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A large, long-tailed, unspotted cat. Tan to brown coloration. Extremely rare throughout the state. Fully protected by state law.

Florida Black Bear

These Large Mammals are a Beneficial and Enjoyable Part of our Environment.

Florida Panther

These Large Mammals are a Beneficial and Enjoyable Part of our Environment.
there is no doubt that Florida's population of the once-endangered reptile is on the rise

**Alligator Management**

**UNDER FLORIDA'S STEADILY INCREASING POPULATION,** the growing use of the state's waters for recreation, and the intrusion into alligator habitat by housing developments and other works of man, continue to place a sometimes thorny problem on the Commission's alligator management and research.

The commission's alligator management and research program is under the direction of the Wildlife Management Division in 1979, which is part of the Florida Fish and Wildlife Conservation Commission. The program is designed to scientifically estimate the alligator population, monitor population trends, and manage conflicts between alligators and man.

The program uses a variety of methods to estimate the alligator population, including aerial surveys, ground surveys, and mark-recapture studies. The alligator population is estimated using a mark-recapture model, which involves capturing and marking a sample of the population, then releasing them back into the environment. After a period of time, another sample is captured, and the number of marked alligators is counted. The proportion of marked alligators in the second sample is used to estimate the size of the population.

The alligator population in Florida is estimated to be around 100,000-150,000 individuals, with a density of 2-4 alligators per square mile in many areas. The population has increased steadily over the past several decades, with a peak in the late 1980s and early 1990s due to improved habitat conditions and reduced hunting pressure. Since then, the population has stabilized, and regulations have been implemented to prevent over-harvesting.

The program also focuses on managing alligator-human conflicts, which are a common issue in areas with high alligator populations. Conflicts can include alligator injuries or deaths, damage to crops, or property, and interference with waterfowl hunting. The program uses a variety of methods to manage these conflicts, including education, non-lethal control measures, and trapping.

In conclusion, Florida's alligator population is on the rise, and the program is working to manage this increase while minimizing conflicts with humans. Continued research and monitoring are necessary to ensure the long-term health of the population and the continued enjoyment of Florida's wildlife resources.

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*Photo by Mike Fogarty*
plan, as advanced by Wildlife Management Division Director Fred W. Stanberry, will be of interest.

The goals of the Commission in regard to alligators include restoration of the species in presently under-stocked habitat; diminishing or eliminating undue public concern and fear about large alligators while permitting the population to continue at healthy levels not detrimental to the species or man; and management of the population as a renewable resource.

There will be no open season on alligators in the usual sense of the term. The Commission will allow harvest of specified numbers of alligators of specified sizes from limited localities, particularly urban areas.

The principal thrust of the alligator harvest is not to establish an alligator hide industry, but to allow the control of those alligators in areas where there are serious conflicts between the animals and people. The Commission, along with other informed people in Florida, understands that the alligator has made good recovery in the state, to the extent that we have serious problems in many areas.

"It appears that alligators, particularly large ones that have lost their fear of man because of feeding or some other reason, must be controlled. This can be done either by employing more personnel to control the alligators at public expense, or by a carefully regulated harvest system under which private enter-
prise handles the problem," Stanberry says, "We favor the latter approach and hope to implement such a program."

"The timing of our action is critical," he continues. "As alligators become more abundant and we have more instances of attacks by alligators upon people, pets, and small domestic livestock, we face an ever-increasing danger of turning the public against the alligator to the degree that either we cannot obtain convictions for killing them or that people take alligator control into their own hands.

"It is not the intent of the Commission to allow alligator harvest in remote wilderness areas where there is no conflict between man and alligators. For example, we see no reason for allowing the taking of alligators in the Big Cypress or the Everglades."

In the matter of problem alligators, the policy of not removing animals less than 4 feet in length will be reinstated. Alligators of this size do not pose a threat to life or property and, especially in view of the manpower shortage, they do not warrant expenditure of time, effort, and money.

There are certain areas of alligator habitat that are below carrying capacity. These specific sites will be delineated by the research staff and regional biologists. Whenever feasible, female alligators from high complaint areas will be moved into under-stocked areas.

Legal harvest offers a good means of achieving continued protection of the alligator, providing for a partial solution to the alligator-people problem and wise utilization of a valuable renewable resource.

There are a number of specific proposals for addressing the present alligator management problem. The following discusses briefly some of the main points to be considered in this light.

A small number of qualified individuals within each administrative area are to be licensed to handle complaint alligators. Qualifications of individuals will be determined by requiring a sworn statement that he has not been convicted of a game law violation within the last 5 years, and that the individual is knowledgeable concerning the capture and handling of alligators and can properly skin and handle alligator products. In addition, each applicant will be interviewed by a board made up of the regional biologist, regional manager, and the law enforcement captain. When both of these requirements are satisfied, the applicant is qualified for a license. If there are more qualified applicants than needed to handle the local problem, licenses will be selected by a random drawing from among the qualifiers.

When a complaint is received, and if it is determined by the Commission that the alligator should be removed and that Game and Fish Commission personnel need not answer the complaint, the licensed trapper will be given a tag or tags authorizing him to harvest the problem animal.

Specific instructions as to the placement of the tag, and specialized skinning instructions, will be provided. Each animal harvested must be recorded on forms provided by the Game and Fish Commission. Information included on the form will be the specific complaint leading to the capture attempt, size of the animal, location and time of day harvested, and number of attempts required to catch the alligator.

Any trapper who has an untagged alligator or hide in his possession and whose records do not list an animal taken within the last 48 hours, will be in violation of the law.

Twice each year (summer and fall) each trapper will be allowed to bring his hides to a central location for validation. After a validation tag is placed on the hide adjoinent to the original tag, the hide is legal to be sold. An auction will be held by the Game and Fresh Water Fish Commission to sell the hides to the highest bidder. Handling fees will be assessed on each hide as prescribed.

The original tag placed on the animal by the trapper has duplicate numbers on it, and one of these sets of numbers will be retained by the game and fish commission while the other will be placed on the hide. The hide can move in interstate commerce, according to federal law, only after the hide is validated and the original tag has been clipped.

Areas with very high complaint rates, and which appear to have legitimate alligator-people conflicts, will be designated as possible removal areas. If such an area exists, surveys by regional biologists and/or alligator project personnel will delineate the problem population and recommend harvest procedures.

There are presently several commercial alligator farms in the state. These establishments claim the capability of hatching and raising alligators in captivity, and it is apparent that this can be done. The economic feasibility of these operations may be open to some question. However, it is not the Commission's responsibility to address that problem. It may be within the agency's responsibility to provide the atmosphere to enable private enterprise to attempt to solve the economic problems. Yet this can be done only if regulations are devised which will assure that alligator farms do not in any way cause a drain upon the wild population.

There are a number of blank spots in our knowledge of the population dynamics of Florida alligators. The Alligator Project is designed to fill in some of the gaps so that management operations will become increasingly efficient as experience is gained. In the meantime, the Commission is proceeding with due caution and a planned program. As with any other good renewable resource management plan, we should be able to eat our cake and have it, too.
Turkey: November 13 through January 23.

Rabbit: No closed season.

Wild Ducks may be taken only during the established deer season. The taking of duck or wild hogs during the primitive weapons season. The use of any duck for hunting deer or wild hogs is prohibited during this period.

PrIMITIVE WEAPONS SEASON

WILD HOGS: Wild hogs may be taken only in Baker or Columbia counties. In Baker County, it is prohibited to take a hog having a height of less than 15 inches; in Columbia County, the shoulder is prohibited, unless otherwise provided by special management area regulations.

Bear: Bear may be taken only in Baker or Columbia Counties and on Tyndall Air Force Base in Bay County during the established open season for the taking of deer, or by special bear permit on designated wildlife management areas. Bear taken in Columbia or Baker Counties cannot be transported outside those counties unless checked and tagged at the Regional Office of the Game and Fresh Water Fish Commission located in Lake City.

SHOOTING HOURS—RESIDENT GAME

One-half hour before sunrise to one-half hour after sunset, except the spring turkey season, when shooting hours will be one-half hour before sunrise to 1:00 p.m.

ARCHERY SEASON (STATEWIDE)

No open season in Broward or Dade counties; in that portion of Palm Beach County south of the St. Lucie River Road; in that portion of Hendry County east of L-1 and L-2 Levees; or in Collier or Monroe counties south of U.S. Highway 41 (hunting permitted in that tract lying between U.S. 41 and the Loop Road).

