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**TEXAS PARKS & WILDLIFE
magazine**

Dedicated to the conservation and enjoyment
of Texas fish, game, parks, waters and all
outdoors.

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BILL REAVES Photography Editor
DIANNE RICHARDS Art Editor
RUTH PERRY Advertising-Circulation
LAVERNE MOCCIA Office Manager

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Front Cover: All hunters may not have a chance to bag one of these South Texas trophy deer, but the upcoming season should still provide ample hunting opportunities throughout the state. Photo by Ed Dutch.

Inside Front: Assorted waterfowl remain on the ground as these white-fronted geese take to the air at Eagle Lake. Photo by Frank Aguilar.

Cedar burns in an old wood stove, the fragrance mingling with that of freshly baked bread. Somewhere a rooster crows. Flowerbeds around the neatly swept dirt yard are ablaze with marigolds and cockscomb. The bemused visitor steps through the inviting kitchen door and knows for sure he is back in the early decades of the century.

The woman at the stove gives a stir to the pan of warming clabber and turns with a smile of greeting. Her dress is long and high-necked and her hair piled in a bun.

Visitors' eyes widening at the sight of homemade doughnuts and "kochkaese" (cooked cheese) are no surprise to her, and neither are wondering comments about the old-style cooking equipment. She gladly answers the questions of her guests and expands their glimpse into an earlier, more tranquil era.

This is part of her job as a park interpreter at Lyndon B. Johnson State Historical Park.

Outstanding historical interpretation is becoming a hallmark of the state parks of Texas. Many of them are noted for imaginative, meticulously researched displays that make Texans more aware and proud of their heritage. But the presentation at L.B.J. State Historical Park, called "Living History," is a unique one so far in this state.

Included among the acreage that was acquired for the park in 1966 was the Sauer-Beckmann farmstead, originally settled in 1869. Department planners recognized a valuable opportunity to preserve for future generations a segment of the nation's rural past. However, this was to be no museum but an ongoing, living experience, of a typical Hill Country farm in 1918.

Former President Lyndon B. Johnson grew up in this region and spent his formative years here during the time depicted at the farmstead.

The carefully restored farm buildings are themselves a history lesson, their building progression being representative of the farming pioneers' growing prosperity. The buildings also reflect the general industrial progress of the times, seen in the transition from

hand-built, simple log cabins and limestone structures to more sophisticated construction with milled lumber.

Evolution also is seen in the furniture, which in this area was generally handmade until the late 19th century. At that time, mass-produced, machine-made furnishings and appliances became readily available to farmers of moderate means.

In 1869, German immigrant John Frederick Sauer moved, with his wife Christina and their four children, into the one-room log cabin he had built near the Pedernales. Later they added a cellar with a lean-to shed. An adjoining limestone cottage came next and a nearby stone house with sleeping loft was built to accommodate additional children.

The Sauers sold the place in 1900 to Herman Beckmann, whose son, Emil, acquired it on his marriage in 1907. He and his wife Emma raised a family of three children there. About 1915, Emil built a large, Victorian-style frame home, connecting it to the second stone house by a breezeway. He also built a large frame barn, a smokehouse and a wellhouse. The Beckmanns' daughter Edna, after her marriage to Ernest Hightower, resided at the old homestead until it became part of the park.

After restoration and furnishing of the buildings had been completed last September and the clock turned back to 1918, the welcome mat was put out for visitors at the Sauer-Beckmann place.

From the first time visitors set foot inside the zigzag, split-rail fence around the farm compound and stepped into a rural yesterday, they have reacted with delight and enthusiasm.

Five regular park employees plus two or three seasonal helpers, all in authentic 1918 dress, demonstrate the myriad chores of the farm, both daily and seasonal. This is not a simulation; the farm is a working one and the activities genuine and productive.

Meticulously researched and carefully restored, the Sauer-Beckmann farmstead at Lyndon B. Johnson State Historical Park is a unique living history exhibit. It is a working farm with the clock turned back to 1918.

Don Schuch



Visi

Living history exhibit takes you back

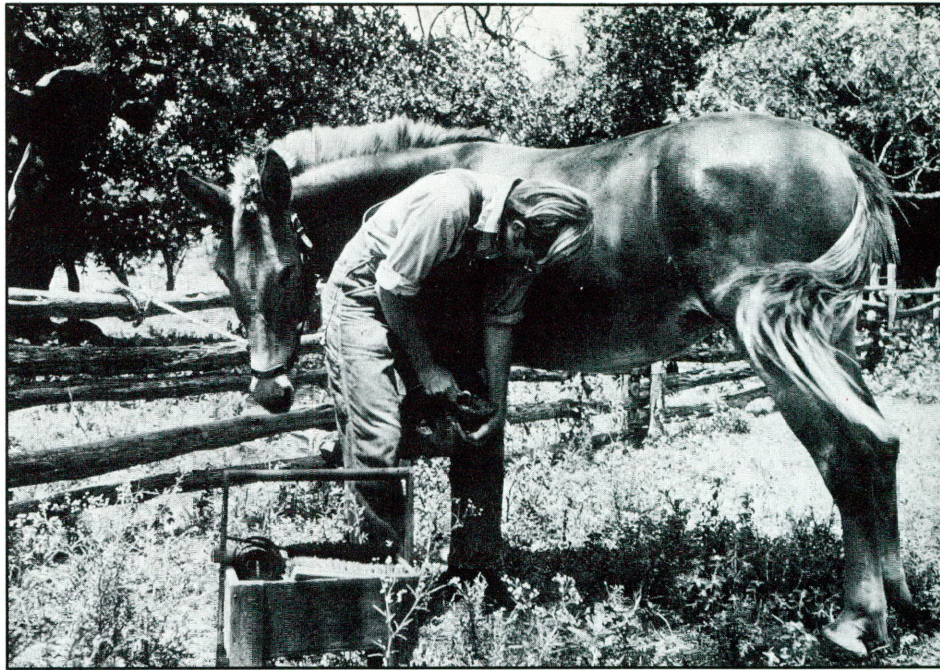


he Past

o 1918 on a Hill Country farm.

by Joan Pearsall

Visitors to the Sauer-Beckmann farm may have the opportunity to observe park interpreters shoeing horses, milking cows, feeding chickens or doing any one of the many other farm chores. However, since this is an authentic farm, not a simulation, there is no way of guaranteeing just which activities will be in progress at any particular visit. The breeds of animals at Sauer-Beckmann are characteristic of those found on such farms in 1918, not necessarily the ones preferred today.

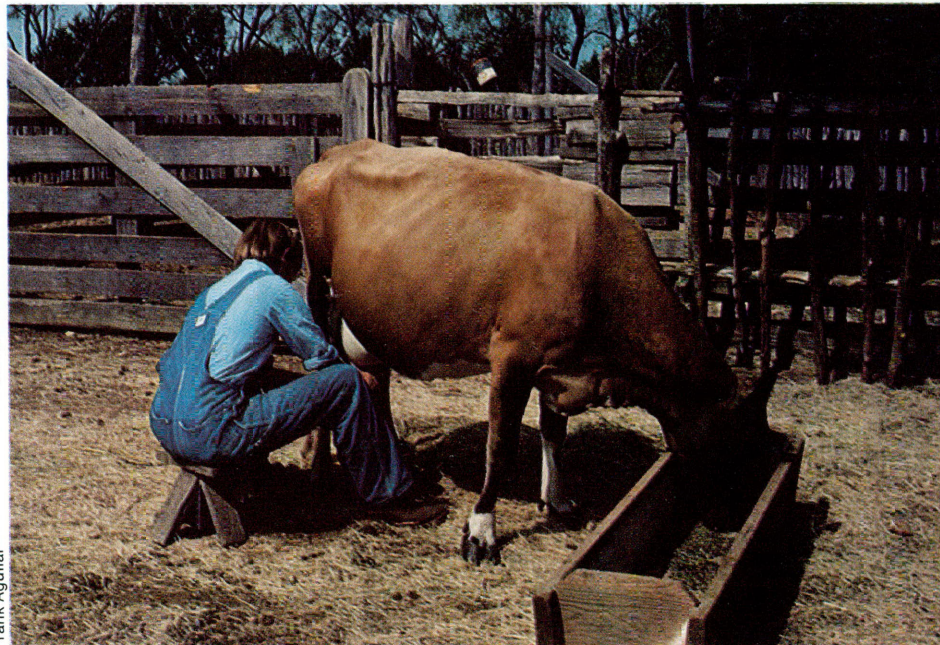


Don Schuch

An unfailing favorite is the twice-a-day milking routine, especially for youngsters used to mass-produced packaging. Half the supply is left un-milked so the Jersey cow can feed her calf.

Park interpreters explain that milking and using the cream separator would probably have been part of the children's chores. The separator is a fascinating machine with two spouts, one for cream and the other milk; twin jets appear after some heavy cranking. Having a separator was something of a status symbol at that time, its price of \$35 being the same as that for a wagon. Families with no such machine had to let the milk set so the cream would rise to the top.

On the breezeway, or "durchgang," between the large frame house and stone one, stand the butter churn and the evaporative cooler where the milk was kept, a metal contraption of shelves with pans of water that feed moisture to hanging, dampened cloths for a cooling



Frank Aguilar

effect. This breezeway is where noon meals were served to visiting neighbors who came to help with the threshing. Here also, just outside the kitchen door, is a stand with pitcher and basin where the farmhands washed up before eating.

