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## OUTDOORS IN EAST TEXAS THEN AND NOW

*by Daniel W. Lay*

Texas was a land of bears and honey for the pioneer settlers starting about 1820. Land was cheap or free. Open ranges welcomed everyone's livestock and provided wildlife, water, firewood, and building materials. Newcomers found a vast, diverse natural world produced by at least 10,000 years of development since the last Ice Age.<sup>1</sup>

The present account starts with 1920, when the bloom was off the wilderness and I was six years of age. Home was in Beaumont, but I preferred the open spaces nearby. There were students in my school whom I envied – they lived in houseboats and rowed skiffs across the Neches River en route to class. Boy Scouts helped in many ways, especially visits to Camp Mitigwa, located on Beech Creek in Hardin County.

The Depression was in full force when I finished high school in 1932. The stress of financial hardship was widespread and close to home. Dad, a pharmacist, urged that I try to go to college. Others had to help support their families. They were not free to go, as I did, to Texas A&M. There I found credit and jobs enough to stay in College Station six years, thanks to many kind people. Training in agriculture and wildlife was the beginning of learning about natural resources and people. In 1938, when I finished, a job was waiting with the Texas Game, Fish and Oyster Commission.

The first Federal Aid in Wildlife Restoration Project, Texas W-I-R, placed me in Beaumont in June 1938 as the regional game manager for twenty southeastern counties. The program was funded by hunting licenses and taxes, three-fourths of it from the federal government. The work involved distribution surveys of important game species and their habitats. Restocking was recognized as a need for deer and turkey. Both had been over-harvested during the Depression.

Soon the whole of East Texas became one of five regions and the office was moved to Lufkin. When World War II started, most of the able biologists entered military service and I moved to Austin to help keep some of the work going under Executive Secretary William J. Tucker. In 1945 I elected to return to field investigations in Silsbee, then Buna, and later Nacogdoches.

Public acceptance of the new science of wildlife management was generous and almost complete. We were inspired to protect the natural world. Young people could gain much from camping, fishing, hunting, and other outdoor activities. The intangible values were recognized. Tucker stressed these things in his public addresses. The public readily agreed that future generations should have the same opportunities to enjoy the outdoors.

In the twenty-first century the trends will continue and may accelerate. This is a message not of "doom and gloom" but of the need for serious planning. Wildlife is a minor product of land use but it offers a warning about

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public health. The following is organized by time periods, except statements about deer and quail.

## BEFORE WORLD WAR II

Two-thirds of the population was classified as rural. Farming of rice, cotton, chickens, and livestock required much hand labor.

An early fascination in Beaumont was watching the daily flights of blackbirds, wave after wave. Countless thousands nested and roosted in the cane marshes along the Neches River and fed in the pastures and rice fields west of town. When rice ripened, it was cut and tied in bundles by machine. Then hand labor was used to stand the bundles in small cones to dry for several weeks before they were moved to a stationary threshing machine. The straw was blown into haystacks, along with shattered rice. Ducks and many other birds swarmed around the dinner plate set by rice farmers.

Hunters were welcome and some farmers provided shells when the birds were at their most vulnerable. The same pattern followed all grain harvests from Canada to Texas ending only when agricultural engineers produced effective combines and drying equipment.

Other crop production was similar. Cultivation was just enough to make the crop of corn or cotton. Incidental growth of wild plants included many forms of value to wildlife. Fencerows received little hand-labor and were a mixture of local seed-producing vines and shrubs – all planted by birds. A tenet of agronomy at that time was that rotation with legumes was worthwhile because it helped develop the natural qualities of soil condition. There were few fences, except for farmlands. Prairies were burned early and marshes were burned in late summer. There was a constancy of composition.

Most woodlands were unfenced and open for use by everyone's livestock. Stockmen burned as often as there was adequate fuel, causing little damage. They had learned that burned plots turn bright green and attract both deer and livestock.

Diverse hardwoods were available. No stand had been "improved" by foresters. A report on lumber production in Texas in 1924 listed the following hardwoods by species: ash, basswood, beech, birch, cottonwood, elm, hickory, maple, oak, red gum, sycamore, tupelo, walnut, and all other. The latter probably included cherry, magnolia, and locust. Cypress, a conifer, was listed separately.<sup>2</sup> Ash, hickory, walnut, and cypress were worth more than pines.

