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Florida

The Adaptable Nutria
Gulf Hammock WMA

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WILDLIFE

JANUARY 1975

The Florida Magazine for all Sportsmen

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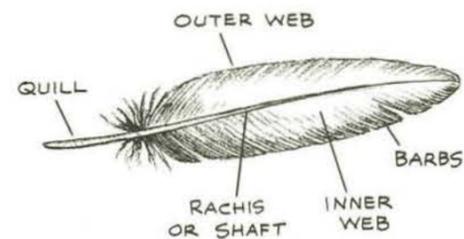
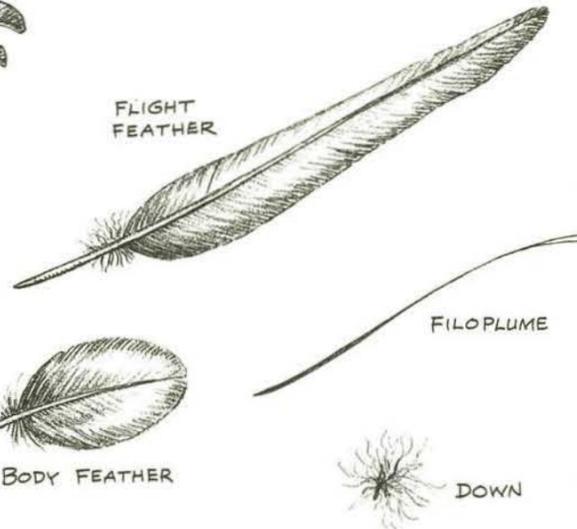
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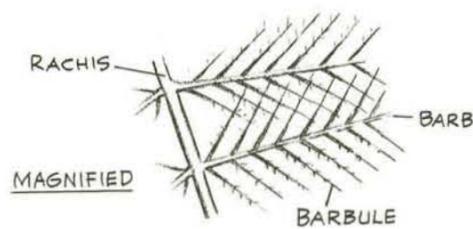
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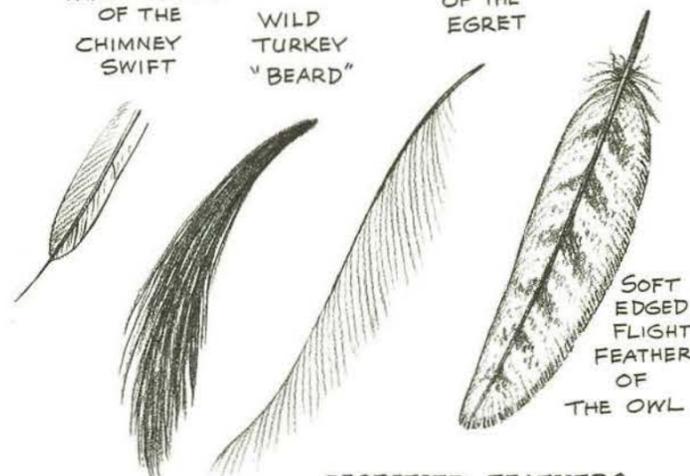
SPINE-TIPPED
TAIL FEATHER
OF THE
CHIMNEY
SWIFT

WILD
TURKEY
"BEARD"

NUPTIAL
PLUME
OF THE
EGRET



PARTS OF A FEATHER



MODIFIED FEATHERS

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The Cover

No sight is more appealing to the waterfowler than a flight of Canvasbacks in a wavering V formation high overhead in their late season migratory passage southward. At rest, this magnificent duck shows its identifying features clearly—white back and wedge-shaped head. See page 8.

Kodachrome Photo By Dave Norris

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ROSE TALLAHASSEE



the past, present and future of Florida's forest industry is on display at Perry

Florida Forestry Museum

LIKE A STARLET GETTING READY for her first performance, the South's first Museum of Forestry primed for opening day, October 26, in Perry.

The unique museum, a project of the Division of Recreation and Parks, Florida Department of Natural Resources, was built through joint state and county funds and the support of private individuals calling themselves "friends of forestry."

Designed by architect Mays Leroy Gray, a Florida native, the Museum was built to honor the tree—both by its circular shape and in the unstinting use of wood throughout. The whole structural system is wood, depicting the importance of forestry to Florida. The roof support is of Florida glue-lam pine beams, and the ceiling is of tongue-and-groove pine decking, also Florida-grown.

Prized red cedar, pecky cypress, ash, red maple, and many other native species were utilized in its construction, all honoring the fact that forestry represents a \$1.5 billion volume of business to Florida each year, and that Taylor County is the "Tree Capital of the South." Sunlight spills through a skylight in the octagonal roof of the main exhibit

building, and treetops form lacy patterns against the sky.

The Museum was built in conjunction with a century-old pioneer complex that is gradually being restored at the Forest Capital State Park, a 17-acre wooded picnic-recreation area off U.S. 27-A and U.S. 19.

Data and photographs from "old-timers," the state archives and Division of Forestry, Florida Department of Natural Resources, as well as from forestry buffs in general have been incorporated. Together, the Museum and restoration project tell the highlights of Florida forestry from the mid-1800's.

Taylor County's 1974 Florida Forest Festival centered around the dedication of the Museum, called the Forest Capital State Museum. It was a world-publicized event built around the theme, "The History of Forestry in Florida."

Forestry, which few associate with the nation's "fun and sun" capital, is Florida's second largest industry. Long since gone, the original longleaf pine forests and virgin hardwood forests of the state were cleared by early settlers and loggers. But more



Florida Dept. of Agriculture and Consumer Services Photos

The displays in the new museum building, opposite page, depict important roles of trees in the life of Florida and the nation. Artist Jennifer Dyer, above photo, prepares her panel "Ecology of the Forest" for opening of museum during Florida Forest Festival in Perry last October. Putting together the story of region's woodlands is a labor of love for exhibits supervisor Elizabeth K. Ehrbar, left, who grew up in the area's logging woods.



By KAY DAVIS

than 2.5 billion tree seedlings have been planted to take their place since 1928. As a result, Florida leads the nation in reforestation, both in environmental and commercial tree-planting projects.

This has been accomplished through the joint efforts of private landowners, forest product industries, civic groups, the Florida Forestry Association and the Florida Division of Forestry. Taylor County alone has planted 150 million seedlings.

Thus was originated the idea for the Festival—which attracts some 30,000 to 40,000 visitors from all over the United States each year—and the Museum, already scheduled to be one of the trail sites of the Bicentennial to be visited by millions of Americans.

Inside the Museum, dioramas and exhibits portray forestry of yesterday, today and tomorrow. Lifelike exhibits and photographs of Florida's early virgin forests, logging camps, sawmills and vanishing naval stores industry reveal a Florida that few know; a Florida of rugged pioneers who braved the dense forests and swamps and who were associated with the beginning of forest industries.

Elizabeth Ehrbar has spent 3 years taping inter-
(Continued on next page)

(Continued from preceding page)

views, researching data, and collecting valuable acquisitions for the Forestry Museum. She is museum exhibits supervisor for DNR. Of all her efforts for the Department and formerly for the Florida State Museum at Gainesville, she feels this project has been the "most special."

Mrs. Ehrbar, who grew up in Lamont, Florida, where her father built logging railroads for Weaver-Loughridge Lumber Company, sought the Forestry Museum assignment, she says, because she feels that the saga of forestry is an untold story in Florida.

She and her interpretive design staff devised and did the artwork, wax figure sculpting, and actual construction for all exhibits and display cases, including a large geodesic dome to go in the center of the Museum.

Among these displays is an all-wood map of Florida. Each county is represented by a different variety of wood that can be found in the county it denotes. From gumbo limbo to torreyia (the "gopherwood" of the Bible), 314 species of trees grow in Florida, more species than in any other state except Hawaii.

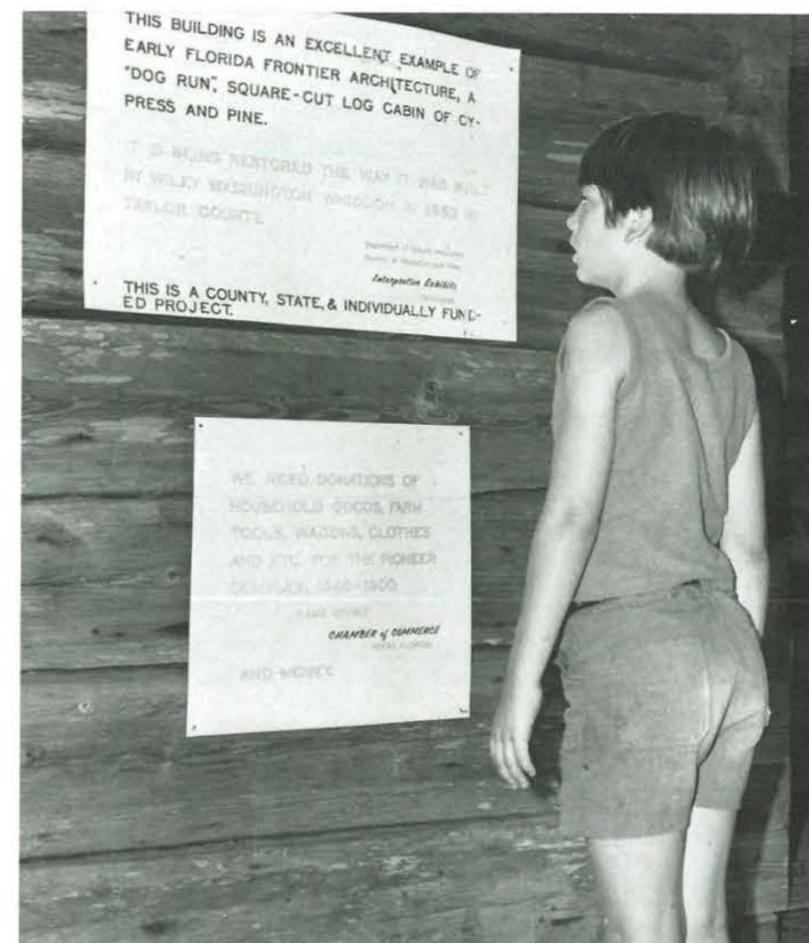
Technical help for this project, as well as advice on environmental habitats recreated in the "Forestry Today" section, was furnished by county foresters and Division of Forestry consultants.

Interest in creating a special museum of forestry began in 1966. The project, spearheaded by Jim



Exhibit designers Lynda Ross and Jennifer Dyer, left, at work on a diorama depicting history of the turpentine woods—a colorful segment of the state's forest products story. Liz Ehrbar, left below, Lynda Ross in center, and Jennifer Dyer create models of turpentine still and firehouse of the early 1900s. David Lottinville, at right, stands by a sign proclaiming plight of many new museums—the need for more display material and funds. The state provided initial fund to assist project off the ground. Donations by the county and private citizens have also been substantial.

Florida Dept. of Agriculture and Consumer Services Photos



Southerland of Buckeye Cellulose Company, was not funded until 1971. At that time, the State Cabinet released \$120,000 for its development. More than \$60,000 in private and county donations, including historical items and services, have since been supplied.

Taylor Countians, for instance, donated the land and road construction. Two prominent lumbermen in the county, Glenn Loughridge and Joe Roberts, donated the raw lumber for finishing the interior in Florida pecky cypress and red cedar. Altogether, some 10,000 lineal feet of pecky cypress are used to panel the interior.

Mrs. L. P. Gibson, wife of the former State Senator, donated a large log house with breezeway (pioneers called it a dog-trot) built in 1863. Moving the old house, which is of considerable architectural value, was done with special assistance from Blair Reeves, professor of architecture for the University of Florida.

The Pioneer Complex is being restored on an expandable concept and will eventually include—in restored form—a sugar shack, smokehouse, corn crib and possibly an old-time store or commissary.

