



TEXAS

PARKS & WILDLIFE

February 1985



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David Baxter Editor
Ilo Hiller Associate Editor
Mary-Love Bigony Assistant Editor
Barbara Karwhite Design Editor
Bill Reaves Chief Photographer
Glen Mills Photographer
Ruth Perry Circulation
La Verne Moccia Office Manager

Front and Back Covers: Caddo Lake is a place of many moods. For a look at this East Texas area throughout the seasons, turn to page 22. Photo by Leroy Williamson.

Inside Front: Cool, open country rather than mountains is the mountain bluebird's home. The only bluebird without a red breast, the mountain bluebird winters in the western two-thirds of the state. Photo by Wyman P. Meinzer Jr.

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SHOOTING RESORTS

Bird Hunting Without Bother

Article by Jim Cox and Photos by Bill Reaves

Many of the older generation of hunters like to reminisce about the days in Texas when a limit of quail could be had any day by strolling through the nearest woodlot or creek bottom.

While the younger set might discount such claims, the fact remains that hunting in Texas has changed dramatically in the past half-century.

Fifty years ago hunting usually was available nearby, even for city dwellers, and farmers and ranchers were generally receptive to visiting hunters. Since that time, populations have shifted from rural to urban, small farms have been absorbed by larger agricultural interests and more intensive land use has destroyed habitat for many game species.

Quail and other game birds are not necessarily less abundant today in all areas, and upland game bird hunting endures as a popular sporting activity in the state. But access has been altered to the detriment of many hunters, a situation made even worse by the relative scarcity of public hunting lands in the state.

All these factors have combined to place most of the control of hunting lands in the hands of landowners, which in turn has spawned an exten-

Plenty of birds and the availability of trained dogs are two of the attractions of shooting resort hunting. Resorts offer longer hunting seasons as well.



sive hunting lease system. To its credit, lease hunting provides recreation for a considerable number of hunters and offers some potential for good game management.

On the minus side, lease hunting tends to keep hunter participation at low per-acre averages, is expensive and usually is conducted on a hunting season or year-round basis. This tends to discourage the hunter who lacks the money or time to get his money's worth from an annual hunting lease.

Private enterprise generally finds a way to fill a void, and in this case a problem has been solved at least partially by a few Texas landowners who have established shooting resorts. Simply stated, shooting resorts are acre-

ages where pen-raised quail or other game birds are released for hunting on a fee basis.

Shooting resorts are not a new idea. Europeans have operated them in one form or another for centuries, and the Southeastern United States is dotted with commercial quail hunting resorts. Many of these are multi-million-dollar operations involving thousands of acres, and customers are provided lodging, guide service and the use of trained bird dogs to assure a quality hunt.

Veteran quail hunters, especially those who train and maintain their own dogs, tend to take a dim view of hunting pen-raised birds. Shooting resort operators agree that there are



countless wrong ways, and really only one right way, to operate a shooting resort. "If you have limited acreage with poor habitat, and you release poorly conditioned birds there's no way you can provide a quality hunting experience," said Dr. James Kroll, a Stephen F. Austin University wildlife biologist and consultant for the Wolf Pine Shooting Resort near Crockett. "But if done properly, shooting resort hunting can be just as exciting and authentic as hunting wild birds."

Kroll listed some of the distinct advantages offered by a well-run resort operation. "First of all, there is no doubt that the customer will find plen-

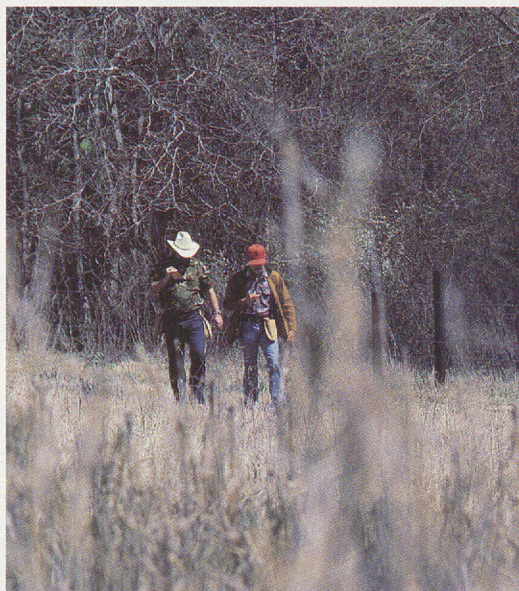
ty of birds on a good shooting resort," he said. "In fact, the operations I have been associated with all guarantee that a specified number of birds will be flushed within shooting range during the morning's hunt." A typical guarantee calls for 125 quail and 15 pheasants, or the hunter doesn't pay, he said.

"Another advantage is that the customer doesn't have to own, train or maintain his own bird dogs. A good operation will have much better dogs than the average hunter, simply because the dogs get so much training and practice in an area where birds are abundant," Kroll continued.

Time is another factor, since a

hunter usually sees more birds in an hour of resort hunting than he likely would in an entire day of tramping through normal quail habitat. Diversity is another justification, since many resorts offer pheasant, chukar or Hungarian partridge in addition to the old standby bobwhite quail.

It also could be argued that shooting resort hunting is safer than public area shooting, since hunts are always guided and usually only one party is hunting on a specified tract. "Because the action is so fast, shooting resorts are an excellent place to expose youngsters to hunting," Kroll said. "They can learn the etiquette of shooting over



Hunters who lack the time to get their money's worth from an annual lease might find shooting resorts the answer. Some resorts have trap ranges where out-of-practice shooters can brush up their skills. And shooting resort hunters seldom go home empty-handed. They usually see more birds in an hour than they would in an entire day in normal habitat, and most resorts guarantee that a specified number of birds will be flushed within shooting range during a morning's hunt or the hunter doesn't pay.

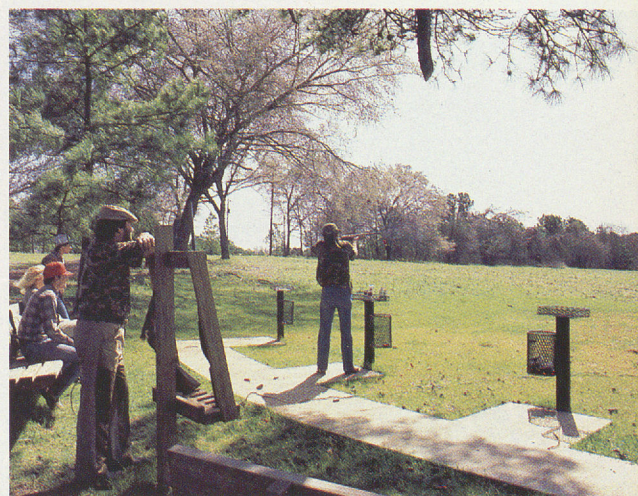
bird dogs, and they don't have time to get bored."

Yet another advantage enjoyed by shooting resort operators and customers is a longer hunting season, and this is where the Parks and Wildlife Department plays a role. Resort operators must be licensed by the department, and provide documentation as to numbers of birds released and other information. In turn, shooting resorts are allowed a longer than normal hunting season. While the general quail season, for instance, opens in early November and ends in February, shooting resorts are allowed a season of October 1 of one year through April 1 of the

following year.

Kroll said one of the objections he has heard from hunters is that pen-raised quail are tame, and hunting them involves little skill. "It's true that quail are easily domesticated, but if they are reared in the proper facilities and released in good habitat well in advance of the hunt I guarantee there is very little difference in hunting pen-raised birds and wild bobwhites," Kroll said.

Another observer who believes shooting resorts are destined to play an increasing role in Texas' hunting scene is Capt. Harold Oates, the department's law enforcement supervis-





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or for inland game and fish. "I don't think there's any doubt that shooting resorts are a coming thing," said Oates, "primarily because good leases are simply getting too expensive for the average weekend quail hunter."

"I think shooting resorts when operated properly can provide a service, but resort operators and those thinking about starting resorts need to be aware of the requirements they must meet," he added.

A \$50 Shooting Resort License is required for a tract of land not less than 600 nor more than 2,000 contiguous acres.

Also, in order to operate a resort, the operator must obtain birds for release. A Class I or Class II Commercial Game Bird Breeder License, which are \$100 and \$10 respectively, depending on the total number of birds handled per year, is required to raise or possess quail or other game bird species. State statutes require hunters to have a valid hunting license while hunting on shooting resorts, even if only pen-raised birds are taken.

A shooting preserve's boundaries must be marked with metal signs, and all game birds taken must be immediately banded with a band showing the permit number of the operator. The band must remain on the bird after it is killed and processed.

To qualify as a shooting resort, the operator is required to release a minimum of 500 quail or 500 pheasant or chukar annually for each 600 acres.

Oates estimated there are approxi-



Shooting resorts usually have better bird dogs than the average hunter, since the dogs get so much training and practice. And there often is more diverse game on a resort than on a lease. In addition to the standard bobwhite quail (top left) some resorts offer hunters a shot at pheasants (top right) and other game birds.

mately 95 shooting resorts now operating in the state. "The number of licenses issued has not grown appreciably in recent years, but I'll be surprised if the number doesn't increase in time," Oates said.

The names of some licenses may be confusing to landowners planning to operate a shooting resort or lease their land for ordinary lease hunting of wild game. "A Shooting Resort License is required when pen-raised birds are released for hunting," Oates said. "However, if a landowner leases his property for the hunting of wild species of animals or birds, the Shooting Preserve License is required."

Confusion is understandable because in many parts of the country shooting resorts are referred to as shooting preserves. A third license, called the Private Bird Shooting Area License, is required for a tract of land of not more than 300 acres where pen-raised game birds may be hunted every day of the year. This \$50 license usually is purchased by landowners who use small tracts of land for training bird dogs, Oates said.

"Anyone interested in leasing their land for any type of hunting should contact the Parks and Wildlife Department to find out about all the requirements," said Oates. **

Texas tortoise by Bill Duncan



Young Texas tortoise by Gilbert Palmer



Common snapping turtle by John Tveten



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Lone Star Turtles

Of the more than 300 turtle species in the world, 50 live in North America and more than two dozen live in Texas. Here's a look at a few of the turtle species found within the state.

by Mary-Lovè Bigony

Common snapping turtle by John Tvelen



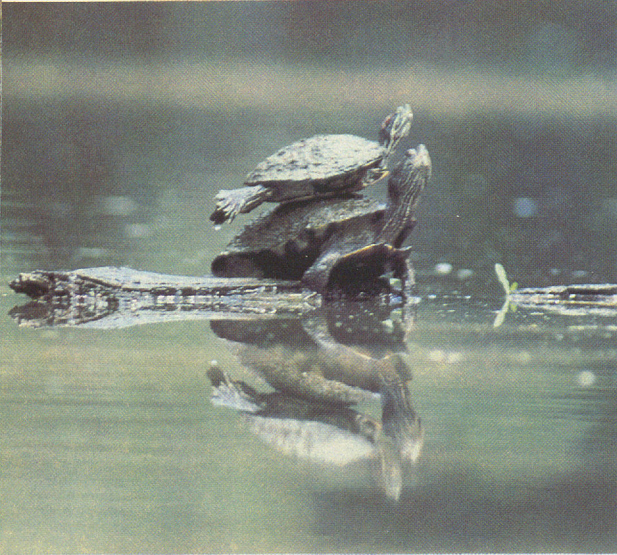
Three-toed box turtle by Jim Whitcomb



Old Texas tortoise by Bill Reaves

Heavy exploitation led to the need for protection of the Texas tortoise. The six-month-old tortoises (inset left), the mature specimen (left) and the old male at right show the age progression of this reptile that can live as long as 60 years. Don't aggravate the snapping turtle (above); in contrast to the docile tortoise the large snapping turtle has a short temper. The three-toed box turtle (above right) can close its shell tightly when in danger.