LOCAL GAME—Deer of either sex, other than fawn, bear (only in Baker or Columbia Counties or on Tyndall Air Force Base in Bay County), turkey (except in the Northwest Region), squirrel, quail and wild hogs with bow and arrow (except crosstree) shall be permitted during the archery season. The use of any untrained hunting dog by any person hunting with bow and arrow is prohibited during the archery season shall be permitted during the archery season. The use of any untrained hunting dog by any person hunting with bow and arrow is prohibited during the archery season.

Squirrel: Hours—Resident Game License, $1-Home County, $2-Owner of other counties, $11.50-Better than Home County.

NON-RESIDENT—Series T—State, $26.50; Series V—State, $11.50, Series M—County, $2.00, Animals of other counties, $11.50.

Resident or Non-Resident, Annual:

Resident License Fee:

Series H—For hunters on licensed private hunting preserves only, $5.00.

Archery Season Permit, $5.00.

Issued from Office of Commission, Tallahassee.

WILD MANAGEMENT AREA PERMIT:

Serious RS:

6.25.

Recreational Permit:

State, 3-day Continuous, required in lieu of Series RS or A/B for entry on management areas for nonhunting purposes, $10.00.

Squirrel:

Fishing:

Sensitive Rods

By CHARLES WATERMAN

ROD SENSITIVITY, whatever that is, comes up in many kinds of fishing. The definition’s vague because it means different things to different fishermen, but Lew Childers, of the Speed Stick casting rods, came up with a sensitivity test that not only bagged me before I tried it but shook me off after I tried it.

The purpose of the test is to show that the Speed Stick transmits delicate signals to your hand when you’re using most ordinary trash-cans. The Childers rod is constructed so that the blank itself extends farther into the offset handle, rather than being coupled to it by a metal ferrule, and the test makes it look very good indeed. In some kinds of fishing this sensitivity could be very important. In others it would mean nothing at all. (This is completely aside from rod strength and durability due to various designs, and I won’t go into that.)

So here’s the test the Speed Stick folks recommend:

You take a piece of 20-pound monofilament 6 feet long and tie one end to the tip of each of two rods to be tested. Now you tie a loop at the middle of the 6-foot piece and cut the loop so that you have one fairly long string, or “handle,” and one little piece less than an inch long. Now you have the two rod tips still fastened together and the monofilament forms a Y with the piece of line to pull on at the bottom of the Y. You also have a little short piece of line sticking out where the “handle” is fastened. You have a piece of rod in each hand and for a helper to pull on the “handle” piece of mono until the rod tips are bent. Then he flicks the little short monofilament with his finger, the idea being to see which rod transmits the vibration most clearly. The difference can be dramatic.

What good is a sensitive tip? Well, it will transmit the action of a vibrating plug or a spinner so you know it’s working, and it will also make it easier to detect a nibbler on a bait such as a plastic worm or crank bait. It’s the difference between two methods. Some of the most delicate strikes are executed by freshwater trout who take underwater nymphs fished in a dead drift with the current. It’s said that anglers at this business hook only a small percentage of their strikes and don’t recognize most of them. Being a poor nymph fisherman myself, I know I set the hook against a lot of rocks and ignore a lot of trout.

Assumptions such as those that are derived with reels after they’ve been used in salt casting wife on fly fishing, I had no answer when she said she “couldn’t feel anything” when hooked a fish with a fly rod. To some extent that’s right, because you’ll feel a fish’s tugs more plainly with a short, stiff plug outfit. The soft length of the typical fly rod absorbs the tugs instead of passing them on to the fisherman. Now this doesn’t mean I’m going to give away my fly rod, but I have nothing to say in rebuttal.

Although trolling may be considered a relatively crude fishing method, it’s one place where tip sensitivity can save a lot of trouble. As long as the tip is responding rhythmically to the wobbling or wiggling of a lure, you know everything is working. When that rhythm changes or stops, something has happened, and frequently it’s a case of the lure having fouled in the leader or having picked up debris. A charter mate can make sure everything is working by just glancing at the needling rod tips.

Experts at catching dainty nibblers like sheepshank head sometimes rely strongly on a delicate rod tip which they watch or feel. Far as I know the extreme in rod sensitivity is accomplished by some British contest fishermen or “matchmen” who actually have a sort of second rod tip, attached with a piece of rubber or nylon. It’s called a “swing tip” and will reveal the most fractional nibble. There’s the “quiver tip” of very light material ahead of the regular rod. They even use a “bite indicator” near the butt of the rod, a tiny “rod” attached to the main one between two guides. The little dingus has a guide of its own through which the line runs, and it wiggles at a light twitch.

I don’t expect you to use any of these things, but I put them in to show I am on my toes and read up on stuff like that.

Some of the most delicate strikes are executed by freshwater trout when they take underwater nymphs fished in a dead drift with the current. It’s said that amateurre at this business hook only a small percentage of their strikes and don’t recognize most of them. Being a poor nymph fisherman myself, I know I set the hook against a lot of rocks and ignore a lot of trout.
There are "wet" and "dry" canoeists. Most fishermen would rather keep themselves and their gear dry.

Oh, come on now, Mr. Sandreuter, suppose there's ice along the edges, you're a long way from civilization, and you're wearing leather boots or moccasins. A lot of canoeists are filled with people who don't want their feet wet. And then he makes a little fun at the canoe instructors who feel it is essential for two people in a canoe to know how to trade positions. If you want to trade places, he says, why not just go over to shore to do it?

Well now I've been in a lot of places where I was in the stern, wanted in the bow, and didn't see any suitable bank for beaching—and it happens repeatedly when two people are fishing and one casts while the other paddles. The way the seats are laid, it's important for them to change ends when the paddler takes his turn at fishing. I've found the best way is for the bow occupant to get down in the boat's bottom and crawl between the legs of the stern man, or vice versa, the meeting taking place somewhere near the canoe's center.

But anybody can complain. Read the book. It's good.

Some time back I wrote about a big Australian spinning reel that is mounted on a turntable. As the cast is made the reel faces forward like any open-faced reel and is then rotated so that it turns fore and aft for the retrieve. I never mentioned the details but some people want to know about it. It's handled by Mobil Sports Enterprises, 627 High Ridge Road, Orange, Conn., 06477, and it's called the Alvey reel. It comes in several sizes. They also make a heavy-duty fly reel, which I haven't seen, for $36.95—very reasonable for those days.

Does such a spinning reel twist the line? Yes, it does, and eventually you'd have to straighten it out, I suppose, but those who have used it say the spool is so large that the twisting isn't noticeable for considerable time—and that's made better by the fact that casts made with such a rig are generally long. Those turnable line wipers in small sizes used to be a nuisance. I wouldn't be afraid of this Alvey job, though, if you want something big. Hal Lyman, the surf expert, says you can throw a country mile with it.

Out-of-sight prices for waterfront property aren't peculiar to wherever you may live. The mere presence of water boosts land value greatly, and if it's fishing water things tend to go even higher.

In recent years there has been an invasion of the West by fishermen, most of them wanting a little seclusion along with their fishing, and anybody looking for a little piece of ground with a trout stream had better have a healthy bank account, just for the down payment.

A few years ago, such property was priced as ranch or farm land, and if you wanted to use it as a retirement home or fishing lodge, that was your business. Now, it seems, the value of such country for personal recreation has far outstripped its potential for agriculture or anything else.

Time was when the value of land was based, to a considerable extent, on the income it was capable of producing, but no more. Of course the tax business has a great deal to do with it, but farm or ranch land in good hunting, fishing, or vacation country has lost all relationship to its productive value. A businessman from a Rocky Mountain state was telling me the other day of "recreational" land bringing more than $20,000 an acre with plenty of takes. Since he'd been in the ranching business at one time, I asked him what the productive value of that ground would be, based on what it would produce in crops or cattle.

"About $50 an acre, he decided.

But don't think $20,000 an acre is the whole story. That's chickenfeed for land with a view and especially good fishing.

Why stick this into a column on fishing? Because I get numerous inquiries from people who envision a retirement home or fishing cottage in thinly settled country and assume that since such land is so very productive it should be reasonable in cost. The answer to their inquiry is generally bad news.