Grape arbors, crape myrtle trees, and climbing honeysuckle, plus paling fence and pine straw trails, will help to give it a final note of true-to-life Florida at the turn of the century. Many furnishings have

been donated and many more are sought (circa 1850-1900).

Through the lead of the Taylor County Development Authority and Taylor County Artifacts Collectors Committee, a lot of people helped or showed they cared. For instance, an 1880's log cabin built by pioneer Jack Green was donated along with a sugar mill and brick kettle given by Rolan Hendry. For her part, Mrs. Eva Loughridge donated an heirloom quilt and well-worn rolling pin. Mrs. Lewis Thomas turned over her cherished buckboard. Ivey Freeman loaned a "fro" to "rive" shingles for the Complex.

The ultimate dream is that the Forest Capital State Museum will be a place of history and nostalgia, a very personal museum.

It provides the best of all glimpses of Florida communities long ago swallowed up in the mists of oblivion—Carbur (once the "world's largest sawmill town"), Fanlew, Helen, Coe's Mill (which became Hosford)

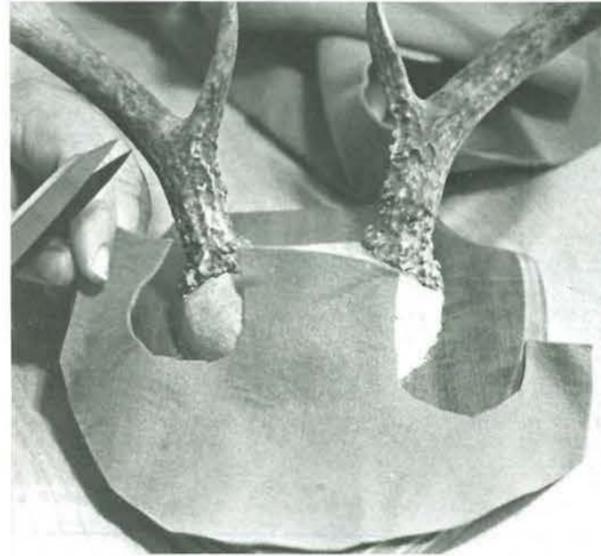
Of forestry in Florida tomorrow, Mrs. Ehrbar says the park and Museum have something to say about this, too.

The inside of the Museum has artists' versions of foresters' plans for the future that will "enable the people of Florida always to have the beauty and benefits of forests." ●



1

From Dust Catcher..



2

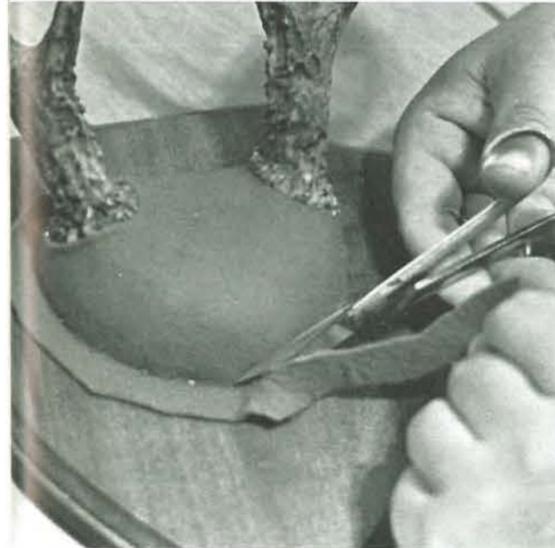


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TO ANY BUCK HUNTER worthy of the name, there is something of a mystical quality about a set of deer antlers. Even if you "can't eat the horns," as the old saying goes, most nimrods find it difficult to relegate a vanquished buck's rack to the junk heap. Usually they will at least put the rack where the dogs can't haul it off, even if they just nail it up on the side of the garage. If it was a first deer, or an exceptionally good trophy, they'll maybe tuck the antlers up in the rafters of the barn or add them to the accumulation of "keeping junk" in the attic.

But there is a simple way of converting that cobweb catcher into a decorative memento of a successful hunt. Here is the way one hunter does it.

1. Remove hide from skull plate. If it has dried, soak in water until soft. Trim down bony skull plate. Be sure the antlers rest snugly and at good angle to plaque. Drill 2 or 3 holes through the bone plate and attach the rack to plaque with screws. Using papier mache, cover skull plate molding low, dome-shaped filler. Let mache dry thoroughly (a day or two), then varnish it to make it waterproof. 2. Wet a piece of colored felt thoroughly in clear water and press out excess moisture, then cut felt to cover filler. Wet felt stretches to conform to contours. 3. Secure felt to plaque with small brads. Overlap it at back of antlers. As felt dries, it will shrink tight for smooth appearance.



4

Photos By Morrie Naggiar

4. Trim excess felt with scissors or razor blade. 5. An edging of a contrasting color is glued on. Metallic binding material was used in this case but a visit to local fabric shops should suggest some other types of suitable trimming. 6. The final step is to attach some sort of device for hanging the plaque. Hangers, as well as other supplies needed for the project, are available from taxidermists' suppliers or your local handicraft shop. Engraved or stamped plate giving date and place of kill adds a nice touch. Nicely finished plates at a reasonable price are available from the taxidermy supply house—Northwestern—referred to in tanning article in the December issue.



5

6

To Trophy

By MORRIE NAGGIAR



The Canvasback

By MORRIE NAGGIAR

THE CANVASBACK FULFILLS every requirement of a great game bird. It has speed, wariness, size, appearance, and prime table qualities. In addition, it responds well to properly set decoys, usually not with reckless abandon, but with enough caution-tempered verve to keep a hunter on his toes.

Back in the days when market hunting was an established way of life, the canvasback nailed down a secure spot for himself as the epitome of table birds. This quality alone would have been enough to assure the species a place in any wildlife hall of fame.

But recently the canvasback has fallen on somewhat dire times. For one thing, a substantial part of its breeding range lies in the northern prairie states and southwestern Canadian provinces, where expanding agriculture and other developmental activities have put the bird in a bit of a squeeze. Undoubtedly, there are other factors not yet completely recognized that have exerted their influence on the species. At any rate, again this season the canvasback is on the protected list. This is an effort to assure that the maximum number of birds return to the nesting grounds next spring.

In general appearance, the canvasback is a typical diver—webbed hind toe, drab speculum, and blocky body with legs set far back, with the result that the bird is somewhat less than graceful on land. But it is the long, sloping, wedge-shaped profile of head and bill that is the unmistakable mark of the canvasback. The name is descriptive enough, too, for a male in full winter plumage is a standout with its white back feathering, finely vermiculated with black tracings. At rest on the water, the bird's sides and back are as conspicuous as a white canvas sail against the more subdued hues of sky and water.

At close range, the male's red head and neck, black breast, white back and sides, and that long, sloping profile make it unlikely that this species will be confused with any other. The hen, as is common among birds, has a much more demure coloration than the male. She is pale salty-brown, with a reddish-brown head, neck, and chest, with darker vermiculations on the back and upper sides.

On the wing, the large size and the long slender head and neck are good identification features. The male's white body and contrasting dark tail are conspicuous features that help the observer separate him from the darker bodied female. The canvasback's flight is swift and direct. Although on migration the flocks usually travel in V formation, at

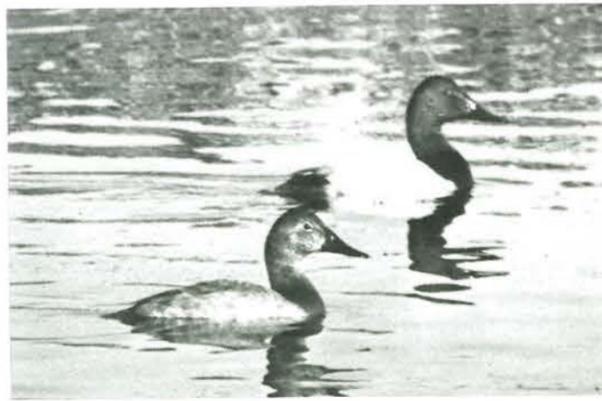


Photo By Wallace Hughes

other times they move about in compact groups, in irregular lines, and straggling bunches—but always with the typical rapid, strong beat of their rather pointed wings.

Once on the southerly wintering grounds, the canvasback is likely to loll away the fair days in huge rafts mixed with scaup and other divers and the usual assortment of freeloaders—the coots, baldpates, and others who eons ago learned to snatch a free meal from the mouths of the larger and much more skillful divers. Canvasbacks have been known to feed on beds of succulent vegetation located 30 feet or more in depth. As they surface after a dive, with a bill full of vegetation, the freeloader darts in and grabs what it can before the diver is able to gulp the rewards of its effort.

Like the redhead, canvasbacks regularly take constitutional flights which seem to be nothing other than a stretching of the wings after a night's repose or a few hours of lolling in the sun. During these flights the birds may swing back and forth over a route several miles long before again settling down.

By choice, the canvasback is a bird of the big waters—large lakes, bays, and the open ocean when the surface is calm enough to allow them to rest in comfort. At such times, great rafts of canvasbacks and other divers gather well off shore.

The special flavor that has made the canvasback a gourmet's favorite is alleged to be the result of the bird's extensive feeding on wild celery (*Vallisneria*). In parts of the west, it feeds extensively on the wapato or duck potato (*Sagittaria*) and does not suffer any apparent loss of flavor as a result.

About 80 per cent of the food of this species is vegetable in origin, including pondweeds, wild celery, grasses, seeds of the burr reed, and a variety of other aquatic plants. The animal foods taken consist mainly of molluscs and insects.

Wide expanses of white-capped gray water, glowering skys, wind lashed reed beds, and a ragged line of strong-winged canvasbacks boring straight into the storm-tossed blocks—this is dream stuff to many an avid waterfowler. With a bit of care, the king of the waterfowl will be with us for years to come. With luck, once again the noble bird will grace the dining tables of Florida waterfowlers. ●

On the Fly

bass and bream are prime game for the fly fisherman, but specialized gear is called for to get the most out of your efforts

FISHING



By CHARLES WATERMAN

YOU DON'T HEAR TOO MUCH about fly fishing for bass anymore. I guess there are just as many people doing it, maybe more, but other methods get the publicity, boosted by tournament angling.

Speaking of tournament fishing, there's a Florida Fly Rod Club that runs regular tournaments for its members. They do some salt water fishing, but they're primarily working on bass and panfish. If you're interested in fly fishing contests, you might get in touch with Edward L. Stahley, attorney-at-law, P.O. Box 1446, Cocoa, Fla. 32922.

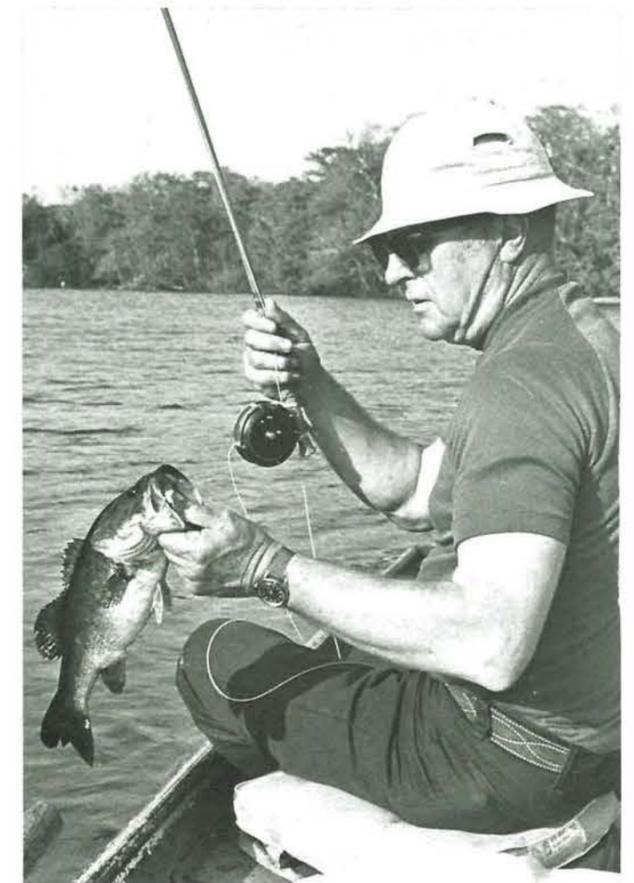
Now being a fly fishing nut of the most obnoxious sort, I tend to over-emphasize it, but I have had some questions about proper fly tackle for Florida bass and panfish. Usually, the query is about fishing for "bass and bream" with flies. Since they're two different things, it takes a little telling.

