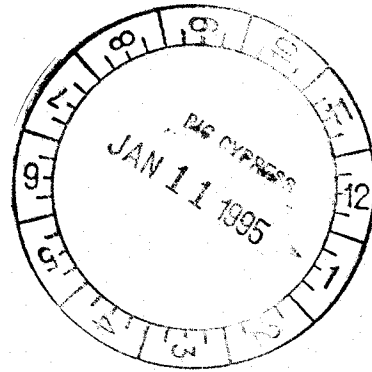




BIG CYPRESS NATIONAL PRESERVE

DEER AND HOG ANNUAL REPORT

1993-94

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EXECUTIVE SUMMARY

Prior to the 1990-91 season the National Park Service (NPS) and the Game and Fresh Water Fish Commission (GFC) agreed to several regulation changes on the Big Cypress National Preserve (BCNP) with the proviso that additional changes be held to a minimum for a period of five years. Rules were modified for the 1993-94 hunting to allow muzzleloading firearms in the Deep Lake Unit for small game and spring turkey seasons. During previous years regulatory changes have been implemented on BCNP either to reduce white-tailed deer (*Odocoileus virginianus*) and wild hog (*Sus scrofa*) harvest or to reduce recreational pressure on the area.

Hunting pressure during the 1993-94 Big Cypress season (15,910 man-days) decreased 4% from 1992-93 (16,534 man-days). Hunting pressure decreased on Bear Island, Corn Dance, and Turner River units but increased slightly on other units, compared to last years levels.

Checked deer harvest (253) reached the highest level ever recorded on BCNP and was 12% greater than last year. Deer harvest increased in all units except Bear Island. Hog harvest (162) decreased by 12% from last year and decreased in each unit except for Corn Dance and Turner River. Deer harvest for General Gun season increased 4% over last season, while hog harvest decreased by 15%. Hunter success (game checked/man-day) was 0.026, similar to last years (0.025).

White-tailed deer morphometric values appear to be similar to values recorded since implementation of the 5-inch antler rule. Mean body weight and antler characteristics were in the upper range of values recorded since the rule (1986-87). Parameters measuring physical characteristics of wild

hogs harvested in 1993-94 were greater than last year. Average body length and shoulder height for hogs were the highest since data collection began. Higher morphometric values for deer in recent years could be related to availability of more nutritious food. Increased prescribed burning could have played an important role in improving forage quality on BCNP. Higher values for hogs may be due to improved food and a lower percentage of young animals in the harvest.

Summary Table 1. Deer harvest totals, man-days pressure, and hunter success by season for 1993-94 and the previous five years in Big Cypress WMA.

Year	Harvest			Pressure			Success (%)		
	A	M	GG	A	M	GG	A	M	GG
88-89	5	27	153	1762	2745	17060	0.3	1.0	0.9
89-90	10	24	152	1735	2010	17915	0.6	1.2	0.8
90-91	6	37	139	1660	1625	11055	0.4	2.3	1.3
91-92	10	37	169	1845	2030	13208	0.5	1.8	1.3
92-93	10	34	182	1495	2085	12954	0.7	1.6	1.4
MEAN	8	32	159	1699	2099	14438	0.5	1.5	1.1
93-94	12	51	190	1890	1955	12065	0.6	2.6	1.6

Summary Table 2. Hog harvest totals, man-days pressure, and hunter success by season for 1993-94 and the previous five years in Big Cypress WMA.

Year	Harvest			Pressure			Success(%)		
	A	M	GG	A	M	GG	A	M	GG
88-89	4	27	113	1762	2745	17060	0.2	1.0	0.7
89-90	19	32	103	1735	2010	17915	1.1	1.6	0.6
90-91	13	33	134	1660	1625	11055	0.8	2.0	1.2
91-92	24	65	165	1845	2030	13208	1.3	3.2	1.2
92-93	15	24	142	1495	2085	12954	1.0	1.2	1.1
MEAN	15	36	131	1699	2099	14438	0.9	1.7	0.9
93-94	20	21	121	1890	1955	12065	1.1	1.1	1.0

INTRODUCTION

Deer and wild hog are important game animals on Big Cypress National Preserve (BCNP). Deer and hog hunting constitutes a significant component of recreation on the area (Jansen 1986). Deer and hog are also important food items for the Florida panther (Felis concolor coryi) (Belden 1983, Maehr et al. 1990). The purpose of this report is to provide census, harvest and biological information collected on these species during 1993-94 on BCNP.

Hunting

Hunts were held as scheduled with deer and hog hunting permitted during Archery (30 days), Muzzleloader (16 days) and General Gun (51 days) hunts. In addition to statewide rules these hunts were governed by specific regulations for BCNP (Appendix A). Major regulation changes have been enacted since the 1984-85 hunt season and have been summarized in previous reports (see Big Cypress National Preserve Deer and Hog Annual Report 1990-91). Prior to the 1990-91 season the National Park Service and the Game and Fish Commission (GFC) agreed to several regulation changes with the proviso that additional changes be held to a minimum for a period of 5 years. Regulations for the Deep Lake Unit were modified in 1993-94 to allow muzzleloading firearms during small game and spring turkey seasons.

This year, the opening date (Nov. 13) of the General Gun hunt on BCNP was one day earlier than the previous year and two weeks after the opening date (Oct. 30) in the South zone of the statewide framework. The closing date for General Gun season on the BCNP (Jan. 2) was one day later than last year and nine days earlier than the statewide South zone (Jan. 9). General Gun season on the BCNP was reduced from 58 to 46 days during 1990-91, but increased to 51 days in 1993-

94. Archery (30 days) and Muzzleloader (16 days) seasons remained the same length as the previous two years.

Check station operations were similar to last year. Provisions were made to operate four check stations approximately 16 hours a day, 7 days a week through Muzzleloader and General Gun seasons. In addition to this coverage, Forty-Mile Bend (FMB) and Bear Island (BI) were operated full time during Archery season, while Dona Drive and Monroe Station were staffed on weekends. The unstaffed check station at the 31mm of Alligator Alley was removed because access to it was eliminated in October 1992. When check stations were not staffed hunters could check in or out using forms and self deposit boxes at each of the 4 stations. Check station locations are shown on the map in Appendix A.

Environmental Conditions

Primary environmental factors affecting both deer and hog on BCNP are water levels and fire. Both of these factors may have positive and negative impacts on deer and hog populations.

Figure 1 shows general hydrological conditions for BCNP in 1993. This map was generated during semi-annual wading bird surveys flown over the area. Hydrological conditions were classified as wet, transitional or dry. Classifications are determined by the amount of surface water present on the area: wet - 90% or more, transitional - between 5 and 90 percent and dry - less than 5%. Areas with greater than 10% of the area in upland habitat were classified as wet whenever 100% of the wetland areas were inundated. The March 1993 survey showed wetter conditions in BCNP compared to March 1992, especially in western Bear Island, western Stairsteps and eastern Corn Dance. The August survey indicated drier conditions than last year especially in Bear Island,

however most of the area was considered wet with a few small areas in the transitional stage.

Fires during 1993 burned 45,652 acres on the BCNP (Table 1). Prescribed fires accounted for 99% of this acreage, while human caused (accidental or arson) and natural fires accounted for 1%. Prescribed burn acres were consistent with park service policy levels. An additional 1000 acres were burned in the Jetport area by GFC personnel. Jetport burns were concentrated in dry prairies with attempts made to protect hammocks.

CENSUS DATA

Deer population surveys have been conducted since 1977. Since 1989, annual surveys have been conducted in May-June in a standard manner within BCNP. Original census data are presented in Appendix B.

Bear Island

Deer track counts were conducted on Bear Island from 1977 to 1988 and have been summarized in previous reports (Manor et al. 1991). Because of wide variability in counts, poor condition of transects, and field observations it was concluded that track counts as traditionally conducted were not suitable for the Bear Island Unit. Spotlight counts were conducted in this unit in 1989 to determine the feasibility of this census method and have been continued through 1993 (Table 2).

In 1993 spotlight counts in western Bear Island resulted in population estimates of 140 deer (1 deer per 137 acres). Estimated deer density for eastern Bear Island was 1 deer per 117 acres. Population estimates from 1993 spotlight counts decreased by 71% in the western portion compared to 1992 and 61% in the eastern portion. Deer harvest (34) in Bear Island during the 1993-94 season was less than last year (50) and the previous 5-year average (41).

Despite high variability among years, we recommend continued use of spotlight counts as the primary census method in Bear Island due to deteriorating condition of suitable tracking medium along track count transects in this unit. However, this survey technique needs further refinement to yield consistent estimates.

Corn Dance

Deer track counts have been conducted in the Corn Dance (CD) Unit since 1981 (Table 3). Ten permanent transects were established in 1985 (Fig. 2) and are remeasured each year to provide 1 mile of suitable tracking medium. Mean deer tracks per mile of transect have varied between 2.6 in 1985 and 3.9 in 1987 (Figure 3). In 1991, the number of deer tracks observed per mile of transect decreased slightly from the previous year (2.9 and 3.4 respectively). The population estimate for CD in 1991 was 1,253 deer or 1 deer per 227 acres (Table 3). Track counts were not conducted in 1992 or 1993 due to a project shift by research staff. Future counts will be conducted by management personnel on an annual or bi-annual basis. Corn Dance deer harvest (27) increased by 56% over the 1992-93 season, and was greater than the previous 5-year average (17).

Turner River

Deer track count surveys in Turner River Unit have been conducted along a buggy trail in the Mullet Slough area since 1988. Track counts were not conducted in Turner River Unit in 1993 because of reduced access to the transect route. In 1992 the Mullet Slough portion of Turner River Unit had a population

estimate of 269 deer or a density of 1 deer per 119 acres (Table 4). Turner River deer harvest increased from 54 deer in 1992-93 to 72 in 1993-94.

Stairsteps

Deer surveys have been conducted in the Stairsteps Unit since 1978. Some track count surveys were conducted in the western portion of the unit while aerial surveys were the type most frequently conducted in the eastern portion (Table 5). The eastern portion of Stairsteps is largely open Everglades marsh adjacent to Shark Slough. This portion of Stairsteps comprises approximately 50,000 acres. Prior to 1985-86 aerial surveys were flown on north-south transects at 2 mile intervals. In 1985, methodology was changed to conform to standards developed by Everglades National Park for systematic reconnaissance flights (SRF). These standards include east-west transects flown at 2 kilometer intervals with the survey area divided into 2-kilometer square cells. This technique provides an opportunity to estimate both density and distribution (Fleming 1984). Figure 4 shows the eastern Stairsteps survey area.

The 1993 annual Stairsteps survey yields deer densities ranging from 1 deer per 86 acres to 1 deer per 566 acres. Deer population estimates were greater than last year but lower than estimates from 1988-91 (Figure 5). There was a slight increase (6%) in the Stairsteps deer harvest from 94 in 1992-93 to 100 in 1993-94. Airboat access into eastern Stairsteps was greatly enhanced by favorable water levels during 1991-94 compared to the 1990-91 season.

HUNTING

Deer and wild hog may be taken during all big game seasons. Since the 1986-87 season, only deer with a minimum antler length of 5 inches were legal game. Wild hogs with a minimum shoulder height of 15 inches were also legal game.

Hunting pressure on BCNP was estimated at 15,910 man-days for Archery, Muzzleloading and General Gun seasons (Table 6). This estimate of pressure was 4% less than the estimate of 16,534 man-days recorded last year, and was less than the previous 5-year average of 18,237. Checked deer harvest (253) was a new record eclipsing the record of 226 in 1992-93. Hog harvest was 10% less than last year (162 vs. 181), and was less than the previous 5-year average of 183.

Hunter success (game checked/man-day = 0.026) remained similar to the prior 3 years (0.025-0.028), and was higher than the average of 0.018 (Table 6). Hunter success through 1989 remained fairly stable (0.015-0.016) except for the 1987-88 season (0.020). The mandatory check of hunters has not directly impacted these calculations because that information was not utilized in estimating man-days of hunting. Hunting pressure was calculated by comparing Saturday vehicle counts with base year surveys. An indirect but potentially significant impact of mandatory check-out is increased compliance with rules requiring that deer and hogs be checked.

Hunter activity and checked harvest has been documented for the last 14 years (Table 6). Hunter pressure appears cyclical with rising pressure from 1980-1984 followed by a dramatic decrease in 1985. Pressure increased through 1988-89 and was followed by a precipitous decline in 1990-91 then an increase in 1991-92 with continued declines in 1992-93 and 1993-94. Dramatic changes in hunter pressure are due in part to major regulatory changes on BCNP. Deer harvest has fluctuated, but has remained fairly stable since the 1987-88 season with record checked harvests being reached in each of the last 3 years. Hog harvest has fluctuated with a gradual increase from 1987-88 which culminated in a record harvest in 1991-92 followed by two years of decline. Historically, declines in

harvest of one species have often been offset by increases in harvest for the other species.

Deer and hog harvest by season compared to the previous 5-year averages are shown in Table 7. The 1993-94 deer harvest was greater than the 5-year averages for archery, muzzleloading, and general gun seasons. The 1993-94 hog harvest during archery season was greater than the 5-year average, however muzzleloading and general gun season hog harvests were less than the 5-year averages. Hunter success ratios for deer and hog were greater than the 5-year average for all hunts except hog harvest success during muzzleloading season.

Deer harvest increased in all units except Bear Island in 1993-94 (Table 8). Hog harvest was less in each unit except Corn Dance and Turner River compared to last season (Table 9). No hogs were taken in Deep Lake Unit for the fourth consecutive year. Deep Lake Unit was closed during Muzzleloading season and was restricted to archery only hunting during General Gun season with vehicle use prohibited.

Hunting pressure increased on Deep Lake, Stairsteps and Loop Units, but was lower overall than the 1992-93 season (Table 10). In general, length of the hunting season and the large land area have created low hunter densities on BCNP. Normally there are between 50 - 500 hunters daily on the entire BCNP, resulting in a hunter density of 450 - 4,600 ha per hunter (Schortemeyer et al. 1991).

Archery Season

Archery season was open September 4 through October 3. This was the fourth year of the 30 day season length. The 1993-94 Archery deer harvest (12) was 40% greater than the prior 5-year average (Table 11) and was the highest during the 5-year period. Deer harvest (83%) was concentrated in the first half of the

season. Hog harvest (20) during archery was 24% greater than the prior 5-year average. Turner River accounted for 42% of the deer harvested (Table 8) and 50% of the hogs taken during archery season (Table 9). Hunting pressure (1890 man-days) was 5% less than the prior 5-year average. Bear Island was the most popular unit during archery season bearing 43% of the total pressure (Table 10). Pressure increased in all units over last year, except Deep Lake and Corn Dance which remained the same. Archery hunter success rate (0.016) was greater in 1993-94 than the previous 5-year average (0.012).

Muzzleloading Season

For the ninth year Muzzleloading season was 16 days long (October 9 through October 24). Muzzleloading season deer harvest (51) was 65% greater than the 5-year average, but hog harvest was 42% less than the previous 5-year average (Table 12). The 1993-94 muzzleloading deer harvest was the highest during the 5-year period. Seventy-six percent of the deer harvest occurred within the first 9 days of the season. Stairsteps accounted for 29% of the deer harvested, while 48% of the hogs harvested came from Turner River Unit. Hunting pressure decreased by 7% when compared to the prior 5-year average. Pressure increased on all areas except Bear Island and Turner River which experienced a decrease compared to the 1992-93 season (Table 10). Muzzleloader success rate (0.036) was slightly greater than the previous 5-year average (0.032).

General Gun Season

The 1993-94 General Gun season was 51 days (November 13 through January 2). Hunter activity and harvest during the General Gun season are summarized in Table 13. Hunter activity was estimated at 12,065 14% less than the prior 5-year

average. Deer harvest (190) was 21% greater than the prior 5-year average while hog harvest (121) was 6% less. The 1993-94 deer harvest was the highest during the 5-year period (Table 8). Stairsteps Unit accounted for 44% of the deer and 40% of the hogs harvested during general gun. Turner River Unit accounted for 29% of the deer harvested.

Between 1980 and 1982 several different methodologies were utilized to estimate hunter pressure. Efforts to measure use were intensified in 1983 and 1984. During these years a consistent effort was made to improve estimates of hunter use by combining check station information, vehicle surveys and other information (Jansen, 1986). Since 1984 hunter use estimates have been standardized. Hunter use in 1993 was calculated by multiplying the 1984 hunter activity (base year) estimate by the ratio of the 1993 vehicle survey to the 1984 vehicle survey (base year). Results of vehicle surveys are summarized in Appendix C. Although vehicle surveys do not directly measure hunter pressure they do provide a good index and therefore the trends over the past 10 years can be analyzed.

Hunting pressure by week of General Gun season over the past 10 years (with the exception of 1988-89) is shown in Figure 6. In general, use is highest during the first 9 days followed by Thanksgiving week. Use levels decline after that until the end of the season. Use levels at the end of the season increase, but generally remain below levels in the first 2 weeks. Levels presented for the first week are actually for the first 2 days only (opening weekend). Remaining weeks cover a full 7-day period, except for 1990-91, 1991-92 and 1992-93 in which week eight is only 2, 3 and 5 days long respectively.

In 1993-94 hunting pressure was greater in each of the first three weeks compared to 1992-93, but generally less in each of the remaining weeks (Figure 6).