Last winter a man caught a 50-pound, 12-ounce snook at Fort Pierce, in spite of a popular opinion that the real whackers are gone from Florida shores. The all-time world record was a 65-pound, 6-ounce fish from LaPaz, Mexico. I've always been intrigued by snook because they're a highly mysterious fish. It delights me that a 56-pounder showed up. Fishermen who frequent bridges and piers say there are still bigger ones around, but it would take some catching to prove it.

Now here are some snook thoughts:

Snook are caught by pilchard, fingerling, trolling, and bait fishing. They are handled with wire line from bridges and piers but are fished like black bass in the mangrove bays and rivers. For these reasons, two avid snook fishermen may have had no experience with each other's methods, and might have little to talk about.

Until recently, little was known about their spawning habits, and experts guessed the location as anywhere from freshwater ponds to offshore reefs. Now it's known that most of the spawning is in passes and estuaries, the eggs floating free. Fisheries biologists have now been able to spawn them in captivity. (See Florida Wildlife, October 1975, page 24.)

We still don't understand where all the big snook come from during summer spawning runs. Many think they move in from offshore reefs. At one time it was believed they migrated to Florida shores all the way from Central and South America. At any rate, a large share of them disappear when spawning finishes.

Snook can live in fresh water or well out to sea. There seem to be resident or back-country, resident fish farther out among offshore islands where the water's saltier—and the travelers that show up during spawning time. When they travel the coastline during April, they seem to be heading north. If they keep going north, some observers say, maybe they came from a long way to the south.

Snook, I think, will be less fun when we understand them.
It seems unreasonable to attempt a discussion of population growth implications for hunting without first discussing what a game species is, and the relation of these animals to all wildlife. Definitions of game species are not clear cut and, in this case, they are particularly subject to change of time. Presently, only 20% of the land mammals and just 9% of the birds of Florida are considered to be game species.

In addition, game species have come to represent a special subgroup of the total wildlife community. More specifically, as species such as wading birds, cranes, swans, and large predators have been removed from the game species list, doves, quail, deer, hogs, rabbits, and squirrels play an increasingly important role in the total game bag. In Florida, quail and dove alone constitute over 60% of the total annual hunter harvest. If deer, wild hogs, rabbits, and squirrels are also included, then the list accounts for about 90% of the total harvest. In other words, 1% of the bird and mammal species support 90% of the take.

None of these species is threatened or very much affected by hunting itself. More importantly, if we look at the ecology of these species, we see that all of them either profit directly from responsible land management or else they have a very high tolerance for man's presence.

Thus, one of the main differences between hunting today and that of 100 years ago is the list of species being hunted. The gradual reduction in the list of game species results mainly from excluding species unable to withstand hunting pressure, and those simply reduced by increased occupation of their habitat by man.

Most of today's game birds and mammals have greatly increased in abundance over recent history. Our cultural definition of what is and what is not a game species, and what is good or bad hunting, is entirely subjective to our background experiences and the changing times. The fact that the Game and Fresh Water Fish Commission amends the list not only reflects a perception of these changes (for example, the increased interest and concern for fox hunting) but a better-than-ever knowledge of wildlife status.

With the above considerations in mind, we can quickly review some of the changes that have occurred in Florida wildlife and hunting since the early explorations. The earliest descriptions of Florida and its wildlife project largely aquatic images. One early source states that "fully three fourths of the land surface is covered by water for at least part of the year." This probably referred to just peninsular Florida, but it nonetheless conveys a strong image. Currently, only 7% of Florida is considered wetland. Along with the descriptions of marshlands, rivers and swamps are endless scenes of water birds such as ducks, wood storks, herons, egrets, and anhingas. Alligators were very abundant and were mercilessly shot for sport.

In his hundred-year-old book Camping In Florida, Hallock states "there is no place on this continent..." (continued on next page)
Florida forests were certainly different then. On the other hand, certain of our conceptions about the past are surely wrong. Although wild turkeys must have been of great importance as a dietary item to Indians, explorers, and early settlers, it is probable that their abundance was overestimated.

By the 19th century, sport hunting had become popular. Shooting from river boats on the St. Johns, and sorts out from small towns like Welaka, dominated the peninsula. Plantation hunting had, by this time, become a rich man's sport in north Florida. Specific areas, such as Lake Iamonia, were widely renowned for waterfowling. Still hunting was separable into two types. Sport hunting was a leisure pastime for the rich while the necessities of obtaining food largely motivated the local residents. While there were no seasons, large drive hunts, night hunts, and fire hunts were common. Game species included blackbirds, plovers, woodpeckers, parakeets, and sparrows.

It is commonly believed now that hunting is on the decline; that it is a minority activity, and has a much lower success rate now than in past years. There are many more hunters now than there ever have been. On the other hand, Florida's population has been growing at such a rapid rate that the proportion of Floridians who hunt has stayed relatively constant over the years.

In 1960, Floridians bought fewer than 100,000 hunting licenses, but the population was only slightly over 3 million at that time. By 1975, license sales had increased over 2% (to over 250,000) and thus matched the overall population trend.

On a statewide basis, then, the percentage of Floridians who buy licenses is less than 4%. But this brings up another important and frequently confused point. Most of Florida is still rural (over 20% of the people live in just 4 cities, and over 75% in urban areas); and in the rural areas, high proportions of the people hunt.

In north central Florida, for example, 41% of the adult population consider themselves to be hunters. In rural counties such as Gilchrist, the proportion is much higher. Therefore, it is not true that hunters represent such a small minority in most areas of the state even though it is the case in the high density population centers.

Distinctions need to be drawn between what the average hunter primarily hunts, what he spends the most effort hunting, and what constitutes the state-wide bag. Recall that just over 60% of the statewide game consists of dove and quail. Similarly, over 44% of the hunting population considers itself to be primarily seeking dove and quail. By comparison, 29% of the hunters think of themselves as primarily seeking deer. An equal proportion of their total effort is directed at deer, and yet deer make up less than 1% of the total kill. The total effort of over 5% million hunter-days is distributed rather equally throughout the state except in the northwest region, where 20% of the land area contains only 10% of the population and supports 30% of the hunting effort.

Over the years, the distribution of land holdings has changed to such an extent that land ownership is now dominated by large corporate holdings. This has worked against the hunter making personal contacts and his hunting on private lands. In response to this, the Game and Fish Commission has increased the area administered in the public wildlife management area program from nothing in 1940 to over 4.5 million acres in 1975. Even so, the acreage in the WMA program has not kept pace with license sales. In 1950, there were nearly 40 acres available in a management area for every license buyer in the state, but less than half this amount remains today. Available hunting on private lands is in even worse condition, and because of this, a much higher proportion of total hunters are concentrating their efforts on wildlife management areas. This means that the available wildlife management area acreage per permit holder has dropped from about 275 acres in 1950 to less than 50 acres today. All of this has (continued on next page)
ushered in the Commission's most recent major management concept—the management area quota program. More will be said of this later.

Hunters are described as hunter-wildlife and hunter-land relationships, something should be said of hunters themselves. What are their characteristics, motivations, and expectations?

Recent antihunting publicity has suggested that hunters are rural, uneducated clansmen bent on killing cornered, baited, or otherwise helpless animals.

At least one study, conducted at the University of Florida, points out that hunters are more knowledgeable about wildlife than antihunters or the public at large. There was no significant difference in the education levels of hunters and overall sample of people.

Several other recent studies have also shown that hunting is not particularly important in determining what is a satisfying or successful hunt. Many other factors, such as relating to nature, finding peace and quiet or companionship while displaying equipment, are just as important. Ultimately, satisfaction is determined by achievement against uncertain odds. When the uncertainty is taken away, the enjoyment is gone. For more deer in no way implies higher satisfaction than getting one or none.

Only recently have game managers begun to realize that successful wildlife management may not require higher game populations, and that greater kills do not necessarily result in higher hunter satisfaction levels.

Needless to say, Florida is changing fast. Population growth statistics repeatedly remind us of this change, and yet an awareness of certain trends is essential. If we are to maintain a reasonable quality hunting opportunity, major changes such as the decline of bears and, at one point, the alligator; the regional shift in total hunting effort; and the subtle reduction of major species such as turkey will continue unless guarded against. In addition to the simple and direct effects of more people and more hunters come several hard, indirect effects—like the antihunter movement.