Panfishing is easier and more fun with very light rods, but if you stick to fairy wands you'll find bass fishing harder work in most cases. Big bugs and streamers don't go good on little rods. If you're in doubt, it's easier to fish for bluegills with a heavy rod than it is to throw a big wind-sucking bug with a glass whisper.

For a single rod to be used for both, I'd say one that's about 8½ feet long and takes an eight line is about right. Ideally, the line you use should be a weight forward, whether bug taper, salt water taper, or simply "torpedo" taper—not a whole lot of difference for your purpose. A level line, much cheaper, will work just as well for short casts, and you can make up your own mind about that. The double taper lines don't have much purpose in Florida, as their strong point, delicacy, isn't needed much.

But if you think nearly all of your fishing will be primarily for panfish, you can go for a really light rod and get by with it for bass, with a couple of gimmicks. Let's say the rod is 7½ feet long and takes a No. 6 line. A shorter stick isn't quite so handy for Florida fishing. I used a 6½-footer quite a bit, but it has some disadvantages, especially when it comes to lifting a line above lily pads or grass patches.

This bass took a tiny popping bug fished on an ultra-light rod, but something a bit heavier is usually better for bass.



(Continued from preceding page)

These bugs are made in many sizes and shapes. For the very light rod I'd be a little careful of those with frog-type legs—a little too much air resistance when they get wet. Not every tackle store has hair bugs, but they're in a lot of catalogs. They tend to be more weedless than standard bugs, and a weedguard begins to defeat your purpose because of added weight. You can work a plain hair bug through a lot of foliage if you do it gently, the hairs just pushing the lure away from hangups.

Okay, so much for the light rod. It isn't ideal but it'll work on the biggest bass in the crick. Heavy bass rods aren't needed for fish playing. They're needed for throwing big stuff and pulling it loose from hangups.

If you want to fish bass in a place like Lake Okeechobee and want to work right through the grass, you'll do better with what's commonly used as a salt water fly rod. It should take a 9 or 10 line, and although it may feel like a flagpole to begin with, it's actually less work when you need to pull loose from hangups and pop a big bug in the grass.

Any reel that'll hold the line is okay for bass.

IN DIGGING INTO SOME MUSTY VOLUMES of more than 100 years ago, I find that "jiggerbobbing," or "skittering," was one of the very earliest forms of sport fishing for black bass. Although there were multiplying casting reels way back about 1810, they were primarily used for chunking minnows and frogs instead of artificials.

The "bob" of early days was a sizable dingfod, generally a wad of hair with several hooks inside. Most of the accounts indicate they used it a little differently from the methods used today. Now, the idea is generally to keep the lure going constantly and attached to only a few inches of line on a husky pole, with the boat moving. Jigging the lure on the surface creates enough of a disturbance that the fish can't see the end of the pole at all. When he strikes, you pull him in hand over hand.

In the old days they apparently did that some of the time, but they also danced the bob, touching the water only occasionally. One account describes keeping the bob in the air for long periods, the fish apparently following its bobbing aerial progress and being ready to grab it when it finally struck the surface. No doubt that it would catch fish today, but unless there was considerable vegetation I think the pole and boat would be too much in evidence and, at best, you'd have to get the boat within 20 feet of the fish. In some areas bass are now too sophisticated to chase an aerial target, even though it is attached to a considerable length of line.

The lures used by present-day operators range from large pork strips and chunks or spoons to leather gadgets cut in the shapes of frogs, small



Black bass tackle is tops for spotted seatrout but many inland tourist-fishermen haven't heard much about them.

alligators or fish. I'm pretty green on the subject, although I've seen that fishing done by a few experts. It's most effective at night, partly because the fish can't see so much of what's going on and partly because bass feed more on the surface at night—sometimes.

Of course, the idea is much the same as "figure-eighting" for snook from bridges or piers. That system is considered unsportsmanlike by many, although a wire line is about the only satisfactory tool for pulling really large fish away from pilings.

I've done a little jiggerbobbing for snook from a boat. I used exactly the same system recommended for bass: the very short piece of line and a large lure. My attractor was an enormous batch of long feathers that I guess you could call a streamer if you aren't too specific. It would catch snook all right in narrow creeks, but I didn't get anything very big. A real bass jiggerbobber would have done better I'm sure.

Anyway, even though the system has been "discovered" from time to time, the general plan has been used for about 200 years, maybe longer. The first operators probably didn't bother to write about it. Literary types tended toward more complicated and artistic methods.

MANY TOURIST FISHERMEN show little interest in salt water trout. The story is that it's primarily a sport for residents, partly because publicity isn't too spectacular. Even a 10-pound spotted weakfish is eclipsed by a 6-foot sail or a 100-pound tarpon.

Commercial fishing for trout with bait may not look too sporty, but the inland bass fisherman is generally pretty well equipped for artificial lure angling on the salt water flats. The freshwater bass boat works fine, and the bass plugging or spinning outfit is almost ideal. Years ago I noted that salt water trout fishermen tended to use tackle that was too heavy for the job. I think the reason was that the "popping cork," intended for popping a big concave cork over a natural bait, had to be pretty stiff, and they stuck with it when they began casting artificials. The big stuff isn't necessary at all.

Year in and year out, the small jig is probably the most effective of all trout lures, although plugs are better at times. The plastic-tailed type has been a big winner in recent years.

Anyway, no fish will demand a more investigative attitude. Although trout can be mighty stupid at times, today's winning lures may be duds tomorrow. The changes are quick and complete. Weather causes trout to change depths suddenly, and some of the biggest catches come from deep holes adjoining shallow flats when a chill hits.

The middle East Coast is noted for big fish, and Cocoa has been a center of trout fishing for many years, although it's equally good north and south of there along the inland waterway. The inland waters of the West Coast are noted for larger numbers of fish and smaller sizes.

This isn't any summary of Florida trout fishing, but it can be found by any visitor wanting to make inquiry and spy on a few marinas.

A FRESHLY-HOOKED TARPON throws a chill into many anglers. For those first few moments when he charges off, jumps at the sky, and rattles his gill covers, it appears nothing short of a bridge cable will hold him. But with no discredit to the Silver King, we can say things level off a little after the first few leaps and charges. If that wasn't so, we wouldn't catch big ones on light tackle.

Imagine how the first tarpon anglers felt when they faced the flashy rascal. A hundred years or so ago, the idea of landing a "tarpum" with rod and reel, even using shark tackle, was considered the epitome of angling adventure. One frustrated fisherman offered to pay the expenses of anyone who would do it. And in those days it was considered pretty sporting to stick a "tarpum" with a spear or "grain" and let him tow the boat until he played out.

Of course, before the days of the star drag a whirling knucklebuster reel was a pretty formidable thing to grab hold of. If the thing didn't freespool, the handle was a lethal weapon. They used thumb-stalls all right, but some of them smoked and burned, and bare thumbs don't stop 100-pound tarpon very well.

And then, you know, really sporty tarpon fishing

came on earlier than most of us realized. Shortly after the new century began, a fellow named Dimock, who wrote *BOOK OF THE TARPON*, was catching them with a canoe and a fly rod. They were big fish, too! With modern big-game fly reels we have a lot of advantage, but that's no reflection on the record-getters.

AND MORE ON THIS "grain" business. It's been only a few years since they speared snook from the Tamiami Trail culverts—and Seminoles still rack up the garfish with them.

One of the most interesting fish stories I've heard is told by an old-timer of the mangrove coast. It concerns spears and sawfish. (The sawfish, you know, is a slow-moving and harmless fellow in most cases, despite early illustrations showing him carving his way through a boatful of scared yachtsmen.)

Anyway, this guy was raised on and in the water and tells of the grain and free rides courtesy of sawfish. He'd stick a big saw with his grain someplace inshore and hang on to a line while the victim would head for the open Gulf. Our hero wouldn't use a boat; he'd just take the trip in a pair of trunks. Only problem was once he'd ridden far enough, he'd have to swim back.

The sawfish *can* be dangerous because he can swing his toothed snout with terrific power. A 16-footer weighs about 700 pounds, they tell me. It's a member of the ray family. Most inshore saltwater anglers have seen one trudging along with a side-to-side movement as it swims. Any time you land a sawfish, you'd better have a pre-arranged plan for subduing him. He becomes a sort of self-powered reaper when you try to drag him aboard.

SEEMS WE'RE ALL WRAPPED UP in history this month. Stories of the origin of lures can get pretty flashy; some true and some probably in the tall tales category.

There's the one about bucktail. Seems this fellow had shot a deer on the edge of a lake and as he dragged his kill up the bank, a wad of hair came loose and was blown into the water. Of course a big bass banged it just as it struck the surface.

The wooden plug: Somebody was whittling for fun, flipped a cigar-shaped scrap into the water and saw a big bass (maybe the same one that grabbed the hair) hit it. That event has been attributed to the Jim Heddon who invented the conventional plug.

The spoon: When a fisherman couldn't find a clamshell to make a wobbling lure from, he used a tablespoon.

The spinner: A guy pulled in his minnow, and while it was twisting his line he had a strike.

The South Bend Super Duper: Guy dropped his tie clasp into the water. Blap!

Maybe they're all true. ●



Photo By Lovett Williams

Gulf Hammock Wildlife Management Area

GULF HAMMOCK WILDLIFE MANAGEMENT AREA in Levy County was the first state-operated wildlife management area in Florida. The concept of controlled public hunts in Florida originally started in the Ocala National Forest when the U.S. Forest Service made their lands available to hunters and charged a fee for a special permit to hunt. The Game and Fresh Water Fish Commission managed wildlife on the area and performed enforcement duties.

The Gulf Hammock arrangement was similar, but there the Commission would lease the land from the landowners and manage the wildlife resources. A \$5.00 management area stamp would be required to hunt in addition to a hunting license.

The desired land was bordered on the northwest by Highway 24 between Otter Creek and Cedar Key, on the northeast and east by U.S. 19 between Otter Creek and Inglis, on the south by Highway 40 between Inglis and the Gulf of Mexico, and on the southwest and west by the Gulf.

Negotiations were completed July 22, 1948, and the contracts signed for 120,000 acres of land.

Twenty thousand acres—from Ten Mile Creek to Cow Creek then to the Waccasassa River and then to U.S. 19—were set up as a refuge and the remaining 100,000 acres as the hunt area. The contracts called for at least six full-time Commission officers on the area.

The Commission agreed to fence the area and maintain the fence. There were very few roads in the area, and the ones there were two-rut logging roads. Travel by vehicle was extremely difficult; in wet weather it was next to impossible. The Commission and landowners agreed to improve the roads, especially to the campsites and hunting grounds. The contract was for a 25-year period. Federal aid funds received through the Pittman-Robertson Act were used to fence the area and for game management projects.

About 60 per cent of the area was hardwood hammock, 20 per cent flatwoods, and 20 per cent salt and brackish marsh. Turkeys were abundant, squirrels plentiful, but deer were scarce. During winter months, the coastal area and pothole ponds in the edge of the hammock were home for thousands of ducks.

At first the "Project," as the local people called it, was quite controversial. Some thought it was a great idea because it would provide the public with a good place to hunt, but others thought they were having the land taken away from them because of the \$5.00 special permit. They also thought wildlife officers were an unnecessary nuisance and game management people were nuts of some kind.