Market hunting for ducks and geese was a major activity at Lake Surprise on Smith Point, across Galveston Bay from Galveston, before 1900. A prominent businessman, W.L. Moody, had a hunting lodge there and its 700-acre lake often was "covered" with canvasbacks and other kinds of ducks and geese. The staff, which served as guides for guests, also "killed thousands of ducks and geese, cleaned and packed them in barrels, and put them on express trains for the Northeast."<sup>3</sup> A single canvasback brought \$4 in the New York market. The lake was special because it contained a rare concentration of Banana Water-Lilly.

The good times of the 1920s included market hunting for ducks and prairie chickens. This became illegal in 1916 but federal game wardens were no more effective than the prohibition enforcers. Drought in the 1930s slowed the duck hunting and led to new programs for wildlife. The prairie chickens disappeared from the area east of Galveston Bay about 1942.

Many people literally lived off the land during the Depression. Fur trapping provided a significant supplement to cotton and other cash crops. Gatherers from town and country sought all of the local fruits as they matured. Many relished hickory and chinquapin nuts, as had the Indians before them. Roadside vendors found ready buyers for mayhaws, dewberries, blackberries, and grapes. A tree with a crown of possum grapes might get the axe for the fruit. Armadillos were not bad eating, despite the name of "Hoover Hogs." Judge R.E. Minton served me my first armadillo meal. Rabbits and opossums were plentiful. Another friend who was reared on a rice farm spoke fondly of dishes her family cooked with meat from the canals and fields – turtles, crayfish, frogs and various fish, served with broken rice, the cheapest grade from the local rice mill.

For deer and turkey, the Depression was bad news. Every track of a deer was enough to start a gathering of neighbors and hounds. Squirrels were the most commonly sought game. They were numerous, and withstood pressure well because of their high reproductive capacity. But they were wild! Quail were common in cropland and cutover woodland. Many made it to the table without being shot via traps.

Land prices were depressed. Many East Texans could not pay their taxes or wait to see if a new stand of pines would develop. Some spent parts of the year camped on the river bank, especially in summer after the last plowing of the corn and cotton. Appeals to Washington produced a market for forestland in some counties. U.S. Forest Service Forest Supervisor L.L. Bishop bought more than 600,000 acres from willing sellers between \$2.50 and \$10 per acre. Each tract was cruised and the price reflected the amount of standing timber by species. This formed the Texas National Forest.

This brought the first practice of forestry to Texas – girdling hardwoods with axes. I observed evidence of this in 1936 in a fine stand of beech. Another activity was the use of fire on cutover longleaf sites. Open sites were planted in loblolly or slash pine.

E.L. Kurth, a second generation "timber baron," built East Texas' first paper mill at Lufkin. The effluent drained into Peach Creek, later renamed Paper Mill Creek, and the Angelina River. From 1940, when paper production began, through the fall of 1944, game wardens and their supervisor from Austin talked to the mill superintendent about state water pollution laws. Promised ponds for settling out some waste were not built.

Finally Tucker of the Texas Game, Fish and Oyster Commission wrote a letter to Kurth stating that he would ask a court to stop pollution unless some action was taken. Tucker was under pressure from fishermen who had employed a lawyer in Nacogdoches after witnessing heavy losses of fish. Damage reached to the coast. Waste fibre clogged nets. Caustic chemicals

caused cotton and linen lines and nets to waste away. Some camp owners along the river had quit using their places.

Pointing to the jobs he had created, Kurth asked for help in Austin, and Tucker lost his job about six months later. The mill operated with little change until the 1970s when the Environmental Protection Agency forced some air and water protections.

Two notes about good hunting will finish references to the days before World War II.

My notes about a day in the field near Beaumont in September 1938 were placed in a short paragraph in an old report. The dove season had opened and I looked for hunters to record their success. At Fannett I found a group of hunters doing a lot of shooting in a fallow rice field. When they returned to their car, I asked to see the birds. They had bagged seventy-two doves. All of the crops seemed to be full with one kind of small black seed. A common plant was collected for identification. Later, I found the common plant did not produce the black seed.

A second trip to the field revealed a slender, inconspicuous, but sexy producer of black seed. This keyed out as *Caperonia palustris*, or Mexican weed, a nuisance in rice production. It was about as popular as prairie dogs on western ranches, but was attractive to doves.