Use estimates derived from mandatory check-in and check-out will be presented in a separate report. However, preliminary results from 1993-94 indicate that estimates of hunter pressure based on vehicle surveys are comparable to direct measurements from mandatory hunter check-in/out forms. Three methods are utilized in calculating hunter pressure from mandatory check-in and check-out cards: Calendar Days, Calendar Days with Daylight, and Man-days. Each day is counted as a "Calendar Day" of hunting pressure beginning with the day a hunter checked-in through the eventual date of departure from the management area (checked-out). This would be the most liberal estimate of hunting pressure since obvious non-hunting opportunities (such as late night check-ins) would be counted. "Calendar Day Of Daylight" estimates attempt to address this deficiency and are similar to the Calendar Day computation except that a hunter checking-in with less than 2 hours of hunting daylight (1.5 hours before sunset) or hunting excursions of less than 1 hour will not be credited as hunting for that particular day. It is assumed that the hunter is setting up camp or in the latter case will not have enough time to hunt due to travel time. "Man-day" estimates from hunter check-in/out cards credit a hunter with a man-day of hunting pressure depending on how many hours elapsed between check-in and check-out. If over 50% of the huntable daylight hours were spent in the field then the hunter receives a whole man-day of pressure, otherwise a half man-day. This is the most conservative estimate of pressure and more closely resembles actual hunting activity. None of these methods evaluate noncompliance with the mandatory check-in rule. In 1993-94, the estimate of total hunter pressure

(Archery through General Gun) based on vehicle count surveys (15,910 man-days) was less than the Man-day estimate from check-in cards (19,357 man-days), Calendar Day with Daylight (21,914 man-days) and Calendar Day (23,612 man-days) estimates. The total vehicle count estimate for general gun season (12,065 man-days) was less than the estimate based on Calendar Day with Daylight (15,457), the Man-day estimate (13,897) and the Calendar Day estimate (16,726). The 1993-94 hunter pressure calculated from vehicle counts was less than direct measurements from check-in cards for Archery, Muzzleloading and General Gun season. Traditionally, Saturday vehicle counts are reasonable estimates of hunter pressure when compared to estimates from mandatory check-in and check-out.

WHITE-TAILED DEER DATA

Herd Composition

Harvested deer were aged by tooth wear and eruption when possible (Severinghaus 1949). In 1993-94 no deer were harvested in the fawn age class. The 1.5 year age class constituted 27.8% of the harvest, while the 2.5 year age class accounted for 32.0% (Table 14). Percentage of harvested deer greater than 2.5 years old was 41%. Harvest in the 4.5 (7.7%) and 5.5+ (9.8%) age classes decreased compared to last year (9.9% and 12.8%, respectively). Initial response (1986) to the 5-inch minimum antler requirement was a reduction in the total number of bucks harvested and elimination of the fawn age class from the checked harvest. In subsequent years (1987-1993), older bucks have increased in the harvest while yearlings (1.5 year-olds) have been substantially reduced. As

predicted under the 5-inch minimum antler regulation, age structure has shifted to older age classes for harvested bucks on BCNP.

Deer age structure by unit of harvest is shown in Table 14. Bear Island Unit had the highest portion (47.6%) in the 1.5 year age class. Stairsteps Unit had the highest percentage of deer (42.0%) in the 2.5 year age class, while Loop Unit had the highest portion (72.3) in age classes greater than 2.5. Overall, age structure data indicated moderate recruitment in recent years. Field observations, surveys, and documented harvest have indicated fluctuating recruitment rates over the past 6 years. Deer recruitment surveys were conducted in Stairsteps and Bear Island Units during May 1993. The Stairsteps population consisted of 23% fawns (11 of 48) while the Bear Island population consisted of 26% fawns (12 of 46). Recruitment rate may be affected by spring water levels, with high water levels potentially increasing fawn mortality.

Physical Characteristics

Antler characteristics and dressed weight by age class and unit of harvest are shown in Table 15. Overall, values in 1993-94 are similar to those reported since implementation of the 5-inch antler rule (1986-87). Mean dressed weight of all animals ranged from 73 pounds in 1989 to 67 pounds in 1986 and was measured at 77 pounds in 1993. Antler circumference at 6.5 cm in 1993 was slightly above the range set in previous years (5.6-6.4 cm). In 1993, antler length (22.8 cm) fell within the range set in previous years (18.8-23.3 cm). Mean number of points per deer (4.6) was slightly greater than last year (4.4). Occurrence of spikes by age class and unit of harvest is shown in Table 16. In 1993-94 overall percent spikes by age class was greater in the 1.5 year class (65% vs. 62%), 4.5 year class (7% vs. 0%) and 5 year class (5% vs. 0%) than 1992-93. Forty-five harvested deer were spikes in 1993 which was greater than 1992

(32). Mean dressed weight for male deer was greater in Bear Island than in Stairsteps Unit for 1993-94 (Table 15). However, mean antler beam length and circumference and number of points were slightly greater in the Stairsteps unit compared to Bear Island for 1993-94. Appendix D is a summary of antler and morphologic data from deer harvested on BCNP.

WILD HOG DATA

Whenever possible, biological data was collected from harvested hogs when they were examined at the check station. Parameters normally measured included weight, body length, tail length and shoulder height. Measurements were taken on approximately 1238 of the 1873 hogs checked over the past 11 years.

Mean gutted weights, lengths, and shoulder heights for hogs harvested during the last 11 years are shown in Table 17. Mean body length and shoulder height were the highest on record. Mean dressed weight (77 lbs.) was 20% greater than last year, and 5% greater than the 11-year mean of 73 lbs. Lower harvest levels and a probable harvest shift to older animals may explain the increase in average physical measurements.

Measured physical characteristics of male hogs harvested were greater than those of females in 1993-94 (Table 18). Males outweighed females by 47% or 30 pounds (94 lbs. vs. 64 lbs.). Mean body length of males was 8% greater than females (127 cm vs. 118 cm) while shoulder height was 11% greater (70 cm vs 63 cm). These differences are similar to those observed over the prior 10 years.

In general, Bear Island appears to be better habitat for wild hogs compared to Stairsteps Unit. In the 1993-94 harvest, mean dressed weight of hogs in Bear Island was 62% greater than hogs taken from Stairsteps (Table 19). In addition, mean body length and shoulder height were greater in Bear Island compared to Stairsteps for 1993-94.

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Table 1. Number of acres burned in Big Cypress National Preserve, 1979-1993.

Year	Total Acres	Human Caused	Prescribed	Natural
1979	24,147	21,482	2,642	23
1980	27,717	20,052	7,440	225
1981	217,378	215,037	1,683	658
1982	49,218	44,691	4,527	0
1983	11,474	1,297	9,950	227
1984	23,064	4,013	17,713	1,338
1985	16,595	2,510	8,729	5,356
1986	51,443	32,718	18,355	370
1987	27,998	3,775	21,767	2,456
1988	40,866	23,751	17,031	84
1989	58,080	17,051	40,386	643
1990	73,058	9,913	62,950	645
1991	40,552	1,631	37,993	928
1992	53,590	2,865	50,689	36
1993	45,652	330	45,000	322
TOTALS	760,832	401,116	346,855	13,311
AVG./YR.	50,722	26,741	23,124	887

(Unpublished data from BCNP, March 1994)

Table 2. Population estimates for white-tailed deer on the Big Cypress National Preserve based on spotlight counts, 1988-1993.

Time of Survey	Source	Unit	Number of Surveys	Deer Count High/Average	Calculated Size of Survey Area (acres)	Population Estimate	Density (deer/acre)
1993 Annual	Schortemeyer & Bozzo July 1993	Western Bear Island	2	4/3	19,129	140	1:137
1993 Annual	Schortemeyer & Bozzo July 1993	Eastern Bear Island	2	10/9.5	19,129	163	1:117
1992 Annual	Schortemeyer & Bozzo June 1992	Western Bear Island	2	14/14	19,129	490	1:39
1992 Annual	Schortemeyer & Bozzo June 1992	Eastern Bear Island	3	16/7.3	19,129	262	1:73
1991 Annual	Schortemeyer Manor & Bozzo July 1991	Western Bear Island	3	16/7.7	19,129	736 563	1:26 (a) 1.34 (b)
1991 Annual	Schortemeyer Manor & Bozzo July 1991	Eastern Bear Island	3	11/5.7	19,129	180	1:106
1990 Annual	Schortemeyer & Manor June 1990	Western Bear Island	5	4/2.4	19,129	140	1:137
1990 Annual	Schortemeyer & Manor June 1990	Eastern Bear Island	4	2/1.3	19,129	33	1:584
1989 Annual	McGrady, Manor & Schortemeyer May 1989	Western Bear Island	3	24/11.3	19,129	683	1:28
1989 Annual	McGrady, Manor & Schortemeyer June 1989	Eastern Bear Island	2	11/7	19,129	266	1:72
1988 Annual	McGrady April 1988	Deep Lake	1	8/8	48,356	378	1:128

(a) 3.1 mile transect

(b) 5.0 mile transect

Table 3. Population estimates for white-tailed deer in the Corn Dance Unit of the BCNP, 1980-91.

Time of survey	Method	Source	Size of Unit (Acres)	Population Estimate	Density (deer: acre)	
1991 Annual	Track Counts	McCown 1991	283,791	1253	1:227	
1990 Annual	Track Counts	McCown 1991	283,791	1500	1:189	
1989 Annual	Track Counts	McCown 1989	283,791	1215	1:234	
1988 Annual	Track Counts	McCown 1988	283,791	1412	1:201	
1987 Annual	Track Counts	McCown 1987	283,791	1720	1:165	
1986 Annual	Track Counts	McCown 1986	283,791	1260	1:225	
1985-86 Pre-hunt	Aerial Counts	Schortemeyer 1985	283,791	280-385	1:1013-737	
1985 Annual	Tracks Counts	McCown 1985	283,791	1140	1:249	
1982-83 Post-hunt	Track Counts	Pylant, memo 11 April 1983	270,000	1266-2250	1:213-120	166 av.
1981-82 Post-hunt	Track Counts	Pylant, memo 21 April 1982	270,000	1080-1875	1:250-144	197 av.
1980-81 Post-hunt	Track Counts	Pylant, memo 28 Dec. 1981	300,000	1620	1:185	

10 Track Counts average 1:204 acres

Table 4. Population estimates for white-tailed deer in the Turner River unit (Mullet Slough) of the BNCP, 1988-1992.

Time of Survey	Method	Source	Calculated Size of Survey Area (acres)	Population Estimate	Density (deer:acre)
1992 Annual	Track Counts	Bozzo May 1992 (d)	32,000	269	1:119
1991 Annual	Track Counts	Schortemeyer, Manor & Bozzo May 1991 (c)	32,000	145	1:221
1990 Annual	Track Counts	Schortemeyer & Manor May 1990 (b)	32,000	345	1:93
1989 Annual	Track Counts	McGrady & Manor May 1989 (b)	32,000	300	1:107
1988 Annual	Track Counts	McGrady April 1988 (a)	32,000	58	1:549

- a) Track counts conducted off Cypress Lane, two replications.
b) Track counts conducted off Cypress Lane, three replications.
c) Track counts conducted off Cypress Lane, three replications.
d) Track counts conducted off Cypress Lane, three replications.

Table 5. Population estimates for white-tailed deer in the Stairsteps unit (eastern portion) of the BCNP, 1977-93.

Time of Survey	Method	Source	Calculated size of unit (acres)	Population Estimate	Density (deer:acre)	
1993 Annual June (1 of 2)	SRF Aerial Counts	Schortemeyer and Bozzo	50,000	58-234	1:214-86	150
1993 Annual June (2 of 2)	SRF Aerial Counts	Schortemeyer and Bozzo	50,000	88-221	1:566-226	396
1992 Annual June (1 of 2)	SRF Aerial Counts	Schortemeyer and Bozzo	50,000	145-362	1:345-138	242
1992 Annual June (2 of 2)	SRF Aerial Counts	Schortemeyer and Bozzo	50,000	32-79	1:1586-636	111
1991 Annual June (1 of 2)	SRF Aerial Counts	Manor and Bozzo	50,000	280-560	1:180-90	135
1991 Annual June (2 of 2)	SRF Aerial Counts	Manor and Bozzo	50,000	280-560	1:180-90	135
1990 Annual	SRF Aerial Counts	Schortemeyer and Manor	50,000	200-442	1:227-113	170
1989 Annual	SRF Aerial Counts	Schortemeyer and McGrady	50,000	602-1220	1:83-41	52
1988 Annual	SRF Aerial Counts	Schortemeyer and McGrady	50,000	485-980	1:103-51	57
1987 Annual (1 of 2)	SRF Aerial Counts	Schortemeyer and Ramsey	50,000	38-76	1:1322-661	993

Table 5. continued

Time of Survey	Method	Source	Calculated size of unit (acres)	Population Estimate	Density (deer:acre)
1987 Annual (2 of 2)	SRF Aerial Counts	Schortemeyer and Ramsey	50,000	19-38	1:2643-1322
1986-87 Post-hunt	SRF Aerial Counts	Schortemeyer and Ramsey	50,000	250-500	1:200-100
1986-87 Pre-hunt (2 of 2)	SRF Aerial Counts	Schortemeyer and Ramsey	50,000	330-660	1:152-76
1986-87 Post-hunt (1 of 2)	SRF Aerial Counts	Schortemeyer and Ramsey	50,000	280-560	1:180-90
1985-86 Post-hunt	SRF Aerial Counts	Schortemeyer and Ramsey	50,000	240-480	1:210-105
1985-86 Pre-hunt	SRF Aerial Counts	Schortemeyer and Ramsey	50,000	410-820	1:120-60
1984-85 Pre-hunt	Aerial Counts	Schortemeyer 1984	50,000	316-633	1:158-79
1984 Post Production (2 of 2)	Aerial Counts	Schortemeyer 1984	50,000	117-220	1:427-227
1984 Post Production (1 of 2)	Aerial Counts	Schortemeyer 1984	50,000	70-132	1:714-379
1982-83 Post-hunt	Aerial Counts	Pylant, memo, 11 April 1983	50,000	379-543	1:132-92
1982-83 Pre-hunt	Aerial Counts	Pylant, memo, 30 Sept. 1982	50,000	833-1190	1:60-42
1981-82 Post-hunt	Track Counts	Pylant, memo, 21 April 1982	50,000	171	1:135

Table 6. Big Cypress National Preserve deer harvest, hog harvest and hunting pressure, 1980-94.

Year	No. of Man-days	No. of deer Harvested	No. of hogs Harvested	Hunter Success (a)
1980-81	14,240	103	81	0.013
1981-82	16,539	104	44	0.009
1982-83	18,625	145	141	0.015
1983-84	23,015	140	201	0.015
1984-85	24,360	205	195	0.016
1985-86	17,195	156	111	0.016
1986-87	17,290	127	153	0.016
1987-88	17,525	208	138	0.020
1988-89	21,567	185	144	0.015
1989-90	21,660	186	154	0.016
1990-91	14,340	182	180	0.025
1991-92	17,083	216	254	0.028
1992-93	16,534	226	181	0.025
1993-94	15,910	253	162	0.026

(a) Hunter Success = (deer and hog harvest)/man-days of hunting.

Table 7. Big Cypress National Preserve deer and hog harvest, and hunter success ratio by season.

DEER				
SEASON	No. Harvested		Hunter Succ. Ratio (a)	
	1993-94	Prior 5 yr. avg.	1993-94	Prior 5 yr. avg.
Archery	12	8.6	0.006	0.004
Muzzleloader	51	31.8	0.026	0.015
General Gun	190	156.4	0.016	0.011
HOG				
Archery	20	16.1	0.011	0.008
Muzzleloader	21	36.2	0.011	0.017
General Gun	121	128.8	0.010	0.009

(a) Success ratio = no. of animals harvested/no. of man-days.

Table 8. Six-year comparison of documented deer harvest on the Big Cypress National Preserve, 1988-1994.

	NUMBER OF DEER HARVESTED						
	88-89	89-90	90-91	91-92	92-93	93-94	
<u>ARCHERY</u>							
Bear Island	2	6	2	6	9	4	
Deep Lake	0	1	-	-	0	0	
Corn Dance	0	0	0	2	0	0	
Turner River	0	1	1	0	1	5	
Stairsteps	2	0	1	0	0	2	
Loop	1	2	2	2	0	1	
Total	5	10	6	10	10	12	
<u>MUZZLELOADING</u>							
Bear Island	11	6	9	9	15	9	
Deep Lake	0	0	-	-	-	-	
Corn Dance	1	0	6	7	1	8	
Turner River	4	7	7	9	11	9	
Stairsteps	7	5	8	8	2	15	
Loop	4	6	7	4	5	10	
Total	27	24	37	37	34	51	58
<u>GENERAL GUN</u>							
Bear Island	27	26	28	23	26	21	
Deep Lake	3	3	1	0	0	1	
Corn Dance	6	14	22	14	11	19	
Turner River	15	20	26	41	42	56	
Stairsteps	95-98	67	46	79	92	83	
Loop	7	22	16	12	11	8	
Total	153	152	139	169	182	190	
<u>COMBINED</u>							
Bear Island	40	38	39	38	50	34	
Deep Lake	3	4	1	0	0	1	
Corn Dance	7	14	28	23	12	27	
Turner River	19	28	34	50	54	72	
Stairsteps	104	72	55	87	94	100	
Loop	12	30	25	18	16	19	
Total	185	186	182	216	226	253	

Table 9. Six-year comparison of documented hog harvest on the Big Cypress National Preserve, 1988-1994.