Poaching was a way of life with some of the local folks. They had always killed game for their table without any thought to season, sex or size. The courts were lenient with poachers, and if the

poacher asked for a jury trial, he was found innocent.

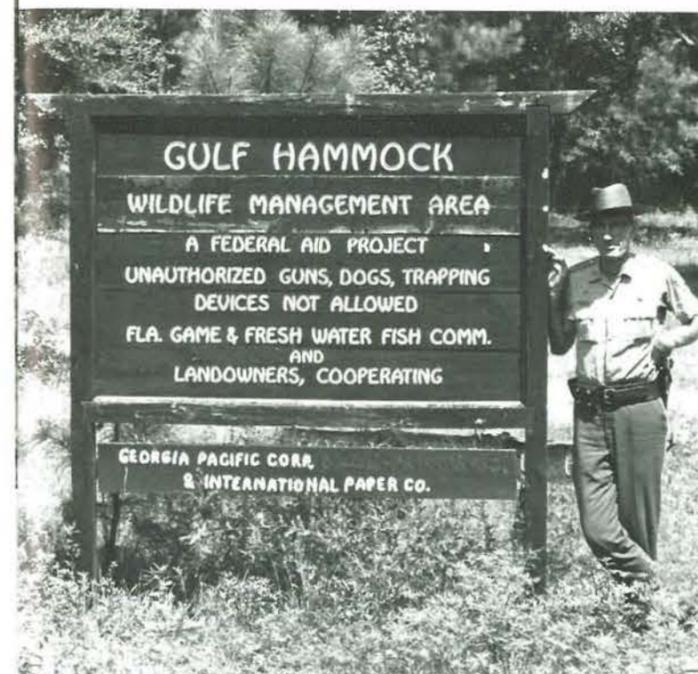
James (Buster) Hudson, Fred Kirkland, and the late Jim Clary, were wildlife officers in Gulf Hammock before it became a wildlife management area. Fred was on the Cedar Key side, Jim was in the middle, at the town of Gulf Hammock, and Buster was on the Yankeetown side. Fred retired several years ago, but Buster is still on the job. Buster was raised in the hammock. His father was a logger, as were most hammock residents. He was one of the better off loggers because he owned an ox, which he used to snake the logs out and get them to the train.

Buster has seen all of the changes in Gulf Hammock, and in the people who use the area. The resentment of the project gradually disappeared as the local people realized it was benefiting them as well as "outsiders."

When the area was first opened, there were only nine entrance roads. There was a checking station at each entrance, where hunters checked in upon entering the area and checked out when leaving. All deer and turkeys killed were to be checked. The game check was for a study on numbers harvested, physical conditions and eating habits.

The check-in, check-out system caused many problems. Hunters could gain access to the area by boat up the Waccasassa River, Cow Creek and the entire coastal area. Fishermen also used the Gulf, creeks and rivers, as this is some of the best fishing on the coast for redfish and trout. Check stations were abandoned after a few years, because they were worthless as a law enforcement tool and

(Continued on next page)



By JIM REED

An ample supply of turkeys, opposite page, is just one of many attractions of Gulf Hammock area. Sign above indicates that this wildlife management area is provided through the cooperation of two large industrial landowners. A substantial block of state land is also included. Old roads, right, have been improved, and new ones put in, making the area readily accessible to hunters. Once off the road however, you're immediately in dense wilderness.



Photos By Jim Reed

(Continued from preceding page)
 enough biological data had been collected to satisfy game management.

From time to time, parcels of land changed hands and Patterson-McInnis Lumber Company sold their holdings. Some new owners took their lands out of the management area program after the lease expired. This caused the Commission to open the refuge to hunting. At the present time, the major landowners are Georgia-Pacific, International Paper Company, and the Department of Natural Resources.

Georgia-Pacific owns 66,000 acres of timberland. International Paper Company owns 856 acres of timberland also. The Department of Natural Resources owns approximately 26,000 acres of coastal land. Others own the remaining parcels of land. The primary land use is timber production, but hunting and cattle raising fit in to follow the multiple-use concept.

Drainage canals have been dug, and excavated material was used to build up the roads. New roads have also been made that crisscross the area. The improved road system has made the area more accessible to the hunter, but when you leave the roads you are in the dense wilderness immediately.

The timber management programs have changed the habitat considerably. This has helped the deer population to increase, but has had an adverse effect on turkeys. Turkeys require open hammock land and a lot of low grass areas.

When Gulf Hammock was first opened, turkey hens were protected. This was later changed so hunters could take gobblers or hens, and still later a special spring gobbler season was established.

A total of 300 hunters hunted the area the first season. They checked 13 deer and 42 turkey gobblers. No record was kept of the squirrel and duck harvest, because most small game found its way to the pot in camp.

The checked harvest figures for the first six years were:

Year	Deer	Turkey Gobblers
1949	13	42
1950	30	18
1951	35	65
1952	64	115
1953	43	34
1954	120	52

Hunter pressure has constantly increased throughout the past 20 years, and the size of the area has dwindled from 120,000 acres to 94,278 acres. This has caused some concern among hunters, landowners, and the Game and Fresh Water Fish Commission. There is room for the hunters, but sooner or later, if the trend continues, some

restrictions on the number of hunters on the area will have to be imposed.

In 1963, the Commission, the landowners, and the Levy County Board of County Commissioners declared hogs game animals in the area. All ownership to hogs was surrendered to the Commission, and the hunters harvested 759 animals that year to go along with the other game. The extra bonus helped increase hunter pressure. Many Florida hunters would rather kill a hog than a deer.

Hound dogs are used by most deer hunting parties. This is not only an old tradition, but almost a necessity for good deer hunting. Hunters cast their dogs in the thick areas and then try to cut the dogs off on one of the roads. Hogs are taken the same way. Still hunting pays off on both species, but most Gulf Hammock hunters prefer to use dogs.

Ducks are hunted by slip shooting the hammock ponds where ducks come to feed on the acorns. Others shoot ducks over decoys around the coastal marshes and creeks.

Squirrels are usually plentiful and can be found

Photo By Morrie Naggiar



in any of the hardwood areas. They are easy to find during the first part of the season, but as more pressure is put on them, they get wilder.

Estimated harvest reports for the past six years are:

Year	Deer	Turkey	Hogs
1968-69	123	44	90
1969-70	155	54	144
1970-71	104	50	85
1971-72	132	98	78
1972-73	121	69	58
1973-74	137	50	48

There were an estimated 92,832 man-days of

hunting pressure last year, according to the last mail survey.

The estimated game populations are 1,400 deer, 400 turkeys and 400 hogs. As the harvest figures indicate, the populations fluctuate annually but in general have stabilized into a pattern.

Our thanks go to all the people who made Gulf Hammock a reality—to Billy Patterson, of Patterson-McInnis Lumber Company; to the present landowners for keeping their lands open to the public; to the people of Levy County, who have been so cooperative; and to Gulf Hammock hunters, who take great pride in being part of a wonderful area. ●

Photo By Wallace Hughes



Photo By Jim Reed

Still hunting deer, left, can pay off in the Gulf Hammock area although most hunters prefer to use dogs in the thick brush and timber common on this management area. Hogs, above, were officially declared game animals by the Commission, cooperating with the Levy County Board of Commissioners, and the landowners, in 1963. At right is a private camp.

This is No. 8 in a series of articles on Florida Wildlife Management Areas. Maps and regulations on individual areas are available from regional offices and from the Game & Fresh Water Fish Commission, 620 S. Meridian Street, Tallahassee, Florida 32304.





Grass Carp

THE GENERAL PHILOSOPHY of the Game and Fresh Water Fish Commission concerning the stocking or release of exotic fish is to take a long look before leaping. The long look consists of thorough biological research under varied conditions to determine both the advantages and disadvantages of any non-native species.

According to Dr. O. E. Frye, Commission director, it is vital that an exotic be thoroughly researched before it is released. Knowing how a fish will react in one situation does not provide adequate knowledge of the same fish in a different environment.

Frye said, "The Commission is being accused of foot dragging and delaying the release of the white amur, or grass carp, as a biological control agent for noxious water weeds. We are not dragging our feet, but we are insisting that a planned research program follow an established schedule."

He added, "Our responsibility is to the fresh water aquatic life of Florida. We cannot rush into a biological weed control program in which the cure might be more damaging than the illness itself. Initial research has proven that the grass carp will eat certain undesirable aquatic plants; however, these studies have been limited and under controlled conditions."

Sportsmen with a sincere concern about Florida's environment would do well to study the introduction and spread of the common carp as a classic example of introduction of an exotic fish without adequate biological research.

"There is strong indication," Frye stated, "that the grass carp will not reproduce in Florida waters; however, indication is not positive proof, and until research provides a positive answer, we will continue looking."

The possibility of grass carp migration and spawning in the wild was recently brought to the attention of anglers by the Missouri Department of Conservation with documented reports of commercial fisherman catches of the imported carp from widely separated spots in Missouri.

According to Dr. William Pflieger of the Missouri Department of Conservation, there is indication that the fish is becoming established in Missouri waters. Missouri has banned import of the grass carp, but both Arkansas and Iowa have stocked them and, obviously, the fish are shouldering their way into the Missouri fish picture.

Frye said, "There is fear among many fisheries biologists nationwide that the fish, which could grow as large as 100 pounds, might compete with sport fish—either for food or for habitat—and could disrupt water conditions."

There is also concern about the grass carp by the nation's duck hunters, because of their probable destruction of waterfowl habitat.

Frye stated, "The grass carp has been described as a super fish that holds all the answers to aquatic weed control. The Commission believes

that it has high potential value for weed control in small ponds, but advocates caution and planned, controlled stocking."

He added, "There is no real reason, biological or otherwise, to rush headlong into an unscheduled stocking. The grass carp has been around a long time, and any fish that the American Fisheries Society considers as undesirable and the Sport Fishing Institute tags with an extreme caution sign deserves to be researched and studied before it is granted free range to Florida waters."

The Florida research program was initiated in 1970 with a limited number of fish being placed in plastic swimming pools to determine food habits, growth rate, and rate of plant consumption—and to develop methods of artificially spawning the white amur.

The research study was accelerated in 1971 with the stocking of four small manmade ponds with safeguards that would prevent any possibility of the fish escaping to natural waters. This study was completed in 1973.

In 1972, the Commission entered a cooperative study program with the Department of Natural Resources for the release and study of the carp in four natural inland lakes. Again, great care was taken to prevent escape of the carp into other waters.

