Florida Wildlife Scrapbook

Fish Facts

Many fishermen claim the largemouth bass is the scrappiest fighter pound for pound than any other fresh water fish.

The lens of the fish's eye is almost a perfect sphere compared to man's somewhat flattened lens. The result: fish are nearsighted—see good close-up pool at a distance.

The kingfish was so named because of its gameness when hooked, its handsome color, graceful form, and fine flavor—all attributes of a true "king" among fish.

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In This Issue

At Home On The Range

In Your Own Back Yard

Banana Patch Bananas

Retire—and Fish

Great Horned Owl

Departments

Fishing

Nature Notes

Game Management Notes

Hunting

Wildlife Officer Notes

The Cover

Seldom exceeding five pounds, the redhorse bass are an extra added angling attraction along the cold, swift Chipola River—only place they are found in Florida. See page 37.

From a Painting By Wallace Hughes

Florida Wildlife is published monthly by the Florida Game and Fresh Water Fish Commission, Tallahassee, Florida. 1200 East Tennessee Street, Tallahassee, Florida 32304. Single copy price: $0.50; subscription rate: $5.50 per year. Periodicals postage paid at Tallahassee, Florida. Official publication of the Florida Game and Fresh Water Fish Commission. Copyright 1973 by Florida Game and Fresh Water Fish Commission, Tallahassee, Florida. 1200 East Tennessee Street.
A FEATHERED FOREIGNER, traveling practically around the world on his appetite, has set up housekeeping in Florida's cow pastures. He's the cattle egret, Bubulcus ibis, a native of Africa. Just how he got from there to here is a bit of a mystery, but he's become practically ubiquitous in Florida during the past two decades and is busily extending his range north and west across the United States.

As his name implies, there's a pretty good chance you'll find the cattle egret hanging around a herd of cows. That may seem like strange company for any self-respecting bird to keep, but this one knows what he's doing—getting an easy meal.

As the cows graze, their hooves flush from hiding prodigious numbers of insects, plus frogs, mice and other small varmints which live in the grass. These tiny creatures comprise the cattle egret's diet, and they're more difficult for the bird to see when they're sitting quietly than when they're disturbed and on the move.

The cattle egret is a strutting dandy in white plumage, standing about two feet tall on vividly yellow legs. He’s got a long, spearlike yellow bill. During the spring breeding season both sexes wear bulky plumes on head, breast, and back, and the legs turn a deep ruby color and the bill a bright red with a white tip.

By comparison, the native snowy egret has a generally slimmer appearance, and its legs and thinner bill are black. Also, the snowy's breeding plumage is white. The white this has a distinctive curved bill, and the American egret and great white heron are both about twice as large as either the snowy or cattle egret.

Relatively newcomers to this part of the world, cattle egrets now appear to be at home on the range.

Fossil remains dating from the Pleistocene Epoch indicate that the cattle egret has been following large hoofed mammals around the grasslands of central Africa for tens of thousands of years. In recent times the cattle egret population "exploded" for reasons unknown, and the species is now established in North, Central and South America; in South Africa, Europe and the Asian steppes; and even in Australia.

Since there are no records of cattle egrets escaping from zoos or being harbored by ship captains, it appears that the species reached the Western Hemisphere on its own, thus earning the distinction of being the only Old World bird to gain a successful foothold in the New World in modern times without man's obvious assistance.

The distance across the Atlantic Ocean from the bulge of West Africa to northeastern South America is more than 1,700 miles. For even a strong flyer like the cattle egret to have traversed such a distance boggles the imagination. Still, in the absence of any other explanation, most scholars have concluded that this Columbus of the bird world did indeed fly across the Atlantic, assisted perhaps by storms or westerly trade winds.

A specimen shot in British Guiana in 1931 provided the first documentation of the cattle egret's presence in the New World, although naturalists in South America had recorded sightings in their diaries as early as 1857. Over the years the species moved northward through the Caribbean, ultimately reaching the United States, where the first individual was recorded—for shame, Floridians—in Massachusetts.

A good birder, upon seeing a familiar species, always looks twice to be sure he's seeing what he thinks he's seeing. Sometimes that second look will disclose a rarity, as it did one day in 1948 for William H. Drury, a professional ornithologist, and Alan Morgan, an insurance salesman-bird watcher who later became executive director of the Massachusetts Audubon Society. They spotted a white bird prancing among a herd of hoifers near Sudbury, Mass., and rubbed their eyes in disbelief—but it was a cattle egret. Armed with a shotgun and a federal collecting permit, they dispatched the bird to a resting place in the Harvard Museum and earned themselves a place in the annals of ornithology.

When word of the find was published, many other birders were ready to kick themselves. One was Richard Borden of Concord, Mass., who got out some old photographs he had taken in Florida at the beginning of World War II. He'd captured on film some birds which looked suspiciously like cattle egrets. Dr. Andrew J. Meyerriecks, an ornithology professor at the University of South Florida in Tampa, says the species might have been in the state, unrecognized, as early as the 1930's.

In 1953, the first cattle egret nest in North America was discovered, at the south end of Lake Okeechobee, near Clewiston. Two years later, over 1,000 pairs were nesting there! The species has since bred in Ontario and the Great Valley of California, and Dr. Meyerriecks predicts a huge increase in its numbers as it becomes fully established in the cattle-producing states of the Great Plains.

When he conducted banding experiments on young cattle egrets in Florida during 1964 and 1965, Dr. Meyerriecks found that most hatchlings stayed in the vicinity of the nest during their first summer of life. Some, however, dispersed immediately and were seen many miles from their hatching place. After migrating back to Florida for their first winter, these roammers may have returned to their nests, thus gaining themselves a place in the annals of ornithology.

(Continued on next page)
The sale of cattle egrets may expand its range by fanning out from centers of abundance such as Florida.

Some ornithologists have expressed concern that the cattle egret might crowd out our native herons. This doesn't seem to be happening, Dr. William J. Weber, a Leesburg veterinarian who studied a central Florida rookery, found cattle egrets nesting close beside Louisiana herons, snowy egrets and anhingas. Relationships between neighbors of different species were generally amicable, even when their nests were less than a foot apart. Dr. Weber also observed that cattle egrets nest in compact colonies, leaving plenty of breeding room for other species.

There seems to be no real competition for food, either. Although cattle egrets have been observed in the Everglades wading through marshes like other herons in search of fish, frogs and snakes, the cattle egret's dinner table is usually a cow pasture.

Mike Fogarty, a biologist with the Game and Fresh Water Fish Commission, has analyzed the stomach contents of 1,000 cattle egrets and determined that 96.8 percent of the birds' diet consisted of insects—butterflies, spiders, flies and beetles predominating. Fogarty found none of the fish on which native herons depend heavily.

The cattle egret's "associate feeding behavior" is the key to his success on his diet of tiny invertebrates. Researchers have counted the footstages taken by foraging cattle egrets, and the number of prey they've captured. These studies show that the cattle egret expends less energy in food-getting when he's eating "in association" than when dining alone.

"The bird is most commonly found with cows," Dr. Meyerrieck's notes, "but he'll associate with anything—horses, turkeys, even himself. I've seen groups of cattle egrets leaffroging over each other as they work their way across a field. Those in front will stir up insects for the ones in back.

The cows don't seem to mind the avian company—and they may even welcome it. Dr. Meyerrieck's once observed a bull charging and chewing its cud. Periodically the bull would turn his head toward a nearby cattle egret, flare its nostrils, and allow the bird to poke its bill in and gobble up flies.

In my own observation of cattle egrets, I've noted another quick in their feeding behavior: animosity between egrets on the left and right sides of a cow. Each bird defends its own side against threats of trespass, an effort made more complex and comical by the movements of the cow—and therefore of the feeding territory.

The cattle egret's feeding habits help to explain why the species has adapted so readily in so many parts of the world. This bird has chosen for itself an ecological niche—cattle-following—which hasn't been occupied in grassland areas outside Africa.

In North America, man has actually created the conditions cattle egrets like. There were no large hoofed mammals in Florida (except deer, which spend most of their time in forests) until settlers brought in cattle and horses.