Red-eared sliders by Grady Allen



Mud turtle by C.J. Simmons



Three-toed box turtle by Leroy Williamson



Turtles are at home on land and in water. The small mud turtle (above) is thoroughly aquatic and usually covered with mud from its watery home. Red-eared sliders (top and center) enjoy quiet waters where they bask on logs or in floating plants. Three-toed box turtles (right, bottom center and far right) are dry-land species.



Red-eared sliders by Grady Allen

Reptiles generally are not thought of as appealing. Alligators and lizards resemble creatures from monster movies and most people loathe snakes. But turtles are different. "Most people have a feeling that no reptiles except turtles are to be trusted," said a renowned turtle expert.

Three-toed box turtle by Jim Whitcomb



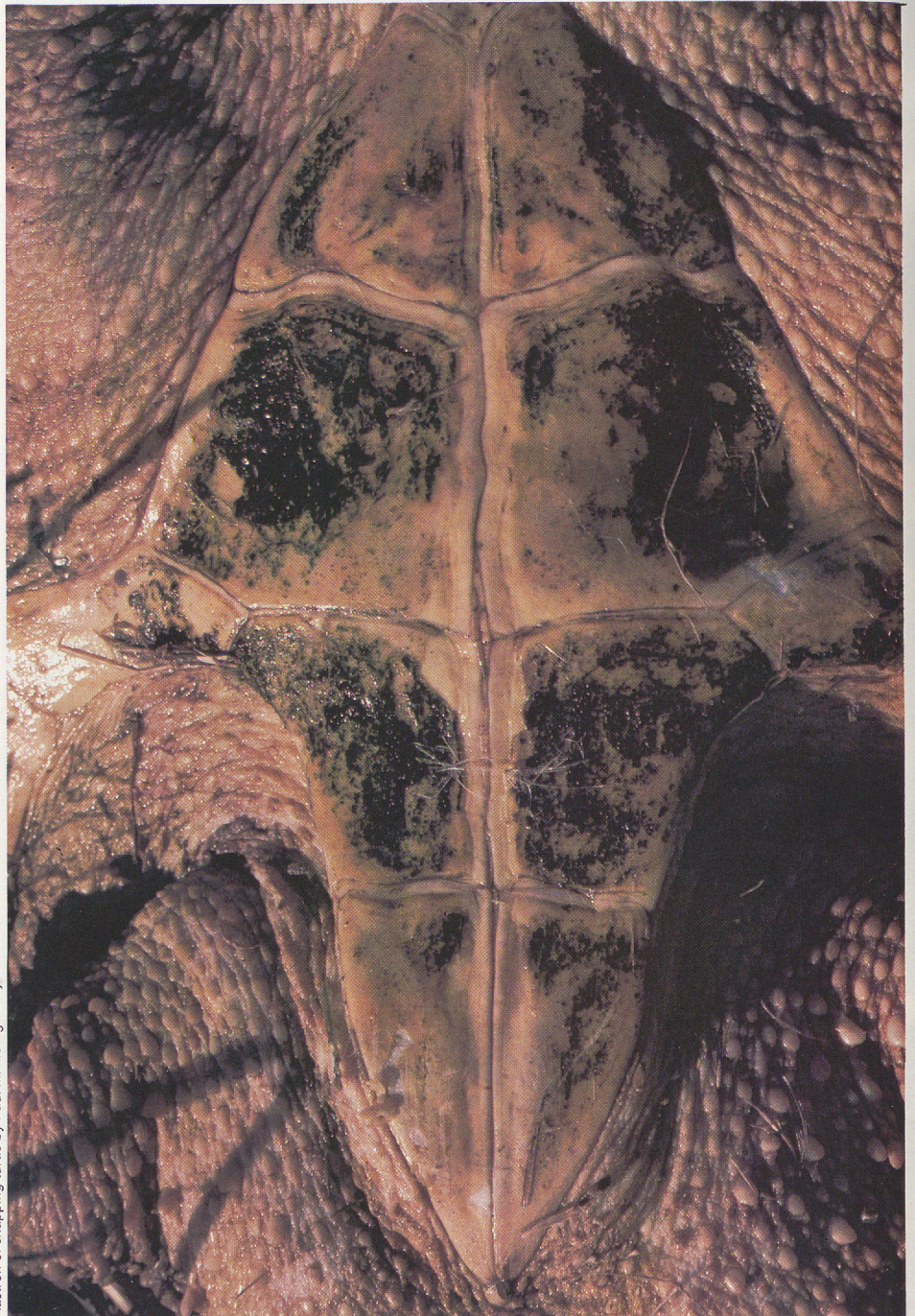
Three-toed box turtle by Leroy Williamson



Since the turtle's shell protects it the reptile has no need for speed, but it needs strong legs to carry the extra weight. It's impossible to remove a turtle from its shell. The backbone is curved and fused to it.



Snapping turtle by John Tveten



Plastron of snapping turtle by Paul M. Montgomery



Snapping turtle by Paul M. Montgomery

Not all turtles are slow and lumbering. Softshell turtles (opposite page) have been called "animated pancakes" and they can outrun a person on level ground. These turtles' shells are soft and leathery and they often lie buried in the mud with only their eyes and snout exposed. The large, ill-tempered snapping turtle (this page) is found in fresh water over most of the state. The center photo shows the snapping turtle's underside (plastron).

Smooth softshell by Paul M. Montgomery



Softshell turtle by Leroy Williamson

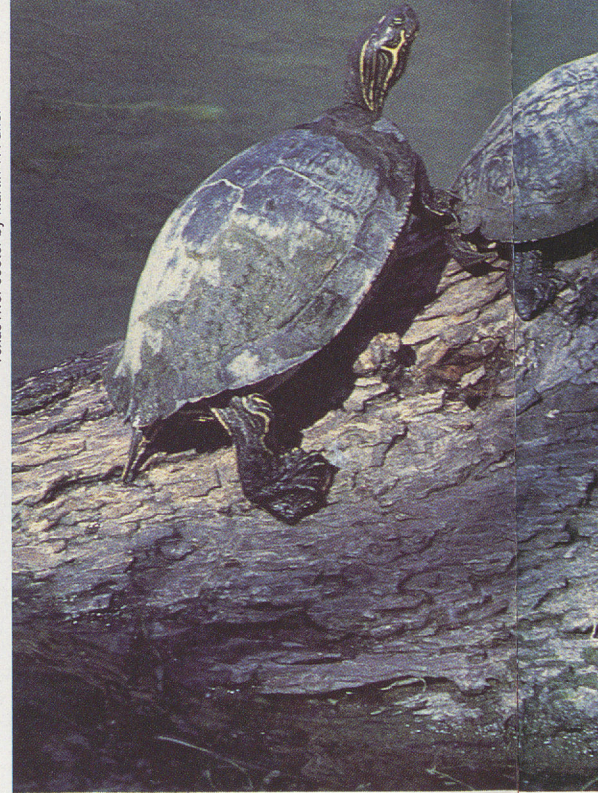


Turtle is a collective name for all reptiles with shells. Tortoises are turtles and so are terrapins; tortoise and terrapin are different genera of this large family of reptiles. Texas has only one terrapin, the diamondback terrapin found along the Texas coast. Tortoises are thought of as land animals, such as the Texas tortoise, but the box turtles also live far from water. Land turtles have heavy, short, clublike legs and feet while most freshwater turtles have longer legs and webbed feet. Sea turtles have paddles instead of feet.

River coolers by Paul M. Montgomery



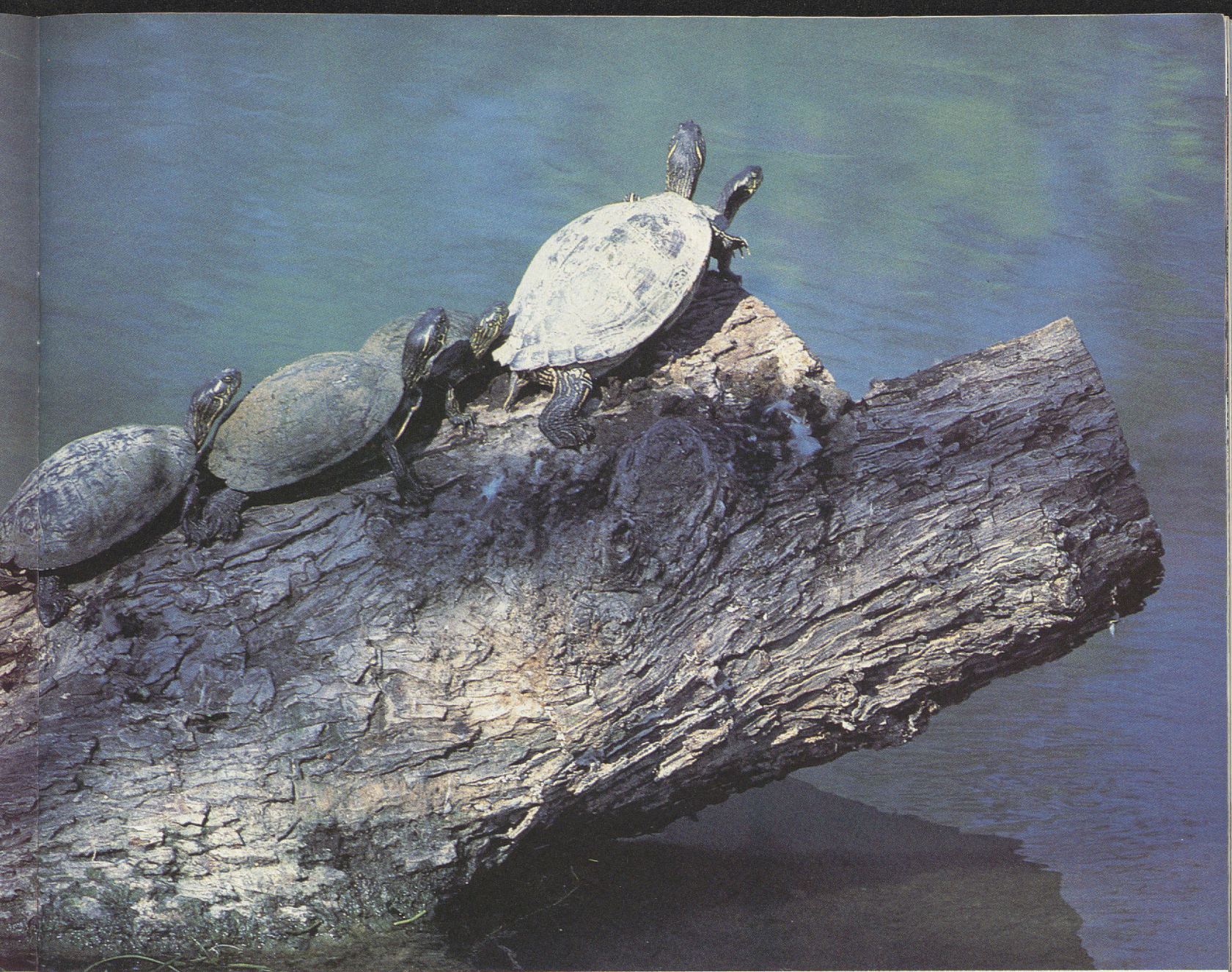
Texas river cooter by Martin T. Fuller



River coolers (above, center and middle bottom) are the picture of serenity as they bask in the sun. If a log fills up with coolers, newcomers may crawl atop another turtle's back. The red-eared slider (immediate right), a related species, also basks on logs and stumps for hours. Although not as fond of basking as the coolers and sliders, softshell turtles (far right) occasionally climb atop a rock or log, but only for a short while.