A 3-year research program scheduled for 1974 through 1977 has been approved by the Cabinet, the Legislature, and the Commission, and provides for release of the carp in eight additional bodies of water, including one canal area, to evaluate the weed control potential in large waters and the

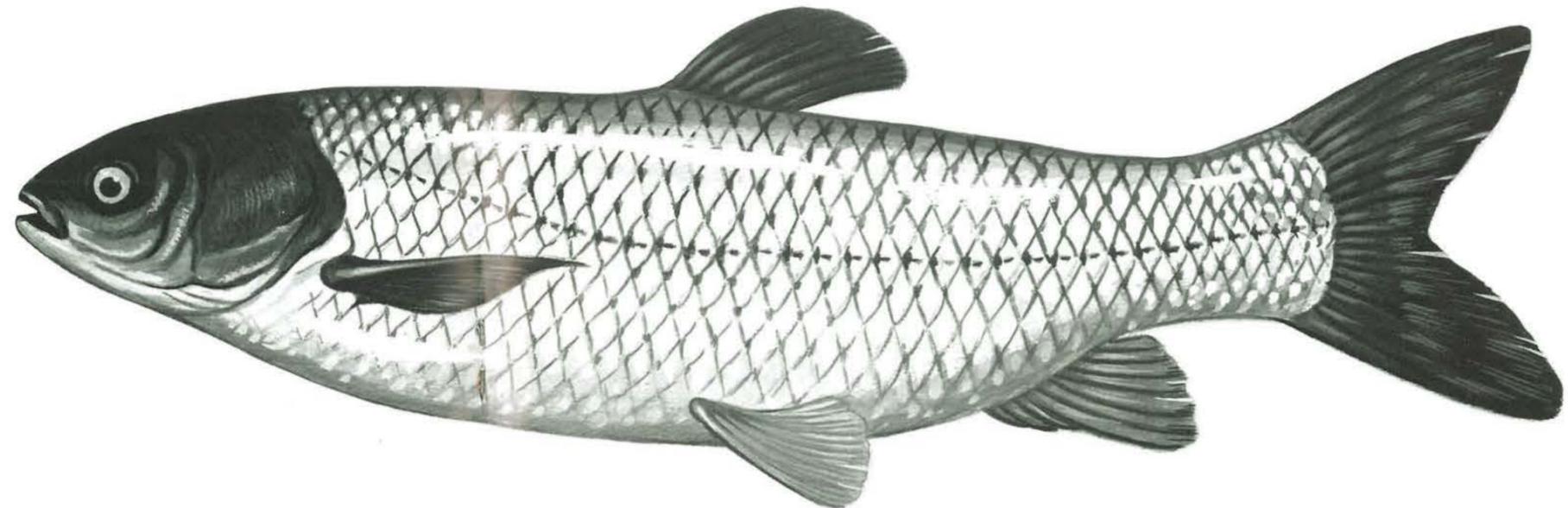
effect of the fish upon water quality and upon the native fish population.

This program also calls for the release of large, sterile carp equipped with radio transmitters into the waters of Deer Point Lake in Bay County to define movements of the fish with access to a river system.

Frye continued, "From all indications, the white amur is an efficient plant eater, especially the imported pest plant hydrilla. One of our big questions is, what does the fish eat when the hydrilla is gone? Will it turn to some of our beneficial native plants that provide valuable cover for bass and panfish? We cannot afford to place desirable aquatic plant life in jeopardy.

"The Commission feels that adequate safeguards have been provided according to the scheduled cooperative research study to prevent escape of the fish. Any departure from the agreed schedule might create a situation over which no one has any control and the grass carp might obtain free range throughout Florida. We are not amenable to this possibility," Frye stated.

Frye emphasized the sentiment of the Commission by saying that, "No one would be happier with a biological control for aquatic weeds than the agency responsible for wildlife and fresh water aquatic life; however, until such time as the fish is proven acceptable according to standards established for quality water and quality fishing, the Commission will continue to support the philosophy of taking a long hard look, through biological research, before leaping forward with indiscriminant stocking." ●



WHITE AMUR or GRASS CARP

Drawing By Wallace Hughes



1

A sharp knife is a pleasure to work with,
a dull one is next to useless

The Knife's Edge

By CHARLES DICKEY

DRESSING GAME AND FISH is an easy chore if you have a sharp knife! If you try to fillet a fish or skin a deer with a dull knife, there's nothing but grief. It takes three times as long, and you lose a lot of meat.

I've always envied the experts who so easily fillet a fish. They go zip-zip and the fillets come off as easily as if the fish had been held together by zippers.

Of course, much of the secret is using a keen blade. Ideally, an outdoorsman should select a knife of hardened steel which will hold a sharp edge. But some of the inexpensive fish knives on the market today hold up fairly well. They are simply sharpened more often than an expensive or better grade knife requires.

There are about as many theories of the best way to sharpen a knife as there are ways to catch a bass. If you can get an edge which keeps you happy, use your old method. But not long ago, I

found out I'd been doing it the hard way. Ralph Glovier, an outdoor sportscaster and writer from Macon, Ga., who spends much of his spare time in Florida, showed me an easy way.

Ralph's a nut on keeping all of his knives finely tuned for preparing fish and game, and for all the other uses one finds for a knife in camping. In his station wagon he always keeps a sharpening kit, usually the Washita Soft Arkansas Soapstone.

In photo number one, Ralph lubricates the stone, which is fine-grained and harder than steel. The stone fits into a heavy cast lead holder that helps to hold the stone firmly when the blade cuts into it. The holder, when it's left in a permanent place, can be fitted with a small vice for even stronger stability. The lubricant comes with the kit, but a few drops of light oil will do for the stone you may already own.

In photo number two, Ralph shows the way he



2



3

starts to put an edge on a fillet knife. The blade is put flat on the whetstone and then the back or top of the knife is raised about 10 degrees.

Now comes the tricky part. With firm but not heavy pressure, Ralph moves the blade as though he were shaving the whetstone. He cuts right into it, and this is what grinds the edge.

In picture three, you'll see that the blade is pulled slowly towards Ralph as he "cuts" the stone. There are two pressures by Ralph's right hand as his left holds the lead frame. One pressure is against the stone and the other is as he draws his right hand back from the stone in about a 20-degree angle.

Picture four shows the completion of the first stroke. He then simply turns the knife over and "cuts" the other edge. You should not give one side 10 straight strokes and then alternate edges. It will keep you from getting a strong, even edge. You alternate from side to side after each stroke.

To make it clearer, go back to photo two. The hilt of the knife is flush with the whetstone so that the entire blade gets pressure as Ralph cuts and pulls. From photo two, imagine you were cutting into a tough loaf of bread, moving on to pictures three and four. Actually, Ralph says, if you use the sharpening stroke when cutting meat the actual cutting should increase the keenness.

If you learn this simple method of keeping your outdoor knives sharp, you may get to where you actually enjoy cleaning a fish or dressing a deer. ●

4

Photos By Charles Dickey



Pickereel—Splendid Splinter!

BUCK BRAY AND I WERE FISHING the Withlacoochee backwaters near Dunnellon, looking for real lunkers the way the big ones are caught. We were using live river shiners, a top delicacy with the Withlacoochee bronzebacks.

Of necessity, both of us were using 30-pound test line on stiff rods. Often you have to horse the lunkers out of the weeds, and even 30-pound test line won't always turn the trick.

Buck has repeatedly encountered broken lines since he became a full-time guide after moving to Citrus Springs for an early retirement. Now he specializes in guiding parties after lunker bass. I, too, have broken 30-pound test lines on unseen foes. You know, snags that moved and fought back.

"I've got something working," Buck remarked, slowly taking up slack line as he watched his cork float bob violently, signalling his shiner's fear of becoming a bass's dinner. Suddenly, the float went under, stayed down, and his line moved steadily off.

Buck waited for a long count of 10, then, taking up slack, reared back to set the hook. The violent

rumpus in the water indicated the barb had gone home. But it was quickly apparent that he was tied into no lunker. The fight was violent but brief, and shortly he brought his prize alongside.

"Nuts!" he exclaimed, looking down. "A jackfish! Those cottonpickers really can mess up bass fishing! How they can ruin bait!"

Landing the 3-pound chain pickerel, he gingerly unhooked it—they have a mean set of choppers—then he released it, re-baited, and went back to fishing, continuing to mutter about those confounded splinters.

The encounter was typical of the way most anglers meet the "splendid splinter," formally known as the chain pickerel. Most people find them by chance, more often than not with tackle suited to much heavier fish. And to most anglers—particularly those fishing for the table with expensive live bait—the chains are "those blankety, blankety jacks!"

Nevertheless, the splendid splinters are among my favorite fresh water sport fish. I've found if you encounter them with tackle matched to their size—8- to 10-pound test line and a light to medium action



rod—you are certain of frantic angling brawls. Give a slender chain pickerel half a chance and he'll prove he's a fighting fool.

I particularly like acrobatic fish, and a chain is just that if he has any sort of a fighting chance. When in the mood, he not only strikes hard and often, but he also puts on an aerial show. Usually he comes out of the water like a miniature missile, then cartwheels and twists and turns violently upon realizing he's been suckered into hitting a false meal. He's also a good underwater fighter for his weight.

When you fish for chain pickerel, you soon find they're as temperamental as any finicky bass. There are times when they're as easy to catch as spearing fish in the proverbial barrel, and there are times when you just can't get them to hit. Sometimes they hit like chain lightning, and sometimes they're unbelievably coy.

Deep in the heart of the Okefenokee Swamp in south Georgia, I've encountered the leaping chains in such abundance that you couldn't drag a lure past a weedy hideout without getting a savage strike. Of course, you don't land every jack that strikes, but the day Johnny Hickox guided us to a special hole, four of us hooked, landed or lost 75 of the fighting

(Continued on next page)

Photos By Kit and Max Hunn



give the pickerel half a chance
and he'll prove he's a game
fish worthy of your attention

By MAX HUNN

Buck Bray, left, was unhappy to have this hefty pickerel hit a live shiner while he was "hog hunting" for big bass out on Lake Rousseau near Dunellon. Near the edge of weed bed, above, an angry chain pickerel takes to the air after feeling the hook. Author Max Hunn, at right, unhooks chain pickerel that nailed Johnson spoon being fished in the weeds for largemouth bass.





If you'd like to deliberately fish for the acrobatic chains, here're a few pointers. The splinters prefer to lurk around grass beds. However, they like grass beds with slow-moving water. Although this aggressive toothpick hits with a fury when in the mood, and prefers a fast retrieve, he doesn't particularly like fast water. Chains are often found resting in the shallows, again with plenty of cover preferred. Usually you encounter them in the same terrain where bass lurk, but on some days you also will encounter them in shallow areas that bass will approach only under cover of darkness.

Too, your retrieve is important. Ol' Chain likes

Streamlined and eager, the jackfish, left, (as the chain pickerel is quite often called) offers a lot to any rod and reeler who will forget his preconceived ideas regarding the splendid splinter. Johnny Hickox, below, a veteran Okefenokee Swamp guide, shows part of pickerel catch.

Photos By Kit and Max Hunn



(Continued from preceding page)
toothpicks in 2 hours. Obviously, we were very, very busy—and very, very successful.

On the other hand, the chains have been completely frustrating in the clear waters of Lake Panasoffkee.

Bob Wallace and I were fishing for whatever we could lure into hitting one January day on the lake when we encountered the pickerel in one of their finicky moods. Time after time, they'd charge from their lairs following our spinner baits, but only one was brave enough to bite a lure. He regretted his audacity as Bob successfully put him in the boat on 8-pound test line. But our fishing morale was shattered temporarily by the repeated sightings and repeated failures to draw strikes. It's demoralizing to see fish pursue your lure, and then turn away instead of strike.

You can catch the splendid splinters any time of the year. They're one fish that doesn't seem to hibernate when it gets cooler. My experience is that they don't get nearly as sluggish as bass, and for some reason you seem to catch bigger ones in cooler waters. Lake Panasoffkee is noted for its chain pickerel during the winter, and there are times during the cool months when you can't keep 'em off your lure in Lake Seminole. Any time you're around pickerel terrain, you may encounter them when conditions are right.

Known as swamp jack in Cracker lingo, this

slender fish is officially labeled throughout the United States as the chain pickerel (Latin moniker *Esox niger*). He's also known as eastern pike, pond pickerel, green pike, grass pike, and just plain pike. The splendid splinter has two close kin—the redfin pickerel (*Esox americanus*) and the grass pickerel (*Esox a. vermiculatus*). The chain, however, is the largest of the three.

The leaping chain is found over a wide range in the United States from the Canadian and Great Lakes drainage southward to Florida, also in the Mississippi Valley, and in Texas. He's been transplanted elsewhere in North America, but is most widely found in the eastern half of the U.S.

You have no problem identifying him. The fighting splinter is bronze-green in color. He's got a perfect camouflage, resembling tire chains. His fins are without markings, and the dorsal, like that of the northern pike and the muskie, is located far back near the tail.