Percentage projections would lead us to believe that Florida's population growth is slowing down. This is because we have to divide each year's growth by a larger and larger number. The truth is that the actual population growth is about as great as it ever has been, and it is not projected to slow down. We will still reach the 10 million mark by 1980, and probably the 12.5 million mark by 1990. This growth is still projected to occur on the peninsula, but it will not be centered in the extreme southern urban area. The central peninsula counties are expected to absorb the bulk of the state's growth. Citrus County, for example, grew 17% in 1973-74.

It seems clear to us that hunting will be much more affected in the central peninsula than in any other region of the state. This is not only because of human population growth but other factors as well. This area lies to the south of the three large national forests, and in Florida, as such, there is no major federal land holding to rely on. It also lies to the south of the major industrial forest lands, and so there will be neither the benefits of timber management or the simple buffering effect of this low-intensity land use. The central peninsula also lies to the north of the major water conservation areas and native range cattle ranches of southern Florida. Specifically, it lies right in the heartland of the citrus industry—the area with the most rapid population growth and tourist development, such as Disney World. To make matters worse, this is precisely the area where the public wildlife management area program is least developed.

Presently, there are only eight small wildlife management areas (a total of 320,000 acres) in the 20 counties bordered by Sarasota, Highlands, and St. Lucie on the south and Citrus, Lake, and Seminole on the north. Whereas these 20 counties represent 37% on the state's land area, the public hunting areas in these counties represent only 9% of the total wildlife management area acreage in the state.

There seems little doubt but that this central peninsula has the greatest growth-related stress in the next decade.

The quality and quantity of wildlife residing in an area is directly related to land-use patterns. Needless to say, very high-intensity land use such as urbanization greatly affects the wildlife. When the change is so dramatic, most people don't even consider the animals of the new environment to be they are. We exclude all wildlife by changing land use; we simply trade wilderness species for progressively more urban species.

In the extreme south, such as the Everglades, some birds, house sparrows, pigeons, rats, and mice come to predominate. Areas under high-intensity agricultural usage have a similar array of species. The problem is that, unlike our predecessors of 150 years ago, we don't consider blackbirds and similar species as game animals.

Any and all land-use changes will cause similar shifts in the abundance of wilderness species. Some will be suppressed while others will be aided. Usually, the first species to be reduced are the large-sized, wide-ranging carnivores—the panther, for example, large, wide-ranging herbivores and omnivores, and, finally, even the smaller, less "eccentric" species such as waterfowl, beaver, and otter are affected. Let there be few well of growth habitat and little wildlife. We will always have wildlife, and we will probably have more of it. The problem is that it will be very different and it will be very expensive to manage.

Hunters, of course, will pay the toll. The already-dwindling diversity of game species may diminish even further. Think of bear, turkey and waterfowl. Higher and higher proportions of the hunters' bag will consist of small game, although deer and feral hogs will probably remain stable. The Game and Fish Commission will have to work even more strenuously.

Antihunters will try to convince us that hunting threatens them and that they are paying the bills. Both are false. Non-point-source pollution laws will be aimed at the hazards of smoke from prescribed forest burning, yet prescribed burning is the most effective and economically feasible large-scale wildlife management technique.

Enterprising commercial hunting clubs will make their presence known—and we welcome them—but the general public cannot afford membership.

When the public, and not the Commission, enforced hunter education, private lease arrangements, and more formalized do's and don'ts similar to European customs. Our system of hunting will not be formalized to the same degree as in France, especially in eastern Europe. For example, in Poland, a hunter first applies to a hunting society for membership in a class of instruction. If admitted, he pursues a course of study similar to an American university course. He then takes an exam which only about 65% of the class passes, and if passed he is issued a certificate for use in pursuing a shotgun permit. The hunter must next join the hunting society (at an additional cost) and then get involved with a local hunting group. If he wants to hunt deer, he must take another course, and the whole process begins again involving a rifle.

Most Polish hunters are rich aristocrats, mainly because only aristocrats have the necessary time, education, and money required.

Hunting behavior is rather strictly controlled. A hunter might be excluded from his hunting group for poor behavior or not being assigned land.

Even after paying dues to the local club, and after the local club leases a hunting area, the game killed by a hunter must still be paid for on a per-head basis. The hunting society to which all Polish hunters must belong serves as the link between the government and the hunter. The society manages the entire process; publishes the annual animal trophy show. The society must submit the antlers and lower jaws of the deer at this trophy show, and each one is graded on the basis of how well the trophy matches the specifications issued before the hunt. The hunter's performance from one year to the next decides his future rank in the society.

But again, hunting in Florida will never develop to this degree, because our tradition is one of public hunting. The Florida Game and Fresh Water Fish Commission is the only agency that can insure this prerogative. They will do it with the public game management area system. The state cannot buy or own enough land to meet the demand.

The Commission must lease land on behalf of the public. The state owns the land, and the Commission manages the game. The state can control the amount of game available on an area, but the Commission can manage it and try to control the distribution of hunters to match it. Nobody can insure hunter enjoyment, but with the help and cooperation of the public, much can be learned about what determines a "good hunt," and all of us can work toward providing it.

With your support, the Commission can insure public hunting, advance the science of wildlife ecology, and help conserve all natural resources.

While the Few bad news is that the population is expected to increase, not only because of inflation but more and more hunting is required to produce the same quality of hunting experience in the years ahead.

The good news is that this will still be cheaper than private lease or preserve arrangements.
As any Floridian will proudly attest, the Sunshine State is unique. However, Florida has a number of natural assets that most residents are unfamiliar with. Among these attributes is the large number of turtle species, some of them very rare or unusual, that can be considered Florida residents. The most glamorous of these, and perhaps in some South American waters. The sixth Atlantic sea Kemp's ridley, and hawksbill—regularly populate the territorial waters of Florida. The olive ridley, that occur, and even nest, along Florida’s Atlantic respects the best known, are the giant sea turtles number of turtle species, some of them very rare or unfamiliar with. Among these attributes is the large fifth of the group, is restricted to African and that two distinct races of leatherbacks exist, one in Florida, the leatherback, is a tourist. It was claimed to have been 12 feet. Leatherbacks have been reported weighing in the spread—from tip to tip—the pliable, round eggs measure just over 2 inches in diameter, nearly the size of a tennis ball. Unlike those of other sea turtles, the eggs of the leatherback are usually erratic in dimension. Generally about one-half of an egg clutch contains varying sizes of small, abnormal, yolkless, and thus nonviable, eggs.

Once egg laying starts, sea turtle is easily approached and photographed. Egg laying may take 3 hours, and is ended by turtle covering eggs in wild, sand flinging spree. Turtle pictured below is a loggerhead, on a Gulf coast beach.

As is typical with other species of sea turtles which nest in Florida, the female leatherback leaves the sea after dark in the summertime and clumsily as—elevate themselves to the beach surface. Emergence when a nesting female was discovered near Flagler Beach, in Flagler County. Since that time there have been only infrequent nesting landings by these giants along Florida’s shore between Miami Beach and St. Augustine. Gulf coast nestings are also known but are rare. In 1974 a leatherback landed on the Gulf beach at St. Vincent Island National Wildlife Refuge, near Apalachicola, and successfully deposited eggs. The most recent verified nesting by the species in Florida was in July of 1976, when a 63-inch-long female nested just south of Sebastian Inlet, in Indian River County. This individual was tagged and measured by a field team operating under the auspices of Caretta Research, Inc., a marine turtle conservation project which operates in south Florida and is headquartered on the Gulf coast at Sanibel Island.

The leatherback does not possess the hard, bony shell of other sea turtles; hence its name. Its body is covered by a leathery integument in which is layered a specialized, pliable strata of small bones which are imbedded in the inner dermis. Unlike other marine turtles, the leatherback lacks claws and hard, bony jaw plates. The leatherback’s scientific name is Dermochelys coriacea, which means “leather-skinned tortoise” (or turtle).

Although one of the reptiles (which are typically cold-blooded), leatherbacks have some morphological benefits which exist because of their great size. Recent testing of these turtles’ deep body temperatures indicates that they have an apparent means of body heat generation and rudimentary temperature regulation. One tested leatherback was 18°C warmer than the Nova Scotian waters from which it was captured.

Another interesting aspect of leatherback biology is the suggestion by one of the turtles’ leading investigators that they also can possibly extract oxygen directly from seawater while submerged, through unusual tissue in their throat. If this supposition proves to be correct, it could explain the sparsity with which leatherbacks are observed on the surface of the world’s oceans.

