with cooking facilities.

Even in transit, while the chairs silently and safely haul him to the summit, the visitor can spot wildlife and birdlife in their natural habitat. This is particularly true in New England, which is today served by many lifts, the skimobile, and the aerial tramway. Out in the West, which took to the ingenious "uphill only" and now "downhill, too" after New England had set the fashion, deer and elk, unmindful of the figures dangling like watch fobs in the air, amble along below.

These trips up the mountain are simple, leisurely, and breathtaking. There are no hazards attached to riding a chair lift. It is possible that the novice might experience a slight touch of vertigo as at first he looks downward, but this soon passes. In the

Skimobile from Base Station, Mt. Cranmore, New Hampshire

East, apart from the tramway at Franconia, New Hampshire, there is never too much height between the passenger and the ground. The lifts are operated at a slower pace during the summer to give the tourist a better view during the ascent to the mountain summit. The ride is inexpensive and holds more than a fair amount of safe thrills.

Regions difficult to reach are brought within easy reach of the summer chair-lift climber. And it is interesting to note that many of these mountain-climbing devices actually do more business in summer than in ski season. Roger Peabody, head of the famous state-owned aerial tramway at Franconia, New Hampshire, says, "Our winter loss is nullified by our summer business. During the thirteen years of operation, summer passengers have averaged two to one over the winter traffic."

The non-skiing lift season, once July and August, now has been extended far beyond Labor Day. Last fall, favored with a long period of colorful foliage, the lifts continued through October in the East. As Roland Palmedo, director of the Mad River Glen chair lift in Waitsfield, Vermont, tells you: "We had to oblige the requests of tourists as well as state authorities to remain open late, since the riot of color viewed during a ride up the mountain was breath-taking."

Chair lifts are the most commonly used transportation, winter or summer, but the "kiddie-car" skimobile on Cranmore Mountain in North Conway, New Hampshire, is extremely popular, too. There is a vertical rise of almost 1,300 feet, during which you get an awe-inspiring view of Mount Washington, the entire Presidential Range, Moat Mountain, and the sharp peak of Mount Chocorua. This skimobile contraption is the simplest of them all, since the passenger is on the ground, and moves along slowly until the halfway point is reached. All during this time, he is seated with legs outstretched on the platform of the "kiddie-car," and the world, it appears, slowly spreads out behind him. Picnic grounds are located at the base station and also at the summit.

The skimobile can carry a thousand passengers per hour on the lower unit and six hundred per hour on the upper section.

Aerial tramway at Franconia Notch, New Hampshire

Passengers are thus able to start the ascent with little or no waiting even when traffic is at a peak. The skimobile transports the passengers up an inclined track in two sections for nearly a mile. According to Phil Robertson, manager, operations start on Decoration Day and run at least through Columbus Day. Last summer 75,000 persons were carried up the skimobile.

Throughout New England the chair lifts stand vividly against the landscape during the summer months. Mount Mansfield in Stowe, Vermont; Mount Sunapee in Sunapee, New Hampshire; and Thorn and Black Mountains, both at Jackson, New Hampshire, are some of the other popular chair lifts in the area. However, these uphill mediums are common throughout North America, with Mount Tremblant, Quebec, and Mount Norquay in Banff, Alberta, the standout ones in Canada, while in this country, you've got Sun Valley, Idaho; Aspen, Colorado; Alta, Utah; and Squaw Valley in Lake Tahoe, California, to mention just a few. Yes, the ski lifts and tramways do the work for those summer and fall tourists who like to "go uphill sitting down."

Chairtow to North Peak on Mount Sunapee, New Hampshire.

The Weasel's Wettest Cousin

by Pete Barrett . . . paintings by Charles Culver

ANYTHING connected with water is a snap for the otter. I was treated to a display of an otter family frolicking in Idaho's Big Wood River, on a rock-studded stretch down which water hurtled and foamed at millrace speed. I wouldn't have risked it in a sealed barrel. But for those five otters it was Coney Island with a tail wind on the roller coaster. The parents came first, showing the pups the way. The superb style with which the porpoising otters avoided the rocks was impressive enough. But this really got me: they were swimming downstream with all they

had. Their chute-the-chute wasn't tough enough. Then they hurried back along the bank to make the run again!

Nature equipped the otter well for an aquatic life. His streamlined form, terminating in a flat, tapered tail which serves as a rudder, is driven through the water by fully webbed feet. One would suppose that a creature so at home in water would be born knowing how to swim—but no, the parents must teach their pups what those big webbed feet are for.

Similarly, the pups must be taught that fish are good to eat, and then how to catch them, which the otter accomplishes by sheer swimming ability. While I was fishing a beaver pond one day, my eye caught a splash beside a log. In a moment an otter swam by under water, with the speed and grace of a seal. Trailing bubbles, it executed an incredible turn to catch a dodging trout.

Normally, otters avoid man. Yet because of their amiable disposition, unlike that of their blood-thirsty cousin, the weasel, they can be tamed, and become affectionate household pets. Domesticated otters have even been used by hunters for retrieving wildfowl. Certain diving ducks, when injured, swim to the bottom and hang onto weeds, eluding the best dogs—but not an otter.

Otters are adept at concealing their presence in winter. The entrance to their cold-weather den is under water and leads upward to a comfortable, dry living chamber, and to another which is used as a toilet. Talk about privacy! An otter can catch a fish in his river, swim home with it, and eat it there, without leaving a sign to betray his existence!

Mostly the animals travel and play in family units, going from pond to river to lake in a circuit that often covers fifty miles. And always there is time to devise a game of some sort. One day I witnessed what appeared to be a sort of water polo. Approaching a river cautiously, I came upon three otters splashing lustily and chittering happily to themselves. They seemed to be passing something around. Every now and then there'd be an extra flurry of excitement and one would dive under briefly. I finally discovered what the "ball" was: a piece of white clamshell.

The otter's greatest joy is a slide which ends at the water. One summer George Heinold watched a family belly-flopping into a river near his home. As their dripping bodies slicked the earth, the slide got faster and faster. They kept at it tirelessly, yipping like kids on a playground.

The only otter I have seen in winter was using a slide, a steeply pitched affair worn to glassy smoothness on a snowbank overlooking a pool. Man and beast saw each other at about the same moment. The otter made a couple of awkward bounds through the snow to the top of his chute, folded his front legs and launched himself head first.

He was a big fellow, almost four feet long. He fairly shot down the slide, caromed swiftly across a patch of ice, and smacked the water with a mighty splash. He didn't *have* to splash, of course, but I think he wanted to, for the otter's year-round motto is, "Come on in, the water's fine!"

Perchville, the ice-fishing community on Tawas Bay.

Deep-Freeze Fishing

by Franklin M. Reck . . . paintings by Bill Moss

THE TWO pink-cheeked girls in the "sports shop" were catching fish like mad. Every few minutes the door of the small building opened a crack and out arched a yellow Tawas perch to bounce on the ice, flop once, and then quietly freeze in the ten-above temperature.

Presently one of the occupants emerged and stood for a moment under the building's painted legend, "Lou's Sporting Goods." She had on blue ski pants, blue sweater, blue stocking cap, red scarf, red mittens, and white skates. Old-time ice fisher-

men, their protective clothing bulging them into concavities, noted the young lady's convexities and paused to admire. Ignoring them, she took off with a Sonja Henie flourish, neatly weaving between the drifted ridges of snow on Tawas Bay.

The two girls were week-end refugees from Detroit. Their "sports shop" was one of fifty gaily colored fish shanties provided free by the enterprising merchants of Tawas City and East Tawas, Michigan. Several hundred fishermen were busy on the premises, half of them in shanties, half of them braving the breezes on the open ice.

They weren't all having luck. A few men were spudding holes alongside the girls' shanty, brash claim jumpers beside the big strike.

Scenes like this are part of the life of Perchville, a community that scorns slow and sound civic growth by springing into life, full grown and open for business, early in January. Perchville's architecture is strange, its decor gaudy. Its mural art would put Diego Rivera to shame. Gigantic red roses, playful trout, stately deer, a menacing dinosaur, leap from the house walls as the visitor walks down Main Street.

The shanties are heated either with bottled gas or oil. Benches are the only furniture, and here the occupants sit, roasting their shirt sleeves, crouching forward to look down through a rectangular hole in the ice. Their fishing equipment is a tiny rod, a long leader, and either a hook or a spoon.

The bait varies. For perch, a small shiner on a bare hook is the most popular lure. Corn borers and grubs are also popular baits with the experienced amateurs. Commercial fishermen who roam the outer expanse of the bay looking for the "school" use a Russian spoon and the eye of a perch.

Occasionally walleyes, lake trout, and northern pike cruise below the hole in the ice. To catch these longer fish, the angler lowers an artificial minnow and jiggles it up and down. In his other hand he holds a spear attached to his wrist with a thong, and when the fish noses the bait he jabs it.

Perchville has a mayor in Hank Greenwood, a charter-boat skipper in summer, who occupies the varnished-log city hall

and hands out keys, bait, equipment, and advice to the transients who come from Ohio, Indiana, and southern Michigan to try their luck at Tawas perch. The town-on-ice was conceived by the businessmen of Tawas to attract winter trade to a resort center that used to go to sleep at the end of hunting season. Tawas had already established a ski bowl at nearby Silver Valley, and this was a help, but as Harold Gould, the druggist, pointed out, "There are more fishermen than skiers, skaters, and tobogganers."

Perchville's success is merely the dramatic symptom of a general epidemic that spreads annually over parts of the United States and Canada as soon as the ice reaches a thickness of four inches. It's then that the fish shanty adds its bizarre touch to the nation's architectural scheme.

Though the heated shanty is comfortable and therefore conducive to cribbage playing, magazine reading, and other social engagements, it has the disadvantage of being relatively immobile. To counteract this, ice fishermen have developed shanties on wheels, collapsible canvas shelters, and simple tarpaulin rigs. Many of the fishermen, grimly out after meat, simply fish in the open.

But even these hardy souls protect themselves in every possible way. A cross section of the dress of an open-ice fisherman would reveal two suits of woolen underwear, two wool shirts, wool pants, a heavy jacket with tight wrists, and a hood that fastens tight under the chin. For the feet, a weather-proof outfit consists of two pairs of socks inside felt boots inside four-buckle overshoes.

With all this protection, there still remains the hazard of pulling off both mitts to unhook a fish and rebait the hook in zero weather at, say, 6:30 a.m.

There also remains the need to keep minnows from freezing into immobility. For these emergencies the ice fisherman often carries a pail containing kindling and charcoal. He puts the minnow pail next to the improvised stove. Whenever his fingers begin to turn hard as link sausage in a freezer, he thaws them out over the glowing pail.

Yet in spite of these rigors ice fishing goes merrily on throughout the northern latitudes. At Houghton Lake the prize is large, fat bluegills. At Boyne City and Beulah, the attraction is silver smelt. When sturgeon spearing was recently legalized, bulky anglers went forth to Lake St. Clair and Mullet Lake to seek the rare species. In a hundred places the prize is northern pike. Behind all this activity is the knowledge that in winter fish are hungry and eager—and wonderfully tasty.

Fish that are taken from the water and dropped onto the ice at zero freeze stiff almost instantly. Two fishermen took a batch of these frozen fish home. In the basement they filled a tub with water and tossed the frozen fish into it. Within two minutes the fish were swimming about, fully restored. Thereupon the two men cleaned and filleted the fish, took them to the kitchen, and fried them for a late breakfast. Only the ice fisherman can achieve this ultimate in freshness.

Cluster of fish shanties in Perchville.

Big Bad Boar

by Burgess H. Scott

THE most dangerous sporting adversary in the South—some say in all the United States—lives deep in the Cherokee National Forest of southeastern Tennessee.

It is the wild European boar, a 300-pound fighting machine that shows equal savagery toward the men and the dogs who hunt him. Last year there were approximately 700 of the animals roaming the forest's 87,000 acres, and yearly state-controlled hunts have made nearby Tellico Plains the boar-hunting capital of the United States.

The present boars are descendants of a few wild pairs brought over in about 1910 by a group of Englishmen to stock a hunting club near the North Carolina line. The term "boar," as used here, does not denote sex, but is a breed name applied to both males and females. Originally, the club was also stocked with elk, deer, and bear. There are still bear and deer in the locality, though the elk seem to have diminished to the vanishing point.

After a time the club disbanded and the animals were left to shift for themselves. Now the boars are the animal rulers of the forest, with no natural enemy but the black bear, which is dangerous only to the young pigs. A full-grown boar is more than a match for a bear.

The Cherokee boars are tremendously powerful beasts covered with a sort of fur rather than the usual hog bristles. Their weapons are hard, yellow tusks (called "tushes" by the natives) that are actually elongations of their canine teeth. These, propelled

by 300 pounds of bone and muscle, are considered by some to be more lethal than the claws of the grizzly.

Pitted against these in a boar hunt are men armed with 30-30 rifles, or 12-gauge shotguns with solid slug shells, and a pack of boar hounds that are about the toughest hunting dogs to be found. These dogs appear to be of no particular breed—one boar hunter went so far as to call them "just a mixture of mountain mongrel." But an effort is made to get short-eared hounds, which make the best fighters, somewhat at the expense of hunting ability.

Dogs trained by a family named Plott in North Carolina have the reputation of being among the best boar hounds, although they vary so much in size and color as to be difficult to describe. Their only similarity is that they are all known as Plott hounds.

In boar hunting, the hunters are stationed in a cove, or mountain valley, and one member of the party—usually the guide—takes the dogs out in the woods until they find a boar trail. When the dogs are loosed they trail until they find the boar and then start working him back to the cove where the party awaits.

In the running battle that then ensues the boar may turn at any time to rip and slash its attackers, and when this happens the animal is said to be at bay. During these pitched battles the boar frequently does serious damage to the pack, slashing any dog in reach.

Despite the boar's murderous attacks, the Plotts and other boar dogs have amazing ability to pull through a bad mauling. One hunting party came across one of their hounds whose entire underside had been ripped open. They sewed him up and in two or three weeks the dog was hunting boars again.

The boar will charge a man as soon as—some think sooner than—it will a dog, so the hunter had better be a good shot, keep his distance, or have a handy tree to climb. A photographer accompanied one party, eager to get full coverage of a bang-up boar hunt. He paid scant attention to the warning that he was unarmed and open to a charge by the angered animal. He was squinting through his view finder when the boar suddenly changed course and headed for him. Luckily the photographer

suffered little more than a ducking in a stream, but his camera was smashed to bits.

The hunters themselves seldom get killed or seriously hurt, but there are those who are solemnly aware of the power of the beast's attack. One agile hunter, facing an onrushing boar, managed to leap out if its path but failed to draw a leg out of the way. The boar raced by, its tusk cutting a gash through the man's boot and deep into his leg.

Once the dogs have brought the boar back to the hunters, it is dropped with the guns, and another boar's head is on its way to a living-room wall or a library mantelpiece.

Opinion varies as to the edibility of wild boar meat. Some say it's too tough and stringy, others contend that they know how to make it taste delicious. But it is a well-known fact that wild boars never get fat like domesticated hogs, no matter how abundant their natural food supply. Apparently everything they eat goes into bone and sinew.

Yankee Pan Fish

design by Charles Harper

THE YELLOW PERCH is essentially a northerner, ranging from lower Canada to the Ohio Valley, and from Minnesota to the Eastern Seaboard. The southernmost reach of this perch is in the Carolinas. His northern setting makes him a major objective of the growing clan of ice fishermen. These frostbite sportsmen eagerly cut through 14 inches of ice to drop a line to this excellent food fish. The size of the average perch is well under a pound. The world's record for yellow perch has been uncontested since 1865: a doctor in New Jersey caught one that year weighing 4¼ pounds.

Camp Cook Tells All

by Edmund Ware Smith . . . decorations by C. H. Roberts

I

Old Wingy Jones used to say: "My idea of heaven is a kitchen with no one in it but me and the cook stove." Wingy was against companionship. He craved privacy in which to cook.

One spring four of us were tenting on a trout river, and Wingy slipped on a boulder and sprained his ankle. I was elected to stay in camp and do his bidding. It was a privilege to watch him at work.

Wingy's effortlessness around a campfire was the result of planning. Every pot, dish, and utensil was laid out in advance within easy reach. His pile of selected firewood lay to the left of the fire. In front of the fire, the wind at his back, Wingy sat or kneeled, producing his simple masterpieces without once standing up, moving nothing but his hands.

When the party was on the move, Wingy's knapsack or pack basket showed the same, fascinating organization. If lunch called for potatoes, canned string beans, broiled trout and tea, those items—except the trout, which we were obliged to provide on the spot—were on top of his pack, together with utensils required for their preparation.

The traditional tool of most camp cooks is the frying pan. Wingy *never* used a frying pan except for very small trout, breakfast eggs, or his Olympian hashes. He used a grill. Boil, bake, or broil. That was his law, and the cases of indigestion it has saved are uncounted. Greasy foods infuriated him, offending his finer sensibilities. Wingy boasted that no bicarbonate of soda would be needed by anyone who ate his food.

Some great simplifier has remarked that cooking is the application of heat to edible raw materials. He does not say how to create this heat. How do you build a broiling fire? And what woods make the best coals?

If you don't have charcoal, use dry hardwood. Hickory, apple, ash, maple, beech, birch, and oak are all good, with hickory first choice. These woods will burn to coals, and when the coals are a little brighter than cherry red, it's broiling time.

But if there's no hardwood, you can broil with softwood—not *over* it, but vertically against its flame. White pine burns with a bright flame, down to a feathery white ash. So does poplar. Most cedars and spruces snap and throw sparks. The pitchy pines burn with an orange flame and throw off oily smoke. Stand your broiler vertically, or leaning a little toward the flame, and about eight inches from it. The result is almost as good, and far better than the frying pan.

Wingy's fire was never larger than his minimum requirement. If it were noon, a hot-tea-and-sandwich meal, his fire would be exactly the size of the bottom of his tea boiler—or about 6 inches across. The wind would be away from him, which is to say toward the back side of the fire.

If his meal required space for two pots and a broiler for meat or fish, he cut his wood 16 inches long, and his fire would be only 6 or 8 inches wide, at the base. It hurt his pride to waste any heat, or wood. More important, he could get right snug to his cook fires without frying his knuckles or singeing his eyebrows.

One of our most revered meat-packing houses (Swift & Co.) has come out definitely for seasoning broiled meats *after* cooking, not before. Wingy knew this all the time. His arguments: salt makes the juice run out of meat, and it also cooks away, while

the meat is cooking. Sometimes he spread prepared mustard on meat before cooking, and sometimes he touched it up with a sliver of garlic. But he believed generally that good meat had its own flavor, and that heavy or bizarre seasoning wasn't right. Salt, pepper, a little butter, after the meat came off the fire.

There is a way to tenderize tough meat and even improve its flavor. South Sea Islanders have used it on fish and meat for generations. You can buy their ingredient in the larger grocery stores—it's papaya juice. Put your meat in a pan or dish, pour over it some of the papaya juice, just enough to cover the bottom of the dish, and leave for a few hours before cooking. I have read recently that the juice of any citrus fruit will have a similar effect.

Wingy was a wizard with game and fish. Did you know that the fishy ducks, coot and shelldrake (merganser), can—this is no gag!—be made to taste second only to mallard, canvas-back, and black duck? The fishy taste is mainly in the oil sacs in the skin of these birds. Skin off the breasts, section them from the breast-bone with a sharp boning knife, soak for an hour or two in lukewarm water to which a tablespoonful of soda has been added, and broil with thin strips of salt pork cross-hatched over the flesh. Or pan-fry with a minimum amount of oil or grease.

One of our most memorable meals in the cabin came about two days after we'd had hard luck on partridge. There were six of us to feed, and only two birds. Wingy dressed the birds, cut them up as you would a frying chicken, and baked them—deeply within, and surrounded by, a pot of baking beans! We liked it so well that we asked for it and got it each hunting season.

Here's his tried recipe for a sauce for partridge, ducks, woodcock, or venison. Into a hot frying pan in which a tablespoon of stock is smoking very slightly, dump about 4 ounces of red currant jelly. As the jelly melts down, add a dash or two of water to get the desired consistency. When the jelly is blended, add a tablespoon of red wine, claret preferred. Squeeze in about a quarter of the juice of a lemon. Spoon this in small quantities over the bird or venison at serving time. Grape jelly is on the same plane. A teaspoonful of soy sauce, or about a third that much of Kitchen Bouquet, is also a good added touch.

But on the whole, Wingy was against sauces, as well as companionship. Both cloyed the appetite, he felt, except on rare occasions. He was a skillful and simple man, and the seasons when we couldn't hire him on as cook were generally sorrowful.

II

In all the years I knew Wingy Jones, he never struck a match till his fire was laid and his pots containing water and other contents hanging over it on the ingenious cranes and dingle sticks he constructed for the purpose. His rule: Light your fire under the kettles. Never hang the kettles over the lighted fire!

With the following list of outdoor cooking equipment, which was Wingy's choice, you can do wonders for six people.

Nest of three pots, with covers and bails. (The smaller, or inside pot, is for tea and coffee, the other two for vegetables or stew.) Broiler, or grill. One 12-inch frying pan, collapsible handle. A collapsible reflector baker, or oven. Six aluminum or enamelware plates and cups. A partitioned cloth bag with pockets to hold six knives, forks, spoons, a long cooking fork and spoon, and a can opener. A bag with pockets to hold seasoning in screw-top metal containers: garlic powder, salt, pepper, oregano, herb blend, celery and parsley flakes, and a small jar of cooking oil or olive oil. This equipment, with but few substitutions or additions, helped assuage some of the most exacting and ravenous appetites of Wingy's career.

Canned vegetables are at least slightly cooked before they reach you. To avoid overcooking and to preserve flavor, freshness, and crispness, follow this recipe: Heat a pot of water to boiling. Open the can of vegetables, leave the lid bent down as a cover, and leave the vegetable in the can in its juice. Place can and contents in the pot of hot water to a depth which just doesn't allow water to spill into the vegetables. Place the pot aside, near the fire to keep warm. When the rest of the meal is ready, the vegetable will be thoroughly heated. Serve it hot from the can after draining excess juices and adding a pinch of salt and a dab of butter.

Meats and fish fall into two categories for the camp cook: the dry, fatless meats and fish, and the moist and fatty ones. Pickerel, pike, white and yellow perch, small trout, and bass are relatively dry. To preserve moisture, they are usually fried in salt pork fat or one of the commercial cooking oils. But Wingy, with his aversion to fried foods, developed a beautiful and simple recipe.

Place dressed fish in a broiler, or folding grill. Brush plentifully on both sides with olive oil, or cooking oil. Broil over bright, hot coals, not over 2 minutes or perhaps 3 to a side, depending on the thickness of the fish. This cooks them about halfway through, and imparts the delectable, faint smokiness of the open coals. Next, remove fish from broiler and place in the pan of the reflector baker, which is already hot. Sprinkle fish *lightly* with oregano; pour enough hot water into the pan to cover the bottom to a depth of about ⅛ inch, no more. Cover the pan and place in the baker for 10 to 15 minutes. Uncover, add salt and pepper and a whisker of lemon juice, and serve.