The food served in those days was hearty and delicious. Park interpreters prepare the same kind of dishes today from meat, vegetables and dairy products produced on the Sauer-Beckmann homestead. Many of the recipes they use come from the famous Fredericksburg 1916 Cookbook.

Something almost always is cooking on the stove, and visitors can enjoy the

aroma. The park staff is especially proud of the kitchen stove, which has both a water reservoir and warming oven. They demonstrate how moving the dampers controls oven heat, and how careful judgment and skill are needed to cook in this manner.

As in the old days, little is thrown away. Besides the prime cuts of meat, the organs, offal and skin also are used for dishes such as sausage, scrabble and hogshead cheese. Vegetable peelings and outer leaves, cornhusks and whey from separated milk go to the pigs. Rendered lard is used in cooking, making soap and for storing bacon and sau-

Don Schuch



Frank Aguilar



Tending the garden is another time-consuming activity at Sauer-Beckmann, and an amazing variety and abundance of vegetables already have been produced in the short time the farmstead has been in operation. Both a spring and fall garden are planted, and the ground is plowed with the aid of a horse as it was in 1918. Meat, vegetables and dairy products produced on the farm are used by the park interpreters to demonstrate the preparation of food in the farm kitchen.



Frank Aguilar

sage in stoneware crocks to keep them from drying. At an earlier time, beef tallow would have been used for candles, but by 1918 kerosene lamps had long replaced candles as the predominant form of lighting.

Even the ashes from the wood stove are put to use, in making lye for soap, for the garden or for the chickens to wallow in and clean their feathers. The interpreter explains that ashes contain a certain amount of lye, which acts as an insecticide.

Animals currently at the Sauer-Beckmann farm include a Jersey cow and calf; Blackie, a Morgan draft horse; a mule called Ruth; a couple of steers; a sow and two piglets; one ram and five ewes, which had lambs this spring; and a flock of 30 to 35 chickens. The breeds of animals are representative of the ones found on such farms in 1918.

A demonstration that intrigues youngsters, but is one that makes mothers glad they're living in the present age, is the washing procedure. First, the well-soaped clothes are rubbed on a scrubboard, then taken to the huge pot of boiling water over an outside wood fire. Here they are worked with a plunger, then lifted out with a stick and put through clear water. White clothes are given a second rinse with bluing. Then they are wrung out and hung on the clothesline or fence. Like Tom Sawyer's friends with the whitewashed fence, children eagerly scramble at the invitation to do some scrubbing and wringing. The interpreter also explains the method used for making lye soap on the farm.

In the tank house is a washing machine dating back to the turn of the century. It seems primitive today, requiring hand cranking and wringing, but it must have been a valuable asset at that time.

Tending the garden is another activity that takes a great deal of time. An amazing variety and abundance of vegetables already have been produced in the short time the farmstead has been in operation. The spring garden contained such items as okra, black-eyed peas, several varieties of beans, pop corn, green peppers, egg plant, tomatoes, cauliflower, onions, potatoes, cucumbers, yellow crookneck squash, cantaloupe and pumpkin. Turnips, beets, sweet corn, cabbage, spinach, radishes, sweet potatoes, broccoli, carrots and kohlrabi were planted in the fall garden.

The daily or weekly chores that may be seen by the visitor are numerous. Around the house and cottage, the farm staff may be observed doing such things as: watering and feeding chickens;

cleaning the chicken house; gathering eggs; churning butter; general house cleaning; sweeping the yard; tending the flower beds; sewing and embroidery; washing, sprinkling and ironing clothes; cooking starch; separating milk; churning butter; grinding corn; and making home remedies. In the kitchen, a variety of foods are cooked and prepared.

Around the barn area, workers can be seen: chopping wood; feeding and watering animals; milking the cow; sharpening tools; shelling corn; saddling or harnessing the horse and mule; hitching and driving the wagon; hauling hay; greasing axles and performing other wagon maintenance; cleaning the barn, stalls and water troughs; and currying the horse and mule.

Those who happen to be there at the right time will see such seasonal highlights as shearing the sheep or planting the garden in the spring; canning in the summer; and, in the fall, the late planting, hog butchering and smoking of bacon, ham and sausage.

As interested as the visitors are in the work going on, the interpreters find them equally interesting. Reactions always are positive and vary with the age groups. For the very young it is like entering a completely new and exciting world. Young adults are affected by the charm of a simpler way of life, and want to know about many of the recipes and ways of doing things. A lot of interest is shown in the building restoration by people who have acquired old homes and want to achieve similar results.

Most moved are the older people, for many of whom this visit is like stepping back into their childhood. Some get so carried away that for a while they forget the present. But it is a happy nostalgia and most of them are grateful for it, for the triggering of memories and the chance to give some helpful comments.

As the years go by and generations pass on, this farm where time stands still will, of course, become more historically significant as a link between future generations and the past, and its value will be inestimable. **



Photographs by Don Schuch



Women park visitors may often say a prayer of thanks for their steam irons and automatic washers as they watch park interpreters demonstrate how the 1918 farm wife warmed irons on the kitchen stove or scrubbed and rinsed clothes in tubs in the yard. Even with all her chores, there was still time for the proud Hill Country woman to keep her home neat and clean and the welcome mat out for friends and neighbors.

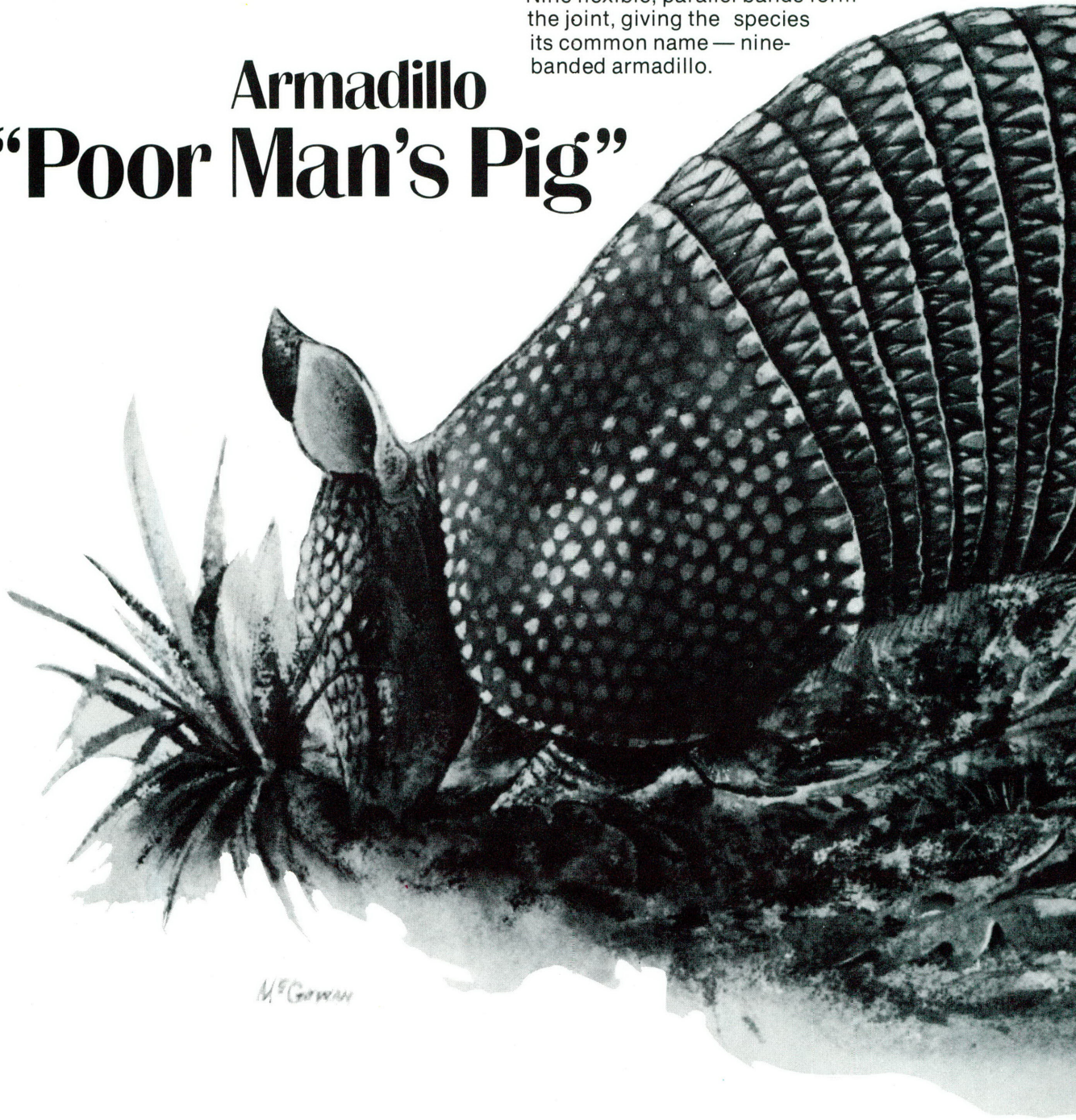


by Dr. E. O. Morrison

Wearing its suit of armor, the armadillo, *Dasyus novemcinctus*, shuffles along like a small tank, rooting in the ground pig fashion.

It's no wonder this bizarre creature causes amazement wherever encountered. Its body is encased in a bony carapace, quite solid over the shoulders, head and hips, but jointed around the middle. Nine flexible, parallel bands form the joint, giving the species its common name — nine-banded armadillo.

Armadillo “Poor Man’s Pig”



This weird migrant from Central America was first reported in Texas in 1849. Slowly but surely, by its own volition and with the help of man, the armadillo has expanded its range from southern Texas clear across the South.

