SOUTH FLORIDA RESEARCH CENTER

Report T-595

Summary of Fires in Everglades National Park and Big Cypress National Preserve, 1979

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and

Big Cypress National Preserve, 1979

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TABLE OF CONTENTS

	page
LIST OF TABLES	ii
LIST OF FIGURES	iii
INTRODUCTION	1
FIRES IN EVERGLADES NATIONAL PARK	1
The fire year	1
Muhlenbergia research fires	1
Wet season fires	1
Sawgrass condition	2
FIRES IN BIG CYPRESS NATIONAL PRESERVE	3
LITERATURE CITED	5

LIST OF TABLES

		page
Table 1.	Individual fires for Everglades National Park, 1979	6
Table 2.	1979 fire statistics for Everglades National Park compared to 32 year average	9
Table 3.	Individual fires for Big Cypress National Preserve, 1980 . .	10
Table 4.	1979 fire statistics for Big Cypress National Preserve . . .	15
Table 5.	Fire starts by day of week and by month in Big Cypress National Preserve	16
Table 6.	Vegetation types within the Big Cypress National Preserve	17

LIST OF FIGURES

		page
Figure 1.	Approximate location of 1979 fires within Everglades National Park	18
Figure 2.	Location of study plots in Muhlenbergia prairie	19
Figure 3.	Time of prescribed fire and lightning fire occurrence relative to Schinus fruit phenology in Everglades National Park	20
Figure 4.	Location of 1979 fires within Big Cypress National Preserve	21
Figure 5.	Rainfall and acres burned by month due to all causes in Big Cypress National Preserve	22
Figure 6.	Number of acres burned by month in three vegetation types within Big Cypress National Preserve	23

INTRODUCTION

Fire statistics for Everglades National Park and for Big Cypress National Preserve are presented for the 1979 calendar year. This annual fire summary is to supplement fire records presented by Taylor (1979) and Taylor (1980) for Everglades National Park, and to establish a systematic fire records system for the Big Cypress National Preserve. The 1979 fire season was the first year of National Park Service fire responsibility for portions of Big Cypress National Preserve compared to the 32nd year for Everglades National Park.

FIRES IN EVERGLADES NATIONAL PARK

The fire year.

Poor prescribed burning conditions were noted by all fire control agencies during early 1979. At the February Interagency Wildfire Council meeting, the Florida Division of Forestry Fort Myers District had burned only 600 acres of 15,000 acres scheduled and the Fort Lauderdale District had burned 3,000 to 4,000 acres of 70,000 acres scheduled for burning. Wet weather hampered the Recreation and Parks Division burning program as well as the Everglades National Park program. Prescribed burning conditions were good throughout the fall, however, and almost all planned prescribed burns were completed by November 1 in Everglades National Park.

Number of fires, fire statistics and location of fires are shown on Table 1 and Figure 1. Total number of fires, number of prescribed natural fires (lightning), prescribed management fires, and prescribed research fires, were above average for the year (Table 2). Notable was the low number of man-caused wildfires.

Fifteen prescribed fires and four prescribed research fires were set during the year compared to an average of 11.2 fires for the period of record (Table 2). As in past years (Taylor 1979) the small part of Everglades National Park near and including Management Unit 3 (Fig. 1) has approximately one-half the fires. Eighteen fires (51%) occurred within or near this small zone. Of these, 11 fires (31%) were pineland prescribed burns set to control hardwood succession, 3 (9%) were set for the prairies research project, 2 (6%) were lightning caused and 1 (3%) was a wildfire set in the campground. Two boundary burns (6%) (Nos. 7904 and 7906) were also set near Unit 3 (Fig. 1).

Muhlenbergia research fires.

A long-term study of fire effects on Muhlenbergia prairies was begun in December 1978 (Fire No. 7816 for 1978). Fire No. 7905 on March 8, and fire No. 7915 on July 20, 1979, completed the initial phase of burning. In future years, designated areas will be burned on annual, three-year and five-year intervals. Location of study areas is shown on Figure 2.

Wet season fires.

It has been shown that prescribed management fires have been set in winter, fall and spring months, whereas, lightning fires occur during the summer wet season (Taylor 1980). During 1979, four fires were observed closely to determine the feasibility of setting prescribed fires during the summer wet season.