Red-eared slider by Paul M. Montgomery





River cooter by Paul M. Montgomery

Softshell turtles by Bill Reaves





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Bill Reaves

planting for whitewings

by George Oxford Miller

Texas Parks and Wildlife Department personnel stood ready as technician Lewis Fitch fired up his John Deere late last winter and slowly began moving down the long plowed row. This "farmer" was not planting carrots or cabbage, which are common cash crops in the Lower Rio Grande Valley. He was planting huisache, ebony, brasil, anacua and granjeno, the same thorny brush that some other John Deere had stripped away several decades earlier. A cycle was being completed, returning this farmland along the Rio Grande to native vegetation.

This scene took place on part of the Anacua Unit of Las Palomas Wildlife Management Area, which consists of a dozen separate units located throughout the Lower Rio Grande Valley. "The purpose of this wildlife management area," explained Ron George, Dove Program Leader at the TP&WD headquarters in Austin, "is to provide native brush habitat for nesting white-winged doves and a source of white-wing food during the nesting season. The units also serve as demonstration

A dirt lane separates the revegetated area and the native brush in the Longoria Unit (left). Both provide good whitewing habitat and there is no discernible difference.

sites so landowners can learn how to manage for doves. Public hunting is permitted on some of these units."

The Texas Parks and Wildlife Department established the Las Palomas Wildlife Management Area in 1957, and began to systematically preserve nesting habitat for the doves.

Since 1971, whitewing hunters have been required to purchase white-winged dove stamps, and the resulting funds have been dedicated to acquiring and developing additional white-wing habitat. In addition to direct revenue, additional money was available from federal-aid cost-sharing, which reimburses 75 percent of the state's expenditures.

In 1976, TP&WD began acquiring acreage with stamp revenues. When possible, brush country with existing prime nesting habitat for doves is purchased. However, since 99 percent of the floodplain below Falcon Dam is cleared for agricultural and urban development, native brushland is difficult to find. When a willing seller is located, the property is often farmland. Of 1,300 acres set aside for white-winged dove habitat since 1957, almost 25 percent was cropland.

Reforestation of cleared land began in 1961 on the Longoria Unit in Cameron County, the first land purchased for the Las Palomas WMA. Over a 10-year period, 17 acres in numbered

rows were replanted with native brush. Today, only a narrow dirt lane separates the revegetated area from land never cleared, but there is no discernible difference. Only the numbered signs along the rows indicate which acreage is reforested.

As an experiment, this early revegetation work was a success, but it was economically infeasible. The cost per acre was \$1,000 in 1960 dollars. "TP&WD personnel dug seedlings by hand from existing brushlands and transplanted them. The most that could be planted was one acre per day," reported Gary Waggerman, Assistant Dove Program Leader for TP&WD. Waggerman, stationed in Edinburg, has worked with the white-winged dove program since 1970.

Now, almost 15 years later, Waggerman is again reforesting cropland for white-winged doves, but using a much less labor-intensive method. Botanists at Texas A&I University in Kingsville have studied the native brush plants and solved many of the problems associated with germinating and growing seedlings. Ebony seeds, like most legumes, have a tough, impervious seed coat. They must be soaked in sulfuric acid to insure that the seed can absorb enough water to trigger germination. Otherwise, the seeds might lie dormant in the soil for years. The germination secrets of many

of the other native trees and shrubs that provide the primary nesting habitat and food for wildlife also have been discovered.

A technique was developed for growing seedlings in a greenhouse that gives the young plants a head start in competing with grasses after they are planted. The seeds are planted in 18-inch-long cardboard tubes. Within six months, the seedlings have a long taproot and up to a foot of foliage. The seedling in its cardboard container is then planted in a prepared plot.

A mechanized method for planting the seedlings also was developed by Texas A&I. A rig with a seat, deep chisel plow, packing wheels, and trays to hold the tubes of seedlings was designed to fit on the back of a tractor. As the plow digs a trench in the plowed field, the operator drops the plants into the ground. Helpers follow to insure that the foliage of the seedlings is not covered. Greenhouse seedlings and mechanized planting have made reforestation of cropland economically feasible.

In February 1984, Waggerman and his crew planted 25 acres of the Anacua Unit of the Las Palomas WMA. "The seedlings are planted 15 feet apart to leave room for a tractor to fertilize and cultivate between the plants," explained Waggerman. "The seedlings will be maintained for two years. By then they should be well established." A farmer is contracted to care for the field and to plant food crops for doves on other cleared land in the unit. In the Anacua Unit, 186 of the 200 acres are presently open fields. Within five years, the reforested area will provide usable nesting habitat for white-winged doves. It will be considered good habitat in 10 to 15 years and prime habitat in about 20 years.

In the 1920s, there were several million white-winged doves nesting in the Rio Grande Valley. A day-hunt bagging 100 birds per hunter was considered

After getting a head start in a greenhouse for about six months, the seedlings—still in the cardboard tubes in which they grew—are loaded onto a specially rigged tractor developed for this purpose by Texas A&I University. As the tractor's plow digs a trench in a plowed field the operator drops a plant into the ground. Helpers follow to insure the seedling's foliage is not covered.

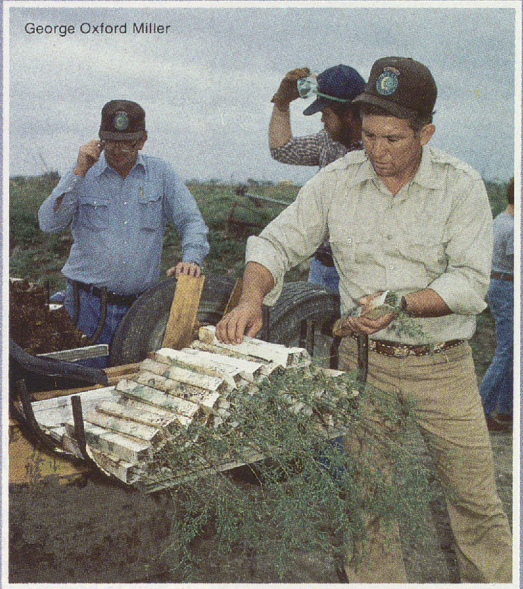
only fairly good. The dove population began to decline in the 1930s, but dropped to a fraction of previous numbers in the 1940s when practically all the thorn brush in the Valley was cleared for agriculture. Now white-winged doves may be hunted only during the first two weekends in September with a bag limit of 10 per day or during the regular mourning dove season with a maximum bag limit of two per day.

According to Harry C. Oberholser in "The Bird Life of Texas," in the 1930s one would see "great flocks of white-winged doves . . . and lesser flocks of red-billed pigeons" when driving from Laredo to Rio Grande City. Between 1940 and 1950 almost all of this terrain was converted to farms and dove numbers declined dramatically. Department records indicate the 1950 whitewing population in the Valley was 1,039,000. The 1984 spring census totaled 467,000 whitewings, approximately 11 percent below the 15-year average. Approximately one-half of the whitewings in the Valley now nest in citrus groves, but they produce only about one-third of the offspring of those nesting in native vegetation. Whitewings nesting in citrus are disturbed by spraying and machinery and suffer increased predation from grackles.

The Texas Parks and Wildlife Department plans to revegetate 25 to 50 acres per year for the next 10 years. Seasonal employees are hired in the spring and summer to gather seeds, which are stored for greenhouse planting. "We have been able to reduce the cost of reforestation to \$165 per acre by using greenhouse seedlings," explained Ron George. "We are experimenting with planting seeds directly, which would reduce the cost even further."

The department has a continuing program for purchasing land for the Las Palomas Wildlife Management Area. With very little native brush remaining in the Lower Rio Grande Valley counties, the key to preserving wildlife in the Valley may well be the reforestation of agricultural land. Persons wishing to contribute to native brush reforestation may do so by purchasing \$6.00 white-winged dove stamps at department offices and most license outlets. **

George Oxford Miller



George Oxford Miller



George Oxford Miller





Buck Antler Ranking Mixes Science, Politics

If you were fortunate enough to bring in a trophy-sized white-tailed buck deer from your hunting trip this season in Texas, you might wonder how its antlers stack up against the competition.

Measuring and scoring deer antlers can be done only by those who have been schooled in the exacting procedure, according to Horace Gore, white-tailed deer program leader for the Texas Parks and Wildlife Department.

"There are five main factors which have to be considered in scoring a set of antlers," Gore said. "These are inside spread, numbers of points or tines, tine length and beam circumference at the base of the antlers."

Even after these measurements, a complicated set of rules involving symmetry and other factors can weigh heavily on the buck's total score, Gore noted.

The TP&WD does not keep records on trophy deer per se. This job is handled by the Boone & Crockett Club, which for more than 30 years has maintained records of the largest big game trophies taken on the North American continent.

Under Boone & Crockett standards, a whitetail buck must score a

OUTDOOR ROUNDUP

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minimum of 170 points in the typical category and 195 points in non-typical to qualify for the record book. Gore said to qualify for a typical listing in the Boone & Crockett record book, a buck would usually have to have at least 10 points with at least an 18-inch inside spread and beams more than four inches in circumference.

"Of the 240,000 bucks taken annually in Texas only two or three would qualify for the B&C record book," Gore added. The largest typical Texas buck in the book was a 15-pointer taken in Dimmit County in 1932. It scored 194 $\frac{7}{8}$ points, Gore said. The largest non-typical head was a 49-pointer shot in McCulloch County in 1892.

While Boone & Crockett heads have been taken from several regions of Texas, the major share of qualifiers has come from the famed Brush Country of South Texas, Gore said.

Gore stressed body weight is not a factor in B&C competition, although some big deer competitions figure the weight in addition to antler measurements.

If you have taken an outstanding buck you think might qualify, you may write the Boone & Crockett Club, 205 South Patrick Street, Alexandria, Virginia 22314, for the location of an official B&C scorer in your area.

New Furbearer Booklet Offered By TP&WD

A new booklet entitled "The Furbearers of Texas" is now available on request from the Texas Parks and Wildlife Department.

Authored by David J. Schmidly of the Texas A&M University Wildlife Sciences Department, the 54-page booklet contains black and white photos, range maps and information on all the state's furbearing animals as well as coyotes and bobcats, which are classified as nongame mammals but are important fur species.

To obtain the free publication, write Furbearer Program, Texas Parks and Wildlife Department, 4200 Smith School Road, Austin, Texas 78744, and specify Bulletin No. 111.

The department distributes a number of other bulletins dealing with wildlife species of Texas. Write to the above address also for a bulletin price list.

Red Snapper Caught In 'Wrong' Area

Clarence Brown of Beaumont couldn't believe his eyes when he pulled a pink-colored fish from the Intracoastal Waterway near Sabine Lake in early November.