Along the way, armadillos have become quite unpopular with man. There are many reasons: their burrows are hazardous to livestock; they are accused of eating quail eggs; and lawns are marred by their incessant search for food. Overall, this shuffling omnivore is beneficial because of the tremendous numbers of insect pests it consumes. Furthermore, its flesh is delicious barbecued.

The thought of eating one may seem repulsive at first, but once this mental block is overcome and the meat

is sampled, most people agree it is tasty. Many even compare it to pork, referring to it as the "poor man's pig" or "Hoover hog."

Since there are no seasons and they do not hibernate, armadillos can be taken year around. The best time to hunt them is early or late in the day as they forage for food along creek and river bottoms. Move slowly and listen; they're easy to hear as they root among the leaves and underbrush. Once you locate one, get downwind from the animal, ease up and shoot it in the head with a small caliber rifle or with an arrow.

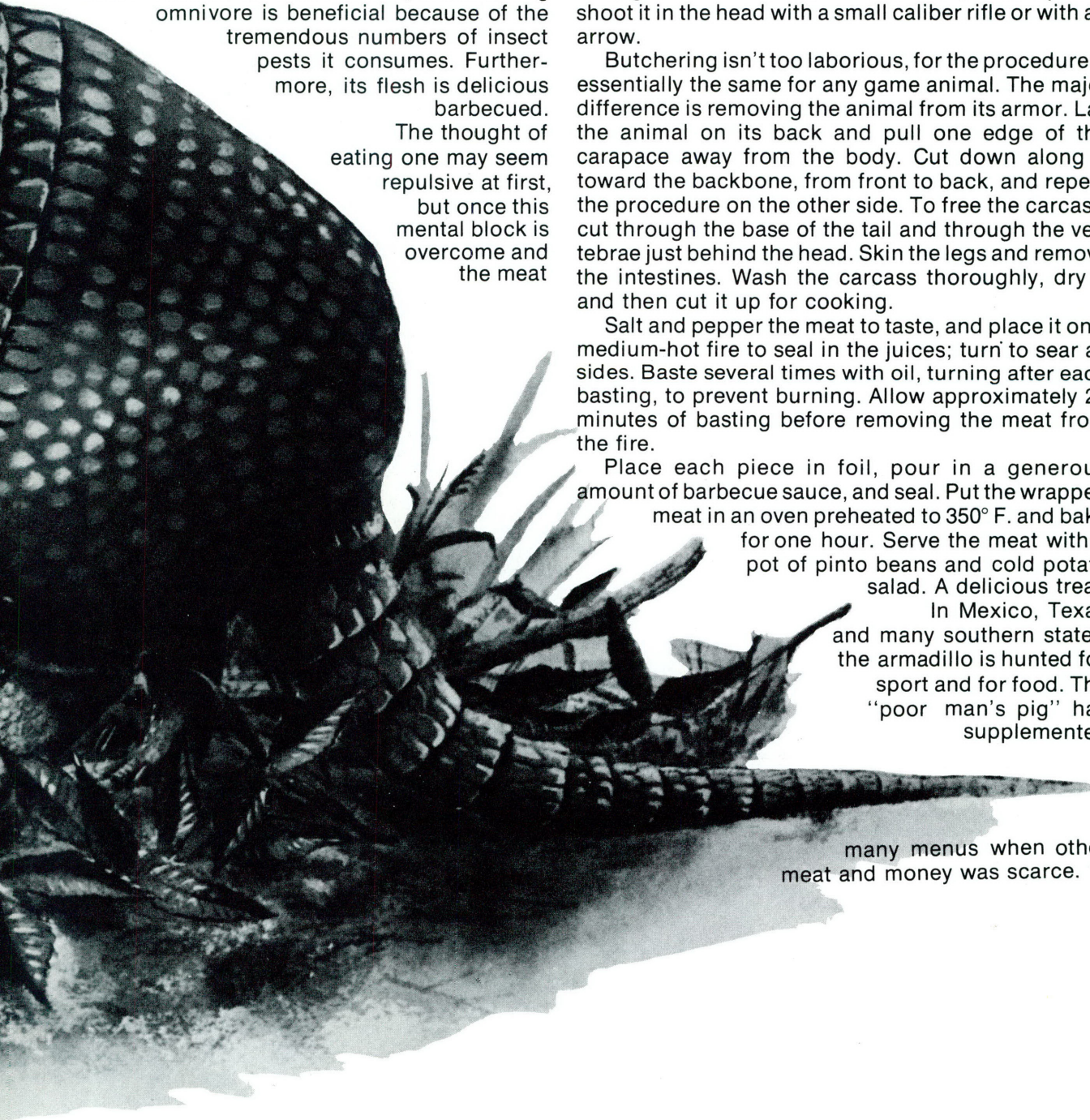
Butchering isn't too laborious, for the procedure is essentially the same for any game animal. The major difference is removing the animal from its armor. Lay the animal on its back and pull one edge of the carapace away from the body. Cut down along it toward the backbone, from front to back, and repeat the procedure on the other side. To free the carcass, cut through the base of the tail and through the vertebrae just behind the head. Skin the legs and remove the intestines. Wash the carcass thoroughly, dry it and then cut it up for cooking.

Salt and pepper the meat to taste, and place it on a medium-hot fire to seal in the juices; turn to sear all sides. Baste several times with oil, turning after each basting, to prevent burning. Allow approximately 20 minutes of basting before removing the meat from the fire.

Place each piece in foil, pour in a generous amount of barbecue sauce, and seal. Put the wrapped meat in an oven preheated to 350° F. and bake for one hour. Serve the meat with a pot of pinto beans and cold potato salad. A delicious treat!

In Mexico, Texas and many southern states, the armadillo is hunted for sport and for food. The "poor man's pig" has supplemented

many menus when other meat and money was scarce. **



OUTDOOR BOOKS

DUCKS, GEESE AND SWANS by Oscar J. Merne; St. Martin's Press, 175 Fifth Avenue, New York, N.Y. 10010, 1974; 160 pages, \$6.95.

Delightful color illustrations complement the easy-to-read text of *Ducks, Geese and Swans* and offer the layman a worthwhile introduction to the different species. Although some birds are not pictured as exactly as a wildlife biologist might prefer, a thorough representation is attempted.

Two purposes for the book are defined in the author's foreword: to describe the major species of waterfowl and their habitat and briefly to relate man's environmental activities (both helpful and detrimental) to the lives of birds.

Short chapters on such general subjects as behavior, habitat, migration, trapping, wildfowling and conservation appear in the first portion of the book. The second and largest portion contains the illustrations and descriptions of all but the very rarest of the world's waterfowl.

A bibliography is provided, and the index comes in handy when attempting to identify birds by their varied common names. Insets accompany many illustrations showing both winter and summer ranges for migratory species.

An interested child or adult with a casual interest in waterfowl will find this publication hard to resist. — Elaine Byrne

SECRETS OF THE DEEP by Stephen Spotte; Charles Scribner's Sons, 597 Fifth Avenue, New York, N.Y. 10017, 1976; 143 pages, \$7.95.

Curiosity about the sea and its creatures may lead you to discover Stephen Spotte's book *Secrets of the Deep*. Although nontechnical, the contents reflect the most recent findings of the scientific community.

Spotte devotes the first half of his book to the techniques developed by sea creatures for survival. Adaptation, camouflage, air-breathing, electricity, navigation and many other such survival techniques are discussed in short, two- to four-page chapters.

The second half of the book is di-

vided into three parts — The Tropic Zones, The Temperate Zones and The Polar Zones. Here Spotte discusses the complex jumble of plants and animals recognized by scientists as aquatic communities.

Illustrations by Gordy Allen, which appear at the beginning of each chapter, add to the book's appeal.

A seven-page glossary, a bibliography and an index complete the book. — Ilo Hiller

THE NATURALIST: NATURE WALK by Janet Clark, Mary Alice Collins and Gary Collins; Burgess Publishing Co., 7108 Ohms Lane, Minneapolis, Minn. 55435, 1975; 55 pages, \$2.95 paperback.

THE NATURALIST: BOTANICAL ART by Janet Clark, Mary Alice Collins and Gary Collins; Burgess Publishing Co., 7108 Ohms Lane, Minneapolis, Minn. 55435, 1975; 61 pages, \$2.95 paperback.

THE NATURALIST: DOWN TO EARTH by Janet Clark, Mary Alice Collins and Gary Collins; Burgess Publishing Co., 7108 Ohms Lane, Minneapolis, Minn. 55435, 1974; 126 pages, \$4.95 paperback.

The Naturalist trilogy is a refreshing guide to discovering and preserving the beauty of nature. Beginning with a *Nature Walk*, we learn to see the beauty of a monarch butterfly and learn something of its life. Techniques for preserving and mounting butterflies also are included. Ever want to capture a spider's web? *Nature Walk* tells how. Handicraft projects involving mushrooms, evergreens, seeds, sea shells and sand will enable you to make gifts or decorative objects for yourself or your friends.

Botanical Art is concerned with techniques for preserving and decorating with flowers and foliage. Drying by hanging, pressing or desiccating is described, together with lists of flowers best preserved with each method.

Perhaps of most wide appeal is the *Down to Earth* volume. Divided into two main sections, indoor gardening and outdoor gardening, this gem presents hints for potting and repotting plants,

maintaining terrariums, growing miniature "fairy" gardens and much more. Included are recipes for such natural delights as lemon-mint vinegar, pumpkin brownies, mustard pickles, cucumber punch, candied violets, marigold cheese, nasturtium mayonnaise and many others.