	NUMBER OF HOGS HARVESTED					
	88-89	89-90	90-91	91-92	92-93	93-94
<u>ARCHERY</u>						
Bear Island	3	11	9	12	4	1
Deep Lake	0	1	-	0	0	-
Corn Dance	0	1	0	1	0	1
Turner River	1	0	1	5	9	10
Stairsteps	0	2	1	1	0	6
Loop	0	4	2	5	2	2
Total	4	19	13	24	15	20
<u>MUZZLELOADING</u>						
Bear Island	11	13	17	20	2	0
Deep Lake	0	1	-	-	-	-
Corn Dance	0	0	0	6	0	3
Turner River	7	7	6	20	19	10
Stairsteps	7	9	3	10	0	4
Loop	2	2	7	9	3	4
Total	27	32	33	65	24	21
<u>GENERAL GUN</u>						
Bear Island	37	33	57	26	22	16
Deep Lake	0	0	0	0	0	0
Corn Dance	3	4	12	18	8	10
Turner River	6	13	21	43	32	41
Stairsteps	56	42	30	67	69	48
Loop	11	11	14	11	11	6
Total	113	103	134	165	142	121
<u>COMBINED</u>						
Bear Island	51	57	83	58	28	17
Deep Lake	0	2	0	0	0	0
Corn Dance	3	5	12	25	8	14
Turner River	14	20	28	68	60	61
Stairsteps	63	53	34	78	69	58
Loop	13	17	23	25	16	12
Total	144	154	180	254	181	162

Table 10. Six-year comparison of documented hunter pressure on the Big Cypress National Preserve, 1988-1994.

	HUNTER PRESSURE (MAN-DAYS)					
	88-89	89-90	90-91	91-92	92-93	93-94
<u>ARCHERY</u>						
Bear Island	518	490	565	595	675	810
Deep Lake	99	20	-	-	10	10
Corn Dance	241	275	245	195	260	260
Turner River	296	280	350	445	285	365
Stairsteps	438	575	365	440	205	335
Loop	170	95	135	170	60	110
Total	1762	1735	1660	1845	1495	1890
<u>MUZZLELOADING</u>						
Bear Island	847	555	540	570	590	520
Deep Lake	100	40	-	-	-	-
Corn Dance	385	290	265	265	265	295
Turner River	511	370	265	570	735	530
Stairsteps	746	630	405	480	395	470
Loop	156	125	150	145	100	140
Total	2745	2010	1625	2030	2085	1955
<u>GENERAL GUN</u>						
Bear Island	4855	4095	2520	2538	2571	2175
Deep Lake	380	515	80	108	89	100
Corn Dance	1651	2035	1495	1591	1689	1415
Turner River	3724	3950	3775	4044	4107	3415
Stairsteps	5435	6080	2345	4078	3880	4270
Loop	1015	1240	840	849	618	690
Total	17060	17915	11055	13208	12954	12065
<u>COMBINED</u>						
Bear Island	6220	5140	3625	3703	3836	3505
Deep Lake	579	575	80	108	99	110
Corn Dance	2277	2600	2005	2051	2214	1970
Turner River	4531	4600	4390	5059	5127	4310
Stairsteps	6619	7285	3115	4998	4480	5075
Loop	1341	1460	1125	1164	778	940
Total	21567	21660	14340	17083	16534	15910

Table 11. Archery season harvest summary Big Cypress National Preserve, 1993-94.

WEEK	DEER		HOG		HUNTER ACTIVITY (man-days)	
1993-94 dates	1993-94	Prior 5 yr. avg.	1993-94	Prior 5 yr. avg.	1993-94	Prior 5 yr. avg.
1 (9-4 to 9-5)	2	2.8	1	4.6	635	552
2 (9-6 to 9-12)	5	3.0	7	5.2	445	376
3 (9-13 to 9-19)	3	1.0	2	2.2	270	370
4 (9-20 to 9-26)	1	0.8	4	1.4	280	275
5 (9-27 to 10-3)*	1	1.0	6	2.7	260	210
TOTAL	12	8.6	20	16.1	1890	1993

*Five-week season began in 1990-91.

Table 12. Muzzleloader season harvest summary Big Cypress National Preserve, 1993-94.

WEEK	DEER		HOG		HUNTER ACTIVITY (man-days)	
1993-94 dates	1993-94	Prior 5 yr. avg.	1993-94	Prior 5 yr. avg.	1993-94	Prior 5 yr. avg.
1 (10- 9 to 10-10)	19	11.0	1	13.0	795	891
2 (10-11 to 10-17)	20	13.4	12	16.4	545	656
3 (10-18 to 10-24)	12	7.4	8	6.8	615	552
TOTAL	51	31.8	21	36.2	1955	2099

Table 13. General Gun season harvest summary, Big Cypress National Preserve, 1993-94.

WEEK		DEER		HOG		HUNTER ACTIVITY (man-days)	
1993-94 dates		1993-94	Prior 5 yr. avg.	1993-94	Prior 5 yr. avg.	1993-94	Prior 5 yr. avg.
1	(11-13 to 11-14)	46	37.4	25	28.0	2200	2462
2	(11-15 to 11-21)	47	45.0	31	32.4	2465	2549
3	(11-22 to 11-28)	20	17.8	17	18.4	2180	1710
4	(11-29 to 12-05)	18	13.2	13	15.2	1410	1445
5	(12-6 to 12-12)	23	14.6	8	11.6	1310	2056
6	(12-13 to 12-19)	11	10.0	5	9.2	1190	1277
7	(12-20 to 12-26)	10	12.6	9	8.8	440	1593
8	(12-27 to 01-02)	15	5.8	13	5.2	870	951
TOTAL		190	156.4	121	128.8	12065	14043

Table 14. Age structure of male white-tailed deer harvested on the Big Cypress National Preserve by unit of harvest, 1993-94.

AGE CLASS	BEAR ISLAND		TURNER RIVER		LOOP		STAIRSTEPS		CORN DANCE		ALL UNITS COMBINED	
	#	%	#	%	#	%	#	%	#	%	#	%
1.5	10	47.6	13	33.3	4	22.2	22	25.0	5	18.5	54	27.8
2.5	4	19.0	11	28.2	1	5.5	37	42.0	9	33.3	62	32.0
3.5	4	19.0	9	23.1	7	38.9	17	19.3	6	22.2	44*	22.7
4.5	1	4.8	4	10.3	3	16.7	5	5.7	2	7.4	15	7.7
5.5+	2	9.6	2	5.1	3	16.7	7	8.0	5	18.6	19	9.8
Sample Size	21		39		18		88		27		194	

* Includes one deer harvested from Deep Lake Unit aged 3.5 years

Table 15. Weight and antler characteristics of male deer harvested during 1993-94, Big Cypress National Preserve.

AGE CLASS	SAMPLE SIZE BY UNIT						MEAN DRESSED WEIGHT (LBS.)					
	I ¹	III	IV	V	VI	ALL	I	III	IV	V	VI	ALL
1.5	6	5	4	12	3	30	68	70	76	73	74	72
2.5	1	2	1	18	2	24	80	75	80	74	72	74
3.5	4	4	7	6	1	23	79	90	87	78	65	83 ²
4.5	1	2	2	4	1	10	115	83	82	83	75	85
5.5+	2	0	1	4	2	9	93	-	72	77	75	80
TOTAL	14	13	15	44	9	96	79	79	82	75	73	77

AGE CLASS	MEAN ANTLER MAIN BEAM CIRCUMFERENCE (cm)						MEAN ANTLER MAIN BEAM LENGTH (cm)					
	I	III	IV	V	VI	ALL	I	III	IV	V	VI	ALL
1.5	5.0	5.0	4.9	5.4	5.3	5.2	16.4	14.8	16.0	15.1	15.4	15.4
2.5	5.3	5.9	6.0	6.0	6.4	6.0	22.2	22.3	-	20.9	22.2	21.4
3.5	5.5	6.8	7.9	7.2	6.4	7.0	23.7	26.5	28.0	24.3	24.5	25.3
4.5	-	8.1	7.4	7.3	9.8	7.8	-	37.7	29.2	26.8	27.8	30.8
5.5+	8.0	8.8	9.1	9.0	8.2	8.7	35.5	36.4	32.3	30.0	33.4	32.5
TOTAL	5.5	6.3	7.4	6.5	6.7	6.5	21.4	23.4	27.5	21.6	23.8	22.8

AGE CLASS	MEAN NUMBER OF POINTS					
	I	III	IV	V	VI	ALL
1.5	3.4	2.5	2.0	2.6	2.6	2.7
2.5	3.5	4.8	3.0	4.3	4.9	4.4
3.5	4.0	6.3	6.6	5.2	4.8	5.5
4.5	-	7.8	5.7	4.8	7.0	6.1
5.5+	6.0	7.5	7.7	5.9	6.0	6.4
TOTAL	3.8	4.8	5.6	4.3	4.8	4.6

¹Units: I = Bear Island, III = Turner River, IV = Loop, V = Stairsteps, VI = Corn Dance

²Includes one 3.5 yr old deer harvested from Deep Lake Unit

Table 16. Number of spikes, percent spikes and average main beam length of adult deer harvested on the Big Cypress National Preserve, 1993-94.

AGE CLASS	NUMBER OF SPIKES						% SPIKES IN AGE CLASS						MAIN BEAM LENGTH OF SPIKES (inches)			
	I(a)	III	IV	V	VI	ALL	I	III	IV	V	VI	ALL	0-1	1-3	3-5	>5
1.5	3	8	3	11	3	28	30.0	61.5	75.0	50.0	60.0	65.1	-	1	7	20
2.5	2	2	0	8	1	13	50.0	18.2	-	21.6	11.1	22.0	-	-	1	12
3.5	1	0	0	0	1	2	25.0	-	-	-	16.7	4.9	-	-	-	2
4.5	-	-	-	1	-	1	-	-	-	20.0	-	7.1	-	-	-	1
5.5+	-	-	-	1	-	1	-	-	-	14.3	-	5.2	-	-	1	-

(a) Units: I = Bear Island, III = Turner River, IV = Loop, V = Stairsteps, VI = Corn Dance.

Table 17. Physical characteristics of wild hogs harvested on the Big Cypress National Preserve, 1983-94.

YEAR	SAMPLE SIZE	MEAN DRESSED WEIGHT (lbs.)	MEAN BODY LENGTH (cm.)(a)	MEAN SHOULDER HEIGHT (cm.)
1983-84	126	71(20-198)	114(42-170)	59(15-90)
1984-85	119	71(18-350)	116(77-164)	61(40-90)
1985-86	67	75(18-175)	116(54-152)	64(28-90)
1986-87	75	70(20-155)	115(78-155)	63(36-88)
1987-88	101	71(16-245)	115(75-166)	62(39-98)
1988-89	108	83(20-238)	120(68-158)	63(22-85)
1989-90	110	66(25-180)	117(85-171)	61(45-87)
1990-91	134	77(25-165)	118(71-160)	63(18-90)
1991-92	158	78(25-235)	120(47-170)	64(27-90)
1992-93	147	64(15-182)	104(59-159)	57(34-89)
1993-94	93	77(25-220)	123(58-161)	66(44-94)

(a) Body length does not include tail

Table 18. Comparison by sex of physical characteristics of wild hogs harvested on Big Cypress National Preserve, 1983-94.

YEAR	SEX	SAMPLE SIZE	MEAN DRESSED WEIGHT (lbs.)	MEAN BODY LENGTH (cm.)	MEAN SHOULDER HEIGHT (cm.)
1983-84	F	52	58(22-145)	113(42-170)	55(16-76)
	M	74	81(20-198)	115(47-149)	61(19-90)
1984-85	F	64	62(18-150)	113(77-142)	58(40-74)
	M	55	82(18-350)	120(78-164)	65(41-90)
1985-86	F	29	61(20-125)	115(57-146)	62(28-75)
	M	38	85(18-175)	117(54-152)	65(31-90)
1986-87	F	40	59(20-150)	111(78-145)	60(36-79)
	M	35	83(20-155)	118(78-155)	66(40-88)
1987-88	F	45	53(16-101)	109(75-145)	57(39-74)
	M	56	85(22-245)	120(87-166)	66(42-98)
1988-89	F	45	67(20-156)	116(68-144)	60(22-80)
	M	62	93(30-238)	122(84-158)	65(42-85)
1989-90	F	54	59(25-150)	115(85-171)	59(46-80)
	M	56	73(25-180)	118(88-162)	62(45-87)
1990-91	F	58	65(25-145)	114(71-139)	60(18-85)
	M	76	85(25-165)	122(84-160)	66(18-90)
1991-92	F	69	65(25-200)	114(79-147)	61(43-88)
	M	89	88(25-235)	124(47-170)	66(27-90)
1992-93	F	34	69(15-140)	117(59-149)	62(39-80)
	M	83	84(20-182)	124(79-159)	68(34-89)
1993-94	F	52	64(25-115)	118(80-157)	63(44-94)
	M	41	94(27-220)	127(58-161)	70(51-88)

Table 19. Comparison of wild hogs harvested on the Big Cypress National Preserve in the Stairsteps and Bear Island units, 1983-94.

Year	Unit	Sample size	Mean Dressed weight (lbs)	Mean body length (cm.)	Mean shoulder height (cm.)
1983-84	Bear Island	70	77 (24-198)	115 (47-170)	61 (19-90)
	Stairsteps	38	61 (20-135)	110 (42-144)	55 (24-72)
1984-85	Bear Island	49	74 (20-350)	115 (81-164)	61 (42-90)
	Stairsteps	44	62 (18-136)	113 (77-148)	59 (40-82)
1985-86	Bear Island	21	92 (50-155)	121 (100-143)	68 (59-90)
	Stairsteps	23	55 (18-145)	111 (76-141)	61 (40-82)
1986-87	Bear Island	22	71 (20-150)	113 (78-136)	65 (36-88)
	Stairsteps	31	80 (30-155)	119 (78-155)	65 (46-83)
1987-88	Bear Island	35	80 (25-245)	118 (96-166)	69 (48-98)
	Stairsteps	39	60 (16-151)	110 (75-140)	57 (39-76)
1988-89	Bear Island	47	97 (30-238)	122 (84-158)	69 (47-85)
	Stairsteps	37	73 (32-150)	118 (90-153)	60 (42-80)
1989-90	Bear Island	49	69 (30-180)	118 (85-162)	62 (47-87)
	Stairsteps	31	67 (25-160)	115 (88-147)	61 (47-80)
1990-91	Bear Island	70	76 (30-165)	116 (71-154)	64 (22-88)
	Stairsteps	22	69 (25-140)	118 (86-142)	64 (43-79)
1991-92	Bear Island	47	84 (35-235)	122 (79-170)	67 (46-90)
	Stairsteps	50	79 (26-155)	123 (80-147)	65 (27-88)
1992-93	Bear Island	24	103 (45-182)	130 (94-159)	71 (34-88)
	Stairsteps	49	70 (20-145)	117 (79-150)	64 (48-83)
1993-94	Bear Island	12	110 (45-220)	134 (95-161)	75 (57-88)
	Stairsteps	36	68 (25-140)	121 (80-157)	64 (44-94)

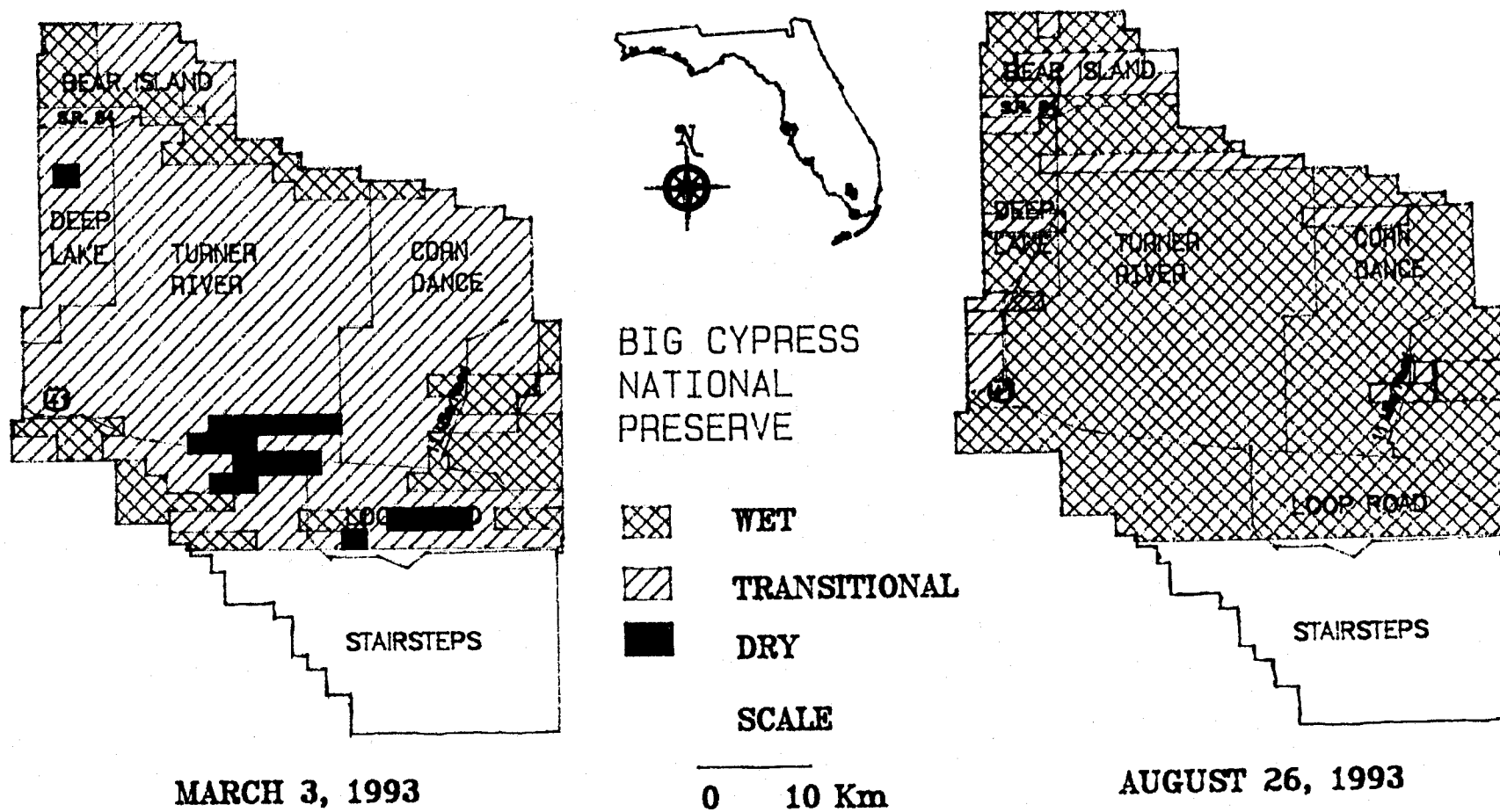


Figure 1. Comparison of dry and wet season hydropatterns on the Big Cypress National Preserve, 1993.

