What is WILDLIFE worth to YOU?

Without wildlife — manufacturers and sellers of fishing, hunting, and related equipment would go out of business. Retailers, grocery stores, and many other businesses would suffer heavy losses. There would be no need for wildlife organizations, agencies, and publications. Without wildlife — our world would be a dreary place to live — if indeed — life could be sustained without the ecological balance and beauty provided by wildlife! The preservation and management of game and fish in Florida depends solely on your purchase of a hunting and/or fishing license and the tax money received from the sale of hunting and fishing equipment and supplies.

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The Cover

The Gray squirrel and bluegill are the "new pinners" to welcome another youth waterfowl fishing and hunting year. This color reproduction (in smaller size) will appear on covers of 1969-70 Hunting, Fishing, and Management Area Regulations Summary. See pages 4 and 16.

From A Painting By Wallace Hughes

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ROSE W. TALLAHASSEE

MAY, 1969

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ROSE W. TALLAHASSEE

MAY, 1969
Florida State Parks
Who hasn't dreamed of a cabin in the woods, near a winding river and far from civilization? Not New York legislators who have their own private hideaway, but Jonathan Dickinson State Park near Stuart has now three rustic cabins situated among the pine trees near swimming and boating facilities on the beautiful Loxahatchee river.
State Parks Director Bill Miller said plans are to add two more cabins for a total of five. All are located in a secluded setting away from other park activities.
Each cabin is fully equipped, with visitors needing to supply only linens. The kitchen has a refrigerator, sink, electric range, and microwave. The bathroom has a stall shower.
The vacation structures hold one bedroom with two bunk beds, a bureau and a small closet, and a living room featuring two studio beds, a log burning fireplace, and a dining counter for six.
Visitors can see the subtropical secrets of Florida's famous underwater state park, John Pennekamp Coral Reef at Key Largo, and never get their feet wet.
A new 57-foot glass-bottom boat has been installed to take tourists some 18 miles out in the Atlantic for a long look at the beautiful coral reef and other underwater sights.
Four small glass-bottom boats will tour the Inner Reef daily, weather permitting.
The large 48-passenger boat has been named "The Infante" for a Spanish galleon that went down on Molasses Reef in 1723. The underwater park contains many sunken ships that met their doom on these reefs centuries ago.

Florida State Wildlife
FLORIDA WILDLIFE

October 1969

The largest passenger boat has been named "The Infante" for a Spanish galleon that went down on Molasses Reef in 1723. The underwater park contains many sunken ships that met their doom on these reefs centuries ago.

Hair Secrets of Florida's Famous Coral Reef

On November 1, 1969, children under 12 and Florida residents 65 and over may hunt bag limits for big game and enjoy a special deer hunt on November 1 at noon.

The possession of firearms during the Archery Season is prohibited.

Regulations Summary

Northeast Region

DEER & BEAR: November 1 through January 4. No open season on Bear in Levy County.

TURKEY: No open seasons in Suwannee County, in Okefenokee National Forest, or in that portion of Columbia County south of State Road 240 and west of State Road 47. No fall season in Alachua County.

Other counties—Fall Season November 1 through January 4.

Spring Season: March 21 through April 5.

QUAIL & SQUIRELL: November 1 through February 22.

WILD HOG: Alachua County—November 1 through January 4.

South Region

DEER & BEAR: DeSoto, Hardee, Manatee and Sarasota counties: November 1 through November 16, and December 20 through January 4.

TURKEY: Fall Season—November, Manatee and Sarasota counties, November 1 through November 16, and December 20 through January 4.

Other counties: November 1 through January 4.

QUAIL & SQUIRELL: November 1 through February 22.

DEER & BEAR: No open season on the Florida Keys of Monroe County.

TURKEY: Fall Season—November 1 through January 4.

Spring Season—March 7 through March 22.

Archery Season—South of State Road 50: March 21 through April 5.

QUAIL & SQUIRELL: November 1 through February 22.

Everglades Region

DEER & BEAR: No open season on the Florida Keys of Monroe County.

TURKEY: Fall Season—November 1 through January 4.

Spring Season—March 7 through March 22.

Wild Hog: Palm Beach County—November 1 through January 4.

Shooting Hours—resident game

Onto-half hour before sunrise to one-half hour after sunset; except Spring Turkey season when shooting hours will be one-half hour before sunrise to 12:00 noon, only.

Archery Season (statewide): September 13 through October 3.

No open archery season in Dade and Broward counties; in that portion of Palm Beach County south of State Road 80; in that portion of Martin County south of the Loop Road; in that portion of Hendry County east of L1 and L2 levees.

Persons holding a valid archery permit in addition to a regular hunting license may hunt on designated wildlife management areas and on open lands during any season opening prior to that regularly established season for taking resident archery season opening prior to that regularly established season for taking resident archery season. Persons holding a valid archery permit and a hunting license may hunt on designated wildlife management areas and on open lands during any season opening prior to that regularly established season for taking resident archery season. Persons holding a valid archery permit and a hunting license may hunt on designated wildlife management areas and on open lands during any season opening prior to that regularly established season for taking resident archery season. Persons holding a valid archery permit and a hunting license may hunt on designated wildlife management areas and on open lands during any season opening prior to that regularly established season for taking resident archery season.
Eastern Wood Rat

By LARRY MARTIN

Large masses of sticks along the shore of Lake Apopka might give the impression that beavers have invaded central Florida. But a recent field trip to investigate the area revealed a sizable population of Eastern Wood Rats (Neotoma floridana) nesting there.

This is the common wood rat of the southeastern states. It is also known as the pack rat. (There are 8 species of wood rats in North America, but Neotoma floridana is the only one found in Florida.)

The delicate coloration of this rat ranges from buff gray to cinnamon above, and the underparts from pure white to buff. The fur is soft but has no commercial value.

While foraging for food the pack rat picks up material for nest construction and carries it to the homesite. If a more attractive piece of material catches its eye, these rodents will drop the one being carried and proceed with the new treasure. They often select pieces of shiny material, such as tin and plastic. In the nests we investigated many such items had been interwoven among the elderberry limbs and cattails. The inner chambers of the nests were lined with dried water hyacinth tissues.

Now and then we'd lose the grass and do a little prospecting but it didn't take long to locate it again. That, of course, is a stacked deck because Jim knew pretty well where the grass was. Nevertheless, his searching methods with the little electric would eventually have worked on strange water.

Well, we caught several bass, even I connecting with two or three, and were back at the plant in time for Jim to put in a full day's work. Whether he goes that strong all the time I don't know but it's hard to find him standing still.

This is not a success story of Jim Bagley but I do have something to say about his plant which is no penny ante operation.

He's always building something new. The colors, shapes and forms of his plastic lures are varied and I suspect he welcomes suggestions. Plastic worms and eels are the backbone of the business, but he went into bass for his Bang-O-Lure and several relatives of that one, including "Dub'L-O7," which is shaped a little like Al Capp's "Wally Torpedo," and "Molly Crawlbottom" and his "Ol' Monster Worm." He also sells staple plastics that might have been made by anybody. His black Magic Cork popper was sacking up big bass before the current line of plastics was even a dream. The use of the term "Ol' Jim" as part of the promotion gives connotations of homey, backwoods fishermen who really know the bass business. All in all, it's a pretty sophisticated advertising campaign.

We felt a lot of grass down there on the bottom but before long Bagley set the hook on a small bear that jumped merrily. His method of simply giving the fish the bait until he felt a tug worked well but there was one period when he missed a series of strikes, giving me considerable satisfaction since hooking a bass on a plastic worm is not one of the things I do best, and it was nice to know the man who makes them can miss, too.

Well, we caught several bass, even I connecting with two or three, and were back at the plant in time for Jim to put in a full day's work. Whether he goes that strong all the time I don't know but it's hard to find him standing still.

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Bagley's variety in plastics fits specific requirements of panfish and worm hookers. He has
been a little big for best results with light tackle. I have used it a great deal in salt water, noticing that was ever hatched. but most line used in weeds is really different. I just a little as it's retrieved. He has a variety of worm shapes and has one that's notched for weed-added flexibility. His plastics are rigged with weedless hooks, or with a metal lip that adds casting weight and wiggle or with spinners and beads. The color range and color combinations are extensive.

From the number of employees in Bagle's plant, it appears they will be able to keep up with the fish demands for Off Jim's dinagnes but they're pretty busy.

A NEW BRAIDED line from the Cortland Line Company, has caused quite a commotion around our house, my wife busily putting it on casting reels and my friends trying to steal it. It's called Cortland Micron and in 20-pound test it makes a little smaller than a popular brand of 12-pound test line I've used happily for years on baitcasting reels.

Braided casting line of about 12-pound test has been a satisfactory size for most of my bass fishing but is a little light for use in heavy grass. On a recent trip to Lake Okeechobee I found my 12-pound stuff wore excessively, and most of the break-offs come at only a fraction of the factory strength.

The new line is pure white which may dismay those who think that adds casting or that adds casting. The new Micron in 20-pound test seems to cast a little smaller than a popular brand of 12-pound test line I've used happily for years on baitcasting reels. The new line is beautiful but it is the bigger stuff that I needed. Don't be scared off by the fact the manufacturer recommends that you put a little extra air in the spare and says it uses 3 to 5 pounds of pressure per hour from your tire. The cost is $4.98.