When herbicides arrived, the plant disappeared. I looked for it. Younger biologists did not know it. A few years ago C.D. Stutzenbaker found some growing in a ditch near Anahuac.

In 1938 most waterfowl hunters bought day permits for two or three dollars at the gates of ranches from Big Hill to Smith Point. Fuller's Cafe in Beaumont was busy from 2:00 to 5:00 a.m. serving breakfast. We checked the hunting success of 294 hunters at the Barrow Ranch in Chambers County. From November 15 to December 18, the total bag was 1,291 ducks and sixty-six geese. These were forty-two percent mallards and eighteen percent pintails, which shows the selective hunting for favorite species. The geese were seventy-seven percent snows and blues, twenty-one percent Canadians, and two percent white-fronted. The daily bag per hunter averaged 4.4 ducks and 0.23 geese.

### **GOOD TIMES 1945-1970**

Hunters and bird-watchers found enough to be energized. When I moved to Nacogdoches in 1965, dove hunting was superb. Many watermelon fields grew crops of goat weed, which attracted doves. Two new reservoirs, Sam Rayburn and Toledo Bend, produced great fishing and duck hunting, especially in their early years.

Some problems produced demands for new legislation. These included modern agricultural chemicals that produced unwanted side-effects. Soldiers were "protected" from lice and mosquitoes with the wonder chemical DDT during the war. After the war related chemicals such as aldrin, dieldrin,

heptachlor, and benzene hexachloride were welcomed for pest control.

Early in 1958 I received a call from Austin to meet fire-ant control agents in Sour Lake. They planned to apply fifteen pounds of heptachlor per acre on the Fralisle Ranch in three days. My instructions were to "Please appraise results." Birdlife was counted on ranch roads as a small pretreatment sample. Three days after the treatment the Plant Pest Control agents from the USDA acted as if they were shocked that there were no live birds but many dead ones. Also found in water were dead fish, crawfish, snakes, and nutria. A covey of quail was gone, though we found two dead members. After a second treatment in May, after more than a hundred nests of dickcissals and blackbirds had been tagged, there was no survival. Similar results were observed elsewhere, but not until after the publication of *Silent Spring* by Rachel Carson in 1962 was this group of chemicals limited to certain applications.<sup>4</sup>

One consequence of the hysteria about fire-ants was antagonism towards me, as if I had caused the problem. This came to a climax in Buna after fifty-pound sacks of heptachlor were distributed at no cost. Representatives of the U.S. Department of Agriculture promised complete control of the fire-ants and did not urge caution in its use. A dairy warning that milk should not be used for first three days after a pasture had been treated had been issued elsewhere. These friends and neighbors were going to apply the poison to home gardens. When I asked about this, I was asked to leave. I did not. A few days later the governor's office received a petition from most of my neighbors asking that I be sent elsewhere. As usual, the staff in Austin considered such complaints an indication that effective work had been done.

Perhaps worse than insecticides has been the widespread effect of herbicides because they have more long-term effects on the ecosystem. Cotton production was shifted to better soil out west and small patch-taming in the east could not compete. Most East Texas cropland reverted to forest or was consolidated into pastures for dairy or beef. Herbicides were needed to convert weedy cropland to produce coastal bermuda grass. Clean fencerows, which saved labor, also needed herbicides. Mowing contributed to using the land for one crop – grass.

In forestland, herbicides were a part of the war on hardwoods. Various methods of girdling with axes and mechanical routers were replaced with injection of herbicides. Later aerial applications would be cost-effective. The first I observed on deep sands in north Nacogdoches County reduced the ground cover, including a heavy stand of grape. These were nurse crops for natural regeneration of shortleaf pine. Their shade in August was quite valuable.

When Congress authorized the National Forests in Texas, multiple uses such as timber, range, wildlife, water, and recreation were planned. Foresters and range people who staffed the four units initiated a "Memorandum of Understanding" with the Texas Game, Fish and Oyster Commission. Their objective was official cooperation for wildlife management, law enforcement, restocking, fire control, and hunting regulations. They offered to save as den trees, large hardwoods with cavities, and ten percent of the hardwood basal area, as had been planned in Arkansas. "Timber stand improvement" (TSI), was

the key problem because hardwoods provided more support for wildlife than pines. Much of the land had more than forty percent in hardwood, so it was not significant to promise to hold ten percent of the basal area in hardwoods.