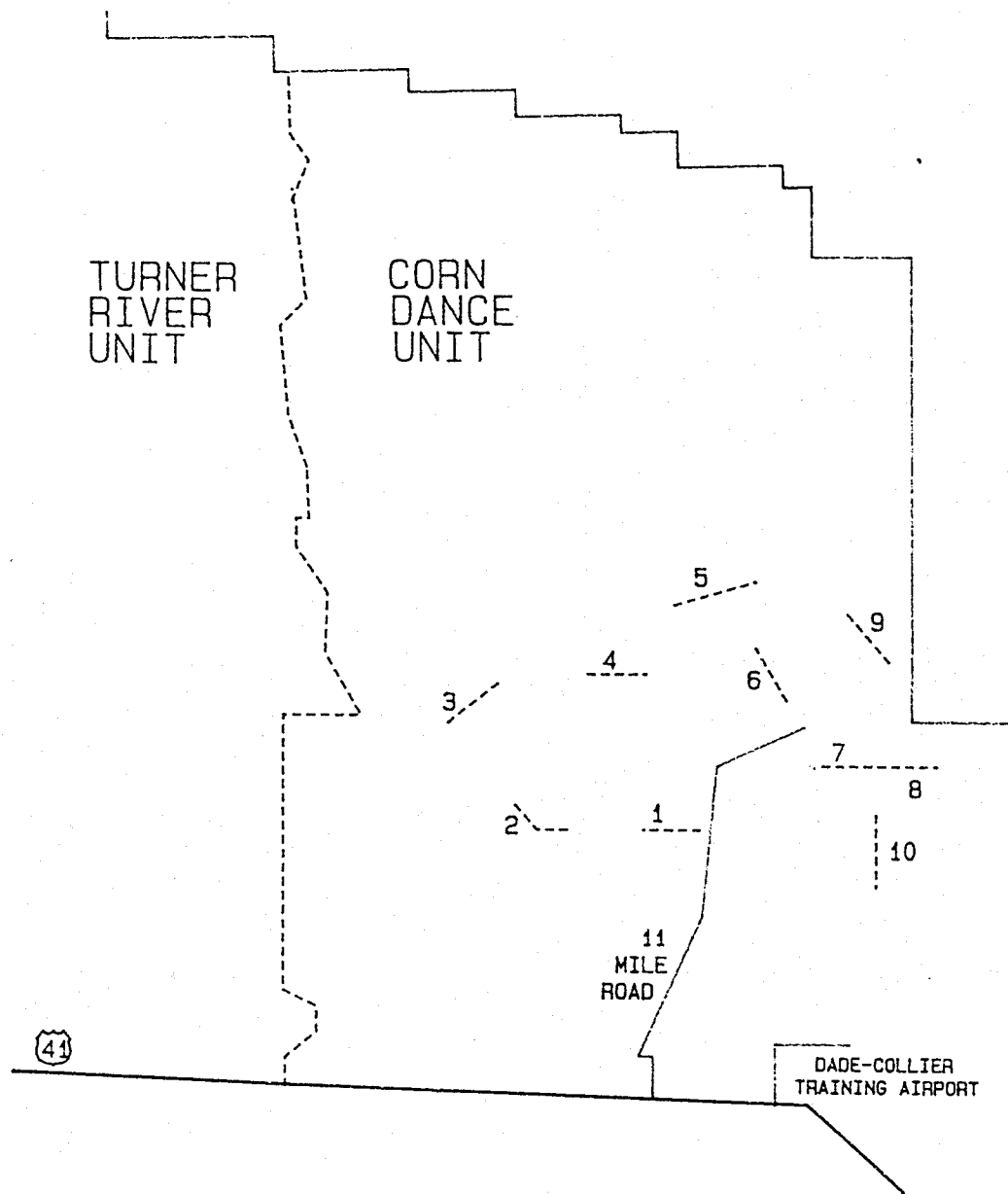


Figure 2. Deer track survey transects. Corn Dance Unit, Big Cypress National Preserve, 1985-1991.

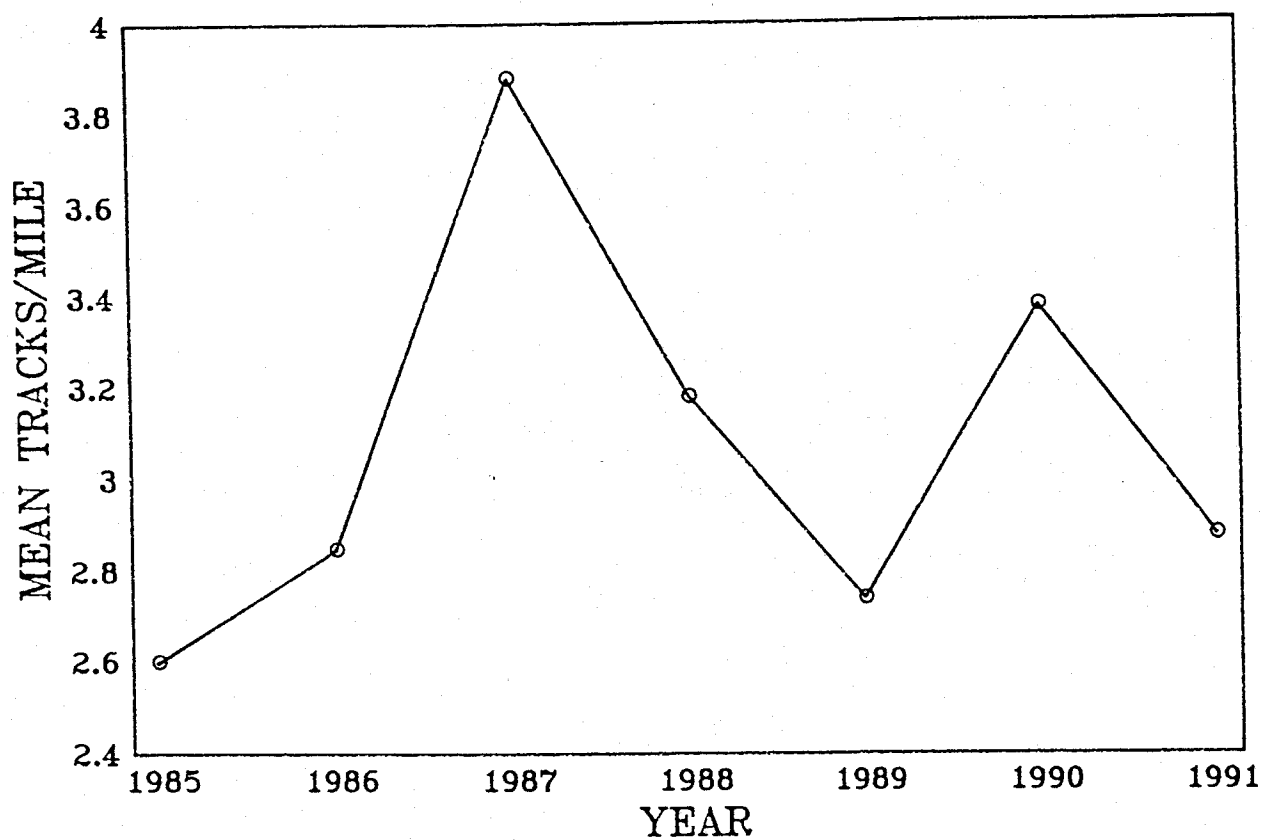


Figure 3. Mean number of deer tracks per one mile transect in the Corn Dance Unit, Big Cypress National Preserve, 1985-1991.

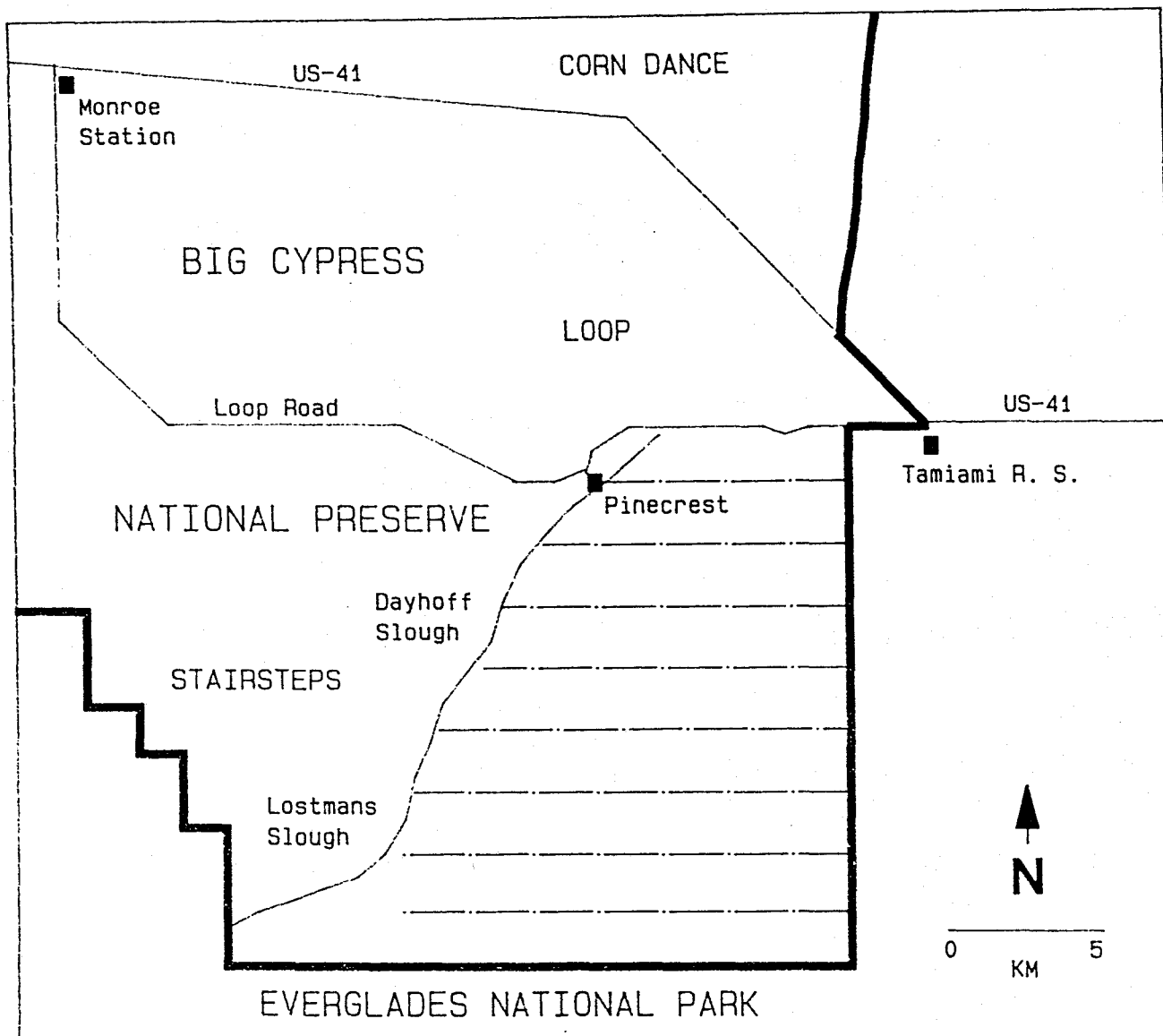


Figure 4. Survey transects and general survey area for aerial deer census, eastern Stairsteps Unit, BCNP, 1985-1993.

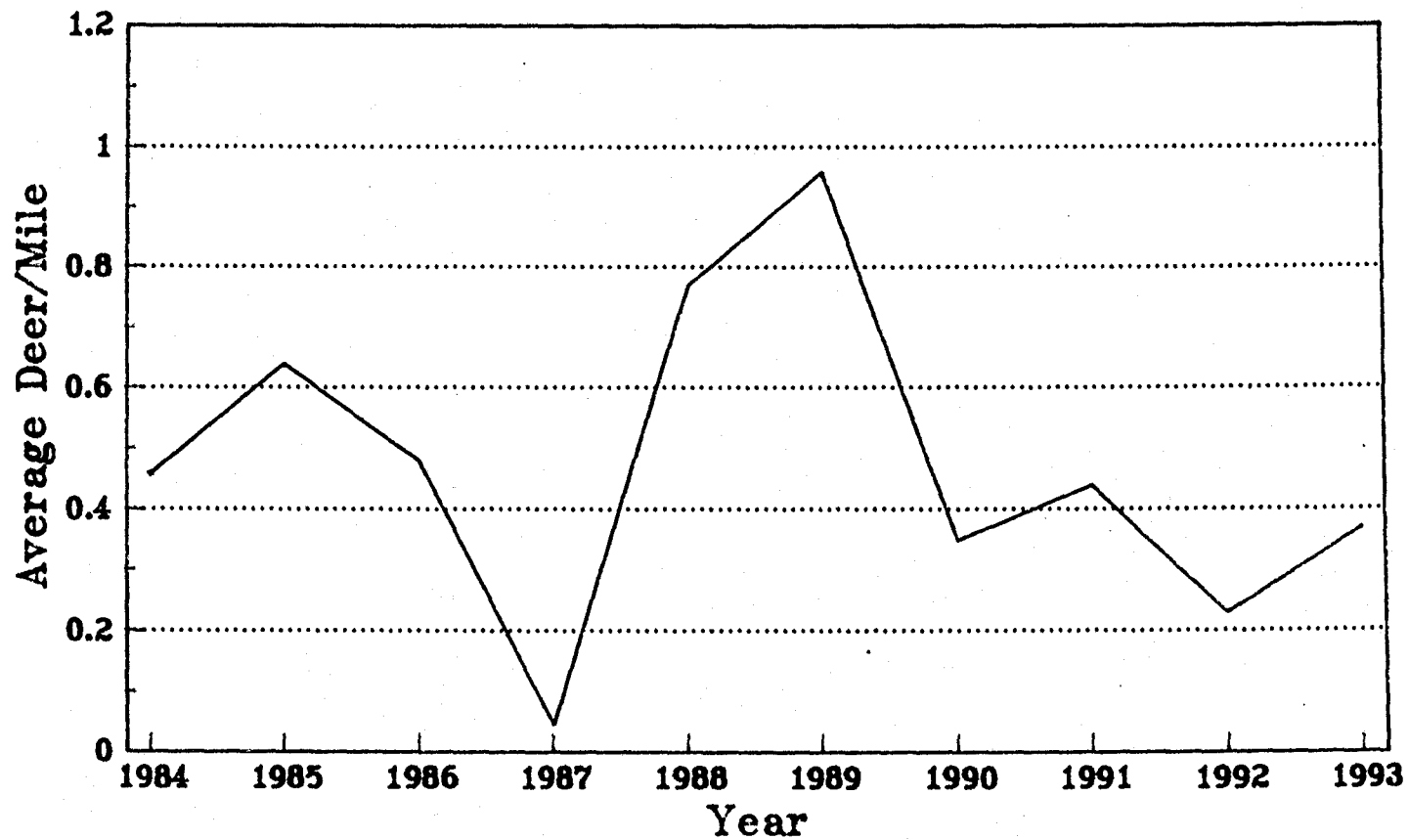


Figure 5. Average number of deer observed per mile in the eastern Stairsteps Unit, BCNP, 1984-1993.