I also have some 12-pound test Micron which is beginning to get into the sewing thread size. It casts beautifully but it is the bigger stuff that I really needed. Don't be scared off by the fact the 20-pound stuff is called "trolling line."

The new line is pure white which may dismaysome of those who have felt that only black casting line is really good and, frankly, it may not look as expensive as multi-colored or camouflaged material. I respect that the man-made fibers of which it is constructed may not dye satisfactorily but have no proof of that.

Personally, I'm not particular about line color with casting outfits. I have no proof of that.

SCIENCE IS ALWAYS coming up with astounding things about fish and, up to now, I have accepted these statements as fact. I live in awe of biologists and am reduced to stammering stupidity in the presence of anyone who has Latin names for stumplknockers but... Finally they have launched one I don't believe. I cannot believe it and I am a real believer. It is just too much for me and I fear no amount of proof will convince. I say this with all humility and confess that limitless space is another thing that bugs me a little.

It comes from no less a publication than National Geographic Magazine, a publication I've never caught in error, and one which is so painstakingly researched it always goes a notch deeper than I have on any given outdoor subject. Here's the stopper:

In a truly spellbinding discourse about the spawning habits of Pacific salmon which return through hundreds of miles of ocean and up hundreds of miles of dirty rivers to reach the stream of their birth, the article refers to the sensory marvels which bring the fish home for spawning and death. Their acuteness is nigh incredible but must be accepted. By illustration, the author, Dr. Clarence P. Ridg, says that an eel can discern the presence of alcohol in water even though it is diluted by the amount of one ten-thousandth of alcohol to the contents of Lake Superior.

I don't believe it, Doctor. I just don't believe it. I have no proof and so I fall back upon the standard response of all confused people of ignorance. I just don't believe it.

LUCK IS SO OFTEN tied into fishing results that we often go overboard and state that a man is a lucky fisherman when his success is really the result of skill, possibly not apparent to him or his less fortunate friends.

But "luck" seems to crop up in shad fishing more than anywhere else. On a given day the shad may be taking some certain lure because of some slight variation in action and one troller may fill his limit while his companion goes fishless. I've heard more of this phenomenon in shad fishing than anywhere else, even when tackle was identical or traded back and forth.

While trying to develop a good fly fishing technique for shad last winter on the St. Johns River, I first watched a couple of experienced spin fishermen casting from shore, thinking I might be able to fit fly action to their methods. They used the same lures and both were veterans. They stood side by side and one caught seven shad and lost about that number while his friend never had a strike. I did not continue when they changed places, even though the fishless man tried to mimic his friend's reeling and casting—and did a good job of it.

Then I returned to the spot with Ray Donnersberger, who is a master at using sinking fly line, and we threw a variety of flies to the shad. Ray caught plenty of fish and lost twice as many, and I don't think I had a single shad strike although we changed position and traded flies. Since the technique appeared pretty simple, I went home talking to myself.

The next day I was back at the spot alone and was disturbed to find I had lost my confidence. Tying on my fly I told myself they wouldn't strike for me anyway. But I simply waded into the river and began catching fish, and continued to catch my share on a third trip with Donnersberger and my wife Debie. No change in method that I could detect. There is a greater story which does involve luck—or possibly black magic.

Ray, who lives in Chicago and spends part of the cold weather in Florida, came over from Crystal River to do some bass fishing with me on the St. Johns and hit a bad day. He fished from 10 a.m. until 5 p.m. without even a strike, not even a "nuisance—nothing. Then at 5 p.m. Ray had one strike and landed an 8-pound bass, bigger than any I've caught on a bug in the St. Johns in almost 20 years of trying. One strike, one fish and that was it. And I don't care if Donnersberger holds a batch of fly fishing records and was voted the fly fisherman of the year by the National Fly Fishing Federation. It was luck!

Stu Apte of Miami, former Keys guide and now a commercial jet pilot, caught a Pacific sailfish weighing 55 pounds on 4-pound spinning line at Pinas Bay, Panama, and I believe this is the Number One light tackle stunt I've heard of. In this case I think we'll even name the kind of line. It was DuPont Stren. It took 45 minutes to hook, fight and land that fish, which is a spinning world record of course.

AN EXPERT CASTER I encountered the other day says that he uses automatic transmission fluid to lubricate his turning spool reel. He says it operates with equal efficiency in all temperatures. Every time I say anything about lubricants some one jumps down my throat. I'm just telling what the man said and he's a good caster.

A PRODUCT OF interest to bait fishermen is the "Miracle Minnow Saver" from the Richford Company, P.O. Box 215, Newbury Heights, Penna. This is a 5-foot hose that can be connected to your spare tire and lets out just enough air to keep minnows happy in your bait bucket. The manufacturer recommends that you put a little extra air in the spare and says it uses 3 to 5 pounds of pressure per hour from your tire. The cost is $4.98.
Florida Youth Camps

It's going to be a memorable season in the history of the Game, Fish Conservation and Fen Fresh Water Fish Commission's conservation camping program, according to Conservation Education extension officers Denver Ste. Claire and Floyd H. Dennard of Ocala. Why? The long dreamed-of South Florida Youth Conservation Camp in Palm Beach County will welcome its very first group of youngsters this year, the ever-popular Ocala Youth Conservation Camp at Lake Eaton in the Ocala National Forest, will be open for its 16th annual fun-filled, interest-packed 10-week season.

Here are the 1969 camping schedules for both camps:

Ocala Camp--June 15-June 26 .......... Boys, Two Weeks
June 26-July 5 .......... Boys, One Week
July 6-July 19 .......... Boys, Two Weeks
July 20-July 26 .......... Boys, One Week
July 27-August 9 .......... Boys, Two Weeks
South Florida Camp--July 6-July 12 .......... Boys, One Week
July 13-July 19 .......... Boys, One Week
July 20-July 28 .......... Boys, One Week
July 27-August 2 .......... Girls, One Week

All campers must be 8 to 14 years of age. Boys may combine two 1-week sessions at the South Florida Camp for a two-week stay. The girls' session at Ocala will be lengthened to two weeks this season in response to the increasing interest of outdoor-minded young ladies in the camp program.

Camping rates are the same for both camps: $30.00 for one week and $60.00 for two weeks. They have remained unchanged for several years. The fee covers everything from food, shelter, study and handcraft materials, medical care, insurance, instruction, and the use of sporting equipment.

"Platoon" now are to set the cutoff at 50 to 70 youngsters per encampment this first season at the South Florida Camp," says Dennard, "but we are confident the facilities will be ready to accommodate 100 to 125 campers next year, which is about the same number that can be accommodated per session at Ocala." Ten concrete block cabins are eventually planned for the South Florida Camp but only one is standing and it will be used as the administration building this summer. (Each will house ten campers and two counselors.) Until they are built, camping will be "for real"—under the crooks—in tents erected over concrete floors.

An administration/meeting/hall/recreation building complex is also planned for the future as its funds become available. But for the 1969 opening, a mess tent will serve. The drinking water supply has been assured through a contribution and a complete camp sanitation plant will be finished for the opening season. Of most importance to the youngsters, the fishing and swimming areas are ready and reports are that the bass and bream are the scrappiest to be found.

The purpose of the entire youth camp program is to encourage Florida's young people to take an active interest in matters relating to wildlife and other natural resources and to teach them the basics of conservation and ecology. The curriculum has been carefully arranged to include periods in which campers become acquainted with many healthful forms of outdoor recreation—fishing, hunting, camping, archery, firearms safety, and many phases of nature study.

Plenty of time is set aside for fun, too. There are games, songs, talent shows, campfire stories, water sports and impromptu athletic competitions—"all supervised but without strict regimentation."

Many camp staffers and counselors are being secured from Florida colleges and universities. All must meet rigid standards. Special instructors will come from various agencies and schools, including the staff of the Game and Fresh Water Fish Commission.

A fund drive is continuing to complete the South Florida Camp. Cash, building materials, furnishings, sporting equipment, labor, and more cash are needed. Dennard reports the largest cash contribution to date was a gift of $10,000.00 from an anonymous benefactor. The smallest, he reported, was a hand-lettered note from a West Palm Beach meeting at which a fund appeal was made. It came from a seven-year-old boy who said he, too, wanted to help because he hoped to attend camp someday. It was only 25¢—two shiny new pennies—but it was gratefully accepted and deposited in the camp fund.

For full information and registration forms, write or call the Youth Conservation Camp at 551 North Military Trail, West Palm Beach, Florida 33406, phone (305) 683-0748 (South Florida Camp), or 1239 S.W. 10th Street, Ocala, Florida 32670 (Ocala Camp), phone (904) 622-7158.

Wildlife Officer Notes

Florida wildlife officers have seized 16,200 pounds of bootleg fresh water game fish—over eight tons—on the state's highways in recent months, according to Maj. Bradley Goodson, Chief of Law Enforcement Division, Tallahassee. The largest hauls came in January, February and March. Speckled perch was the predominant species involved.

Twenty-four persons were arrested in connection with the unlawful fish marketing operations and charged with at least 50 separate conservation law violations. Seven of the counts involved the unlawful possession or transportation of game animals—over 700 pounds of wild rabbits, also bound for the illegal market when seized.

Four truckloads of black crappie, or "specks," accounted for over half the total poundage. Two were seized in Okecokeeho County and two near the Georgia-Florida state line in Hamilton County. All were headed north. Investigation revealed that virtually all the fish came from south Florida and that most were bound for out-of-state markets, some moving in licensed commercial fish dealers' marked trucks. In all cases, officers reported the fish showed visible signs of having been netted or trapped.