One of the fastest growing gamefish, the average pickerel will be 15 inches long in 3 years. Later, he averages about 24 inches, and weighs from 2 to 3 pounds. However, they get much larger, and you never know when you're going to encounter a grandpa (or ma) in the 6- to 7-pound range. In 1961, the Okefenokee Swamp yielded the world's record chain pickerel, 9 pounds, 6 ounces. The fish was 31 inches long and 14 inches in girth. Now that's a real lunker on light tackle!

his meal moving fast, at least with artificials, although he also will chomp on a live bait, as we've related. (But he's more fun when caught with artificials.) A slow, teasing bass retrieve seldom entices a pickerel into hitting, but when you're using a fast retrieve for bass, don't be surprised to have a pickerel barge into the act.

After an experience in the Loxahatchee Wildlife Refuge in South Florida, I am convinced that you can't retrieve too fast for a chain on the prowl for food.

We'd started bass fishing on a warm spring day, but it had become nothing but a boat ride. While moving to another area, Kit tossed her lure behind our boat despite the fact that I was running the aluminum skiff with an 18 horse motor, far faster than trolling speed. I was at least at half throttle, and we were really moving in the tin boat. I assumed she was trying to unkink her line.

Suddenly, she hollered, "Slow down! I've got a hit!"

I cut the motor and glanced back. A good 50 yards astern, a slender fish vaulted into the air, crashed into the water, and then really put a bend in her rod. After one jump, her foe fought doggedly underwater. I wasn't certain what she'd hooked, but I was willing to wager 100 to 1 it wasn't any bass.

The fish put up a real battle, but eventually she brought it alongside for me to net. Her prize? 2½-pound pickerel that had socked her shallow-running lure at far above normal trolling speed.

It wasn't an accident. We eliminated that possibility by deliberately trolling for the chains—at a fast speed, naturally. By so doing, we picked up half a dozen more before deciding we did really want to go bass fishing. I'm convinced speed is essential in teasing the chains into striking.

Although I've caught pickerel on shallow-running, silver-colored plugs, always worked fast, by far the most successful lure has been a spinner-type, which, by its very nature, has to be retrieved fast. You can catch chains with the Shysters, Mepps, Abu, and similar spinners with treble hooks; with blade baits which now are so popular for bass; with various spoons such as Eppingers and Jensen; and with weedless, Johnson-types. Sometimes the latter are particularly effective with a strip of pork rind. All of these lures work best with a fast retrieve. But keep your lures small. Pickerel seem to prefer small mouthfuls.

One other thing: Color is important. On bright days, silver is number one, but yellow or gold will produce best on overcast days. Other colors score infrequently. The ol' chains definitely like some glitter with their pseudo meals.

Don't overlook the splendid splinter as a gamefish. Pickerel put up a topnotch fight on light tackle. Just match your tackle to them, and you'll have fun. Then you won't be cussing about jackfish. ●



this large South American
rodent finds Florida a
great place to be

the adaptable nutria

THE NUTRIA (*Myocastor coypus*) is a beaver-sized rodent native to South America but now widely established in many western and southern states. It often causes damage to the banks of drainage canals and to wetland crops, and thus is a source of considerable interest and concern to man. In the 1930's, nutria were brought to Louisiana for a fur-farming operation and subsequently were liberated in substantial numbers by hurricanes and by accidental escapes. They quickly colonized and spread throughout the Louisiana marshes. There, they out-competed and largely replaced the native muskrat (*Ondatra zibethicus*), which is smaller but possesses a more valuable fur coat.

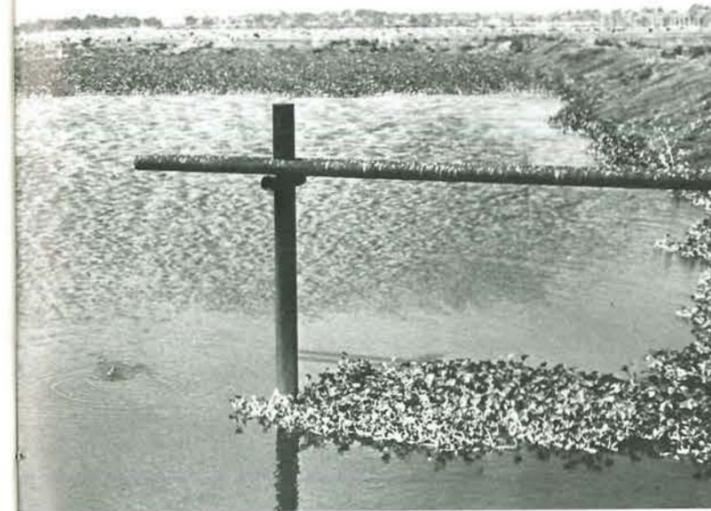
Nutria were not reported as exotics in Florida until the mid 1950's when the first feral animals were taken in the Panhandle (Apalachicola and Choctawhatchee River Basins) and also at about the same time from the Hillsborough River drainage near Tampa Bay. The initial Florida colonies in the Panhandle apparently resulted from the eastward expansion of populations which originated in the Louisiana marshes. The colonies of nutria recorded from the Hillsborough River and many locations in peninsular Florida, on the other hand, resulted from escapes or outright releases from abortive fur-farming operations in the 1950's or later.

I became interested in studying the biology of the nutria in the Tampa area in 1972 when Florida Game & Fresh Water Fish Commission officers found that the species was present in the ponds and canals on several large dairies in the Tampa Bay area. These dairies had in common the presence of a series of pollution "polishing ponds" and canals to trap and settle out much of the considerable

organic waste and runoff generated by 1,000 to 3,000 cows per dairy.

To my considerable surprise, I discovered that exceedingly high numbers of nutria thrive and live with no apparent ill effects in these extremely nutrient-rich cattle sewage lagoons. In order to quantify the high numbers of nutria observed, sampling was conducted in one 5-acre pollution pond and compared to the nutria density in another 5-acre unpolluted farm pond located about 1 mile away. At both ponds, 1-day shoots were conducted simultaneously by two groups of three persons each, using rifles to harvest all nutria observed swimming or feeding in the ponds during a single 8-hour period. The results were startling in that the pollution pond yielded 50 nutria and the unpolluted pond yielded only 12 nutria in the identical census. These nutria estimates are probably fairly close to the actual population present in each pond, because very few nutria were observed at either site on the day following the shoots. Such differences in the carrying capacity of nutrient-rich ponds versus unpolluted ponds were noted several times while studying the dairy nutria.

Colonies of nutria are, therefore, capable of living and thriving at unusually high population densities in nutrient-rich cattle sewage lagoons. The ecological factor which appears to augment nutria multiplication in these polluted waters is a virtually unlimited food supply. The fertilizing effect of dairy runoff waters produces a much ranker growth of shoreline vegetation which the nutria utilize heavily on a year-round basis. In addition to shore vegetation, the cattle sewage lagoons are normally also choked with a dense carpet of water hyacinths (*Eichhornia*



By LARRY N. BROWN

An adult nutria, opposite page, shows the chisel-like incisor teeth that are trademarks of the rodent clan. The pollution outfall pipe, above, pumps cattle waste from dairy barnyard directly into polishing ponds in which nutria thrive. Portrait of nutria, below—South American rodent that has thriving colonies in Florida.



crassipes), which is a widespread exotic aquatic weed originally introduced from South America, like the nutria.

Many dairy farmers utilize water hyacinths to help cleanse the polluted runoff water because of their rapid growth rate and uptake of dissolved substances. Nutria were observed feeding heavily on the water hyacinths, and in some limited areas they partially decimated them. However, they take mainly the new tender vegetative shoots rather than the older, tougher leaves, so total elimination of hyacinth does not usually occur. The vast floating mats of water hyacinths insure a virtually unlimited supply of fast-growing aquatic plant growth available on a year-round basis.

To study the breeding cycle and overall productivity of these high-density populations with an unlimited food supply, nutria were collected at 30-day intervals throughout the 12 months of 1973. They were easily collected using .22 caliber rifles with telescopic sights. Sufficient animals were obtained each month so that females could be checked for embryos and other signs of breeding.

From these data it was interesting to find that virtually all adult female nutria were breeding on a year-round basis. No obvious peaks or valleys in breeding activity were evident, and every adult
(Continued on next page)

Photos By Larry N. Brown



Photos By Larry N. Brown

Bank den entrance, left, is typical of those nutria dig for their homes. They tunnel extensively in canal and ditch banks, leading to much erosion damage. A lush growth of water hyacinths, right, fertilized by cattle wastes. Hyacinths in foreground were eaten on by nutria.

(Continued from preceding page)

female collected during the 12-month period was pregnant and/or lactating. This contrasts with the breeding cycle of nutria in Louisiana marshes, where there is a single main breeding season in December and January and a smaller secondary one in June and July.

The average litter size in the dairy pond nutria, based on embryos, was found to be 5.7, the range in litter size was 3 to 10, and the commonest litter size was 5.0 embryos. In Louisiana, the average nutria litter size has also been reported to be 5.0 and the range 1 to 11, which compares very closely to our data.

The length of pregnancy in nutria averages about 134 days (range 129-139 days). This length of gestation suggests that with a continuous breeding period under nonlimiting environmental conditions, approximately 2.7 litters could be born per adult female per year. In these Florida nutria, this would represent a total "maximum breeding potential" which would average 15 young per adult female per year. This is one reason they are able to saturate a new area quickly when they are introduced to it.

Juvenile mortality in nutria appears to be small, at least from predation losses, because virtually no nutria predators live in the dairy sewage lagoons. The American alligator (*Alligator mississippiensis*),

which is an important potential nutria predator elsewhere in Florida, did not appear to thrive in the polluted dairy ponds.

The possible adverse affects of disease-producing bacteria, viruses, parasites, etc., on nutria survival and health could not be assessed, but little evidence of diseased, dying, or unhealthy animals was noted during the course of the 1-year study.

Thus, the combination of a high breeding potential and a continuous breeding season, coupled with an unlimited food supply under mild climatic conditions in Florida seems to be responsible for the very high population densities of nutria in dairy pollution ponds. I would conclude that the nutria is extremely adaptable to a wide range of aquatic conditions, and apparently insensitive to pollutants in dairy runoff waters. This species thus has the potential of being as troublesome in certain aquatic situations as is the black rat (*Rattus rattus*) on dry land in many portions of the world.

It is also possible that the nutria may compete with or displace the small round-tailed muskrat (*Neofiber alleni*), which is found in certain Florida freshwater marshes and coastal wetlands. This would be another adverse affect typical of exotic introductions, whereby a desirable native species is replaced or threatened as the exotic spreads. Only time will tell in this instance. ●

Smoothbore Care

to keep your smoothbore in the very best condition, give it the treatment after a day in the field or on the range

HUNTING



By EDMUND McLAURIN

MOST RIFLEMEN WATCH RIFLE BORE CONDITION—and promptly clean at first sign of powder build-up in bore or copper streaks on rifling—but relatively few shotgunners bother to give their guns periodic cleaning.

The tendency is to take the attitude that modern non-corrosive primers and powders eliminate *all* need for cleaning. In fact, at many trap and skeet clubs, where members' guns are used daily or several times weekly, guns are rarely cleaned.

Now the claimed admirable properties of modern ammunition are true. Non-corrosive primers and powders do not contribute to bore rusting. On the other hand, they cannot guarantee to prevent it, either. Quite likely, any long-neglected, uncleaned shotgun bore will rust in time. Powder residue, which collects and holds moisture, is the prime cause.

Also, modern plastic shell cases can sometimes cause chamber rusting, not necessarily from the plastic but more probably from unabsorbed moisture transferred to the shell case from the shooter's slightly sweaty hands when loading.

Moisture is the normal product of combustion of smokeless powder, and where paper tube shotshells are used, infinitesimal traces of moisture could possibly seep through the porous paper shell tube, despite wax content.

Outers Laboratories, Onalaska, Wisconsin 54650, makes a special short length, sturdy aluminum cleaning rod with wire bristle tip for shotgun chamber cleaning. Any desired gauge size can be had.