Large trout, rainbows, browns, brookies or lake trout, are best broiled. The trouts, except lake trout, should be broiled full thickness, since they are not nearly as oily or fatty as salmon or lakers. Salmon or lakers of 2½ pounds and up should be split down the back, the backbone removed, and the fish opened out flat. Broil over slow coals, skin side up. When the meat side, or down-side, takes on a golden brown color, turn the fish and broil with the skin side to the coals till the skin starts to blister. Then remove from fire, open the broiler, and lift off the loosened skin with a fork. It will peel off whole. Serve with the browned side to the eye after leaving fish in the reflector baker or oven for 2 or 3 minutes, sprinkled lightly with oregano, salt, pepper, and butter.

Fish, like vegetables or meat, suffers badly from overcooking. It's ready to eat the moment, or even the moment just before, the flesh lifts, or but gently clings to the bone.

Wingy showed us a nifty wrinkle with a frying pan. You fill it half full of water. To the water add a bay leaf or two, a tablespoon of herb vinegar, and a double pinch of salt. When the water boils, gently slide into it a requisite number of 8- to 10-inch

trout—measured without heads on. In about five minutes, or when the water again comes to a boil, remove the trout, drain them, brush them with drawn lemon butter to which parsley has been added, and serve them with a boiled potato and green canned peas. This meal is guaranteed to put an end to all table conversation until the plates are empty.

The dry meats, as Wingy called them, are veal, most venison except fat, yearling critters, and beef tenderloins. These dry meats are good pan-fried, and you can make a fine, light and delicate gravy by dashing a ½ cup of hot water into the piping hot pan, stirring with a fork, and adding salt and/or garlic powder. But if you brush them with cooking oil, or the more expensive and delicious olive oil, these dry meats will broil wonderfully. Veal done this way is especially fine.

I see that from Wingy's list of utensils I have left out some of his most treasured items. They are a dish cloth, soap, steel wool, and dish towels—all sun-bleached, and beautifully clean. It was part of his code. He washed his pots and pans before he served his meal. In the hot water which had heated the can of green vegetables, he later washed dishes. And with his dish water, he put out the remnant of fire that was left.

In the cabin, on the third log above the level of the cook stove, there was—in Wingy's tortured handwriting—an epitaph to a cook, which I suspect he wrote himself, but I do not know. Anyway, it is with respect and affection that I hereby inscribe it:

TO WINGY JONES

Here lies the best cook ever known,
Who never wasted crumb or bone,
Who honored meat both fat and lean,
And always kept the bean pot clean.

Upside-Down Fishing

by T. D. Allen . . . painting by Sam B. Colburn

From their breast-of-pampered-turkey flavor and their calla lily texture you might expect them to be as difficult to obtain as edelweiss and as scarce as dinosaur cutlets. Actually, they are so plentiful that the season is open ten months out of twelve, and more than a thousand miles of California coast line are open to fishing for abalone.

Furthermore, you don't have to dive or hire a boat or even get your feet wet to fish. You don't need bait. And the best place to get your tackle is in a junk yard.

Abalone fishing, done by this dry-land, upside-down method, is no sport for spectators. It is so strictly amateur and so alluring that no spectator is ever able to remain neutrally upright for long. And you need only one fishing license and one meager set of junk-yard tackle for a large party of stalkers. Everybody who can bend himself into a pretzel without getting dizzy can spot abalone. The one with the license should also have muscles. He pries the game off the rocks and carries the catch. A day's bag on one license is five. If you take big ones only, five abalone will provide a belt-loosening feast for six or eight people—at least five dollars' worth of prepared succulence at the market.

Want to go? Here's how.

Search a junk yard for a good heavy leaf spring from an old car, and file to an edge on one end only. This is your fishing tackle. Your creel is a gunny sack. Heavy slacks and heavy gloves

will save some of the skin on your knees and knuckles. Buy a fishing license. Now you are equipped.

Pick yourself a low tide (see your daily newspaper) and head for a place on the West Coast where rocks instead of a sandy beach stop the waves. A minus tide and a lazy surf are considered essential by some upside-down fishermen. Both are desirable. Either one will usually uncover abalone clinging to rocks you can reach dry-shod.

Climb out on the rocks and start looking. Abalone love the darkness rather than the light, and you'll find them on the underneath sides of table rocks or deep in the inkiest crevices. You will see oval shells in black, brown, or pink-like bumps on the rocks. Some of these will turn out to be bumps on the rocks. Others will be abalone.

Select large ones—at least 5 inches across for black or brown and 6 inches for pink, but you want them much meatier than that. Push the thinned end of your car spring between the rock

and the protrusion you suspect of being an abalone. If it is, it won't come off. Also, it will drool or even spit out the portholes in its shell. This is your signal to keep after it—pry, pry again. An abalone is a working model for the perfect rubber suction cup.

About this time you may find yourself wishing that you had taken up that other form of abalone hunting: namely, putting on bathing trunks, flippers, and goggles, and going at it under water. That way you can be erect, or horizontal at least, but you might also be competing with a shark, octopus, or a giant clam. Better stay dry-shod.

When you get your five big ones, the fun begins. Arch the blade of a stiff butcher knife from the edge to the center of the shell under the abalone. Your knife will be stopped by the abalone's neck—his only attachment to his shell. Push your blade under the neck and with a quick twist of the wrist, out comes your meat. The shell may be pastel lined with mother-of-pearl. The abalone you will find neatly constructed as to viscera. The line for cutting off waste is all but perforated. What you have left looks and feels like a horse's hoof.

Peel this with a sharp knife as if you were dressing a scalloped squash. Peel the flat top and bottom, slice off the neck, and trim the ruffles around the edge until you have a flat white (or sometimes greenish and just as good) disk. Slice this once or twice, about ¼ to ½ inch thick. Next, with the rounded bottom of a milk bottle or a wooden mallet or a plain hammer padded with cloth, pommel each slice until it gives up—not hard enough to mutilate it but until it is limp and limber all over. When a slice goes down for the count, it is ready to salt, dip in beaten egg and coarse cracker crumbs, brown in hot fat one minute on each side, sprinkle with lemon juice, and cut with your fork.

This is not all. Once you have tasted abalone, you will be subject to spells. You will wake up in the middle of some sweltering night in San Antonio or Dearborn or Pawtucket. You will remember the impossible tenderness of abalone steak, the flavor delicately blended from both animal and vegetable kingdoms, and the fun of upside-down fishing among wave-sculptured rocks. Don't say we didn't warn you.

Custom "Bait" Conversions

story and photograph by Lewis F. Greene

SHOWN above are five excellent lures and part of a spinning lure which have undergone a "custom conversion." Number one is a spinning "Devon Minnow" to which is attached the keel weight of a Brown "Terrible" spinning lure. Number two shows the same keel weight attached to a Phillips "Multi-Wing" streamer, a fine light casting lure. The keel may also be used with a light "Flatfish" if a 6-inch length of leader material is used between keel and plug. Four is a converted "Miracle Minnow," and five is a re-decorated gold "Streamliner."

Fishing just below the dam at Enfield.

The Tarpon's Zany Cousin

story and photograph by Pete Barrett

A MAN doesn't have to be crazy to fish for shad, but a touch of sun helps now and then. Picture a fish so capricious it doesn't know its mind for more than a few minutes at a time. For a brief, wonderful period it may hit with mad abandon, then the deal's off. It can escape with an impossible caper when the net is ready. How can you reason with such a creature?

But these qualities pale to nothingness when compared with the shad's predilection for colors. This lovely eccentricity has driven plenty of strong-willed men to absolute frenzy.

Up on the Connecticut River—at Enfield Dam, say—it goes this way. Two men are fishing side by side; one doing a terrific business with the shad, the other coming to a slow boil. Finally the desperate one speaks.

"What color are they hitting?" he asks, hating the question.

The busy one squints at the sky a moment for inspiration. "Guess you'd call it an off-shade of lavender."

Now the luckless one hauls out a tin box and paws through it —no off-shade of lavender. Who'd think of a silly color like lavender when they wanted mother-of-pearl yesterday? He can now continue the torture of fishing the wrong color, or quit temporarily—the smart thing to do, for soon the shad might switch to carnation red. That's why it would be so risky to dash into town for the lavender; the show might be over by the time he returned.

If you imagine that this matter of color is concerned mostly with a fly or a lure, you're wrong. The bauble that shad are interested in along the Connecticut is a bead or two riding on the leader just above the lure. With the right beads, you can catch a barrelful of shad on a bare, silver-colored hook.

Each spring, from the unknown depths of the Atlantic and the Pacific, shad ascend our coastal streams in unbelievable hordes to spawn. It is perhaps because they seek little if any food that they are so choosy about hitting the small-winged flies, the tiny spinners, spoons, and fluttering lures that fishermen tease through their ranks.

As they go up-river, the shad pause in pools and eddies, whirling and chasing one another in flashing schools. Now, if you watch, you can see their inconsistencies. They seem unable to follow one leader. They split up, flow together again, reverse themselves in silvery confusion. Small wonder then that fishing for them is erratic: a channel may be overcrowded one moment, deserted the next.

Fishermen with rods crowd these resting places along the Connecticut, especially the big concentration points below dams like Enfield. Watching them here is almost as diverting as fishing. They're faddists and individualists in the extreme. One man will insist upon standing on a certain rock. If it's occupied when he

arrives, he stands by doggedly till he gets just the spot he wants.

You'll see another fellow using a nail for a sinker; he caught his first shad this way, after weeks of trying, and now won't use anything else. Some swear by a particular bead-and-fly combination and fish it ceaselessly.

In the midst of this hectic rod-swishing and scrabbling in bead boxes, one man will be fishing with stoic calm. That will be Elmer Rivers, a magician among Enfield's shad fishermen. He has no vast collection of baubles. His flies appear barely adequate. Yet Elmer can take 'em when men swear there are no shad in the river.

Once, to see just how far he could carry his skill, Elmer Rivers hooked, landed, and released more than a hundred shad in a day's sport with a fly rod.

It is amusing to watch other anglers watch Elmer. He is usually in the middle of a line, because others flank him swiftly after he steps into the river. Then, after he has taken a couple, the big squeeze begins and Rivers starts to feel like the center section of an accordion. His casting is hampered; his tackle minutely inspected. Pretty soon the whole line will be casting the same distance as Elmer, with the same approximate timing of the swing, the same snubbing of the lure in the current. And guess who keeps on catching the shad.

But the others keep trying, for they know that to hook and play this crazy cousin of the tarpon is high excitement. They remember silver cartwheels in the sun, the fiddle-string tightness of the line as it sings against the pluck of the current while a 6- or 7-pound berserk beauty races the river.

They remember these things and more, and they keep on trying because they're committed to experimenting. Shad have been running east coast rivers for centuries, but men with rods have barely got to know them. At Enfield, it's the bead that's king; at Little Falls on the Potomac and at the St. Johns River in Florida, small spoons have the come-hither.

Who knows what they'll take next—or when? What price a Lilly Daché shad lure! Make it gaudy, make it crazy, and a shad fisherman will try it.

Paradise for Shell Hunters

story and photographs by Robert P. Holland

TURN a child loose on a beach and he'll hunt shells. Turn a grownup loose on a beach and he'll hunt shells, too, only he'll have a title. He'll be a conchologist (pronounced "konkologist"). To be konked is to be shell crazy, and quite a few people are. They are readily spotted by their conversation, containing words like univalve, pecten, scallop, and coquina.

Say *Voluta Junonia* to a conchologist and his eye will gleam. Every collector has his favorite, but "Juno's volute," a good-looking, pinkish-white snail, identifiable by rows of squarish chocolate-colored spots, is a prize for any collection. When first discovered, a good specimen brought up to a hundred dollars.

Seashells have been among our most revered whatnotia for generations. Shells made up into wampum belts were currency among coast Indians until some of our settlers counterfeited them, thus forcing the Colonies off the shell standard. The species of clams that furnished these shells have since received the apt scientific name *Venus mercenaria*—mercenaria meaning "money"; Venus, because all clams of the genus were noted for their attractive shapes.

It is precise labeling that establishes the value of any collection, but if you can't be bothered spelling names like Amphineura, Scaphopoda, Pelecypoda, Gastropoda, Cephalopoda (in plain English, the five classes of mollusks—chitons, toothshells, clams, snails, and squids), don't worry about it. Most collectors consider place and time of discovery as most worth recording.

Among the best shell beaches are those near the tip of Florida on the Gulf side. Sanibel Island, off Fort Myers, is famed hunting ground for conchologists. Here the warm tropical waters add

brilliance to the coloring of shells, and the variety is unlimited. Along these sands you'll see the shell hunters in shorts and sneakers, armed with a sack and clam fork, looking for angel's wing, bleeding tooth, and jewel box. As for time, shells can be found day or night, in the rain or sun, at high or low tide.

Shells are carved into buttons and jewelry, ground into powder to be used in the manufacture of fine porcelain, and fashioned into miniatures to be sold at curio shops in far-flung places. Only live shells are collected, not beach-scarred skeletons. The hunters take them home and kill them by immersion in fresh water to save the luster. Then they either add them to their collection or start trading with some other dyed-in-the-sun conchologist.

Some of these shells were found on the Marco Island beach. The clams (11) came from Key West. The angel's wings (18), also a member of the clam family, are not found in this condition on the beaches but are dug up in tidal flats and later cleaned of membranes and the crusty material found on the natural shell. (1) Panama Roller, (2) Smooth Auger, (3) Calico Pecten, (4) Boat, (5) Disten, (6) Beehive, (7) Cockle, (8) Silver Tip, (9) Crown Conch, (10) Coquinas, (11) Clam, (12) Lace Murex, (13) Pinna or Pen Shell, (14) Sea Worm, (15) Rough Auger, (16) Nutmeg, (17) Pecten, (18) Angel's Wings, (19) Shark Eye, (20) Rose Petal, (21) Junonia, (22) Baby's Foot, (23) Coconut, (24) Starfish, (25) Coral, (26) Sunrise Shell (clam), (27) Rose Murex, (28) Turban.

Beaver Business

by O. A. Fitzgerald . . . paintings by Charles Culver

THE world's first dam builder is a shining example of industry, application, and good conduct.

The beaver is eager. But he's also modest, patient, persistent, frugal, and a dependable provider for his family. His only frivolity is a daily grooming of his very valuable coat.

Only man and his machines can face-lift a stream faster than the fur-coated engineer with the built-in diving suit. Whether

he gets cussed or complimented for it depends upon where he does that face-lifting.

For free, some western irrigation farmers get generous bonuses every summer from beaver ponds high up in the mountains. The bigger those ponds, the happier the farmers downstream. "Every one's worth a thousand dollars," remarked one farmer.

Some mountain ponds have a mile of shore line and contain many millions of gallons of water.

On the other hand, plugged ditches, flooded fields, washed-out roads, and trees across phone lines are some of the results of beaver eagerness close to civilization. In some logging districts bridge piling has to be coated with tin against beaver choppers.

Try discouraging a "nuisance beaver" and you'll learn the real meaning of perseverance. Tearing holes in his dam, even dynamiting it, is but a routine annoyance. One rancher hung out a lantern to annoy the night shift. It was chucked into the dam along with everything else the beaver could float or drag. A beaver never admits defeat. So he gets carted off to some lonely meadow where his swimming pool will not bother anyone.

This policy of resettling nuisance beavers is building up the population. Centuries of ruthless trapping have reduced our one-time hordes of nearly half a billion to pitiful thousands. Thanks to wise game management, you now can find beaver workings on streams that haven't seen any since Indian days.

Locating a leak in his precious dam is a beaver specialty. There he has the super-sensitivity of a Geiger counter. When trappers learned this, they created leaks and set their traps by them. Beavers soon were dragging pieces of brush across those traps before repairing the leaks.

A beaver's choppers are so formidable that the Indians mounted them on handles for cutting tools. With short, powerful strokes, a beaver can chop down a tree in about the time it would take a man using a dull axe.

Around a ton of limbs goes into the underwater winter food cache for each adult. Aspen and poplar are favorites. Alder, maple, lodgepole pine come next. A beaver will eat cedar and the firs, but he thinks they're spinach.

Because of his moated castle, little is known about beaver romancing. We do know the beaver is an exemplary family individual. A colony generally contains beavers of all ages. When a new batch comes along, it's a signal for the oldest children to move out, mate, and start dams, homes, and woodpiles on their own.

One honeymooning couple chopped more than a hundred trees and built a dam three feet high and several hundred feet long their first season of homemaking. Inside their new swimming hole, they built an underwater castle with a 450-cubic-foot living room.

So long as there are beavers in that pond, work will be done every day. Much of it will not be necessary, but when a fellow has his reputation to uphold he can't take time out to loaf.

Hunting the fox in early mist is fun—even if Reddie wins.

Foxing the Fox

by Franklin M. Reck . . . photographs by John Calkins

Doc Ritchie's two foxhounds are alike only in their black and tan coloring.

Mike is broad-chested, husky, and tireless. Barney is lanky and indolent, like the hound dog that lay on a cocklebur and howled with pain, but was too lazy to move. Yet, when Mike stirs up a fox, it's always Barney who takes the lead, his indifference gone, his nose to the trail, his "Ow-ow-ow!" echoing through the hills.

Between them, Barney and Mike are two good reasons why Dr. James Ritchie and his fellow fox hunters in South Lyon, Michigan, collect enough bounty each year to throw a couple of feeds for the gang.

The red fox has been clocked at 45 m.p.h. Action photograph by L. M. Chase.

There are probably as many ways of hunting fox as there are localities. The methods range from putting on red coats and shouting tally-ho to just settin' and listenin' to hound music. It's all a matter of terrain and temperament.

In South Lyon, Doc and his friends have developed their own method. They use Barney and Mike, several Fords, plenty of No. 2 shot, and their wits.

The country around South Lyon is a fine jumble of swamps, lakes, hills, and woods. When the glacier passed that way, thirty or forty thousand years ago, it did a good job of sculpturing, leaving plenty of game cover between the rolling fields.

Crisscrossing this land is a pretty fair network of country roads winding in and out between the woods and swamps—handy bridle paths for Fords. With Ritchie and his huntsmen, using these roads to head off fox is a year-round proposition. They hunt when the spirit moves, and it moves often.

It goes about like this:

Jim Hatch releases the dogs, Mike and Barney, at the creek culvert, Kent Lake Road.

Around Friday night somebody gets the urge, probably because he saw a fox crossing Martindale Road late the evening before. Generally

the man who sees these things is Jim Ritchie, who drives with his head out the window, all year long, looking for fox runs.

These fox runs are nothing you can see, like a deer trail. You learn where a fox run is by seeing him use it.

The hunters are up at dawn, making plans over coffee and doughnuts at Ruth's on Lake Street. Men will be posted at likely spots over a two- or three-mile area.

Their strategy laid out, they separate to their cars and head north, with Barney and Mike in the trunk of Doc's car.

At the creek culvert on Kent Lake Road, Doc and Harry Bulmon open the trunk and the two dogs leap out, Mike getting at the job at once, circling and sniffing, and Barney taking it easy. Barney is purely a clock puncher. He doesn't start until the whistle blows.

So Doc whistles and motions them into the tamarack swamp to the east of the road, and the two men follow. For maybe a half hour, the dogs nose around, now and then giving a half-hearted yelp as they pick up a cold trail. Then suddenly Mike breaks out in full-throated song and Barney joins in, telling everybody within two miles that they've jumped a fox.

It's no use to follow the dogs now, so Doc and Harry hustle to their favorite spots near the road.

Now follows a period of tense waiting and listening on the part of all hunters spread out over more than two miles of east-west territory. Each hunter crouches motionless at his spot, listening to the music.

This hunt doesn't go so well. The music travels east, falters uncertainly, and heads back west. Holding the eastern outposts, Merv Shankland and Bob Eckert decide that the chase has gone the other way. They hop into their cars, hurry west to see what's up. Doc and Harry also realize that the chase has gone to the west and is now in the region of swamps and stone quarries, where Morgan Muir and Russ Calkins are keeping vigil. So they, too, get into their cars.

A caucus follows, in which the men listen and plan. From the high ground they look down on Blood's Creek, and the swampy ground spreading out from its north bank.

At the moment the hunt has gone dead. No music. No action. Doc lifts his gun and fires into the air to call back the dogs, and at that precise moment the fox jumps out of the swamp in plain sight, streaking west.

A lot of things happen at once. Merv and Bob dash for their cars and head back east. Doc yells to Russ down in the woods that the fox is coming his way. Harry dashes across a wheat field. Cars raise trails of dust in a race to beat the fox to a road crossing.

The sun climbs higher and the guessing game goes on. Cars maneuver. Men wait. Dogs bay. And somewhere, 10 pounds of cunning chooses a devious trail to security.

By two o'clock they're all gathered again, wondering whether to call it a day, but Morgan has one final strategy to explore. Over yonder is the gravel pit. Morgan knows that more than one fox has given his pursuers the slip among the barren boulders and mounds of the gravel pit. He tops a rise and looks down. There on the far side, half concealed by a rock, the fox lies, resting. Not fifty yards away, the dogs are aimlessly circling, their tongues hanging out. Silently Morgan pays tribute to the fox's cunning. There he is, out of shotgun range, knowing the dogs have lost him, taking a breather before going away from there. Presently he rises cautiously, slips over the rim of the stone quarry, and heads north to safety. Morgan shrugs his shoulders and rejoins his fellow hunters. It's too late to go on.

Ritchie and his friends have deep respect for the fox's resourcefulness. They remember the fox that wore out the dogs in heavy snow, leading them in a wide circle, coming back time and again to the same trail, making a beaten track of mingled dog and fox scent, until the dogs were utterly frustrated.

They remember the fox that deliberately headed through a herd of Herefords in an open pasture. Did the little rascal know that the hounds would give the touchy cattle a wide berth, thus causing them to lose the scent? Doc and his friends are sure of it.

Doc and company figure that in spite of their frequent hunts, the fox population in the woods and swamps of South Lyon is increasing—which doesn't make them at all unhappy. There'll be plenty of foxing this year and next.

Glutton of the Great Lakes

design by Charles Harper

WHETHER you spell him muskellunge, maskinonge, muscalonge, or great pike, this glutton with the undershot jaw is an angler's prize. This is not so much for his eating quality as his size, which may run to 8 feet and 100 pounds. Fishermen who troll the tributaries of the Great Lakes for muskies bait their hooks with minnows large enough to be considered a good catch in themselves. Some use bright spoons as large as a salad plate. When they hook one, they settle down for a long session of bulldogging. A muskie consumes 4 tons of smaller fish to reach a size of 80 pounds. He's found only in the Great Lakes region.

Steelhead on Line and Lens

by Jackson Rivers . . . photograph by Carl Steph

THE pipe-smoking, felt-hatted experts on fresh-water sport fishing argue long over the relative merits of the steelhead trout and the Atlantic salmon as fighters. Some assert that the bright salmon of our Eastern rivers wins on aerial acrobatics. Against this, the boys from the Pacific slope rivers offer the long, powerful runs and staying power of *Salmo gairdneri*. They say that the angler who has lost an hour-long battle with a heavy *gairdneri* suffers a "steelheadache."