A delight to the entire family, this set is guaranteed to bring any willing soul closer to the beauty and wonder of nature. — Elaine Byrne

GUN DIGEST — 1977 Deluxe Edition edited by John T. Amber; DBI Books, Inc., 540 Frontage Road, Northfield, Ill. 60093; 448 pages, \$8.95.

There's something for every hunting and shooting enthusiast in this 31st anniversary deluxe edition. Sportsmen can find topics of interest ranging from "Sporting Arms of the World" by Bob Steindler and "The New Knifemakers" by Sid Latham, to preventing heart attacks while hunting.

For the history buffs there are a couple of features — "Sharpshooters in the Civil War" by Dan Flowers and "The Ferguson Rifle Mystery" by Ed Dieckmann Jr. Both stories are well documented and are filled with intriguing details of how man and machine won or lost two wars on this continent.

Another interesting feature, "Firearms in Frontier America," covers the complex political, economic and technological aspects firearms had on the North American colonies. In this 12-page article, M. L. Brown goes into great depth describing the economic growth of such companies as Du Pont, L. C. Smith, Ithaca Gun Company, etc. He graphically portrays the development of the ideas, men and machines leading to the development of this country's first breech-loading rifles.

Aspiring artists or engravers will thoroughly enjoy the six-page pictorial display of the work of some of this country's leading firearm engravers.

Handgun zealots will find five different stories on automatics, including a technical report on the Auto Mag pistol. This six-locking-lug, rotary bolt, short-recoil operated, semiautomatic handgun, made primarily of high-strength stainless steel, is available in the original .44 Auto Mag chambering and in .357 Auto Mag, a necked-down version of the .44.

As always, in the back of the book is an extensive listing of international and national handguns, rifles and shotguns offered by the world's leading companies and gunsmiths. This is truly a sportsman's wishbook. — Darrell Holt

PHOTO AND ART CREDITS

Front Cover—Ed Dutch; Nikon F with motordrive, 560mm Leitz Telyt; Kodachrome 64.
Inside Front—Frank Aguilar; Nikon F with motordrive, 560mm Leitz Telyt; Kodachrome 25.
Pages 2-3—Don Schuch; Sears 2000ES, 35mm lens; Kodachrome 64.
Page 4 (top & bottom right)—Aguilar; Nikon F2, 35mm Nikkor; Kodachrome 25.—(left)—Schuch; Sears 2000ES, 35mm lens; Kodachrome 64.
Page 5 (top left)—Schuch; Sears 2000ES, 35mm lens; from Kodachrome 64.—(top right)—Aguilar; Nikon F2, 35mm Nikkor; Kodachrome 25.—(bottom)—Aguilar; Nikon F2, 24mm Nikkor; Kodachrome 25.
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Page 31 (top)—Dutch; Nikon F2, 35mm Nikkor; Kodachrome 64.—(bottom)—Dutch; Nikon F with motordrive, 35mm Nikkor; from Kodachrome 64.
Inside Back—Dutch; Nikon F with motordrive, 560mm Leitz Telyt; Kodachrome 64.
Back Cover—Martin T. Fulfer; Nikon F with motordrive, 80-200mm Nikkor Zoom; Kodachrome II.

LONG SHOTS SHORT CASTS

compiled by Neal Cook

Christmas Bird Count Results: The National Audubon Society has announced that a total of 124,651,593 birds was sighted in last winter's Christmas Bird Count. A total of 28,688 observers, organized in teams, covered the 1,141 count areas, which stretched from the Arctic to South America. Each year, individual teams search their assigned count area during one calendar day of the Christmas holiday season. From the sightings, the team then compiles a species-by-species list of all the birds spotted. According to the National Audubon Society, the event has grown so in the last few years that it took six months to edit and compile this year's results. The Christmas Bird Count has become a valuable method for monitoring changes in bird populations and ranges over the years. The greatest number of species sighted by a U.S. team this year occurred in Freeport, Texas, where 216 individual species were counted. Details of the count are published in the Society's ornithological journal, *American Birds*.

Catalytic Fires: The use of catalytic converters for pollution control on 1975 vehicles has added a new caution for hunters venturing into the field this fall.

Catalytic converters operate at a very high temperature and could possibly be the cause of fires in high grass or other dry vegetation. Skin temperatures of the converters placed on the exhaust system of new autos ranges from 800 to 1,200 degrees Fahrenheit. A malfunctioning or untuned engine can up the temperature to 2,500 degrees. Dry grass and pine needles will begin to burn at between 700 and 800 degrees, with almost instantaneous ignition between 1,000 and 1,200 degrees.

Hunters with new cars or light trucks should use an extra measure of caution when driving in fire danger areas and be certain that their vehicles' exhaust systems do not come in contact with flammable material.

Free Books: Two new publications are now available free from the National Wildlife Federation. "Ten Steps Toward An Environment Club" outlines how youngsters can form their own environmental group and suggests projects of interest.

"Conservation Careers" takes a look at conservation and environment as a vocation, mentioning some of the types of jobs, education required, pay, etc.

For a copy of either write the National Wildlife Federation, Dept. CN 75, 1412 16th Street, N.W., Washington, D.C. 20036.

Cat Travels: A study of bobcats in bottomlands by Louisiana researchers turned up some interesting information. For example, the home range of males is almost six times that of females (1,221 acres vs. 240 acres). Males also move about twice as far during a day as do the females. Incidentally, bobcats are not night creatures; they are most active at dawn and dusk, and quiet at noon and midnight.

by Buddy Gough,
Information Officer, Beaumont

Veteran boaters, taking advantage of the lower prices which occur as boat dealers discount current-year models, are trading their old rigs for bigger or better ones. Disillusioned summer sailors are exchanging their spring-bought dreams for cold, hard cash. Others, having discovered that boat payments come due year around, are liquidating debts against the impending rigors of winter by selling their rigs.

For these and other reasons, the supply of used boats and engines is increasing, providing bargains aplenty for discriminating buyers.

Judging from the amount of boat registration transfers being handled at Texas Park and Wildlife Department offices, business is brisk. However, the business of buying a used rig is not without considerable risk. To separate the trash from the treasure is a task requiring caution.

The safest and simplest procedure is to visit a reliable, trustworthy boat dealer and buy from his stock. In this way you have some guarantee of getting a rig which will perform up to expectations. For such insurance, however, you can probably expect to pay more than you would to an individual seller.

On the other hand, if you are willing to go it alone with the individual sellers, you can realize substantial savings on a used rig.

To deal with the individual, you need to know the boating market — the average costs of various models of both new and used boats. This requires reading boat ads and visiting some boat dealers' showrooms. Also, you need to know the boating industry — which lines of boats are quality built, which boat engines are particularly reliable. This requires questioning various boat owners about their rigs. Finally, you must be able to judge the condition of all those you inspect. This is the heart of the matter.

First of all, limit inspection trips to those boats of good quality construction which are favorably priced.

During the inspection trip, don't ignore the intangibles. For example,

observe the condition of the seller's property. If he takes good care of his home, lawn and automobile, chances are he did the same with his boating rig. In talking to the seller, try to form an opinion on his expertise as a boater. Generally, the more knowledgeable and more experienced boater is less likely to abuse his equipment. The happy, satisfied boater who has enjoyed his outings may not have had much trouble with his boat.

Inquire about the regularity of maintenance to the rig or about any extensive repairs. This will give you some idea of the present condition or, perhaps, an idea of what you can expect to do in the future. Find out which local service shop handled maintenance and repairs; it will be a good place to verify information.

Take everything the seller says about his boat with a grain of salt, but don't entirely discount it either. The seller's comments can be balanced against a thorough inspection.

Nothing can take the place of a close scrutiny of the boat, engine and trailer.

INSPECTING THE BOAT & TRAILER

A rig which has been treated with tender, loving care will show it; it will be clean even though it isn't new enough to be showroom shiny.

On the other hand, a faded, mildewed or peeling finish; worn or split upholstery; corrosion on the boat's hardware or engine's lower unit; a badly dinged prop; or a scratched engine cover can indicate both hard use and lack of attention.

However, the appearance of the rig, be it good or bad, often gives little information on its structural soundness.

This is where minute scrutiny is demanded.

Start with the trailer. In the coastal area a zinc-coated or galvanized trailer is a plus or, realistically, a must. Painted trailers will require repainting on a regular basis to fight inevitable rust.

Inspect the trailer wiring. If the trailer lights don't work, rewiring is probably called for and, at best, it is

a troublesome and time-consuming task.

Inspect wheel bearings. If the bearing grease is black and thin, new bearings may be needed, especially if it has been used in salt water. Check the trailer springs for excessive rust. Rusty springs are prone to snap and require replacement. See that tires are of suitable size and condition.

All of these things must be weighed against the cost of the rig.

Now turn your attention to the boat itself.

If the boat is made of aluminum, check the gauge of the aluminum. Better aluminum boats range in the vicinity of 70-gauge material.