Included in the total poundage figure were approximately 2,000 pounds of fish seized from three different load by wildlife officers in DeSoto County, another 800 pounds seized in Hillsborough County through the cooperation of the Tampa Police Department. According to Captain David Starling, Regional Law Enforcement Supervisor, Lakeland, a vehicle was stopped by the police for a traffic violation, the fish were discovered, and the wildlife officers were called. The DeSoto County cases came harder. They were the result of ten officers working a total of 3,120 hours manning roadside checkpoints looking for suspected fish-hauling vehicles. The largest of these three hauls came to 1,400 pounds; the other two to about 300 pounds each.

"Patience, cooperation, and good communications are the keys to the effective combating of market fishermen and hunters and their associates, the buyers, haulers and sellers," says Maj. Goodson. "The truth of his statement is illustrated in the following four cases, all typical."

In the first, wildlife officers of the Everglades Region had been working systematically for three weeks to nail a particular refrigerated truck suspected of being used to haul game fish periodically. But since it was also used for legitimate commercial fish hauling, the timing had to be precise; if an arrest was to be made. Long hours of surveillance became necessary. The officers worked in shifts. According to Lt. Elliott Lott, Area Supervisor, Okecokeeho, his officers had narrowly missed stopping the well-known vehicle on a previous occasion after an all-night effort. Information about the planned run had come too late.

But persistence and planning eventually paid off. When apprehended in mid-January, the driver had (Continued on next page)
The second case was similar. In late February, wildlife officers Herre, Roberts, Roy Raymond of Vero Beach, and Jim Cook, West Palm Beach, had been conducting a 24-hour surveillance for seven days when they finally stopped their second fish company truck. This one was loaded with 2,000 pounds of well-iced game fish and is thought to have been headed for Georgia outlets.

This driver also plead guilty to charges of unlawfully having and hauling too many fresh water game fish and paid a fine of $400.00. A check of Commission records revealed he had been similarly charged and convicted in Columbia County ten years before.

Statewide planning and good liaison helped Northeast Region officers E. F. Reynolds, Perry, and C. T. Wright, Live Oak, nab a man and his female companion, and a pickup/camper hauling 1,600 pounds of panfish in a third case. Attempts had been made since September 1st to catch this known hauler. It was not until mid-February that the pieces all fell into place. Twenty wildlife officers had been working the familiar 24-hour watch routine, in 12-hour shifts, covering all the likely routes out of the state, when the innocent looking vehicle was spotted by officers in an unmarked car. After the description and tag number were verified by two deputies, the truck made its way to Wilbur's report, the border is usually longer, wider, and more intensely colored in the male than in the female.

One of the bread-and-butter fish in Florida's sport-fishing economy is the shellcracker, or red ear sunfish.

If you aren't convinced, on a warm spring morning eavesdrop at a flourishing bait dealer's counter to find out how those purchased cartons of worms are going to be used.

Or better yet, watch, the fishing activity where shellcrackers and fishermen congregate over deep-water shell bars or over vegetated shallows during the spawning season.

Because this fish and its continued well-being is important to the State of Florida, and because any future Florida fishing is dependent directly upon management techniques which are gained through life history studies, the shellcracker is currently undergoing an investigation titled "Shellcracker Study" by Project Leader Bob L. Wilbur and Fisheries Aide Joe Crumpton, both working out of the Game and Fresh Water Fish laboratory at Estus. The project is supported by state and federal funds.

The shellcracker (Lepomis microlophus) belongs to that confusing group of sunfishes or "bream," many of which look alike and most of which have confusing and multiple common names.

It ranges along the Mississippi River Valley, then through the southern tier of states from Texas eastward. A desirable fish, it has been widely introduced into many other states.

In Florida, the shellcracker can be readily identified by the bright red or orange margin which encircles the edge of the opercular flap, that short backward-extending part of the gill cover. According to Wilbur's report, the border is usually longer, wider, and more intensely colored in the male than in the female.

By ART HUTT

MAY, 1969

fisheries biologists are taking a close look at a scrappy panfish

the

Shellcracker

By ART HUTT

ONE OF THE bread-and-butter fish in Florida's sport-fishing economy is the shellcracker, or red ear sunfish.

In overall appearance, the shellcracker has a silvery olive or bluish-olive coloration interrupted by more than a hint of from five-to-ten darker vertical bars. The underbelly is commonly yellowish.

Unlike the common bluegill, the shellcracker lacks the dark spot at the rear portion of the dorsal fin. It is somewhat chunkier than the bluegill, too.

The shellcracker likes to dine on snails, possessing an unusual internal modification to help it crush shells. Fifth gill arches on most fish have "thorn-teeth" of some sort but in a shellcracker the structure is sturdily built and with heavy teeth on the middle surfaces of these gill arches--just the thing for cracking the shells to get to the tidbits inside.

Back in March of 1965, Mr. Ronald D. Greary, Jr., caught a 2-pound, 15-ounce shellcracker while fishing...
While all these collection methods have their uses, the otter trawl seems to have the edge as it will operate in deep water, yet cover a lot of territory as compared to the trammel or Gill net. Essentially, the otter trawl consists of a short length of net with a wooden board attached to each end. When the gear is dragged behind a moving boat, the boards act as vases to keep the net spread out and running deep. Drawbacks of this sampling tool include the delicacy of adjustment of the wings, the potential of snagging and ripping the net on bottom obstacles, and the amounts of litter other than fish that comes up with the gear. Plainly, it is messy work, particularly in muck-bottomed situations and where, like Griffin, pounds and mounds of mudge larvae cases come up with most drags.

In Weir, samplings revealed that shellcrackers inhabited the deeper waters (up to 20 feet deep) and did not concentrate along the shoreline areas. Griffin shellcrackers utilized nearly every part of the lake. To verify the value of marsh areas to shellcrackers, samplings were made in this type habitat. The Lake Griffin marsh, about 4,000 acres, revealed that shellcrackers were using it for feeding and reproduction, with a marsh population of these fish nearly equal to the lake population.

From other supporting work in the Lake Yale marsh and in Conservation Area No. 3 in the Everglades, it would appear that these and similar marshes were suitable for the well-being and reproduction of these fish.

Each fish collected is catalogued by the "where," "when," and "how," then followed by lab checks to determine sex, length, weight, condition factor, and reproductive condition. Stomach content analyses are made as is an egg-count, if eggs are present. As far as the research has gone to date it seems obvious that shellcrackers tolerate, even thrive in, a lake that is somewhat enriched (like Griffin) than they do in a less nutrient-laden lake (like Weir). The researchers have established that there are more shellcrackers in Griffin than Weir and that they seem to be bigger and healthier. While water quality may not affect shellcrackers directly, the influence on the fish's surroundings—available food, cover, spawning sites—may be the determining factor.

In general, it appears as though Florida shellcrackers live for 3 years or so and reach an average length of 12 inches. Growth is rapid—up to 5 inches by the end of the first year with another 2 inches added the second year. While these fish have the ability to spawn in their first year, spawning normally commences when they are two years old.

Along with other Florida researchers, Wilbur agrees that the urge to spawn most commonly occurs at water temperatures over 70 degrees. Bedding may start as early as February in the Everglades (an area which has more shellcrackers than bluegills) and extend up into September although the statewide top months seem to be March, April, May and June.

Spawning time varies from lake to lake, too. It is heaviest in Griffin in March and April, in Weir during June and July.

They spawn in groups, one biologist reporting as many as 300 nests in one 1,500 square-foot area in the St. Johns.

Normally, nests are made about 2- to 8 inches apart, averaging about 15 inches in diameter. According to the bottom type, the male fans out a depression of from 2-to-4 inches, or on muck bottoms, cleans off roots, then after spawning with the female, defends the eggs from intruders.

Food preferences most likely depend upon availability, Wilbur figures. At neither Weir nor Griffin did shellcrackers show a marked desire for snails, although previous investigations on other Florida lakes and the St. Johns frequently revealed that snails were the predominant diet.

A. C. Chable, in his Master's thesis (University of Florida), gives a vivid account of how a shellcracker tackles a snail:

"Upon finding a snail on the bottom, the shellcracker assumes a vertical position and literally dives into the sand, head first. This is accompanied by excessively rapid movements of the dorsal and pectoral fins. The disturbed sand rises in a cloud almost obscuring the forward part of the fish. After the snail has been taken into the mouth, the fish assumes a horizontal position on or near the bottom, and after a few seconds spits out a few shell fragments."

In Weir, mayfly larvae were most eaten by shellcrackers, with a wide assortment of other goodies thrown in as the fish went through various size classes and as seasonal availabilities of the food shifted.

In Griffin, a tiny crustacean (Hyalella), midge larvae, and snails were their three preferences. The Shellcracker Study is an exacting, comprehensive endeavor, all aimed at uncovering life-history facts about this fish which will aid the fisheries management biologists to develop techniques designed to keep this fish around for awhile and available to the fishermen.

While popular now as a diminutive game fish, the shellcracker's tolerance of somewhat polluted conditions may double its popularity in the future.
There are 33 Florida Wildlife Management Areas open to hunting during the 1969-1970 season. The numbers that precede each Area name, in the summary, correspond with numbered locations appearing on the map.