No steelheadache resulted from the episode shown in the photograph on the opposite page. The picture is in fact a kind of double success story—a collaboration between Arvi ("Shorty") Kouvo, steelhead fisherman, and Carl Steph, who took the unusual color shot of the 8¼-pound steelhead on the first leap after it was hooked by Shorty, who is standing in the boat in the background.

The steelhead in the picture is, or was, a resident of the Kalama River, Washington. Shorty Kouvo and Carl Steph are both residents of Woodland, Washington. Fish, fisherman, and photographer got together in exactly the right position at exactly the right time in perfect lighting one day last April.

It didn't just happen. Before this fishing-photographing expedition, there had been many others over a period of years. Shorty hooked this steelhead on the Kalama on the fourth day of an otherwise no-luck trip. Carl had set up his camera on the opposite bank, using an 8½-inch commercial Ektar on his 4x5 Speed Graphic, lens set at 1/100 of a second at f6.3. After an hour's wait, Shorty Kouvo hooked the steelhead, and Carl Steph snapped the shutter. The result is one for the books of photographers and steelhead fishermen.

The truck doesn't stop to loose the pack—a yank on a pullcord

Coyote Hunt

by Burgess H. Scott . . . paintings by Don Silverstein

SPORTSMEN would have to travel far to find a more slam-bang sporting event than the coyote hunts that Nebraskans of the Sand Hills country put on at every opportunity.

The gist of the sport is setting a pack of greyhounds on the trail of a coyote and following the chase at a near-fifty-m.p.h. clip in a stripped-down truck known locally as a coyote car.

One of the ablest of the huntsmen is Ben Ammon of Bassett, whose pack of seven greyhounds and staghounds ran up a score of thirty-six kills last fall. Ammon's coyote car was made from a

and out come the hounds, yelping, rolling, and tumbling.

1936 V8 pickup, the alteration involving "taking just about everything off of it." In place of the original bed he has a large crate or cage on the rear to hold six of his hounds. A wide running board on the driver's side is the special place for Bob, his grizzled, 98-pound half-Russian, half-greyhound lead dog.

With the dogs loaded, Ammon takes off over the sand hills at about forty m.p.h., he and Bob scanning the hills and draws for the first coyote to break cover. When the big dog spots the critter, he leaves his running board like a shot—regardless of the truck's speed. He usually rolls end over end a few times before he can get his long legs into action and light out after the coyote.

Bob's departure from the running board is the signal for Ammon to release his six other dogs, which he does by yanking on a pull cord that trips latches on the cage doors, allowing them

to fall open in a horizontal position. Using the doors as springboards, the dogs bail out in a yelping, rolling mass. In less time than it takes to tell they have gained their legs and are off in pursuit of Bob and the coyote.

Their quarry is a gray, wolf-like animal ranging in weight from 35 to 50 pounds, and a formidable opponent on the defensive. He preys on calves that have become separated from the herd, and on sheep and poultry. His pelt is useless except as a trophy, and in some states it will bring a small bounty—leaving little more to coyote hunting than the sport involved.

Bob's weight and experience make him more than a match for almost any coyote he reaches, and Ammon has seen the time that he has finished off the animal before the rest of the pack arrived. However, he recalls a hunt on which Bob was late in arriving. Several less experienced dogs were having trouble with a tough old marauder. Bob took one grab at the beast's throat, flipped him over, and the hunt was ended.

The hunt follows a well-organized pattern. On coming alongside the coyote, the lead dog grabs a leg and trips the animal. The rest of the dogs close in and the tussle is usually over in two minutes.

The length of the chase varies from three hundred yards to two miles on clear ground, and has been known to last between ten and twenty miles through deep snow or rough hills. Through all of it, Ammon's V8 bounces along in the wake of the pack, taking hills and gullies a tenderfoot wouldn't dream possible.

Sometimes small airplanes are used to spot the animals, a waggling of the wings indicating that a coyote has been jumped. One such hunt was staged in country where two crafty old coyotes had been killing calves. The plane soon found the two outlaws and the first was killed after a chase of two miles. After a four-mile run the second was added to Ammon's pile of trophies.

The hounds vary from the type used in dog races to mixtures of longer-haired wolfhounds. They are generally raised and trained by the hunters, and a well-handled, experienced dog can bring as much as $1,000.

As able as the hounds are with coyotes, it's a different story

when the pack brings a big timber or gray wolf to bay. When this happens the wolf frequently has to be shot, because you simply can't surround one of the big animals every time with enough dogs to do the job.

Ammon is a staunch supporter of such an activity as coyote hunting for promoting general health and well-being.

"I think every business man, rancher, or farmer should take a few days off each month," he said. "By doing so they will live longer, and after all is said and done they only live once, and when they leave they won't take anything with them." Ammon demonstrated this philosophy one afternoon by leaving his ranch in Bassett and bagging five coyotes before sundown.

Although the coyote is hunted relentlessly in almost all western states, he seems not only to survive but to thrive. In fact the coyote has infiltrated into New York State during the past ten years, mated with stray or wild dogs, and produced a distinct breed called the "coydog." The coydog is the subject of much controversy, but it seems to have done not too much harm to poultry and livestock. In an article titled "Nature's Quiz Kid," O. A. Fitzgerald says that much of a coyote's diet consists of crickets, grasshoppers, and grubs—in season.

Ammon's pack may soon have a chance at much bigger and fiercer game. Reports have been coming in that a large mountain lion, ranging far from its natural habitat, has been causing trouble with livestock in the rough, hilly country along the Niobrara River to the north of Bassett. If the talk persists, Ammon will take his dogs north for a try at North America's biggest cat.

The hogfish is one of many trophies sought by Florida gogglers→

Let's Go Goggling

by George X. Sand . . . photographs by Verne O. Williams

SOUTHWESTWARD from the tip of Florida, the Keys stretch in a hundred-mile sweep of tiny limestone islands. Here, where more than six hundred varieties of multicolored fish swim lazily across the connecting shoals, I had my first try at goggling.

Two recent inventions have placed goggling in the class of big game hunting. One of these is the Aqua-lung, a compressed-air breathing tank which enables a goggler to explore the ocean bottom at will. The other is the gas-powered spear gun, invented by Bill McDougall, founder of the Neptune Club.

Bill's gun makes use of a 2-pound CO_2 fire extinguisher bottle, with enough pressure to discharge the driver shaft through the body of a 400-pound jewfish. The gun can be used fifty times without reloading. Members of the Neptune Club brought along this formidable weapon that sunny winter morning when we set out in Bill's 17-foot boat for the shallow Carysfort Reef. As an amateur, I carried a "Hawaiian sling," a bamboo tube through which a 4-foot metal driver is shot by a strip of bungee rubber.

On the way out the glittering sea was calm. I could see the bottom clearly, even though it was three fathoms down. Coral caves appeared and melted away beneath the outboard's bubbling wake. Then, almost at the edge of that deep blue channel in the sea that is the warm Gulf Stream, Bill found his spot. The other men took their guns and slipped gently overboard. Only McDougall remained, at the helm.

"Go on," he encouraged me, "take a look around." The water was warm as it closed over my head. Now, for the first time, I appreciated the heretofore awkward swim fins. A few kicks and I was gliding downward with surprising ease.

Patches of sand showed white in the shimmering dream-world of light that filtered from above. Delicate coral formations

With a gas-powered spear gun, gogglers seek out big game→

changed from white to green to pink as I slipped along. The thrum of the water was vibrant against my ear drums. When I came up for air, Bill pointed out several large spotted grouper finning slowly around a gray coral table. "There's your supper down there," he grinned. "Go get it."

In spite of previous assurances, I cast a quick glance around for a telltale shark fin before I slid on my mask and started down. Heart pounding, I drew back the sling into firing position . . . closer . . . closer . . . *now!* To my utter dismay, I missed. The grouper moved off unhurriedly.

Topside I found McDougall grinning. "Go back and get 'em—this time get closer."

Down I went again. A school of tiny goldfish lazed past. A gorgeously hued green parrot fish swam near me, curious. Suddenly I felt uneasy, and angled a quick glance over my shoulder. Not 30 feet away the 4-foot-long body of a vicious-looking barracuda hung suspended in the green water! The others were watching me from above. I continued after the grouper.

Picking out a big fellow, I approached so closely I was sure I would bump him—but I didn't so I swam even closer. Then I released the gun—I had him! He jerked frantically but I hung onto my gun and made for the surface with my 5-pound prize.

Later that day I went overboard again to watch Bill's battle with a huge jewfish. Wearing his Aqua-lung, he stalked the monster in its coral cavern. Boom—boom—boom—clearly came the sound of the jewfish's tail swinging to and fro. Then, with a challenging grunt he emerged, finning slowly at his tormentor.

Suddenly a long path of bubbles shot through the water, and the deadly barb sped true to its mark. Bill was already making for the boat where the men had control of the wire cable attached to his barb. As we watched, the great fish turned the ocean bottom into a turmoil, smashing the delicate ferns, toppling the fragile coral houses. Finally he subsided, glowering up at us.

If I was a little absent-minded when I said good-by later on, it was because I was already thinking of the spear gun I was going to buy, and I knew I would soon see the Neptune Club again—under water.

-Allagash—one of the many lakes in the Maine wilderness.

Maine Wilderness Sporting Camps

by Edmund Ware Smith . . . photographs by John Calkins

IN THE age of the surrey, the walkingstick, and the Inverness cape, the range of the country's resorts was as narrow as a railroad track. Today, there are too many places to go!

With vacation literature so stacked up that you can't decide between Guelph and Guatemala, it is refreshing to return to the day of numbered enticements. The old becomes new. For example, what about the Maine woods and Maine's wilderness sporting camps? Where are these camps? What can you do there? Are they anything like dude ranches?

Maine sporting camps were born early. Fishermen, hunters, or amateur explorers stopped at lumber camps, or the unique and very remote wilderness farms that supplied the lumber camps. There they took potluck. Presently they began to hire woodsmen for guides, using tent camps for bases. One of these guides built a log cabin on a lake. The moment smoke rose from the chimney and a paying guest moved in, the Maine sporting camp came into being.

The traditional Maine guide is a pleasing, cantankerous, original, tall-taling, highly skilled woodsman and canoeman. Standing up in his canoe, he can do what the dude wrangler does sitting down on his horse—make it go and stop it right side up.

Wyoming trails a scent of sagebrush and saddle leather. The characteristic odor of wilderness Maine is spruce and hot pine.

Many of Maine's truest wilderness sporting camps are in the Mt. Katahdin region. This region lies roughly within the giant fork formed by the east and west branches of the Penobscot River, but it fans out to the north, east, and west. Within this

-Looking across Mattagamon Lake from Foster's landing.

Twin Pine Camp on Daicey Pond; Baron Mountain behind–

huge fork the 142,000 acres of Baxter State Park Wildlife Sanctuary are contained.

Here is a wilderness of intricate streams and rivers, spruce and pine forest, and closely jumbled mountain peaks. Katahdin itself is conceded to be the East's most striking single mountain, its impressive, gray granite crags and upper slopes seeded by the great glacier with Icelandic and Greenland flora.

Background for wilderness sporting camps! Here are hundreds of lakes with strange names, the mountains rising from their shores. Katahdin Lake, or lake-of-the-big-hill; Nesowadnehunk Lake, or the mountains-from-Katahdin-that-stream-runs-among-them; Wassataquoick, meaning white or light-colored water, or fish-spearing-stream-place; Allagash, meaning bark-cabin-lake.

The approach to the Katahdin region from the west and south is via the Millinocket-Greenville road. This road gives access to some of the oldest and most famous wilderness sporting camps: Twin Pine, Kidney Pond, Togue Ponds, and Katahdin Lake Camps, and Camp Phoenix on Sowadnehunk Lake are all addressed at Millinocket, Maine. It is best to make reservations.

The only other approach by car to the Katahdin region is via the town of Patten from the east and north. At Patten turn north on Route 159 to Shin Pond—ten miles. Shin Pond is the last overnight accommodation. From here on it's wilderness. On lower Shin Pond is the seaplane base for Elmer Wilson's Shin Pond Flying Service. The Shin Pond House and cabins is a good place to spend the night and make plans. And pilot Elmer Wilson should be consulted for up-to-the-minute dope on wilderness camps and wilderness lake and stream fishing, or hunting.

Camp Wapiti is reached by two miles of rough but passable auto road from Shin Pond. This camp on Davis Pond is run by Albert and Maude Turner. Log guest cabins are attractively located on the shore of the pond, which has a view of Mt. Katahdin. Wapiti's main dining room is considered a sort of museum piece for the Maine type.

Chapman's Bowlin Camps, inaccessible by car, are located on the east branch of the Penobscot River at the confluence of Bowlin Brook. You can fly in from Shin Pond or make other

 Mattagamon, "old, worn-out lake," belies its name–

arrangements with the proprietor. The river location affords quick-water fishing virtually at the cabin door. Address: Patten, or Shin Pond P.O., Maine.

Al Nugent's Camps on Chamberlain Lake and Hall's Camps on Munsungun Lake are both true wilderness camps, best reached by plane. Nugent is a genius with an axe. His cabin floors are hand-hewn and pegged with wooden pegs. Address Nugent's Camps, Chesuncook, Maine, and Hall's Munsungun Camps, Portage, Maine.

Point-of-Pines Camps on Upper Shin Pond, though less wilderness in concept and category, is a good introduction. Address: Shin Pond, Maine.

Foster's Wilderness Camps on Mattagamon (or Grand) Lake are the product of A. C. "Chub" Foster and his wife, Frances. Foster, like other camp owners, is a highly-skilled guide, woodsman and canoeman. His wife, likewise at home in the forest, a canoe, or her kitchen, is an extremely capable cook. She can show you a menu card of the Plaza Hotel, New York, on which is listed: "Graham Cracker Pie, à la Frances Foster." You can fly in to these camps from Shin Pond in twelve minutes, or you can drive twenty miles from Shin Pond to the Fire Warden's camp on Mattagamon Lake, where Foster will meet you by boat. Reservations are necessary. Address: A. C. Foster, Patten, Maine.

This much you can expect from Maine wilderness camps: the proprietor will arrange fishing, hunting, and canoe trips. He will either act as your guide himself or provide reliable guides for your party. He will show you the best of a region full of Maine's wildest scenery where moose, bear, and deer are common sights. His wife will provide excellent meals. And at night you will rest in a good bed with forest air drifting through the screens.

To anyone contemplating a visit to a Maine wilderness sporting camp, the Appalachian Trail Club guide book is an almost essential preview. Priced at $1.25, the Katahdin Section (specify this) of the Maine Appalachian Trail Guide is obtainable by addressing the Appalachian Trail Conference, Washington, D. C. For general information address your questions to the Maine Development Commission, Augusta, Maine.

Old Man of the Mountains

by Kenneth Gilbert . . . paintings by Charles Culver

THEODORE ROOSEVELT held the mentality of the mountain goat in low esteem. "Verily," he asserted, "the white goat is the fool-hen among beasts of the chase." He reached this conclusion after he had killed a male goat and had seen the rest of the band move only a short distance before stopping to look back at him.

There is no record of any mountain goat's appraisal of man, but frustrated cameramen and hunters report that he appears amused as he gazes down at their pathetic human struggles to scale a mountain side that he has scrambled up in nothing flat. Moreover, in the State of Washington, five hundred licenses were issued to hunters in 1950, but only ninety-nine reported success. Not a bad record for a "fool-hen."

But these squabbles about IQ's seem unimportant when tourists first catch sight of the snowy-bearded Old Man of the Mountains standing on a high crag, in characteristic silhouette against the sky. Always shy and aloof, these animals are found on the highest peaks of the Cascades, the Rockies, and other northwestern ranges.

Although the Old Man is called a goat, he is really a goat-like antelope related to the Alpine chamois and the Himalayan serow. He is a sturdy beast, set on short, stout legs and weighing up to three hundred pounds. A fleece of fine wool next to the skin, with an outer covering of long hair, insulates him against the freezing mountain winds. A chin whisker beard gives him an air of antiquity which, combined with a solemn expression, makes him look profoundly wise.

Both sexes are armed with slender black horns, curved near the tips and slightly flared apart, and these are as deadly as twin daggers when it comes to infighting. A full-grown male will be 5 feet in length and stand 3 feet at the shoulder. His black hoofs are a combination of rubber-pad inside and knife-edge outside to give him solid traction on snow, ice, or bare rock.

Aside from man, a mountain goat's principal foes are bald eagles and cougars. How can an eagle possibly conquer a goat? One wonders. It is estimated that the bald eagle, with its 7-foot wingspread, is powerful enough to carry off a young mountain goat weighing up to 20 pounds. While the average cougar probably prefers a toothsome young mountain goat to a tough old billy, the big cat will not hesitate to attack even the herdmaster, despite the latter's dangerous horns.

Occasionally a cougar will make a mistake in judgment and timing, with disastrous results to himself. A sheepherder grazing his flock in the high summer-range of the Okanogan country last year found a very dead cougar at the base of a 50-foot cliff. The cat's belly appeared to have been slashed open with knives. Draped from its cruel claws were strands of white goat-hair. Obviously the cougar had taken on a veteran battler who knew a few fighting tricks himself, and had been tossed to its death on the rocks below.

Smelt Run Rendezvous

by James B. Hendryx . . .
painting by Bill Moss

DRIVING upstate, one spring night, we passed through a succession of little towns, stores dark and the inhabitants asleep. Then, about eleven o'clock, we rolled into Beulah, a village located at the end of Crystal Lake. No dark houses here. The street lights were all on, cars parked bumper to bumper, and laughing, jostling crowds filling the sidewalks. We parked the car and joined the crowd, which we quickly noted was shod, almost to the last man and woman, in hip boots.

We soon learned that the annual smelt run was on. People were beginning to crowd the banks of the shallow creek that bisects the village, each armed with a net of some sort. There were long-handled landing nets, short fly fishing nets, and wire wastebaskets. Two enterprising gents held a contraption made

out of screen wire that was affixed to the rim of a huge buggy wheel minus its spokes.

The scene demanded that we stop. We knew the story behind this bizarre and unearthly scene. In 1913, Michigan had imported millions of salt-water smelt eggs from Maine to generate a food supply for landlocked salmon. The salmon disappeared but the smelt thrived. They found their way into Lakes Michigan and Huron and each spring jammed the creeks to spawn. For several years during the war they mysteriously disappeared, then came back stronger than ever. And each spring, Michiganders went smelt-mad.

Selecting a point of vantage at the rail of the bridge that spanned the creek, we found ourselves next to a conservation

officer who stood, watch in hand, ready to give the signal that would send the crowd surging into the water, furiously dipping at the tiny, trout-like fish.

We noticed that the officer's eyes were sweeping over the mob, and we thought that they rested for a moment, dubiously, on the two smelt-hogs with the buggy-wheel net. But if he disapproved, he gave no outward sign.

Promptly at the stroke of twelve, the string of floodlights flashed on. Glancing downward we saw that the water fairly teemed with flashing silvery little fish. The next instant it was black with people, buckets in one hand, nets in the other, madly plying their nets, somehow bringing the squirming fish out from the tangle of legs that surrounded them, and skillfully transferring the catch into the waiting buckets.

The creek was probably a foot in depth, but the displacement of legs raised the water level until overcoat tails floated out behind their owners.

One man with a long-handled net was industriously dipping and transferring the fish into a bushel basket held by a friend. Intent on his work, he failed to look where he was swinging the fish, and on one dip, instead of dumping them in the basket, he brought the net down over the head of a white-bearded old gentleman, who spluttered as he combed wriggling smelt out of his whiskers.

The guys with the buggy wheel? They never made a lift! Leaping into the stream at the signal, they lowered the huge net to the bottom, where it was promptly filled with booted legs! They yelled, and they tugged at the rim of the huge net, but as one leg would step out, two more would step in, and a final frantic pull doomed their well-laid plans.

The conservation officer grinned and winked: "I figured that would happen," he said. "That's why I didn't stop 'em from hoggin' the crick."

Ten minutes from the time of the signal there was not a smelt left in the creek. The floodlights were snapped off, and the crowd adjourned to the taverns to rest, to ruminate on the art of smelt dipping, and to wait for the four-o'clock run.

I'd Rather Go Crabbing

by Samuel Hopkins Adams . . . painting by Crawford Livingston

DEVOTEES of Izaak Walton look down upon the humble crab. I have heard salmon fishermen, for example, compare crabbing unfavorably with their pet and somewhat pretentious sport. Admitted that there is a difference.

The sportsman angler travels several hundred miles, spends several hundred dollars and a couple of weeks, and maybe gets a salmon. On the other hand, maybe he doesn't. The crabber outfits for a dollar, if extravagant, strolls down to the nearest tidewater, angles for a couple of hours, and catches perhaps twenty crabs. On the other hand, maybe he catches fifty.

Sport is sport. But there is also the consideration of getting what you go after.

What I know about the art and practice of crabbing I learned from an aged Gullah Negro on Lady's Island across from Beaufort, South Carolina. My first lesson was on an abandoned pierhead jutting into the Inland Waterways which wander sinuously through meadow, marsh, and forest of the Carolinas.

Uncle Henry looked dubiously at my brand-new equipment and sniffed at the somewhat noisome chunk of meat which I had brought along for bait.

"Crab a clean feeduh," he explained curtly. Nothing but the best quality of bacon rind for him, even at 10 cents a pound. Being tough, it lasted longer and hence was just as economical. It attracted the large crabs which are choosy about their vittles.

"Lemme meat yo' line," he offered.

Setting a noose in my ten yards of cord, he encircled a rich strip of bacon rind, firmed it in, adjusted the heavy sinker, designed to hold against the tide, and with an expert toss landed the bait at the edge of an underwater seaweed bed.

"Crab maybe burra inna mud," he said. "Eye stick out, watchin', waitin'. Maybe he walkin' 'roun' on he big, blue flippahs, lookin' foh he breakfas'." Uncle Henry made propulsive motions with his arms indicating the crustacean's mode of locomotion. The blue crab is the only member of his family equipped with flippers, enabling him to dart and grab with surprising swiftness. "He see dat meaty line; he ac' mighty sudden."

Pending such action, the instructor considered my long-handled net. "Sto'-bought," he commented.

"Yes, I got it at the store."

"Yo' yeddy *(Gullah for 'listen to')* Ol' Henry. Sto' net maybe good foh sto' crab. No good heah." He waved his own homemade net, chicken wire pendent from a chinaberry crotch, and pointed to my line, which was twitching gently. With unthinking instinct I gave a sharp jerk. The line slackened.

"Whoo!" said Uncle Henry in mild reproof. "Coax un; don' tweak un."

Thus warned, I tolled in the next one with extreme caution.

Bidden to "scoop um," I did so, and immediately understood the expert's strictures upon my net. The captive clung to the soft mesh with a frantic death-grip, resisting all efforts to shake him loose. There was nothing to do but lay the frame across the top of the pail and wait for the prey to drop.

Meantime the old Gullah had cast out and attracted a good-sized one. Drawing in briskly but steadily, he enmeshed it. One mild shake above the pail, and it let go all holds of the cold metal. I became an instant convert to chicken wire.

That was six years ago. Since then I have crabbed from docks, dories, floats, yachts, bridges, and shore, and always found a few hardshells. As for my tutor, he has turned professional with his own boat and trotline, one of five hundred who catch for the local Blue Channel Corporation's crab factory.