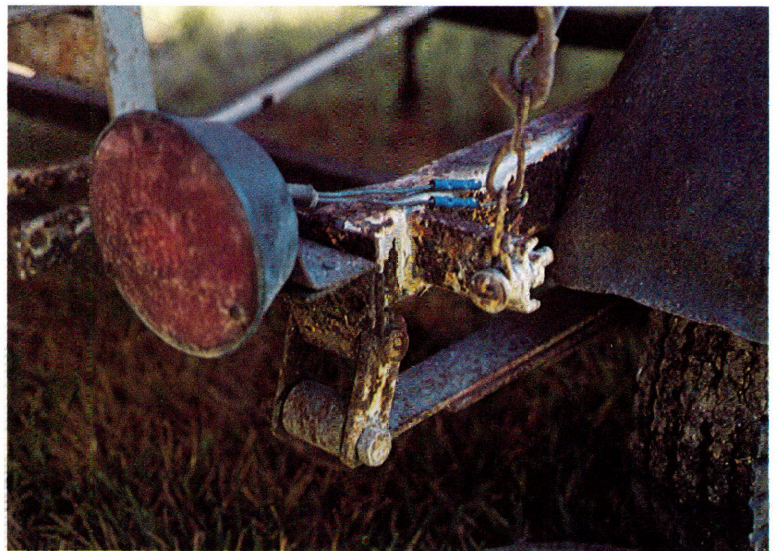
On flat-bottom aluminum boats, check the ribs running the length of the outside hull. Under heavy use, these ribs can wear thin and develop holes, especially at the bow and stern. Check for tightness of rivets; loose rivets mean leaks. If the bottom of the boat has a corrugated look, it has seen long use and it probably leaks. While leaks are common in flat-bottom boats, don't pay a premium price for one that does.

There are some larger V-bottom aluminum boats on the market. The ones with foam-filled, double hulls are generally most durable and long lasting. While they may fall short in the looks department, they are often bargain buys.

If the boat is a wooden one, begin your inspection with healthy skepticism. Although there are still plenty of wooden boats on the market, finding a good one is very rare. But when a good one is found, it is invariably bargain priced when compared to other type boats.

The problem with wood boats is

Close inspection is the only way to determine a used boat's condition. The rig that has been cared for properly will show it even though it is no longer new. Be sure you know the current market value of a boat so you will be able to determine if the asking price is too high. If the trailer is rusty it will require cleaning and painting on a regular basis. Wooden boats also require constant attention to prevent deterioration.



Buying a Used Boat

rot. If the wood boat has a fiberglassed bottom, forget it. Inevitably water will seep between the fiberglass and the hull, and rot will start.

Inspect a wooden boat with a sharp penknife. Get in the dark recesses of the bottom and probe battens and joints for soft spots which indicate rot. Even if the hull is sound, plan on spending considerable time maintaining such a boat. Anyone buying one of those big, wooden, yacht-type rigs had better have a fat bank account to support it.

When inspecting a fiberglass boat, keep in mind that fiberglass boats do eventually wear out. First, look at the finish of the boat. If it has a chalky look, the boat has been exposed to the weather for extended periods. Compounding a test spot on the chalky surface will show if the gel coat can be restored or if it is, in fact, unsalvageable.

While a few hairline cracks in the gel coat are no cause for concern, look carefully for deep gashes and cracks which may need repair to prevent leaks. Look for separation around the transom which could call for expensive repair.

Since the floors of many boats are constructed of fiberglassed plywood, walk the length and breadth of the floor looking for soft spots which indicate rot. Storage compartments and seat boxes are often of plywood construction which is susceptible to rot.

Check all rivets, screws and bolts for tightness. Loose rivets are hard to correct and under continued use they get looser, causing the boat to flex. Sometimes loose screws and bolts will have to be replaced with larger sizes.

Cover the inner hull from bow to stern searching for cracks or separation at joints and braces. Check windshields and all boat hardware for tightness.

On all boats which have steering systems, check cables for tightness and general condition relating to wear and tear. Make sure all gauges, lights and electrical components are working.

Finally, put the boat, whatever kind it is, in the water and take it for a test drive. If possible, put it in the

kind of water conditions under which you plan to use the boat. Run the boat across some waves or wakes to check for unusual flex or shaking. Check closely for leaks. Remember you wouldn't buy a used car without driving it.

INSPECTING THE ENGINE

Unless the engine is purchased from a boat dealer, you have no guarantee it will give good service.

Most boatowners can't be completely sure that their outboards or inboards which are running perfectly today won't go to pieces tomorrow. However, there is plenty you can do to lessen the risks of getting an "anchor" instead of a good boat engine.

If time allows and the owner is willing, the most prudent procedure is to have the engine checked by an experienced mechanic. In the fall and winter, boat service centers aren't as swamped with work as in the peak fishing months and, thus, will likely have time to check an engine quickly. The cost of the checkup will be well worth it.

If you must decide for yourself, here are a few tips which might help.

According to one experienced boat engine mechanic, a good guide for judging the worth of a boat engine is to go by its looks.

A clean engine has probably had good care. Be it outboard or inboard-outdrive, the lower unit should be free of excessive corrosion. The powerhead or engine block should be free of rust or accumulated oil and grease; oil seals should be tight; all hoses and electrical wiring in good shape; and the engine should be free of scorch marks. All of these things can indicate care or lack of care.

Hours of use on an engine are often not as important as good care and maintenance. Don't be overly impressed with an engine advertised as having seen very little use. Lack of use is often synonymous with neglect. Many things can happen to an engine which has been set up for extended periods of time and most of the things are bad — moisture can get to the electrical system, wiring and hoses can rot, water

pumps can ruin and pistons can freeze.

An inboard engine which has seen regular use and maintenance has an engine life in the range of 800 to 1,000 hours or even more. But one which is seldom used or is neglected may have an engine life of less than 500 hours. When an inboard engine sets up for extended periods, the oil drains from the cylinder walls. Then when the engine is fired, the first few strokes of the pistons in the cylinders put much wear on the engine, reducing its life.

Rust is another major destroyer of inboard engines; it can quickly build up in manifolds. Any inboard engine which has been used in salt water is suspect, especially if the engine hasn't been flushed after every trip. Remove the end caps from manifolds and check interior for rust build up.

While judging the appearance of an engine is a good starting point, trying the engine out on the water is the ultimate step. Don't buy a used engine which hasn't been tested. Unwillingness on the part of the owner to let the rig be tested should be considered with suspicion.

Begin with the engine cold and see how easily it starts and idles. Shift from neutral to forward and from forward to reverse to see that the transmission is working quietly and smoothly. See that the water pump is working. Then beginning at slow speed, gradually increase throttle to full speed. The engine should run smoothly throughout the speed range with no unusual vibrations or noises. Check for excessive smoke from exhaust. When the engine is well warmed, stop it and restart it several times. If there are gauges for the engine, watch these closely throughout the test which should last at least for 30 minutes running time.

As mentioned previously, with a used boat or engine bought from an individual you get no guarantee. But thorough testing can prevent some obvious mistakes and some headaches later.

Happy hunting, and don't forget to register the transfer of ownership with this department. **

Titling Your Boat

by David Baxter

More than a handshake is needed these days to seal a bargain between the buyer and seller of used boats.

In 1975, the Texas Legislature passed an amendment to the Texas Water Safety Act which requires that when sold, any new or unregistered motorboats in excess of 14 feet must have a certificate of title from the Parks and Wildlife Department. Also, any outboard engine of 12 or more horsepower must be titled separately by the department.

The popularity of pleasure boating and the increased prices for boats, motors and trailers make them attractive targets for thieves. These certificates provide the boater with some concrete proof of ownership he can present to state law enforcement agencies if a theft occurs. The certificate also is needed for insurance and loan purposes.

Since the boat and motor titling law has been in effect only since January 1, 1976, most boats now being sold by private owners are untitled. When this is the case, the seller must furnish the buyer with separate, notarized bills of sale for both boat and motor if the boat is in excess of 14 feet and the motor is 12 or more horsepower. The buyer then has 20 days to make application with the department for a certificate of title. A transfer of registration for "TX" hull numbers also is required.

If the boatowner does have a certificate of title issued by the department, he is required to release to the buyer his original Texas Certificate of Title, properly completed and notarized on its reverse side. Simultaneously, a transfer of registration must accompany the notarized title certificate.

Each certificate of title, whether for motorboats in excess of 14 feet or engines of 12 or more horsepower, costs \$2. On September 1, 1977, the fee drops to \$1.50 each.

Boat titling officials of the Parks and Wildlife Department have been overwhelmed with response to the titling law. Many boatowners with smaller boats and motors, which by law do not have to be titled, also are applying for certificates for proof of ownership and extra insurance against theft.

All department offices and marine dealers throughout the state have supplies of both the certificate of title and registration forms. When in doubt, ask questions at the nearest Parks and Wildlife Department office. Many applications have had to be returned for additional information as required by law or more accurate information. These incorrectly submitted forms have caused a backlog of paperwork and delays of from 90 to 120 days.

Other than the necessary red tape, selling a used boat is not much different than selling any other piece of sporting equipment. And remember, a boat is a luxury, not a necessity such as a car or washing machine. It may take a while to sell.

Some other suggestions include:

— First impressions are important; if your boat is in good shape, it will sell faster. A piece of equipment that has been maintained stands out and brings a higher price.

— Establish what you think is a fair price for your rig and stick with it. Consult boat dealers and price books at credit unions and other lending institutions. Be able to tell your prospective buyers how you arrived at the figure.

— Decide ahead of time what accessories you plan to sell with the boat. Are you going to sell both boat and trailer? What about life preservers, cushions, gas cans and other gear?