Detailed maps and COMPLETE REGULATIONS for the individual Management Areas may be obtained from Commission offices listed on page 3, or at the Management Areas during the Area's open seasons.

Vehicle-No motor-powered vehicle shall operate on any part of any management area designated as closed to vehicular traffic. The use of two-wheeled motor-powered vehicles is prohibited on any roads or trails not open to or used by four-wheeled vehicles, unless otherwise provided by area regulations. On most management areas vehicles are permitted only on established roads. Parked vehicles must not obstruct roads or firebreaks.

Littering—Florida law prohibits littering of public lands or highways. Persons convicted of throwing or dumping refuse or rubbish thereon are subject to a $100.00 fine.

Intoxication—Intoxicated persons will not be allowed to hunt on wildlife management areas.

1969 - 1970

There are 33 Florida Wildlife Management Areas open to hunting during the 1969-1970 season.
<table>
<thead>
<tr>
<th>Wildlife Management Areas</th>
<th>1970</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>West Northwest Region</strong></td>
<td></td>
</tr>
<tr>
<td>1-—St. Regis Wildlife Management Area</td>
<td></td>
</tr>
<tr>
<td>Open Season: Hunting—November 15 through March 1.</td>
<td>Fishing and Fugging prohibited.</td>
</tr>
<tr>
<td>Legal to Take: Quail, squirrel and rabbit.</td>
<td>General Regulations: Camped prohibited. No rifles allowed.</td>
</tr>
<tr>
<td>2—Blackwater Wildlife Management Area</td>
<td></td>
</tr>
<tr>
<td>Open Season: Hunting—November 15 through January 18.</td>
<td>Fishing and Fugging—Permitted throughout the year except on hot-hunt area.</td>
</tr>
<tr>
<td>Legal to Take: All legal game, fish, frogs and fur-bearing animals.</td>
<td>General Regulations: Restricted camping permitted. No rifles allowed.</td>
</tr>
<tr>
<td>Archery Season</td>
<td></td>
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<tr>
<td>Open Season: Hunting—September 24 through October 31.</td>
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<tr>
<td>Spring Gobbler Season</td>
<td></td>
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<tr>
<td>Open Season: Hunting—March 21 through April 5.</td>
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</tr>
<tr>
<td>3—Elin Field Wildlife Management Area</td>
<td></td>
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<tr>
<td>Area Regulations:</td>
<td></td>
</tr>
<tr>
<td>2. Hunting and fishing maps and regulations may be obtained by writing to: ADTC/EADBUN, Natural Resources Branch, Eglin AFB, Florida 32542.</td>
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</tr>
<tr>
<td>3. Hunting and fishing permitted only on portions of the area designated on Air Force maps.</td>
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</tr>
<tr>
<td>Archery Season</td>
<td></td>
</tr>
<tr>
<td>Open Season: Hunting—August 29 through November 16.</td>
<td></td>
</tr>
<tr>
<td>Legal to Take: All legal game (except bear), fish, frogs and fur-bearing animals.</td>
<td>General Regulations: Restricted camping permitted. No rifles allowed.</td>
</tr>
<tr>
<td>4—Point Washington Wildlife Management Area</td>
<td></td>
</tr>
<tr>
<td>Open Season: Hunting—November 15 through January 18.</td>
<td></td>
</tr>
<tr>
<td>Legal to Take: All legal game (except bear), fish, frogs and fur-bearing animals.</td>
<td>General Regulations: Restricted camping permitted. No rifles allowed.</td>
</tr>
<tr>
<td>5—Goslin Wildlife Management Area</td>
<td></td>
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<tr>
<td>Compartment A—That portion of the area in Bay County south of Woods Road 101 and north of State Road 22.</td>
<td></td>
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<tr>
<td>Open Season: Hunting—July 1 through March 1.</td>
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</tr>
<tr>
<td>Fishing and Fugging—Permitted throughout the year.</td>
<td></td>
</tr>
<tr>
<td>Legal to Take: All legal game (except deer, turkey and bear) and fur-bearing animals.</td>
<td>General Regulations: Camped prohibited.</td>
</tr>
<tr>
<td>(Quail and squirrel season from Nov. 15 through March 1.)</td>
<td></td>
</tr>
<tr>
<td>General Regulations:</td>
<td></td>
</tr>
<tr>
<td>1. Camped prohibited.</td>
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<tr>
<td>2. Firearms other than a .22 rimfire pistol or single shot .22 rimfire rifle using .22 short cartridges prohibited July 1 through November 14.</td>
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<tr>
<td>Compartment B—All of the management area except Compartment A.</td>
<td></td>
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<tr>
<td>Open Season: Hunting—November 15 through March 1.</td>
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</tr>
<tr>
<td>Fishing and Fugging—Permitted throughout the year.</td>
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</tr>
<tr>
<td>Legal to Take: All legal game (except deer, turkey and bear).</td>
<td>General Regulations: The taking of fur-bearing animals is prohibited.</td>
</tr>
<tr>
<td>General Regulations:</td>
<td></td>
</tr>
<tr>
<td>1. Dogs other than dog dogs prohibited.</td>
<td></td>
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<tr>
<td>2. Restricted camping permitted.</td>
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<tr>
<td>3. The possession of centerfire rifles or shotgun shells containing shot larger than No. 6 is prohibited.</td>
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</tr>
<tr>
<td>6—Edward Ball Wildlife Management Area</td>
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<tr>
<td>The newly established Edward Ball Wildlife Management Area will not be open to hunting during the 1969-70 hunting season.</td>
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</tr>
<tr>
<td>7—Liberty Wildlife Management Area</td>
<td></td>
</tr>
<tr>
<td>Fishing and Fugging—Permitted throughout the year.</td>
<td>General Regulations: No rifles or pistols allowed. Shot larger than No. 6 prohibited.</td>
</tr>
<tr>
<td>Legal to Take: All legal game (except bear).</td>
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<tr>
<td>8—Leon-Wakulla Wildlife Management Area</td>
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<tr>
<td>Open Season: Hunting—November 15 through January 18.</td>
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</tr>
<tr>
<td>(Quail and squirrel through March 1.)</td>
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<tr>
<td>Trapping—January 19 through March 1.</td>
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<tr>
<td>Fishing and Fugging—Permitted throughout the year.</td>
<td>General Regulations: No rifles or pistols allowed. Shot larger than No. 6 prohibited.</td>
</tr>
<tr>
<td>Legal to Take: All legal game (except bear).</td>
<td></td>
</tr>
<tr>
<td>9—Apalachicola Wildlife Management Area</td>
<td></td>
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<tr>
<td>Open Season: Hunting—November 15 through January 18.</td>
<td></td>
</tr>
<tr>
<td>Fishing and Fugging—Permitted throughout the year.</td>
<td>General Regulations: No rifles or pistols allowed. Shot larger than No. 6 prohibited.</td>
</tr>
<tr>
<td>Legal to Take: All legal game (except bear).</td>
<td></td>
</tr>
<tr>
<td>10—Robert Best Wildlife Management Area</td>
<td></td>
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<tr>
<td>Open Season: Hunting—November 15 through January 18.</td>
<td></td>
</tr>
<tr>
<td>(Quail and squirrel through March 1.)</td>
<td></td>
</tr>
<tr>
<td>Trapping—January 19 through March 1.</td>
<td></td>
</tr>
<tr>
<td>Fishing and Fugging—Permitted throughout the year.</td>
<td>General Regulations: No rifles or pistols allowed. Shot larger than No. 6 prohibited.</td>
</tr>
<tr>
<td>Legal to Take: All legal game (except bear).</td>
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</tr>
<tr>
<td>St. Vincent Wildlife Management Area</td>
<td></td>
</tr>
<tr>
<td>(Sir Vincent National Wildlife Refuge)</td>
<td></td>
</tr>
<tr>
<td>Fishing and trout use will be in accordance with regulations of the Department of the Interior Bureau of Sport Fisheries &amp; Wildlife.</td>
<td></td>
</tr>
</tbody>
</table>
It is unlawful for any person to throw or dump refuse or rubbish of any kind on any highway or public lands. This low Section 82-1.36, Florida Statutes) carries a $100.00 fine, and provides for enforcement by all peace officers and the officers of the Florida Game and Fresh Water Fish Commission.

**Open Season:** Hunting-November 1 through January 4.

**Legal to Take:** All legal game (including wild hogs), fish, frogs and fur-bearing animals.

**General Regulations:** Hunting prohibited in that portion of the area south of U.S. 98 in Jefferson and Wakulla counties.

**Marsh Hen Season**

**Open Season:** Hunting-The hunting of rails and gallinules permitted only in the Hickory Mound Impoundment area, Taylor County, within Federally established season.