The blue crab *(Callinectes sapidus)* swarms all along the Atlantic Coast. No exact census has been attempted, but a statistically minded neighbor of mine estimates that if the national debt were reduced to dimes and strewn through the Inland Waterways, there would be from ten to a dozen hardshells competing for each coin. Danger that the supply will become depleted is remote, provided that the law protecting the female crab in its sponge-bearing stage is observed. Each sponge contains from one to two million eggs. Each egg hatches a microscopic mite called a zoea. This develops, becomes a megalops, and, successively, a green crab, a peeler, a buster, a soft crab, a buckram, and finally the hard crab of commerce and sport.

Five inches' breadth is the legal minimum, though rare specimens may attain twice that size. If all the zoeae survived to the hardshell stage, there would be no room left in the ocean for waves. Various predatory sea-creatures take care of that; man does his part. I have seen a commercial runboat return from a long day's collecting tour with 25,000 blue-flippers overflowing the tall oil-drums that serve as receptacles.

Plenty remain for the individual crabber. With his cord, his sinker, his net, and his gob of meat, he need never fear coming home empty-handed. Salmon fishermen kindly take notice.

That is why I'd rather go crabbing.

Fresh-Water Moby Dick

design by Charles Harper

WIDELY snubbed by anglers, but just as widely caught and eaten, the smooth-skinned, whiskered, but delectable catfish inhabits practically all of the United States east of the Rockies. He is a cosmopolite as well, cruising the Amazon, the Nile, the Thames, and the Ganges in many sizes and variations. There is on record the case of a mammoth catfish taken from the Danube that had swallowed a small dog. In this country he ranges in size from one to more than 100 pounds. He is caught by hook, spearing, and is even wrestled by hand.

Lazybones Angling

by M. F. McElravy and John L. Rose

DOWN in the heart of the Ozark country, along both sides of the Missouri-Arkansas line, there's a fast-growing vacation industry which is doing its best to return the sport of fishing to the lazy man.

There was a time when fishing was primarily for those who, as Webster says, are "disinclined to action." Relaxation for the tired business man consisted of sitting back in a boat and watching for the float to wobble. Izaak Walton's modern disciples, however, are men of action, wading out into rushing rapids to seek the elusive trout or fighting for hours with a powerful swordfish to bring him to gaff.

Slow-moving, slow-talking men of the Ozarks have the answer to all this rushing and pulling and hauling. It's float fishing—where a vacationing fisherman is gently floated from one good fishing spot to another while sitting in a camp chair in a flat-bottomed john boat.

He can float for a week or two if he wishes, alone with a quiet hillsman for a guide or with others who are propelled in their own john boats. Propelled is used advisedly, for actually the guide does little except guide the boat along the meandering White River, turning it now and then into the mouths of creeks and deep holes where the crappies and bream lurk in great numbers or where the bass awaits a tin minnow.

At night, camp is made on a sandbar where the float fishermen—and women—gather around to compare their catches and eat dinner prepared by their guides. Tents are pitched, and sleeping bags are unrolled or cots set up.

After a dinner of fried fish, cornbread, "long-sweetening" and coffee, oak logs are placed on the fire. The floaters stretch out on the sand, gossip, brag about their fishing ability, and one

by one turn in. The nights are cool, even in midsummer, guaranteeing long and untroubled sleep.

Float fishing history dates back nearly to the turn of the century, but Jim Owen, for twelve years mayor of Branson, Missouri, is credited with really putting it on a par with other Ozark attractions in the Thirties.

The three Barnes brothers of Galena were the first to take fishermen on trips down the White River. Charlie Barnes still builds the john boats for Owen.

Another floater of long experience, Cliff David, arranges float trips out of Eureka Springs, Arkansas. Costs of the trips range from five to twelve dollars a day per person, two to a boat. Tourists and sportsmen will discover that all vacation costs in this section of the Ozarks are low in comparison with most parts of the nation.

Old and comfortable clothes are the rule along these back-country rivers. Fishing equipment is whatever you have and however you want to fish. You can just drop a line over the side, or you can bring your best casting equipment. These hillsmen will take you to places where there are plenty of fish at the drop of a hook.

The john boats are 16 feet long, and wide enough to carry the fishing and camping equipment for the floater and guide. These men have known the rivers since they were toddlers. They steer their craft with a paddle as they stand in the stern, varying the pace of the slow jaunt by occasionally shooting short but exciting rapids.

Any time from May 15 to September 15 is good for float fishing. In the spring there will be wild flowers along the banks and under out-cropping limestone ledges. In the fall, there are brilliant colors where the frost has touched the leaves.

For the seasoned fisherman who has fished in northern lakes for muskies and western mountain streams for trout, this is a new and worth-while experience and one which probably will demand a return engagement. For the uninitiated it's a thrill which won't be forgotten soon. And for everyone, it's a quiet, easygoing vacation, promised so often but rarely fulfilled.

Fish of Fifty Names

design by Charles Harper

THE CRAPPIE is among the largest and most popular of the many pan fishes. It is found in almost every state, puts up a lively scrap on light tackle, and ranks with the best of fish in flavor. Its principal distinction, however, is that it is known by more local names than any other fish—over fifty at last count. To mention only a few: bitterhead, tinmouth, john demon, grass bass, lamplighter, sac-a-lait, straw bass, bachelor, mill pond flyer, papermouth, goldring, barfish, razorback, roach, new light, banklick, and on and on.

Give Me Snowshoes!

by Richard L. Neuberger . . . painting by Harry Borgman

SKIS are the hot rods of the winter woods. The snowshoe is the steady reliable family sedan that carries the groceries. I'll stick to a pair of snowshoes every time.

During construction of the Alaska Highway a crew was marooned in heavy snowdrifts beyond Whitehorse. Several of the isolated men had come down with flu. We had some star skiers from New England in our outfit who set off spectacularly to the rescue.

A day or so later, the skiers as well as the snowbound crew had to be succored by five trappers striding along on oval-shaped Mackenzie River snowshoes. With their knapsacks of food and

medical supplies, our doughty ski champions had not been able to maintain balance. Nor could they shift direction readily in the forests of stunted spruce. Spills were frequent, with loads strewn across the snow.

This experience was enough to convince me that, although skis may be fine for a few swoops downhill, they are utterly worthless as transportation.

Let's document this claim. The organization which oversees more snow-covered terrain than any other on the North American continent is the famous Royal Canadian Mounted Police. Listen to Sergeant Howey of "G" Division, responsible for law and order in the Arctic:

"Skis are not used for our patrol work in the North. All winter patrols are carried out by dog teams, and the members of the force are equipped with snowshoes. When snow conditions are adverse, the member has to break trail by snowshoeing in front of the team."

A pair of skis would not push aside enough snow to permit a Pekinese to pass, much less a string of robust Huskies. Skis are synthetic devices and their surface is narrow. Snowshoes, by contrast, are molded after the pads which nature gave the lynx and caribou. Their webbing is like a huge paw.

A wayfarer toting his grub dares not rely on skis, for it is difficult to stay upright even with shoulders free. This anchors skiers to lodges and inns. They rarely get into the real wilderness because they cannot take food and shelter with them.

A further example of the decadence of skiing is the vast assortment of lifts, tows, drags, and escalators at virtually all ski resorts. Every last breath of exercise is gone from the sport. Your skier never actually sees the pageant of the solitudes in winter. He is hoisted uphill in an armchair and glides back down on a pair of planks. The majesty of the Sierras, the Rockies, or the Appalachians is to him a fuzzy blur of green and white.

The snowshoer, on the other hand, moves at a leisurely but dependable pace. He can watch Chinook fingerlings through the glazed ice of a creek; he studies in fascination where elk have "yarded" to stand off marauding wolves. He kneels to note the

footpad of the cougar and the glutton. He looks for activity around the frozen turret of mud and branches in which a beaver family waits out the siege of snow and cold.

I remember the half-breed trapper near the Alaska-Yukon international line who tried out skis at the urging of our downhill enthusiasts. That night the splintered hickory slats fed the trapper's campfire. "No good on trail," he explained. "OK going down. Uphill or on level, better in bare feet."

This, in a nub, is what ails skis. On the descent they are marvelous—that is, unless you must pack supplies. Otherwise, they might as well be chopped into kindling to heat the noonday soup. Skiers themselves prove this when they refuse to ski back up to the summit. The downhill glide is all that interests them.

The skier probably looks disdainfully at snowshoeing. To him it may seem mundane and dull. This is because he never has slogged comfortably through groves heavy with gleaming new snow or plowed a trail for fourteen frisky sled-dogs, their bushy tails waving like plumes. Can the artificial sensation of skiing compare with such a vivid experience?

Your true Northerner would no more set up his wife and children in a place where skis were the sole means of exit than he would leave a roof off his cabin. He would be uncertain, and rightly so, of their chances of getting safely to a doctor or school. Indeed, you can look intently in the Arctic and never see a pair of skis, although snowshoes are stacked in the "corner" of every hut, barracks, and igloo. To these hardy people snowshoes are transportation, skis merely a gadget.

Skis may offer brief exhilaration, but the snowshoe helps unlock the secrets of the wilderness. It is a way to travel, and its users do not have to cling to lifts and tows. They get across country on their own.

The Mounties have a standard joke about the Englishman who was posted for duty at Fort Chipewyan. "Hi say, old chap," the recruit is alleged to have asked, "what keeps your feet warmer in winter—moccasins or snowshoes?"

Of course, even the rawest novice in his red coat would know that there's no warmth in skis!

Skis for Me!

by Frank Elkins . . . photograph by Bob and Ira Spring

MY COLLEAGUE and antagonist, Neuberger, states that "the skier is the dude—the part time (playboy) inhabitant of the mountain ranges. . . . No pay check from Uncle Sam or the Hudson's Bay Company inspires his (the skier's) presence in the great outdoors."

Now, wait a minute! Didn't Uncle Sam fashion a whole division of troops out of this sport of skiing for the last war? Remember the 10th Mountain Division? Its pay checks came from Uncle Sam, didn't they?

But that is merely Point One for the boards with bindings. Let us lead gently into more scintillating comparisons, starting with the theory that fifty million Americans, Swiss, Norwegians, Swedes, Finns, and Minnesotans can't be wrong. That is a rough yet realistic estimate of the number of snow-tanned characters buying or using skis. Thousands upon thousands of the gleaming hickory blades grace the sporting goods stores, while a pair or two of webs gather dust alongside old boxes of black powder cartridges. It's really that poignant!

Let me now make a concession. It is true that the slow-going shoes give stability and maneuverability in deep snow, and in dense, closely wooded country. But they are the plodders, the pedestrians, and they lack the one thing most essential to all sport—*glamour!* This little item is practically built into skis.

To use symbols, the ski is to the snowshoe as the seagull is to the snail. Riding the waxed timbers, speeds of 85 m.p.h. are attained downhill, while the snowshoer goes uphill at best at 4 m.p.h. and downhill about 5 m.p.h.—a startling gain of 1 (one) m.p.h.

And as far as can be determined by this writer, there are few if any jumping records for the snowshoe. On the other hand, on

The skier enjoys a sensation of flight as the terrain drops away.

skis—it was only a few years ago—a Swiss, Fritz Tschannen, jumped or flew through the air some 393 feet for a world's record. It would take a snowshoer a minute to walk that far!

This brings up the subject of thrills and esthetic pleasures. And another—somewhat grudging—concession for Neuberger. He stated, somewhere, that the skier went so fast he didn't get a chance to enjoy the scenery. True. The skier is too often occupied by enjoying skiing, the thrill of the terrain seemingly dropping from under him, the sensation of flight without power, the swift-swinging turns.

If the skier wants to stop and enjoy the scenery, he can Christy and pull up. But there, I admit, the snowshoer has the advantage, being practically at a standstill anyway.

In the matter of ski and snowshoe music, we submit—or hurl —another comparison. The snowshoer listens doggedly to the crunch-crunch, clump-clump, or swish-swish, as he plods along,

while the more privileged skier's ear is enlivened by the downhill wind roaring in his ears. And along the slope or slalom, the spectators lift to the trail of powder snow swept up by his boards, and are vicariously imbued with the spirit of flight.

From a competitive point of view, snowshoeing is not even recognized, except by its relatively outmoded sponsors. The Olympic Games don't even list them. Much less do the Olympics include snowshoeing races.

On the point of dress and regalia—what sport boasts more picturesque costumes and attractive ladies than skiing?

Snowshoes are, to be sure, worthy appendages in the northland. They have really played a part in the legends of Indians, trappers, Northwest Mounted Police. They make very charming tracks in the snow, and keep one from sinking out of sight—better, perhaps, than skis.

But my colleague struck a blow that struck fire in the vast ski fraternity—something about rescue work. According to Dick, some guys in the northwoods got pneumonia, skiers sallied forth to help them but got bogged down, and to the rescue of both skiers and the sick came Mounties, or someone, on snowshoes.

Now a glance into the National Ski Patrol System's records in this country will quickly show you—and Dick—how many lives were saved—lives of pilots and crews who made forced landings or crashed in the snowbound wildernesses of this country during the last war.

And how about the old Telemark skier, John Thompson? This transplanted Norwegian, ironically called "Snowshoe," carried the mails, a pack of 100 pounds, from Placerville, California, to Carson City, Nevada, over the imposing Sierra Nevadas, a distance of 91 miles. John Thompson did this little trek—exclusively on skis—for 21 years!

In conclusion, why can't the case for skis be drawn up logically and objectively? Just lay out the facts, that's all. "Then," as our fellow skier, Johnny Jay, says, "if they still think skiers are crazy, no one will complain. No one can doubt. No one, that is, except the skiers themselves, and they—happy mortals!—care not!"

Birds on Tour

by George Heinold . . . painting by Claude Peacock

THE HUMMINGBIRD, tiniest of all our feathered neighbors, transports his thumb's-length of bright plumage each year all the way from Brazil to Alaska and back again. Blackpoll warblers also regularly wing the 7,000-odd mile distance between South America and Alaska. The wheatear, a small bird seen in northern Europe, Asia, and America, has no qualms about commuting between Greenland and Africa. And cliff swallows, flying from South America to northerly points in the United States, scorn the air route across the Caribbean and the Gulf of Mexico. By picking a course through Central America and Mexico, they add 2,000 miles to an already long journey.

Sea birds navigate distances that would have paled Columbus and Magellan. A blackheaded gull, banded at Rossitten, Germany, was later recovered at Vera Cruz, Mexico. Nesting gulls of other species have been banded on the English coast, to be later retaken in both Newfoundland and Labrador. And to Arctic terns, space is nothing. Nesting within 500 miles of the North Pole, they winter 11,000 miles away in Antarctic seas. Their migration each year totals 22,000 miles!

The longest over-ocean flights for shore birds are those flown by the golden plovers. Pacific representatives of this family share honors with the turnstone, another plover-like bird, in 3,000-mile crossings from Alaska to Hawaii.

For the sportsman, no sight is more stirring than the V-formations of wild geese and the clouds of ducks that darken the skies over the country's flyways in the autumn. From their breeding lands, which extend from the Arctic coast to the Gulf of St. Lawrence, they honk their way to the Gulf of Mexico. The

At top, left to right: Carolina wren and ruby-throated humming bird. Just below, left to right: cardinal, little blue heron, osprey, yellow-breasted chat. Next in line: coot, egret, kingfisher, redheaded woodpecker. Bottom line: red-winged blackbird, ruddy duck.

majority of the wild duck family follow similar flight plans.

Although their flights aren't as picturesque, many of our common songbirds are also indefatigable tourists. It seems incredible that the indigo buntings we often see making their springtime journey to Ontario have passed the winter in Cuba or Central America. But the songsters do get around. Robins, bluebirds, wrens, thrushes, thrashers, pipits, warblers, orioles, sparrows, nuthatches, finches, martins, and gnatcatchers wing north to nest and south to winter.

It's too bad that our migratory feathered friends don't speak our language. Their observations could be most valuable to us!

Camping with a Baby

by Norma (Mrs. Bob) Spring
photographs by Bob aud Ira Spring

CAMPING with a six-months-old baby won't be any vacation for you," our friends warned, "and besides, Terry can't stand the rigors of outdoor life." But if there were any rigors, it wasn't Terry who experienced them. And even his Dad and I survived practically unscathed.

We took Terry along on our trip to the wilderness of British Columbia to prove to ourselves that having a baby did not mean the end of our greatest pleasures: camping, hiking, and skiing.

(Left) *Lunch at Englishman's River Park, Vancouver Island, British Columbia.*

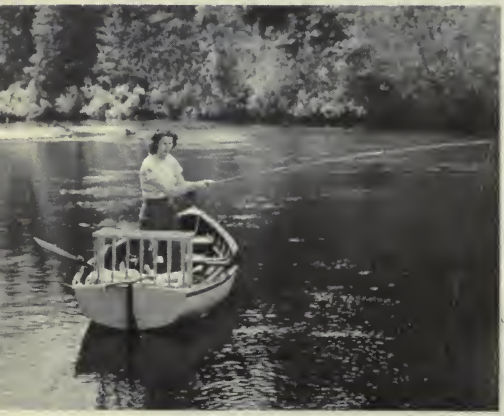
After weeks of adding, discarding, and substituting items of Terry's equipment we got down to the essentials which, Bob commented, was merely a matter of making both ends neat.

We took baby clothes sufficient for any weather, including every diaper Terry possessed. Disposable diapers served daytimes but at night he wore cloth ones for warmth.

Terry fell into the spirit of the trip from the beginning. He was perfectly at home in his specially built crib, and bumpy roads that jarred our teeth merely set him chortling with delight. There was just one thing which upset his equilibrium, but we soon became accustomed to reminding each other—"Don't slam the door!"

(Below) *In a park near Nanaimo, six-months-old Terry studies early Indian petroglyphs.*

BATH TIME *on the front seat of the station wagon (where Terry was safe from drafts) was an occasion for gurgling. We heated the water on the campfire or the community cookstove. Rain, as in this picture, made no difference. On the floor is the satchel that contained the bath paraphernalia.*



TERRY'S BED *was his castle. We padded it all around 8 inches high, for protection against bumps. Sheets made like pillowslips could be used on both sides and quickly changed. In this crib Terry dropped off to sleep easily, enjoying the motion of the car. He sometimes awakened to find himself fishing in a boat, as in this picture with his mother.*

TERRY HAD *his own private milk supply, which simplified our operations. Feeding a bottle baby, however, would merely require a few extra minutes in the morning to prepare the day's supply of formula, and taking along a small insulated ice pail and bottle warmer.*

"HIKING" *in an over-the-shoulder sling seat delighted Terry (right). Our most extensive walk was up a 2-mile trail from Strathcona Park Lodge to a fire lookout station. Ordinarily Bob and I slept outside in sleeping bags, but on rainy nights when we all slept in the station wagon, Terry's crib was raised to give us foot room by inserting a shelf—which also held the satchel containing all his needs for the night. Here his dad tucks heavy mosquito netting around his crib (below). Terry came back from his excursion into the wilderness healthier than ever, and with the wonderful habit of sleeping until 8:30 in the morning!*

TUSCUMBIA
Wheeler S. Park
DECATUR
U.S. 31
Tennessee
Little Mountain S. Park
GUNTERSVILLE
S-11A
U.S. 31
BIRMINGHAM
Black Warrior R.
U.S. 11
TUSCALOOSA
Lake Jordan
Lake Martin
Weturnpka
MONTGOMERY
U.S. 80
AUBURN
Fish Expt. Station
to Atlanta
U.S. 80
Shreveport
Demopolis
U.S. 80
Alabama R.
Tombigbee R.
Chattahoochee R.
U.S. 231
U.S. 31
DOTHAN
Chattahoochee S. Park
to Tampa
S-57
MOBILE
U.S. 31
S-12
to New Orleans
ALABAMA
"FISHERMAN'S PARADISE"

The fish of Alabama: 1—Smallmouth bass. 2—White perch. 3—Bluegill. 4—Pickerel. 5—Crappie. 6—Largemouth bass. 7—Sturgeon. 8—Blue catfish. 9—Shellcracker bream. 10—Tarpon. 11—White lake bass. 12—Striped sea bass. 13—Grindle.

Alabama Ponds

by Franklin M. Reck . . . map by Claude Peacock

QUITE a few states can lay claim to good fishing. Pit the Wisconsin muskie fisherman against the Oregon steelhead fan and you'd develop quite an argument. Add the Maine, Michigan, and Western trout addicts and the atmosphere could easily become tense. Toss in the deep-sea tars of the coastal states and the debate would begin to curl at the edges.

But in all this furore, Alabama might put in, "By the way, you fellows have closed seasons, don't you?"

This would give her an opportunity to point out that Alabama doesn't believe in closed seasons. Why bother with bans when you've got more fish than folks could take out if they worked at it every day, all year?

Alabama's fishing possibilities range from the tarpon and striped bass of Mobile Bay to the smallmouths, crappies, and white bass of the Tennessee Valley lakes, with largemouths, bream, catfish, grindle, and shellcrackers in the rivers and lakes between these northern and southern extremes. Yet it isn't the variety that gives Alabama her distinction, because all states have variety.

What sets Alabama apart is that she has learned to raise fish the way she raises corn and cotton. She prepares the land, plants tiny fish, applies fertilizer, and keeps down the weeds. Under the direction of fish culturists at the Alabama experiment station, some 15,000 plots of land have been covered with water and

put to raising bass and bream, and in some cases the only supply of water has been drainage from the surrounding slopes. You don't need a watery land to have fish, Alabama has proved. All you need is a subsoil that will hold what water there is.

The rate at which fish grow in Alabama's well-managed farm ponds seems incredible to most observers. Week-old bass fry have grown to one pound in six months. Baby bream have reached six ounces in a year. This is four times as fast as the rate of growth in the state's lakes and streams.

This triumph of management has attracted an army of anglers ranging from the city man with expensive tackle to the barefoot cane-pole clan. There are ponds in open fields, ponds by the roadside, and beautiful fifteen-acre expanses deep in the piney woods.

Lamar Blow, auto dealer at Union Springs, took me out to the first Alabama pond managed according to the findings of H. S. Swingle, the man behind the fish. There are four hundred such ponds in Bullock County where Union Springs is located, and four hundred in neighboring Montgomery County.

Most of these are open to the public for a small fee, but Blow's pond is privately managed for a limited membership. This pond, the prototype of all Alabama's fish ponds, destroys most conventional notions of what constitutes good fishing water. The banks are steep and weedless. Those who associate good bass fishing with water lilies would be disappointed to find not a lily pad, spatterdock, or lotus anywhere.

Yet the water, instead of being clear, is a murky green. Blow thrusts his arm up to the elbow in the water and waves his hand from the wrist. You can barely see the fingers.

"Pretty good," he murmurs. "Could use another application of fertilizer."

Blow explains how H. S. Swingle of the state experiment station at Auburn worked out these mysteries. Swingle found that fish depend on the fertility of the land just as crops do. A pond in fertile land produces many large fish. A pond in worn-out soil raises a small crop of runts.

So Swingle decided to apply fertilizer directly to ponds. He

spread a hundred pounds of 8-8-4 (nitrogen, phosphorus, and potassium) per acre of pond, and did this once a month. The fertilizer stimulated the growth of the microscopic plants known as algae, turning the water to a murky gray-green. The algae increased the larvae, crayfish, and other natural fish food. A pond thus treated, he found, was a land of milk and honey for fish.