Brown knew enough about coastal fish to realize the 1 $\frac{1}{2}$ -pound red snapper was indeed an unusual catch that far inshore.

Parks and Wildlife Department biologist David Trimm confirmed the catch, saying that red snappers are found almost exclusively in deep offshore waters and are rarely caught in bays or bayous.

Trimm said Brown's fish, which was caught about 10 miles from the Sabine River's confluence with the Gulf of Mexico, is interesting especially because coastal oldtimers report that an inshore population of red snappers existed years ago. "Those fish reportedly remained in inshore waters the year round," said Trimm. "We don't know if Brown's catch is a remnant of that group or one which simply migrated from the Gulf."

Trimm added that all fishermen are urged to contact a TP&WD biologist anytime they catch an unusual fish, or as in the case of the snapper, catch fish in an area where they normally are not known to range.

Javelina Die-Off Seen In South Texas

Javelina in at least five South Texas counties are suffering losses due to an apparent outbreak of a form of encephalitis, Texas Parks and Wildlife officials said.

Charles Winkler, big game program director, said he has received reports of sick and dead javelinas recently in Webb, Starr, Brooks, Kenedy, Live Oak and Duval Counties.

"Several of the sick animals have been collected by department personnel and were sent to the Texas Veterinary Medicine Diagnostic Laboratory for diagnosis," Winkler said. "Preliminary indications point to a form of encephalitis, but the specific strain has not yet been identified."

Winkler said javelinas in poor body condition or which appear dazed or unable to walk properly should be avoided. "Encephalitis is a viral disease, and while most strains which affect wildlife and livestock are not transmittable to humans, some can be," Winkler advised. "Sick or dead animals should be left alone, and especially should not be handled by persons who might have sores or scratches on their hands."

The meat of javelinas infected with the virus can be safely consumed by humans if it is cooked thoroughly, he said.

Winkler said it's not known what triggered the virus epidemic, but he speculated that the long drought followed by heavy rains this fall may have been a factor.

Calaveras Corvinas Growing; Redfish Also Stocked

The angling future appears bright for Lake Calaveras near San Antonio because of two species of non-native game fish introduced recently by the Texas Parks and Wildlife Department.

A hybrid between Texas' native saltwater spotted seatrout (speckled trout) and orangemouth corvina from California's Salton Sea is already exceeding biologists' expectations.

Biologist Jimmy Dean of San Antonio said anglers already are catching hybrid corvinas 11 to 12 inches long. "About 12,000 fingerlings were stocked on July 27, and they ranged in size from $\frac{3}{4}$ to 1 $\frac{1}{4}$ inches in length," Dean said. "That means the hybrids attained a size in four months that it takes speckled trout in the bays two years to achieve."

The hybrids, which are similar to

specks in appearance, were produced at the department's Palacios Research Station. Biologist John Prentice from the Heart of the Hills Research Station said the corvina hybrids have been caught in all net surveys taken at Calaveras, indicating high survival rates.

Calaveras also received its first stocking of red drum (redfish) during the fall, with 204,000 fingerlings brought in from the Palacios facility. Also receiving their first redfish stockings were Lake Fairfield, near Fairfield, and Lake Nasworthy at San Angelo. Lake Braunig at San Antonio and Tradinghouse Reservoir near Waco received supplemental stockings of redfish.

Bird Checklist Now Available

Serious birders or those considering taking up bird watching as a hobby may wish to obtain a new free booklet from the Texas Parks and Wildlife Department.

A Checklist of Texas Birds is a handy 36-page booklet designed for recording bird observations by location or in a diary fashion. It includes an accurate listing of Texas' birdlife with both scientific and common names.

To obtain copies, write to Park Operations, Texas Parks and Wildlife Department, 4200 Smith School Road, Austin, Texas 78744.

Hypothermia A Factor In Winter Water Safety

Drownings often are thought of as more of a warm-weather occurrence when Texas lakes are abuzz with activity. But state water safety officials warn that your chances of drowning are greater during cold weather because of the added threat of hypothermia.

Hypothermia is simply a scientific word used to describe freezing to death, when the victim's inner body temperature drops below safe levels.

In its early stages hypothermia causes a form of shock, with shivering, a lack of coordination and disorientation among other symptoms.

Texas Parks and Wildlife Department water safety education officials say anyone getting on the water for fishing or any other activity should take extra precautions.

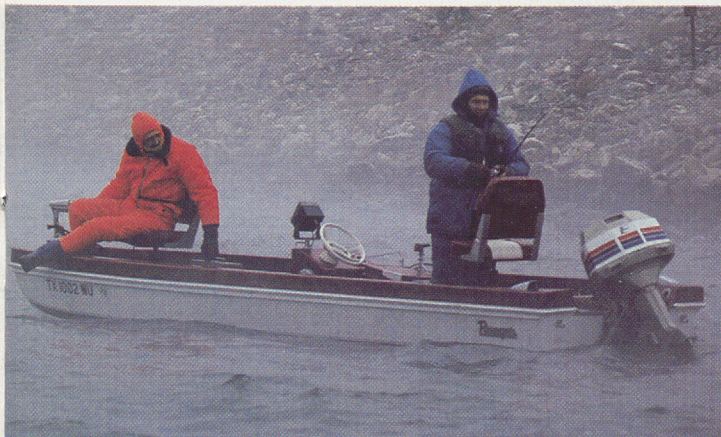
These include dressing more warmly than you might think necessary, taking along extra clothing in case of getting wet, and wearing a personal flotation device (life preserver) at all times.

Being aware of weather forecasts is vital for wintertime boaters, and outings should be delayed or cancelled if the weather is threatening. If your boat should overturn, stay with it as long as it floats and never attempt to swim to shore.

One of the first symptoms of hypothermia is shivering. When someone aboard starts shivering you should immediately head for shore. First aid before the onset of serious hypothermia is a warm drink such as coffee or tea, never alcohol.

For serious hypothermia, remove the victim's wet clothing and concentrate on applying heat to the trunk of the body. Do not rub hands and feet.

Officials said covering the victim merely stops further heat loss, and additional heat sources are needed in severe cases. This can be accomplished by providing heat with warm water, heating pad, water bottle or a second person wrapped in a blanket or sleeping bag with the victim.



Smallmouth Bass Continue To Progress In Texas

The recent catch of a three-pound 12 ounce smallmouth bass at Lake Texoma is yet another indication of the slow but steady emergence of the import as a sport fish in Texas.

One fish does not make a fishery, but Texas Parks and Wildlife Department officials said a half-dozen Texas lakes now offer legitimate smallmouth fisheries and at least a dozen more are developing.

"The stocking of smallmouth bass takes a lot of time to show results," said Bill Provine of San Angelo, smallmouth bass program leader. "In nearly all cases we have had to stock the fish in lakes which already had existing game fish populations."

Smallmouths have had good reproductive success in virtually every lake in which they have been introduced, but the hatchery system can't produce enough to stock massive numbers in all available habitat, Provine said. "We have to put as many as we can and wait for natural reproduction to do the rest," he noted.

Texoma is one of the more recent lakes to be stocked with smallmouths, having received its first shipment in 1981. Anglers are catching the fish with increased frequency.

Smallmouth bass are stocked in the rocky, clear waters of reservoirs in the western half of the state. This kind of habitat suits the fish best, and these reservoirs are able to provide an excellent sport fish in habitat that may be only marginal for largemouth bass, Provine said.

Provine said the best smallmouth fishing lake in Texas probably is Lake Meredith in the Texas Panhandle, where the species has become the dominant one. Canyon Lake near New Braunfels has to be a close second, especially since it has produced several state records, the latest a six-pound, two-ounce fish taken by Austinite David Vorwerk in Decem-

ber 1982.

Some of the other lakes with bona fide smallmouth fisheries, not necessarily in the order of productivity, are Amistad, Belton, Georgetown, Medina, Spence, Stillhouse Hollow, Travis and Whitney.

Other lakes that have been stocked in recent years include McClellan, Winters, Copper Breaks State Park, Hord's Creek, LBJ, Twin Buttes, Bridgeport, Brady, Oak Creek, Cisco, Falcon, Town Lake and the Colorado River below Austin.

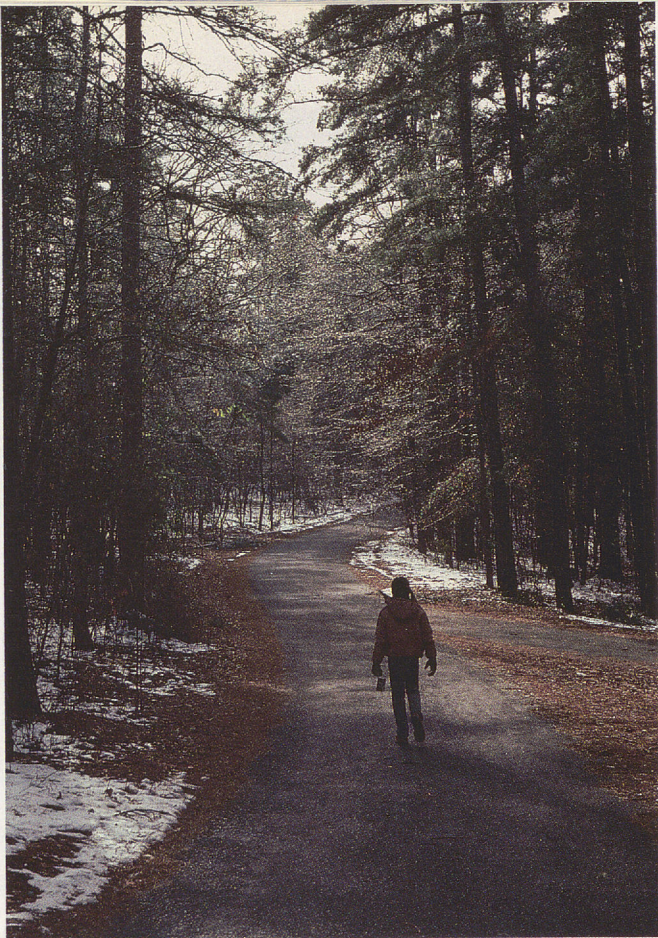
Officials say the winter and early spring are good times to catch smallmouths. They will hit a variety of bass lures, with small jigs and grubs in crawfish or shad colors being favorites. Live crawfish also are a proven smallmouth bait, as Vorwerk's state record was taken on one.

Smallmouths often are found deeper than largemouths, but in the spring may move into six- to 10-foot depths to spawn over small rock rubble.

March in . . .

TEXAS PARKS & WILDLIFE

Being a falconer is more than just having a wild bird in the backyard. It is a commitment, and in the March issue we'll explore the sport of falconry, or hawking, and its regulations. Also next month are stories on solar heating in state parks, Blanco State Park, tracking whooping cranes from their Canadian nesting grounds to the Texas coast, bass fishing regulations, buckskinners, Panhandle mule deer and a photo story on tree frogs.