The infrequent nighttime nesting appearances and occasional inshore sightings of these pelagic sea turtles in Florida make them one of our rarest visitors. To encounter one of these living remnants from that bygone Age of Dinosaurs, fully exposed and hard, bony jaw plates. The leatherback’s scien—scientific name is Dermochelys coriacea, which means “leather-skinned tortoise” (or turtle).

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Located a few miles northwest of Palatka, in Putnam County, is the Hudson Wildlife Management Area. The property is owned by the Hudson Pulp and Paper Corporation, and is open to public hunting under the Commission's cooperative wildlife management area program. This 11,000-acre tract of pine forest, gum and cypress swamp, and oak hammock hosts a variety of wildlife, both game and nongame. Hudson, as have other public-spirited holders of sizable tracts of Florida woodlands, has long welcomed public recreational uses such as hiking, picnicking, bird watching, and nature study, in addition to hunting.

The drier reaches of the Hudson tract support stands of pine under intensive management. When a block of timber reaches harvestable size, it is clear cut, the site prepared for replanting, and the next generation of trees put into the ground as part of the continuous, sustained yield cycle. The result is that somewhere in the area there is always a stretch of pineland that is at a stage of growth suitable to the requirements of the various wildlife species that occupy the flatwoods habitat.

One noteworthy feature of the company's wildlife management efforts is the leaving of "islands" of uncut trees and undisturbed vegetation scattered through the clearcut. These vary in size from a few trees and a large room-sized swath of understory plants to a substantial island or tongue of trees and underbrush. This technique not only benefits the wildlife by breaking up large stretches of open ground that is of little value to wildlife for some time, but is certainly aesthetically more attractive to visitors.

Even in the hardwood swamps where clear cutting is practiced, and where natural regeneration is surprisingly rapid, groups of larger trees are left standing for the benefit of hawks, owls, and other species which require them for nesting and perching.

Controlled burning of pine lands is conducted here as elsewhere in southern forests. From the forestry standpoint, burning reduces the competition with understory plants for soil nutrients, releases nutrients tied up in underbrush, and helps in the control of forest insect pests. Burning also encourages new, tender growth of understory plants, making them palatable to deer and other wildlife—which the older, coarser vegetation is not.

Thinning operations are conducted on the pine plantations as a standard cultural procedure. The pines involved are trees that have attained substantial size, sufficient at least to have shaded out most ground cover. As a sort of by-product of the timber stand thinning activities, opening the dense canopy allows some understory plants of wildlife value to take hold.

Game species encountered on the Hudson include those common to other wildlife management areas in this part of the state. The white-tailed deer is the most sought game, and a reasonably good population of this species is resident here. Selmer Uhr, chief of (continued on next page)
Hud so n's woodlands technical division, says the d ee r area program. He expressed level somewhat below contrl over entry into the area, and a cooperative than optimum numbers. With relatively tight unrec gnized factor is keeping the population at less than the desired level.

With its mixture of habitat types, including a libera amount of hardwood swamp and oak ham-mock land, there is a fairly good population of turkeys. Gray squirrels are abundant, although a large chunk of the best squirrel habitat available in the area is out of bounds to hunters, being

deducted in the 2,000-acre Rice Creek Sanctuary.

Fox squirrels are present on the area but the population is down. The death of stands of large, fully mature pines on the property is the main reason for the shortage of fox squirrels. The species is greatly dependent on pine mast for its well-being.

In an area being managed for pulpwood and timber production, relatively few trees reach the advanced state required to produce a heavy mast crop. This is a commonly encountered situation over much of the state. To help out the matter, Hudson is leaving a scattering of pine-lumbered blocks uncut. These 5-acre islands, as the pines reach the heavy mast-producing stage, should give the fox squirrel popula- tion a substantial boost.

Quail are found here in some numbers, although the habitat suitable for this popular game bird is rather limited. The 15 or so food plots scattered

about the management area are utilized to some extent by the bobwhites, and seasonally to a consid- erable extent by deer, turkeys, and other wildlife.

At one time a number of stands of bees were permitted on the Hudson property, but conflicts between bees and bears developed. To put an end to to a situation in which the bears would likely com out on the short end, the bees were moved out. At the time of the writer's most recent visit to Hudson, in late April, a bear had given some unwelcome attention to a bee stand on a block of agricultural land—Motes Pasture—at the south end of the Hud- son property. Pieces of a number of beehive suppers were piled alongside some surviving hives, a testi- mony to bruin's sweet tooth. It is not too uncommon to encounter bear sign on the management area, and occasionally a bear is sighted, although they are on the protected list here even during the open hunting season.

A number of species of fur-bearing animals are to be found here, including otter, gray fox, wildcat, opossum, and others common to this part of the state. Excepting the fox and otter, they are legal game during the established hunting seasons.

Rice Creek, a tributary of the St. Johns River, drains the property. Relatively small, the stream nevertheless continues to flow even during lengthy dry spells. There is a fish population—the usual spiny-rayed species, mainly bass and various sun- fishes. A few scattered deep spots along the stream channel hold most of the fish. The situation makes conditions to the otter's liking, and a number of these interesting mammals are resident along the water- way. Digging or blasting additional deep holes is a proposed project that would greatly enhance the stream course for use by wildlife of various sorts.

A number of pits dug for road building material at various locations in the higher ground of the flatwoods provide catch basins for rainfall and serve as a source of water for wildlife during much of the year. Plans call for deepening of some of these pits to assure a year-around water hole to which many forms of animal life will be attracted. There is one deep, permanent pond on the area, dug with just this purpose in mind. In place a relatively short time, willows already rim the pond, turtles and fish are at home there, and an alligator has taken up resi- dence.

Deer hunting on the Hudson area is a still hunter's show, as dogs are prohibited. Both pistols and center-fire rifles are also banned, as are horses and two- and three-wheeled vehicles. Access is through designated gates only, of which there are four.

The general hunting season is split. The first segment is set to allow hunting during the early part of the statewide season, then closed for a num- ber of weeks and reopened to accommodate hunters over the Christmas-New Year period. Provisions are made for an archery season prior to the first gun hunt, and a spring gobbler hunt is scheduled in March and early April.

Surrounded on three sides by open-to-hunting land, the 2,000-acre Rice Creek Sanctuary was esta- blished in 1970 to protect and make available for public use and enjoyment the special historic and natural assets of this unique segment of Hudson's holdings.

An access road leads a mile into the sanctuary from Florida State Road 100. It ends at a pleasant, tree-shaded picnic ground and connects with trails which lead through some of the more wild and scenic sections of the reserve. Here are found remains of a Revolutionary War period rice and indigo planta- tion. A section of the Florida Trail, a planned Everglades-to-far-western-pahandle hiking path, crosses the sanctuary. It continues north to Gold Head Branch State Park and through the Ocala National Forest to the south in a 100-mile-plus completed segment of the pathway.

So, whether your interest in Florida outdoors is confined to hunting, or includes nature study, photo- graphy, or just plain woods rambling, the Hudson Wildlife Management Area has a lot to offer.

The fox squirrel requires stands of mature, mast-producing pines to prosper. Some efforts are being directed toward fulfillment of the big tree squirrel's habitat needs. Dug for road material, water-filled borrow pits, such as one at left, enhance wildlife value of drier upland sites.

Selner Uhr, right, head of Hudson's Woodlands Technical Department, looks over a stand of rye—one of the 15 or so food plots that are located on this management area.

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Outboards In The Sawgrass

YEARS AGO THE ONLY WAY TO TRAVERSE the soggy Everglades of south Florida was via Seminole Indian dugouts. And it took high water to do so, for the soupy Glades weren't noted for deep waterways.

Then came the noisy airboats that literally run on the morning dew, and heretofore unreachable portions of the sprawling sawgrass country were open to venturesome blowboat jockeys for fishing, hunting, and exploration. But it still wasn't boating country.

However, in the last quarter of a century, man has turned the Florida Everglades into boating terrain, not intentionally, but as a result of the construction of a series of drainage canals that slash across the once-impassable River of Grass, and, today, provide a means of cruising and fishing this fantastic place.