Meanwhile, he discovered that bass alone in such a pond were unsatisfactory. The larger bass would feed on the smaller ones, and in a few years there'd be nothing in the pond but a few large bass.

He tried planting bream (bluegills), but bream alone multiplied so rapidly that soon the pond was loaded with stunted fish. One pair of bream will produce as many as 15,000 young in a year.

Then he arrived at a combination of bass and bream at the rate of 100 bass and 1,500 bream per acre of water, and the results were highly pleasing. The bass fed on the excess bream and grew fat and scrappy. At the same time the bream, their numbers kept in check by the bass, fed on the abundant crayfish and larvae and made record growths.

There was one catch in it. If weeds were permitted to grow, the bream could hide from the bass. Result: overpopulation.

The cure for weeds, however, was almost automatic. Swingle's fertilization program made the water so murky with algae bloom that the sunlight couldn't reach the bottom of the pond and the weeds couldn't get started! This left only those weeds that grow in shallow water, and these were abated by steepening the banks, cutting and pulling.

That was the kind of pond Lamar Blow was showing me—a sun-dappled expanse in a woods where bass and bream thrived.

"But won't a pond like this get fished out?" I asked. "It seems to me if you fish it hard, all year, that's bound to happen."

"It can't be done," Blow assured me. "When you catch the big ones, all you do is give the smaller ones a chance to grow. These fish will reproduce as fast as you can take them. And how they grow! Listen, you want to go fishing?"

There wasn't time, but there was no mistaking Blow's enthusiasm. He and his fellow members will go bass fishing at the drop of a hint.

Over in Montgomery the citizens make a game of pond seeking. With new ponds springing up month by month, they hunt ponds like gold hunters looking for rich gravel, and when a man makes a strike he tries to keep the location to himself.

Some ponds have a third kind of fish called the shellcracker, known also as the strawberry bream, identified by its yellow breast and red band on the edge of the "ear." Since shellcrackers feed on the bottom and can only be caught there, usually with worms, they complement the bass and bream.

While Alabama probably has more fun-producing ponds than any other state, her fish culturists figure that they're just started. Swingle estimates that there are 140,000 pond sites in the state.

Alabama wouldn't have you think that her only fishing resource is the cultivated and fertilized pond. Down in Mobile Bay there are deep-sea derbies specializing in tarpon. Salt-water striped bass are found not only along the Gulf shore but as far inland as the dams below lakes Jordan and Martin, almost in the center of the state.

In the TVA lakes on the northern border of the state are smallmouth, white bass, perch, and other fresh-water varieties. In the rivers "jugging" for catfish is popular, and one Alabaman points out that fertilized water from ponds, overflowing into the rivers, has helped grow oversized fish everywhere, among them a "cat" weighing 157 pounds, and a record bluegill going 4 pounds 6 ounces.

Many Alabamans also recommend exploring the cypress swamps for the grindle, which they call the "most underrated game fish in America." Similar in appearance to the dogfish, the grindle is so strong that some fishermen insist that a hickory limb is the only safe rod to use on him.

In Alabama waters are found pickerel, crappies, sturgeon, and a host of lesser varieties in addition to those listed. Taken together, they all add up to sport.

Pan Fish for Young Fry

design by Charles Harper

THE SUNFISH is the prize of the cane-pole and bobber brigade, the fish associated with bare feet, a straw hat, and a can of worms. He's a relative of the bass and is found almost everywhere east of the Rockies from Texas to Maine. Bluegills and bream are also sunfish, but the common sunfish, known as the punkinseed, can be distinguished by his handsome orange underside and the scarlet spot on his "ear." The sunfish is scrappy. He likes seasonal food. From spring to fall the youngsters feed him angleworms, grubs, crickets, and corn borers.

Cranky Is the Crow

by George Heinold . . . paintings by Charles Culver

EXCEPTING Donald Duck, no American bird has developed a personality equal to that of the crow. Yet the crow lacks beauty, charm, grace, song, deadly beak, and talons. Cunning alone has made him the Capone of the cornfields, and with as many foes, man and beast, as the coyote, he is not only here to stay, but everywhere to stay—except that he has no clawhold in South America.

Stories of corvine mischief, raffishness, and perverse humor make the eagle and the hummingbird drab by comparison. What eagle ever swooped into a farmyard and made off with

a set of false teeth? What hummingbird or bluejay ever broke up a golf game by stealing the ball? Recently a pair of the black scoundrels ruined a day's ice fishing in Connecticut by pulling up the fishermen's tip-lines, and robbing the hooks of bait.

The crow is against everyone. The feeling seems to be mutual. Game keepers, sportsmen, farmers, and the Great Horned Owl denounce him, shoot at him, and attack him—the owl, because the crow disturbs his daytime sleeping!

About the only thing that can fool a crow very long is another crow. When corn is planted in straight rows, the crow finds a kernel, and goes right down the line. When it's cross-planted, he digs only where the marker lines intersect.

One noted crow hunter tried all his tricks without success.

"Why not get a line on where their roost is?" I suggested.

"I know where their roost is. It's in a public park—no hunting!"

The apparent mob tactics of crows are actually strategies. Insolence and clamor are a means of defense. In union there is strength. Said Henry Ward Beecher: "If men had wings and bore black feathers, few of them would be clever enough to be crows."

Once, on a back country trail, I came on two crows diving and picking at some creature on the ground. One would lunge and retreat, whereupon the other would dive in to attack. This went on for minutes. When I walked closer to the scene, I was astonished to find that the slick pair of gangsters had successfully engaged and killed a copperhead snake nearly 3 feet long.

There are nine different corvine species in the United States, six of which are known as crows, and three as ravens. The common crow, a bundle of supreme arrogance, is the "haranguester" we most generally know. He stands about 16 inches high, and his gathering is—of course—called a "cawcuss."

While the crow undoubtedly prefers stolen food to other kinds, much of his diet actually benefits man's activities. A government biologist has estimated that a family of crows would destroy 38,000 harmful insects during their nesting period.

Last spring I watched a pair of crows nesting. They wedged a twig nest in a tall tree near our house, and lined its interior with horse hair and grasses. Soon the nest held six eggs of mottled green.

When the young hatched, both parents worked hard to keep them fed—crushed insects, shreds of field mice, downy young songbirds, and choice frogs went into the bill of fare.

After about three weeks, the doting attitude of the parents changed. Arriving at the nest with a tidbit, the parent refused to yield it, but perched some feet away on a limb, tantalizing the youngsters. One day, after about an hour of this, a young crow got up his nerve and hopped to the parent's limb. He was promptly rewarded with the tidbit. This process went on till all the youngsters had hopped from the nest with a flurry of frightened wings.

When the nesting and training period is over, crow families gather in small bands which gradually coalesce as colder weather comes. There is now a move toward warmer climates, where crow cities are established. Some of these have been known to harbor as many as 200,000 birds.

Sportsmen for years have endeavored to popularize crow shooting as a sport with a three-fold purpose: the protection of agriculture, the increase of game and songbirds, and, as no closed season exists to preserve the crow, the development of an excellent off-season gunning sport.

The crow is wary. Decoys, such as live, stuffed, or mechanical owls, are used to lure him to the blind. A crow call is generally used. There are phonograph records to teach the hunter the best crow jargon.

Skilled callers can imitate distress, discovery, attention, and rallying calls so effectively that their efforts blacken the sky. They can also reproduce the calls of young crows in nesting season.

The oddest and certainly the most unorthodox crow caller I've ever seen was a cantankerous old parrot. Dubbed John Silver, the parrot was placed on the lawn one warm summer's day. The family's pet black cat was in the house on a cushion,

and all was peaceful until John Silver spied a crow in a neighboring lot. At sight, John employed his bilingual talent to heap scorn and abuse on the crow. Out-classed, the crow summoned assistance. Soon the field resounded with the blasts of the crow chorus, and the commotion did not subside till John Silver's mistress came out to investigate.

Thus John's personal differences with the mob won him an audition as a crow caller, a trial that turned out so favorably that his master used him as a decoy by placing the parrot cage in strategic crow territory. John's fervor increased with each shot. He shook his cage in his rage, hurling invectives as the crows stormed about him. Finally, after four seasons of raging, John Silver was seized with a fit and perished from the earth.

Some birds charm with their plumage, others with their song. The crow, however, is typed as the pariah of the bird kingdom. Nevertheless he lives a full life on a full stomach. He's a wise guy—and he has a lot of fun.

Fishing by calendar will take you on an exciting tour of the Northwest. Map by Charles Harper.

Use a Timetable

by Joe Van Wormer

COMBINING a sightseeing trip for your family with a fishing trip for yourself isn't a bad idea, when your destination is that rugged corner of the United States consisting of Washington, Oregon, Idaho, and Montana. Your family will have no trouble, but you may, unless you have due regard for the whimsical fact that trout lakes and streams have their periods of high production, and that these periods vary from place to place. This being so, your most valuable piece of equipment may not be a rod, reel, or lure, but a *timetable.*

If your family doesn't mind doing the Northwest in an odd kind of loop, you should be able to put yourself on the region's most famous waters when the fish are most likely to strike. On, then, to a timetable fishing and sightseeing tour of the Northwest:

May 15. The Deschutes River in north central Oregon. Take-off towns, Madras and Maupin.

The Deschutes is a big, rough river that flows northward to

the Columbia near The Dalles. The rainbow will take everything from spinners and worms to dry flies, but in May they'll be ravenously smashing big salmon flies.

Two tributaries, Crooked River and the Metolius River, join the Deschutes near Madras. Crooked River, a fast, turbulent stream that flows between deep canyon walls, is a consistent producer of a particularly vicious breed of rainbow. The Metolius maintains a constant level of cold, crystal-clear water, where rainbow trout are still wary enough to make skillful fishing a must.

May 20. The Lewis River. Take-off town, Vancouver, in southwest Washington.

The east fork of the Lewis is a swift stream that frequently provides a breathless brand of angling during the early season.

On the Lewis River, late in May. Photograph by Ray Atkeson.

May 23. Either the rugged Olympic Peninsula or the western slope of the Cascades.

The Peninsula is a wild playground whose rivers rise in the Olympic Mountains and tumble to the Pacific. Best known are the Quinault, Hoh, Galawah, Elwha, Queets, Bogachiel, and Sol Duc Rivers. The touring angler may take his pick or, better still, follow the advice of some local authority on where the cutthroat runs are heaviest.

Streams in northwestern Washington fall from the Cascades into Puget Sound. In May the traveler is likely to catch a "run" of salmon, steelhead, or cutthroat trout. In late May the Skykomish is bountiful with rainbow, cutthroat, and Dolly Varden. Practically any enticement is accepted—bait, spinners, flies, or small spoons.

May 30. Lake Chelan.

This lake in central Washington puts in a powerful bid as the West's most picturesque body of water. Throw out a spoon or spinner, or just gaze and relax.

June 2. Lake Pend Oreille.

Since the first giant Kamloops rainbow trout came out of Lake Pend Oreille a few years ago, many fishermen have waked up in the middle of the night, bemused by the idea of catching one. The current mark of 37 pounds was established in 1947.

These Paul Bunyan rainbows are rare enough to make catching them a patience-testing matter. The gear varies, but it's wise to use boat rods with star drag reels and lots of 18- to 30-pound test line. Surface troll with salmon plugs, spoons, or wobblers. If your patience wears thin, it is an easy matter to switch lures and work over the bluebacks.

Bluebacks are a small species of landlocked salmon. In Lake Pend Oreille they're so plentiful that no limit has been placed on them. Best method for sure catches is to troll slowly, using a

multiple flasher baited with worms. In the shallower sections of the lake, fishing for bass, perch, and other spiny ray fish is good. Several small lakes near Pend Oreille also provide fine sport on warm-water species.

June 7. Priest Lake, 50 miles northwest of Pend Oreille.

Priest Lake is considered by many Idaho fishermen to be one of the best cutthroat lakes in the state. Good fly fishing, here. Plenty of bluebacks and Dolly Varden trout.

June 15. The Whitefish-Flathead Lake section of Montana, 250 miles by highway from Priest.

Send your family to near-by Glacier National Park while you work over an assortment of trout in Whitefish Lake. The Dolly Varden will go to 15 pounds and the lake trout up to 35, although the average will be considerably less. Cutthroat and rainbow will run to 5 pounds. Flathead Lake yields about the same variety of fish, with the addition of largemouth bass, crappies, and other pan fish.

A week later your family will return from Glacier to tell you what great fishing you could have had there.

July 1. The Madison, Gallatin and Jefferson Rivers. Take-off town, Bozeman, Montana.

All three streams yield rainbow and Loch Leven (brown) trout. Wet flies, streamers, and a spinner-fly combination seem best for the bigger fish. You could spend three weeks here and at nearby Yellowstone Park, but the calendar is calling you 125 miles south to a jewel of consistency.

July 20. Henry's Lake.

Folks say that Henry's Lake produces average catches running better than 2 pounds. They may be rainbow, eastern brook, or native cutthroat. Fishing is from boats, either with a fly or casting rod with some form of wobbler. A few miles south lies

Island Park Reservoir, a man-made lake that produces good catches of rainbow and blueback salmon. Fly fishermen should put up their light tackle and troll with bait.

August 1. The Big Lost River. Take-off town, Mackay, Idaho.

The Big Lost disappears in the lava beds southeast of Mackay, only to reappear after 75 miles underground as the roaring Thousand Springs on the Snake River. Here is one of the best fishing grounds in the country, tops for fly fishing. Since it's August, the river is low enough to wade. The trout population includes rainbow, eastern brook and Dolly Varden.

August 7. The waters of the Stanley Basin. The Middle Fork and the main Salmon River.

Early in June: Lake Pend Oreille. Photograph by Ray Atkeson.

Here is spectacular salmon fishing. Try it out—and plan to come back for a whole summer.

August 15. The Lower Deschutes. Take-off town, The Dalles, Oregon.

Get ready for the steelhead run on the Lower Deschutes, near where it joins the Columbia. This is the Main Event. It starts after August 15 and continues well into September. These sea-going rainbow trout are at their best on the end of a flyrod leader. World's record, 28 pounds—on a fly. Steelhead flies are special creations, and why the fish strike is a mystery, since they do not feed during spawning migrations. But strike they do, and the results are dynamite.

A float trip down Oregon's famous McKenzie River makes a restful finish to a timetable fishing trip through the Pacific Northwest. There are numerous launching and take-out sites on the river, so the float trip can be of any length. Fishing is good in early September and ideal for the angler who prefers flies. Mostly he'll get rainbow.

Thus terminates a season of timetable fishing. You arrived at each bit of water at the height of its productive period. Not everyone has the opportunity to spend an entire season on a fishing tour, but even for a shorter trip a timetable will pay off. With the right luck and weather you'll be off to a good start.

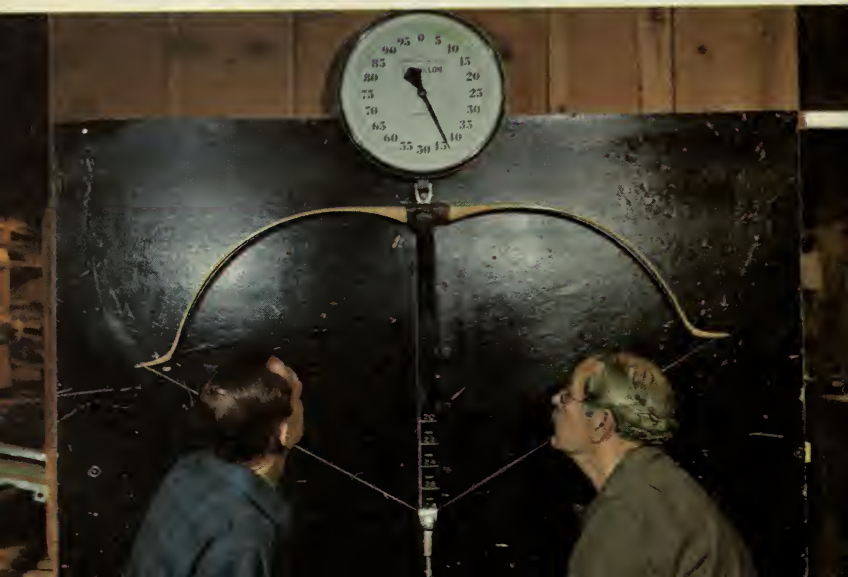
The bow hunter's deer season is in October's bright blue weather.

Johnny, Get Your Bow

by Mary R. Zimmer. . . photographs by John Calkins

GUIDES in the Canadian north woods generally take a dim view of the hunter who totes a bow instead of a rifle. They know their popularity depends on how many trophies they help to bring back, and they prefer guns. So when Fred Bear of Grayling, Michigan, set out to hunt moose in the Ontario wilderness he kept mum about his weapons. Not until he was well up north did he unpack his bows and arrows. The guides took a long look, glumly concluded they were stuck with a loony.

A few days later, cruising on a tiny lake, they spotted a bull moose nibbling his breakfast from the lake bottom near the far shore. While the guides stayed back, hidden by tall reeds,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←*Feathers are glued on arrows in a slight spiral to assure true flight.*

Bear quietly slipped inland, edged along behind the brush, and waited. The moose came into range twenty-five yards away and the bowstring twanged. The animal ran fifty feet, half turned, and sank into the shallows, as the exasperated guides, who had seen and heard nothing, came charging up demanding where it had gone. Fifteen hundred pounds of meat lay at their feet—and two more skeptics were converted to bow hunting.

That was several years ago. Fred Bear has scarcely been out of Grayling since, because he's been too busy making bows and arrows for other people to use. That's no hardship, however. In the off-season he can look out the windows of his Bear Archery Company and watch deer among the white pines and maples. Come hunting time, he doesn't have to go far to get his buck.

In the past twenty-odd years, over 40,000 hunters in the United States have forsaken the gun for the bow. Most hunt in Michigan or Wisconsin, but there are many in California, Washington, Pennsylvania, Utah, Idaho, Oregon, New Hampshire. They like to hunt this harder way because it's more fun.

To the man with a rifle any buck in sight is a target. His bullet, traveling about 2,500 to 3,000 feet per second, kills by shock, even if it doesn't hit a vital spot. But an arrow travels only 175 to 200 feet per second. It has little shocking power, but great penetration, and its sharp broadhead brings down the game by causing internal hemorrhage. Archers claim that if the animal is not killed, the arrow shaft, unlike a bullet, works itself out, leaving a clean wound that heals more easily.

Against the bow a deer has more than a sporting chance. The bowman must creep to within sixty yards for good aiming; the average is thirty-five yards. The hunter's best bet is to aim before the deer sees him, but this is difficult when the woods are dry and consequently noisy, and the leaves cut down visibility. And even the twang of the bowstring can send the quarry out of range before the released arrow finds its mark.

Ten years ago one bow hunter in a hundred got his deer. Today it's about one in twenty—and one in three or four among gun hunters. The improved score is due partly to liberalized state game laws, which give bow hunters special seasons or

-- *Testing a "Grizzly" bow at the Bear Archery Company.*

special preserves, or both. It's also due to modern bows, which outclass anything Indians ever dreamed of. Some are hardened aluminum, magnesium, or tubular steel. Others are composites of laminated wood, glass fiber, and plastic, partly mass-produced and less expensive. An example is the "Grizzly," made by Bear. It's a 17-ounce bow, shaped from a sandwich of maple and glass fiber, with an interliner of sheet aluminum. It is claimed to out-perform handmade wooden bows of twice its price.

So far, bow hunters bag less than one per cent of the country's total legal deer kill. Automobiles kill more deer than archers do. But the bowmen's numbers are increasing, and so is their skill. In northern states, weather alone converts many from gun to bow. For the gun season is in November, when the days are cold, gray, and wet, and the woods are cluttered with trigger-happy hunters. But the bowman stalks his deer in October's bright blue weather. The sun is warm, the air crisp, the foliage brilliant, the woods silent. What if he doesn't get a buck? He's had a wonderful time.

In Bear's special quiver, arrows can't rattle and alert the deer.

Two divers in the clear spring water of Crystal River.

Fish Meets Man

story and paintings by Bill Moss

I WAS lying head downward along a slanting limestone cliff and keeping very still. The snook, dressed in silver gray with a black stripe, was three feet away, curiously eyeing the bubbles rising behind my head. Then I moved and the fish swam away—not darting. Just ambling along.

One of the nicest places I know to meet fish on a man-to-fish basis is Paradise Point on the Crystal River in Florida. Paradise Point is a green lawn hemmed by a seawall jutting into the clearest 72-degree spring water imaginable. In this water, large-mouth bass and bream—northerners call them bluegills—swim

by the thousands. Into this place salt-water fish come from the Gulf six miles away: snook, mangrove snappers, and sheepshead.

Almost any average swimmer can dive off the seawall and meet these fish gill to gill, and if he wears an Aqua-lung he can stay down for the better part of an hour, making the discovery for himself that fish aren't the least bit afraid of a submerged human if he stays reasonably still. With the Aqua-lung almost any paddler can be his own Beebe.

The land around Crystal River is a fine region for exploration above water as well as below. Hereabouts the sea and the land have so contrived to merge and form uninhabitable labyrinths that you have awesome jungles within gunshot of room service. Here, on a meandering lake a mile and a half long, the river has its beginning in a series of springs bubbling up from some inexhaustible source. On its way to the Gulf, the river is joined by feeder streams, and long before it gets to open water it divides into a maze of channels that confuses everybody but guides.

My first evening on Crystal River I walked the entire eight feet from the front door of the cottage to the seawall, rigged up my flyrod with a popping bug, and caught eight bass, two of them weighing 5 pounds. The surprises of the area were heightened sometime after midnight when I was awakened by sounds of splashing and heavy breathing, like a couple of channel swimmers in a struggle. The next morning I learned that the noise was nothing more than a mama porpoise teaching her child a couple of new rolls.

The man who introduced me to Crystal River's underwater possibilities was Bill McDougall, one of the outstanding goggle fishermen in Florida. Bill initiated me into the use of the Aqua-lung. It's a foolproof, simple rig consisting of a tank of compressed air that you wear strapped to your back, a couple of valves, a hose, and a mouthpiece. With it, you can carry an hour's supply of air—or more—down into those depths where the fish become casual and curious. With rubber fins fastened to your feet for easy propulsion, with goggles to keep the water out of your eyes, and the mouthpiece to feed you air, you're well equipped to discover a new world.

Discovery of the world below the surface began at the three springs fifty feet beyond the seawall. The water here was shoulder deep, but where the springs marked the surface with glassy boils, the river bottom dropped away into deep, shadowy grottoes. After Bill McDougall explored them first, I swam thirty feet down into one of them and struck up an acquaintance with a couple of snook, a bass, and a school of snappers.

Paddling deeper, I saw that the spring was flowing out of a slanting crevice in the sandstone, and as I looked into it I found that I was peering through an open door into still another world. Beyond the crevice was a deeper space and at the bottom was a patch of sand, brilliantly sunlit, and across it fish were swimming. What kind of watery network underlay this land?

Sam Pickard, owner of Paradise Point, added to the mystery when he showed me the spring-fed pool in the lawn near the cottage. There were bass in it, and he added several mangrove snappers, alive and flipping.