The Atoll Hammock fire (No. 7911) on July 1, was caused by lightning. The fire was burning with 5-10' flames at 8 p.m. when relative humidity was 80% and wind speed 2-5 mph. Rainfall during the storm totaled 3.7 inches at the Research Center a few miles from the fire. Relative humidity of 80% at the fire is considered as much too high for prescribed fire, and winds under 5 mph are usually too low to carry a prescribed fire.

Research fire #3 (No. 7915) was a prescribed fire set with one spot on July 18. The fire was set in late afternoon to take advantage of evening humidity increase, thereby normally holding size of fire to the desired acreage. Winds from a late evening thunderstorm caused the fire to spread rapidly for a few minutes, then it spread at a slower rate until it finally died-out over night due to high humidity. The ultimate result was a 1116 acre burn. By comparison, a December 7-8, 1978, dry season prescribed fire on the east boundary, in identical habitat, did not burn well. Relative humidity, wind speed, and air temperatures were nearly identical during the two burns. Rainfall amount for five days prior to the prescribed burns was comparable (.57 in. during July and .32 in. during December). The major difference between the two burns was water level (July was .48 feet msl below average compared to .11 feet msl above average for December). However, water level during the July fire was .42 ft. msl above water level at the time of the December burn (July 3.01; December 2.59 ft. msl at Taylor Slough Bridge).

The Gumbo Limbo prescribed sawgrass burn (No. 7917) was completed August 10. August is normally the third wettest month of the year (Rose, et al., 1979). During the five days prior to the fire, 3.3 inches of rain fell near Gumbo Limbo hammock. Water levels were near normal.

The fourth fire was an August 14 lightning started fire (No. 7918) in Spartina saltmarsh near Little Fox Lake. The fire burned 1392 acres during two days and two nights. Nighttime dewfall often inhibits burning or extinguishes a fire. Dew point did occur at Pine Island (several miles north and east), but it is unknown if dew point occurred at the fire location. A small amount of rain may have accompanied the storm as .12 in. fell at Pine Island, but no rain fell on August 14 at Flamingo a few miles east and south of the burn. The fire killed red mangroves (Rhizophora mangle) that were encroaching into the Spartina marsh.

These data suggest prescribed fires can be set during the late July and early August part of the summer wet season when, theoretically, natural fires occur. Wet season fires would more nearly approximate what are now considered to be "natural" conditions. Wet season fires would help reduce the potential threat of invasion into burned areas by the exotic Shinus terebinthifolius (Fig. 3). Most prescribed burns now occur when a majority of Schinus fruits are ripe and when the greatest number of fruits are present. These fires may clear an area and allow Schinus plants to become established, especially in pinelands. Fewer Schinus fruits are ripe and fewer fruits are present on the tree during the time when lightning fires occur. (Fig. 3).

Sawgrass condition.

During the early 1970's concern was expressed about extensive areas of dead or dying sawgrass. To better understand sawgrass communities in Shark Slough, a resources management research program was begun to study effects of fire on sawgrass strands (Werner, 1975). Data were collected from 13 different strands during 1973-74. Eleven strands were burned by prescribed fire, one by incendiary

fire, and two by lightning strikes. The study did not resolve the contribution of fire to the sawgrass condition and it is being continued with two strands to be selected each year, one to be burned and one to remain as an unburned control.

Sawgrass strand #13 (Werner, 1975), the tail of Gumbo Limbo Hammock, was selected for study and burned August 10, 1979. Biomass recorded before fire in 1979 was more than two times the amount present in the 1974 decadent sawgrass. Open water within the strand declined from 80% in 1974 to 15% before fire in 1979, reflecting increased sawgrass growth. Post-fire sawgrass recovery is being monitored.

FIRES IN BIG CYPRESS NATIONAL PRESERVE

The Big Cypress National Preserve is an area of 570,000 acres being acquired by the National Park Service. Fire control responsibilities for 353,000 acres of the preserve have been under National Park Service direction only since November 1978. Responsibility for the final 216,500 acres was transferred to the National Park Service during December 1979. Big Cypress fire management will require new National Park Service strategies because of unusual special use activities permitted within the area. Special uses include grazing and burning for improved cattle pasture, hunting, trapping, off-road vehicle use, hunting camps, exploration for, and extraction of gas and oil, and traditional Indian use. To prepare for fire activities within the preserve the National Park Service has completed a fire management plan and an environmental assessment (Fire Management Plan, Big Cypress National Preserve, 168 pp., 1980; Environmental Assessment Fire Management Plan Big Cypress National Preserve, 1980). A long-term research plan has been completed (Taylor 1980).