Caddo Lake in all seasons

Article by Ilo Hiller and Photos by Leroy Williamson

winter

It might not be your idea of a winter wonderland, but Caddo Lake displays a special kind of beauty when snow blankets the pine/hardwood forests and ice holds the towering cypress trees in its grip. As you stroll through the park beneath ice-covered branches or discover a fungus-covered stump or snow-bordered stream, you may feel its spell.









spring

The fresh new greens of spring become a backdrop for dogwood blossoms as the season progresses. And lily pads with their fragrant blooms form a ceiling for fishy waters below, tempting anglers to lose a lure or two in their tangled mass. Wildlife abounds in and around the lake and park with enough variety to please most naturalists.





summer

A hike in the woods on a sultry summer day may not appeal to everyone, but who could resist an early morning boat ride on the open water of Big Cypress Bayou as the mist is rising from the surface? As the day progresses, the boater may seek the cooling shade beneath moss-draped cypress trees. Insect repellent will make any outing more pleasant.



autumn

There's a nip in the air as autumn leaves add color to the woodland scene. Cooler temperatures invite visitors to stroll the paths of the park or play games around the leaf-strewn campsites. Fungi and lichens, often unnoticed, add their unusual beauty as mystic Caddo Lake weaves its spell of enchantment through yet another season.







Glen Mills

FISH TALES

by Jim Cox

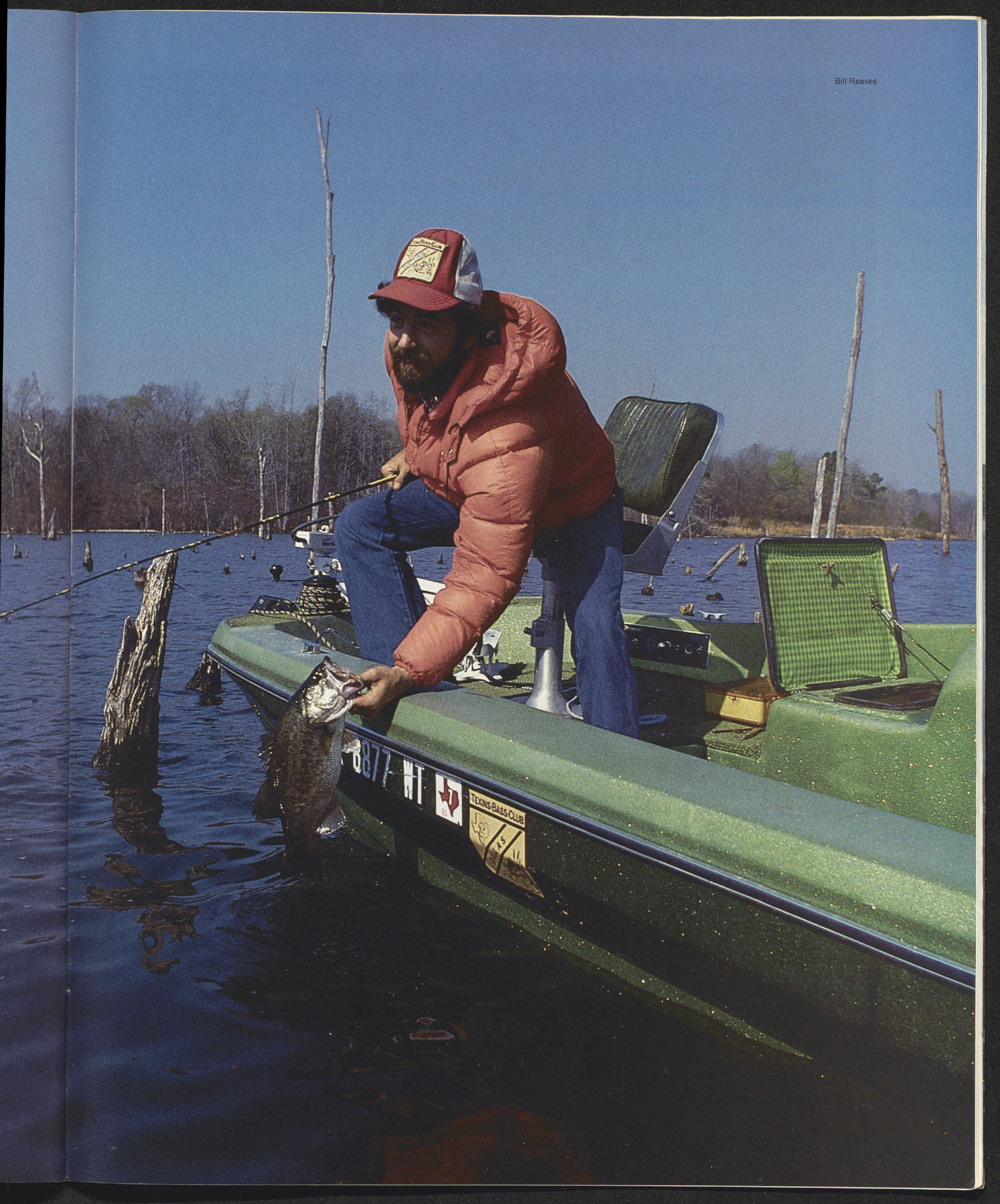
So you've caught an eight-pound bass. It's time to pop some corks and flash cubes before selecting a trusted taxidermist to mount your once-in-a-lifetime largemouth.

Basking in the afterglow of such a triumph, you probably are wondering how your prize stacks up against the biggest bass caught in Texas.

It might be sobering to consider that the state record largemouth bass is almost twice the weight of your eight-pounder. In fact, you would have to catch a 13-pounder just to rank in the top 20.

The spotted bass (above) and largemouth (right) would please any angler, but they don't qualify for the certificate of merit.





So how do you get some recognition for what you rightfully consider a significant catch?

The Texas Parks and Wildlife Department wants to hear your fish story, and for the price of a stamp the agency will provide you a "Certificate of Fishing Merit" to document your catch. If you're not a bass fisherman, don't despair. Certificates are awarded for 18 species of fish, and all you have to do is catch one that exceeds the minimum weight established for that species.

Big fish awards serve two purposes: glory for the angler and data for the fisheries biologist.

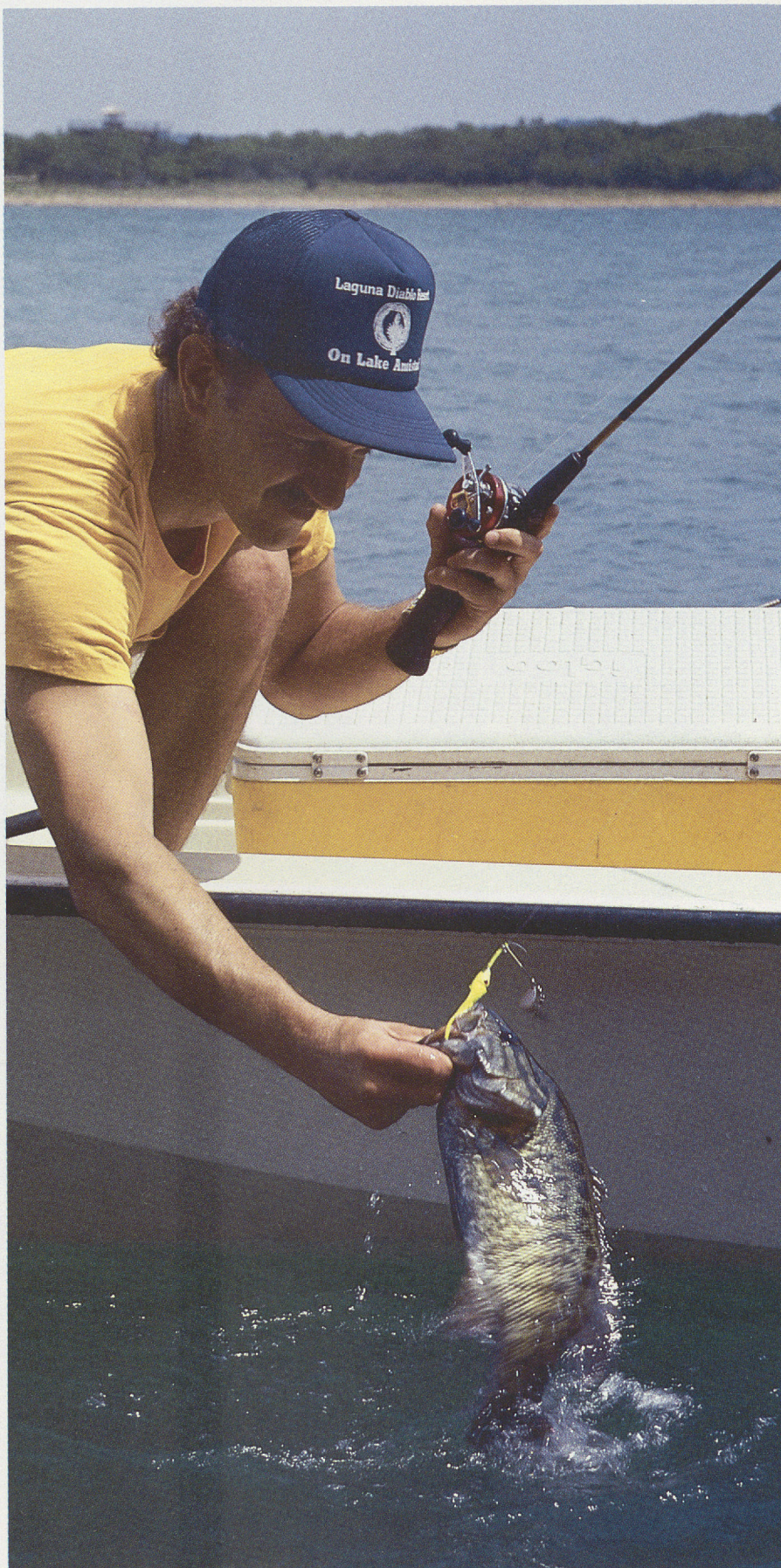
Getting a certificate is easy. But catching a qualifying fish might be more difficult than you would expect. For instance, a sunfish of any variety weighing over one pound will put a certificate on your wall. But to get the same certificate for flathead (yellow or Opelousas) catfish you would have to land a 50-pounder.

The aforementioned eight-pound bass would make the grade, as that is the minimum weight, but a four-pound smallmouth bass also would qualify because they don't attain the sizes of largemouths.

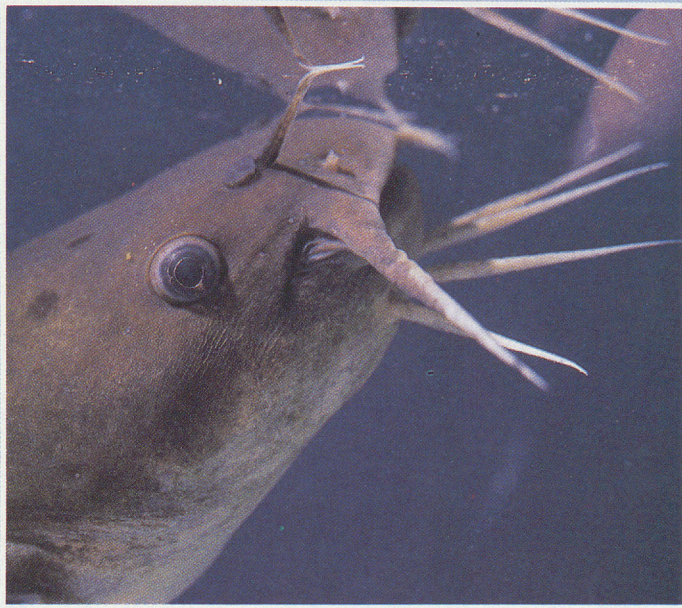
Without a doubt, the most difficult big fish award to capture would be in the peacock bass category. These South American imports have been stocked experimentally by the department in several power plant reservoirs, but so far Alcoa Lake near Rockdale is the only public reservoir with an established peacock bass population, and those fish have not yet had time to grow to the 12-pound minimum set for a big fish award. (Alcoa Lake, which was closed to fishing because of high water temperatures through the summer months, is scheduled to be reopened but no date had been set at the time this article was being written.)