To the north and west, a large expanse of woodland separated the seacoast from the vast herds of antelope and bison on the Great Plains, but even if cattle egrets had reached that region they would have found a scarcity of water and nesting sites. Reservoirs and planted trees have made the plains a more much more desirable heron habitat now. Thus, only within the last century or two has North America become suitable for colonization by cattle egrets.

One can't help wondering, of course, just how the birds knew when green pastures had been prepared for them here. It's possible that the cattle egret's wanderlust—like that of our own species—is an age-old phenomenon. While men were crossing the Bering Straits, and later struggling across the Atlantic to establish primitive colonies in the New World, adventurous egrets may have been flying out from Africa in search of new homes.

The records of so many explorers—human and avian—have been swallowed up by the oblivion of failure that we shall never know to what extent the cattle egret's history parallels our own. In any case, he has arrived to share Florida with us, and we should welcome his graceful beauty and appreciate his beneficial eating habits.

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Worm Rod

the invention and great popularity of the plastic worm, in its many variations, has led to a whole new line of bass fishing gear.

By CHARLES WATERMAN

The "worm rod" has turned into a pretty versatile gadget. Built primarily for plastic worms and largemouth bass, the sticks are pretty stiff, run around ⅜ to ⅞ feet in length, and can cover the whole works from panfishing to tarpon wrestling.

I'm speaking of those intended for turning-spool reels, although they can be used with pushbutton equipment too. A few years back they would have been considered too stiff for efficient plugcasting of bass-weight lures. Now that we have the good freespooling reels they will get by even with quarter-ounce weights. They are a little too stiff for the very finest of accuracy under bushes, but they'll get by there if you're willing to practice with them.

When plastic worms first began to send the bass for cover most of us used soft spinning rods, feeling the weight wasn't enough for anything with more backbone. It was very difficult to set a hook in a worm slumper, especially if there was any kind of resistance involved. Most of us tried to let the bass take the worm home and start digesting it before we tightened up. The later model of worm fisherman hits hard and after a very short dropback in most cases. Since he may have his hook barb concealed in the worm's body and it may have to penetrate the rest of the way through to stick the bass, he needs a rod that won't give too much and a line that won't stretch too much.

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JUNE, 1973

Worm fishermen who cast with both hands don't (Continued on next page)
actual wind up like surf fishermen. They generally apply the left hand (for right-handed casters) to the rod butt and simply add a little snap with it. Whereby Lew Childre & Sanders, Inc., Foley, Alabama, better, but it’s an individual matter.

Most manufacturers are now getting into the worm rod business. Lew’s Speed Sticks are imported by Lew Childre & Sanders, Inc., Foley, Alabama, and are excellent examples of what modern bass fishermen are going for. These are lightweight rods in a variety of actions and employ guides called Fugi Hard Speed Rings made from aluminum oxide. This is tough stuff and offers very little friction. It’s also very, very light and they even equip entire fly rods with such guides.

There’s a Speed Stick setup that enables the individual fisherman to make up his own rod as he wants it, with a variety of interchangeable components. Not every fisherman is qualified to do anything drastic in rod design, but he probably wouldn’t go far wrong. Although I’m talking about worm rods that can be used for a variety of other fishing, the Speed Sticks can be had for lighter and heavier use.

Along a completely different line in the rod business, there’s a fine reference article about rod prices. Most of us who occasionally spout off about rod quality get the same questions repeatedly. Are expensive glass rods worth the money? Are bargain glass rods satisfactory? Of course, there’s no flat answer. The more expensive sticks generally have better hardware and are more carefully designed with regard to action. They are less likely to have flaws in the glass. If you’re intending to use a rod heavily and expect it to stand up for a long while, you’ll probably be wise to put down the extra cash. For occasional use there are bargains.

With inexpensive rods you may get some sort of warranty, and you’re paying the bill for those who take advantage of guarantees frequently. Many rods have been replaced after breakage at no charge to the owner, but the item was returned with it, probably because of poor design or the builder’s inability to do an adequate job. It is the beginning fisherman who is most likely to buy inexpensive rods, and he is least likely to be a good judge of the product. Hence highly experienced anglers who paw through cheap rods or rod blanks, find the ones they are sure will be satisfactory, and then add the hardware they want. Few of us are that good a judge, but there are good, cheap glass rods.

Disadvantages? Well, you have to watch the stuff if there are any narrow crevices around your equipment. It can claw back of the spool ends if they don’t fit tightly. The narrow edge is really narrow.

Bargain glass pushpoles are the thing these days. Fiber glass pushpoles are the thing these days. They are less likely to have flaws in the glass. If you’re intending to use a rod heavily and expect it to stand up for a long while, you’ll probably be wise to put down the extra cash. For occasional use there are bargains.

Glass in expensive rods is generally of uniform quality. All models of a given catalog description will be nearly the same in action. Glass wand is held, should be about the same thickness all the way around, without weak spots.

The hardware is nearly always good on expensive rods. Mechanical devices for holding on the reel or holding a plugging handle to the stick are likely to be of good materials, but the most expensive rods don’t always have the best designs. I still think they play with these contraptions during office parties and take pride in the number of variations they can come up with, and it’s a pet grumble of mine and some of them last well. They’re getting better, and there was plenty of room for improvement.

In buying an expensive rod you’re paying something for advertising and something for the name which has been helpful by that advertising. Some glass rods carrying famous names are overpriced. Bamboo rods used for fly fishing and built with great effort and lots of handwork aren’t often overpriced as far as construction costs are concerned, although their relative fishing value may not measure up to glass sticks.

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There’s controversy about plans of the Army Corps of Engineers to charge fees for use of recreation areas. Those opposed say that the Corps and its works are for you and me. Even if no charge is justified, even though a special service of some sort is involved. A typical bone of contention is the boat launching site which comes into a slim profile when lifted. Many flats fishermen don’t want metal on their pushpoles because of the extra grating noise it makes on rocks.

Anyway, the glass one doesn’t have splinters and is nice and light.

Don’t hear much about salt fish these days, but there’s something being done about it by some people up in New Jersey. Since it’s sometimes possible to catch large quantities of mackerel, and since mackerel aren’t noted for being good keepers, the New Jersey folks have gathered some old family recipes from residents of the Cape May area, have tried them imitated, and are willing to send them to you.

If you want a free copy of this salty information you can get it from: Mackerel Recipes, c/o Fishing Magazine, Box 266, Cape May Court House, N.J. 82810.

I guess this shows I’m really getting to be a man of the world. I’d almost forgotten about home-salt fish.

I have never formed a very strong opinion about salt fishing. I can’t make up my mind whether some worm fishing is not the best thing going. It’s the simple matter of what’s to be done with the money. If money charged for use of special facilities is used to help those who pay it, it may be justified. If money collected is simply turned into general Corps operations "to buy more dredges," as some put it, then it would be an unfair petition.

Hunters have never been back about asking to be taxed when they thought the money would go for improvement of their sport, and they have long been leery of any kind of "general fund."

This is not for or against special charges for special Corps services. But where does the money go?
Cottontails seem to breed synchronously—nearly all females are "expecting" at the same time. The young, which number 3 to 5 in an average litter, are born helpless and blind, left. The white beauty mark in forehead, above, is lost before maturity. Rabbit has keen senses of hearing, smell, and sight—the large eyes at sides of head insure rabbit and family slight in all directions.

If ever there was a wild animal designed for survival, the Eastern Cottontail Rabbit is one. Yet it doesn't have armor like the armadillo, or tough hide like the alligator, or rock-hard scales like the ancient-ordered garfish. Instead, the rabbit is soft, vulnerable, and heavily preyed upon. What then is the cottontail's secret of survival?

Mass production, pure and simple. Everybody knows they breed like... well, like rabbits, but not everybody knows they probably die about as young as any wildlife species. Rabbits suffer an 85% population turnover annually; that is, only 15 of every 100 bunnies born can expect to survive beyond their first birthday. Those that make it, however, are capable of repopulating the fields and woods of both town and country—and in some years, in addition to recouping losses, there's a marked gain over the rabbit crop of the previous season. It seems to be cyclic.

Cottontails in Florida produce from three to five litters annually, between February and July, with the peak of production coming in April and May. A few late litters—possibly the sixth go-round for some females—are produced as late as September.

Three to five young per litter is the average, but up to 12 have been recorded in one batch, though not in Florida.