Bad leading of shotgun bores is now rarely seen. Chrome plating of bores in many modern shotgun models, and use of improved wads and hard, often plated lead shot have largely eliminated bore leading problems.

Overlooked, however, is bad, almost certain bore leading that results from firing of rifled slugs, now popular for deer and close range wild hog and bear hunting. Being soft, virtually pure lead, rifled slugs swage down tightly in shotgun bore without damage to choke, but invariably leave heavy lead streak deposits. This build-up is so fast in most shotguns firing slugs that the bore usually needs cleaning after only five or six shots. Otherwise, slug firing accuracy can suffer.

Lead deposits in shotgun bore are indicated by

dark streaks. You should get after these streaks promptly and vigorously.

Where the shotgun is take-down type, disassemble barrel and action. This will permit easier—and assuredly accident-free—cleaning.

First, run a proper size cleaning patch wet with a nitro solvent, like Rice's XF-10, G-96, Outers, Rusteprufe or Hoppe's, through the bore from breech to muzzle, wiping length of bore thoroughly with repeated chamber-to-muzzle movement of the cleaning rod tip. Next, follow with several clean, dry patches.

Hold the wiped shotgun tube against a strong light for bore examination.

As stated, lead deposits will show up as dark streaks; rust will likely be seen as roughness or even detectable metal pitting.

Metal fouling—an uncommon condition in shotguns, and usually associated with use of copper-plated shot—will show up as thin, shiny streaks that can usually be polished out during bore cleaning operations.

The shiny, coppery-colored streaks are more frequently seen in center fire rifle bores that have fired jacketed bullets, than in shotgun bores.

Where not entirely removed by dedicated application of solvent-wet bore brush or patch, any visible metal fouling will be so immeasurably thin in coating form that it will do no harm. Also, nitro solvent left in the shotgun bore's metal pores after the gun is set aside will, in all probability, continue to work at the job of loosening any remaining metal fouling. This explains why a cleaning patch pushed through a bore days after thorough cleaning will sometimes show green color metal fouling stain.

A shotgun bore in obviously badly leaded or rusty condition calls for heroic measures.

Get busy with a phosphor-bronze bristle brush, wet with Rice's XF-10 solution or coated with JB bore-scrubbing compound, or use a Tomlinson-type cleaner coated with wet Bon Ami powder. The Tomlinson-type cleaning rod accessory is made with oversize fine bronze wire mesh sides that compress to fit the bore tightly and give sure, broad surface polishing contact with each forward and backward pull of cleaning rod. Outers Laboratories makes Tomlinson-type cleaners in all gauges.

Do not use a steel wire brush accessory on the
(Continued on next page)

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cleaning rod, as it will likely scratch the shotgun bore. The brass and phosphor-bronze brushes, on the other hand, are softer than the steel they scrub, and therefore do no harm.

Where a shotgun bore proves stubbornly difficult to clean, do not hesitate to wrap finest 0000 grade steel wool around a bristle brush accessory, kept thoroughly saturated with bore cleaning solvent. Fine 0000 grade steel wool won't hurt the shotgun bore one bit, but will characteristically accomplish wonders, and without harm to barrel choke. This cannot be said of the coarser grades of steel wool, which can scratch and harshly abrade like a steel wire cleaning rod brush.

During work operations, periodically wipe clean the worked-on shotgun bore with dry patches and inspect condition. Quite likely, improvement will be obvious.

When cleaned to satisfaction, give the bore a final "loving touch" wiping with cleaning patch or wool mop accessory wet with Rusteprufe (Rusteprufe Laboratories, Sparta, Wisconsin 54656) or Rice's XF-10 solution (Rice's Gun Coatings, West Palm Beach, 33407) to maintain it in clean, rust-free condition.

The latest shotgun bore care accessory on the market is a chemical-containing dummy "shell" that is placed in closed shotgun chamber after gun use. The Minnesota makers claim their product releases chemical vapors that protect an idle shotgun barrel against rusting. A good friend who resides in that state sent me one for testing, but so far I have not been able to make an evaluation, pro or con. Some things require time for fair judgment.

NORMA BRAND AMMUNITION has been popular in Europe for many decades, as well as a long-time favorite of Olympic shooters. The Swedish manufacturing firm has had to periodically expand its facilities and increase total production. One of the world's most modern ammunition factories has recently been completed at Amotfors, in expanded development.

The brand of ammunition is well known in this country. Not only is Norma ammunition widely distributed and generally used, but many shooters, especially reloaders who salvage and reload Norma's high quality brass cases, elect to use it in preference to American manufactured ammunition.

In this country, Norma ammunition receives trade distribution through Norma Precision, Inc., a division of General Sporting Goods Corporation, Lansing, New York 14882.

Many American and European cartridge listings are represented in the line. The availability of a wide range of rifle calibers has been like answered prayers to riflemen owning rifles chambered for



certain cartridges not of current American manufacture.

Consider that servicemen returning from the European theatre of World War II brought home many thousands of war souvenir weapons. Also, until changes in Federal firearms regulations sharply curtailed commercial imports, there was a brisk American trade market for obsolete military rifles.

Many of these war souvenirs and surplus-outlet purchases have been modified and otherwise customized into excellent sporting rifles.

For some of these rifles, matching ammunition has been hard to come by at retail level. The primary reason is that many of the European calibers (designated in millimeter measurement) are not interchangeable with American calibers.

However, most of the hard-to-find European cartridge designations and desired bullet styles can be found in the Norma line. Included are some fairly well-known and some lesser-known calibers—6.5 Japanese, 6.5 x 54MS, 6.5 x 55, 7 x 57, 7 x 61S&H, 7.62 Russian, 7.65 Argentine, .303 British, 7.7 Japanese, 8 x 57JS, 9.3 x 57, 9.3 x 62 and 9.3 x 74R.

Highly respected and widely used by home reloaders are five different types of Norma-made powders.

Norma 200 grade powder is fast-burning. It is used for reloading small capacity center fire cartridge cases such as the .222 Remington, but has also proven excellent matched with light bullets and light loads in larger calibers.

Powder 201, when ignited by flash primer, burns more slowly than grade 200. It is generally used in combination with lighter bullets in medium-sized calibers, or where big calibers have a large bore volume to be filled quickly with expanding powder gases.

Grade 203 is commonly used in reloading .30-06, .303 British, European 7 and 8mm's, and similar size

rifle calibers, unless use of light bullets necessitates corresponding use of a faster burning powder.

Norma 204 powder is slow-burning, and is especially suitable for reloading calibers with large case capacity and/or using heavy bullets in relation to the particular caliber.

Fifth among current Norma powder manufactures is Norma 205, an exceptionally slow-burning, high-energy powder for obtaining highest bullet velocity from bullets loaded in large-capacity cases. It is a "must" for Magnum calibers.

Many American sporting goods stores now stock imported Norma brand ammunition and components alongside the wares of Remington, Winchester, Federal, and other familiar brands. Where they do not, they can order through the supplying jobber.

I have used Norma ammunition a long time with happy results. The only trouble I ever had was back about 1948, when a particular lot of .30-06 cartridges came through loaded with slightly undersized bullets, as indicated by poor target paper grouping and subsequent micrometer measurement of bullets pulled from still unfired cases. But I have had the same experience among American cartridge manufactures—and, to its credit, Norma promptly made good on the particular lot. I haven't experienced any difficulties with Norma ammunition since, nor have I heard any complaints from other users.

Norma ammunition is good. You realize it when you shoot it carefully and regularly.

IN LOOKING BACK TO MY DEER HUNTING of the 1930's, I recall having only to pick up rifle, ammunition, and a small shoulder bag and go. Not so today!

Unless he hunts close to his parked vehicle, the Florida deer hunter of today must literally be a pack horse. Seemingly, more personal equipment is needed, and deeper foot travel to a good hunting spot demanded, unless one does not mind being surrounded by rival hunters.

It is surprising the total weight the average deer hunter now moves when he hunts.

Let's say that the average hunter weighs 170 pounds, stripped—the net weight to be moved every time he changes standing spot.

Added weight of clothing worn—heavy socks, underwear, hunting pants, belt, shirt, hunting coat and cap can be conservatively figured at 5 pounds, total. (Some hunting coats alone weigh half that figure!)

Boot weight can be figured at 2 pounds each in Size 9, a mid-range size; total 4 pounds. My Red Wing "Irish Setter" boots in Size 7½, weigh 1 pound, 12 ounces each, so the two pound average weight per boot can be considered fairly accurate for the larger Size 9.

Rifle with metallic sights, or shotgun, will weigh about 6½ pounds, and a rifle with installed scope sight some 7½ pounds. Let's even off gun weight to 7 pounds, average.

Five or six rounds of ammunition are usually carried, in loaded gun or in belt holder. Figure ½ pound for the lot.

Binoculars are another item of equipment regularly carried. Figure weight as 16 ounces, or exactly one pound.

Most all day deer hunters carry a small canvas bag, or a folding aluminum stool with storage compartment underneath. Usual contents comprise lunch, a small container of water, flashlight, nylon rope, snake bite kit, knife (if not worn on belt), sweater and plastic rain jacket. Total weight of packed bag or canvas seat, 4½ pounds.

Since the U. S. Forest Service has tabooed building of permanent-type tree stands in Florida's national forests, portable types are now the vogue among deer hunters who select the national forests as hunting locales.

The current crop of portable tree stands embraces various types, often of individualistic description. Everything from chain-supported platforms to swiveling farm tractor seats altered for temporary attachment to a forest tree are to be seen.

Portable tree stand weights vary considerably. Among the commercials, the Baker weighs 10 pounds; the Port-O-Stand, 17 pounds. In homemades, a portable of tractor seat conversion will weigh approximately 16 pounds. Stands of portable platform type, with attaching chains or ropes but without convenient easy-to-climb-in feature, are among the lighter ones carried. My own portable tree stand weighs exactly 8 pounds, but the weight figure includes combination support and climb-up ladder, easily assembled at chosen hunting spot. Let's agree on 10 pounds as average weight for a portable stand taken into the woods.

Now let's total the classifications in pounds:

	Pounds
Hunter's net body weight (average)	170
Clothing worn (excluding boots)	4
Boots	4
Rifle or shotgun	7
Ammunition carried	½
Binoculars	1
Packed knapsack or folding aluminum	
Camp stool, with packed section	
under seat	4½
Portable tree stand (average weight)	10
	201

That's 201 pounds to be moved with each change of standing spot!

Now, the average hunter takes 2,112 steps for each mile walked. Multiplying the 201 pounds to be moved by that figure, and dividing the result by 2,000 (the number of pounds in a ton), boils down to physically moving very close to 21¼ tons every mile walked!

I think I'll get a horse. ●

JERKY—

Ideal Outdoor Snack

By JUDITH GIRVIN

MENTION "JERKY" OR "PEMican" and most folks picture strips of flyspecked meat hanging by a teepee. Or, possibly, an Eskimo crouched in the lee of an iceberg chewing some awful glop. But those who've tried it will tell you different.

Jerky is easy to fix when you have a modern kitchen available. It is cheap, sanitary, and downright delicious. More important, it makes a lightweight food supply which is reasonably impervious to being carried in a boat locker, hunting coat, or glove box. If you haven't tried jerky, drop down to your neighborhood convenience grocery. You'll buy a wee stick of beef jerky for about two bits. Once you try it, you'll probably like it. Then come on back home, pull some of that last year's venison out of the freezer, and let's "jerk" some jerky.

Although most any kind of meat can be used, beef and venison are usually handiest.

Having selected the meat, preferably portions with no fat, we're ready to begin. First, cut the meat into strips. They can be as long as 8 to 10 inches. Cut them 1 to 2 inches wide and no more than a 1/4-inch thick. Length and width can vary, but thickness should be relatively uniform or the meat will not cure evenly.