Many users have a propensity to start fires as shown by 89% of the fires, 89% of acreages and 99% of fire cost due to man-caused fires (Table 4). Only 4% of all fires discovered, and less than 1% of acreage burned and 1% of assessed cost was due to lightning fires. Lightning fires were recorded only during May (Tables 3 and 4). Burning grazing land by permit was a third cause of fires within Big Cypress but these fires occurred only during January (Tables 3 and 4). Fires were concentrated along U.S. 41 (Tamiami Trail), around Ochopee and vicinity, and within the Bear Island (north) part of the preserve (Fig. 4). The large section where fires numbered 69-71, 73, 74, 76, and 80 occurred are parts of the preserve which was under Florida Division of Forestry control until December 1979. Fire reports were not filed until the National Park Service assumed control, consequently, the 7 fires represent a minimum number to have occurred in the region during the past year (Fig. 4).

Eighty-one fires burned 24,140 acres and were assigned $28,376 control cost (Tables 3 and 4). Twenty-four (30%) fires were larger than 100 acres, one burning 3,200 acres (No. 45) and one 4,077 acres (No. 35) (Table 3). Sixty-two fires (77%) were larger than 10 acres. The "fire season" is October through May which coincides with the dry season (Fig. 5). Seventy-eight (96%) fires occurred during these eight months while only three fires (4%) were recorded from June through September. The five-to-seven month dry season usually terminates by May, therefore, end-of-season fires are normally much larger than fires that occur early in season. For example, 25% of all fires and 38% of all acreage burned was burned during March. Average fire size was 967 acres in April and 462 acres in March, compared to 9 acres in October and 119 acres in November. March, April, May, and sometimes June, are months when fires burn large acreages (as much as 77,000

acres; 10,000 acre fires are not uncommon) in Everglades National Park (Taylor 1980).

Months when greatest number of fire starts occur are January when the deer, turkey, and hog season close, March when the turkey season occurs, and November when the deer, turkey and wild hog seasons open. All three October fire starts were during the special black powder deer season. Few fires occurred during February when fire potential was high due to low precipitation, but because no hunting seasons were open few people were present to set fires. Most fires are set on Sunday (33 starts, 41% of all fires; Table 5) with the belief that deer will be attracted to the area for shooting the following weekend.

McPherson (1973) has mapped biotic communities in Big Cypress (Table 6). Of the types he lists, we have identified pineland, cypress prairie, and prairie as where nearly 100% of 1979 fires occurred (Fig. 6). High acreages of pineland were burned during January and March. Almost all cypress prairie that burned was burned during March, while highest acreage of prairie was burned during March, April, December, January, and November, respectively.

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Table 1. Individual fires for Everglades National Park, 1979.

Fire Number	Location (R-T-S)	Cause	Fire Mgmt Unit	Acres	Cost ($)	Date	Remarks
				January			
7901	37-58-12	Prescribed	3	9	$ 179	1-4	Hardwood Control
7902	30-52-22	Man	2	15	10	1-8	Incendiary
7903	36-58-7	Prescribed	3	580	1,061	1-16	Pines NW of Block D
Total, 3 fires				604	$ 1,250		
				February			
7904	35-54-22	Prescribed	2	216	$ 4,532	2-27	Miccosukee Boundary
Total, 1 fire				216	$ 4,532		
				March			
7905	37-58-3	Research	2	127	$ 549	3-8	Prairies Study
7906	36½-54-1	Prescribed	2	403	1,258	3-15	North Boundary Burn
Total, 2 fires				530	$ 1,807		
				April			
7907	37-58-7	Man	3	1	$ 224	4-9	Campground
7908	37-58-19	Prescribed	2	40	192	4-18	Donut-8
Total, 2 fires				41	$ 415		
				May			
7909	31-54-14	Man	2	3	$ 20	5-4	Incendiary
Total, 1 fire				3	$ 20		