The gestation period for cottontails is 28 days, and since they are most promiscuous it is no wonder they've never been in danger of extinction. Researchers say many female rabbits have been bred again within 24 hours after giving birth.

Members of the order Lagomorph, the rabbits, hares and pikas, are strictly vegetarians. They munch leaves, buds, bark and berries; they also lap dew from plants, although they drink water if it is available.

Like Br'er Rabbit of the Uncle Remus tale, real cottontails are "bam and raised in a briar patch," or similar protective cover, from which they seldom venture too far. At night they feed and play; by day, they are usually sleeping in a bed, or form—unless exposed by an intruder. Suburban gardeners often have to fence out hungry cottontails who are known for select vegetation dietary.

Special Note—There's still no closed season on rabbits in Florida, but a valid hunting license is required, and, beginning July 1, 1973, the daily bag limit is 10 rabbits and the possession limit is 20, whether cottontails and/or marsh rabbits.
attracting birdlife to a feeder

is easy, entertaining, educational, and enjoyable all year long

in your own back yard

By CHARLES DICKEY

FLORIDA WILDLIFE

For a long time, I regret to say, I thought bird watchers were typically little old spinsters in tennis shoes who slipped around spying on birds, occasionally using their binoculars for a quick look in someone’s window. It was difficult for me to understand why they would get up before daylight to be on station to catch the first bird movements. If they had to get up so early, I thought, they should do something sensible like sit in a duck blind and watch decoys all day.

What happened when they watched birds? Did the birds watch back? Did the birds resent it or like opening other people’s mail.

It was kind of like sitting on a bench and watch decoys all day.

Well, I joined their ranks last fall! My in-laws, Mr. and Mrs. Gladis Perrin, sent me a ferris wheel bird feeder from Massachusetts. I’m hardly an expert after a few months of observing birds, but I have a lot of company. There are about 7.5 million birders in the United States, according to a recent survey by the U.S. Department of the Interior. About 4.8 million people enjoy wildlife and bird photography. More than 36 million Americans participate in nature walking, and presumably a large percentage of these enjoy seeing birds in their native habitat.

We decided to put the ferris wheel feeder 10 feet from our breakfast window panel, convenient for observation but not so close as to generally frighten the birds. The feeder has four arms, each of which holds a tiny plastic cup for feed. The arms are delicately balanced so that when even the smallest bird lands, it gets a swinging ride.

It was obvious that some species preferred to feed on the ground and would use the feeders only if they dine at escape cover, especially the sprangly branches, open, far removed from escape cover.

We were fortunate that our feeders were not far from escape cover, especially the sprangly branches, open, far removed from escape cover.

We didn’t care, as they are as much fun to watch as the birds.

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Our family observes for fun, with no notebooks yet, and none intend to become professional ornithologists. However, we are advanced past the observations of most poets, who, unfortunately, see little more than bright colors and affable human characteristics.

Each little bit of knowledge gained, either from direct observation or reading, makes the watching more enjoyable. I suspect that deep down in every human there is a desire to discover something and announce it to the world. It’s too late for me to stand on the peaks of the Andes or to discover the Pacific Ocean with Vasco Balboa, but I felt akin to him the day I discovered peanut butter spread on top of a feeder was a sure-fire way to attract a red-bellied woodpecker. A small victory you say? Well, you just wait until you make your first discovery.

Sunflower seeds are like magnets to cardinals, finches, and mockingbirds, but they are expensive if squirrels have access. Mixed feed with a variety of small seeds, available from most grocery or pet stores, attracts smaller birds such as sparrows, chickadees, and warblers. During the fall and winter, when migratory birds came to north Florida, we kept the “squirrelproof” feeder filled with sunflower seeds and the ferris wheel loaded with mixed seeds. The hungry squirrels chewed the holders, spilled the feed, and scraped the paint off the feeder. We didn’t care, as they are as much fun to watch as the birds.

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There is an understandable tendency for new observers to become possessive and to jump to conclusions. For instance, very rarely did we ever see more than two doves in the yard at one time. They quickly became "our" doves and all of us assumed the same pair came back repeatedly. Ellie, our 16-year-old, shook us out of this one morning by asking, "How do you know it's the same pair?"

Bunya, Steve and I looked at each other as the light dawned. We did not know if it was the same pair and could not possibly have known. We simply assumed it and wanted to believe it. If we were going to be birders, we had to learn to be objective, gather data, and base any conclusions on facts.

When a beginner watches 15 or 20 species of birds using a limited amount of feeder space, he quickly realizes that birds are not all sweetness and beauty. One finch doesn't hesitate to peck another finch off the feeder. One species doesn't balk about running off another species; that is, a mockingbird will bluff a cardinal off the feeder nearly every time.

There are two important aspects of wildlife behavior here, both discovered and clarified by outstanding bird watchers of great scientific skill. Within the individuals of a single species, each bird instinctively requires individual space, or territory. It's as though it has an invisible barrier around it. If another bird lands 12 inches away, the first bird may act as though he does not notice. If they suddenly find themselves within six inches of one another, they get jumpy. At a certain distance, say five inches, they will not tolerate one another. There will be brief chatter, blushing, perhaps pecking, and one bird has to go.

Whether chickadees, sparrows, or warblers, we never saw birds willing to share the small cups on the ferris wheel feeder with another bird, either of the same species or a different one. There apparently was not enough individual space for two or more birds. No matter how many birds were chattering in the trees above, waiting to go through the buffet, it was rare to see more than six birds on the feeder at one time, counting the arms, base and feed cups. There is an individual distance for each species, whether intruded on by one of his brothers or another species.

This principle is easily observed if you watch a flock of ducks. Domestic mallards may swim contentedly for an hour, dabbling and loafing. If a certain distance is kept between all individuals, there is complete harmony. But let one mallard get too close to another, violating individual space needs, and pecking starts immediately. The violator of the territory, or intruder, usually is the one which backs down.

Dominance among the different species in the same area, such as a back yard with a feeder, is quickly observed. It's usually the larger species which dominate the smaller, as would be expected. A finch will run off a chickadee; a cardinal will rout the finch; a jay will flush the cardinal; a mockingbird will run off the jay; and a purple grackle will move any of them off the spot he wants. Yet, all of these species will tolerate one another on the ground where there is adequate room. They will feed happily until one bird violates that invisible boundary of tolerance or territory.

There is a natural tendency for humans to try and apply human morals and conduct to wildlife. It is hardly fair and certainly not realistic. For instance, the blue jay is loud, raucous and has the reputation of being an egg stealer. These are characteristics we do not admire in humans, so some people don't like jays. The bird should not be condemned. Being raucous is his natural way of doing business as dictated by thousands of years of genetic evolution. We can best appreciate wildlife, and learn more about it, only when we accept any species as nature has made it. The jay, as well as other unlovable species, is as interesting and necessary as the milder birds, such as titmice.

During the winter, we frequently saw two or three red-bellied woodpeckers in the live oak tree, but we never saw them land on a feeder. About this time, Gordon Spratt, assistant chief of Game Management for the Florida Game and Fresh Water Fish Commission, told me that peanut butter was an instant attraction for many kinds of wild birds.

The next morning, I coated the top of the large feeder with chunky peanut butter. In less than an hour, two redbellies were taking turns landing on the feeder and getting their throats clogged. As long as they were feeding, they would let no other bird land on the feeder. Up to that time, before we had any Florida grackles, mockingbirds had ruled the back yard. But no more! The aggressive mockingbird would not argue with the woodpeckers. It is easy to understand why when one looks at their long beaks and realizes the muscle force behind the head and neck, which can drive the beak deep into wood. No bird wants to get drilled with that hit!

The following morning, the peanut butter was gone. While I was having a last cup of coffee, a red-bellied hit on the feeder and began to shriek its raspy call. I got up, found the peanut butter jar and a knife, and went outside. The woodpecker leisurely flew up to a nearby limb, as though patiently waiting for me. (Before the peanut butter era, we had never been able to get close to them.) I spread the gunk and went back in the house. The time I had my coffee cup again, the red belly was pecking at the peanut butter.

I thought the whole sequence through and said, "Whoa! I'm about to give that woodpecker credit for ordering his breakfast, or for being able to reason. Birds aren't supposed to have that kind of intelligence.