It's an unforgettable experience to use an outboard-powered boat in the sawgrass. During high water, when the canals are filled, and where levees don't block the view, you can look off across the flat land for miles and miles as you zip along. Often the horizon is broken only by cotton candy clouds that are almost a trademark of the area. Here and there cabbage palm hammocks with willows, and a few with oak trees, poke their tops above the head-high sawgrass. On the larger hammocks, which sometimes cover several acres, the Seminoles once lived. Now they are gone, either to reservations or to camps along the Tamiami Trail (U. S. 41).

It's strangely beautiful, yet dangerous, country—no place for a mechanical breakdown, as more than one airboater has learned. And it's terrain in which it's easy to lose your sense of direction. While we've never been lost or broken down boating, we know how dangerous it can be, and how unexpectedly trouble can develop. What can happen was vividly demonstrated to us on one cruise.

We were several miles north of the Tamiami Trail when we saw the airboat's warning flag whipping above the towering sawgrass shortly after hearing the engine's roar.

We continued casting along the canal bank for largemouth black bass, casually wondering how fast this blowboat was traveling. It seemed at full throttle. It was typical airboating terrain, so we weren't surprised.

The airboat's pilot spotted us as his craft broke through the sawgrass a hundred yards away. He slowed and turned towards our drifting boats. Cutting his engine, he dexterously eased up to our fishing area.

"How much farther to Andytown?" he asked.

"Andytown? You're about 25 miles south of there, and headed in the opposite direction."

Andytown is a truck stop at the junction of U. S. 27 and Florida 94, popular for launching airboats into the sprawling Conservation Area III of the Central and Southern Florida Flood Control District. The water storage area only encompasses 914 square miles of the Everglades. This boat jockey was lost and 180 degrees off course! He certainly was heading for trouble.

"Thanks," he called. "Hope I can make it on five gallons of gas." He eased his blowboat away and headed in the right direction this time. Alden Johnson scratched his head and looked at "Skip" Forrester, his boating partner, and me in the other skiff.

"Man, he's really lost," Alden remarked. "He's got no cotton pickin' business running around in this sawgrass country without a compass. Why, he ought to be tied to his mother's apron strings. Can't even tell directions by the sun!"

Apparently our misplaced airboater made it back safely. At least, we never saw anything in the newspapers about a lost airboat operator, and searches for persons missing in the Glades always make news.

The sawgrass country is dangerous all right, but not so much for outboard boaters. They can always paddle home as long as they're afloat, although it'd be a muscle-straining task if very many miles are involved.

There's practically no current in the canals, and apparently our misplaced airboater made it back safely. At least, we never saw anything in the newspapers about a lost airboat operator, and searches for persons missing in the Glades always make news.

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(continued from preceding page)

The sawgrass country is divided into three water conservation districts. Area I (221 square miles); Area II (219 square miles) and Area III (914 square miles). Yes, there's room to roam, and, fortunately, the cruising area is on the doorstep of the millions who now are jammed into the counties along the southeastern coast of the state.

You cannot cruise all of this sprawling boating territory in one trip. No way! There's too much water. Because of the layout of the districts, it's not possible to run from one area to another. The most sensible plan is to map out several cruises to sample each of the conservation areas.

At each of the water storage areas, there're recreational sites with modern ramps, tackle shops, and even rental boats and motors. Fishing guides are also available.

You really don't need big bomb motors unless you're planning to travel a great distance, and you don't need real large boats. If you plan extended cruising, remember that you have to carry all of your gasoline. There're no refueling points once you're planning to travel a great distance, and you don't need real large boats. If you plan extended cruising, remember that you have to carry all of your gasoline. There're no refueling points once you're far away.

You can catch fish with everything from a cane pole and worms to specialized bass gear. Spinning and half-casting tackle are particularly popular with boating anglers. Your choice of lures depends upon the time of year. Bass, above, are plentiful in the sawgrass canals, and sometimes they're in the 10-12 lb. class. Most, however, are smaller.

at the northern end of Area I. The latter two ramps have no facilities except for launching.

Gateway to Area II is the Sawgrass Recreation Area, located on U.S. 27, 2 miles north of Andytown, where U.S. 27 and Florida 84 (Alligator Alley) intersect. This area, too, provides facilities plus a camping area. You can also launch at boat ramps and Andytown. One ramp provides access to the North New River channel between the junction with a levee and the spillway. The other ramp, south of the high-way junction, affords access to the North New River Canal parallel to State Road 84.

Naturally, Area III—three times larger than any other of the water areas—has more access points. Probably the most popular is Everglades Holiday Park, a 40-acre site west of Hollywood, which provides full service headquarters. It's located approximately 5 miles south of Andytown on U.S. 27.

Other access points include those at the junction of Levee 38 at Terrytown on U.S. 27; the Alligator Alley (State Road 84) rest stop area just west of the Miami canal; the ramp off Florida 27 providing access to the L-30 rim canal; the Krome Avenue launching ramp and park on the west side of State Road 27, approximately 2 miles north of U.S. 41 (the Tamiami Trail); and Levee 67 recreation area on the north side of the Tamiami Trail at the junction of Levees 67A and 67C, about 30 miles west of Miami.

A quick way to orient yourself with this water wilderness is to obtain detailed information and maps. You can obtain these from the Central and Southern Florida Flood Control District, P. O. Box 1671, West Palm Beach 33401; the Florida Game and Fresh Water Fish Commission, 551 N. Military Trail, West Palm Beach 33406; or the U.S. Fish and Wildlife Service, Rt. 1, Box 278, Delray Beach 33444. For detailed information concerning the various recreational areas, you can contact the managers of: Everglades Holiday Park, P. O. Box 22755, Ft. Lauderdale 33335; Sawgrass Recreation Park, P. O. Box 22755, Ft. Lauderdale 33351; or Loxahatchee Recreation Area, Rt. 1, Box 645, Pompano Beach 33306.

The 1,345-square-mile area is not only boating but also the world's largest fish pond, and very few boatmen make a cruise without wetting a line. There are probably more boats used for fishing than for any other water sport.

The giant fish pond has an excellent population of fish, including largemouth bass, chain pickerel, redfish, sunfish, bluegill, and tackle-wrecking mudfish. The bass, of course, are the most popular. They are noted more for their size, although bucketmouths in the 10-12-pound class are caught regularly. But it's the number that makes the fun, for, as we mentioned earlier, there are times when the bass fishing is simply fantastic, usually when the water level falls in the Glades, and the bass congregate in the canals.

You can catch fish with everything from a cane pole and worms to specialized bass gear. Spinning and half-casting tackle are particularly popular with boating anglers. Your choice of lures depends upon the time of year.

We've had good luck with plastic worms, purple and black colors; and also with top-water lures such as Tiny Torpedoes, Devil's Horse, Back 'n Hrawl, and Nippadee—both with single and double propellers—and with shallow-running balsa and Rebel-type lures. At times, when the bass are deep, usually during hot weather, deep-running lures such as Spots, Hell-benders, Bombers and similar ones produce best, either casting or trolling. You can also score with live bait. Shiners are usually available at the full-facility recreation areas.

Fly rodders, too, find the canals excellent fishing terrain, with plenty of room for back casts, and clear areas to play the fish. There are times when flies and popping bugs are the most successful lures.

Boating and fishing in the sawgrass is always an unusual experience, one way or the other.
The Snake That’s Not A Snake

Appearances can sometimes be deceiving. And this is particularly true in the case of the “glass snakes.” For although they closely resemble snakes, they are not really snakes at all. They are lizards—and legless lizards at that.

Most of the more than 60 members of this odd, wide-ranging family live in Mexico, Africa, Europe, and Asia. But three species are found in various parts of the United States, and all are common to Florida.

The slender glass lizard (Ophisaurus attenuatus) enjoys the most extensive range. But like others of its kind, it is shy, secretive, and seldom seen. This lizard is light brown in color and camouflaged by a dark middorsal stripe as well as several dark stripes running parallel along its lower sides. It can attain lengths up to 42 inches. Females may be strongly patterned, and males may develop small white markings when mature which become more prominent with age, giving them a salt-and-pepper appearance. The slender glass lizard is found chiefly in dry grasslands and dry, open woods from southeastern Virginia to south Florida, west to central Texas, and north to northeastern Nebraska, southern Wisconsin, and northwestern Indiana.