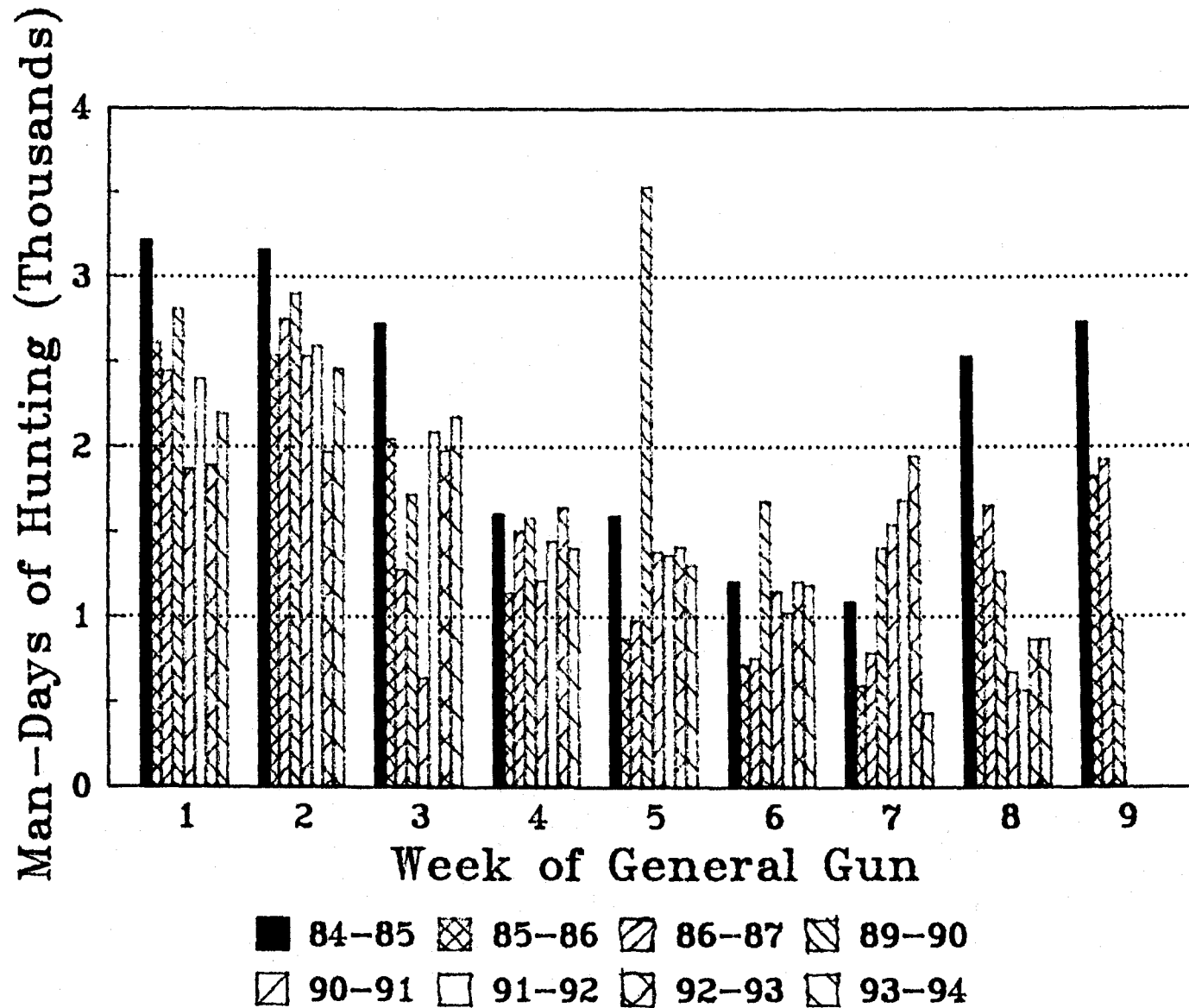


Figure 6. General Gun season hunting pressure by week, Big Cypress National Preserve, 1984-1994.

Appendix A. Big Cypress Wildlife Management Area Regulations, 1993-94.

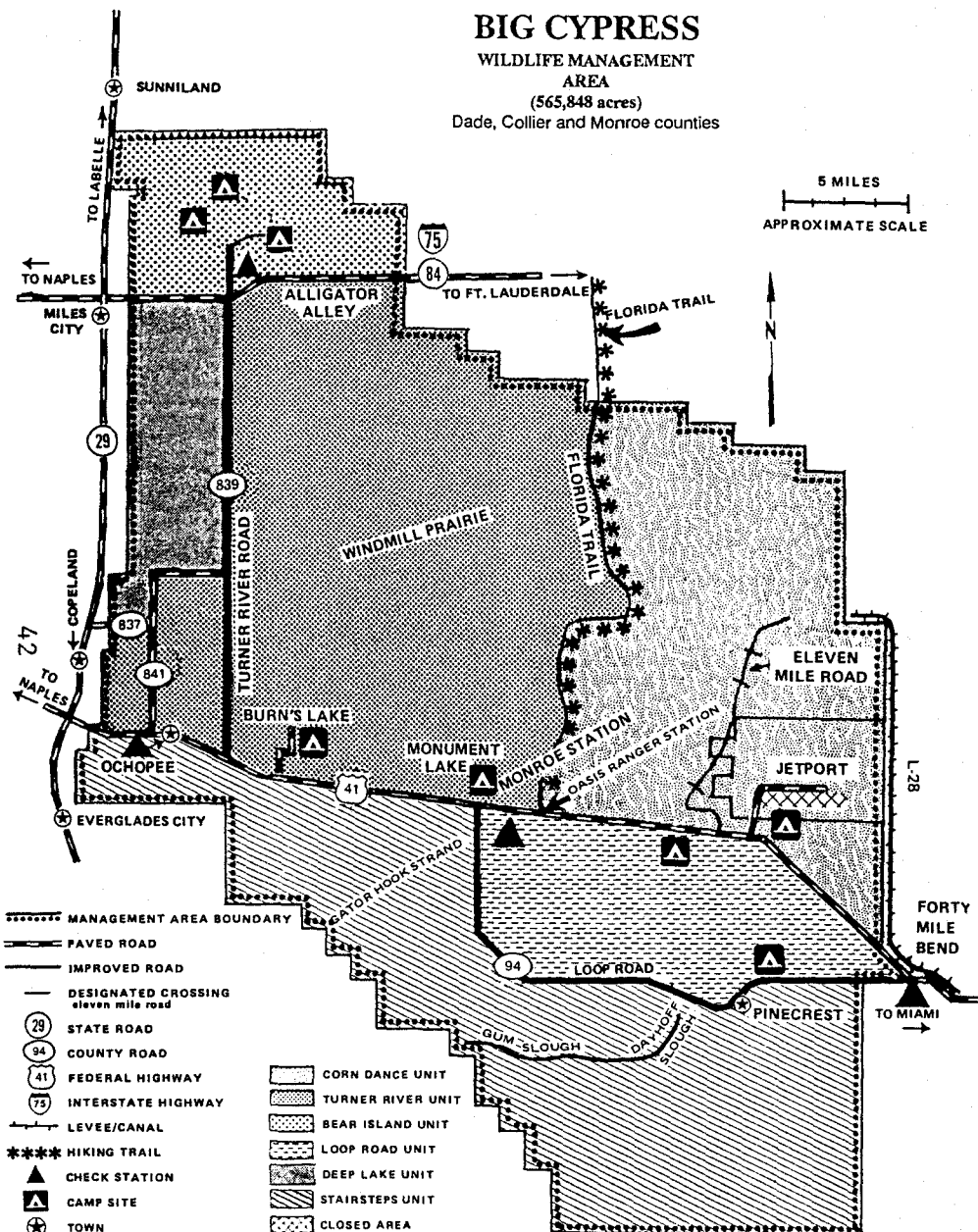
BIG CYPRESS

WILDLIFE MANAGEMENT
AREA

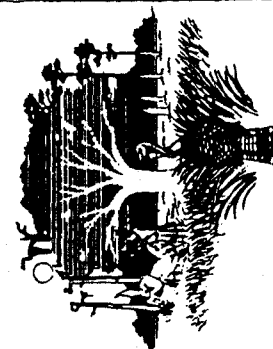
(565,848 acres)

Dade, Collier and Monroe counties

5 MILES
APPROXIMATE SCALE



BIG CYPRESS WILDLIFE MANAGEMENT AREA 1993-94 REGULATIONS SUMMARY AND AREA MAP



A COOPERATIVE PUBLIC WILDLIFE
AND RECREATIONAL AREA
BIG CYPRESS NATIONAL PRESERVE
NATIONAL PARK SERVICE
FLORIDA GAME AND FRESH WATER
FISH COMMISSION
An Equal Opportunity Agency

This brochure is designed to provide the public with information and a summary of regulations pertaining to hunting and other recreational use on the Big Cypress Wildlife Management Area. To make it easier to learn about regulation changes on this area, regulations that are new or differ substantially from last year are shown in bold print. Area users still should familiarize themselves with all regulations for the area. For the exact wording of the wildlife laws and regulations, see Florida Game and Fresh Water Fish Commission's wildlife code on file with the Secretary of State and state libraries. This brochure and the quota hunt application form should provide the information necessary for you to plan your hunting activities. For information pertaining to hunting on private lands and trapping, consult the current Florida Hunting Handbook and Guidelines for the Taking of Furbearing Animals in Florida. These publications are available from any Commission office as well as county tax collectors and their subagents.

PERMIT, STAMP AND LICENSE INFORMATION:

Persons utilizing the wildlife management areas are required to have appropriate licenses, stamps and permits for hunting and/or fishing. Florida residents who are 65 years of age or older and residents certified totally and permanently disabled may obtain exemption certificates for most licenses, stamps and permits from the county tax collector. Hunters under age 16 and Florida residents in the U.S. Armed Forces, not stationed in Florida and home on leave with orders in possession are exempt from most permit, stamp and license requirements on this area.

Unless exempted, each hunter on this wildlife management area must have the following in his possession and display them upon request of any Commission employee.

1. Hunting License: Florida hunting licenses may be purchased from offices of county tax collectors or their subagents. Information on the categories and costs of hunting licenses is available in the Florida Hunting Handbook.
2. Wildlife Management Area Stamp: This \$25.00 stamp may be purchased from county tax collectors or their subagents.
3. Quota Permits: A no-cost regular quota hunt permit is required to hunt on the Bear Island, Stairsteps, Loop Road, Corn Dance, Turner River and Deep Lake units of this wildlife management area November 13 through 21, November 22 through 28 and December 25 through January 2 of the general gun season. A no-cost special quota hunt permit is required to hunt on the Bear Island Unit from October 9 through 17 of the muzzleloading gun season.

A daily hunt permit (available at the check station) is required for hunting each day during non-quota periods of general gun and muzzleloading gun seasons on the Bear Island Unit (no exemptions). There are 200 daily hunt permits available on a first-come, first-served basis at the check station.

Regular quota permits are available in the following numbers by management unit: Bear Island 200, Stairsteps 1,000, Deep Lake 200, Corn Dance 300, Turner River 500 and Loop Road 250. There are 200 special quota permits available for the muzzleloading gun hunt in the Bear Island Unit.

Regular and special quota hunt permit applications are available from county tax collectors or their subagents on or about June 1. To apply for either permit, obtain a regular or special quota hunt application and follow the printed instructions.

Transfer of Permits: Quota hunt and antlerless deer permits are transferable, except that any exempt permit is transferable only to another exempt person. The sale or purchase of any quota permit or antlerless deer permit is prohibited.

4. Archery Stamp: This \$5.00 stamp is required when hunting during any archery season outside of the South Zone general gun season dates. This stamp may be purchased from county tax collectors or their subagents.

5. Muzzleloading Gun Stamp: This \$5.00 stamp is required when hunting during the muzzleloading gun season. This stamp is available from county tax collectors or their subagents.

6. Wild Turkey Stamp: This \$5.00 stamp is required if hunting turkeys and may be purchased from county tax collectors or their subagents.

7. State Waterfowl Stamp: This \$3.00 stamp is required while hunting ducks and may be purchased from county tax collectors or their subagents.

8. Federal Duck Stamp: Any hunter 16 years of age or older must possess a federal duck stamp while hunting ducks. This \$15.00 stamp is available at post offices.

9. National Park Service Off-Road Vehicle Registration Permit: Any vehicle used off roads on the Big Cypress Wildlife Management Area shall have a National Park Service registration. This includes any 4-wheel-drive vehicle having a current license plate. The National Park Service off-road vehicle registration permit is available at the Oasis Ranger Station. Call for more information: (813) 695-4111 or (813) 695-2000.

BAG AND POSSESSION LIMITS:

1. Deer, wild hogs and bearded turkeys—Daily limit 1, season limit 2 for each game species (all hunts combined).
2. Gray squirrel, quail or rabbit—Daily limit 12, possession limit 24, for each game species.
3. Raccoon, opossum, armadillo, beaver, coyote, skunk and nutria—No bag limit.
4. Migratory game birds—See Migratory Game Bird Hunting Regulations pamphlet.

GENERAL WILDLIFE MANAGEMENT AREA REGULATIONS:

In addition to the regulations which follow, all general laws and regulations relating to wild animal life or freshwater aquatic life shall apply unless specifically excepted for this wildlife management area. Hunting or the taking of wildlife or fish on this area shall be allowed only during the open seasons and in the manner set forth herein.

1. Driving a metal object into any tree or hunting from a tree into which a metal object has been driven is prohibited.
2. It is illegal to cut or damage cattle fences.
3. Wild hogs may not be transported alive.

Appendix A. Continued.

4. Fires are permitted only on designated camping areas or in back country campsites and must be completely extinguished prior to the user leaving the campsite.

5. It is unlawful for any person to leave any garbage or refuse or in any way litter in the management area.

6. Hunters using the Bear Island Unit shall enter and exit ONLY through the designated entry point at the north end of Turner River Road.

7. Entering any fenced area within the Jetport area is prohibited.

8. The wanton or willful waste of wildlife is prohibited.

9. The removal of any plant is prohibited.

10. The head and evidence of sex may not be removed from the carcass of any deer on the area. Portions of the carcass may be removed immediately prior to cooking.

11. No person shall release any wildlife on this wildlife management area.

12. It is illegal to hunt over bait or place any bait or other food for wildlife on this wildlife management area.

13. Taking fox is prohibited.

14. Taking fox squirrel is prohibited.

15. Taking any turkey while it is on the roost is prohibited.

16. Killing swimming deer is prohibited.

17. Taking or attempting to take game with the aid of live decoys, traps, snares, nets, drugs, lights or recorded game calls is prohibited.

18. Any person hunting deer or accompanying another person hunting deer shall wear at least 500 square inches of daylight fluorescent orange material above the waistline as an outer garment. This is not required when hunting during an archery-only season.

19. Deer and turkey may be dismembered in the field or camp, but each portion shall have a tag affixed to it identifying the name, address and hunting license number of the person who killed it; the date and location at which it was taken; and shall be readily traceable to the portion of the animal bearing the sex identification.

GUNS OR DOGS:

20. The use or possession of a loaded firearm while under the influence of alcoholic beverages, chemical substances or controlled substances is prohibited (F.S. 790.151).

21. Hunting with gun and light is prohibited.

22. Hunting wildlife or the display or use of a gun in a manner capable of taking wildlife on or from the rights-of-way of County Roads 837, 839, 841, State Roads 84, 94, U.S. 41 and Burns Road is prohibited.

23. The use of guns other than muzzleloading guns or bow and arrow in the Deep Lake Unit is prohibited.

24. Authorized hunting equipment or dogs may be taken onto the area after 8 a.m. one day before the opening of the hunt and shall be removed from the area before 6 p.m. one day after the hunt.

25. For taking non-migratory game, only shotguns, rifles, pistols, longbows (including compound and recurved bows), crossbows (during the general gun hunt only) or birds of prey may be used.

26. For hunting deer, muzzleloading guns firing a single bullet must be at least .40 caliber; those firing two or more balls must be 20 gauge or larger.

27. Hunting deer with full-jacketed bullets or any rifle cartridge is prohibited.

28. Fully automatic firearms, silencer-equipped firearms, centerfire semi-automatic rifles having a magazine capable of holding more than five rounds, explosive or drug-injecting devices and setguns are prohibited.

29. Guns or dogs are allowed only during periods in which their use for hunting is allowed.

30. Children under the age of 16 may not be in possession of a firearm unless in the presence of a supervising adult.

31. The possession of any firearm containing shells or cartridges or any capped or primed muzzleloading gun is prohibited at campsites or check stations. The discharge of firearms is prohibited on, from or across any campsite or check station.

32. Hunting deer or hogs with dogs is prohibited. All dogs are prohibited in the Loop Road and Deep Lake units. The possession of dogs customarily used for hunting (other than bird dogs and waterfowl retrievers) is prohibited during any period.

33. No person shall allow any dog to pursue or molest wildlife during any period in which hunting with dogs is prohibited.

34. No person shall possess any dog during any period in which the taking of wildlife by the use of dogs is prohibited, except that dogs not normally used for hunting and kept under restraint may be possessed.

VEHICLES:

NOTICE: You are strongly encouraged to contact the Big Cypress National Preserve office, Star Route, Box 110, HCR 61, Ochopee, FL 33943 (813) 695-2000 regarding vehicle use regulations prior to your use of the preserve.

35. All vehicles, including airboats, used off roads shall have a National Park Service off-road vehicle registration permit. See Permit, Stamp and License Requirements for more information.

36. Vehicles shall not be parked in such a manner as to obstruct roads, gates, trails or firelanes.

37. Vehicle access or use for the purposes of hunting, fishing or frogging is prohibited except by all-terrain vehicles with 3 or more rubber tires, the front tire(s) of which shall be at least 7 inches wide and the rear tires of which must be at least 9 inches wide and other vehicles with three or more rubber tires of nine-inch minimum width. Airboats are permitted except in the Bear Island, Deep Lake and Loop Road units. Vehicles are prohibited on Loop Road and Deep Lake units. In management units other than Deep Lake and Loop Road Units vehicles shall not be operated off designated roads and trails or outside designated vehicle access areas; however, if vehicle access trails or areas have not been designated, vehicles may be operated throughout the unit.

38. All airboats used for taking wildlife, frogs or fish or for other recreational use must fly an orange flag at least 10 inches wide by 12 inches long at least 10 feet above the bottom of the vessel.

39. Only vehicles equipped with pneumatic tires may be operated on Jetport Road. Parking on the paved portion of Jetport Road is prohibited.

40. Vehicular use by the public on Eleven-Mile Road or the Florida Trail is prohibited. Vehicles may cross Eleven-Mile Road at designated and marked points only. Maps showing the location of crossings over Eleven-Mile Road are available at the Oasis Ranger Station.

41. No motor vehicle shall be operated on any part of the wildlife management area designated and posted as "CLOSED" because of inclement weather, poor road conditions, construction, management activities or wildlife surveys.

CAMPING:

42. Camping on the Bear Island Unit is permitted only at designated campsites by the use of tents, trailers or self-propelled camping vehicles. Camping is permitted on designated campsites on other units. Primitive camping is not limited to designated campsites except on Bear Island.