— If you sell the trailer with the boat it must be transferred in ownership at the local county tax assessors. All fees, whether they go to the Parks and Wildlife Department or county officials, are paid by the buyer, unless otherwise agreed upon before the sale. **



Rio Grande turkey by Ed Dutch

Popular Game Birds



Wild turkey have always been prized trophies, but they also are enjoyed by the nonhunter who is fortunate enough to see a gobbler strutting and displaying for a hen during the breeding season. Texas has more wild turkey than any other state, and hunters harvest about 10 percent of the total population annually during the fall and spring seasons. Although the Rio Grande species totals 95 percent of the population, an intensive restocking program designed to restore the eastern turkey to its historic range east of the Trinity River is currently being undertaken by this department.

Rio Grande turkey by Bill Reaves

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Seasons and bag limits are closely regulated for the Canada goose to provide for its continued welfare as it affords hunter recreation from Canada to Texas. Canadas wintering in northwest Texas are lightly hunted in comparison to those wintering in East Texas and along the Texas coast.

Female shoveler by Bill Reaves



Canada goose by Ed Dutch



Mallards by Ed Dutch



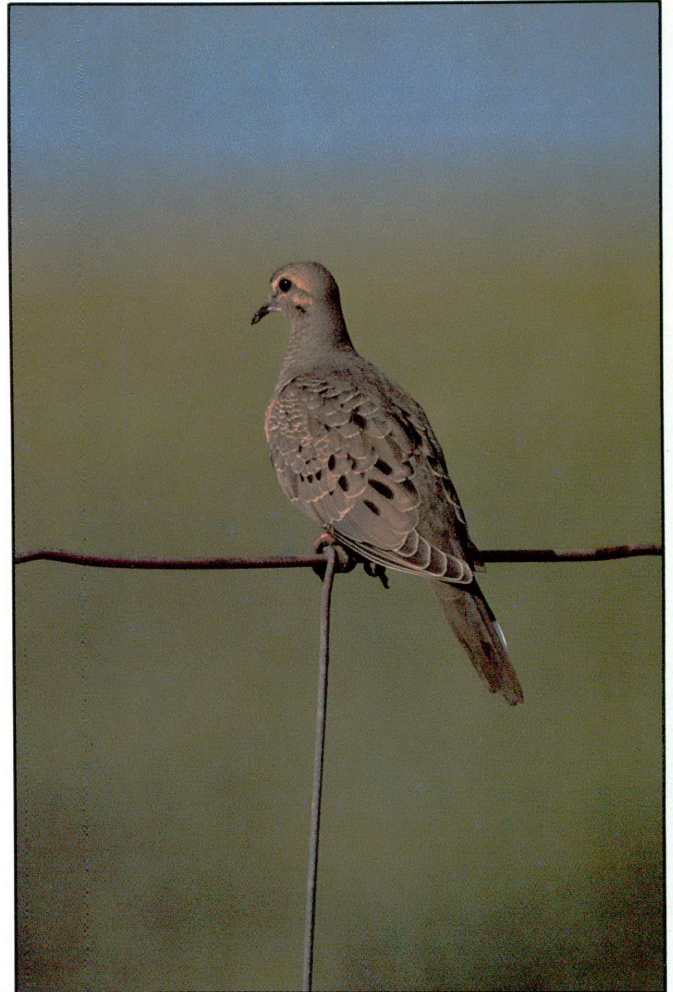
Blue-winged teal by Jim Whitcomb



Pintails by Bill Reaves

Its distinctive broad bill makes the shoveler easily identifiable, and it comprises about five percent of the Texas duck harvest. Mallards are the most sought-after wild ducks in the United States, but they cannot compete with the more numerous teal in the bags of Texas hunters. The mallard usually vies with the pintail for second place. Blue-winged teal and pintails are two of the earliest migrants to enter Texas, and are prized ducks for the waterfowler's table. Texas also enjoys a special September teal season to harvest a very small portion of the Central and South America-bound populations of these game birds.

Although as many as five million mourning dove are harvested annually in Texas, hunting has a minimal effect on the bird's population. It is estimated that more than 500 million mourning dove are found in the continental United States, and a good percentage of this population funnels into Texas during the fall and winter migration. This swift-flying dove provides numerous recreation days for a large segment of hunters. Whitewing hunting in Texas is for the most part limited to those counties bordering the Rio Grande, but the majority of birds are found in the Valley where the breeding population fluctuates between 300,000 to 600,000 birds. Each year hunters from all over the country descend on the Valley in droves to have the opportunity to harvest birds from the spectacular flights of whitewings.



White-winged dove by Bill Reaves

Scaled quail by Bill Reaves



The more arid, western half of the state with its open habitat and bare-ground areas is preferred habitat for the scaled quail. Often called the blue quail, this bird is known for its ability to elude the hunter. When pursued, the scaled quail usually chooses to run on the ground rather than fly. Unlike the scaled quail, which is hunted primarily without the aid of dogs, the bobwhite quail is the bird dog owner's favorite because bobwhite coveys characteristically "hold" in front of pointing dogs. Located throughout the eastern two-thirds of the state, the bobwhite is often referred to as the prince of game birds. Although East Texas was the traditional bobwhite hunting area, this hunting has shifted in recent years to North Central and South Texas. Hunting accounts for only a small portion of the annual mortality in quail. Studies show that less than 25 percent of the population survives from year to year.

Bobwhite quail by Ed Dutch



FISHING THE CANALS

South Texas irrigation canals provide fishing opportunities.

by Karl Wolfshohl

With a climate moderated by soft sea breezes and an atmosphere tempered by friendly, unhurried inhabitants, the Rio Grande Valley is a favorite wintering place for people from many parts of the United States and Canada.

Year-round pleasant weather has a particular attraction for many visitors — it's warm enough to fish comfortably throughout the winter months.

The Valley is bordered on the east by the Laguna Madre and on the south by the Rio Grande, which teems with catfish and gar. Of course, numerous Valley lakes, including Falcon and Delta, are available for winter bass and crappie fishing.

If you've fished big lakes, rivers and surfs back home and you're looking for something a little different, you might like to try your hand at a sport few places but extreme south Texas can offer — canal and drainage ditch fishing.

Visitors often cross the bridges spanning these man-made waterways without really noticing them. The ones seen most frequently are just shallow, seemingly endless, V-shaped trenches that cut swaths through grain fields, residential sections or possibly business districts in the larger towns. They were constructed to carry water from the river to thirsty field crops throughout the area, and they fulfill this purpose admirably.

But why, you ask, would any angler worth his chest waders want to fish in a canal or drainage ditch? For one thing, these strips of water have a lot of fish swimming around in them. In one part of the Valley or another, you can find canals that contain black bass, yellow and channel catfish, many species of sunfish, carp, gar, shad and the Rio Grande perch. Toss a lure or the right kind of natural bait in any one of them and you may have as much fun filling a stringer as you have had fishing anywhere.

If you're interested in trying this type of fishing, there are some things you'll want to know, such as where the fish are found.

Although types of fish and their relative abundance vary with differing water conditions, they inhabit virtually every part of every canal or drainage ditch you would care to try.

Strongly flowing waters are often the most productive. If you are on a larger canal with a dirt bank, stop and cast toward projecting mesquite trees or mud ledges. For yellow catfish, carp and gar, try a natural bait and let it sit awhile. Game fish often hit on topwater or shallow-running lures.

If nothing hits after a few casts and your patience wears thin, pick up your gear and try somewhere else. The beauty of a canal is that there's plenty of it and it's all easily fished from the bank.

In the smaller concrete channels, there are not many natural projections to provide shelter for fish; therefore, the most productive spots will probably be around the gates erected to regulate water flow.

You may be in luck if you find white water rushing through a wide-open gate. The highly aerated water stirs up bait fish and can drive the game fish into a feeding frenzy.

If you seek game fish in still water, bear in mind that they will be near plentiful food supplies. In other words, search out places where water plants grow. Lily pads and cattails provide natural shelter for frogs, young blackbirds, minnows and many other natural foods of bass and channel catfish. Make sure the water is fresh, as almost any fish will vacate stagnant pools.

Stalk fish in these places as you would anywhere else, but remember that the shallowness of the water necessitates extreme quietness on your part. Do your

Canal and drainage ditches in the Valley provide more than just water for thirsty fields. These irrigation waters also contain black bass, yellow and channel catfish, many species of sunfish, carp, gar, shad and Rio Grande perch to provide fishing opportunities for anyone who wants to give them a try. Some of the most productive spots are around the gates erected to regulate water flow.



One of the nice things about canal fishing is the fact that there is plenty of it. All of the waters are easily fished from the bank and, if you don't catch anything after a few tries, you can move on to a more likely looking spot and try again.

casting from the bank. There is no need to slosh around in the water unless it's a warm day and you want to get wet more than you want to fish.