**12—Tide Swamp Wildlife Management Area**

**Open Season:** Hunting-November 1 through January 4.

**Legal to Take:** All legal game, fish, frogs and fur-bearing animals.

**General Regulations:** Hunting prohibited. No dogs allowed.

**Spring Gobbler Season**

**Open Season:** Hunting—March 21 through April 5.

**Detailed maps and COMPLETE LAWS for individual Management Areas may be obtained from Regional Offices, listed on page 3, or at the Management Area during the Area’s open season for hunting.**

**13—Steinhatchee Wildlife Management Area**

**Open Season:** Hunting-November 1 through January 4.

**Quail and squirrel through February 22.**

**General Regulations:** Restricted camping permitted.

**Spring Gobbler Season**

**Open Season:** Hunting—March 21 through April 5.

**General Regulations:** Hunting prohibited. No fires allowed.

**Spring Gobbler Season**

**Open Season:** Hunting—March 21 through April 5.

**Legal to Take:** All legal game except turkey, including wild hogs, fish, frogs and fur-bearing animals.

**General Regulations:** Hunting prohibited. No fires allowed.

**15—Gulf Hammock Wildlife Management Area**

**Open Season:** Hunting—November 1 through January 4.

**Wild hogs through November 20 only.**

**General Regulations:** Hunting prohibited in that portion of the area north of State Roads 231 and Widows Trails 4, 5 and 9.

**16—Adams Posture Wildlife Management Area**

**Open Season:** Hunting-November 1 through January 4.

**Trapping-January 5 through March 1, south of Interstate Highway 10.**

**Fishing and Frogging—Permitted throughout the year.**

**Legal to Take:** All legal game, fish, frogs and fur-bearing animals.

**General Regulations:** Hunting prohibited. No dogs allowed.

**Spring Gobbler Season**

**Open Season:** Hunting—March 21 through April 5.

**17—Okeechobee Wildlife Management Area**

**Open Season:** Hunting-November 1 through January 4.

**Quail and squirrel through February 22 south of Interstate Highway 10.**

**Trapping-January 5 through March 1.**

**Fishing and Frogging—Permitted throughout the year.**

**Legal to Take:** All legal game (except turkey), fish, frogs and fur-bearing animals.

**General Regulations:** Restricted camping permitted. No dogs allowed.

**Archery Season**

**Open Season:** Hunting—September 13 through October 3.

**General Regulations:** Hunting prohibited. No fires allowed.

**18—Nassau Wildlife Management Area**

**Open Season:** Hunting-November 1 through January 4.

**Quail and squirrel through February 22.**

**Trapping-January 5 through March 1.**

**Fishing and Frogging—Permitted throughout the year.**

**Legal to Take:** All legal game (excluding wild hogs), fish, frogs and fur-bearing animals.

**General Regulations:**

1. Restricted camping permitted.
2. Dogs other than bird dogs prohibited in that portion of the area located on the north of the St. Marys River, on the east by State Road 115-A, and on the south and west by Woods Road 43. Dogs other than bird dogs prohibited in entire management area after January 4.

**Spring Gobbler Season**

**Open Season:** Hunting—March 21 through April 5.

**General Regulations:** Hunting prohibited. No fires allowed.

**19—Lake Butler Wildlife Management Area**

**Open Season:** Hunting—November 1 through January 4.

**Trapping—January 5 through March 1.**

**Legal to Take:** All legal game except turkey, including wild hogs and fur-bearing animals.

**General Regulations:**

1. Hunting prohibited.
2. Hunters must check in and out at checking stations. Check stations open November 1 through November 9; closed November 10 through January 4.
3. Birds other than bird dogs prohibited in that portion of the area north of State Roads 16 and 215, and west of State Road 225 and north of State Road 230. 

**Archery Hunt**

**Open Season:** Hunting—October 11 & 12, 18 & 19 and 25 & 26.

**General Regulations:** Hunting prohibited. No fires allowed, except turkeys and wild hogs.

**General Regulations:** Hunting prohibited. No fires allowed, except turkeys and wild hogs.

**20—Camping and Hiking Management Area**

**Open Season:** Hunting—November 1 through January 4.

**Trapping—January 5 through March 1.**

**Fishing and Frogging—Permitted throughout the year.**

**Legal to Take:** All legal game except turkey, including wild hogs and fur-bearing animals.

**General Regulations:**

1. Hunting prohibited.
2. Hunters must check in and out at checking stations.
3. Dogs other than bird dogs prohibited in that portion of the area north of State Roads 16 and 215. 

**THE GAME LAW VIOLATOR IS A THIEF!**
Central Region

21—Guana River Wildlife Management Area

Open Season: Hunting—November 1 through January 4.
Fishing—Permit from landowner required.

Legal to Take: All legal game, fish, and fur-bearing animals.

General Regulations:
1. Hunting must be by day only.
2. Dogs prohibited south of the main road from Main Base to Fort Kissimmee.
3. Hunting prohibited in the hatchery area.
4. No possession or use of rifles or shotgun shells containing shot larger than No. 4.

Open Season: Spring Gobbler Season—March 21 through April 5.
Fishing—Permit from landowner required.

Legal to Take: All legal game, fish, and fur-bearing animals.

General Regulations:
1. Restricted camping permitted. No rifles allowed.
2. Special Gun Hunt Permit required for November 1 to January 4.
3. No more than 1200 hunters may participate in opening weekend hunt.
4. Dogs other than bird dogs prohibited.

22—Ocala Wildlife Management Area

Open Season: Hunting—November 1 through January 4.
Fishing—Permit from landowner required.

Legal to Take: All legal game, fish, and fur-bearing animals.

General Regulations:
1. Hunting must be by day only.
2. Dogs other than bird dogs prohibited.
3. No more than 1200 hunters may participate in opening weekend hunt.
4. Dogs other than bird dogs prohibited.

Spring Gobbler Season—March 21 through April 5.
Fishing—Permit from landowner required.

Legal to Take: All legal game, fish, and fur-bearing animals.

General Regulations:
1. Restricted camping permitted. No rifles allowed.
2. Special Gun Hunt Permit required for November 1 to January 4.
3. No more than 1200 hunters may participate in opening weekend hunt.
4. Dogs other than bird dogs prohibited.

Archery Season—October 1 through October 3.

Legal to Take: All legal game, fish, and fur-bearing animals.

South Florida Region

23—Timucua Wildlife Management Area

Open Season: Hunting—November 1 through January 4.
Fishing—Permit from landowner required.

Legal to Take: All legal game, fish, and fur-bearing animals.

General Regulations:
1. Restricted camping permitted. No rifles allowed.
2. Special Gun Hunt Permit required for November 1 to January 4.
3. No more than 1200 hunters may participate in opening weekend hunt.
4. Dogs other than bird dogs prohibited.

30—Cecil M. Webb Wildlife Management Area

Open Season: Hunting—November 1 through February 22.
Fishing—Permit from landowner required.

Legal to Take: All legal game, fish, and fur-bearing animals.

General Regulations:
1. Restricted camping permitted. No rifles allowed.
2. Special Gun Hunt Permit required for November 1 to January 4.
3. No more than 1200 hunters may participate in opening weekend hunt.
4. Dogs other than bird dogs prohibited.

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Fishing—Permit from landowner required.

General Regulations:
1. Restricted camping permitted. No rifles allowed.
2. Special Gun Hunt Permit required for November 1 to January 4.
3. No more than 1200 hunters may participate in opening weekend hunt.
4. Dogs other than bird dogs prohibited.

Fishing—Permit from landowner required.

General Regulations:
1. Restricted camping permitted. No rifles allowed.
2. Limited to take: All legal game, including wild hogs, fish, and fur-bearing animals.

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2. Special Gun Hunt Permit required for November 1 to January 4.
3. No more than 1200 hunters may participate in opening weekend hunt.
4. Dogs other than bird dogs prohibited.

Fishing—Permit from landowner required.

General Regulations:
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2. Limited to take: All legal game, including wild hogs, fish, and fur-bearing animals.

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**Fresh Water Fishing Regulations**

**Method of Taking Fresh Water Fish**

Game fish may be taken with pole and line, rod and reel, hook, spinner, or troll. Non-game fish may be taken with bush hook, setline or trotline baited with cut bait or similar live bait: Cast nets having not more than ONE INCH stretched mesh, not to exceed 20 feet in length, or more than 4 feet in depth. Minnow traps not to exceed 24 inches in length, 12 inches in diameter, with funnel entrance not more than one inch in diameter. Any game fish, if taken in these nets, seines, or traps, shall be returned immediately and alive to the waters from which they were taken.

**Method of Taking Boat**

The following methods may be used for the taking of minnows, fresh water shrimp and similar live bait: Cast nets having not more than ONE INCH stretched mesh, and not to exceed 7 feet in length, or 14 feet in spread. Minnow dip-nets not over 4 feet in diameter. Minnow seine having not more than ONE INCH stretched mesh, and not to exceed 20 feet in length or more than 4 feet in depth. Minnow traps not to exceed 24 inches in length, 12 inches in diameter, with funnel entrance not more than one inch in diameter. Any game fish, if taken in these nets, seines, or traps, shall be returned immediately and alive to the waters from which they were taken.

**Residents of Florida**

Citizens of the United States who have continuously resided in the State for one year, and six months in the County, prior to making application for hunting, fishing or trapping licenses, and servicemen stationed in Florida, are considered residents unless licenses to hunt and fish are concerned.

**Fishing Information**

For localized information about fresh-water fishing, write to the Chamber of Commerce in the city nearest the area in which you are interested. For general information, write to Florida Game and Fresh Water Fish Commission, Tallahassee, Florida 32304. Commission Regional offices are at Panama City, Lake City, Ocala, Lakeland, West Palm Beach, listed on page 3.

**Commercial Fishing**

A commercial fish dealer's license, in addition to regular fishing license, is needed to take fish by use of traps, set hooks, round nets, set nets, long nets, etc. permits required for use of setline nets and hoop set, and license needed for same are issued by Game and Fresh Water Fish Commission.