CHECK STATIONS:

43. Hunters shall check in and out at a designated check station when entering the area and check out at the same check station when exiting the area. A check station pass, issued at the check station, shall be retained in possession while hunting.

44. All game taken must be checked and tagged at a check station prior to removal from the area. It is important that as much of the animal as possible remains intact and that it be brought to the check station as soon as possible. Important biological data are obtained from the following animals or animal parts: deer (head, heart, kidney, liver), hog (head), turkey (wings and tail). If the animal is processed in the field, the above items should be brought to the check station along with the meat. Deer jawbones shall be saved and brought to the check station.

45. No person shall enter or exit the area north of I-75 by any route except via the north end of Turner River Road through the Bear Island check station or at other designated entry points along I-75.

SEARCH:

46. A wildlife officer may search any camp, vehicle or boat when he reasonably believes a violation has been committed.

ARCHERY:

September 4 through October 3, in all units and November 13 through January 2 in the Deep Lake Unit only.

Permit, Stamp and License Requirements—Hunting license, wildlife management area stamp, archery stamp (not required November 13–January 2 in Deep Lake Unit). State and federal waterfowl stamps (if hunting ducks). Quota hunt permits (see no. 3 under Permit, Stamp and License Information).

Legal to Take—Deer with one or more antlers at least five inches in length visible above the hairline, wild hogs with a shoulder height of 15 inches or more, gray squirrel, quail, rabbit, opossum, raccoon, beaver, coyote, armadillo, skunk and nutria.

Regulations Unique to the Archery Hunt: In addition to these regulations, all General Wildlife Management Area Regulations shall apply.

1. Possession of firearms or crossbows is prohibited, except that during the early duck season shotguns are permitted for duck hunting on all units except Bear Island and Deep Lake.

2. The transportation of archery equipment on airboats is prohibited.

MUZZLELOADING GUN:

October 9 through 24, except in the Deep Lake Unit.

Permit, Stamp and License Requirements—Hunting license, wildlife management area stamp, muzzleloading gun stamp, and special quota permit (if hunting on the Bear Island Unit during the first 9 days), daily permit (after first 9 days in Bear Island Unit).

Legal to Take—Deer with one or more antlers at least five inches in length visible above the hairline, wild hogs with a shoulder height of 15 inches or more, gray squirrel, quail, rabbit, opossum, raccoon, beaver, coyote, armadillo, skunk and nutria.

Regulations Unique to the Muzzleloading Gun Hunt: In addition to these regulations, all General Wildlife Management Area Regulations shall apply.

1. Only muzzleloading guns are allowed.

2. The transportation of muzzleloading equipment on airboats is prohibited.

GENERAL GUN:

November 13 through January 2, except in the Deep Lake Unit.

Permit, Stamp and License Requirements—Hunting license, wildlife management area stamp, regular quota hunt permit (if hunting during designated quota periods, see Permit, Stamp and License Information), daily hunt permit required on Bear Island Unit if hunting during non-quota periods, state and federal waterfowl stamps (if hunting ducks) and wild turkey stamp (if hunting turkeys).

Legal to Take—Deer with one or more antlers at least five inches in length visible above the hairline, wild hogs with a shoulder height of 15 inches or more, gray squirrel, quail, rabbit, opossum, raccoon, beaver, coyote, armadillo, skunk, nutria. Bearded turkeys or gobblers may be taken only on the Corn Dance, Turner River and Loop Road units.

Regulations Unique to the General Gun Hunt: All General Wildlife Management Area Regulations shall apply and bird dogs and retrievers are permitted except in Loop Road and Deep Lake units.

SMALL GAME:

January 3 through February 9.

Permit, Stamp and License Requirements—Hunting license, wildlife management area stamp. State and federal waterfowl stamps (if hunting ducks).

Legal to Take—Gray squirrel, quail, rabbit, opossum, raccoon, beaver, coyote, armadillo, skunk and nutria.

Regulations Unique to the Small Game Hunt: In addition to these regulations, all General Wildlife Management Area Regulations shall apply.

1. The possession of centerfire rifles is prohibited.

2. The use of guns other than muzzleloading guns or bow and arrow in the Deep Lake unit is prohibited.

3. Bird dogs and waterfowl retrievers are permitted, except in the Loop Road and Deep Lake units.

SPRING TURKEY:

March 12 through April 17.

Permit, Stamp and License Requirements—Hunting license, wildlife management area stamp and wild turkey stamp.

Legal to Take—Bearded turkeys or gobblers.

Regulations Unique to the Spring Turkey Hunt: In addition to these regulations, all General Wildlife Management Area Regulations shall apply.

1. Legal shooting hours are one-half hour before sunrise until 1 p.m.

2. The use of guns other than muzzleloading guns or bow and arrow in the Deep Lake unit is prohibited.

3. No person shall possess any dog provided that dogs not normally used for hunting and kept under restraint may be possessed.

MIGRATORY GAME BIRDS:

Mourning doves, white-winged doves, snipe, ducks, coots, woodcock and crows may be hunted during seasons established for these species which

coincide with the muzzleloading gun, general gun and small game hunts. Ducks may also be taken during the early duck season (except in the Bear Island and Deep Lake units).

Permit, Stamp and License Requirements—Hunting license, wildlife management area stamp. State and federal waterfowl stamps (if hunting ducks). Quota permit if hunting during any designated quota period.

Legal to Take: See Migratory Game Bird Hunting Regulations pamphlet.

Regulations Unique to Migratory Game Birds: See Migratory Game Bird Hunting Regulations pamphlet. In addition to these regulations, all wildlife management area regulations contained in this pamphlet shall apply and the use of lead shot for taking ducks and coots is prohibited.

FISHING AND FROGGING:

Permitted throughout the year.

NATIONAL PARK SERVICE REGULATIONS:

This area is a national preserve. All of these Big Cypress National Preserve regulations shall apply. For further information, contact the Big Cypress National Preserve Office, Star Route, Box 110, HCR 61 Ochopee, Florida 33943, (813) 695-2000.

1. Any person hunting or accompanying another person hunting any game during the muzzleloading and general gun season shall wear at least 500 square inches of daylight fluorescent orange material above the waistline as an outer garment. This is not required when hunting waterfowl or turkey or during an archery only season or in an archery only unit. Turkey hunters are required to wear fluorescent orange to and from the blind during general gun season.

2. Any open container of an alcoholic beverage is prohibited in or on all motor vehicles, including off-road vehicles.

3. Loaded weapons cannot be carried in/on a motor vehicle, including off-road vehicles. Weapons in a vehicle must be packed, cased or stored, not available for ready use.

4. Weapons cannot be discharged from a motor vehicle, including off-road vehicles. A weapon may, however, be discharged from an airboat when the vessel is not under power and is stopped.

5. All private property owners in the preserve are required to obtain a burning permit from the National Park Service prior to conducting any burn on their property. Permits can be obtained by calling (813) 695-4111 between 8 a.m. and 4:30 p.m. daily.

6. Constructing a building or other structure is prohibited.

7. Vehicles are prohibited on the Florida Trail.

8. The preserve is closed to the viewing of wildlife with an artificial light. Frogging is permitted.

GENERAL INFORMATION:

1. Small tracts of private property are located within the boundary of the wildlife management area. These lands may be posted against trespass and should not be considered as part of the wildlife management area.

2. It is unlawful for any person born on or after June 1, 1975 to take wild animal life with the use of a bow or firearm in this state without having first successfully completed a Commission-approved hunter safety course.

3. If you have any questions about this material, please call the Game and Fresh Water Fish Commission at (407) 640-6100 ((800) 955-8771 (TDD)).

COOPERATION REQUESTED:

Please do not discharge firearms at anything other than legal game while in a wildlife management area. Target practice and random discharge of firearms have become increasing threats to the quality of the hunting experience.

PLEASE DO NOT LITTER. TAKE TRASH OUT WITH YOU.

In recent years, unauthorized and uncontrolled fires have caused severe damage to area wildlife and wildlife habitats. Controlled fires are beneficial only when they are of the proper size and location, and when area conditions are suitable. UNCONTROLLED FIRES DO NOT BENEFIT WILDLIFE. Please use caution with campfires, smoking materials and vehicles to prevent damage to wildlife habitats.

The U.S. Department of the Interior prohibits discrimination on the basis of race, color, national origin, age, sex or handicap. If you believe that you have been discriminated against in any program, activity or facility as described above, or if you desire further information, please write to: The Office for Human Resources, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.

The project described in this publication is part of a program funded by federal dollars under the Wildlife Restoration Act. Federal funds pay \$1,950,543, or 61 percent of the cost of the program.

Appendix B. Deer survey data, Big Cypress National Preserve,
1984-1993.

Table A. Number of deer tracks observed by transect, Monument/Corn Dance
Unit, 1985-91.

SURVEY DATE	TRANSECT NUMBER	DAY							TOTAL	MEAN
		1	2	3	4	5	6	7		
June 1991	1	6	3	2	5				16	4.0
	2	6	7	2	5				20	5.0
	3	0	1	0	0				1	0.3
	4	5	1	3	2				11	2.8
	5	4	2	1	8				15	3.8
	6	8	5	2	2				17	4.3
	7	2	2	0	1				5	1.3
	8	0	1	1	1				3	0.8
	9	1	3	1	8				13	3.3
	10	3	6	2	3				14	3.5
									---	---
									115	2.9
May 1990	1	3	4	4	6	6	5		28	4.7
	2	5	7	6	3	5	1		27	4.5
	3	3	3	4	1	1	3		15	2.5
	4	2	1	2	4	2	3		14	2.3
	5	3	4	4	2	2	2		17	2.8
	6	3	3	2	5	4	2		19	3.2
	7	5	2	3	3	5	3		21	3.5
	8	1	3	1	7	3	4		19	3.2
	9	1	4	4	7	5	1		22	3.7
	10	3	3	3	4	4	4		21	3.5
									---	---
									203	3.4
May 1989	1	7	4	1	4	3	-		19	3.8
	2	7	2	2	3	0	-		14	2.8
	3	5	3	2	3	3	-		16	3.2
	4	4	3	3	5	3	-		18	3.6
	5	2	4	2	2	2	-		12	2.4
	6	3	2	1	4	6	-		16	3.2
	7	4	2	3	0	2	-		11	2.2
	8	3	2	0	1	2	-		8	1.6
	9	3	3	1	2	0	-		9	1.8
	10	3	3	2	3	3	-		14	2.8
									---	---
									137	2.7

Appendix B., Table A. continued

SURVEY DATE	TRANSECT NUMBER	DAY							TOTAL	MEAN
		1	2	3	4	5	6	7		
May 1986	1	5	5	7	4	-	-		21	5.3
	2	3	3	5	6	-	-		17	4.3
	3	4	1	1	3	-	-		9	2.3
	4	3	3	4	0	-	-		10	2.5
	5	4	6	7	3	-	-		20	5.0
	6	2	2	1	2	0	3		10	1.7
	7	3	0	4	4	3	4		18	3.0
	8	2	3	3	0	3	4		15	2.5
	9	2	2	2	1	3	4		14	2.3
	10	3	7	4	3	3	5		25	6.3
									---	---
									159	3.2
May 1987	1	2	2	0	3	13	7		27	4.5
	2	0	10	7	8	7	5		37	6.2
	3	2	11	6	4	6	6		35	5.8
	4	2	6	9	5	12	3		37	6.2
	5	5	8	4	3	6	6		32	5.3
	6	4	0	2	1	8	4		19	3.2
	7	1	1	0	1	3	0		6	1.0
	8	0	2	2	2	3	3		12	2.0
	9	3	2	3	3	1	0		12	2.0
	10	1	1	3	1	6	4		16	2.7
									---	---
									233	3.9
May 1986	1	1	3	3	0	3	4	3	17	2.4
	2	4	7	7	5	5	1	3	32	4.6
	3	3	0	1	1	3	4	4	16	2.3
	4	2	1	3	1	1	4	2	14	2.0
	5	2	3	3	5	3	4	7	27	3.9
	6	4	4	4	5	2	5	3	27	3.9
	7	1	6	3	6	2	3	1	22	3.1
	8	1	3	3	2	2	0	2	13	1.9
	9	2	2	4	5	1	3	2	19	2.7
	10	1	1	0	3	3	1	3	12	1.7
									---	---
									199	2.9

Appendix B., Table A. continued

SURVEY DATE	TRANSECT NUMBER	DAY							TOTAL	MEAN
		1	2	3	4	5	6	7		
May 1985	1	2	1	4					7	2.3
	2	4	3	2					9	3.0
	3	1	2	3					6	2.0
	4	2	1	1					4	1.3
	5	2	0	1					3	1.0
	6	8	6	7					21	7.0
	7	2	4	3					9	3.0
	8	4	1	1					6	2.0
	9	0	2	2					4	1.3
	10	3	1	4					8	2.7
									77	2.6

Appendix B. continued

adults and fawns?

Table B. Number of deer observed per mile during aerial surveys of the eastern Stairsteps unit, 1984-93.

Survey	Transect #	Left Observer	Right Observer	Total Deer	Average deer/mile
Pre-hunt	1	0	10	10	1.03
Aug. 1984	2	0	3	3	0.31
	3	1	2	3	0.31
	4	0	2	2	0.21
				-----	-----
				18	0.46 (a)
Pre-hunt	1 (55)	0	1	1	0.16
Aug. 1985	2	3	2	5	0.81
	3	0	2	2	0.27
	4	6	9	15	1.72
	5	3	0	3	0.30
	6	1	4	5	0.51
	7	4	2	6	0.54
	8 (62)	1	3	4	0.36
				-----	-----
				41	0.64 (b)
Post-hunt	1 (55)	0	0	0	0.00
Feb. 1986	2	0	1	1	0.16
	3	2	1	3	0.40
	4	4	4	8	0.92
	5	2	2	4	0.40
	6	2	3	5	0.51
	7	0	0	0	0.00
	8 (62)	1	2	3	0.27
				-----	-----
				24	0.38 (c)
Pre-hunt	1 (55)	0	0	0	0.00
Aug. 1986	2	0	1	1	0.16
(1 of 2)	3	0	7	7	0.95
	4	2	5	7	0.80
	5	2	0	2	0.20
	6	2	0	2	0.20
	7	0	3	3	0.27
	8 (62)	3	3	6	0.54
				-----	-----
				28	0.44 (d)

Appendix B., Table B. continued

Survey	Transect #	Left Observer	Right Observer	Total Deer	Average deer/mile
Pre-hunt Aug. 1986	1 (55)	0	1	1	0.16
	2	2	0	2	0.32
	4	7	9	16	1.83
	5	0	3	3	0.30
	6	0	2	2	0.20
	7	1	1	2	0.18
	8 (62)	3	4	7	0.63
				-----	-----
				33	0.52 (e)
Post-hunt Feb. 1987	1 (55)	0	0	0	0.00
	2	0	0	0	0.00
	3	0	0	0	0.00
	4	4	3	7	0.80
	5	4	0	4	0.40
	6	3	2	5	0.51
	7	3	0	3	0.27
	8 (62)	6	0	6	0.54
				-----	-----
				25	0.39 (f)
Annual May, 1987 (1 of 2)	1 (55)	0	0	0	0.00
	2	2	0	2	0.32
	3	0	0	0	0.00
	4	0	1	1	0.11
	5	0	0	0	0.00
	6	0	0	0	0.00
	7	0	0	0	0.00
	8 (62)	0	1	1	0.09
				-----	-----
				4	0.06 (g)
Annual May, 1987 (2 of 2)	1 (55)	0	0	0	0.00
	2	0	0	0	0.00
	3	0	0	0	0.00
	4	1	0	1	0.11
	5	0	0	0	0.00
	6	1	0	1	0.10
	7	0	0	0	0.00
	8 (62)	0	0	0	0.00
				-----	-----
				2	0.03 (h)

Appendix B., Table B. continued

Survey	Transect #	Left Observer	Right Observer	Total Deer	Average deer/mile
Annual May 1988	1 (55)	0	1	1	0.22
	2	3	0	3	0.42
	3	0	0	0	0.00
	4	8	4	12	1.45
	5	3	2	5	0.59
	6	4	0	4	0.41
	7	10	4	14	1.35
	8 (62)	6	6	12	1.16
				51	0.77 (i)
Annual June 1989	1 (55)	0	9	9	1.96
	2	5	0	5	0.70
	3	2	3	5	0.67
	4	9	13	22	2.66
	5	3	2	5	0.59
	6	0	2	2	0.20
	7	2	0	2	0.19
	8 (62)	10	4	14	1.35
				64	0.96 (j)
Annual June 1990	1 (55)	1	0	1	0.20
	2	3	0	3	0.41
	3	0	3	3	0.38
	4	6	4	10	1.24
	5	0	3	3	0.37
	6	2	1	3	0.32
	7	0	0	0	0.00
	8 (62)	0	0	0	0.00
				23	0.35 (k)
Annual June 1991 (1 of 2)	1 (55)	0	2	2	0.40
	2	2	1	3	0.41
	3	0	0	0	0.00
	4	4	6	10	1.24
	5	0	1	1	0.12
	6	2	3	5	0.54
	7	1	0	1	0.10
	8 (62)	3	4	7	0.71
				29	0.44 (l)

Appendix B., Table B. continued

Survey	Transect #	Left Observer	Right Observer	Total Deer	Average deer/mile
Annual	1 (55)	0	0	0	0.00
June 1991	2	0	1	1	0.14
(2 of 2)	3	1	1	2	0.26
	4	6	2	8	0.99
	5	0	1	1	0.12
	6	5	2	7	0.75
	7	2	3	5	0.51
	8 (62)	3	2	5	0.51
				-----	-----
				29	0.44 (l)
Annual	1 (55)	0	0	0	0.00
June 1992	2	2	7	9	1.24
(1 of 2)	3	0	2	2	0.26
	4	0	1	1	0.12
	5	0	1	1	0.12
	6	2	2	4	0.21
	7	0	0	0	0.00
	8 (62)	0	0	0	0.00
				-----	-----
				15	0.23 (m)
Annual	1 (55)	0	0	0	0.00
June 1992	2	0	1	1	0.14
(2 of 2)	3	0	0	0	0.00
	4	0	1	1	0.12
	5	1	0	1	0.12
	6	0	0	0	0.00
	7	0	0	0	0.00
	8 (62)	0	0	0	0.00
				-----	-----
				3	0.05 (n)
Annual	1 (55)	0	1	1	0.20
June 1993	2	0	0	0	0.00
(1 of 2)	3	0	2	2	0.25
	4	6	0	6	0.75
	5	0	10	10	1.21
	6	0	3	3	0.33
	7	0	0	0	0.00
	8 (62)	0	2	2	0.22
				-----	-----
				24	0.37 (o)

Appendix B.. Table B. continued

Survey	Transect #	Left Observer	Right Observer	Total Deer	Average deer/mile
Annual	1 (55)	0	0	0	0.00
June 1993	2	0	0	0	0.00
(2 of 2)	3	1	0	1	0.12
	4	1	0	1	0.12
	5	1	5	6	0.72
	6	0	0	0	0.00
	7	0	0	0	0.00
	8 (62)	1	0	1	0.11
				9	0.14 (p)

(a) Density estimates based on 10% area coverage:

1. 100% of animals observed: .46 deer/72.7 acres x 1/1.00 = 1 deer/158 acres.
2. 50% of animals observed: .46 deer/72.7 acres x 1/.50 = 1 deer/79 acres.
3. 40% of animals observed: .46 deer/72.7 acres x 1/.40 = 1 deer/63 acres.