There had to be an explanation other than the woodpecker deciding he was hungry and could fasten it if he shrieked at me. Perhaps some of the neighbors had been feeding him. Maybe when a red-bellied woodpecker flies to a spot where he has found food before, and finds none, he gets angry and shrieks. But how to explain my opinion that he had "tamed down" since I put the peanut butter out?

I don't have the answer. My one definite conclusion is that the woodpeckers cost us a lot of peanut butter. I also found out by feeding breakfast scraps that woodpeckers like melted cheese on toast.

When small flocks of purple grackles began using our back yard, they were spooky and would not come to the feeders. Gradually, they moved in...
bolder they soon were landing on the hanging feeder. 

were the dominant

looked at each other a few seconds and then the woodpecker gave way, darting low and then up when a grackle came swinging in and landed. They want to notice the time birds arrive in the morning feeding times for various species. Most species follow a pattern, although it may vary because of weather. I suppose it could also change because birds are freelancing at someone else’s feeder.

The study of wildlife behavior is a fairly new science. Even newer is the study of human behavior, often using principles discovered in lower animal life. It’s an exciting new field as man tries to learn more about himself, what part instinct and evolution play on his behavior, and what part environment. For the past 50 to 60 years, the emphasis has been on environment, almost to the exclusion of the individual. Many of the big breakthroughs on instinctual behavior have come from bird watchers, some of the expert amateurs contributing as much as professionally trained scientists.

Five years ago, Robert Ardyre threw a block-buster at the world with a summary of the results of the best studies on animal behavior regarding territory. The playwright’s book Territorial Inheritance emphasizes that nearly every species of animal life has an instinctual compulsion to hold territory.

Although Charles Darwin danced around the concept of territory, it took a dedicated amateur British bird watcher, H. Elliot Howard, to recognize the fact and to prove that a bird must have a certain amount of territory during the mating season. Territory can be a limiting factor in the number of successful matings, which would therefore affect the bird population.

It is dangerous and very unscientific for me to transfer to humans my limited observations and cursory readings on bird behavior, but it is fun.

Can man learn much about himself from studying lower animals? Each human has his own need for individual space, although he may not realize it. You don’t believe it? Try this for size: Just notice the next time a speaker keeps pushing his face closer and closer to yours, and how you back up and resist his intrusion. It isn’t just his garlic breath that makes you uncomfortable or angry; he’s violating your individual space.

It has been proven that birds have an instinctual need for their own territory during the mating season. They stake it out and defend it. Does man have the same need to stake out territory, even if it is a subconscious need? The next time you go to a hunting or fishing lodge with several companions, notice this one factor: At the first meal in the dining room together, wherever a person sits the first time, that’s where he will sit at all following meals. He has staked out territory, even to the point that he may get miffed if someone sits in his chair!

Howard, and behavioral scientists after him, showed that a male bird stakes a territory and the female is attracted to the territory, not to the individual male. Of course, there is variance with species, but in some species for sure the female cares less who the owner is; she’s willing to mate with any owner as long as she gets to the territory she is attracted to. Does this apply to man? I don’t know, but did you ever see a millionaire who lacked status? In the dining room together, wherever a person sits the first time, that’s where he will sit at all following meals. He has staked out territory, even to the point that he may get miffed if someone sits in his chair!

If you wish to become a bird watcher, it will add to your pleasure if you learn to identify species quickly, recognize the sexes, watch for dominance—the pecking order, notice how a species handles individual space, and note feeding times. When you transfer bird behavior to humans, do it for fun and for catching your own walleye during the meal.

When young, the barring is prominent and the fins can be viewed, and whether it is dead or alive. Certainly its faint patterning begins to change shortly after it is removed from the water. The adult redeye is quite uniformly greenish above, sometimes with light vertical bars, gradually shading to lighter green on the belly. When young, the barding is prominent and the fins are brick-red with light margins, but these markings tend to become obscure with age.

Three identifying characteristics remain with coosae, however, and a bass from the Chipola that has all three is surely the real thing: (1) a red eye, (2) a shovel-like mouth between the spines and soft parts of the dorsal fin, and (3) a jaw that does not extend beyond the eye when the mouth is closed. If you fish the upper Chipola River and you might make fishing history all over again, for as of today the only known Florida home of the redeye bass remains the Chipola. (Continued from preceding page)
for a grab bag of sport fishing fun, head for

Banana Patch Bonanza

By MAX HUNN

IT WAS BARELY AN HOUR before sundown when we finished anchoring our houseboat near the mouth of Avocado Creek at the head of Tarpon Bay, deep in the back country of the Everglades National Park.

"Want to run up to the Banana Patch and check things out?" I queried Fred Mulholland. "Our wives can relax here and get supper ready while we scout. We should catch some bass, too."

He looked at me dubiously. I knew why. This was his first trip into the park back country, and undoubtedly he questioned some of my angling claims—fabulous black bass fishing with snook, tarpon, and reds tossed in for good measure. After all, fishermen have been known to bend the truth of Avocado Creek at the head of Tarpon Bay, deep in the back country of the Everglades National Park.

"Sure, go ahead," said Fred reluctantly. He didn't bother to put his anchor down.

We've made the trip several times, so actually I was on safe ground predicting fishing success, because there's any water. There was barely a trail through the grass-covered swamp, but we made it with minimal pushing. Then it was clear sailing, down a narrow trail, hemmed in by mangroves at the mouth of Avocado Creek. It's only a few minutes run to the Banana Patch from this anchorage. It's about as close to a fishing paradise as we ever expect to get.

I was on safe ground predicting fishing success, because the Banana Patch is a long run—about two hours one way with big motors from Flamingo—and because 99 per cent of the Flamingo anglers seek saltwater species, not too many people fish the area.

The fish are there, despite their lack of publicity, a virtually virgin fishing territory, and one of my favorite haunts. Ever since first sampling this fantastic fishing back in 1960, it's been a favorite hole, but infrequently visited because of the distance. However, with the availability of rental houseboats at Flamingo, there's no problem.

The houseboat concessionaire furnishes everything except food, drinks and personal items. Your floating fishing base can sleep six, and it's a mighty swank one, with wood grain paneling, picture windows, and even carpeting.

A two-burner alcohol stove is located midship, along with some storage space, and you can carry 123 gallons of fresh water—not enough to make showers possible (there is a shower stall), but ample for ordinary purposes. You don't set speed records, but you can get there safely. It takes about half a day to reach our favorite anchorage from Flamingo.

The floating fishing base has made it possible for us to visit the Banana Patch regularly and have ample time for fishing. Now we get a houseboat, load up with provisions, and set up shop at the mouth of Avocado Creek. It's only a few minutes run to the Banana Patch from this anchorage. It's about as close to a fishing paradise as we ever expect to get.

We've made the trip several times, so actually I was on safe ground predicting fishing success, because there's any water.

Located where the fresh water becomes brackish, it's a melting pot of fish—fresh water bass (we never tried for bream, but I wouldn't be surprised if they were there too) mingling with snook, tarpon, redfish, jack crevalle, speckled sea trout, lady-fish, and who knows what else. We've caught all these at various times and in lakes near the other. It can be the most confusing angling you ever hope to encounter. When a 4-pound snook socks a Johnson spoon with a plastic worm trailer, you certainly have a confused situation. We caught this to me once, while I was merely retrieving a line snarl. He almost took the rod out of my hands.

We went with Bob Hadley and Gene Lechler, we baited 20 bass, seven snook, a lady fish, a jack crevalle, and a mangrove snapper in two short fishing sessions. It was odd. You could almost call your fish—fresh or saltwater—by the type of retrieve. A slow, tantalizing retrieve brought forth a black bass, while a speedy one intrigued a saltwater brawler.

With this in the back of my mind, we began our Banana Patch checkout sortie. I was confident of some sort of action. We worked our way through the mangroves at the mouth of Avocado, then took off full bore to the little pond halfway up the creek. There was barely a trail through the grass-covered pond, but we made it with minimal pushing. Then it was clear sailing, down a narrow trail, hemmed in by dense grass, to the Banana Patch. The sun was just about to the tree line when I turned the boat around to head back. But I just had to make a few casts, while Fred, in the rear seat, played tourist.

Putting on a topwater balsa plug with a lip, I flipped it, with my open-face spinner loaded with a 8-pound test line, near the grass and twitched it.