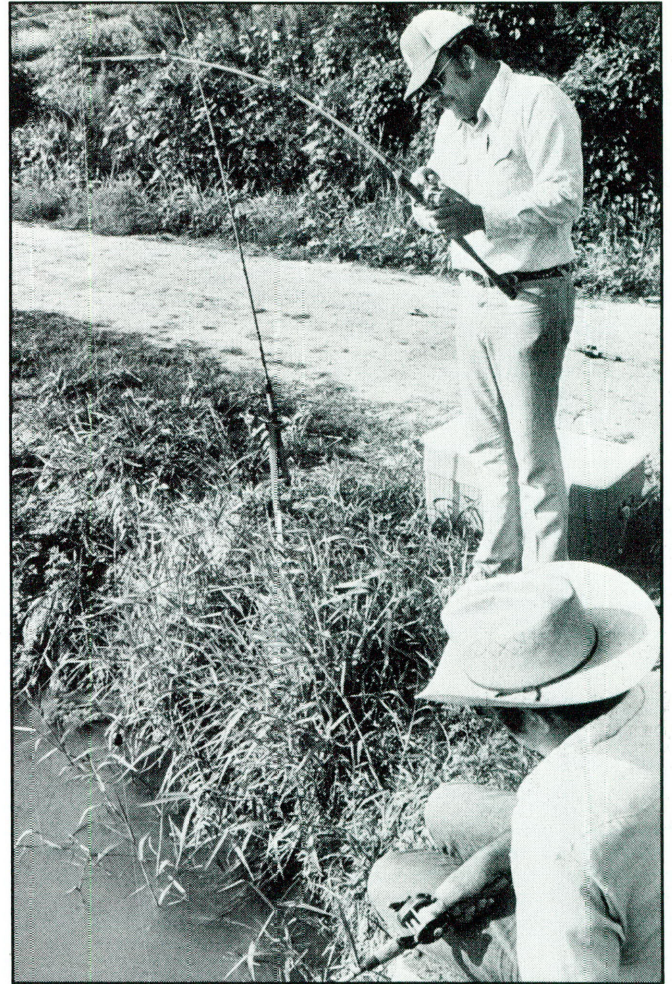
Stay low; don't let the sun throw your shadow over the water. Black bass, in particular, are cautious feeders in these closed-in situations.

There are no particular laws concerning the type of bait you should use. In general, throw the same things at canal fish that you use in any other body of water.

Through experience, I have found the two best natural baits to be earthworms and grasshoppers. These two are not necessarily more productive than small frogs, shiners or crayfish, but they are by far the easiest to find and catch.

If you prefer to use artificial baits, try some that simulate these natural foods. Probably the best for bass and the larger panfish are the swimming-minnow lures. But spinners, spoons and plastic worms are good, too.

Another beautiful aspect of canal and drainage fishing is that it is very relaxed. You can sit on the grass, soak up a little sun and take it easy; do what you want. You may even find a comfortable shade tree and decide not to bait the hook. **



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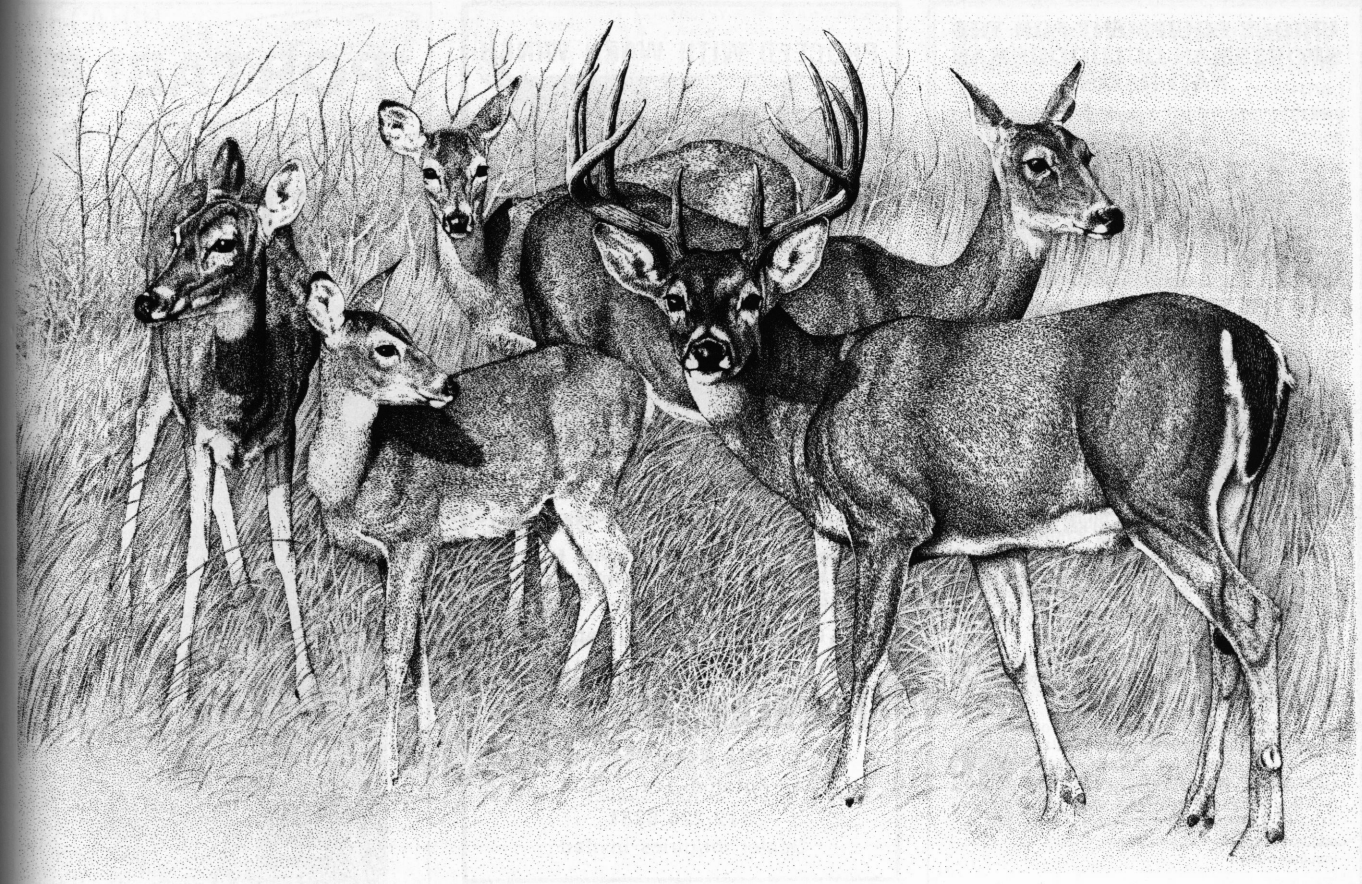
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That is why I did not show you the watercolor version at the top of this page — this simply cannot be duplicated on a printing press.

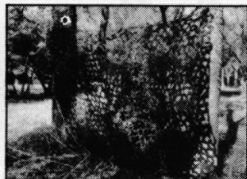
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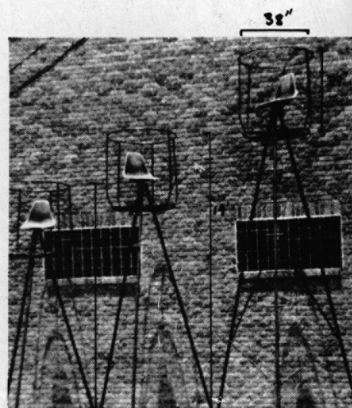
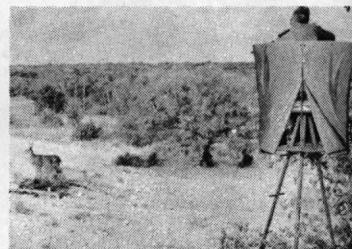
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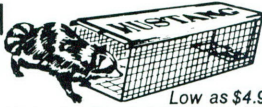
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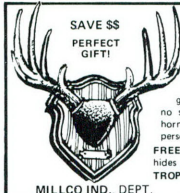
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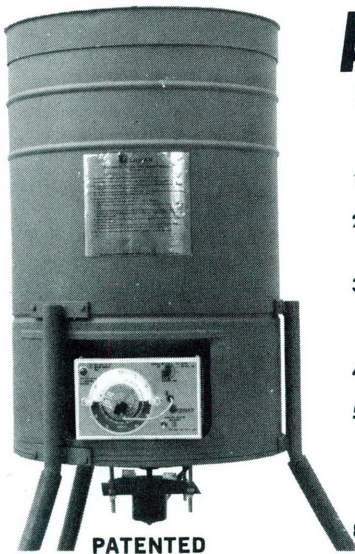
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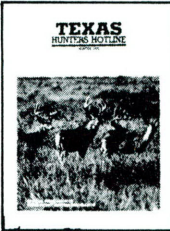
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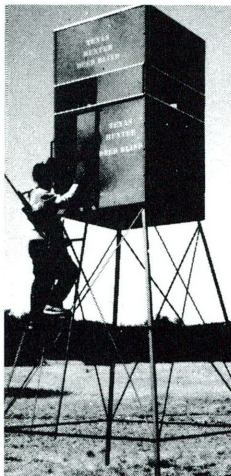
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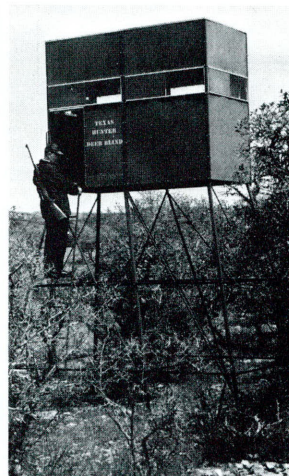


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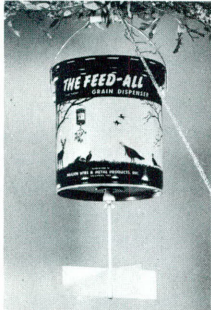
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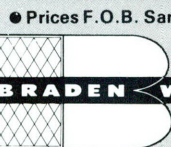
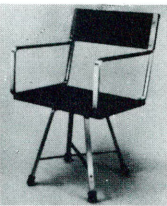
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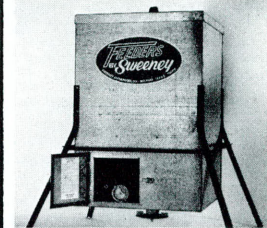


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Young Naturalist

The Hunter's Role by Ilo Hill

Destruction of the places where animals live — not hunting, as many people would have you believe — is today's greatest threat to wildlife populations.