"Tomorrow morning," he suggested, "you come out and look for the snappers."

The next day I followed orders and the freshwater bass were still there but the salt-water snappers were gone. Their only means of exit was the 8-inch opening through which the spring water came. You could only assume that they had made their way elsewhere by way of underground waterways.

One of the attractions of Florida's west coast jungle is its mysteries. All up and down Crystal River are sights to ponder over and among them are the mounds of oyster shells. These must have been the remains of monstrous prehistoric clambakes, because the oysters obviously had been eaten and the shells piled up for a purpose.

Another riddle is the potholes. Carson took me to one such basin by rowing up a side channel and walking across a bit of prairie. There, in the midst of swampy desolation, was a small circle of water, and though it was not connected with any other body of water it yielded large and lively salt-water channel bass. Was the pool self-sustaining or did it repopulate itself through some underground channel?

If you're an angler, Ronnie Green, the manager of Paradise Point and former owner of the land on which it is built, guarantees that the guides will lead you to fish. You have a choice of the headwaters, the main river, the side channels, the potholes, and the Gulf itself.

As for the hunting hereabouts I have only hearsay evidence, but I'm told that these wildernesses are one of the better duck-hunting areas of Florida. The woods are also full of deer and wild turkey.

Just an hour and a half from the population centers of Tampa and St. Petersburg are some of Florida's wildest jungles. Whether you choose to take a tank of air and go down to meet fish, or take a boat and do your exploring above water, it's an intriguing region for the traveler with adventure in his blood.

Large school of mangrove snappers.

Pathways to the Primitive

by Robert M. Hyatt . . . photograph by Ernst Peterson

WITHIN the boundaries of our western national forests, where the peaks are lonely and the trails run dim, lie the last true strongholds of nature in our land. These strongholds are the seventy-six Wild and Wilderness Areas—tracts of land set aside by the U. S. Forest Service to preserve primitive conditions of habitation and environment.

The areas have been selected during the past thirty-five years to represent typical forests, deserts, watersheds, geological formations, and mountain terrain in a primitive state. Accessible only by trail or water, they are located in eleven western states and Minnesota. Their variety, vastness, and beauty are difficult to comprehend. Hunting and fishing is permitted within them, according to state laws.

The distinction between Wild and Wilderness Areas is merely a matter of size. Wild Areas are between 5,000 and 100,000 acres; Wilderness Areas are 100,000 acres or larger. All together, these primitive areas total 14,000,000 acres. But they cannot be measured in acres or by any ordinary standard of value. Their significance, grandeur, and the quality of recreation to be found in their fastnesses can be judged only in terms of equities of the human spirit.

In fact and in concept, the Wilderness Areas are guarded and maintained by the U. S. Forest Service. Their protection is also the fundamental objective of a spirited organization called "The Wilderness Society." The guardianship of both groups is distinguished by a quiet, unrelenting zeal, and by an inspiration all its own. Their laws are mostly of the unwritten kind—but they are a potent force in winning the individual's support of the wilderness idea.

North to Coquina Lake in the Selway-Bitterroot Wilderness Area.

None of this means that you are barred from Wild and Wilderness Areas; from the finest hunting and fishing the nation affords; from the wildest and most beautiful scenery; from the joy of seeing our last true wilderness. It means, instead, that you may regard this abundance as yours—a special privilege, in which a special responsibility is implicit.

From the beginning, and always, the Forest Service has faced a strange, complex problem. In preserving the wilderness, it is doing an immeasurable service to civilization. But in order to do so, it must keep civilization out. If that is a paradox, the results are a masterpiece.

Forest Service directors found that the simplest control was the most effective. They outlawed the wheel and the engine. Cars are prohibited, motors and motorboats likewise. Thus commercialism in all its forms is automatically excluded. The airplane is also prohibited except in a few areas where its use

had become established. But nowhere is it welcomed by wilderness enthusiasts.

The only way to explore a Wild or Wilderness is on foot or on horseback, except the Quetico-Superior Wilderness Area, in Minnesota, to which the canoe belongs. Horses, guides, and pack outfits are available near most areas. Dude ranch operators are usually glad to take guests into nearby primitive areas on pack trips. The cost is usually fifteen to twenty dollars per person per day, including horse, tents, food, wrangling, and guide service, and depending on the number of persons in the party and the amount of work the dudes wish to do for themselves. Deluxe service can bring the cost per day much higher. Dudes who don't mind doing their own cooking, wrangling, and tent-pitching can reduce the cost by these efforts. Because of the wildness of the terrain, inexperienced individuals are strongly urged not to attempt trips without guides. For information, consult the Forest Supervisor having jurisdiction over the area chosen, or the local forest ranger, or write to the Forest Service, U. S. Department of Agriculture, Washington, D. C. The Dude Ranchers Association, Billings, Montana, will supply lists of ranchers offering pack trips.

Each year the American Forestry Association sponsors a number of trail-riding trips through some of the outstanding areas. These parties are of the all-expense, little-work variety, and the party always includes a competent guide and a physician, as well as cooks and wranglers. The trips are usually ten to twelve days, and the cost ranges from $175 to $215. For information write to the Association at 919 Seventeenth Street, N.W., Washington, D. C.

The Roadless Areas in the Superior National Forest in northern Minnesota are unique. This is probably the largest region in the world traveled almost exclusively by canoe. But not quite exclusively. There is considerable use of the pontoon plane—a situation which is greatly deplored by both the Forest Service and the Wilderness Society. They feel that the airplane is a means of travel entirely foreign to the purpose of a wilderness area. Neither is against airplanes, it should be explained. Rather,

they are *for the wilderness.* There is a difference. But there must be no compromise, or the whole concept of a primitive area will be endangered.

The Living Wilderness, official publication of the Wilderness Society, is dedicated to the wilderness idea and offers much information on the areas. Address: "The Living Wilderness," 1840 Mintwood Place, Washington 9, D. C.

In most of the writing about Wild and Wilderness Areas you will note a marked contrast with the usual tourist and resort literature. There is always dignity, and frequently a curious reserve. The writers aren't withholding anything, or even making it hard to find. But they are guarding something big, and as a result:

"(You) can travel in the roughest, most rugged terrain in America and experience the same emotion that the pioneer explorers felt when they blazed the first trail across the seemingly endless and formidable mountain ranges and deserts of the West. From the cactus country of the Superstition Mountains where the waterhole is the congregating place of all wildlife to the big, rain-soaked Douglas fir forests of the Olympic, the wilderness traveler can explore. . . . He can look off from the cool crest of the Chiricahuas over the sun-baked desert into old Mexico, or he can step across the Canadian border from the rugged, snow-capped North Cascade. He can camp on the Continental Divide in the Popo Agie and look out over the Wyoming prairie, or he can view the distant Pacific from his trail in the Ventana."

Those words from *The Living Wilderness* were written by John Sieker, Chief, Division of Recreation and Lands, U. S. Forest Service. There isn't a word about the marvelous hunting and fishing. But there is more—a feeling of the sweep and scope of the wilderness, the altitudes, the forest depths, the majesty of height and distance. It seems to explain what a group of young men felt after their first trip into the great Selway-Bitterroot Wilderness Area, when one of their party said:

"We were in that country for nineteen days, and we came out quiet."

The Compleat Florida Angler

by Philip Wylie . . . paintings by Morgan Douglas

THE tourist angler generally approaches Florida in a mood of worried excitement.

He may be an old salmon man from Maine or Puget Sound; he may be a caliph among the pike and muskellunge of Wisconsin; perhaps he is a trout wizard whose waders know the upland brooks of half a dozen states; still the name of "sailfish" and the awesome reputation of the Gulf Stream will put him on his mettle.

"Tarpon" is another word calculated to shake his aplomb. Quite often, at about the point in his drive south at which Spanish moss begins to dangle from the trees, he bolsters up his intrepidity by telling himself that salt-water fish are a brutish, sluggish sort and the taking of them is hardly a fine art.

The sad thing is that the tourist angler may go back home with that opinion—even after a good deal of conventional fishing. For much of the best of Florida fishing is unconventional: as sporting as any quest with rod and reel can be—or not sports fishing at all, but always odd and fascinating.

Sailfish and tarpon, the standard quarry, are commonly taken from charter boats, operated by two guides in the case of the former and one or two in the case of tarpon. And while I would be a great hypocrite to disparage either sport, I would be less than honest to deny their handicaps, especially for the novice.

In the Gulf Stream

Consider sailfishing. The cost of chartering the boat runs from thirty to sixty-five dollars a day. The tackle supplied by the boatmen is generally designed for durability in the hands of beginners rather than for sporting qualities. Chances of getting a sailfish to hit on any given day are far less than even; chances of catching a sailfish, if it does hit—less again than that. Many anglers have trolled for months without taking a sailfish. And sailfishing is not a sport for persons subject to seasickness .These conditions apply in a lesser degree (except for *mal de mer*) to the commonest forms of tarpon fishing.

A tourist angler who spends days in green-gilled queasiness and gets no fish, or who takes a sailfish on a line that would do for blue marlin, or who hunts tarpon for a week and catches nothing but jack and snook on heavy tackle—one who goes home lighter by a good deal in the pocketbook but not much heavier in the

creel—will hold a dim opinion of Florida's piscatorial possibilities. And one who thinks that the beginning and the end of Florida fishing lies in the conventional, guided trips, together with the bottom-fishing which one observes from every bridge, and even from front yards, has missed endless adventures.

Suppose you are such a tourist: an old black-bass and pickerel man. Naturally you leave the bait-casting rods at home. The 2-ounce tip, the hundred yards of 12-pound test line, your favorite bass plugs—in Florida? In the ocean? Crazy, you are sure. So you fondly store them away—and make one of the major blunders of your life.

Down around the end of Florida lie the Keys—accessible by a dramatic highway—and around the Keys lie thousands of square miles of water—some of it only a foot deep, very little of it over your head. At a hundred spots along the road you can rent an outboard motorboat. Then with your bass tackle (and only one change: a wire leader for the gut you may have used) you are set for a style of angling with which you are familiar. In a sense, that is. You are set for lake-calm water, warm sun, shore line with coves and weed beds, fallen trees, channels and holes—all ideal for a well-aimed plug.

You run your boat over toward some rotted pilings off shore—a spot where a pickerel might hang out in fresh water. You cast, and work your plug. From here on I leave you to yourself—with these hints.

Plug casting is tied, in my own mind, with trolling for the great game fishes, as top fun in salt-water angling.

Your cast may bring a rushing hit that knocks the plug into the air—and a second hit which takes it under water. You may find yourself engaged in a hard fight that resembles the battle of a smallmouth bass—and finally bringing in a perch-like fish of one, two, six, even eight pounds—which will prove to be a member of the snapper family. I think you will agree that a snapper on a plug is the equal of a bass—to fight—or to eat!

But it may not have been a snapper that was lying in the shadow of those piles. It could have been a snook—which is a pike-like character. Or a sea trout. Or a jack—and a minor jack

on a casting rod furnishes a very interesting ten minutes. Suppose, though, it is a 20-pound jack. That ten minutes will stretch into half an hour—or an hour—of very hard, fast fishing, before you, or the jack, gets the decision.

Could be a barracuda longer than your leg—and I recommend this guy, on casting tackle, to my muskellunge colleagues. Could be a grouper. Or a ladyfish, also called Chiro—which pinwheels and jitterbugs in the air like the fastest rainbow—and ladyfish grow up to be 10-pounders. That cast might attract any of a score more species which there isn't space to list here—and it is also a fine way to locate and make contact with a tarpon.

I hold, with considerable expert backing, that no man's fishing days are complete until he has attached himself to twenty or thirty or forty pounds of tarpon via a rod intended for black bass. Standing in a rowboat, with his fish leaping higher than his head or running away like something out of a roman candle, —and with only a hundred yards of line and the drag of his own thumb between himself and a shellacking—an angler will learn things about tarpon that are unknown to those who go after them with heavy rods, guides, large boats, strip baits, and other accessories.

Of course, if you are the perennially unlucky angler, that cast may be picked up by a shark or possibly by a 300-pound jewfish. Or maybe a tarpon as heavy as yourself will grab your plug, feel its hooks, and start across the Gulf of Mexico by the air route.

Against such common extremities, the Florida caster carries a good supply of plugs along—and several extra lines. Furthermore, the Florida caster is sometimes embarrassed by a strike—and a catch—that is not in the finny league. Among the critters taken thus inadvertently are terns, gulls, pelicans, turtles, alligators, crocodiles, and rattlesnakes.

Reeling a pelican down from the sky is quite an experience, I guarantee—and how to turn loose an alligator is a problem never encountered in northern ponds.

Now get a grip on your chair and consider this: all the fish just mentioned, and the many more implied, take flies.

Casting for jacks

Your old salmon rod or the delicate favorite with which you pursue brook trout may also be imported to the Keys, and when you get them out, no one will laugh. People may think you are piscatorially foolhardy but they will also assume you are among that rare and dangerously living breed, the salt-water wet- or dry-fly angler. A small tarpon on a trout rod, or a nice snapper—but I think all fly fishermen get the idea.

The fresh-water angler usually casts into likely *places*. But in Florida's vast reaches of fish-thick "flats" the angler often sees his fish and stalks it—casting to his quarry personally, as it lies, swims, or feeds, plainly visible in the gin-clear water. Such fishing is like hunting.

Barracuda, for instance, are often seen before they are heard from. More than once I have watched a casting wizard of a lake or river region get buck fever as he tried to aim his plug at five

feet of sabre-toothed malice leering at him from a quiet nook forty yards off. Jacks, which travel in schools and which feed with a roaring splash like fifty women beating fifty rugs in the water, also are among the fishes that may be taken by this sort of dead aim.

In my Florida home on the Bay, I kept a casting rod with a plug ready to fire, hanging on the front porch. Often, while deep in the production of literature (as near as I could get) I would hear the roaring splash of jacks in the water outside, rush downstairs, grab the rod, cast from my front lawn, and enjoy the next quarter hour in non-literary excitements. At night, ladyfish feed on shrimp with a surging surface break, and the rod on my porch was handy for that too.

Bonefish occasionally—and, once in a great while, permit—take plugs. These are fish which feed in shallow water, showing caudal and dorsal fins as they do so, and stirring up mud. They too are stalked by rowboat or even by an angler in waders. Crab, shrimp, bits of conch, and the like, are the proper bait for them—but it is no mistake to try a cast at one when you encounter him, excepting of course for the tackle risk involved.

Bonefish and permit are commonly alleged to be the fastest fish alive; fishing for them gives thousands of savvy anglers an extended, slap-happy old age; it is a cult—but anybody with ambition and a few bucks can join the cult.

The channel bass, alias redfish, alias red drum, is a potent swimmer who often grows up to weigh twenty-odd pounds, and he too haunts the shallows and feeds nose-down, tail-up—so that he may be approached cautiously by poling or rowing, and set into violent motion by feeding him a plug with an easy cast.

To stalk the channel bass is to enjoy a particular sport. On reddish, greenish, or violet banks, where an incoming tide provides inches of water, enough to float his skiff, the hunter prowls like a man with a gun. He takes care not to flush his game. And once a redfish is spotted—once the cast is made and the plug taken—a contest follows in which, as a rule, the angler has his fish in sight the whole time—and, no doubt, the fish has the angler in *his* alarmed view.

II

Some of my friends are experimenters, and of these one is very lazy. It is about a hundred and eighty miles from Miami to Key West over the famed "Highway That Goes to Sea." This thoroughfare, besides furnishing some of the most dazzling marine-scapes in the world, crosses many scores of bridges—the shortest of which is a few feet across, the longest seven miles. These bridges connect the Keys and carry the road over such waters as we have just been discussing. Plain bottom-fishing with shrimp for bait provides most bridges with a quota of anglers. My lazy friend, who does not cast but who likes to troll, realizing that the running tide would keep his bait clear of the bridge bastions, now carries a bicycle in his car. It is his practice to rig up a bait, drop it over the bridge rail, mount his bike, and ride sedately along the rail, trolling. He has caught a good many fish in that fashion—but he has one problem: when he hooks a big one a mile or so from the shore end of a bridge, he has to battle it the long way back before he can land it—for the line he uses will lift nothing over twelve pounds.

Another gentleman, known personally to me, conceived the notion—doubtless on a day when fishing was slow—of looking for them in an autogyro and harpooning them from the wing of same. It was some time ago—and I presume that today he would employ a helicopter; but he did manage to harpoon a shark, several 'cudas, and one loggerhead turtle—all of which were retrieved by a boat following below. This method, though interesting, is expensive and somewhat hazardous.

I have heard suggestions made for trolling from blimps—and the blimp which takes passengers for a sky ride from Miami's causeway uses its shadow to scare and pursue porpoises and sharks. But, again, the blimp angler would run the risk of hanging a fish that would pull the blimp down, rather than the fish up.

I have a report of some Florida boys who were taking large-mouth black bass in unlikely waters by a method which, again, has certain hazards, but the appeal of novelty. The boys attracted the bass by catching several live bumblebees, putting them in a one-gallon glass jug, and weighting the jug so that it descended to bottom. There the flying about of the bees brought the bass, and the lowered baits did the rest.

In my own way, I discovered a means of initiating Florida novitiates to the fish-teeming facts of life in that area. On my front lawn stood a large Australian pine. To this I affixed a long sash cord. On the far end of that I put a cable leader and a large hook. Near the tree end of this line, I took up a couple of yards of slack and tied in it a bundle of eight heavy door springs. This rig, in other words, was a set line—and the springs were to give it play in the event of a strike. For bait I used a whole crawfish tail or a whole fish of half a pound or so. Under scrutiny of scornful tourists, friends, and new arrivals, I would tie a heavy sinker to my rig and toss it overboard from my sea wall. I would then fix an elephant bell, which someone had brought me from India, to the tree end of the line. Then I would go about my business.

Bear in mind that the rig lay in water which surrounded a suburban tropical community—a place where people swam, aquaplaned, and bottom-fished for grunts. Often I have been interrupted at dinner, or during a bridge game, or even in my slumbers at night, by the melodious chiming of the elephant bell. Then, with my skeptical guests, I have gone out and battled, on my own lawn, 200-pound sharks and rays as heavy—both leopard and stingaree. Furthermore, on half a dozen occasions, this powerful rig has been snapped and carried away by—what? I don't know. Enormous sharks, perhaps. Big jewfish. Something. Don't ask me. When an unseen fish gets away in Florida—even in the middle of a city, it could be a lot of things.

Harpooning fish in lakes, rivers, and brooks is regarded as a tame, even unsportsmanlike, activity. A harpooning expedition around the Florida Keys at night—is something else. A rowboat will do; a square-ended boat is better; and with a pipe railing

Bees in a jug

is better still. The rail will keep the harpooner from falling overboard (and it is not good to fall into Florida salt waters in the dark). A gasoline or electric light, with shade and reflector, is needed to throw a broad beam into the water and to shield the harpooner's gaze. An outboard motor is valuable for propulsion.

In such a craft, on a calm night, "prowling" through creeks, channels, into bays, across sand banks, coral bottom, and over the flats, a man with a fish spear for the small ones and a good harpoon with rope and a buoy for the big ones, will find himself embarked upon one of the most fabulous experiences of his life. At night the fish are out. In the light they may be seen. As his boat moves slowly here and there he will see the salt-water kingdom and its denizens in thousands—fish of every species, color, and size: sharks and rays; crabs and spiny lobsters; morays; the great, slow, but dangerous sawfish—and all the mats,

millepores, fans, corals, plants, and weird formations which make the tropical bottom look like a jungle on some other planet. There are some six hundred species of fish in this territory.

Even the amateur spearman, when he becomes accustomed to the angle of refraction, can "strike" a fair number of fishes. I have known men to become so enthralled by this sport that they have preferred to do their "fishing" at night only. They bring in big jewfish, big sharks, and huge rays—as well as smaller specimens and the highly edible spiny lobsters. There is a primordial satisfaction in slamming home a harpoon—and a prodigious excitement in following a buoy as some monstrous fish—harpooned and "marked" by the shining can—rages through the mysterious dark. This sport is called "progging," and I have always wondered why so few engaged in it. The initial cost is small, but the thrill tremendous, and a night's sport may be had for a few gallons of gasoline, once a boat is equipped.

Bottom-fishing is the simplest and, presumably, the tamest kind of fishing. Everywhere in Florida that water is to be found, bottom-fishermen may be seen—in rowboats, with expensive tackle —on banks and bridges, with handlines or cane poles. It is true that in Florida the bridge-and-bank angler has an opportunity to "hang" any of the great game fishes except those that confine themselves to the Gulf Stream. Usually, however, his intentions and his catch are confined to pan fish. But I can tell you a way to turn this pedestrian style of angling into one of the most fascinating adventures on old Ike Walton's list: take along a glass-bottomed bucket. Better still, have a glass-bottomed "well" set in your skiff.

Through the glass bottom, you can watch your bait descend—and keep an eye on it thereafter. You can see the approach of every fish—the nibble, the gulp. You can see the fish that approach—and do not bite. You will decide—as you watch your bait—that there are many other fish you'd like to catch than those you are taking. And you can figure out why you're not getting them. The glamorous angel-fishes and the parrots—which not only have "beaks" but more and brighter colors than macaws

—aren't being caught because your hook is far too big. Get a minnow hook and use a rice-grain-sized bait—and you may find yourself battling a 3-pound angel-fish. Yours for the price of a glass-bottomed bucket is a brand-new Indian sign on the fish—you can see them, but they don't recognize you.

Such are a few of the means of fishing in Florida which—while not always conventional—are highly rewarding. And the moment you begin to fish—from boats, or along the beach, or on banks—you will spot others who will be ready, if asked, to lead you to novel methods and to new quarry. As an angler who has written a good deal about "big-time" or deep-sea fishing, I was once advised by a reader to "get off my charter boat and go fishing on a bridge." Some dispute between that gentleman and myself arose—but I was able to squelch him finally by advising him to get off his bridge and fish under it. He hadn't tried that one yet.

No telling where or how you might get a fish. One pal of mine —a gent with salt water of an icy degree in his veins—not only goes goggle-fishing (diving, with goggles and a hand spear) but when he has speared a fish he rides up to it hand-over-hand on the spear line and wrestles it to the surface. He has done this with 50-pound amberjacks—turning their heads up by sheer muscle, forcing the frantic fish to carry itself and the man on its back to the top. And he has done it out on the big reefs, amidst the 20-foot sharks and the barracudas. If you are confident in yourself, strong, and don't give a damn what happens, there's one you might try.

Fishing in a chartered boat with expert guides is fun. A blue marlin of several hundred pounds on a rod and reel provides exhilaration difficult to compare, but they don't bite every minute. It took me six years of trying to get one blue marlin and I lost eight in that period. Still—if the sailfish aren't running, king mackerel and bonita will give you excitement.

One last tip—about that casting rod. Take it along on the charter boat if you go to the Gulf Stream. Maybe you'll feel sillier than a man carrying a small fire extinguisher to Hell—but take it. If you happen to run into a school of little dolphin, or

a school of baby bonitas, you can settle for yourself the age-old argument: Which is stronger, pound for pound—a sea fish or a fresh-water fish? Cast a feather into the school, and then make up your own mind.