It's easier to cut the meat if it is reasonably stiff. Our easiest cutting has been meat taken out of the freezer and allowed to thaw for about an hour. An electric knife makes an even easier—and neater—job.

At this point, the meat is ready for flavoring. There are two schools of thought on the best way. You may wish to do half your batch each way. In the "classic" method, the meat is spread on the oven rack, then spiced with garlic salt, meat flavoring, and black pepper. Coarse-ground, salad-type pepper works the best. Don't be stingy with the spices; a liberal coating is just about right. With later batches, you can add or delete as you prefer.

The other method, used by many, calls for the strips to be marinated overnight, then "jerked." If you prefer a spicier jerky, this is a good process. Make a marinade sauce of salt, onion powder, pepper, garlic powder—about a tablespoon of each—then add two to three tablespoons of Worcestershire sauce and one tablespoon of Tabasco sauce. Next, add enough water to cover the meat. Then leave overnight in the refrigerator.

Your meat is now ready for "jerking." The process takes from 6 to 8 hours. Spread the strips across your oven racks. The meat can touch and you can use several racks. Try to place the racks near the middle of the oven. If you have an electric oven, place the setting at the lowest heat possible. If you have a gas unit, the pilot light will probably provide enough heat. Leave the oven door ajar.

Curing time will vary depending on the thickness of the meat, but about 6 hours is average. The meat is "jerked" when it cracks when bent. If it is brittle and breaks, it is a bit overcured. The appearance of the jerky will be black and seemingly burned, but that is appearance only. You are ready to portion it out into plastic bags for quick snacks in the field or for munching around the house.

A word of advice: Jerky is like pretzels—everybody likes it. So be prepared to follow your initial batch with another after everyone tries "just a taste." It disappears pretty quickly.

Jerky will keep for about a year. It needs no refrigeration and can be stored in glass jars, plastic bags, or foil wrap. If it is kept moistureproof, it can be left in the hunting rig, tackle box, or jacket pocket for when you need a pick-me-up and don't have a lunch.

Jerky is also a basic ingredient of pemican, which is another compact, high-energy food easily made by a sportsman. If you are likely to be in a situation where lightweight survival rations are needed, look into making up a batch of modern pemican. But jerky is good by itself in this regard, since it can be "reconstituted" into a flavorful soup simply by boiling strips of it in water. ●

Drawing By Caroline O'Bryan



Hunter Behavior

A STUDY BY THE PENNSYLVANIA State University Forest Technician Unit shows that landowners in southcentral Pennsylvania who allow public hunting on their property have experienced very little trouble with hunters, according to the Wildlife Management Institute.

Previous studies have been conducted on why landowners post their property, but this is probably the first to determine why other landowners do not post their land. As might be expected, the landowners who allowed public hunting had not been the victims of misconduct by hunters. Conversely, studies of landowners in other areas who did post their land indicate that hunter misbehavior was the primary reason. Therefore, the combined results provide strong evidence that hunters' behavior determines to a great extent whether land is posted or remains open to public recreation.

In the Penn State study, 76% of the landowners said they were concerned about liability for accidents on their land, however, they still wanted people to enjoy hunting on their farmland. Eighty seven percent of the farmers said they would like to have hunters ask permission to hunt. The farm-

CONSERVATION SCENE

ers interviewed look upon open land policies as a community service.

This study, and others, carries an important message for sportsmen and others who depend on private land for recreation.

Dyeing Ducks

CANVASBACKS MARKED WITH colorful plumage dyes were recently released at key migrational concentration areas in the north central states by wildlife research biologists of the U.S. Fish and Wildlife Service. One purpose of the color-marking program is to determine wintering areas used by canvasbacks which gather on the upper Mississippi during the fall migration. The birds were dyed one of three colors: blue, yellow, or pink.

Observers will be performing a valued service to conservation if they will report sightings of dyed canvasbacks to the Northern Prairie Wildlife Research Center, P.O. Box 1747, Jamestown, North Dakota 58401.

The following information will make the sightings more valuable to the study: name and address of observer, date, time, specific location of observation, and color of the bird. In addition, information on the activity of the bird, size of the flock, and species of ducks associated with the marked bird would be helpful. This research on the migrational habitat and destinations of the canvasback is part of an investigation which seeks to determine factors having a bearing on the population of this highly valued species.

Original Updated

SINCE ITS PUBLICATION in 1965, McCLANE'S STANDARD FISHING ENCYCLOPEDIA has been recog-

nized as the most comprehensive and authoritative book on fishing, fisherman, and ichthyology ever written. Until then, it took a whole shelf full of fishing books to hold the world of information contained in this single volume.

Because of the extensive advances in fishing technology and marine science during the past decade, and with an appreciably larger field of contributors and correspondents at his disposal, A. J. McClane, of Palm Beach, has now thoroughly revised, updated, and augmented his original book. On October 17, Holt, Rinehart and Winston, of New York, published McCLANE'S NEW STANDARD FISHING ENCYCLOPEDIA, a book entirely redesigned and completely reset: the ultimate reference work on fishing.

Entries from the original book have been expanded where supplementary information has come to light since 1965. There have been a number of changes in common and scientific fish names, for example, established by the American Fisheries Society, and these revisions are included. The original contents have been augmented by another 30%, with additional entries and illustrations to expand the scope of this 1156-page reference work.

Among the new subjects covered in detail are: a complete treatise on fiber glass rod building; angling information on 30 additional countries in Africa, Europe, and South America, with photographs of popular fishing locations, numerous detailed biographies of angling authors for literary buffs; more color plates of popular fly patterns, including the Muddler Minnow series; hundreds of new fish portraits in full color, both salt and fresh water varieties, with life histories of
(Continued on next page)

(Continued from preceding page) these additional species; the most comprehensive work ever written for a popular publication on fish diseases and parasites. There are also new in-depth entries on algae, big-game fishing, catfish farming, crayfish, and lobsterettes.

Easy-to-follow techniques from over 150 expert contributors explain the latest methods of dry and wet fly-fishing, surf casting, spinning, nymph fishing, spear fishing, trolling, bottom fishing, and big-game fishing. More than 1,000 species of freshwater and saltwater fish are listed—each cross-referenced with common and local names, each described by their anatomy, size, color, spawning habits, food, growth, age, and young.

In short, McCLANE'S NEW STANDARD FISHING ENCYCLOPEDIA is a volume absolutely without peer in scope, information, or beauty—a complete education in fishing that will be treasured by all who enjoy the many rewards of the marine world.

Cost of the publication is \$34.95 through December 31st; \$40.00 thereafter, through Holt, Rinehart and Winston, 383 Madison Avenue, New York, N.Y. 10017.

Hunter Orange

THERE'S GOOD REASON for the increasing appearance of hunter orange field clothes in our upland coverts and on our deer stands, according to the National Shooting Sports Foundation. In the first place, 17 states have now passed laws making hunter orange mandatory for at least some types of hunting. It is, perhaps, surprising that far more states have not enacted such legislation, given the undisputed fact that hunter orange is by far the color most highly visible to the greatest number of people—even those with defective color vision.

The scientific data on hunter orange is supported by a wealth of practical experience. The Pennsylvania Game Commission recently reported, "There has never

been a person shot in Pennsylvania who was wearing fluorescent orange and who was mistaken for game." In 1973 alone, there were 25 accidents in the Keystone State involving hunters who were wearing the traditional red, and an additional 31 mishaps involving hunters who wore no safety color at all.

Kansas passed a mandatory hunter orange law in 1965; they haven't had a single fatality in the mistaken-for-game or in-the-line-of-fire categories there since. Georgia passed its law in 1973 and reported its first season without a hunting fatality in 20 years. The list goes on and on.

Even in states where legality is not a factor, nimrods who know the score are retiring the drab birdshooting coat and the red plaid deerstalker's jacket. And why not? With the exceptions of waterfowl and wild turkey, game couldn't care less if the sportsman looks like a neon sign to other hunters. Visibility is not a factor in spooking upland game, and big game is color blind.

It all adds up to a single simple fact: Being seen is being safe. So, whether you are hunting where it is required or not, seriously consider getting into hunter orange this year. A small investment in fluorescent-colored field clothes can pay big safety dividends.

Buy A Stamp

ONE OF THE LARGEST single efforts in North America to insure the future of wildlife—the Migratory Bird Hunting Stamp program—is being expanded to encourage citizens outside the hunting community to buy them, Rogers C. B. Morton, Secretary of the Interior, has announced.

"This is a revenue stamp required of all duck hunters 16 years of age or older. Conservationists of all persuasions can make a solid contribution to wildlife preservation by buying a duck stamp for five dollars at their local post office," Morton

said. "I am especially proud of the progress in wetlands acquisition from these funds. Since 1971, over 360,000 acres have been set aside for wildlife."

The revenue from sale of these stamps, which have been issued each year since 1934, goes directly into the purchase of lands for waterfowl nesting, resting, and wintering. More than 160 species of birds, a number of mammals, and fish are directly dependent on wetland habitat for their survival. Some two-thirds of the fish species important to the commercial fisheries industry are directly dependent on wetland productivity. Since 1934, over 2 million acres of land have been purchased with duck stamp revenues. Average annual receipts from the sale of these stamps now totals about \$11 million.

Hides Seized

SIX PERSONS HAVE BEEN ARRESTED and more than 500 hides seized in one of the biggest cases involving the shipment of alligator hides ever uncovered in the United States, the U.S. Fish and Wildlife Service announced recently.

The seizures and arrests, carried out by Special Agents of the Fish and Wildlife Service, took place on September 17 at the Adams Tanning Corporation in Newark, New Jersey. A month before, a similar operation in New Orleans resulted in criminal charges being filed against three other men and the seizure of approximately 260 alligator hides.

The two investigations are part of a continuing crackdown on illegal traffic in endangered wildlife. The American alligator is protected by the Endangered species Act of 1973, which prohibits the interstate transportation or sale of endangered animals. The Act carries a maximum penalty of one year in jail and a \$20,000 fine for each violation. The Lacey Act also prohibits the interstate transportation of illegally-taken wildlife.



ELIGIBILITY REQUIREMENTS SPECIES

- LARGEMOUTH BASS
.....8 pounds or larger
- CHAIN PICKEREL
.....4 pounds or larger
- BLUEGILL (BREAM)
.....1 1/2 pounds or larger
- SHELLCRACKER
.....2 pounds or larger
- BLACK CRAPPIE
.....2 pounds or larger
- REDBREAST
.....1 pound or larger

TO BE ELIGIBLE . . .

all fish must have been taken from the fresh waters of the State of Florida, on conventional tackle, with live or artificial bait, in the presence of at least one witness. The catch must have been weighed and recorded at a fishing camp, tackle shop, or similar establishment, by the owner, manager, or an authorized employee. No citation will be issued for a record-sized catch unless the fish was preserved for examination.

FLORIDA WILDLIFE'S FISHING CITATION

is available without charge to subscribers to FLORIDA WILDLIFE Magazine and their immediate families who catch any of the listed freshwater fish of the prescribed minimum size. A citation for framing will be mailed to the applicant upon receipt of the following application form properly filled out and signed. Only those applications received within 90 days of the date of catch will be honored.

APPLICATION FOR FLORIDA WILDLIFE FISHING CITATION

The Editor, FLORIDA WILDLIFE _____ Date _____
Game & Fresh Water Fish Commission, Tallahassee, Fla. 32304

Please send me the Florida Wildlife Fishing Citation with the inscribed data listed below:

Name (please print) _____

Address _____

City _____ State _____ Zip No. _____

Species _____ Weight _____ Length _____

Type of Tackle _____

Bait or Lure Used _____

Where Caught _____ in _____ County

Date Caught _____ Catch Witnessed By _____

Registered, Weighed By _____ At _____

Signature of Applicant _____

CUT OUT AND SAVE THIS APPLICATION BLANK



Black Bear

Photo By Morrie Naggiar

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