(b) Density estimates based on 10% area coverage:

1. 100% of animals observed: .64 deer/79.3 acres x 1/1.00 = 1 deer/124 acres.
2. 50% of animals observed: .64 deer/79.3 acres x 1/.50 = 1 deer/62 acres.
3. 40% of animals observed: .64 deer/79.3 acres x 1/.40 = 1 deer/50 acres.

(c) Density estimates based on 10% area coverage:

1. 100% of animals observed: .38 deer/79.3 acres x 1/1.00 = 1 deer/209 acres.
2. 50% of animals observed: .38 deer/79.3 acres x 1/.50 = 1 deer/104 acres.
3. 40% of animals observed: .38 deer/79.3 acres x 1/.40 = 1 deer/83 acres.

(d) Density estimates based on 10% area coverage:

1. 100% of animals observed: .44 deer/79.3 acres x 1/1.00 = 1 deer/180 acres.
2. 50% of animals observed: .44 deer/79.3 acres x 1/.50 = 1 deer/90 acres.
3. 40% of animals observed: .44 deer/79.3 acres x 1/.40 = 1 deer/72 acres.

Appendix B., Table B. continued

(e) Density estimates based on 10% area coverage:

1. 100% of animals observed: $.52 \text{ deer}/79.3 \text{ acres} \times 1/1.00$
1 deer/152 acres.
2. 50% of animals observed: $.52 \text{ deer}/79.3 \text{ acres} \times 1/.50 =$
1 deer/76 acres.
3. 40% of animals observed: $.72 \text{ deer}/79.3 \text{ acres} \times 1/.40 =$
1 deer/61 acres.

(f) Density estimates based on 10% area coverage:

1. 100% of animals observed: $.39 \text{ deer}/79.3 \text{ acres} \times 1/1.00$
1 deer/200 acres.
2. 50% of animals observed: $.39 \text{ deer}/79.3 \text{ acres} \times 1/.50 =$
1 deer/100 acres.
3. 40% of animals observed: $.39 \text{ deer}/79.3 \text{ acres} \times 1/.40 =$
1 deer/80 acres.

(g) Density estimates based on 10% area coverage:

1. 100% of animals observed: $0.06 \text{ deer}/79.3 \text{ acres} \times 1/1.00$
1 deer/1,322 acres.
2. 50% of animals observed: $.06 \text{ deer}/79.3 \text{ acres} \times 1/.50 =$
1 deer/661 acres.
3. 40% of animals observed: $.06 \text{ deer}/79.3 \text{ acres} \times 1/.40 =$
1 deer/529 acres.

(h) Density estimates based on 10% area coverage:

1. 100% of animals observed: $0.03 \text{ deer}/79.3 \text{ acres} \times 1/1.00$
1 deer/2,643 acres.
2. 50% of animals observed: $0.03 \text{ deer}/79.3 \text{ acres} \times 1/.50 =$
1 deer/1,322 acres.
3. 40% of animals observed: $0.03 \text{ deer}/79.3 \text{ acres} \times 1/.40 =$
1 deer/1,057 acres.

(i) Density estimates based on 10% area coverage:

1. 100% of animals observed: $0.77 \text{ deer}/79.3 \text{ acres} \times 1/1.00$
1 deer/103 acres.
2. 50% of animals observed: $0.77 \text{ deer}/79.3 \text{ acres} \times 1/.50 =$
1 deer/51 acres.
3. 40% of animals observed: $0.77 \text{ deer}/79.3 \text{ acres} \times 1/.40 =$
1 deer/41 acres.

(j) Density estimates based on 10% area coverage:

1. 100% of animals observed: $0.96 \text{ deer}/79.3 \text{ acres} \times 1/1.00$
1 deer/83 acres.
2. 50% of animals observed: $0.96 \text{ deer}/79.3 \text{ acres} \times 1/.50 =$
1 deer/41 acres.
3. 40% of animals observed: $0.96 \text{ deer}/79.3 \text{ acres} \times 1/.40 =$
1 deer/33 acres.

Appendix B., Table B. continued

(k) Density estimates based on 10% area coverage:

1. 100% of animals observed: $0.35 \text{ deer}/79.3 \text{ acres} \times 1/1.00 = 1 \text{ deer}/227 \text{ acres}.$
2. 50% of animals observed: $0.35 \text{ deer}/79.3 \text{ acres} \times 1/.50 = 1 \text{ deer}/113 \text{ acres}.$
3. 40% of animals observed: $0.35 \text{ deer}/79.3 \text{ acres} \times 1/.40 = 1 \text{ deer}/91 \text{ acres}.$

(l) Density estimates based on 10% area coverage:

1. 100% of animals observed: $0.44 \text{ deer}/79.3 \text{ acres} \times 1/1.00 = 1 \text{ deer}/180 \text{ acres}.$
2. 50% of animals observed: $0.44 \text{ deer}/79.3 \text{ acres} \times 1/.50 = 1 \text{ deer}/90 \text{ acres}.$
3. 40% of animals observed: $0.44 \text{ deer}/79.3 \text{ acres} \times 1/.40 = 1 \text{ deer}/72 \text{ acres}.$

(m) Density estimates based on 10% area coverage:

1. 100% of animals observed: $0.23 \text{ deer}/79.3 \text{ acres} \times 1/1.00 = 1 \text{ deer}/345 \text{ acres}.$
2. 50% of animals observed: $0.23 \text{ deer}/79.3 \text{ acres} \times 1/.50 = 1 \text{ deer}/173 \text{ acres}.$
3. 40% of animals observed: $0.23 \text{ deer}/79.3 \text{ acres} \times 1/.40 = 1 \text{ deer}/138 \text{ acres}.$

(n) Density estimates based on 10% area coverage:

1. 100% of animals observed: $0.05 \text{ deer}/79.3 \text{ acres} \times 1/1.00 = 1 \text{ deer}/1586 \text{ acres}.$
2. 50% of animals observed: $0.05 \text{ deer}/79.3 \text{ acres} \times 1/.50 = 1 \text{ deer}/795 \text{ acres}.$
3. 40% of animals observed: $0.05 \text{ deer}/79.3 \text{ acres} \times 1/.40 = 1 \text{ deer}/636 \text{ acres}.$

(o) Density estimates based on 10% area coverage:

1. 100% of animals observed: $0.37 \text{ deer}/79.3 \text{ acres} \times 1/1.00 = 1 \text{ deer}/214 \text{ acres}.$
2. 50% of animals observed: $0.37 \text{ deer}/79.3 \text{ acres} \times 1/.50 = 1 \text{ deer}/107 \text{ acres}.$
3. 40% of animals observed: $0.37 \text{ deer}/79.3 \text{ acres} \times 1/.40 = 1 \text{ deer}/86 \text{ acres}.$

(p) Density estimates based on 10% area coverage:

1. 100% of animals observed: $0.14 \text{ deer}/79.3 \text{ acres} \times 1/1.00 = 1 \text{ deer}/566 \text{ acres}.$
2. 50% of animals observed: $0.14 \text{ deer}/79.3 \text{ acres} \times 1/.50 = 1 \text{ deer}/283 \text{ acres}.$
3. 40% of animals observed: $0.14 \text{ deer}/79.3 \text{ acres} \times 1/.40 = 1 \text{ deer}/226 \text{ acres}.$

Appendix C. Summary of vehicle surveys conducted on the Big Cypress National Preserve during selected hunting seasons, 1983-86 and 1990-94.

	Vehicles Only							ATC						
	83-84	84-85	85-86	90-91	91-92	92-93	93-94 g	83-84	84-85	85-86	90-91	91-92	92-93	93-94 g
ARCHERY														
Opening weekend	52 a	141	90	39	131	57	111	41 a	56	21	6	9	19	17
1st week	41 a	74	60	71	46	37	46	18 a	18	4	5	10	4	11
2nd week	63 a	61	45	43	71	38	41	26 a	36	2	4	7	5	5
3rd week	36 a	79	56	53	32	41	30	22 a	29	9	6	12	5	10
4th week	--	--	--	51	31	20 f	21	--	--	-	3	6	6 f	6
MUZZLELOADING														
Opening weekend	196	179	111 d	133	137	115 f	110	85	54	10 d	10	17	22 f	16
1st week	75 b	121	71	74	90 f	77 f	55	12 b	48	9	6	20	22 f	17
2nd week	82 b	97	61	82	69	63 f	65	28 b	31	7	5	15	10 f	14
GENERAL GUN														
Opening weekend	367	406	348	285	300	292 f	259	142	134	41	14	60	71 f	57
Midweek	112	53	49	---	---	---	---	24	28	12	--	--	--	--
1st week	204 b	242	179	244	165 f	104 f	143	98 b	66	33	19	27	35 f	26
2nd week	272 a	307	171	96	168 f	145 f	150	90 a	96	10	6	41	51 f	37
3rd week	172	206	250	204	110 f	133 f	118	64	69	17	11	39	33 f	29
4th week	103 a	225	137	217	109 f	110 f	109	55 a	63	10	53	25	32 f	41
5th week	104 a	177	105	204	93 f	95 f	100	33 a	52	9	9	18	17 f	20
6th week	81	136	78	260	141 f	106 f	13 f	13	55	4	11	29	32 f	5 f
7th week	88 a	245	167	145	-- e	-- e	149	24 a	69	7	14	-- e	-- e	45
8th week	231	338	249	---	---	---	---	109	79	10	--	--	--	--

Appendix C. continued

	Swamp Buggy							Airboat						
	83-84	84-85	85-86	90-91	91-92	92-93	93-94 g	83-84	84-85	85-86	90-91	91-92	92-93	93-94 g
ARCHERY														
Opening weekend	22 a	32	38	51	58	43	53	10 a	4	5	2 c	7	2	6
1st week	14 a	19	18	34	24	33	26	8 a	7	12	8 c	2	1	7
2nd week	24 a	13	21	33	31	38	22	0 a	6	4	7 c	2	3	6
3rd week	11 a	23	29	24	20	35	36	7 a	10	0	8 c	8	0	6
4th week	--	--	--	24	22	25 f	32	-	--	-	4 c	0	3 f	16
MUZZLELOADING														
Opening weekend	84	87	39 d	65	70	77 f	83	26	19	9 d	6 c	8	9 f	4
1st week	17 b	53	55	48	81 f	63 f	48	10 b	12	7	13 c	9 f	8 f	12
2nd week	41 b	43	38	33	41	46 f	45	26 b	9	7	4 c	5	9 f	24
GENERAL GUN														
Opening weekend	164	219	157	143	116	114 f	123	140	140	128	62 c	101	90 f	123
Midweek	60	61	61	---	---	---	---	50	24 c	29 c	-	--	--	--
1st week	60 b	94	91	37	67 f	78 f	58	39 b	57	32	8 c	55 f	38 f	61
2nd week	96 a	87	60	42	86 f	82 f	81	5 a	30	21	0 c	34 f	37 f	70
3rd week	65	64	110	63	75 f	84 f	66	31	26	2	0 c	26 f	61 f	42
4th week	56 a	66	49	69	56 f	69 f	75	22 a	31	16	6 c	18 f	35 f	28
5th week	31 a	59	50	61	42 f	71 f	61	24 a	7	11	6 c	36 f	23 f	20
6th week	19	43	45	68	78 f	83 f	8 f	9	15	10	0 c	28 f	59 f	6 f
7th week	36 a	93	67	31	-- e	-- e	82	10 a	16	18	0 c	-- e	-- e	53
8th week	112	93	92	--	--	--	--	46	33	12	-	--	--	--

Appendix C. continued

	Totals						
	83-84	84-85	85-86	90-91	91-92	92-93	93-94 g
ARCHERY							
Opening weekend	125 a	212	154	158	205	121	169
1st week	81 a	118	94	118	84	75	90
2nd week	113 a	116	72	87	111	84	74
3rd week	76 a	141	94	91	72	81	82
4th week	--	---	--	82	61	56 f	75
MUZZLELOADING							
Opening weekend	391	333	169 d	214	232	223 f	213
1st week	114 b	234	142	141	200 f	170 f	132
2nd week	177 b	180	133	124	130	128 f	148
GENERAL GUN							
Opening weekend	813	899	674	524	577	477 f	562
Midweek	246	166	151	---	---	---	---
1st week	401 b	459	335	368	314 f	255 f	308
2nd week	463 a	520	262	146	329 f	315 f	338
3rd week	352	365	379	278	250 f	331 f	255
4th week	236 a	387	212	339	208 f	246 f	253
5th week	192 a	295	175	260	169 f	206 f	201
6th week	122	251	137	279	276 f	280 f	32 i
7th week	158 a	443	259	190	--- e	--- e	329
8th week	498	543	363	---	---	---	---

a) Excluding Loop Road, Pinecrest to Monroe Station; and/or County Roads 637 and 641; and/or U.S. 41, TRR to west boundary; and/or Loop Road, 40 Mile Bend to Pinecrest.

b) Excluding several locations.

c) Includes Mitchell's Landing.

d) Main campground (Bear Island) not counted.

e) No vehicle count- check in/out forms used to determine pressure.

f) Excludes 31 MW at Alligator alley.

g) Excludes all Alligator Alley (1-75) sites.

i) Survey occurred on Christmas Day.

All: Excluded S-12's, S-12A and Bear Island - other Sites.

Appendix D. Summary of biological data for deer harvested during the 1993-94 hunting seasons on the Big Cypress Wildlife Management Area.
(Zone: 1=Bear Island, 2=Deep Lake, 3=Turner River, 4=Loop Road, 5=Stairsteps, and 6=Corn Dance).