In this country alone, it is estimated that the destruction is progressing at a rate of one million acres a year. Stop and think about it — one million acres of land each year that can no longer provide food, water and shelter for the nation's wildlife.

Another threat to wildlife (although neither group will admit it) is the continuing argument between hunters and antihunters over the question of hunting. While these two groups are busy arguing about their rights, wildlife is losing out. Acres and acres of wildlife land are being bulldozed away to make room for superhighways, high-rise buildings, shopping centers, housing developments and new reservoirs. Strip mining, dredging and other such activities also take their share of the land and waterways needed by wildlife.

Wouldn't it be more sensible for hunters, landowners and antihunters to join forces and work together to protect wild river areas, mountainsides, woodlands, wetlands and wilderness areas for wildlife? If America's wildlife heritage is to be preserved, wildlife will need all the friends it can get, whether they are birders, big game hunters, fishermen, nature photographers or some other type of outdoor enthusiast.

Just when the arguments between hunters and antihunters began, no one can really say. Perhaps the first ones took place in prehistoric times. Can you imagine cavemen arguing over whether it was right to kill woolly mammoths and sabre-toothed tigers for food, especially when these animals began to become scarce?

Although we don't know when the first disagreements took place, arguments between the two groups became quite common at the turn of the century when the conservation movement really got underway in this country, and they are still going strong today.

Both groups seem to agree on the idea of protecting endangered species, but many dedicated conservationists and antihunting enthusiasts are unable to accept the fact that many forms of wildlife, such as deer, will overpopulate if their numbers are not controlled in some way. Some antihunters recommend that we "let nature take its course." If man had never



Ed Dutch

interfered with nature by cutting and flooding woodlands, draining the wetlands, plowing the prairies and polluting the air and water, nature might have been able to keep in balance.

However, nature's way of maintaining a balance can be very cruel. When animals become overpopulated and the land is unable to produce enough food for the extra animals, the surplus must die. It is only a question of how — nature's way or the hunter's way. When the food becomes scarce, browsers, such as deer, soon become undernourished. If they don't die slowly of starvation, in their weakened condition they are open to attacks from predators, parasites and diseases. Some diseases can destroy as much as 90 percent of a deer herd within a few days. Nature takes its course and the herd is once again reduced to a level the land can feed. Was the starvation and disease of nature's way, which killed young and old alike, more humane than the hunter's bullet? Those who have seen a white-tailed deer in the last stages of starvation question whether nature's way is best.

Some antihunters realize that surplus animals must be removed, but they feel that the job of killing them should be handled by professional marksmen who would not get any "fun" or sport out of it. This



Bill Reaves

Agricultural needs, land-clearing projects and man-made reservoirs hurt wildlife populations much more than hunting. Although reservoirs provide recreational opportunities for man, and in many instances serve as flood-control measures, they destroy the river bottomlands which once provided food and shelter for wildlife. When the surviving animals seek shelter in the lands surrounding the new reservoir, they often again are displaced as land developers move in to create a lakeside resort area complete with roads, homes, swimming pools, tennis courts and golf courses.

Until the landowner put the poor creature out of its misery with a bullet, this deer was walking around in this horrible condition. Screwworms had eaten away its flesh and exposed its skull while the animal was still alive. These parasites are just one way Nature controls wildlife populations. What a shame this deer was not harvested by a hunter's bullet before screwworms put it through such prolonged agony.

idea has never really been accepted by the general public because the average person does not want to pay someone to do what hunters will do for free. They can see nothing wrong with the hunter harvesting the surplus for food and recreation.

Still another substitute for hunting proposed by antihunters is birth control in wildlife. The federal government actually tried this method on the overpopulated white-tailed deer in Mammoth Cave National Park in Kentucky. The experiment was successful on penned deer when the birth-control chemical was added to their food, but rangers found it impossible to give daily doses to free-roaming deer. Some of the wild deer were trapped and given extra large doses of the chemical, but eventually both the penned deer and the free-roaming deer refused to eat the food containing the chemical. Hormone injections were also tried, but the researchers were never able to learn how long the hormones would remain effective or what effect they would have on predators that might eat the wild deer. Nature stepped in during the research in the form of disease and the herd was reduced once more to a manageable population. After seven years of experimentation, the birth-control project was abandoned.

Why do people search so hard for a substitution for hunting?

Sport hunting — properly regulated and based on scientific research — is recognized as the most efficient way to remove surplus wildlife and it also serves as a form of recreation for those who enjoy hunting. All 50 state governments consider hunting a valuable management aid that not only thins the overpopulated herds, but also puts this surplus to good use as food.

No American wildlife species has been exterminated by sport hunting since the development of modern wildlife management in the 1930s. In fact,



wildlife management has increased many species. The nation's white-tailed deer population, estimated at 350,000 animals in 1890, today numbers more than 15 million. This is more deer than were here when the Pilgrims landed. Since 1907, the elk population has grown from 41,000 animals to about a million, while the pronghorn antelope population has increased sevenfold and the wild turkey tenfold.

Since hunting does not endanger any wildlife species when the harvest is based on wildlife research and limited to surplus game, the question of whether to hunt or not is one that each person should be free to decide individually. However, each person also must learn to respect the opinions and rights of those who choose differently. Wildlife resources belong to all Americans, hunter and nonhunters alike and, instead of fighting with each other, both groups should devote their energies toward preserving lands for wildlife and share in the expenses of properly managing them for everyone's enjoyment. **

Editor's Note: This article was based on the National Wildlife Federation's bulletin "Should We Hunt?"



Ed Dutch

Nature's way of removing surplus animals can be very cruel. When the land cannot produce enough food for the extra animals, many of them slowly starve to death. Once they become too weak to run, they are easy prey for predators. In their weakened or overcrowded conditions, they also are susceptible to diseases and parasites. Most birds do not live long in the wild. Severe weather conditions, disease, food shortages and predators contribute to their high mortality rate. When hunters harvest game birds such as dove and quail for food, they are putting to use a natural resource that otherwise would be wasted. It is estimated that only 25 percent of the state's quail population survives from one year to the next whether hunting is allowed or not. The dead whitewing (left) is good only as food for small predators.

LETTERS TO THE EDITOR

Alien Hunters

I am a Vietnamese refugee and have lived in Detroit, Red River County, since August 1975. Please advise me whether I can buy a rifle or shotgun for hunting purposes. I am 49 years old and love hunting.

Bui Raun Dang
Detroit

■ The Texas Parks and Wildlife Department does not have any jurisdiction over the purchase of firearms. However, according to federal law governing the purchase of rifles and shotguns, an alien is eligible to buy either or both if he or she is legally inside the United States, is at least 18 years of age and can show proof of residence. If the alien is just visiting the United States or is here as a student, he or she must live here at least 90 days before making such a purchase. An alien here less than 90 days must have a letter from his or her consulate stating that the consulate is in favor of the purchase.

There also are specific rules governing the purchase of firearms that apply to nonaliens. Proof of residence is re-

quired for all purchases. The buyer must be at least 18 years of age to purchase rifles, shotguns and the ammunition for both. Buyers must be at least 21 years of age to purchase handguns and the ammunition for them. No one may purchase a firearm if he or she has been convicted of a felony, is considered mentally incompetent, has received a dishonorable discharge from military service, is an illegal alien or has at any time renounced American citizenship.

Until an alien applies for citizenship, he or she must purchase a nonresident hunting license. Once the application has been made, a resident license can be issued.

Doe Triplets

Deer roam quite freely through many parts of the City of New Braunfels. As I live in one of these areas, I have put out a trough in which to feed them as they come by. Last summer, a doe that is a regular visitor surprised us by bringing a newly born fawn with her. Naturally we were thrilled to see it. Several days later the doe came in at the usual time to feed, but after feeding for a short while,

she retreated to some trees where she met what we took to be two fawns. However, it developed that there were three fawns and she was nursing all three. When we saw her again, there were only two with her.

Can a doe have triplets or will she accept the fawn of another doe for feeding? Could she have been "baby sitting" for a friend?

Do you have any publications available concerning the white-tailed deer?

Thomas Pennington
New Braunfels

■ Twins are very common in whitetails and triplets do occur. The doe you saw probably had triplets and was not "baby sitting."

Bulletin 41, "The Mammals of Texas" by William B. Davis, is distributed by this department at a cost of \$2.36, including state tax. This bulletin contains not only information concerning the distribution and habits of the white-tailed deer but also similar information for the other mammals of the state.

Gifts for Teachers

Not only do we enjoy every issue of *Texas Parks & Wildlife* magazine, but we use them — by trying your suggestions for observing, hunting, skinning, cooking and smelling all these Texas goodies.

I would like to take this opportunity to make a plea for all the subscribers who do not use their magazines themselves to pass on their copies to any nearby school teacher. This monthly collection of pictures of things right around us is so great an illustration of our visible surroundings that it makes great bulletin boards and other teaching aids. Every one of us knows a school teacher — or passes a school building on the way to work. Pass your magazine on!

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BACK COVERS

Inside: Until 1939 when it was designated as a game animal, the javelina was hunted commercially for its hide. Since that time, in areas where good javelina habitat exists, the animal's population has increased. Many have been restored to West Texas ranchlands to help control certain undesirable cacti which they eat. Photo by Ed Dutch.

Outside: As the shell is ejected from the waterfowler's gun, the duck begins its descent to the ground — the first stage of its journey to a successful hunter's dinner table. Photo by Martin T. Fulfer.



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