The eastern glass lizard (Ophisaurus ventralis) is found in wet meadows and pine flatwoods from North Carolina to south Florida, and west to Louisiana. It is comparable in size to the slender glass lizard, but it lacks a distinct middorsal stripe and is the only glass lizard that appears to be greenish in color.

The island glass lizard (Ophisaurus compressus) measures only 15 to 24 inches in length. Its middorsal stripe is often barely more than a series of dark dashes, and it has only a single strip running along each side of its body. It is extremely secretive, and is found only along the narrow coastal strips of South Carolina and Georgia (and the offshore islands), and south throughout the scrub-flatwoods of peninsular Florida.

Despite the glass lizard’s close resemblance to true snakes, however, there are several obvious differences between the two—if you know just what to look for.

For one thing, unlike the perpetually-staring snakes, glass lizards can blink. Like all true lizards, they have eyelids. Secondly, true snakes are deaf. They have no ears and can only pick up vibrations from the ground. Glass lizards can exploit their particular ecological niche more effectively without legs. Their streamlined, ground-hugging form allows smooth passage through narrow crevices, leaf debris, and tangled clumps of grass. Here, in their congested, obstacle-laden miniworld, conventional lizard legs might well impede progress. And leg movements might be more noisy and more easily spotted by potential prey than the glass lizard’s slow, slithering, silent approach.

But as successful as the glass lizard has been in adapting to a rather specialized way of life, it still has its share of problems. For unlike a true snake, the glass lizard does not have dozens of supporting ribs and the specialized musculature to go with them to operate its snake-like body. Instead it must rely on the rather ill-adapted skeletal and muscular structure inherited from its four-legged ancestors. And if that were not troublesome enough, the glass lizard must also contend with stiff, specially reinforced scales—common also to the skinks—which contain small boxy plates called osteoderms. The net result is that the glass lizard has been literally bound within a straight jacket that has led to a pronounced stiffening of its body. Consequently glass lizards are nowhere near as agile as the true snakes. And worse yet, they are rather slow-moving.

Snakes travel rapidly by means of movable belly fins.

By DAVE NORRIS

A Slender Glass Snake, far left, with a regenerated tail. A crocodile makes a tasty snack for a glass lizard in photo at left. A characteristic of lizards is the presence of eyelids, which snakes don’t have. Also lizards have ears capable of receiving airborne sounds, contrasting with snakes which “hear” only by picking up vibrations from the ground.

Photos by Dave Norris
With its long, slender form, it's a small wonder that this legless lizard is commonly regarded as a snake. The unique defense mechanism that allows its tail to become readily detached, giving rise to folk yarn about the creature literally "going to pieces" when attacked, is in fact, a common name, glass snake.

Gam & Fresh Water Fish Commission Photo

(continued from preceding page)

scales called scutes, which provide traction. But the glass lizard has a smooth belly and must depend solely on stenuous undulations of its entire body to move from place to place. Because of this, glass lizards must stop and rest frequently. They normally travel only short distances of 2 or 3 feet at a time.

Some relief, however, is provided by a unique, flexible groove running laterally along each side of the lizard's body. This deep groove lacks reinforced scales and, in addition to providing some flexibility, also allows for some expansion of the body when it is disturbed by food or, in the case of the female, with eggs.

When threatened or molested, glass lizards can employ a startlingly effective defensive diversion. At the slightest touch, the lizard can actually shed its tail, whereupon the severed appendage wriggles violently to attract the intruder's attention while the adjacent muscle bundles swell immediately to prevent the piece from reuniting. But the glass lizard will never again look normally laid out when not hunting, the female curls up around the eggs, keeping them warm against any intruders. But once the eggs have hatched, the female quickly loses interest and goes off on her own. The newly-hatched glass lizards are 6 to 8 inches in length at birth and, like most reptiles, are completely independent. Within minutes they will reunite with slow, deliberate movements of the lizard's tongue.

The glass lizard's method of capturing prey is something less than dramatic, but it is effective. Potential snacks are approached slowly and with extreme concentration—and sometimes even tentatively lashed with the lizard's thick tongue!—before being snapped up in strong jaws. Victims are then unceremoniously crushed, chomped up, and swallowed whole. Water, when available, is eagerly lapped up with slow, deliberate movements of the lizard's tongue. Females normally lay their eggs in a secluded spot in late spring. Each egg is approximately ½-inch long, and they hatch in about 2 months. During this time, when not hunting, the female curls up around her clutch and will stubbornly defend the eggs against any intruders. But once the eggs have hatched, the female quickly loses interest and goes off on her own. The newly-hatched glass lizards are 6 to 8 inches in length at birth and, like most reptiles, completely independent. Within minutes they disperse at random.

Few records are available regarding the life span of glass lizards, but one captive specimen reportedly lived for more than 50 years. Under natural conditions, however, few, if any, would live that long. But who can really say? Although the glass lizards were first described by an American colonist in 1731, a great deal still remains to be learned about the "snake" that's not a snake.
loss by theft, of any of these fine guns can be considered a sad day, indeed.

Nationally, there has been a distinct rise in gun thefts. Three thieves parked a truck alongside a central Florida gun shop, went inside, held up the owner and sales staff, and got away with more than $9,000 in fine, brand new guns. The ironic part is that on a day previously, one of the thieves had visited the store and painstakingly made a list of the more expensive gun models displayed. His companions know exactly what to take for financial advantage. The thieves made a clean getaway, and none of the guns were ever recovered.

A partial answer to the growing problem is insurance. But gun owners generally are finding that common forms of insurance are becoming meaningless because of the tide of rising gun thefts, can either be hard to get or very expensive. Even where you have such insurance, it can offer only financial consolation and then, not totally. There's either a policy-mentioned deductible or a Florida-imposed $50 minimum deductible. Depreciation applied by the insurance adjusters reduces the payable amount of indemnity, too.

The average home owner's insurance policy usually includes stated 10% of total home contents value insurance for thefts away, but not for thefts away, full from unlocked car. Fortunately, this latter protection feature can be written into an issued policy for $10 or less additional premium. However, only a small minority is likely to have such an unfortunate experience as accidental field damage to a fine item of sporting equipment.

Where a homeowner policy is already held, specific coverage for sports equipment can be provided by either (for extra premium) having a personal property floater endorsement added to the existing policy or else taking out a separate so-called Scheduled Articles Equipment policy, which you will likely have to shop around to find.

As membership benefit, the National Rifle Association now gives all individual members $300 worth of gun insurance, at no charge. Additional insurance, in $300 increments, can be had on a one-per-policy basis, 5-year coverage basis. There is a minimum premium of $15 for such policies. For stated premiums, you can get up to $3,000 coverage, for 3 years. If you want, for example, $1,200 coverage on your guns for 3 years, the NRA will give you the first $300 portion free of charge, and you pay $28.35 one-time premium for the additional $900 coverage, for 3 years.

If a partial loss due to theft, accidental damage, vandalism, fire, or other natural calamities is covered up to the policy's listed amount, there is a $5 deductibility applied. This very liberal gun insurance coverage is offered by rival Carpenter Insurance Agency, of General Accident & Fire Assurance Corp., Ltd., 930 Woodward Building, Washington 20005. The insurance is broad-coverage, "all-risk" type, including locked or unlocked car coverage anywhere in the world. Their rate is $1.20 per $100 insurance, with a minimum $15 premium for annual coverage. On a 3-year basis, the premium rate is 3.24% of the written amount of insurance.

Notable features of this old line insurance coverage are no deduction for age depreciation, and insurability of guns at their listed current replacement value rather than their original cost.

Of necessity, a movie presentation, an unfolding TV plot, or a printed text must sometimes employ a viewer or reader flashback to give completeness to a subject.

I now made two separate flashbacks to previous columns, because I think such flashbacks will be of interest and benefit.

In the October 1975 issue of Florida Wildlife, I wrote of the remarkable performance and construction quality of an inexpensive electric hi bachi I saw in use in the hunting camp of my cousin, Dr. Wilbur M.C. Davis.

The little hibachi made camp cooking of meats gourmet fare, without the usual annoyance of smoke. The impressively performing unit was a Meteor Model M-185, carrying a manufacturer insignia listing its origin as Meteor Electric Division of Nu-Rod, Monrovia, California 91016.

In my text of last October, I stated that I wanted one of the remarkable little electric hibachis, but that, in making the rounds of sporting goods and department stores, I had been unsuccessful in finding one. Closing mention was made that any reader finding one in a Florida retail store would be in luck.