By November 12, 1954, a letter from Forest Supervisor Frank W. Rasor, signed by E.E. Wagner, stated that 450,000 acres had been worked "deadening worthless hill hardwoods." Some of this acreage had been "worked over two or three times."<sup>5</sup>

The promised ten-percent was not preserved. The foresters and range people had not negotiated in good faith. Wildlife biologists in other states had similar problems. The regional forester from Atlanta met in Hot Springs with some biologists and a committee met with Ed Swift, chief forester in Washington, who promised changes. By then some forests had more than three times as much pine as was being carried by the forest industry. The dominant culture among federal land managers was timber. Many subtle forces worked to give only lip service to wildlife.

Forest Service records for each tract document the species and sizes of the original trees. Early surveys delineated the longleaf type, the pine-hardwood type, the hardwood-pine type, and the bottomlands hardwoods. Some listed hardwoods by species. Soil surveys compiled in recent years would be useful if anyone wanted to document the original condition and composition.

Negotiations about leaving hardwoods became moot after 1964 when the Forest Service announced the abandonment of selective silviculture.<sup>6</sup> This was a reversal after many years of telling landowners they should paint trees to be sold and keep all ages in the stands. The new even-age silviculture involved clear cutting, root plowing, and planting seedlings from nurseries. Most natural sources of seed were removed, especially the heavy-seeding oaks and hickory. Species with winged seeds, such as ash and sweetgum, fared somewhat better.

In 1973 the "Memorandum of Understanding" was terminated by the state for several reasons summarized as "failure to adequately implement established Forest Service management practices to insure quality habitat for Wildlife."

The status of dogwood marks the new silviculture. Natural stands without any TSI had more than a hundred stems per acre of dogwood on the Stephen F. Austin Experimental forest in 1965. Intensively managed sites of commercial forests now have few to none. Dogwood is important in the forest as wildlife food and soil conditioner. Leaves, stems, and fruit contribute more calcium than any other forest plant. This improves percolation and cancels some pine acidity.

For twenty years prior to 1965, red-cockaded woodpeckers (RCW) and I shared a section of cutover longleaf six miles east of Buna in Newton County. My executive director, John R. Singleton, wrote on August 8, 1969, to the U.S. Bureau of Sports Fisheries and Wildlife. He suggested its new Red Book of Threatened and Endangered Species should include the RCW. A few months later the bureau confirmed that the bird was falling through the cracks of silviculture and listed it.

Early response was refreshing. Many wanted to help, without knowing the

necessary concessions. The first official non-game project in Texas was a new Job 10 added to Federal Aid Project Texas W-80-R. Surveys on private and public lands sought to map locations of remaining birds. Three study areas were established and more than 100 birds were banded. These were in Compartment 58, the Angelina National Forest, Temple Inland's Scrapping Valley area, and ten acres of old longleaf in a highway park located west of Hemphill.

The ten-acre park was of special interest. Its one RCW clan had made many cavities through the years which supported the following species that need cavities for nesting: pileated woodpeckers, after enlarging some cavities, wood ducks, kestrels, and one bee hive. Others were: Prothonotary warblers, brown-headed nuthatches, screech owls, crested flycatchers, starlings, bluebirds, tufted titmouse, Carolina chickadees, red-bellied and red headed woodpeckers, and flickers.<sup>7</sup>

### INCREASED REGULATION 1970-2000

Several new federal laws have made life more complicated for land managers and others. Texas pollution laws were not enforced before the creation of the Environmental Protection Agency (EPA). Some cleanups resulted, but pollution problems even increased faster. Houston had the worst air in the nation in 2000.

In 1973 the Endangered Species Act was passed by Congress and included the RCW. A team was appointed to develop a recovery plan, but little progress was made. The usual silviculture of clearcutting and selective removal of relic old trees used for cavities continued. Finally this was challenged in a federal court and the Forest Service was forced to face the RCW problems.