(Continued on next page)
The second twitch brought action. It was the savage 1-pound black bass. He wasn't any record, but a little swirl of a hungry fish, and soon I was releasing him. I flipped the little plug out again. Bang! I tied into another bass, and it was a good one—the kind I was fidgeting now for lack of a rod. Three for three, and time was against us. With barely 15 minutes left to contact with a bigger largemouth, and Fred was fumbling now for lack of a rod. Three for three, and time was against us. With barely 15 minutes

Later in the day, Kit successfully whipped one almost as big. Hers tipped the scales at a fraction over three pounds. It was obvious that in the years between our visits, the Banana Patch bass had put on weight. Another few years of stable water and there may be some real Junkers waiting, or they may be there now, just waiting to open their mouths foolishly. Who knows?

The fishing was fantastic. By lunch time, Kit had caught 10 largemouth bass and an undersize snook—big enough to make the 10-pound test line hold, though, and now he was exhausted. Kit netted him for me. He was the biggest we've caught to date at the Banana Patch—four pounds of solid fight.

It's an odd way to treat a forest that earns almost one million dollars for the state each year in timber receipts and provides a recreational haven for thousands of Florida's residents and visitors each year, Bething said.

After the bass fishing, we went upstream to the Withlacoochee River, where Fred and I caught more bass. We were returning home the next day and still had plenty of fish, Fred and I cleaned four limits of black bass that night, plus three keeper snook and a redfish. We and Ruth had plenty of fish dinners for the following weeks.

With success like that, do you wonder that we rate the Banana Patch as a super fishing hole? It can't be classed other than fabulous. Now to plan another trip to this bass bonanza. We'll be taking off any day now, and it can't be too soon!
occasional enjoyment now—with happy thoughts of "someday"

Retire —
and Fish

We've borrowed a phrase from the underworld. "He's doing hard time" we say when a retired Florida resident is stewing about how to spend his abundance of leisure. More specifically, we refer to one who quits work to fish and can't seem to get started at it.

The "hard time" term is a private phrase of my wife and me but the condition that it refers to is common.

You want to quit and fish? Do some thinking first.

I make my living, such as it is, writing about fishing and hunting. What I write is mostly the result of general experiences or "how to" articles as opposed to the relation of a specific hunting or fishing adventure.

Now I've decided that in order to write authen-

tically about fishing, I should spend at least 150 days out of the year actually engaged in it. I figure the hunting part takes 50 days of participation. This is a happy decision because I love to fish and hunt or I wouldn't be in this business. Business?

So what's my problem?

If you figure it's forcing myself to lay down my rod and grab my typewriter, you're wrong. My problem is forcing myself to get out and do those 200 days of research.

"What a jerk!" you say. "This guy doesn't really like to fish. If he did, he'd hate the thought of pounding the typewriter."

But you're wrong. I love to fish. In the days of my youth, I've missed sleep, meals and a lot of other comforts just to fish. Until I went into the business, I spent every possible moment at it, but now, with the rest of a lifetime of fishing and hunting stretching before me, I get lazy about it.

It's easy to stay home today because it looks like rain or it's too hot or too cold or the lake will be crowded or the fishing reports are bad anyway. Getting a boat ready to go, assembling tackle or packing a lunch is a nuisance now; not unpleasant once in a while but a nuisance when it comes 200 days out of a year.

The joyful experiences of travel have palled a little. A fishing invitation to Canada or South America would have enraptured me a few years back. Now I study it thoughtfully and wonder if the fishing is really as good as the man says. Packing my gear 20 or 30 times a year is no longer the picnic it used to be.

Sure I want to fish in South America and Can-

ada, but I weigh the pleasure against the trouble and time spent getting there.

Part of that is a case of getting older; most of it is a matter of laziness and the knowledge that I can go next year if I put it off this time.

By now you wonder what the trials and tribulations of a hack outdoor writer have to do with you. I'll tell you.

If you consider retiring in Florida and spending your time fishing, your problem will be just the same as mine. You'll have all the time you want for your fishing and unless you play it smart you'll get pretty bored.

For one thing, you must be sure, damned sure, you're a fisherman. If you haven't been able to fish before your retirement (no matter what you worked at), the chances are you don't really have much interest in fishing. Don't tell me you didn't have time. If you want to fish badly enough you'd have found time somewhere along the line.

The thoughts of fishing are pleasant. A picture of a man relaxed under a palm tree with a fishing rod across his knees is highly attractive to another man working hard, worrying hard, and wading the slush of a prolonged northern winter.

I'm not throwing off on palm trees and relaxation, but just how long do you think you could sit under a palm tree with a fishing rod and retain your sanity?

I'm not throwing off on fishing either, but it isn't a guarantee of full-time joy unless you're a special kind of person. Let's study the procedure of becoming a full-time fisherman.

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The old business of getting out what you put into it was never more true of anything. Without exception, all of the happy fishermen I know are good at some phase of it and became good through practice—or work, if you prefer that word.

The most dissatisfied fishermen I encounter are those who refuse to learn anything on their own. Often they can afford all the guides they want and confine their own skills to deciding when to go and how long to stay. I know some of these fellows who can return from a dream trip to some exotic fishing spot without being able to answer the simplest questions about the method used.

"The guide knew where to go," they say, never considering the reason why that was the place or how the guide had decided.

Some of these folks will fish with guides out of the same dock for years and never learn the first thing about the country. When one of these fellows says he always uses tackle furnished by the guide, I immediately suspect he isn't much of a fisherman. Nearly all good fishermen want their own tackle, and assembling it is part of the sport. Anyway, these people complain a lot about the thing that was striking. He became pretty good at it after a couple of years during which he fished the Gulf Stream as regularly as a charter skipper. His friends got tired of it and he didn't care to go alone. The last I heard of him he was working in a welding shop for amusement.

If he'd been forced to steal time from a job to maintain and operate his boat, he'd probably have had a lot of fun at it. With nothing else to do, it got tiresome in a couple of years.

Some of the happiest retirees become artists at one specific kind of fishing. I know a retired merchant who has become a fly fishing expert and fishes all over the world using nothing but his fly rod. He catches a lot of fish not usually considered fly fish and has a lot of fun doing it. He sets himself some pretty tough tasks and is enjoying life.

I'm pretty sure that any one of them would have a hard time spending his retirement at fishing. If you fit in the category, don't buy yourself a one-way ticket to a bass lake. Better have some other hobbies.

I don't believe in competitive fishing, but there must be some kind of a challenge.

I know a wealthy man who retired to Florida to fish. He bought a deep water cruiser and went out every day, trolling for sailfish, kingfish; anything that was striking. He became pretty good at it after a couple of years during which he fished the Gulf Stream as regularly as a charter skipper.

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On the other end of the expense account is a man who fishes daily at a pier, specializing in flounder when they're running and going for pompano when they're available. His skill at these two kinds of bait fishing is dramatic although neither is ordinarily considered a "fancy" game fish. His fun is comparable to that of the fly fisherman.

Another retired angler I know has gradually gained the greatest satisfaction from building tackle, especially lures.

None of these specialties is particularly easy, and all take a great deal of study and practice.

Few fishermen who want to use only the easiest and simplest methods become serious fishermen. Call it ego or self-satisfaction or what you will, there is little fun in doing something that everyone else can do just as well. The novelty wears off.

A roller coaster thrills or scares almost everyone, but riding one would probably never develop into a satisfactory hobby because someone else is running the thing.

A lot of people go fishing with no abilities at all. The guide makes the cast and gives them move for move instructions when a fish strikes. The customers may have a wonderful time, but they're like the roller coaster passengers and it's a dull fellow indeed who wants someone else to do all of his casting for him year in and year out.

But suppose you're a real fisherman and you've definitely decided you want to retire to Florida and fish. You still have some decisions to make. Your best move would be to spend an entire year in the state before buying a home or otherwise settling permanently. There's as much difference between bass fishing in the Florida panhandle and bone-fishing in the Keys as there is between Maine salmon and yellowtail off California.

Your first reaction is to find something similar to what you had at home. For example, when I came to Florida, I was primarily a black bass fisherman so I sought bass fishing country.