Me, I won't tell you. There are some places where even a bold man doesn't care to stick out his neck. I say—take that casting rod along. After all, I know one guy—just one, though—who caught a sailfish on a salmon rod. I know three or four who have caught sailfish on surf-casting tackle from piers. When you go to Florida—fish in the charter boat, Chamber of Commerce, newsreel style, if you like. But if you can't for one reason or another, don't be discouraged. Just remember that a string tied to your big toe, while you nap on a bank, can get you supper—or even take your toe off.

Snook fishing

Smart Guy in Red

by George Heinold . . . paintings by Charles Culver

ALTHOUGH our toiling settlers didn't plan it that way, the first strokes of their axes underwrote a domestic Marshall Plan for the fox. Their efforts opened up forests with crop fields, pasture lands, and orchards, creating the type of range ideally suited to Reynard's needs. And plump rabbits and juicy mice, food staples of the fox, increased with widespread agricultural effort.

If such high living added fat around Reynard's waistline, none of it softened his brain. Unlike the ancient Romans, he shows no evidence of decline and fall.

How well the fox does use his wits was once brought to my attention by an old trapper as he and I sat in a cabin with a front window overlooking a narrow river occupied by a flock of black ducks.

"Keep your eye on that clump of brush over there," suddenly whispered the old woodsman.

Soon I saw a large red fox. Crouched, he was watching the ducks hungrily. A few minutes later, he edged forward cautiously. Tearing bits of weeds with his jaws, he set them adrift in the current. The weeds floated to the ducks. Suspicious at first, the web-foots soon began investigating them.

The fox released perhaps a dozen mouthfuls of weeds during the next few minutes. Thus seduced to playfulness, the ducks awaited each batch expectantly. Then Reynard executed his master stroke. Grabbing an extra large bunch of weed, he slipped quietly into the river. Only the tip of his nose was above water, and that was hidden by the weeds.

When the submarine fox drew closer, one of the ducks, impatient to be at the weeds, swam up to meet them. There was a quick lunge, a flurry of wings, and a great splashing of water. Soon Reynard, a fat duck in his mouth, was swimming back to land.

Outdoor sleepers in all weather, red foxes use dens only when it is time to raise their young. The vixen then chooses a safe retreat. Some are burrows made by enlarging a woodchuck hole in a sheltered bank, underneath a brush pile, or in the roots of a windfall tree. I've even seen abandoned threshing machines and the junked bodies of automobiles converted into fox nurseries.

Few wild animals outshine the father fox in fidelity to wife and young. He shares the proceeds of the hunt. A vigilant guardian, he resorts to ruse and decoy when dogs or other enemies draw too close to the nursery burrow. He now becomes an actor who really knows how to ham it up when he brings the spotlight to himself by cavorting, barking, and feigning injury until the invader is lured to safer territory.

Giving dogs the slip is an accomplishment at which Reynard

excels. He has become adept in this. Keen-nosed hounds, bred for speed and stamina, are his chief foes.

When pressed hard by fast dogs, Reynard breaks his scent line by running brooks, crossing small rivers diagonally, running stonewalls and windfall trees, leaping off ledges, skirting thin ice, merging his scent with that of deer, sheep, cattle, or rising flocks of waterfowl, and disguising his smell by rolling in mint beds and manure. These are old tricks handed down by his ancestors. Quick to turn modern conditions to his advantage, the fox of today slows up large hounds by slipping under barbed wire fences and electrified cattle wire. He has learned that the gasoline fumes on highways and the acrid locomotive odors on railroad tracks vitiate his scent.

Foxes used to spell one another by changing places in hollow logs during a chase. Many up-to-date foxes employ steel pipes and concrete highway culverts. This is their answer to vitamin-fortified dog food.

The Shotgun Is Here to Stay

by Franklin M. Reck . . . photographs by John Calkins

THE RABBITS, squirrels, and ducks on the Crouse Farms were confused. Guns they could understand. It was a different matter when men came at them with such strange devices as boomerangs, tapsticks, slingshots, and longbows.

The *Ford Times* had decided to test these ancestral weapons in the hands of modern man. A crew of hunters had been selected, trained, and turned loose on an estate full of wild life. Now, after two days of effort, the hunters were sure of just one point: that the rabbits, the pheasants, the squirrels, and the ducks entered into the spirit of the thing with a right good will. The leaps of the rabbits had taken on a certain carefree gaiety, ducks in flight were circling back for a closer look, and the chatter of the squirrels carried the lilt of mockery. Perhaps their carnival spirit was due to the brevity of the casuality list:

One bruised rabbit hip.

One rabbit with clipped underhair.

One pulled leg muscle (hunter).

There was a time when men depended on noiseless weapons to bring meat to the family table. It is recorded that the boomerang has laid low wallabies, emus, and enemy warriors. The slingshot has brought down such diversified game as birds, bunnies, and Goliath. With the longbow, the English foot soldier wiped out the knighthood of France. The thrown club is as old as the caveman. If modern man were limited to these weapons, how would he fare? The question interested the *Ford Times.*

An appeal to Jack McCallum of Ford's recreation department brought willing volunteers. Among them was Carl Strang, who holds state and national records in archery. Another was Johnny Milligan, the Tennessean who can literally hit a tossed dime at 20 feet with his slingshot. The magazine obtained precision boomerangs from Colonel John Gerrish of Portland, Oregon, and volunteers spent ten days practicing with them. Another group fashioned tapsticks out of 2-foot pieces of hoe handle with heavy railroad nuts screwed to one end. The experimenters, an even dozen, were all skilled.

Local wildlife hardly suspected the lively exercise in store for them that chilly fall Friday when the hunters arrived at Crouse Farms. For fifteen years Gerald Brian had managed the 1600 acres of the estate near Detroit as a game preserve. There were patches of multiflora rose for shelter when hawks circled, clumps of lespedeza for bird feed, pine plantings for cover, tall grasses and marsh hummocks along the mile of creek for nesting, and a broad lake for migratory waterfowl.

Their first hint that turmoil was to invade these happy surroundings occurred on a field south of the lake. Here the hunters and observers formed a V and began driving northward through low pines toward a deep ravine.

Shortly thereafter, one cottontail, driven from cover by the sound of booted feet, felt the breeze of a tapstick as it whirled past his white rear. He had to leap sideways to avoid another tapstick bouncing in front of his nose.

At the ravine the action grew hot. Rabbits began popping in and out like commuters at a subway entrance. Carl Strang drew back his bow, then relaxed when he saw a man in the line of fire. Johnny Milligan and Whitt Coleman let fly with their slingshots, and Johnny's shot turned the rabbit over.

A bunny came over the crest of the ravine into the open and Fred Cook let loose an arrow that went squarely between his legs, grazing his belly and adding height to his leaps. Then the fun was over, the landscape quiet except for the breathing of the hunters.

Johnny Milligan was rueful over hitting the rabbit in the

Upper left: Jack McCallum, slingshot expert, takes aim.
Upper right: Bowman and tapsticker search for rabbits.
Lower left: Raised tapstick awaits a suitable target.
Lower right: Assorted hunters investigate stream for game.

hindquarters instead of farther forward. With him, slingshot marksmanship has become a precision art equal to that of a champion rifleman. His shot are ball bearings which he propels with his ¾-inch rubber band for some 30 feet at a velocity of 500 feet per second.

Just to prove that rabbits and squirrels aren't safe when he's within range, he set up a silhouette of a chipmunk, life size, forty feet away, and put two successive shots into its head. He had a man toss a quarter into the air fifteen feet away and hit it. Then he had him toss up a penny, and hit that.

A week later he went out with a photographer and leveled on a squirrel jumping from one tree to another. He hit it in mid-air.

It was on the slopes beyond the creek that rabbits first met up with the sight of a boomerang whirling close to their long ears. It was here too that ducks, rising from the creek, had a chance to wonder whether the spinning weapons were being aimed at them or were merely a strange species of bird. It was also here that a hunter, stepping on a swamp hummock, pulled a leg muscle and had to be carried from the field—a form of assistance that no small game needed.

The word "boomerang" literally means "I go, but I return," and because of this odd trait the greatest danger of the boomerang was to the hunters themselves. The wooden scythes never returned precisely to their owners but always in the neighborhood of one of the other hunters in the line. Thus, whenever the cry of "Boomerang!" shattered the air, every hunter within hearing distance dropped to a crouch and folded his hands over his head, remembering that a Gerrish small-game boomerang can sink its leading edge ¾ inch into a cedar post at the outer end of its flight.

Carl Strang, Jack Ketchman, Fred Cook, and the other longbowmen had few good shots in the field, but proved their marksmanship by pouring bolts into the chest area of a paper deer at 75 feet. Strang's bow, a lamination of Fiberglas, maple and aluminum, is taped all over to prevent reflections that might startle a deer. He even has a patch of sheepskin at the arrow rest, so there'll be no rasping sound when the arrow is drawn back. His steel tips with three cutting edges are filed to razorlike sharpness. When he draws the bow back to the point where his thumb meets the corner of his mouth, he is exerting power enough to lift a 57-pound package.

The crossbow also went to the party, but because of a law

prohibiting its use on game it was not taken afield. It was a five-shot repeater made by George Stevens of Marcella, Arkansas, a weapon with a 40-pound pull, highly accurate on silhouette targets and with enough penetrating power to bring down small game. The crossbow proved faster than the longbow. Its five shots could be fired just as fast as a man could pull back the cocking device and squeeze the trigger—an advantage in small game hunting where its use is permitted.

With their bows the archers have hit small game, but they agree that the hunter should be within forty feet and the rabbit or woodchuck should be sitting. The rabbits on the Crouse Farm were in no mood for repose.

Yet they couldn't have been too disturbed at the antics of men who heaved strange missiles that made little noise and few hits. On the whole, they must have enjoyed the weekend.

As for the hunters, they came out of the affair with a new respect for their ancestors. With a little more practice, they agreed, they'd have brought home *some* meat.

Not enough, however, to threaten the supremacy of the shotgun.

Below left: Archer Carl Strang demonstrates his prowess.
Below right: The group examines the results of their hunt.

The Cincinnati area is peppered with "cow-pasture" fishing holes.

Cincinnati Pay Lakes

by Dave Roberts . . . map and paintings by Charles Harper

If you've flown into the Greater Cincinnati airport by daylight, you've probably noticed clear-water ponds and lakes of various sizes and shapes peppering the ground in and around the city. These are the trade-marks of a recreational development both unique and unheralded. Still it is one which could be profitably copied by hundreds of communities.

Most of those pools are devoted to fishing—fishing for a fee. Each day of each week, and particularly weekends, thousands of ardent anglers flock to them. They've built an industry which turns over $25,000 or more on pleasant weekends.

No one knows exactly how it all started. Farm ponds have supplied water to cattle, sheep, and horses for years. Finally some thrifty farmer conceived the idea of charging friends for fishing—and a business was born!

The investment represented by the 125 or more pay lakes in the Cincinnati area would be difficult to estimate. It isn't stretching things to set the figure at $1,000,000. The annual revenue approximates $800,000. Add to this the revenue of bait shops and sandwich emporiums—and you can see that this cow-pasture enterprise is nothing to sneeze at.

But that isn't all. Because they store millions of gallons of surface water, the little lakes serve as reservoirs for the subsurface channels which feed wells, springs, and many a big-time industrial water supply. By retarding surface runoff, the lakes also cut soil erosion and aid in the ever-recurrent problem of flood control.

Fish are trucked from Lake Erie in aerated tanks.

← *Mueller's Lake provides recreation for the fisherman's family.*

But it is the fishing that folks enjoy most—and talk about. And it is fishing to which the commercial pools are dedicated. Here's how one of the average playgrounds operates:

If a farmer or investor decides to build, it is best to have the dam on fairly high ground, with a graded drainage area.

We'll say that our man has his lake, either old or new. His next problem is to get live fish. Most supplies come from Lake Erie, and most fish truckers are based there. But several Cincinnati firms specialize in carting bass, catfish, pike, and other species in aerated tanks over the 200 miles from the nearest of the Great Lakes. A few come directly from the Ohio River. Each truck carries 1 to 1½ tons of live fish. Loads can be split if owners desire, but purchasers of full loads on a regular basis can get a price reduction.

In spring and fall, when the weather is cool, operators can get mixed loads. Channel cats, which can be shipped all summer, are most popular. Others are walleyed pike, freshwater drum, northern pike, black bass, white bass, shovelheads, and bluegills. Some owners shy away from bluegills, fearing that the great reproductive powers of this small gamester may bring overpopulation. Some species of catfish, notably yellow cats and marble heads, are equally despised. But there are pools which specialize, successfully, in these varieties.

The fish vary in size. Each pool owner likes to have a few big babies—sometimes as large as 20 pounds—in his menagerie. When a lunker is taken, the resultant talk brings business, and the big ones grow as tales of rod and reel battles are told and retold. For general purposes, however, catfish which run from ½ to 2 pounds are ideal. Bass should start at 1 pound; walleyes a little larger.

The owner now has his lake stocked. How does he get business? He can advertise in newspapers and the telephone directory. He can get some publicity through outdoor columns of newspapers. He can distribute cards through sporting-goods stores and retail bait shops. He won't have any trouble working up a brisk trade if fish are plentiful, and if they'll bite.

The average charge for a day's fishing varies widely, but usu-

← *Pay lakes like Keller's began as a sideline to farming.*

← *Hatchet Lake, in Covington, Kentucky, occupies an old quarry.*

ally there's a limit of four fish per man. Some limit the number of poles; some charge 50 cents for the fishing and add so much per pound for the catch. A few place no limit on the take. Ingenious methods are used to stir fish to action, such as broadcasting sprouted corn over the ponds during the night. Generally, fishermen have good luck: the more skill, the better their luck.

Many lakes boast elaborate establishments—and depend on accessories as much as on fishing for income. These may have clubhouses; where drinks and lunches are available. There may be boats for rent, tackle for hire, and all types of natural and artificial bait for sale.

Others are the essence of simplicity. The fisherman stops at a farmer's house, pays his money, and follows a winding road through the fields, taking care to close the gates! He may buy his worms or minnows from a neighboring farm lad, or may pick them up at some city bait store. His host usually depends on him to check out with his catch when the day is done.

Commercial pools spring up in odd places. Most are in rural or suburban districts. But several are within a stone's throw of business and industrial centers. An old brickyard, its pit flooded, does a thriving business just off a street teeming with streetcars, buses, and automobile traffic. An abandoned gravel pit, once considered more of a liability than an asset, now brings its owners a sizable annual profit. Even the city of Cincinnati has gone into the business. Several park ponds are stocked and are open, under strict regulations, to public angling. Some of the larger sportsmen's clubs have built their own pools for the benefit of members. Others derive a steady income from commercial ponds on their properties.

For the most part the tiny lakes are well-groomed. They're likely to be fringed by meadows, usually neatly cut. Large hardwood trees offer cool shade even on warm afternoons. Banks are sodded to prevent erosion, and for customers' comfort.

No matter where you live in or around Cincinnati, fishing is within convenient distance. You can pack the family on a streetcar, bus, or in your own automobile, take a lunch—and like as not catch a mess of fish for supper.

← *Lake Isabella offers night fishing, a popular sport.*

Social Notes on a Dime-Sized Clam

by Juliet Tucker Divine . . . decorations by John Davenport

ALONG the sandy shores of Florida, on either coast and especially in March and April, you can find a rainbow to build a house with, eat, or wear.

This rainbow is a small shell, usually half an inch or less across, called *Donax variabilis* in the textbooks, and butterfly shell, periwinkle, or coquina by those who hunt it.

A day's search along the beaches of warm seas will not reveal a busier or more colorful creature. As each wave recedes, the hard-packed sand is sprinkled with these living jewels. Each glitters in the sun a few seconds, sticks a foot out, and disappears in the sand until the next wave strikes.

The rainbow effect comes from lines of different colors emanating from the center and crossed by narrow bands. This blaze of color also makes them a hot item in the shell market, and they appear on fancy hand-painted place cards, are strung up for window curtains, and make exceptionally fine bracelets and earrings.

Coquina rock—which is the dead, broken shells welded by

sand—is used for building material, and some ancient Spanish forts in Florida attest to its invincibility.

The final—and possibly the greatest—joy in Donax has to be cooked out of it. One book recommends using 6 quarts of coquina to make a quart of broth. A chef at the Waldorf made some for a select dinner party once and estimated the cost at over a dollar a bowl.

This price means it's probably cheaper to catch your own. There are several methods. One is to stand in the surf, wait for a wave to break, and pounce. You can get up to a dozen if you're fast, and it gives the little beast a sporting chance to hide.

One person was inspired to invent a scoop for getting Donax in decent amounts. He stretched No. 4 hardware cloth on a wooden frame that resembled a dustpan, and scooped away when the wave was receding. Part of coquina-catching gear is a dishpan with some sea water to keep them happy while you hunt.

At home, rinse the shells in clear water and never mind the sand. Nearly cover them with cold water and bring the pot to a simmer, stirring once in a while. After 5 minutes drain the broth off the top. Serve it hot or ice-cold, always with a few shells in the cup for effect.

Their beauty is muted somewhat by heat, but they are still lovely to behold. The soup is wonderful to drink—a little like clam chowder but more delicate. Call it periwinkle broth or nectar of the sea, or whatever you like. When Donax has made the supreme sacrifice in your kitchen, you'll pat your stomach with satisfaction.

Our third camp was on a sand bar next to a "hot" pool.

With Fly Rod and Geiger Counter

by Franklin M. Reck . . . photographs by John Calkins

EARLY in the summer, Bob Leonard, guide and outfitter, wrote us:

"I found three streams I don't think ever have been fished before, except by some trapper, to get enough trout for his fry pan. I paddled up one stream for nine hours, made three portages, and stopped to cast every forty-five minutes, trout each time. I kept four, one weighed over three pounds. For photography it would be swell, cliffs and canyons all along the route."

To us, this was like a letter from a Yukon prospector: "Just

found crick paved with gold. So far there's nobody here but me."

Bob Leonard had built a camp on a new highway cutting through the Canadian bush in the wild country between Lake Superior and James Bay.

The road had been opened to the public in 1946. It's Highway 11 and it runs from Cochrane to Lake Superior.

Five of us made the trip to Leonard's place last August. Reading from the merely ardent to the rabid, they were Jim Hendryx, Bob Crowell, Johnny Calkins, the writer, and Lowell Marvin.

When we started north we had in our baggage not only fly rods but a Geiger counter. We were going close to recent uranium discoveries, and might possibly walk over some pitchblende.

As we rode west out of Cochrane we found ourselves wishing we had all summer to explore. The road from Cochrane to Hearst is subarctic farm lands alternating with muskeg, but beyond Hearst, every stream is an invitation to stop.

The Kabinakagami, Shekak, and Nagagami . . . the Pitopiko and the Otasawian . . . good streams, all. Past Leonard's camp, the Pagwa flows wide and deep, its shores solid walls of spruce, cedar, tamarack, birch, and poplar.

"We'll go up the Osawin," Leonard announced. "The first day will be kind of rough going, but after that there'll be plenty canoe water."

He didn't exaggerate. We had six miles of paddling, three more of dragging our loaded canoes through shallows, and a two-mile portage that ingeniously ended in a steep hill to the top of a canyon.

Above the canyon, the Osawin was deep. The canyon itself was granite. It funneled the river into a narrow slot through which the river boiled with compressed fury. Farther down, white water tumbled into a pool and raced around past giant boulders to the first of a long succession of rapids and pools.

Lowell Marvin caught the first trout—a full-bodied fish weighing nearly two pounds. Johnny Calkins stood at the foot of the slot, cast four times into the white water, and took a trout each time, all of them about a pound.

← *Headquarters for exploration; trout were plentiful here.*

We got busy with the Geiger counter that first evening, listening through earphones to the hypnotic little clicks caused by cosmic radiation. Unless the clicks exceeded a normal thirty or forty per minute they meant nothing. This was merely the "background count."

(Operating manual: The background count varies from spot to spot. It is higher over granite, which is radioactive, than over limestone, which is inert.)

The next day, Lowell took personal charge of Geiger counting, while the rest of us were hurrying our remaining duffle over the two-mile portage to beat an impending drizzle. About mid-afternoon he found several of us at the foot of the portage, ready to take over the last load. His eyes looked strange and his face flushed, as if he'd been running.

"You can get ready to stake claims," he said.

Tired as we were, we all sat up straight.

"I found several spots where the count was a hundred forty. Maybe faster. I could hardly count 'em."

(Operating manual: A specific area that consistently gives readings of more than twice the background count may well prove to be significant.)

After we'd carried everything to the upper end of the canyon, Lowell and I rechecked the trail. On a ridge, what we heard through the earphones sounded like an agitated telegraph operator sending an urgent message. We blazed trees to mark the spots and returned to camp.

After some deliberation, we decided to push on upstream for a week of exploration before making a grid survey of the ridge. On our way out if the indications were still good, we'd mark off the territory in 20-foot squares and accurately locate the pockets or veins of ore.

(Operating manual: A close examination should be made with the counter probe to determine the precise source of the radioactivity.)

We explored the stream for some thirty miles, fishing and prospecting. The water got colder and fishing better as we moved up, the trout running from twelve to sixteen inches.

← *Leonard likes a tripod cooking rig and running water nearby.*

Jim Hendryx got a big one on the lower portage of the Pagwa.

We found little to interest the prospector but plenty to interest the sportsman. On every sandbar at every portage we found moose tracks, some of them so fresh it seemed the moose must still be in them. We found bear signs and mink tracks, but we never saw an axe mark or burnt log to indicate previous human presence. One day a porcupine visited camp, carelessly leaving a quill in Johnny Calkins' sleeping bag.

Our week of upstream exploration ended in a long series of rapids beyond which there seemed to be little water, and we assumed from this that the stream was petering out. So we returned to our first campsite to recheck Uranium Ridge.

We went out to the spots where we had blazed trees on the trail, placed the counter on the ground and listened tensely to the clicks, pacing them with the second hand on the watch. At each spot where a week ago the counter had threatened to run away, the Geiger tube now transmitted some forty to fifty snail-paced clicks per minute.

Assuming the battery was weak, we put in new batteries and listened again. The count was still a deliberate forty. Uranium Ridge was dead, another stock promotion scheme lost.

Lowell Marvin wasn't one to give up meekly. He asked Leonard where there were other outcroppings of bedrock and Leonard told us of a hill several hundred feet high, the sides of which were barren rock.

The way to this hill was about two miles west. There was no trail. The route led over hills, around swamps, and through a pocket that we called Bear Hollow, in which the natural evidences of bear were so numerous and fresh we had to walk as carefully as in a cow pasture.

The hill was an imposing chocolate drop. When we had tired of shoving boulders off the crest, we started for home to beat another rainstorm. Lowell insisted on remaining behind.

We returned to the river, fished the canyon, and began supper. The trout were getting brown when Lowell pulled in.

Lowell (left) and Leonard become involved in nuclear physics.

His eyes were gleaming again. We recognized the sign.

"I couldn't even begin to count 'em. It went so fast I had to turn it off. It was in one spot on the northwest face of the cliff. I want someone to go with me tomorrow to bring back samples."

(Operating manual: If the radioactivity of any particular rock is four times the background count, a sample should be taken.)