Big fish awards not only bring much-deserved adulation for the angler, but also help the department in its ongoing

Whether you're a bass angler or not, you'll find 18 categories to match your catch.



Buddy Gough



Bill Peaves

Certificate of Fishing Merit

Eligible Fish Species	Minimum Weight In Pounds
Spotted seatrout (speckled trout)	7
Black drum	35
Southern flounder	6
Largemouth bass	8
Smallmouth bass	4
Spotted bass	4
Peacock bass	12
White bass	3
Striped bass	15
Striped/white bass hybrid	8
Crappie	3
Channel catfish	12
Blue catfish	35
Flathead catfish	50
Walleye	6
Rainbow trout	2
Brown trout	2
Sunfish	1

chore of assessing the condition of the state's varied and far-flung fisheries.

One of the nice aspects of the big fish program is that anglers all across the state have a chance to qualify, since at least some of the selected fish species are found in virtually any reservoir the angler might pick. The list also includes several species that often are caught in salt or brackish coastal waters. (See list of eligible species.)

There are a few rules and guidelines to follow when applying for a big fish certificate. The fish must have been taken on hook and line. The applicant must have caught it without help from others, and only fish caught since January 1, 1974, are eligible.

If you have caught a potential certificate fish, the best way to get it documented is to obtain a big fish award application from a Parks and Wildlife Department office or a hunting/fishing license outlet. Complete the form and weigh the fish on a scale certified for trade by the Texas Department of Agriculture. The form should be signed by a witness to the weighing.

If your luck and skill enable you to catch a state record fish, the procedure for obtaining an official state record is similar to a big fish award. However, a bit more documentation is required. In addition to one witness to the weighing, you must submit a pho-

tograph and have the certification form notarized. In cases where species identification is in doubt, the fish may have to be examined by a department biologist.

State fish record forms also are available at department offices and many license outlets across the state.

January through March is the period of the year when most trophy largemouths and other big fish are caught, so now is an excellent time to try your luck.

Department biologists, hatchery personnel and others can take credit for much of the angling variety in Texas, as management programs including stocking of non-native species have significantly enhanced the sport. New sport fish such as smallmouth bass, striped bass and hybrid stripers were not found in Texas before the department began stocking. These fish have revived fishing at many lakes and, especially in the case of stripers, have fueled a boom in the fishing tackle and

guiding business on many reservoirs.

Introductions of Florida-strain largemouth bass in the early 1970s may have been the most pleasant surprise among all the stocking experiments. Before that time, a seven- to eight-pound bass was a rarity, even in the famed bass waters of East Texas.

In fact, a 13-pound, eight-ounce bass caught in 1943 in Lake Medina was the state record until Jim Kimbell of Pittsburg broke it in 1980 with a 14-pound, 1½-ounce fish from Lake Monticello near Mount Pleasant. Kimbell apparently left the gate open, as a flurry of 14-pound-plus bass catches have occurred since that time, capped by John Alexander's state record 15-8 taken from a private lake near Athens in 1981.

Most of the 13- to 15-pound blacks taken in recent years have been examined by department biologists who found all were either pure Florida-strain bass or hybrid crosses between Floridas and native largemouths.

January through March is the period of the year when most bona fide trophy largemouths are caught. This applies to many other species as well, so now would be an excellent time to sample the offerings of a state that has some of the most productive and varied fishing opportunities to be found in the nation. **



Reagan Bradshaw

young naturalist

Ladybugs

by Ilo Hiller

Finding thousands of ladybird beetles (ladybugs) gathered in one place is an amazing sight, and one that few people get a chance to see. Since you usually find only a few at a time, it is hard to believe there could be enough of the small, brightly colored insects to completely cover a tree stump, a log or a large portion of the ground.

What causes them to gather in such large numbers, and how do they know where to go?

In the fall when it is hibernation time and a suitable location is found, the ladybugs release a chemical message called a pheromone (FER-ah-moan). This pheromone signals all other adult ladybugs in the area to gather at the site. Then, when the time is right, they hide themselves in protected locations to wait for winter to pass. They may crawl into dry crevices under tree bark, or take shelter in the ground or beneath leaves and other debris on the ground.

When the ladybugs come out of hibernation in the spring, they again may be seen in a large group before going their separate ways. But most of the time during the spring, summer and fall, they are scattered everywhere doing what ladybugs do best—eating undesirable bugs, especially aphids. (Aphids, commonly called plant lice, are insects that bore into a plant, suck its juices and spread plant diseases in the process. When they are present in large numbers, which they usually are, they can kill the plant.)

Ladybugs are anything but ladylike

Large numbers of ladybugs may be seen when they gather for hibernation in the fall, and when they come out again in the spring.

Paul M. Montgomery



Paul M. Montgomery



It would be impossible to say how many undesirable bugs are eaten by ladybugs and their larvae each year. The larvae below are protected by a waxy secretion. Adults must rely on their warning colors and bad taste.



Paul M. Montgomery



Paul M. Montgomery

when it comes to food. The adults are "appetites with wings" and the flightless larvae are just as single-minded. In both stages, they are bloodthirsty little predators that attack an aphid colony with nothing less than a massacre in mind. A researcher, who studied the eating habits of one ladybug larva, recorded that it ate 90 adult and 3,000 larval scale insects during its three-week life span. Add to this the number of insects the larva continued to eat after becoming an adult and you will get an idea of how many harmful insects a single ladybug can get rid of in its lifetime.

When you consider that thousands of aphid-eating adult ladybugs are each laying hundreds of eggs that will hatch into hungry larvae, you will begin to realize how important they are for insect control. It would be impossible to guess how many plant lice and scale insects are eaten by ladybugs and their larvae each year, but we do know that millions of dollars worth of crops would be destroyed by harmful bugs if it weren't for the ladybug's appetite.

In the late 1880s the California citrus industry was threatened by a cottony-cushion scale insect that was accidentally imported from Australia. Since there were no natural enemies to keep the insect under control, it quickly spread to every orchard and began damaging the trees. Scientists discovered that an Australian ladybug kept the citrus insect under control in its homeland. A supply of these lady-

bugs was shipped to California, and while the citrus growers kept their fingers crossed, the imported ladybugs started eating the cottony-cushion scale insects and laying eggs. It was estimated that if the ladybugs multiplied as fast as they should, a single ladybug could produce 75 billion descendants within six months. Fortunately for the citrus industry the imported ladybugs thrived in California, increased even more rapidly than expected and ate only cottony-cushion scales.

Later in the 1920s another scale insect attacked the citrus orchards. Another ladybug was brought from Australia to control it, but since this species could not reproduce naturally in America, ladybug factories had to be set up so the insects could be produced for release. In 1928 some 48 million ladybugs of this species were set free in the California orchards, and as before, the little beetle's appetite saved the citrus trees.

The ladybug is still important enough to be collected by the thousands for sale to farmers, gardeners and citrus growers. And its habit of gathering in large numbers makes such collections relatively easy for those who know where the ladybugs gather for the winter.

Ladybugs would be perfect insects if it weren't for two members of the family—the squash beetle and the Mexican bean beetle. These two species, unlike their relatives, do not feed on



Paul M. Montgomery



Paul M. Montgomery

other insects. They eat plants and are considered serious garden pests. Fortunately for the family reputation, most people don't know that the squash beetle and Mexican bean beetle are ladybugs.

Ladybugs have been popular for generations. Most of us have held one of these small beetles in our hand, recited the rhyme "Ladybird, ladybird, fly away home, your house is on fire, your children alone," and then allowed the insect to fly away. This rhyme has been a part of our English folklore for so long that few people even know its meaning. According to one source, it refers to the English custom of burning hop vines at the end of the season—vines on which many ladybug larvae (children) might be found. The second stanza of the rhyme, "Except little Nan, who sits in a pan, weaving gold laces as fast as she can," refers to those larvae that were saved from the fire because they were spinning their protective pupal cases somewhere other than on the burning vines.

The common name ladybug, or lady beetle, dates back to the Middle Ages when these insects were associated with the Virgin Mary and called "beetles of Our Lady." The family name Coccinellidae comes from a Greek word meaning scarlet. Most species are red, yellow, orange or reddish-brown with contrasting black spots on their wing covers, or they are black with contrasting red, yellow or white spots. The larvae are blackish grubs,

often spotted or banded with red or yellow and covered with small spines.

The ladybug's yellowish-orange eggs usually are laid on the undersides of leaves in batches of three to 50. Each female lays several batches, producing somewhere between 100 and 200 eggs, and sometimes more. To make sure the larvae have food as soon as they are hatched, the eggs are laid in areas where aphids are plentiful. Depending upon the species, the eggs hatch in five days to three weeks. The emerging larvae proceed to eat their way through the next three or four weeks until it is time for them to enter the pupal stage of their life before becoming adults. Since the whole life cycle takes from four to seven weeks, several generations of ladybugs may be produced in a summer.

Ladybugs don't require a lot of protection, but they are not completely defenseless. Their bitter yellowish blood keeps them from being a tasty snack for birds and other insects, and gives them a strong, unpleasant smell. It may ooze from the leg joints of the adult when the beetle is handled, and from the back of the larvae. The adult's coloration also acts as some protection. In nature, red often indicates that the insect wearing it is either dangerous or bad-tasting. For whatever reason, the ladybug's enemies are few.

The next time you see a ladybug, remember how helpful it is and allow it to continue to do what it does best—eat harmful insects. * *

The ladybug's life cycle from egg to adult takes four to seven weeks, depending upon the species. Newly hatched larvae soon scatter in search of food. Scientists use the number of spots on the adult's back to divide them by species. The adult above has none and the one below seems to have 10 visible.

Bill Reaves



Urban Wildlife

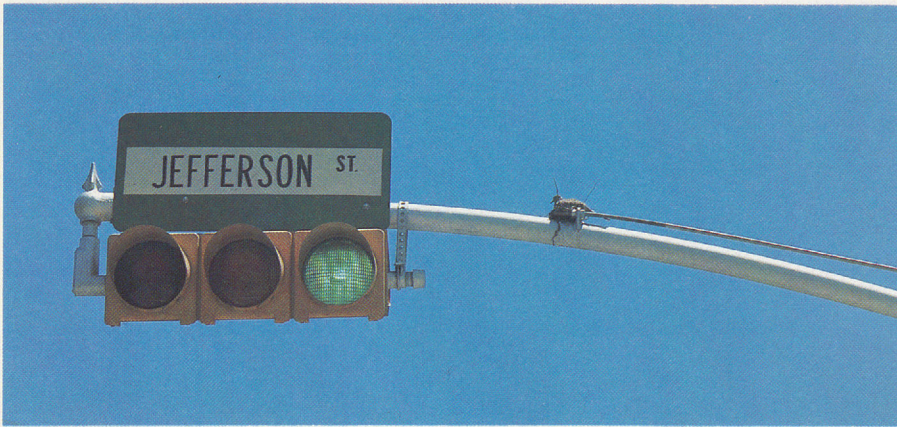
by William H. Clay



Jim Whitcomb

To some people, urban wildlife seems a contradiction of terms. Others may concede that wildlife is present in cities, but believe it is restricted to rats, squirrels and pigeons. Actually, more different species of wildlife exist in urban and suburban areas than most people realize.