A year of indecision is expensive but more desirable than settling where you don't care for the fishing. I know a fellow who bought a home on salt water thinking he'd learn to fish there. He knows now that the light tackle fishing he's used to just doesn't fit in with his new residence.

There are other parts of the state where he'd have a wonderful time, but he has to drive hundreds of miles to get to them.

Any fisherman who comes to Florida should study the kinds of fishing carefully. There are more than you think. I have repeatedly mentioned the fellow who fished in Florida for 12 years before he learned he could catch salt water fish with his bass tackle, the fellow who still thinks he has to go north for fly fishing and the bass fisherman who has lived 20 years within two miles of salt water trout fishing without trying it, driving 30 miles for bass fishing.

I have always been against hurried selection of a retirement spot.

Right now there is a boom in fishing classes, fishing clinics and schools. A fisherman intending to retire to Florida should make every effort to attend any of them he can reach. He may be bored stiff, but he'll invariably learn something.

(Continued on next page)
The need for this sort of thing is spotlighted in some of the housing developments where the staff is hard put to keep new retirees from going to seed in a strange place—no matter how gracefully the palms sway or the water ripples. The developers are seriously into the fishing school and learning fast.

Not everyone retiring to Florida is young enough or healthy enough to do just any kind of fishing he wants to. Doctor's orders may seem to prohibit almost all angling, but chances are there is some skillful fishing the person with limited physical capabilities can do.

Patients are too skimpy with the information they give their doctors. I know a heart patient who doesn't want to cast very much because his doctor told him not to, but he turns around and yanks violently on a stubborn outboard because his doctor never said anything about that. He should know better.

So what's the easiest fishing?

 Probably bridge and pier fishing with bait takes the least work. You can do it with a chair and you can be on shore quickly.

However, rowing a light boat is less taxing than rapid walking. Persons with health problems should be careful in handling and starting outboard motors. Carrying even light motors or attaching them to boats is not wise for semi-invalids. Electric starting motors certainly take little exertion, but long range boating could become strenuous in case of a breakdown or bad weather, and someone in such a party should be capable of manual effort.

I have frequent inquiries from persons who aren't able to do strenuous labor but can cast or troll. They're worried mainly about boat handling and trailering.

Well, a carefully matched outboard boat and trailer can be launched with little effort and recovered almost as easily if the operator takes his time on the winch (which can be geared so low it's virtually no effort).

Elderly persons will be wise to keep their boats large enough that they can move around a little. Any boat of less than 12 feet gets pretty tiresome for an all day trip, even for a youngster.

What kind of tackle?

Contrary to popular belief, there is little difference in the physical exertion of spin-casting, open reel spinning, plug casting or fly fishing once the skill is learned. Fly fishing is considerable labor at first and many beginners don't get past the hard work stage. The spin-casting or push button is easiest to learn but no less work than regular bait-casting once skill is acquired. I believe the open-face spinning reel, although simple to learn, requires somewhat more physical effort than either plug casting or fly fishing. At least it does for me.

But some of it you gotta do for yourself.

So what's the easiest least physically taxing fishing method for a retiree or anybody else? Bank, pier and dock fishing, as this content. Northwest Florida lake fishermen illustrates. Many prefer bridge fishing but there might not be space for a chair—and traffic's heavy!

Great Horned Owl

By ELIZABETH ADLER

The great horned owl, that's who. The rhythm of the hoots was the key. They were those of an owl more often heard than seen.

"Not here," I exclaimed aloud, "in this buzz of activity!"

To the east, I was within a stone's throw of well-traveled U.S. Highway 19 through Crystal River; 50 yards to the west, men were systematically destroying natural habitat (in the name of progress, of course). Bulldozers had leveled the land, whirring chainsaws were dismembering fallen trees, and the noisy, staccato pounding of carpenters' hammers reverberated as they went on building homes.
Simultaneously, my ear caught the deep, resonant, echoed and re-echoed like the utterances of one and began to feel empathy with that owl. In this the complaint against the building of more homes for 20th century those notes could have been the bird’s wildlife. I thought of Gray’s who loves the sound of his own voice.

Another series of hoots. I moved cautiously along a stand of pines in the direction of the sound and searched the branches intently. A dragonfly buzzed a faint light than man’s, and his eardrums larger than an expression of judgment like solemnity, he moved his eyeball with.

At the end of the fourth week the nest was empty. Scattered beneath the tree were a few feathers, small bird claws, little bones, and a segment of a dead snake. My heart sank. It looked as though one body had two heads. Then, either tired of their antics or aware of my presence, they suddenly compressed their feathers close to their bodies, elevated their small ear tufts, and appeared to grow as I stood watching. After the stretching exercise they both disappeared into the nest as completely as performers on stage behind a rung down curtain.

From that moment an unforgettable experience began to unfold for me. Discovery of the nest and the owlets made me a self-appointed babysitter for them during the next three months. Enthusiastic visits and neither sight nor sound indicated their presence in the bird. Suddenly, I was eyeball to eyeball with Bebe virginiana, the Great Horned Owl.

Although his eyes are 100 times more sensitive to faint light than man’s, and his eardrums larger than those of any other bird, he permitted me to get within 30 feet for a photograph. This delicately feathered, marble-eyed bird, ranging 18 to 25 inches in length, had his enormous feet anchored to a stark pine branch. The outer toes, which are reversible, flipped nervously back and forth. He raised himself to full height and with a flourish elevated both his feet. With piercing yellow eyes fixed on me in an expression of judgmental solemnity, he moved his entire body to keep me in view. As I focused my camera he anxiously scanned his beak, and the first click of the shutter sent him off in noiseless flight to denser woods.

Aware that the haunts and habits of the great horned owl are not too well known, I had hoped to uncover further evidence that this stand of conifers was his home; that he was not just a bird in flight with only time to shake a quill at you.

I studied the trees, the ground, and the underbrush as I walked to the far edge of the woods. At ground level, in every direction, small orange striped bugs and the indistinguishable brownish leaves of small plants. Bold black numerals presaged the subdivision into small lots and the coming of still more new homes. Looking up, I spied in the crotch of a pine a large, carefully made nest of sticks, old leaves, feathers and moss. It appeared empty, although there were signs of recent refurbishing.

It is known that great horned owls seldom make nests for themselves, preferring instead abandoned hawk, osprey, or squirrel abodes. It was the new week of moss and outer twigs, less weather worn, that held my interest and this be the nest of the great horned owl I’d seen?

From every possible angle I studied that nest. Just as I was deciding that whatever bird had called it home had been driven off, I detected movement. I froze in my tracks and watched. First one and then another fuzzy head pushed up. What ensued for the next 10 minutes was a comedy sketch by two baby owls that would have gladdened any heart.

Over the rim of the nest four eyes stared down with a saucy look. One owlet and the other climbed up and tittered precariously on the edge. They turned their backs; they faced me; they hid behind each other; and one fell backward, recovered, and positioned himself to peek around the other. It looked as though one body had two heads. Then, either tired of their antics or aware of my presence, they suddenly compressed their feathers close to their bodies, elevated their small ear tufts, and appeared to grow as I stood watching. After the stretching exercise they both disappeared into the nest as completely as performers on stage behind a rung down curtain.

An owl’s first flight is within nine or 10 weeks. I reviewed my notes. Guessing the eggs were laid in late February, I allowed 26 to 30 days for the incubation period, and checked the date of discovery of the nest. They were right on schedule.

Fresh pellets on the ground would be a clue. I combed the area for several days and finally walked back to the old pine where I first had seen the parent bird. There on the very same branch of the very same tree, far removed from the nest, a great horned owl sat beside its offspring, keeping a watchful eye on the young. The youngster stretched his wings out of flight, out of flight, and out like—morning situps. Time and again he flapped his wings frantically in an effort to keep his balance. Yes, he could fly, and was a good distance from his natal tree! The mother, ever watchful, sat immobile, and with a typically stoic look of moss and outer twigs, less weather worn, and sat secure and serene. Had they been able to talk, I had the feeling they would have said “We’re ready. We’re about to leave. Take our picture now.”

I longed to hear the young owls try their voices, as I had watched them trying their wings. But they only sat in dignified, and sometimes drowsy, silence. They are gone now, and the tree that held their home will be destroyed in another year. La dolce vita for the great horned owl, fast being deposited throughout much of its “ancient solitary reign,” will be no more unless more of us begin to give a “hoot” about its future.