**DAY’S BAG LIMIT**

10 Black Bass—15 Chain Pickerel
50 Tilapia
50 Panfish: Bream, Perch, and Red-tinned Pike Individually, or in aggregate

**SPECIAL DAILY BAG LIMITS**


In Dade, Monroe, Broward or Collier (except Lake Trafford) counties: 70 Panfish.

**Florida’s Fish Management Areas**

Copies of regulations applying to each fish management area are available at the Tallahassee and regional offices of the Game and Fresh Water Fish Commission and at the offices of the County Judges.

**General regulations**

1. No special license or permit is required to fish in Florida Fish Management Areas, but valid fishing licenses are required except for residents 65 years of age and older, and all children under 15, when fresh water fishing by any method.

2. The possession of fishing tackle is prohibited on any fish management area that is closed to fishing.

3. Daily bag limits and methods of taking fresh water fish shall be as generally established for the State except as provided for a particular fish management area.

4. Possession entering or leaving fish management areas. It is unlawful to have desiganted parts, or associated with, in fish management areas. It is unlawful to have desiganted parts, or associated with, in fish management areas.

5. Any vehicle, boat or other transportation device may be watched while in, leaving, or entering a fish management area.

6. Fishing is prohibited as fixed waters posted as closed to fishing on the U.S. and Canadian border, and Florida and Georgia Fish Management Areas in Bock and Christian Lake, and Leesburg recycling areas, are closed to fishing.

Special regulations are essential in order to properly manage three public fishing areas, and should not impose any undue hardship on the fishermen. Fishing and boating will be permitted on fish management areas subject to existing rules and regulations of the Commission, or to such other special regulations as apply to particular fish management areas.
I won't dwell on the millions of speckled perch in Lake Okeechobee and I know that there are thousands of speckled perch fishermen there on any given weekend during the speck season, but to see the crappie army in full force on a Friday afternoon could still shake me.

Two of us pulled up to Joe and Wanda's Camp at the mouth of the Kissimmee River on a mild late winter afternoon aboard a small van camper and toting two boats. One boat was a big, 16-footer with a 55-horse motor and a 9½-horse for get-home insurance and weed chopping, and nested inside it was a 12-foot johnboat that could take the 9½ and rowed like a feather in a canal. The big boat would serve on an Okeechobee bass trip and the little one would work in the FCD ditches further south.

There are two fishing camps at the Kissimmee's mouth plus a camping area maintained by the Central and Southern Florida Flood Control Dist, and everything seemed to be loaded. From the bridge that carries State Highway No. 71 across the river at that point, Buddy Nordmann counted 35 travel trailers and campers at the shore. Parked a little way back were hundreds of them. I go with Buddy Nordmann on fishing trips because he remembers to count campers and things like that, because he will row a boat half of the time and because everyone will go fishing with me. Besides, since he is a sporting goods dealer I hope for sensible comments on lures and fishing methods.

I entered the camp office to register for camping and found myself waiting briefly in line. The young lady who registered me said it was unnecessary to put down my business connection but I wrote Florida Wildlife in the blank space anyway.

"Game warden, eh?" she said.

"No, I'm not a game warden," I explained carefully. "I'm fishing author of Florida Wildlife.

"Same difference," she said. "Game warden."

"No," I started in, and began to explain the difference but I saw she wasn't listening so I asked where to park and walk out.

We didn't need electric or sewer connections and it was a good thing because it appeared that kind of parking space was taken up by semi-permanent guests. We pulled the little van between a tent and a $12,000 house car, neither of which needed connections either.

Launching the 16-footer was easy, but we had to look a little before finding docking space and most of the boats were pulled up on the bank since there was no room for alongside tugs. Fishermen and fisherwomen hurried back and forth along the waterfront with minnow buckets and outboard gas tanks. Motors hummed, puttered and sputtered. The cleaning benches were full and the speckled perch were coming in by the stringerful. When we went to bed the cleaning benches were still busy.

The last thing I heard before beating Nordmann to sleep was a comment by our neighbor.

"There's nothing I love like a campfire," said he in a long-talking, high-pitched voice. "I just may sit here and watch her all night. This is livin'."

From the bridge next morning some of the fishing boats looked like water spiders, cane poles and spinning rods played out in all directions and some of the fishermen worked like metronomes, casting crappies aboard. Sometimes two or three bobbers were down at once, and the happy anglers had reached the state of only mild excitement so they were pretty efficient.

Although the river mouth was pretty muddy that week-end, it didn't seem to affect the minnow gobbling specks and fishing boats lined the mile or so to the lake. Once we went into Okeechobee proper the boats thinned rapidly and no one would have guessed how many thousands of crappie fishermen were at work behind the miles of cattails and reeds.

We went south and west to Tin House Cove, a favorite hangout of bass fisherman as long as I've known about Okeechobee. On the way we hit little clumps of grass occasionally and noted unhappily that the water was muddy. It's several miles to Tin House, and most of the usual route is protected although wind from exactly the wrong direction can turn it into a bumpy ride. There are completely protected boat trails if you know them. We got there about 9 a.m. and found several boats of bass anglers drifting the grass. Since Tin House was protected from the wind, there was much cleaner, definitely clear enough for bass fishing.

I rigged a heavy fly rod with a big popping bug and a plugging outfit with a spoon and pork frog. Nordmann tried some wild-looking gadget left at the store as a sample. Virtually all of the other bass fishermen were fishing weedless plastic worms.

The thing Nordmann was casting would come back and forthing through the water, shaking a yellow plastic skirt and apparently completely immune to hookups. I suggested it also was immune to strikes and fish hooking but I was wrong. He caught a 2-pound bass almost immediately and then attracted a series of swirls and bulges without making contact. He caught most of the fish and we began to test his plug against everything else that looked good. His wife was captivated by a wide margin for the entire trip, even over the old Okeechobee favorites.

By CHARLES WATERMAN

A buoat, lower left, that hit a popping bug in the FCD canal near Holiday Park, south of Belle Glade. Fishermen is Buddy Nordmann. Fishing was so good, that one more speckled perch didn't cause much excitement. These anglers are scoring regularly at mouth of the Kissimmee River, Lake Okeechobee.

I've caught my fair share of bass, have sold many a bass story and enjoyed the sport, but I'm not sure that I would have the same enthusiasm for smallmouth bass as Bass Waterman. Bass Waterman, perhaps the greatest bass writer of our time, is a master of words and describes a bass trip to Lake Okeechobee that left me in awe. His writing is so descriptive, that you can almost smell the fishy aroma and hear the sounds of the water. His love for bass fishing is evident in every sentence, and his knowledge of the sport is second to none. This article is a must-read for any bass angler who wants to experience the thrill of catching those elusive smallmouth bass.
picked' was actually a 'Doofer,' no longer manufactured, but originally created by a Fort Lauderdale firm. A few fishermen are treasuring a small number of survivors.

When things slowed up we moved over to the cattail line and cast against it. Buddy caught one 3-pounder and I found a smaller fish on a popping bug. We had taken 3-pounder and I found a smaller fish on a popping bug. When my fishing turn came I felt a little smug about the whole thing. I went into detail about the scientific reasoning that had gone into my selection of the bare side of the ditch.

"I'll put on a little streamer and work it deep along the underwater stuff," I announced, "I think they're lying too deep for bugs."

The streamer was orange with a silvery mylar body and I raked it back along the deep side of the underwater growth. About the fifth cast it seemed to hang up and I pulled. Nothing gave. Then it moved a little and began sluggish travel toward mid-canal. A little extra pressure and a really good fish jumped. With only a little extra dramatics I worked that fish around the boat and held it firmly. It weighed 3½ pounds and I was very generous with inside bass information for Buddy on the way back to camp. The following day we found slow fishing, but did catch a few small bass and one more 3-pounder on a popping bug.

We pushed the boat back from one of the marked marsh access points for 300 yards and worked the lily pads, but it was pretty rough duty. We didn't give the marsh pad water a fair shake. As usual, when I start chasing around south Florida I hadn't allowed enough time. That's a tour in itself and it takes a lot of snooping to find where the fish are against the steep bank.

I alternated plug and fly outfit. My biggest fish took a popping bug with a sound like a frustrated plumber's friend and another small 1¾-pound bass. I was pretty pleased with inside bass information for Buddy on the way back to camp. The following day we found slow fishing, but did catch a few small bass and one more 3-pounder on a popping bug.

(Continued from preceding page)

The side with the above-surface cover is so obviously the place for fish to lie that almost any cast will start in there. We did, using furred popping bugs, and worked 300 yards without so much as a boil, changing lures and methods regularly and making a long list of excuses for our lack of action.

Then, in a stroke of genius I recommended we fish the other side of the ditch so we tried that.

"Sometimes", I explained, learnedly, "the fish are against the steep bank."

Buddy noted a small swirl next to his bug and on the next cast a warmouth struck and was unceremoniously corn-fielded. It seemed to have weighed a pound. The rest were pretty acceptable fish. One pair of worm fishermen had obviously beaten us pretty badly but we had an average score, released them all, and headed further south the next morning.

South of Okeechobee the FCD canals run everywhere, an impossible quandary for visiting fishermen. Most of them have bass and some of best ditches will take you back into open marsh if you're willing to do a little pushing and paddling.