In 2000 the species remained on the endangered list while many people throughout the South worked for recovery. Meanwhile, the Forest Service seems to have a scorched-earth policy on the ground, using the federal court's order for one more gain for silviculture. Crews have been sent long distances to remove one hardwood. Some use of fire has been replaced by herbicides. Unrealistic goals of future re-establishment of RCW have been used to justify complete removal of hardwoods where no RCW are likely to be established. Silviculture continues to dominate and biodiversity continues to decline.

It is ironic that fire exclusion has contributed to the declines of longleaf pines and RCW. The original three million acres of longleaf in Texas was burned often enough to exclude invading loblolly pine and other less fire-tolerant species. This produced the open-park-like aspect favorable to woodpeckers. Most of the remaining forty thousand or so acres of longleaf forest are in the Sabine and Angelina Forests. To reestablish all longleaf sites would require reversal of loblolly pine plantations. Promised efforts have moved slowly.

Bottomland hardwoods are even more threatened than those on uplands. Much of the original acreage has been lost to inundation by reservoirs. Some has been cleared for cropland. All of the remainder is subject to planning for future water projects. Although lost wetlands are irreplaceable, their



ecological service is mostly ignored. Natural parts of the Sulphur River which were set aside for mitigation of the Cooper Reservoir may be under water in a new impoundment soon. Natural habitats are weakened and fragmented by water projects and their associated developments. The future for hardwoods is better in the national forests than on intensively managed private lands, especially those of the forest industry. The Forest Service does leave excellent stream-side strips protected from clearcutting.

Researchers promise to double cellulose growth again with improved genetics and more intensive culture. This includes expensive use of agricultural chemicals – fertilizer, insecticides, herbicides – so that no plants but pine benefit from rainfall or irrigation.

The best future for hardwoods probably lies with the unmanaged private lands in towns and along many highways. A low flight from Nacogdoches to Beaumont would show a preponderance of unbroken dark green pine. The splendor of dogwood and magnolia blooms and the spring and fall colors of beech and hickory are much reduced.

A final problem: all commercial silviculture is moving towards shorter rotations. Boards are being replaced by products made from chips. Thus fewer trees live long enough to provide cavities or seed. The skills of foresters to manage natural forests are being supplanted by the skills of agronomists to manage tree farms.

The subject of biodiversity has attracted much study and comment. An editorial in the *Dallas Morning News* on April 27, 1998, concluded that continued declines in natural diversity are threatening human survival.

Many can confirm the decline of bird species in the pineywoods. In April 2000, the Texas Parks & Wildlife Department published lists of rare and declining birds by region. Those for the pineywoods numbered fourteen.<sup>8</sup>

Squirrels and quail, two of the most important game species, were not listed but have declined so much that they provide negligible amounts of hunting.

### **GAME MANAGEMENT - DEER**

A summary of the sixty-year history of deer restoration and management will not do justice to the many people and funds devoted to it. The Depression demonstrated that a deer population can be wiped out. Restocking started about 1939 with deer trapped on the Aransas Refuge or other places in West and South Texas.

By then, the only huntable deer were on the hunting clubs near Lufkin. At Boggy Slough in Trinity County, Judge R.E. Minton had increased the deer population by limiting illegal hunting. He used armed fence riders and legal injunctions. The general public was tolerant of illegal hunting. Game wardens, with only one assigned to three counties, found it difficult to make a case, and hounds and headlights use was common year around.

The restocked areas had to be fenced and patrolled, as at the Devil's

Pocket in Newton County and Moore's Plantation in Sabine County. Many dedicated people took risks and worked hard to improve the protection of deer. Biologists such as Charles Boyd and wardens such as Earl Sprott head the list.

The problem of general public support required many presentations to civic clubs and Wildlife Planning Boards. Gradually more and better-paid wardens arrived and the protection of deer gained the majority support. Then, when it became necessary to make shooting female deer legal, there was an adverse reaction.

While the herd was increasing, the quality of habitat was declining. Conversion of mixed pine and hardwood forests to pine plantations caused apprehension among deer hunters who knew the fondness of deer for acorns. Boyd stated in a talk to a civic club in Hemphill that pine plantations would become "biological deserts." This made headlines and foresters objected.

Deer are adaptable animals with a rapid reproductive capacity. Most doe produce two young each year. If the range is adequate in forage quality, there will be two young added to the herd. Any acorns available in winter will be a bonus.