BIG CYPRESS		ZONE 1				ZONE 2		ZONE 3				ZONE 4				ZONE 5		
		1.5	2.5	3.5	4.5+	1.5	3.5	1.5	2.5	3.5	4.5+	1.5	2.5	3.5	4.5+	1.5	2.5	3.5
		YEAR-	YEAR-	YEAR-	YEAR-	YEAR-	YEAR-	YEAR-	YEAR-	YEAR-	YEAR-	YEAR-	YEAR-	YEAR-	YEAR-	YEAR-	YEAR-	YEAR-
		OLDS	OLDS	OLDS	OLDS	OLDS	OLDS	OLDS	OLDS	OLDS	OLDS	OLDS	OLDS	OLDS	OLDS	OLDS	OLDS	OLDS
AGE	N	10.0	4.0	4.0	3.0	1.0	0.0	13.0	10.0	8.0	6.0	4.0	1.0	7.0	6.0	20.0	37.0	17.0
CIRC.	NMISS	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(CM):	MEAN	4.8	5.3	5.6	7.7	5.8	.	5.0	5.8	6.8	8.3	5.4	6.0	7.9	8.3	5.3	6.0	7.1
	STDERR	0.2	0.4	0.5	0.6	.	.	0.3	0.3	0.4	0.5	0.6	.	0.6	0.4	0.2	0.2	0.2
	MAX	6.0	6.0	6.5	9.0	5.8	.	6.5	7.0	8.0	9.8	7.0	6.0	10.8	9.8	8.0	10.0	9.5
	MIN	4.0	4.0	4.6	7.0	5.8	.	3.0	4.2	5.3	6.8	4.3	6.0	6.0	7.0	4.0	4.5	6.0
AGE	N	10.0	4.0	4.0	3.0	1.0	0.0	13.0	10.0	7.0	6.0	4.0	1.0	7.0	6.0	20.0	37.0	17.0
LENGTH	NMISS	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(CM):	MEAN	15.7	22.2	23.7	35.8	12.8	.	15.1	21.4	26.4	34.9	16.6	10.9	28.9	30.8	14.7	21.0	23.7
	STDERR	1.0	3.2	1.4	2.7	.	.	1.4	1.6	2.7	4.0	2.9	.	2.3	1.1	0.9	0.7	1.2
	MAX	20.5	27.9	27.3	40.2	12.8	.	25.5	30.5	36.5	43.5	23.0	10.9	39.0	34.0	24.5	28.5	34.3
	MIN	11.3	13.5	21.0	30.8	12.8	.	4.8	12.5	16.5	16.9	11.3	10.9	21.8	27.5	7.5	12.3	17.5
INSIDE	N	8.0	4.0	4.0	2.0	1.0	0.0	11.0	9.0	7.0	6.0	3.0	0.0	7.0	6.0	13.0	36.0	16.0
RD.	NMISS	2.0	0.0	0.0	1.0	0.0	1.0	2.0	2.0	1.0	0.0	1.0	1.0	0.0	0.0	7.0	1.0	1.0
(M):	MEAN	15.0	16.1	19.0	33.0	12.5	.	13.4	19.4	23.1	27.6	14.2	.	26.2	26.9	16.2	20.4	24.6
	STDERR	1.4	2.4	4.5	6.0	.	.	1.0	1.3	1.7	1.7	2.2	.	1.0	1.5	1.2	0.7	1.1
	MAX	20.0	23.0	26.5	39.0	12.5	.	18.5	27.0	28.0	33.5	18.5	.	30.5	34.0	23.0	29.0	33.0
	MIN	8.5	13.0	6.0	27.0	12.5	.	8.0	16.0	17.0	23.0	11.0	.	22.5	24.0	7.0	10.5	17.0
ANTLER	N	10.0	4.0	4.0	3.0	1.0	0.0	13.0	10.0	7.0	6.0	4.0	1.0	7.0	6.0	20.0	37.0	17.0
POINTS	NMISS	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	MEAN	3.1	3.5	4.0	5.3	2.0	.	2.4	4.5	6.3	7.7	2.5	3.0	6.6	6.7	2.7	4.4	5.1
	STDERR	0.4	1.2	0.8	0.7	.	.	0.2	0.7	0.9	0.3	0.5	.	0.4	1.0	0.3	0.3	0.4
	MAX	6.0	7.0	6.0	6.0	2.0	.	4.0	8.0	10.0	9.0	4.0	3.0	8.0	10.0	6.0	8.0	8.0
	MIN	2.0	2.0	2.0	4.0	2.0	.	2.0	2.0	3.0	7.0	2.0	3.0	5.0	3.0	2.0	2.0	3.0
WE	N	10.0	4.0	4.0	3.0	0.0	1.0	8.0	3.0	5.0	3.0	4.0	1.0	7.0	4.0	11.0	21.0	6.0
WEIGHT	NMISS	0.0	0.0	0.0	0.0	1.0	0.0	5.0	8.0	3.0	3.0	0.0	0.0	0.0	2.0	9.0	16.0	11.0
(BS):	MEAN	86.3	101.3	103.8	129.9	.	111.4	93.4	93.5	120.5	117.0	100.8	105.4	114.3	104.4	96.9	97.2	103.3
	STDERR	3.0	4.3	3.8	10.1	.	.	3.1	5.8	5.3	9.4	7.1	.	4.4	3.2	5.2	3.5	3.0
	MAX	100.0	110.0	111.4	147.6	.	111.4	105.4	99.3	135.0	133.0	111.4	105.4	129.5	111.4	135.6	135.6	111.4
	MIN	70.0	90.0	93.3	112.6	.	111.4	81.2	82.0	105.4	100.5	81.2	105.4	99.3	95.7	70.4	70.0	93.3
CONDITION	N	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	2.0	1.0	3.0	5.0	10.0	18.0	8.0
INDEX:	NMISS	10.0	4.0	4.0	3.0	0.0	1.0	12.0	10.0	8.0	6.0	2.0	0.0	4.0	1.0	10.0	19.0	9.0
	MEAN	.	.	.	.	0.0	.	0.0	0.0	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	STDERR	.	.	.	.	.	.	.	.	.	.	0.0	.	0.0	0.0	0.0	0.0	0.0
	MAX	.	.	.	.	0.0	.	0.0	0.0	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	MIN	.	.	.	.	0.0	.	0.0	0.0	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(CONTINUED)

SUMMARY OF ANTLER, MORPHOLOGIC AND CONDITION DATA FROM BUCKS HARVESTED ON WMAs DURING THE 93-94 SEASON

BIG CYPRESS		ZONE	ZONE 6				
		5					
		4.5+	1.5	2.5	3.5	4.5+	
		YEAR-	YEAR-	YEAR-	YEAR-	YEAR-	
		OLDS	OLDS	OLDS	OLDS	OLDS	
BEAM	N	13.0	5.0	9.0	6.0	6.0	
CIRC.	NMISS	0.0	0.0	0.0	0.0	1.0	
(CM):	MEAN	8.0	5.3	6.4	6.4	8.4	
	STDERR	0.5	0.2	0.3	0.3	0.6	
	MAX	10.0	6.0	7.9	7.3	10.0	
	MIN	4.3	5.0	5.0	5.3	6.3	
BEAM	N	13.0	5.0	9.0	6.0	6.0	
LENGTH	NMISS	0.0	0.0	0.0	0.0	1.0	
(CM):	MEAN	27.3	15.4	22.3	24.5	32.4	
	STDERR	2.4	1.0	0.6	2.4	1.7	
	MAX	37.0	18.8	25.0	31.0	39.5	
	MIN	9.8	13.0	20.0	15.0	27.8	
INSIDE	N	13.0	5.0	9.0	5.0	6.0	
SPRD.	NMISS	0.0	0.0	0.0	1.0	1.0	
(CM):	MEAN	26.9	13.1	19.9	19.9	29.1	
	STDERR	1.7	1.6	1.2	2.2	2.0	
	MAX	34.0	18.0	27.0	24.0	36.5	
	MIN	13.0	9.0	15.5	12.0	22.0	
ANTLER	N	13.0	5.0	9.0	6.0	7.0	
POINTS	NMISS	0.0	0.0	0.0	0.0	0.0	
	MEAN	5.2	2.6	4.9	4.8	6.3	
	STDERR	0.6	0.4	0.7	0.7	0.5	
	MAX	8.0	4.0	8.0	6.0	8.0	
	MIN	2.0	2.0	2.0	2.0	4.0	
LIVE	N	9.0	4.0	2.0	1.0	4.0	
WEIGHT	NMISS	4.0	1.0	7.0	5.0	3.0	
(LBS):	MEAN	105.4	97.0	96.3	87.2	99.3	
	STDERR	3.8	4.0	3.0	.	2.5	
	MAX	123.5	106.6	99.3	87.2	105.4	
	MIN	87.2	87.2	93.3	87.2	93.3	
CONDITION	N	5.0	1.0	5.0	4.0	2.0	
INDEX:	NMISS	8.0	4.0	4.0	2.0	5.0	
	MEAN	0.0	0.0	0.0	0.0	0.0	
	STDERR	0.0	.	0.0	0.0	0.0	
	MAX	0.0	0.0	0.0	0.0	0.0	
	MIN	0.0	0.0	0.0	0.0	0.0	

SUMMARY OF ANTLER, MORPHOLOGIC AND CONDITION DATA FROM BUCKS HARVESTED ON WMA DURING THE 93-94 SEASON

BIG CYPRESS		ALL ZONES			
		1.5	2.5	3.5	4.5+
		YEAR- OLDS	YEAR- OLDS	YEAR- OLDS	YEAR- OLDS
BEAM	N	53.0	61.0	42.0	34.0
CIRC.	NMISS	0.0	1.0	1.0	1.0
(CM):	MEAN	5.2	6.0	6.9	8.1
	STDERR	0.1	0.1	0.2	0.2
	MAX	8.0	10.0	10.8	10.0
	MIN	3.0	4.0	4.6	4.3
BEAM	N	53.0	61.0	41.0	34.0
LENGTH	NMISS	0.0	1.0	2.0	1.0
(CM):	MEAN	15.1	21.1	25.2	30.9
	STDERR	0.6	0.6	0.9	1.3
	MAX	25.5	30.5	39.0	43.5
	MIN	4.8	10.9	15.0	9.8
INSIDE	N	41.0	58.0	39.0	33.0
SPRD.	NMISS	12.0	4.0	4.0	2.0
(CM):	MEAN	14.6	19.9	23.4	27.8
	STDERR	0.6	0.6	0.8	0.9
	MAX	23.0	29.0	33.0	39.0
	MIN	7.0	10.5	6.0	13.0
ANTLER	N	53.0	61.0	41.0	35.0
POINTS	NMISS	0.0	1.0	2.0	0.0
	MEAN	2.7	4.4	5.4	6.1
	STDERR	0.1	0.2	0.3	0.3
	MAX	6.0	8.0	10.0	10.0
	MIN	2.0	2.0	2.0	2.0
LIVE	N	37.0	31.0	24.0	23.0
WEIGHT	NMISS	16.0	31.0	19.0	12.0
(LBS):	MEAN	93.7	97.6	109.9	108.9
	STDERR	2.1	2.5	2.5	3.0
	MAX	135.6	135.6	135.0	147.6
	MIN	70.0	70.0	87.2	87.2
CONDITION	N	15.0	25.0	15.0	12.0
INDEX:	NMISS	38.0	37.0	28.0	23.0
	MEAN	0.0	0.0	0.0	0.0
	STDERR	0.0	0.0	0.0	0.0
	MAX	0.0	0.0	0.0	0.0
	MIN	0.0	0.0	0.0	0.0

SUMMARY OF ANTLER, MORPHOLOGIC AND CONDITION DATA FROM BUCKS HARVESTED ON WMAs DURING THE 93-94 SEASON

BIG CYPRESS													ZONE 2																	
													2																	
													1.5																	
ZONE 1													YEAR-OLDS		ZONE 3															
1.5 YEAR-OLDS				2.5 YEAR-OLDS				3.5 YEAR-OLDS				4.5+ YEAR-OLDS		ANTLER POINTS		1.5 YEAR-OLDS				2.5 YEAR-OLDS										
ANTLER POINTS				ANTLER POINTS				ANTLER POINTS				ANTLER POINTS		POIN-TS		ANTLER POINTS				ANTLER POINTS										
2	3	4	6	2	3	7	2	4	6	4	6	2	2	3	4	2	3													
BUCKS N													5.0	1.0	3.0	1.0	2.0	1.0	1.0	2.0	1.0	1.0	2.0	1.0	10.0	1.0	2.0	3.0	1.0	
PCTN													50.0	10.0	30.0	10.0	50.0	25.0	25.0	25.0	50.0	25.0	33.3	66.7	100.0	76.9	7.7	15.4	30.0	10.0

(CONTINUED)

SUMMARY OF ANTLER, MORPHOLOGIC AND CONDITION DATA FROM BUCKS HARVESTED ON WMA# DURING THE 93-94 SEASON

CYPRESS													ZONE 4						
													2.5 YEAR-OLDS						
													1.5 YEAR-OLDS						
ZONE 3													ANTLER POINTS						
													3.5 YEAR-OLDS						
2.5 YEAR-OLDS													ANTLER POINTS						
3.5 YEAR-OLDS													ANTLER POINTS						
4.5+ YEAR-OLDS													ANTLER POINTS						
													ANTLER POINTS						
5													2						
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8													9						
10													16.7						
7													75.0						
8													25.0						
9													100.0						
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4													28.6						
3													42.9						
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SUMMARY OF ANTLER, MORPHOLOGIC AND CONDITION DATA FROM BUCKS HARVESTED ON WMA_s DURING THE 93-94 SEASON

BUCKS	CYPRESS	ZONE 4										ZONE 5										
	3.5																					3.5
	YEAR-OLDS																					YEAR-OLDS
	----																					----
	ANTLER																					ANTLER
	ER	4.5+ YEAR-OLDS					1.5 YEAR-OLDS					2.5 YEAR-OLDS					ER					
	POIN-																					POIN-
TS	ANTLER POINTS					ANTLER POINTS					ANTLER POINTS					TS						
	8	3	6	7	8	10	2	3	4	6	2	3	4	5	6	7	8	3				
BUCKS	N	1.0	1.0	2.0	1.0	1.0	1.0	13.0	2.0	4.0	1.0	8.0	1.0	14.0	4.0	6.0	1.0	3.0	2.0			
	PCTN	14.3	16.7	33.3	16.7	16.7	16.7	65.0	10.0	20.0	5.0	21.6	2.7	37.8	10.8	16.2	2.7	8.1	11.8			

(CONTINUED)

SUMMARY OF ANTLER, MORPHOLOGIC AND CONDITION DATA FROM BUCKS HARVESTED ON WHAs DURING THE 93-94 SEASON

C CYPRESS	ZONE 5										ZONE 6									
	3.5 YEAR-OLDS					4.5+ YEAR-OLDS					1.5 YEAR-OLDS					2.5 YEAR-OLDS				
	ANTLER POINTS					ANTLER POINTS					ANTLER POINTS					ANTLER POINTS				
	4	6	7	8	2	4	6	7	8	2	3	4	2	3	4	5	6	8		
BUCKS N	8.0	3.0	1.0	3.0	3.0	3.0	2.0	3.0	2.0	3.0	1.0	1.0	1.0	1.0	3.0	1.0	1.0	2.0		
PCTN	47.1	17.6	5.9	17.6	23.1	23.1	15.4	23.1	15.4	60.0	20.0	20.0	11.1	11.1	33.3	11.1	11.1	22.2		

(CONTINUED)

SUMMARY OF ANTLER, MORPHOLOGIC AND CONDITION DATA FROM BUCKS HARVESTED ON WMA's DURING THE 93-94 SEASON

BIG CYPRESS	ZONE 6							
	3.5 YEAR-OLDS				4.5+ YEAR-OLDS			
	ANTLER POINTS				ANTLER POINTS			
	2	4	5	6	4	6	8	
BUCKS N	1.0	1.0	1.0	3.0	1.0	4.0	2.0	
PCTN	16.7	16.7	16.7	50.0	14.3	57.1	28.6	

SUMMARY OF ANTLER, MORPHOLOGIC AND CONDITION DATA FROM BUCKS HARVESTED ON WMA's DURING THE 93-94 SEASON

G CYPRESS	ALL ZONES																		
	1.5 YEAR-OLDS				2.5 YEAR-OLDS								3.5 YEAR-OLDS						
	ANTLER POINTS				ANTLER POINTS								ANTLER POINTS						
	2	3	4	6	2	3	4	5	6	7	8	2	3	4	5	6	7	8	
BUCKS N	35.0	5.0	11.0	2.0	14.0	5.0	17.0	7.0	10.0	2.0	6.0	2.0	3.0	12.0	2.0	11.0	5.0	5.0	
PCTN	66.0	9.4	20.8	3.8	23.0	8.2	27.9	11.5	16.4	3.3	9.8	4.9	7.3	29.3	4.9	26.8	12.2	12.2	

(CONTINUED)

SUMMARY OF ANTLER, MORPHOLOGIC AND CONDITION DATA FROM BUCKS HARVESTED ON WMA's DURING THE 93-94 SEASON

BIG CYPRESS	ALL ZONES									
	3.5									
	YEAR-									
	OLDS									
	ANTL-									
	ER	4.5+ YEAR-OLDS								
	POIN-									
	TS	ANTLER POINTS								
		10	2	3	4	6	7	8	9	10
BUCKS N		1.0	3.0	1.0	5.0	10.0	7.0	7.0	1.0	1.0
PCTN		2.4	8.6	2.9	14.3	28.6	20.0	20.0	2.9	2.9

SUMMARY OF ANTLER, MORPHOLOGIC AND CONDITION DATA FROM BUCKS HARVESTED ON WMA_s DURING THE 93-94 SEASON

BUCKS CYPRESS						ZONE													
						2													

						ALL													
						AGES													
	ZONE 1					----	ZONE 3										ZONE 4		
	ALL AGES					ANTL-	ALL AGES										ALL AGES		
					ER														
					POIN-														
ANTLER POINTS					TS	ANTLER POINTS										ANTLER POINTS			
2 3 4 6 7					2	2	3	4	5	6	7	8	9	10	2	3	4		
CKS N	8.0	2.0	6.0	4.0	1.0	1.0	13.0	3.0	3.0	2.0	5.0	4.0	4.0	1.0	1.0	3.0	2.0	1.0	
PCTN	38.1	9.5	28.6	19.0	4.8	100.0	36.1	8.3	8.3	5.6	13.9	11.1	11.1	2.8	2.8	16.7	11.1	5.6	

(CONTINUED)

SUMMARY OF ANTLER, MORPHOLOGIC AND CONDITION DATA FROM BUCKS HARVESTED ON WMA_s DURING THE 93-94 SEASON

BUCKS CYPRESS	ZONE 4					ZONE 5								ZONE 6							
	ALL AGES					ALL AGES								ALL AGES							
	ANTLER POINTS					ANTLER POINTS								ANTLER POINTS							
	5	6	7	8	10	2	3	4	5	6	7	8	2	3	4	5	6	8			
BUCKS N	1.0	4.0	4.0	2.0	1.0	24.0	5.0	29.0	4.0	12.0	5.0	8.0	5.0	2.0	6.0	2.0	8.0	4.0			
PCTN	5.6	22.2	22.2	11.1	5.6	27.6	5.7	33.3	4.6	13.8	5.7	9.2	18.5	7.4	22.2	7.4	29.6	14.8			

SUMMARY OF ANTLER, MORPHOLOGIC AND CONDITION DATA FROM BUCKS HARVESTED ON WMA_s DURING THE 93-94 SEASON

BIG CYPRESS	ALL ZONES									
	ALL AGES									
	ANTLER POINTS									
	2	3	4	5	6	7	8	9	10	
BUCKS N	54.0	14.0	45.0	9.0	33.0	14.0	18.0	1.0	2.0	
PCTN	28.4	7.4	23.7	4.7	17.4	7.4	9.5	0.5	1.1	