We went to Holiday Recreation Park on U.S. 27 near Andytown. That's one of three recreation concessions built to specifications of the Florida Game & Fresh Water Fish Commission. There's camping room and bait, boats and motors.

Our 12-foot johnboat is good for canal travel and goes well with 9½ horses. It's light for portage over dikes and I have a clamp-on dolly for the stern. However, the 14-foot aluminum johnboats rented for $3.50 a day would be somewhat better. The added length will give you a steadier base for poling and more comfort for fishing during a long day.

As usual, when I start chasing around south Florida I hadn't allowed enough time. That's a tour in itself and it takes a lot of snooping to find where the fish are against the steep bank. Back at the Holiday camp we visited Jack Horner who fishes a month or so (Continued on next page)
Although this is some of the best bass fishing in Florida, it is not the area for record fish. Ten-pound bass in south Florida are scarce indeed. A 2-pounder is good and a 5-pounder is big in my experience. As a rule you'll find the biggest fish in marsh potholes, in Okeechobee or on the canal bottoms. Surface lures will do a fine job in home potholes or in Okeechobee, but most of your surface bass are rather small in the canals.

Thousands of fishermen fish the Tamiami Trail canal for bass although it's better known nationally for the snook found near its west end. I have found the trail bass run small and there are better fish to be had if you can get some distance from the highway in the FCD reservoir areas. Hence, a fairly powerful motor is an asset.

Briefly, the FCD system is a design of dikes and canals to control flooding and to equalize the flow of water over the sawgrass sea of south Florida. Originally the system was intended only for flood control; lately it's wildlife conservation aspects have been stressed more and more.

When water levels are falling the fish are concentrated in canals. When it gets too low they suffer from lack of oxygen and overcrowding.

There is no place in the state where you can work so easily on your own with minimal equipment at low cost. Spinning, fly or plugging tackle will get the fish.

And leave your cabin cruiser at home.

Price of Permissiveness

Newspapers, periodicals and magazines are over-flowing with comments on the problems which confront the westerner's richest, most affluent and self-indulgent nation. It is regular for everyone to try and correct this self-created monster by advancing his or her pet solution. Too much of what I read is of the kind withlogged solutions and little courage for direct action.

Some claim we have too much, others that it is a case of poor distribution. Some have too much and suffer too little, in any case what was considered sufficient and a direct blessing from the Almighty a few decades ago, is not enough for anyone today.

The American public must face up to the fact that its problems are self-imposed. America should quit feeling sorry for itself, quit all its self-pity and self-indulgences, quit pampering its children, abdul suffering, permissiveness, law enforcement, and the increasing permissiveness attitudes regarding the management of its resources. I hear the question asked, "Don't you agree that resources be given such a priority when people are starving?" I don't know how many people in the United States are actually starving, if any; but more certainly starve if there is a continued misuse of management of resources.

Just how our educators and public officials have been led, pushed or blackjacked into this putty-like philosophy of permissiveness is difficult to determine. The either have too many fuzzy thinkers, or else too many cowards on public payroll. It is a virus that has spread from adults to the young people and the latter accept it with great joy and glee.

The older generation is responsible for all this mess through their own greed, their own desire for a guaranteed living without responsibility and a minimum of effort. Adults who cannot discipline themselves cannot discipline their children. Tough minded application to work is no longer a symbol of dignity and accomplishment. They have created a false philosophy called permissiveness which means letting the kids be the boss. Too many are allowed to throw tantrums if they don't get what they ask for.

Juvenile delinquency is at an all time high. What can be expected in the way of future social environment from such products of our culture? Youngsters with no respect for their parents, for the laws of society, will have no respect for the laws of nature.

Coming generations can revolt against society, revolt against the established laws of the land and possibly change some of them for a time to suit their fancy, but no large group of human beings can outrage nature and prosper, because nature has means of cruel and bitter retaliation.

Permissiveness becomes an arts of debate in the fields of industry and recreation. It becomes a handy posture to forestall or action. Some say that there can be no exact rules laid down, no yardstick for water pollution. That pollution should be a permissive thing in relation to pollution densities or industries, or possible job curtailment. But if pollution has no index as to what is permissive and what is destructive, then the entire issue becomes a matter of diversified interests held on personal attitudes, on profit, loss or indifference.

Pollution is all right in some instances but not in others. This same permissiveness is now being applied to the use of pesticides. Few agree on the attitudes of use.

So long as the use of resources continue to be permissive with no definitions as to what is beneficial and what is destructive, the endless debates simply become an intellectual exercise with nothing (Continued on next page)

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Florida Bait News, Bureau Photo. Americans have been awakened to the tremendous trend toward environment pollution. The response has been favorable in recent years. A permissive solution—poor or—cannot impact sense of subjuected responsibility to next generation.
The tank of slignting in a new scope equipped rifle no longer needs to be the ammunition wasting, frustrating experience many shooters know.

By EDMUND MCLAURIN

"I can't seem to get any shots on the target," he called out over more windage and elevation! Can you tell me what's wrong?"

"Let's have a look!" I suggested. I left my own rifle on its bench rest, action open, and walked over to his bench.

I inquired whether or not he had first bore-sighted his rifle and made preliminary scope sight alignment adjustments before firing any ammunition. He had not.

But the guy was in luck. I happened to have a colimator in my shooting kit, along with a bore-arbor for .30-06 caliber.

For fast, easy sighting-in of rifles, a colimator or optical bore-sighter cannot be beat. Where expensive large caliber ammunition is fired, the optical sight alignment aid will pay for itself many times.

The basic instrument consists of an optical head to which an arbor is precisely fitted. The arbor is simply a short length of round rod of the right diameter to fit single bore diameters .22, 6mm, 6.5mm, .270, .30, .32, .35 and .375 calibers. Bushnell makes three models of adjustable arbors. One takes care of bore diameters from .22 through 7mm; the second from 7mm through .35 caliber, and the third from .35 through .45 caliber—including the .458 Winchester Magnum.

In the field, an optical bore-sighter can be used to check the accuracy of sight alignment, or to... (Continued on next page)
that rifle will have a practical bullet trajectory and kill 180 yards—that is, so long as you continue to use the bullet weight you are now firing,” I told him.

“Fluorescent plastic on which vertical and horizontal aiming marks on which they can be simultaneously aligned. In some commercial targets these features come ready-made.

“Fortunately, most rifle models now come factory-drilled and tapped for scope sight bases, either on top of receiver, on side, or both. This eliminates many possible botched jobs of sight mounting since installed bases, in most cases, will be screwed-on properly positioned and parallel to rifle bore.

Occasionally a scope base must be shimmed, or the inside of a scope tube holding ring shimmed, to bring about correct alignment of scope tube with bore, but not so often as to constitute a scope mounting problem for the average shooter who follows the directions furnished with his scope’s base and tube holding rings.

It is important that the scope tube be positioned in holding rings so that it offers proper eye relief.

When, in subsequent firing, with perfect hold and trigger squeeze, shots cut the corner, you can be sure that your windage adjustment is very close to a perfect zero. Desirably, of course, shooting to establish a normal zero windage setting should be done on a still day, or one with barely perceptible air movement.

For maximum visibility of aiming bullseye at long range, cut and paste a center shaped from bright orange paper or cardboard. The new center is truly vertical alignment.

This is valuable in countries where practice shooting usually can be easily made thereafter.

The value of individual windage and elevation adjustments to achieve satisfactory results, but I soon obtained a fairly accurate bore alignment of the distant target in relation to rear-mounted scope aiming reticle.

The final error wasn’t much. The rifle owner’s next bullet group formed at one o’clock position in the firing of the 6-inch black aiming bullseye. I next made inches-on-paper windage and elevation correction, corresponding to target distance and the value of individual windage and elevation clicks at that particular distance, then told him to shoot another string of shots. This time the shot group formed entirely inside the center “10” ring.

I would have insisted that all initial bore-sighting be done at 25 yards, instead of 100.

At this close range even serious sight misalignment errors will not likely cause the shooter to entirely miss the target paper. Given a registered bullet hole as working point, needed sight adjustments usually can be easily made thereafter.

Also, at only 25 yards range, resolution and related reticle alignment are easy to come by. A bullet hole can be identified beyond all doubt.

I consider it helpful to accurate sighting-in to position each target paper on holding frame so that it takes true vertical and horizontal planes. This can be accomplished by dropping a plumb-line from the top of the target frame, and then placing the target paper under the plumb-line so the dropped line passes right through the center of the aiming bull.

When the vertical portion of the scope’s aiming reticle is aligned on the cord, you know you have truly vertical alignment.

Likewise, the method enables the shooter to accurately detect any existing cant or tilt of scope tube and reticle in the scope’s holding rings, and to make any needed correction before firing.

In a nasty eyebrow cut under certain shooting conditions. Similarly, scope sights designed for use on 22 caliber rifles, with their usual short eye relief, should not be mounted on rifles of heavy recoil.

Understanding the value of scope sight adjustment graduations is important.

Most hunting scopes have internal adjustments for elevation and windage, made by the shooter by moving graduated external dial located under a protective, screw-off cap.

Generally, the individual adjustments are graduated into 1/4 click changes of angle click changes—which means 1/2 inch impact change, per click, at 100 yards, and relatively so at other distances.

Suppose you need to move your windage one inch to the left at 25 yards, 3 clicks are necessary. A sight graduated to give changes of 1/10 of an inch at 100 yards would require 2 clicks for a 1 inch change at that distance, 4 clicks to make the same one inch change at 25 yards, and 8 clicks to achieve one inch bullet impact change at 25 yard range.