To avoid overpopulation, reduced survival of fawns, and even adult mortality, some doe must be taken during the hunting season. Public acceptance of this concept has been slow. Hunters see greenstuff and do not realize that much of it is lacking palatability or nutritional quality, as many studies have demonstrated.

Currently, there is a "trend toward privatization of state-owned resources (including deer) for private gain, thus eroding the legal authority of the Texas Parks & Wildlife Department to manage and regulate," according to the Texas Chapter of The Wildlife Society. This concerns intensive management behind high fences and locked gates. Already these deer are close to private property.

Regardless of the legal status, the rising cost of access is moving us closer to the European system of hunting for the privileged few.

### **GAME MANAGEMENT FOR QUAIL**

During the beginning years of wildlife management in East Texas, quail received more attention than any other species. The success of quail hunters remained high but was declining. How good was it? In 1938 drive census lines of forty men were used, thanks to manpower supplied by the Civilian Conservation Corps. Results for 7,414 acres in acres per quail were: cutover longleaf pine, 6.6; 3-8 year cutover loblolly pine-hardwood, 4.7; Walker County farms, 10.7; and Nacogdoches County farms, 7.7.

Wardens listed 349 owners of bird dogs in Hardin, Polk, Tyler, Angelina, and Nacogdoches counties. Results of a mail survey were: "the average hunter has 1.8 dogs, makes 11 hunts, bags 78 quail and took four friends hunting." This was for the winter of 1938.

Quail declined because land use practices which favored the growth of seed-producing plants were being lost: cotton and other crop farming; open-range

livestock management with frequent fires; and conversion of longleaf pine forests with open understory and prairie-like vegetation to pine plantations without fire. All upland forests had some quail before modern silviculture arrived. In winter most creek bottoms had quail looking for tree mast, especially acorns.

None of the efforts to demonstrate good management for quail food and cover were as attractive to landowners as more intensive forest and pasture management. A costly quail hatchery failed to help.

At the end of the century, quail are an uncommon songbird in East Texas. Those hunters who can, go to South and West Texas for quail shooting.

### SUMMARY THEN AND NOW

A review of wildlife management in East Texas since its beginning leaves me humble. How fortunate can one be? The work was engrossing and there is a possibility that some of it was worthwhile. I am indebted to many coworkers over forty years.

Fewer varieties and numbers of plants and animals are present now than eighty years ago. Most losses can be charged to rising numbers of people, who now need four times or more commodities and services. Losses in biodiversity should be considered a warning for the welfare of people.

Many of the present problems will only get worse. Construction of highways and schools may never catch up. Health threats from stress, crowding, noise, traffic, and less-than-clean water and air are serious. Whether or not populations double again twice in the next eighty years, some thoughtful planning will be required.

The cultural and intangible values of the natural world are more important than ever before. Scarcity contributes to appreciation. Those restricted to rocking chairs need to hear and see a hummingbird or watch a butterfly. Their grandchildren need places to sleep under the stars and listen to owls.

### NOTES

<sup>1</sup>Joe C. Truett and Daniel W. Lay, *Land of Bears and Honey* (Austin, 1984).

<sup>2</sup>H.B. Steer, *Lumber Production in the United States*, USDA Miscellaneous Publication 669, 1948.

<sup>3</sup>Shannon Tompkins, "Moody's Lake a victim of 1900 storm," *Houston Chronicle*, September 6, 2000, p. 16A.

<sup>4</sup>D.W. Lay, "Count three for trouble," *Texas Game and Fish*, (July 1958). Also D.W. Lay, "Aftermath of waste," *Texas Game and Fish*, (October 1959).

<sup>5</sup>Lay Collection, Box 1, East Texas Research Center, Stephen F. Austin State University.

<sup>6</sup>Howard A. Miller, "The New Look On Southern National Forests," Proceedings of Eighteenth Annual Conference, Southeastern Association of Game and Fish Commissioners, Clearwater, Florida, October 1964, pp. 124-129.

<sup>7</sup>Daniel W. Lay, "Wildlife penthouses," *Texas Parks & Wildlife*, April 1973, pp. 20-21.

<sup>8</sup>Clifford E. Shackelford and Mark W. Lockwood, "Rare and Declining Birds of Texas," *Texas Parks & Wildlife*, p. 9, April 2000.