On what proved to be my last visit before the owls departed, no watchful eye of a parent was evident. I found the young birds sitting side by side. Their breasts appeared as whitish bibs of soft, downy feathers. The stark two dimens of its wings were very distinct—a rich brown, spotted with darker browns and black. The female was preening her feathers as they both sidestepped down the limb out of the dense foliage. They stopped in front of me, turned toward each other as though making confidential aside remarks, readjusted their positions, and sat secure and serene. Had they been able to talk, I had the feeling they would have said “We’re ready. We’re about to leave. Take our picture now.”

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A total of 282,271 resident licensed hunters went after 19 game species and three unprotected species during the 1971-72 hunting season in Florida, and harvested the following: 48,900 deer, 25,809 turkeys, 1,712,700 quail, 1,438,600 squirrels, 222,590 ducks, 2,219,500 doves, 304,800 snipe, 12,300 woodcock, 319,500 rabbits, 5,000 foxes, 61,400 raccoons, and 6,800 bobcats. The sportswomen spent a combined total of 4,651,300 days hunting.

These figures are the results of the Game Management Division's annual Wildlife Inventory, Harvest, and Economic Survey, conducted through a random mail survey of Florida hunters at the close of each season. The study is done with federal aid from the U.S. Fish & Wildlife Service. Also cooperating in the Southeastern Fish & Game Statistics Project at the Institute of Statistics, North Carolina State University, Raleigh, N. C.

Detailed figures on the harvest, by administrative regions in the state, indicate that the deer kill was heaviest in the Northwest with 13,480, followed in order by Northeast—10,400; Central—9,900; Everglades—8,960; and Southern Region—7,700.

The wild turkey tally looked like this: Northwest—6,400; South—6,100; Northwest—5,900; Central—5,200; and Everglades—2,600.

Quail hunters took 2,286,400 birds in the Southern Region; 344,600 in the Northwest; 325,100 in the Northeast; 308,300 in the Northwest; and 213,200 in the Everglades.

Ten thousand pheasants were up 12,300 pokers in the Central Region; 11,800 in the South; 6,000 in the Everglades; 4,100 in the Northwest; and 3,000 in the Central Region.

Dove hunting during the first phase of Florida's 3-way split season produced 299,400 birds in the Central Region; 267,800 in the South; 262,000 in the Everglades; 163,500 in the Northwest; and 115,400 in the Northeast. But the total harvest of doves for the entire season was greatest in the Southern Region, followed by Central Region; with 473,900; Everglades with 430,400; Northwest with 378,800; and Northeast with 259,500 doves.

Statewide, the sales of resident licenses, by region, were: Northwest—58,945; South—52,516; Northwest—50,704; Central—50,618; and Everglades—30,481.

On the average, it took 34.47 hunting days to bag one deer; 17.41 days per wild turkey; and 10.97 man-days hunted to get a wild hog, according to the survey.

Resident licensed hunters receiving questionnaire post cards are urged to cooperate by filling in the information requested so that accurate statistics can be obtained on the results of the '72-73 hunting season. The basic trends in wildlife populations, as revealed by the year-to-year mail survey, provide information of extreme value and importance to wildlife biologists and administrators.

Michael J. Fogarty, of Gainesville, is the project leader of the Florida hunter-harvest survey, Federal Aid Project W-33-22.

Gator nesting, hatchling success, survival, and growth rates are under study by Commission biologists in the Everglades.

FRONT COVER

JUNE, 1973

Lead and Steel

It appears that before long ammo makers will be geared to supply duck hunters with the long-sought lead shot substitute—at a price

By EDMUND McLAUGHLIN

WATERFOWLERS CAN expect to change their ways soon, at least with respect to the shotshell loads they use. This coming hunting season, hardware and sporting goods stores will be offering shotshells loaded with steel shot. Such loads are already in manufacture and being shipped to dealers.

The new steel shot loads are expected to be the coming thing for waterfowling—not because they are superior to lead shot loads, but for the reason that the Bureau of Sport Fisheries and Wildlife of the U.S. Department of the Interior is expected to decree that hunters can legally shoot nothing but steel shot at migratory waterfowl.

Since the days of market hunters, countless thousands of tons of lead shot have been deposited over our wetlands. There has been a gradual and ultimately enormous but unseen buildup because lead does not deteriorate like some metals. Also, most hunters are not aware of the fresh deposits of lead that reach up to 12 million pounds of lead shot to the marshes annually.

Where the expended pellets do not sink into bottom ooze beyond feeding depth, ingestion by waterfowl can result in poisoning and serious annual mortality. Biologists say we are losing at least 4% of our annual waterfowl population to lead poisoning resulting from ingested shot picked up in heavily hunted waterfowl feeding areas. The percentage may go as high as 7%.

The losses are due to natural causes and to the legal hunting season harvest, the losses to lead poisoning take on more importance. The problem has been known for some time and a solution sought, as far back as 1956.

The National Wildlife Federation is putting heavy pressure on the Bureau of Sport Fisheries and Wildlife for a regulation that the use of steel shot in shotshells would not be allowed, the key point being that steel shot is a bit less dangerous for migratory waterfowl than lead. The new steel shot loads are expected to be the coming thing for waterfowling—not because they are superior to lead shot loads, but for the reason that the Bureau of Sport Fisheries and Wildlife of the U.S. Department of the Interior is expected to decree that hunters can legally shoot nothing but steel shot at migratory waterfowl.

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tial kill of 34 birds out of a hundred shots when firing lead shot of the same size. In the new steel sizes smaller than No. 4 are virtually ruled out for successful waterfowl hunting. Tests by Remington show that in the new steel shot sizes No. 3 is best for ducks and size BB for geese—and with shooting range reduced to 40 yards for sure kills! This will be quite a change for waterfowlers who have long been using lead shot sizes 4, 5, and 6 on ducks with killing effect well beyond 40 yards. The retained velocity and penetration of the new steel to these two popular sizes of lead shot loads are simply not to be had from steel shot in sizes 4, 5, and 6. These are not haphazard conclusions, but findings based on extensive field tests conducted on National Wildlife Refuges located along Atlantic, Mississippi, Central and Pacific waterfowl flyways, on Winchester's Nilo Game Farm in Ohio, and at Remington Farms in Maryland, during the 1972 waterfowl hunting season.

In field tests, hunters used shotshells loaded with lead shot on certain hunting days and loads containing steel shot on others. The results were tabulated by on-the-spot observers.

The Fish and Wildlife Service painstakingly reviewed the findings. Undoubtedly, there will be a Federal decree that only steel shot loads will be legal during the waterfowl hunting season. Waterfowl and conservation groups are pressing the BSAF&W into such action. Seemingly, it matters not to advocates that the use of steel shot may easily fail to reduce waterfowl losses—due to a greater tendency of steel shot to cripple birds shot at distances beyond 50 yards, and that steel shot cannot yet be produced as economically.

In use, steel shot can be rough on some of our shotguns. Gun steel used in the trade varies considerably in hardness. The new steel shot loads are not up to handling steel shot. When passing through our gun barrels, steel shot will not have the resilience of lead. There is not much latitude for individual pellet realignment or for compensating "give" during passage through the bore as occurs with lead pellets. Consequently, the steel shot charge develops a pellet spread against the barrel interior, especially on chokes.

One manufacturer of high quality shotguns said that in the new steel shot loads not to drastically reduce the useful life of his product. Meanwhile, there is hope in the ammunition manufacturing trade that solid copper shot may eventually provide the solution to this steel and give results comparable to lead shot loads. Copper has greater sectional density than steel but less than lead. Solid copper shot is a relatively expensive metal to purchase in raw form and process. Retail prices of shotshells loaded with solid copper pellets would undoubtedly reflect substantial increase over the costs of today's lead-shot-loaded shells, and be even higher than the inflated prices already set for the new steel shot. It is almost sure that the use of lead shot for waterfowl hunting will soon be verboten.

One of the most useful and enjoyed items I've carried hunting the last fifteen years has been a folding aluminum-frame stool that has a five-color camouflage canvas seat, a zippered carry-on bag, and a folding aluminum frame. The lightweight stool to be carried in almost any habitation.