Among the items crowding my shooting kit’s interior is a six inch square of thick, transparent plastic, on which vertical and horizontal graduations are marked in waterproof ink, 1/10 inch apart. Where the lines cross is central “0.”

After firing, I place the plastic mat over the aiming bullseye and count up or down, or left or right, or both, the number of inches my sighting shots grouped from true center. If you figure my needed sight changes (clicks) in corresponding inches of change. Usually, next fired shots strike very close to target center.

A quick method of sighting-in, and an ammunition saver, is to use the so-called “one shot method.”

Shooting from a padded rest, with what you consider perfect aim, hold and trigger release, you fire one shot on the target at 25 yard range.

Let’s assume the shot has hit five inches to the right of target center and six inches high; it matters not where, just so long as it has hit the target paper and is visible as a registered bullet hole seen through the scope sight.

Again you aim at the target, taking exactly the same aiming point as formerly—but not actually firing. While either holding the rifle steady yourself or, better still, having a companion hold help hold it immobile, with sights aligned on the former aiming point, move the scope’s adjustments until the reticle “walks across” the target paper and takes final rest on the bullet hole. (At only 25 yards from muzzle this reticle movement and the registered bullet hole can both be seen clearly.)

When you next take normal aim at the bullseye, and execute good aim, hold and trigger release, you can bet your bullet impact point will coincide very closely with your point of aim, instead of being ‘way off.

This method is fast—and sure—but it requires good aim and hold for the first registering shot, and an immobile rifle while the windage and elevation adjustments are being made to bring bullet hole and sight reticle together.

Really, the task of sighting-in a new scope-equipped rifle need not be the ammunition-wasting, frustrating experience many shooters know.
CONSERVATION SCENE

A Computer Nightmare

National compulsory gun registration would require "one of the most gigantic computer operations ever undertaken," according to a recent article in Datamation magazine, reports Bill Tantum, president of Management Consultants, Inc., Bala-Cynwyd, Pa., a management information consulting firm.

Tantum said that he had studied the problem simply as an "academic exercise" since the question of gun registration had often been in the news. He claimed any personal interest in the problem but studied it because no one had explained how the government would go about registering and taxing guns in the U.S., that three million new guns are purchased every year, and that registration would require more than 130 characters.

Each time a gun was sold, bought, or an owner moved, the information would have to be changed and updated, the article concluded.

Fish and Game Managers

KNOWINGLY or unknowingly, sportsmen pose one of the most serious threats to efficient management of fish and game programs today, according to John Marsman, Savage Arms Co. It takes the form of political pressure based on selfishness, short sightedness and oftentimes pure vengeance. It includes the age-old conflict between the armchair hunting and fishing expert and the trained biologist who is paid to manage his programs.

Examples of this type of political interference can be found in many states. Professional conservation men, dedicated to their careers, are being pressured out of jobs for which they are highly qualified and underpaid, and the sportsmen is losing out in the shuffle.

Trained personnel serving the fish and game cause today have not been attracted to their careers by high salaries. Neither is there any glory attached to the work they have chosen. On the contrary, whenever a sportsman de- cides to speak up, it is usually to air a complaint rather than offer a compliment. Perhaps if sportsmen paused a moment to reflect on the matter, they would not be so quick to block or harass changes in fish and game policies through political interference. Game management changes are mostly not imposed for the benefit of a minority group, but are aimed at improving the lot of all sportsmen while protecting the natural resource sportsmen depend on for pleasure.

Therein lies the chief difference between the trained fish and game managers and the license holder who views his 30 years of experience in the field as the sole criterion for being an authority. The former considers the total spectrum of fish and game problems in his state, and makes his decisions accordingly. The latter is concerned chiefly with his own personal hunting and fishing pleasure, which he seems to evaluate only in terms of bag and creel limits.

This is not to say that fish and game administrators should enjoy autonomy and be responsible to no one. A check valve has to be installed somewhere, and sportsmen have functioned quite effectively and visibly in many areas of the country.

It is equally important that fish and game administrators be allowed maximum freedom to manage their programs on the basis of education, experience and scientific data. Political pressure exerted by minority groups of sportsmen for the benefit of a minority of sportsmen is the result of improper game management programs.

This nation is in dire need of qualified men dedicated to the sound management of our natural resources. Many have been lost along the wayside because sportsmen, with limited vision and ulterior motives, instigated enough political influence to force them out. Many more will be sacrificed in years to come.

Don't take it happening in your state. Support your fish and game agency and give it an opportunity to work before condemning it. You will be surprised, in the end analysis, that the department is concerned only with improving your lot as a sportsman.

Environmental Problems

More and more Congress is beginning to realize the pitfalls in dealing with natural resources on a piecemeal basis, the Wildlife Management Institute reports. Individual members and some committees are starting to suggest mechanisms and criteria which will result in the needed contradictory federal assistance policies. The latter is concerned chiefly with his own personal hunting and fishing pleasure, which he seems to evaluate only in terms of bag and creel limits.

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Despite lingering pockets of phosphate slime pollution, south Florida's Peace River has made a near complete recovery from pollution that killed almost all life in a 76-mile stretch of the river in March 1967. Thus concludes an 18-month study of the effects of phosphate slime pollution, conducted by Fishery Biologist Forrest J. Ware, Lakeland.

Ware's study of the Peace River began on March 12, 1967, the day after an earthen dam near Fort Meade burst, releasing between 1,000 and 1,500 acre-feet of slime into the river. "After 15 months the average standing crop of fishes was estimated at 87 pounds per acre and compared favorably with the unpolluted areas of the river," he reports. Early recovery of the fish population was attributed to the marked reinvasion of the Peace from above and below the polluted section and from tributaries. Active spawning of sport fish in the polluted section of the river was noted for the first time 13 months after the fish kill, in the spring of 1968. Growth of fishes during the recovery appeared normal, according to Ware, and by late spring and early summer, 1968, limited sport fishing had returned to the river. "Channel and white catfish, bluegill, spotted sunfish (stumpknocker), and largemouth bass were available in varying quantities. Occasional reports of successful fishermen were received, but for the most part people had the erroneous belief that a fishery did not exist. One marine species, the snook, provided a substantial sport fishery in the lower river, although it was completely unexploited by local fishermen," Ware says.

In August 1967 an agreement was reached by which a pollution settlement of $200,000.00 was paid by the owners of the phosphate mine to the State Board of Health and the Game and Fresh Water Fish Commission—for expenses incurred in tracing the pollution from assessing lands to the state, and for restoration of the river. The best information indicates this is the greatest amount ever paid for water pollution damage in the United States.

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**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 receipt of the following application form that has been properly filled out and signed.

**APPLICATION FOR FLORIDA WILDLIFE FISHING CITATION**

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

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

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<tr>
<td>City</td>
<td>_______________</td>
</tr>
<tr>
<td>State</td>
<td>_______________</td>
</tr>
<tr>
<td>Zip No.</td>
<td>_______________</td>
</tr>
<tr>
<td>Species</td>
<td>_______________</td>
</tr>
<tr>
<td>Weight</td>
<td>_______________</td>
</tr>
<tr>
<td>Length</td>
<td>_______________</td>
</tr>
<tr>
<td>Type of Tackle</td>
<td>_______________</td>
</tr>
<tr>
<td>Boat or Lure Used</td>
<td>_______________</td>
</tr>
<tr>
<td>Where Caught</td>
<td>_______________</td>
</tr>
<tr>
<td>County</td>
<td>_______________</td>
</tr>
<tr>
<td>Date Caught</td>
<td>_______________</td>
</tr>
<tr>
<td>Catch Witnessed By</td>
<td>_______________</td>
</tr>
<tr>
<td>Registered</td>
<td>_______________</td>
</tr>
<tr>
<td>Weighted By</td>
<td>_______________</td>
</tr>
<tr>
<td>Signature of Applicant</td>
<td>_______________</td>
</tr>
</tbody>
</table>

**FLORIDA WILDLIFE**

**ELIGIBILITY REQUIREMENTS**

**SPECIES**

<table>
<thead>
<tr>
<th>LARGEMOUTH BASS</th>
<th>8 pounds or larger</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHAIN PICKEREL</td>
<td>4 pounds or larger</td>
</tr>
<tr>
<td>BLUEGILL (BREAM)</td>
<td>3 1/2 pounds or larger</td>
</tr>
<tr>
<td>SHELLCRACKER</td>
<td>2 pounds or larger</td>
</tr>
<tr>
<td>BLACK CRAPPIE</td>
<td>2 pounds or larger</td>
</tr>
<tr>
<td>RED BREAST</td>
<td>1 pound or larger</td>
</tr>
</tbody>
</table>

All fish must be taken from the fresh waters of the state of Florida, as defined by the Game and Fresh Water Fish Commission. Fish must be caught on conventional fishing tackle, with artificial or live bait, in the presence of at least one witness.

The catch must be weighed and recorded at a fishing camp or tackle store within the state by the owner, manager, or an authorized agent of the respective establishment.

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**For that BIG ONE that didn't get away**

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**Photo By Wallace Wright**
FLORIDA WILDLIFE Magazine
Game & Fresh Water Fish Commission
Tallahassee, Florida 32304

please print or type

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State __________________ Zip Code __

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