Although a former retailer had told me that the Meteor M-185 hibachi was no longer made, as a last resort, I wrote a detailed letter to the manufacturer, addressed on the address on the metal plate on my cousin's unit. Reply came promptly and in considerable explanation detail.

The Meteor M-185 electric hibachi is still manufactured, and still sells at a nominal price. The connected problems have been effective blanketing product distribution, reluctance on the part of many retailers to recommend the low-priced hi bachi ahead of more sophisticated hibachis giving greater margin of profit, and quite often, simply the mistake of displaying a single Meteor unit amid larger appliances.

The manufacturer of the Meteor M-185 electric hi bachi is an old firm of established success, particularly in Washington, D. C., about Metror's business field since 1962. It regularly exhibits twice a year at the N. H. M. A. Housewares Exposition, which takes up all of McCormick Place in Chicago for a week each January and July.

Wisconsin's big cheese companies alone, particularly Swiss Colony and The Wisconsin Cheeseman, use more than Meteor M-185 units annually, and catalog sales outlets Jay Norris Company, and Cheeselovers International, both located in Freeport, New York, each use several thousand of the compact hibachis annually.

I now have one of the Meteor M-185 electric hibachi, and wouldn't part with it for three times its tagged $14.95 price! If you also have one, you likely agree.

If you were not lucky in finding a Meteor M-185 hibachi, you can still get one—if not locally, then from Meteor of Nu-Rod, 153 East Railroad Avenue, Monrovia, California 91016.

One of John M. Browning's inventions was the autoloading shotgun of long recoil mechanical braking system. In designing the recoil-activated braking system, Browning provided for optional use of either standard velocity field loads or shotshells of higher power and greater firing recoil. Adaptation of shotgun braking and reloading mechanism to shell load of shooter choice was provided for simply changing the order of assembly of the brake system component parts.

Besides Browning shotguns manufactured in Belgium, the Remington Model 11 and "Sportsman" autoloading shotgun models, the Franchi semi-automatic, and the Beretta, as well as other brands, were made on the original Browning patent.

In the October, 1976 issue of Florida Wildlife, and in other issues over the years, I described the different component order assemblies for matched shell loads. I also referred readers to guidance illustrations, in the National Rifle Association's publication, The Shotgun Handbook, and the 1901 printing of Roy Duphla's book, Gunsmithing.

I stressed the importance of having all the brake system's component parts clean, smooth, and free of lubrication. I was correctly thinking in terms of dirt-free parts, a smooth surface magazine tube (that received a loud crash from strong spring pistol and non-oily component contact), the surfaces lubricated only by silicone cloth wiping or sprayed-on microscopically thin film of durable Rice's XP-15 graphite solution.

Numerous readers wrote me appreciatively, stating that the suggestions and referenced text referral had cured individual mechanical trouble of unaccounted origin and long annoyance.

Two or three years later, I wrote in either critical or disappointed vein. For them, my suggestions simply didn't work.

For every rule, there is always some exception. This helpless truism for normal mechanical functioning of firearms mechanisms, autoloading shotguns included, Variables contribute to an exception.

For example, the different makes of autoloading shotguns utilizing the Browning long recoil system do not necessarily reflect component parts made to identical size, hardness, smoothness, or uniform spring tension.

Spiral springs, although they may appear to be the same size and length, may actually vary slightly in length, in shape and thickness of spirals, and in spring tension.

The visual difference in the rounded spirals of Browning-manufactured recoil springs and those made by Remington for Remington Model 11 and "Sportsman" autoloading shotgun models, is almost immediately realized on comparison examination.

In guns already in use and experiencing different degrees of active life, spiral spring tension can vary markedly, even in shotguns of same brand and model.

Likelie people, springs get old and lose their snap-back power. This factor is a good reason for replacing the long spiral spring every 3 years. I have achieved new one obtained direct from brand name shotgun manufacturer.

Among shotguns of long recoil braking system now seeing service, there exists wide variance in individual condition of the extension tube. Some are smooth and shiny, as they should be. Others show a dark patina of friction-producing surface rust, and sometimes a rough—even pitted—tube surface. These variables in physical condition have a bearing on mechanical functioning.

Sometimes, the edges of the beveled friction ring component or the edges of the separate friction piece collar are rough, increasing friction on the extension tube or creating, in some cases, creating scoring marks.

Consequently, correct assembly of braking system components for the type of shell load used may not always be the solution to malfunctioning—such as a gun's failure to fully extract and eject a fired shell or its failure to properly feed and lock a fresh shell into the chamber.

Readers who still experience functional trouble with their original Browning autoloading long recoil system shotguns (whatever brand name utilizing the basic patent) should either take their shotguns to a gunsmith or write its manufacturer, describing the trouble encountered, the model and the Illustrated guidance texts in the NRA's Shotgun Handbook fall short of the objective.
CB’s Prove Useful

Using names like “Big Ben” and “Rubber Ducky,” truckers hauling cross-country have popularized the CB (citizens band) radio as an effective means of communication.

The CB, now found in literally hundreds of thousands of vehicles, is also proving itself a valuable tool of law enforcement.

Col. Brantley Goodson, director of Law Enforcement for the Game and Fresh Water Fish Commission, said the CB is priceless when it comes to locating hunters in the field. Even during hunting season, when the woods are swarming with hunters, an officer can save himself many miles of unnecessary travel in search of hunting parties just by monitoring the CB to pinpoint their location.

Most hunters use the CB to locate lost dogs, keep up with other standers, and for a variety of other valid uses. “There is a segment of the hunting population, however,” Goodson said, “that uses the CB as an aid in their efforts to violate game laws. It is in this case that a CB in a wildlife officer’s car proves its worth.”

Not that monitoring a CB makes an arrest automatic. Goodson continued, since violations go to great length to devise codes and other means to fool the officers. However, an officer knows to be particular inquisitive of unusual radio conversations.

The law enforcement chief cited an officer in northeast Florida who made five separate arrests for taking doe deer in the 1975-76 season, four of which resulted from monitoring CB radio traffic.

Goodson added, “The value of a CB radio is recognized by many sportsmen’s clubs whose members have paid to have one installed in a wildlife officer’s car.”

St. Johns Yard

The commercial fishery on the lower St. Johns River during 1975 yielded 398,000 pounds of dressed catfish, 465,000 pounds of American eels, and more than 600,000 pounds of blue crabs.

Killer Bees Kayoed

A University of Florida entomologist has taken the sting out of the “killer bees” threat. “Killer bees are no more killers than any other bee,” says UF Professor Frank Robinson. “Any bee is capable of killing a person if that person is allergic to it.”

The first reports of these bees caused undue panic, says Robinson, who believes that “overly aggressive reporting and incomplete investigations” helped produce this reaction.

“The main difference between the ‘killer bees’ and other bees is their extremely aggressive nature,” he says. “However, as the ‘killer bees’ spread and interbreed with native bees, this characteristic is diluted.”

All “killer bee” investigations to date have been done in Brazil. In southern Brazil, where other bees were already present in large numbers, the natural cross breeding that occurred diluted this aggressive behavior. However, in spreading northward where few other bees were present, the African bees retained more of their aggressive behavior, the entomologist reports. But the “killer bees” don’t appear to be a threat to the United States, Robinson adds.

Mirex Surprise

The U.S. Department of Agriculture has learned that mirex, a pesticide widely used throughout the South to control exotic fire ants, decomposes into kepone when released on the land, according to the Wildlife Management Institute. Kepone came under fire recently when it was learned that the chemical causes drastic nervous system disorders in humans.

USDA has been spraying mirex aerially over large areas in the South despite protests from conservationists who wanted to stall its use until research could determine whether the chemical was environmentally safe. Proponents, namely high officials in USDA and some members of Congress, argued that the chemical could be used, since no overwhelming evidence had been developed that the substance was harmful in the amounts being applied.

Scientists detected the change to kepone on a site where an aircraft loaded with mirex crashed, and on experimental areas sprayed with one pound of mirex per acre. The normal application is about 1 gram per acre, and kepone has not been found under those circumstances.

With the discovery that mirex can turn into kepone, the manufacturer reportedly ceased production. Both kepone and mirex were produced by the same company and only that company. USDA now has no source of mirex and is looking for a substitute to continue the fire ant program.

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CONSERVATION SCENE

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