The next day we all packed stuff down over the long portage. After taking over one load, Lowell and I took an axe and made our way over the hills, around the swamps, through Bear Hollow, to the hill. We worked around the crest of the hill to the northwest face and warmed up the Geiger counter.

Lowell placed it on a rock and listened. The day was warm and dry and the woods were as utterly silent as only the bush can be on a windless morning. Lowell's face wasn't easy to read.

Finally, with deep disgust, he said, "Not quite forty."

He stood up. "Yesterday, right along this ledge—and over there it went nuts! It doesn't stand to reason. . . ."

It certainly didn't. It was becoming apparent that there were phases of nuclear physics that we didn't understand.

Climbing like a mountain goat, Lowell explored the cliff face, testing impossible areas. Eventually he reappeared, shaking his head. Nothing doing.

The mystery wasn't solved until some time later, when Bob Crowell wired from New York after consulting the manufacturer: "High count probably due to moisture in box. Must be absolutely dry to work properly. Note operating instructions—do not use in excessively humid environment."

The two days on which we had obtained our high counts had both been damp days. So that was it.

We didn't find uranium, but we found a lovely new country. We walked an old trap line along a beaver pond, inspected a rabbit snare, came upon an Indian campsite, walked past an unafraid spruce hen, flirted with two weasels, looked past spruce boughs at the stars, and listened to the musical cadence of running water.

It was just as well. What would the Osawin Canyon look like if you blasted it with dynamite?

Stevens' repeater fires five bolts without reloading.

Oldest New Weapon

by Robert M. Hyatt . . . photographs by John Blundell

THERE was once a romantic episode of the Middle Ages, in which by night you swam the moat surrounding the dark castle. The princess lowered a rope from her prison in the grim stone tower. You climbed the rope, your crossbow slung at your back. On the parapet stood the sentinel, armed and menacing. He started toward you with drawn sword, or he brandished something called a mace. But with your crossbow you coolly aimed. You loosed the bolt, and the bowstring twanged, and the bolt went "blup" as it pierced the sentinel's leathern jacket. Calmly you hurled the body over the parapet. As it splashed in the

Fellow hunters stop and stare when Stevens aims his crossbow.

moat, you stepped into the tower, rescued the princess, and rode away with her on a white charger.

In order to implement yourself for this adventure, the chances are that as a small boy you spent many hours trying to make a crossbow. You dulled grandfather's chisels and draw knife, and made your trigger out of a door latch. It simply wouldn't work. So you will be glad to know about a man named George Stevens who makes crossbows that really work, and whose bolts, or arrows, really go "blup" when they hit the target. Moreover, it seems more than likely that a new sport is developing around the revival of this weapon of the Middle Ages.

Not long ago, hunters in the Ozark woods near Marcella, Arkansas, used to come upon George Stevens and his retriever, whose name was Spunky. There were two highly unusual features about the pair. Spunky was a house cat, and George Stevens' "gun" was a crossbow.

George's crossbow itself was unusual. It was a five-shot repeat-

er, whereas the ones used in rescuing princesses were merely one-shotters. He can loose five bolts in five seconds with his ingenious pump-action weapon.

George Stevens began experimenting with the crossbow many years ago. He studied every printed word he could find on the subject of medieval warfare and weapons. First, he built a child's toy model which put him in business, made him a little money, and launched him as America's ace custom builder of crossbows for adults. If you're interested in one of his repeaters, the price is under a hundred dollars. Every Stevens crossbow is a hand-built masterpiece with handsome walnut stock, lemonwood bow, and beautiful brass trim. It makes a unique den ornament, but more than that, it is a hard-hitting, accurate weapon for target, predators, and small game.

Stevens' repeater fires exactly like a pump-action repeating shotgun. His single-shot, big-game models are first shaped to a Cupid's re-curve and then specially tempered by an auto-spring maker. No auxiliary cocking aid is needed by the average man, but a "goat's-foot" cocking device (a simple, hand-operated lever) is furnished for ladies. In appearance, weight, and balance, both of these modernized crossbows resemble the sporting rifle, and are aimed similarly. Already cocked when aimed, they provide the unskilled bowman with a weapon far superior in accuracy to the longbow.

When he closed out his Chicago advertising agency and settled in Arkansas' White River country twenty years ago, George had ideas about living the good life far away from business turmoil. He bought a hillside farm with a snug log cabin, had his huge library shipped from Chicago, sent for his wife, and set out to become an Ozarkian.

At that time, depression sat heavily upon the land. There was game aplenty in the Ozarks, but ammunition for firearms cost money. Many of the hillfolk simply couldn't afford to buy shells. That's when George got his bright idea. In an unchinked log shack near their cabin, George and Dolly Stevens slowly and painstakingly began making crossbows. Today, the shack workshop, still unchinked, boasts a full line of power machinery.

The two most common questions asked about the crossbow are: How accurate is it and how hard will it hit? In the hands of an expert, the longbow may have a faint edge in accuracy, although the fact that the crossbow is cocked when aimed about evens the score. Impact of the missile depends upon the "pull" of the bow and the distance the bolt travels. A heavy longbow has about 65 pounds pull at 28 inches draw. In the heavy hunting crossbow the draw is 14 inches, or half that of the longbow, but the poundage is doubled—or about 120 pounds. The repeater only has 40 pounds pull and this is easily done with the slide under the stock.

A Gulf fisherman uses a crossbow for shooting game fish and claims he has impaled them in 10 feet of water! Half that depth will stop bullets.

Stevens doesn't recommend the crossbow for hunting bears; you have to get too close to the animal, and a wounded bear can be dangerous. But for deer and other large game animals he considers the crossbow an ideal weapon. Farmers in a dozen states are using them for potting crows, magpies, weasels, and other predators.

The legal hunting status of the crossbow hasn't had much thought. With the exception of Michigan and Wisconsin, which ban the crossbow for all hunting, states have few special rulings. George is working to have Arkansas set a crossbow hunting season, hoping other states will follow suit.

Crossbow shooting has grown slowly, yet a dozen or more clubs have sprung up here and abroad in recent years. Two in America have been locally famous for many years. One is conducted by Swiss residents of Wisconsin, who hold an annual William Tell Day; the other is in Fort Wayne, Indiana. They hold the popular "Bird Shoot" once a year.

George himself helped organize the fifty-member Stone County (Arkansas) Crossbow Club some years back. It holds frequent meets. He says that "Buckshot" Wilson of Mound City, Missouri, is probably the best crossbow shot living.

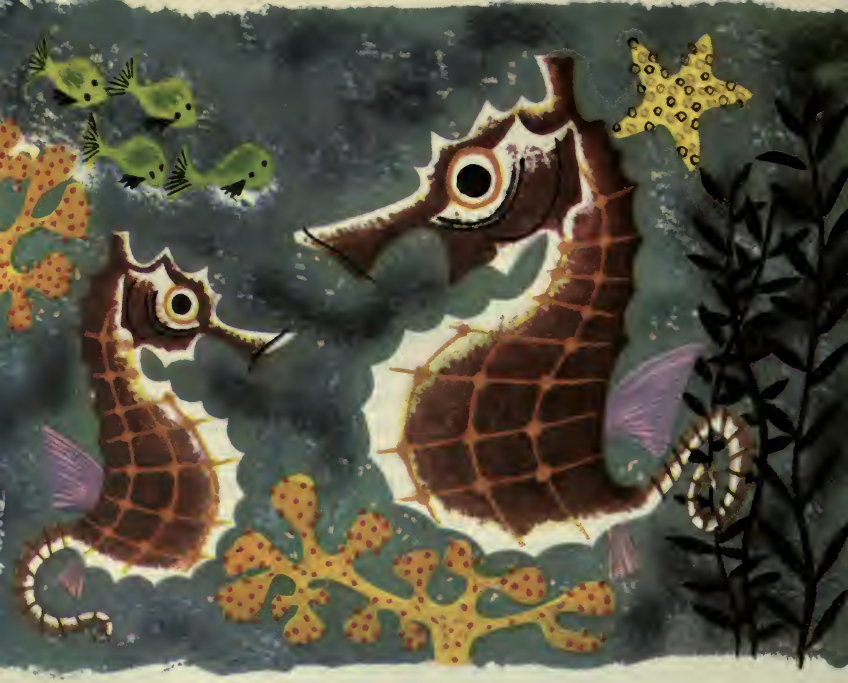
Paul Runyon of Plainfield, New Jersey, is another crack crossbow shot. He won the national crossbow event in 1947 at the

National Archery Association Tournament at Amherst, Massachusetts. This was the first time in American archery history that crossbows were allowed among the ranks of longbowmen.

Most recent development in crossbow interest is the repeating crossbow shooting gallery. A wealthy sportsman started one in Houston, Texas, and many Texas dude ranches are considering crossbow shooting galleries as the "extra added attraction."

So it looks as though a new sport is beginning to revolve around the ancient weapon we tried so hard to make as boys. Meanwhile, George and Dolly Stevens are happy about the whole thing. Between spurts of farming, they fish and hunt—and when someone insists, they step into their backwoods "factory" and custom-build a superior crossbow. The address of the factory, and of George Stevens, is simply Marcella, Arkansas. That's the place to write, if you want to rescue the princess from the dark tower, or if you just want a new kind of sport with a very old kind of weapon.

When someone insists, the Stevens turn out a bow in their shop.



The Horse Nobody Rides

by Burgess H. Scott . . . painting by C. H. Roberts

FEW CREATURES can equal the little 4-inch-long seahorse in reversing Nature's well-ordered rules and regulations. For one thing, he is the only fish to swim upright, propelling himself with his long prehensile tail and fast-moving dorsal fin.

His resemblance to a horse is in outline only. Everything else about him is strictly non-equine. In fact, one of his means of locomotion is the un-horselike habit of riding other fish.

The seahorse pins his hopes of survival on what is probably the most passive means of defense known: he simply tastes and

smells so bad that nothing likes him. His safety is further insured by a chameleon-like ability to take on the coloration of the reeds and grasses of his seaweed home.

Hippocampus punctulatus has eyes that operate independently of each other, enabling him to look forward with one for the minute crustaceans and tiny guppies he feeds on, while using the other to look back and guard his rear. He can also look up and down at the same time.

Hippocampus takes food into his toothless, tubular mouth by means of suction, and will eat nothing but live food. Another curious feature is a gas bladder which enables him to keep his upright position. If this bladder is damaged, and Hippocampus loses even the tiniest portion of his gas, he surrenders to the law of gravity and sinks to the bottom, there to lie helpless until death overtakes him, or until his gas bladder heals.

But most amazing is the role he takes in the begetting of new herds of seacolts. The seamare has only the briefest part in the foaling; she merely provides the eggs and then swims away, perhaps never to see husband and young again.

After fertilization the eggs slip mysteriously into a kangaroo-like pouch on the seahorse's stomach, where the young stay until they hatch. One seastallion's motherly-fatherly performance was observed at close range by William Beebe, eminent naturalist.

He seined his specimen off a bathing beach and recorded the birthing in his book *Nonsuch; Land of Water* as follows: "As he glided gracefully about the aquarium I saw that he was a horse of unusual beauty. He was full-grown—one hundred millimeters from snout to tail—or, less impressively, four inches.

"The parent Hippocampus had taken a firm grip with his tail on a seafern and was swaying back and forth with pouch pushed far forward. As I watched, the body was drawn back, every muscle being brought into play. As the pouch reached its utmost distention an opening enlarged, and with a convulsive movement there was ejected a whole herd of young. Five more parental convulsions took place before the pouch was empty and the seahorse was father-mother to 306 seacolts in all."

← *Hunters scramble by torchlight as the fish flip ashore.*

The Fish That Lays Eggs on Land

by Anne Allen . . . photographs by Joseph Rustan

ONE EXCLUSIVE that southern Californians haven't publicized is the tiny, tasty grunion, the little silver fish that twice monthly in summer flips itself ashore to spawn—and may shortly thereafter be flipped into a frying pan and so into the mouth of the hungry hunter who has shivered for hours awaiting the nocturnal dance of this wonder fish.

To those who regularly seek grunion on the 350 miles of southland beaches from Point Conception to Baja California, the fish is an elusive but succulent morsel. State Fish and Game authorities report that grunion hunting lures almost three quarters of a million people in hope of a beach-fire banquet. The 4- to 6-inch fish run in for their stint of egg-laying in June, July, and August.

To help the fishermen, the State Bureau of Fish and Game issues schedules which forecast the days of grunion runs. Even the experts can't tell for sure when, where, or *if* the grunion will appear, but most likely are the four nights with highest tides in each two-week period, after the peak tide of the evening.

At the full and dark of the moon the grunion gather off some relatively calm-water beach until the turn of the tide. Then thousands of them plunge ashore, covering the sand three and four deep. No one knows which beach the grunion will choose.

Dr. Frances N. Clark, of California Fisheries Laboratory on Terminal Island, is one of the world's few grunion experts. She reports that in a single run she has seen an estimated million fish come up on the beach to spawn. Some enthusiasts liken the spectacle to a shimmering sea ballet because the females literally dance on their tails on the glistening damp sands.

← *Bare hands are the only legal tackle in taking grunion.*

Dr. Clark, who has recorded runs from Ventura County to Mexico, says certain beaches with easy access and a minimum of disturbing influences are best bets for catching grunion. One favorite spot is Belmont Shore near Long Beach; another is the beach near La Jolla. State fish wardens report that man-made Cabrillo Beach near San Pedro is host to record-size runs year after year.

Often grunion are confused with smelt, both having a translucent blue stripe along their bodies. But grunion are members of the silversides family, and only grunion come up on the beach to spawn. The female flips her tail around, burying herself up to her head. Then the male arches himself around her to fertilize the eggs. After the mating, the male flops away to the ocean, and Mrs. Grunion remains behind to ride the next wave out. The whole process takes only the interval between waves—12 to 30 seconds.

It is during this half-minute period that the eager grunioneer, if he has a three-dollar fishing license, can take as many grunion as he can catch with his bare hands. Although the fish are wet and full of wiggle, chances are good that the excited hunter will get all he can eat. No artificial means are allowed—no nets, scoops, sieves, or strainers. Torches and flashlights are permitted, however.

By instinct the grunion deposits its eggs at the upper limit of the tidal zone. There they will be undisturbed by waves till the next high tide two weeks later. When the movement of the surf agitates the sand, the eggs hatch and the liberated baby grunion wash back to their habitat, the sea.

Grunion haven't always been so plentiful. Although they have never been fished commercially, there was a time when hordes of hunters would go after them with sink strainers, window screens, car blankets, buckets, and trout nets. Fearing depletion of the species, conservationists succeeded in having mechanical contrivances banned and a closed season established.

Regional-minded Californians are gradually realizing that the only fish in the world that lays its eggs on land does so exclusively on their California coast.

He Always Walks to the Nearest Exit

by Pete Barrett . . . paintings by Charles Culver

ONE MORNING in New Hampshire I came upon a frenzied bull and a skunk squared off in a pasture. This was heartening, as I have never liked bulls and this one was plainly not in command of the situation. The little skunk would take a few steps and stop, eyeing the bull with a disdain worthy of a matador. Invariably this triggered the animal into a turf-ripping, snorting approach and a vicious hook at nearby weeds.

Coolly, the skunk would take another little trip—always toward a protecting stone wall—then hoist its tail and stare at the bull.

Well, you know how bulls are. This one got too brave. Instantly the skunk's head went down and its tail came stiffly erect. Then it sprayed from a devastating five feet. Partly blinded, the bull rushed off in agony. Once again a skunk had *walked* away from grave danger.

Completely sold on their impregnability, skunks walk amiably through life. An old skunk is usually fat—he has seldom hurried. Skunks won't run from peril, partly because they believe to the last in the power of their terrible scent. A railroad engineer told me his train was sprayed on two occasions by a skunk near the tracks. I know of a skunk that let fly at a house because it was startled—and probably angered—by a slamming door.

In some rural areas they'll tell you the animal dispenses its trade-mark by saturating its tail with the liquid and then flicking it at an enemy. Actually, a muscular contraction expels the stuff from a pair of glands beneath the tail to a distance of about ten feet. It is strongly acid and can cause temporary blindness.

For about the same reason that Russian roulette is played, back-country folk often try picking up and carrying a live skunk by the tail—they know he is loaded but they don't think he'll fire. My friend George Heinold tells of a night when a customer stepped from the rear of a country bar and reappeared toting a skunk by the tail. Successfully holding the skunk before him, the fellow emptied the bar.

Not long afterward George saw a skunk. Walking, of course. He picked it up by the tail. It refused to conform to theory and George had to go bury his shirt. Persistent, George later elevated another polecat. He buried that shirt too. To my mind this only proves that the animals are whimsical; he should have picked up three skunks.

Most wild animals treat a skunk as if it were a ticking time bomb and walk carefully around it. Bears are quite polite; so are mountain lions. In return for such deference, skunks behave pretty decently and often show remarkable self-control even

when annoyed. There was Mickey, for instance, a skunklet presented to a friend of mine when we were school-children. What a workout we gave that skunk! We did just about everything but use him for a basketball, and he loved it. We had been told that Mickey had been "fixed," of course.

Cats and dogs gave the young skunk plenty of room. Then one Sunday morning, after Mickey had been a household pet for about three months, a new kid showed up with a sassy fox terrier on a leash.

"That skunk safe?" the new kid wanted to know.

"Sure."

"Betcha he's scared of my dog then."

"Naw."

So the kid unsnapped his dog, which went yipping over to Mickey, who retreated carefully. The terrier pursued, getting nastier. And then an incredible thing happened—Mickey erected his tail and stank up the dog. Our patient playmate had been armed all along!

Nowadays genuinely deactivated young skunks can be bought from animal dealers for about $20 F.O.B. They make fine pets for youngsters because they are as playful as Siamese kittens and are possibly even more affectionate. Young ones can be housebroken and taught to come when called. They keep themselves fastidiously clean, and grow up to become terrific mousers.

It seems possible that young skunks make good pets because they are a gregarious, family-minded breed in the wild state. Litters of about six are born in springtime and the mother looks after the whole crew—with occasional help from the old man—for a year. Skunks are mostly nocturnal, and more than once I have seen a mother abroad of a moonlit night, the little ones toddling along in single file like a well-ordered conga line. She would show them such skunk tricks as how to raid a hornets' nest and dispatch its occupants before they wake up.

Aside from farmers and trappers, few people realize the extent of skunkdom in this country. The common striped skunk, which reaches the size of a house cat, and the smaller spotted skunk blanket the entire U. S. and much of Canada. Hog-nosed skunks

inhabit parts of our Southwest and extend into Mexico. The total population is somewhere in the millions.

Back in the days when long-haired furs were in fashion, Maine trappers used to harvest 100,000 or so skunks a season and ship the pelts to Philadelphia, whence they'd go to Paris to appear as "monkey" skins. Today the annual skunk-fur harvest in the U. S. is around 330,000, with most of this take appearing in our stores as fur garments under a variety of glamorous-sounding names.

The skunk and the rabbit have been so maligned in this respect that Congress has at last come to their aid with a law. Furriers will no longer be able to label skunk as "Alaska sable," "genuine civet cat," or "black marten." However this affects furriers, it seems certain there will be plenty of skunks around, living the good life and trying to stay out of trouble.

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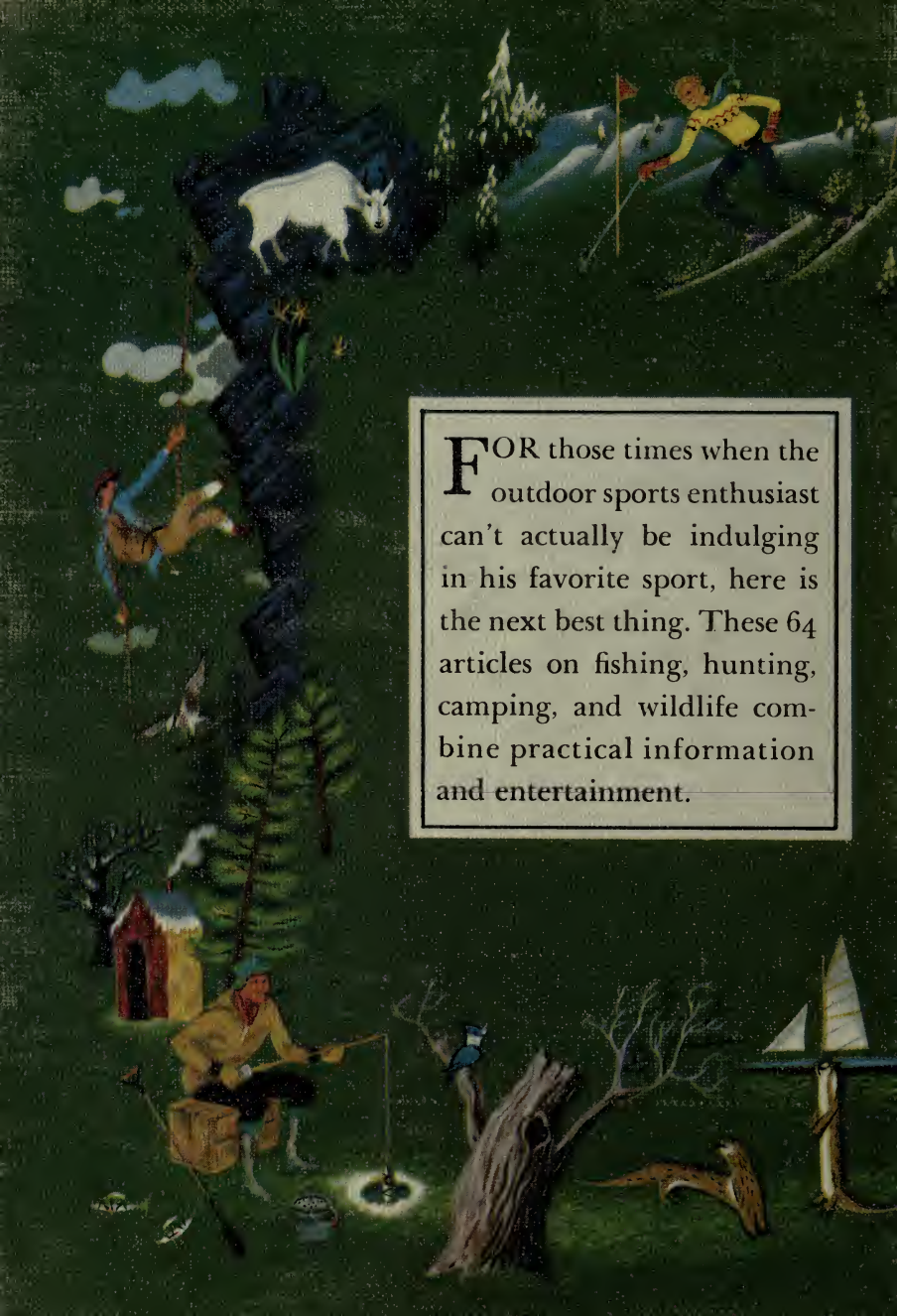

FOR those times when the outdoor sports enthusiast can't actually be indulging in his favorite sport, here is the next best thing. These 64 articles on fishing, hunting, camping, and wildlife combine practical information and entertainment.