In the bag section of the stool, I usually carry the assorted items a fellow needs afielog, depending on the type of hunting or archery activity being enjoyed.

Such stools are made by Kamo, Black Sheep, L. L. Bean and others, and are priced about the same. Their versatility is impressive. A stool will serve its owner in many ways.

Frames are usually formed from two sections of aluminum tubing given inverted, open-U shape and held together where they cross by an aluminum rivet, with each leg end capped with a rubber crutch tip.

The Bean product, however, does not have four legs, but is comprised of rectangular sections that are crossed and riveted to pivot to form the stool's frame. Although I do not use this particular stool, the Bean stool is stronger and more stable, because of the continuous, closed-frame construction, without four individual legs to press uneasily into soft ground and thereby cause variable stress on the stool frame every time the hunter shifts his weight, as he will surely do during long sitting sessions. In time, a four-legged aluminum stool will usually bend lopsided and, although easily pulled back into shape, thereafter will tend to bend often.

To strengthen the sections forming my four-legged stool, I obtained a strip of 1/2-inch thick aluminum and bolted cut sections to the stool to achieve the same design and effect as the Bean product. I've not since had any trouble with frame bending.

Two narrow, hucke-type leather straps were also added, to provide for outside strapping on of sweater or poncho. When not in use, the two straps are kept wrapped around the stool's tubing, near the seat—weighting almost nothing, and out-of-the-way, but there when needed.

I usually carry my stool slung over one shoulder, with the strap shortened until the folded stool seems to fit nicely under my arm and against my side. A stool, I believe, should be both a practical accessory and a personal comfort while occupying a deer stand for long, often cold hours. It has also served as an excellent and comfortable seat in many a dove field.

The aluminum frame stools can be had with choice of ordinary canvas seat and bag or insulated vinyl for carrying ice drinks. The insulated type is noticeably bulky. I much prefer the canvas model. A small vacuum bottle can always be carried in the main compartment.

You cannot imagine the convenience and comfort of such a stool until you have used one under various hunting conditions.

If I ever build a new home, it is going to have some sort of soundproofed range for home target practice with 22 caliber rifle and handgun. From talks with architects, I know that installing one at the level of the living area would be costly, but a tunnel-like range built below floor level and running underneath the house is feasible, I am told.

There would be some sort of ventilated, acoustic-tiled booth at the firing point, then a large, long pipe of heavy steel duct formed from steel girders through which shots could be fired at illumi­ nation targets at the far end. The tunnel would be backed with an angled steel plate and sand box, or a commercial bullet trap.

Even though the firing booth would be walled with sound-absorbing tile, I'd wear muff-like hearing protectors of the kind favored by handgun­ners who fire large-caliber pistols in competition. Within the confines of a small booth, even a 22 would have an acutely sharp report. Wearing the protectors, the user would enjoy ear comfort and protection of hearing when firing.

A 50-foot range utilizing standard NRA targets for that distance would be preferable, but if I had no room for a full-time range, I would control all fired shots at the target point. Range safety to home premises and neighbors would be the objective. From the standpoint of economics, it would also be necessary to provide for outside strapping on of sweater or poncho. When not in use, the two straps are kept wrapped around the stool's tubing, near the seat—weighting almost nothing, and out-of-the-way, but there when needed.

An entry trapdoor to the shooting booth would have to be hinged, and some sort of pulley arrangement incorporated in the duct or tunnel to permit targets to be put at the far end and then removed.

All firing would be done with rifle or handgun muzzle inserted some three or four inches in the firing tunnel. This would aid firing safety, in the booth, and dissipate energy by combined friction and centrifugal force, and an impact type that stops bullets when they hit a steel plate set at an angle that deflects remaining fragments away from any lead-receiving reservoir. Either type can be used singly or in multiple arrangement with or without protective barriers.

For a long time X-Ring products (until its manu­ factures were taken over by Outers Laboratories, Inc., Onalaska, Wisconsin 54656) furnished a booth table and pedestal models. The University of Florida, Memphis City Schools, Georgia Military College, and the Naval Training School were among early users. Outers Laboratories can supply you with detailed information and prices.

The impact-type of bullet trap finds practical, con­ venient form in the portable Sheridan models, made in several sizes by Sheridan Products, Inc., Racine, Wisconsin 53403. One catalog listing—although portable—will safely stop 38 caliber pistol bullets. Sheridan traps are widely used.

The National Rifle Association, 1600 Rhode Island Avenue, N.W., Washington, D. C. 20006, publishes manuals on a dozen rifle ranges, a fine selection of safe shooting ranges, from simple to elaborate, and both indoor and outdoor types.
Wildlife Officer Notes

Guns, lights, game law violators, and wildlife officers don't mix. Sgt. J. K. Davis and wildlife officers Paul Gaffney and Archie Maynard, of the Everglades Region, arrested six adults and two juveniles in two separate incidents the first weekend in April, according to Lt. G. Ross Parsons, regional information-education officer, West Palm Beach.

Seized as evidence were two deer (a doe and a buck), two motor vehicles, and an assortment of firearms.

All the arrests were made in Palm Beach County.

Three men were charged with taking or attempting to take deer at night with the use of gun and light. They were arrested by officers Gaffney and Maynard on the L-8 dike in the north end of the county, following several hours of observation in the early hours of Saturday morning.

Booked were John Franklin Cove, Roger Floyd Ready, and Robert Mack Yarbrough, all of Boynton Beach. A juvenile apprehended with them was turned over to detention center authorities.

The officers seized two 30-06 rifles, a .410 gauge shotgun, a .22 caliber pistol, and a 1965 Buick as evidence in the case, and those charged were released after posting bonds of $1,000 each.

Within eight hours, Wildlife Officer Gaffney and Sgt. Davis apprehended Manuel Fraga and Hermangeid Cardenas, of Hialeah, and Augustin Novoa, of Miami, with a 15-year-old juvenile on the Talsman Sugar Company property. The three adults were charged with unlawful possession of game during closed season and contributing to the delinquency of a minor.

Evidence seized in this case included the two deer carcasses, a 30-30 rifle, and a 1970 Ford pickup truck.

Bonds for this trio were also set at $1,000 each, and the juvenile was released to the custody of his parents.

The six men will be tried at a later date.

Florida hunters are advised and requested to obtain certification as "Florida Safe Hunters" before next fall, especially if they plan to travel out of state to hunt.

Seventeen states and four Canadian provinces require visiting nonresidents to have proficiency certificates from their home states, or else spend part of their vacation or hunting time completing a similar course prior to being issued a hunting license.

"Whether hunting at home or elsewhere, we want Florida hunters to enjoy their sport," said Captain James Carter, state hunter-fisheries safety coordinator for the Commission. "The important aspect is that you hunt safely and follow the marks of good sportsmanship. Florida's firearms safety program can and will help you become a safer hunter and a better outdoorsman," he said.

The 10-hour Commission course of instruction and practice covers the entire spectrum of hunting and firearms safety, including basic operating principles of a firearm, safe gun handling, marksmanship, wildlife identification, field first aid, survival, and modern game management techniques. The course also includes actual firing on a rifle range, a simulated hunt to field-test each student's skills as a safe hunter, and a written test. An optional class on archery is offered for those interested in the growing sport of bowhunting.

For additional information on the Florida Hunter Firearms Safety program in your area, contact Capt. Jim Carter at 5950 W. Colonial Drive, Orlando, Florida 32808.


FLORIDA WILDLIFE'S FISHING CITATION

is available without charge, to any and all subscribers to Florida Wildlife Magazine, and their immediate families, who catch any of the fresh-water game fish of the prescribed species and size requirements. Citation, showing recorded date of the catch, will be mailed to the applicant upon request of the following application form that has been properly filled out and signed.

Only fishing citation applications received within 90 days from date of catch will be honored.

APPLICATION FOR FLORIDA WILDLIFE FISHING CITATION

The Editor, FLORIDA WILDLIFE

Date

Game & Fresh Water Fish Commission, Tallahassee, Fla.

Yes. Send me the Florida Wildlife Fishing Citation with the inscribed data listed below:

Name (please print)

Address

City. State Zip No.

Date Caught Catch

Password Used

Address

Registered, Weighed By At

Signature of Applicant

CUT OUT AND SAVE THIS APPLICATION BLANK