Leroy Williamson



Birds are the most familiar form of urban wildlife, and people who enjoy their presence put out food to attract hummingbirds (opposite) and cardinals (bottom). The dove at left seems content to rest above a busy Austin intersection.

Leroy Williamson



than can be found in rural or agricultural habitats. In fact, some birds such as cardinals and mockingbirds, have increased as a result of urbanization. This increase apparently is related to an increase in the number of fruit and seed-producing trees and shrubs planted by homeowners.

A wide variety of other food sources await these animals. Pet food, pecans, vegetables in home gardens, seeds in bird feeders and garbage in trash cans supply easy meals. Locating water is usually no problem either. Pet bowls, bird baths, leaky faucets and drainage ditches are but a few of the places where water can be obtained.

In urban and suburban areas, people supply wildlife species with food, water and shelter, either on purpose or unintentionally. People's attitudes regarding urban wildlife differ. Some enjoy having wildlife present in their backyards or in their neighborhoods, while others may resent them and fear exposure to a transmittable disease. There is no doubt that certain species of animals can become a nuisance or damage property. In addition to property damage to roofs, attics and lawns, these animals also can represent a health threat. Last year in Texas there were 698 laboratory-confirmed cases of rabies in animals, and the majority of these cases involved wildlife. Most major cities in Texas reported instances of animals suffering from a communicable disease such as rabies or canine distemper.

Wildlife in urban areas need not be arbitrarily removed. Many species can and do exist in residential areas with no detrimental effects. In other cases, however, the animals live at the expense of the homeowners. Where problem animals need to be controlled, live-trapping is recommended. Live

Most metropolitan areas can support large populations of birds, rats, mice, snakes, raccoons, opossums, skunks, armadillos, bats, squirrels, coyotes, deer, beavers and even foxes. Since the majority of these animals are nocturnal, their movements and presence often go unnoticed. The animals that survive the best are the ones that can adapt to different food sources and living sites, and can tolerate human activities.

Obviously, urbanization affects the environment. It destroys old habitats, but at the same time, it creates new ones. Raccoons, opossums and squirrels are forced to trade hollow trees for attics and chimneys, while skunks and armadillos trade their burrows and rocky crevices for shelter under houses or in woodpiles. Trees and shrubs provide suitable habitat in which birds can live and nest. Some urban areas contain more bird species

Residents of this urban Dallas neighborhood discovered that beavers can be an annoyance. Beavers are adaptable animals, and their numbers have increased during the past few years. In urban areas they sometimes dam up creeks and drainage ditches.

traps are available in sizes small enough to catch squirrels, large enough to catch foxes and all sizes in between. Once the animal is captured, it can be relocated in a less-populated area. Under no circumstances should an animal be released if it appears ill, or has been involved in a bite case. The advantage of using live traps is that if a dog or cat is accidentally captured, it can be released unharmed. Traps should be used only after checking local ordinances and state laws.

Generally, the smaller mammals and birds are more numerous; however, it is not uncommon to see deer or hear coyotes within the city limits of suburban areas. Although most people enjoy the presence of deer in their neighborhoods, they may become quite frustrated and concerned when the deer begin feeding on their ornamental shrubs and flowers. Outside of deer-proofing the affected areas, the only alternative is to use repellants or plant less-palatable vegetation.

Because of the coyote's adaptability, it is becoming increasingly common in suburban areas. In some cases, these animals become quite bold as they knock over trash cans or search yards for food scraps. Many callers actually complain of coyotes harassing neighborhood pets. Since shooting or trapping is unacceptable because of the presence of people and pets, little can be done to discourage them except to keep garbage lids on trash cans and remove any uneaten pet food left outside.

Besides birds, the most common animal species in urban areas are rodents—specifically rats and mice. Although there is no way to accurately determine the total population, it is estimated that there is one rat for every person living in a city. They live and



Bill Nash



Bill Nash



Bill Nash

multiply in almost every suitable place where they have access. Unfortunately, people also supply rats and mice with everything they need to survive. Rats do not discriminate and are found in every socioeconomic area ranging from the very rich to the very poor. Controlling rats and mice usually involves a combination of mechanical, chemical and environmental measures.

Another common rodent inhabiting urban environments is the squirrel. They are numerous on golf courses and city parks, and are usually found in most neighborhoods containing an adequate number of large trees in which they can live and nest. Squirrels provide many hours of enjoyment and

entertainment to people who feed and observe them. They survive on acorns and pecans, but also will take vegetables in home gardens, fruit on trees and seeds placed out for birds. In extreme cases, they may peel the bark from trees and shrubs, or feed on young buds. In wooded areas, squirrels normally nest in trees; however, in urban areas, they readily adapt to the attics of houses if access is available. Where squirrels are a problem, squirrel-proofing is recommended. Trees can be trimmed back at least six to eight feet from each other and from homes to discourage squirrels from jumping from tree to tree or from the trees to roofs. In addition, sheet metal



Bill Nash



Leroy Williamson

Jim Whitcomb

Glen Mills

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bands two feet wide placed around the trunks of the trees six to eight feet off the ground can prevent squirrels from climbing the tree. Where squirrel-proofing is not possible, live traps can be used. Captured squirrels then can be released in a less-populated habitat. Again, check with local and state law enforcement officials on the legality of proposed trapping activities.

In some large cities, particularly Dallas and Fort Worth, many residents are becoming increasingly aware of the presence of beavers. The beaver population in Texas has increased dramatically during the past few years, and they have proven to be very adapt-

able to the many creeks, rivers and drainage ditches that interlace cities. Complaints range from the beavers damming up the creeks and drainage areas, to cutting down fruit and ornamental shrubs. Where conflicts occur, trees can be protected by encircling the trunks with hardware cloth, sheet metal or other similar material, or by the use of traps.

Raccoons, skunks and opossums also are prevalent, although generally not as conspicuous as the rodents. In San Antonio, 62 raccoons were removed from a single neighborhood during a one-year period. Raccoons and opossums are probably the most adaptable

Finding an alligator in the back yard is unnerving. Squirrels are entertaining in a park, but can be a problem when they move into an attic. Raccoons and opossums also have adapted to urban settings.

animals living in urban and suburban areas. Although preferring to live in attics and chimneys, they also utilize woodpiles, garages, storage sheds or areas under houses. Their diet consists largely of pet food which is available all year round, but they seasonally feed on vegetables in gardens and fruits on trees. They sometimes eat garbage as evidenced by the fact that more than one opossum has accidentally trapped itself in a trash can.


Although somewhat restricted, skunks survive all too well around man, living under houses, garages or wooden decks. Like raccoons and opossums, their main urban diet consists of pet food. Besides the odor, which is a nuisance, skunks have replaced foxes in recent years as the number-one carrier of rabies in Texas. Normally, skunks account for 60 to 70 percent of the total rabies cases in the state each year.

In neighborhoods where raccoons, opossums and skunks are common, conflicts can be avoided through proper planning. Trees can be trimmed back away from the homes, and attic and foundation vents can be screened off and inspected regularly. Any uneaten pet food should be removed immediately after the pets finish feeding. Live traps should be used where appropriate and legal.

Not all wildlife in urban and suburban areas is detrimental. Many species, such as birds and bats, can be beneficial because of the large number of insects they consume. Many neighborhoods are inhabited by a large population of wildlife species that often survive there undetected. By knowing about the presence of urban wildlife and its benefits, people may be able to understand the situation better, and know how to deal with potential conflicts when they occur. * *

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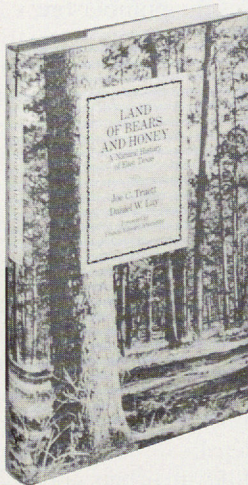
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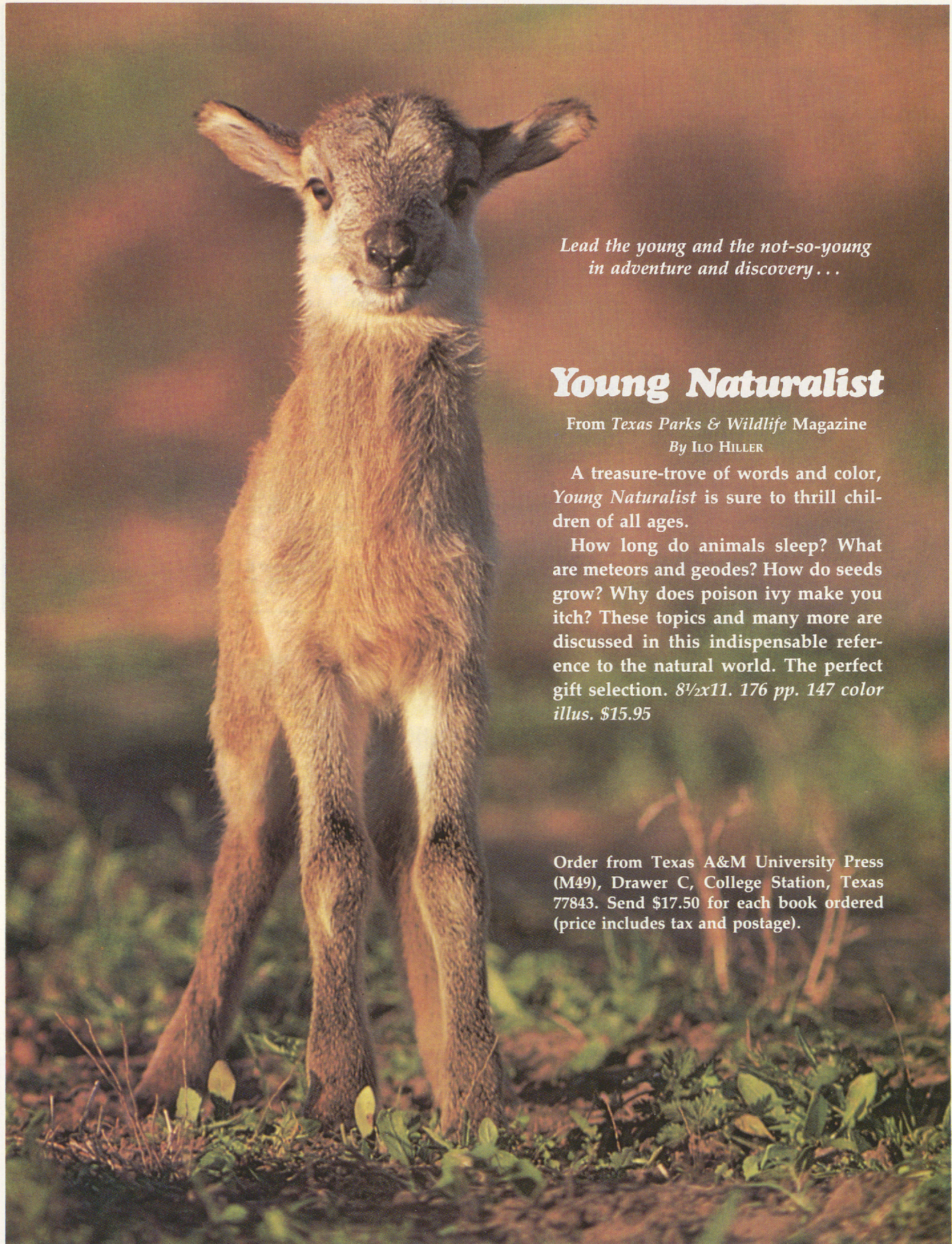
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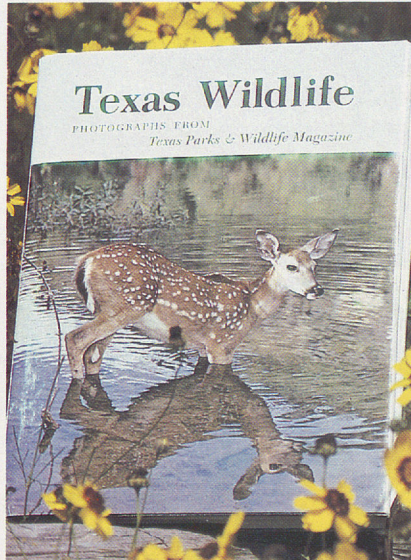
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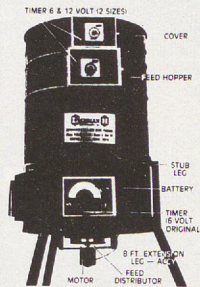
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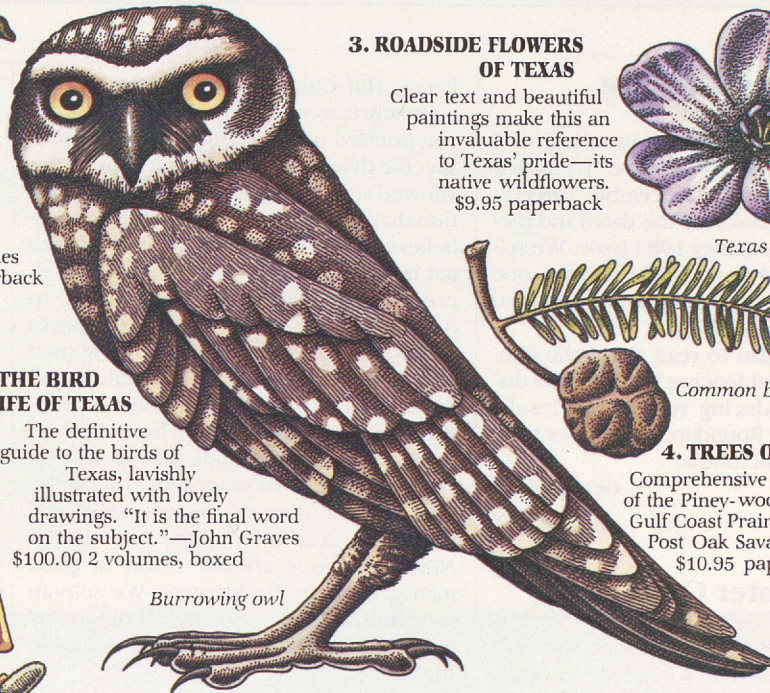
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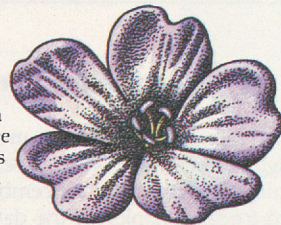
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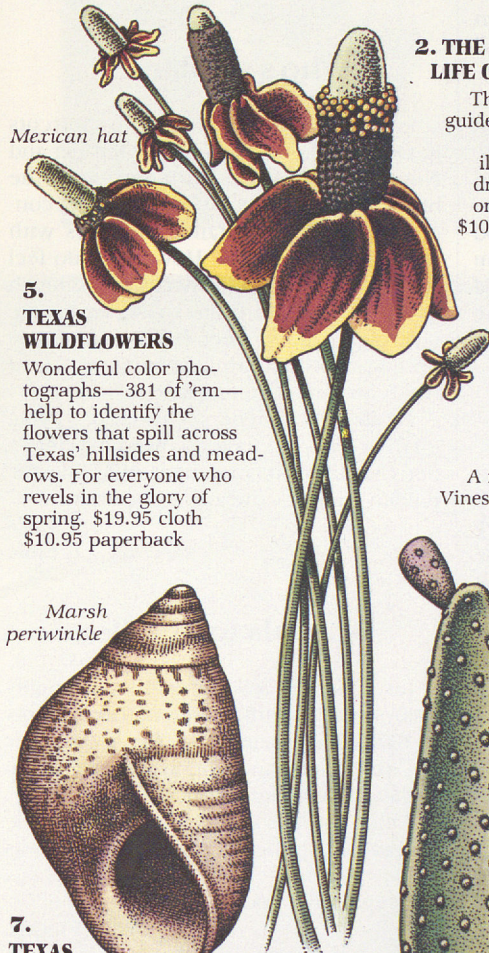
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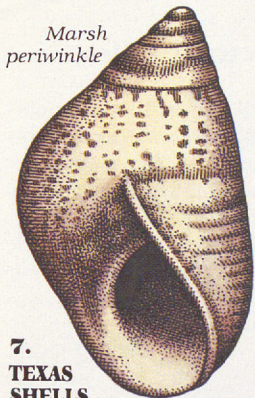
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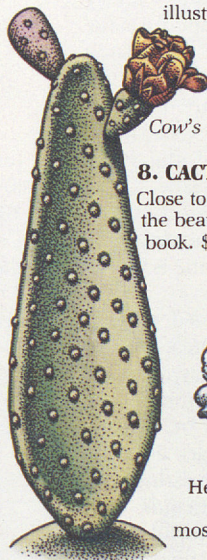
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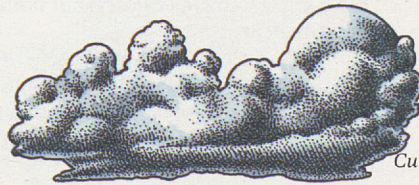
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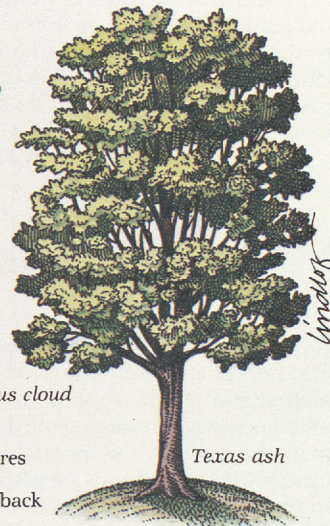
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Letters to the Editor

Record Freeze

On this cold and rainy morning, as I snuggled near my warm fire, I enjoyed reminiscing about the December 1983 record freeze. Thanks for the dates and pictures in the December 1984 issue. We seldom throw away a magazine and this one will remain in our library so our children will be able to look back.

We're also glad to read about the Minnesota electrical fencing firm that has discontinued producing red-colored insulators ("Outdoor Roundup," December). We hope others will follow.

Georgia Foyt
Edna

Hunter Orange

Your article "Improve Hunting Success" in the November issue was good. However, the most successful hunt is when the hunter himself is not killed. No mention of this fact was made. None of the pictures used shows any use of the orange vest and hat that your own department says is mandatory for hunting on Parks and Wildlife Department wildlife management areas.

By showing pictures of hunters in the old-fashioned camouflage suits you just add to the ignorance of all but the most educated hunters. Your magazine tries to educate hunters but often you do a poor job when it comes to human life.

W.H. Whitney
Austin

Photo Locations

On the whole we are very pleased with your beautiful magazine. My husband is an avid hunter and really enjoys all the information and gorgeous photos. I have one minor complaint regarding the deer photos in the November issue. You do not identify exactly where the photos are taken or when. In the wild? In a game preserve? In a zoo? When? Last year or 10 years ago? Your captions imply that these deer are readily available in the locations discussed in the article and are available today. Do these deer actually exist where any hunter has access? This also applies to other game photos.

Linda McMillian
Nederland

■ In a story about wildlife in a particular part of the state (i.e. South Texas, Trans-

Pecos, Hill Country), the photos that accompany it were taken in that area. But as you pointed out, we usually are not more specific than that. Photographers often are allowed access to ranches with the stipulation that the location not be published. We believe this is a fair arrangement in order to get high quality photos, since our job is to present excellent wildlife photography to our readers. As you know, most hunting in Texas is on private land, so the deer shown in our magazine are not available to all hunters. Most of the photos published were taken in the last year or two, but we have a huge photo file and some may have been taken as long as 10 years ago. You can be sure that the deer we picture exist, and handsome deer such as the ones in the November issue are the result of good management by landowners. We seldom use photos taken in zoos, unless the animal is one that is extremely difficult to locate in the wild.

National Parks

As a fourth generation Texan with more than 70 sun-baked summers behind me, I want to commend *Texas Parks & Wildlife* magazine's coverage of our wonderful state. Thanks for including national parks such as Big Bend, Guadalupe Mountains and the national wildlife refuges. More than 50 years ago, I discovered the Guadalupe Mountains and I have visited Big Bend about 60 times. As one might suspect, I am a dedicated hiker with some good experiences in Colorado's Rockies and Arizona's Grand Canyon country, but home is where the heart is.

In retirement I have retained enough good health to climb our state's highest peak (Guadalupe) on my birthday, although the pace has slowed. Because the Guadalupe were preserved so well by Wallace Pratt and J.C. Hunter in pre-park days, nature lovers can still find near-pristine conditions in those pine-clad highlands. That does not belittle Big Bend's colorful desert mountains or the enchanting tinajas.

Although San Angelo is about equal distance from Big Bend and the Guadalupe, our local scribes shun those limestone ramparts leaking across New Mexico's southern boundary. To find a measure of equality I depend on state magazine stories and pictures to bring the Guadalupe's ragged peaks and clear springs into focus.

Roy "Cap" Carpenter
San Angelo

Well Done

I always enjoy the photographs in your magazine, month after month. However, I thought you and the various photographers deserved a "well done" for the December issue. The wood duck reflection on page 2 was superb.

Roger Mellum
Houston

Who's to Blame?

In response to the articles "No Shortcuts to Good Deer Management" (October and November), I agree that a portion of the blame for the deterioration in size and condition of our white-tailed deer lies with those of us who hunt. However, I do feel strongly that the landowners share as much or more of the blame due to indiscriminate clearing of good deer habitat for cattle grazing and the continuing build-up of goat herds on the remaining land.

I realize the ranchers must make a living off their land, but they also need to remember that they are in danger of killing the golden goose — the average sportsman.

Sam Jones
Temple

Appeals to Toddler

Just a note to say our family thoroughly enjoys your monthly issue of *Texas Parks & Wildlife* magazine. We have a daughter 1½ years old, and she has learned the names of many animals from the magazine. It's nice to have a magazine in the house that can grasp the attention of a toddler as well as an adult.

Keep up the good work.

Jenifer Wingate
Baytown

INSIDE BACK COVER

Caddo Lake anglers enjoy tranquil scenery in addition to the possibility of catching a variety of fish. If one of those fish—from Caddo or any other Texas lake—turns out to be a lunker, the angler can receive a Certificate of Fishing Merit. For information on the big fish award program turn to page 30. Photo by Bill Reaves.