Fire Number	Location (R-T-S)	Cause	Fire Mgmt Unit	Acres	Cost ($)	Date	Remarks
				June			
7910	36-54-34	Lightning	2	1	$ 30	6-22	
Total, 1 fire				1	$ 30		
				July			
7911	36-59-17	Lightning	2	218	$ 75	7-1	Atoll Hammock
7912	36-56-29	Lightning	2	1	20	7-12	Panther Mound
7913	32-57-6	Lightning	1	288	50	7-16	75% Coastal Marsh
7914	32-56-7	Lightning	1	162	50	7-17	75% Coastal Marsh
7915	37-57-31	Research #3	2	1,116	428	7-20	Prairies Study
Total, 5 fires				1,785	$ 623		
				August			
7916	37-59-13	Lightning	2	12	$ 21	8-16	
7917	36-54-32	Research	2	289	650	8-10	Gumbo Limbo Hammock Strand
7918	33-60-16	Lightning	1	1,392	693	8-14	Little Fox Lake, Coastal Marsh Prairie
7919	37-59-10	Lightning		47	0	8-19	
7920	35-58-24	Lightning	2	5	110	8-20	
7921	36-58-30	Lightning	2	44	153	8-20	
7922	36-55-19	Lightning	2	5	15	8-23	
7923	35-57-10	Lightning	2	60	0	8-29	
7924	35-55-36	Lightning	2	1	15	8-10	
Total, 9 fires				1,864	$ 1,657		

Fire Number	Location (R-T-S)	Cause	Fire Mgmt Unit	Acres	Cost ($)	Date	Remarks
			September				
No fires				0	0		
			October				
7925	37-58-14	Prescribed	3	6	$ 180	10-21	Block P
7926	37-58-13	Prescribed	3	11	324	10-27	Block S
7927	37-58-13	Prescribed	3	32	588	10-28	Block S-T
7928	37-58-7	Prescribed	3	391	1,607	10-29	Block I
7929	36-58-3	Prescribed	3	446	1,696	10-30	(west ½) No. Block D
7930	37-58-13	Prescribed	3	492	1,208	10-31	Block J
Total, 6 fires				1,378	$ 5,624		
			November				
7931	37-58-18	Prescribed	3	171	$ 598	11-1	Camp Everglades
7932	37-58-12	Prescribed	3	18	191	11-5	Block Y
7933	36-58-24	Prescribed	3	823	2,238	11-29	Block F
Total, 3 fires				1,012	$ 3,027		
			December				
7934	37-58-10	Research	2	10	$ 173	12-18	Prairies Study
7935	36-58-15	Prescribed	3	795	$ 2,647	12-18	Block C
Total, 2 fires				805	$ 2,820		
TOTAL, 35 fires				8,229 (Acres)	$21,892		

Table 2. 1979 Fire Statistics for Everglades National Park compared to 32 year average.

	CAUSE														
	Man			Prescribed Natural (Lightning)			Prescribed			Prescribed Management Research			Total		
	No.	Acres	Cost	No.	Acres	Cost	No.	Acres	Cost	No.	Acres	Cost	No.	Acres	Cost
JAN	1	15	$ 10	-	-	$ -	2	589	$ 1,241	-	-	$ -	3	604	$ 1,251
FEB	-	-	-	-	-	-	1	216	4,523	-	-	-	1	216	4,523
MAR	-	-	-	-	-	-	1	403	1,258	1	127	549	2	530	1,807
APR	1	1	223	-	-	-	1	40	192	0	0	0	2	41	415
MAY	1	3	20	-	-	-	-	-	-	-	-	-	1	3	20
JUN	-	-	-	1	1	30	-	-	-	-	-	-	1	1	30
JUL	-	-	-	4	668	195	-	-	-	1	1,116	428	5	1,784	623
AUG	-	-	-	8	1,566	1,048	-	-	-	1	289	705	9	1,855	1,753
SEP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OCT	-	-	-	-	-	-	6	1,378	5,624	-	-	-	6	1,378	5,624
NOV	-	-	-	-	-	-	3	1,012	3,027	-	-	-	3	1,012	3,027
DEC	-	-	-	-	-	-	1	795	2,646	1	10	173	2	805	2,819
Totals:	3	19	253	13	2,235	1,273	15	4,413	18,511	4	1,542	1,855	35	8,229	21,892
1979 Average:		6.3	13.31		171.9	0.56		294.2	4.19		385.5	1.20		235.1	2.66
1948-1979 Average[a]	14	20,016	-	7	2,859	-	11[b]	4,590	-	0.2	57	-	28[c]	29,104	-

a = Taylor, 1980

b = Prescribed fires have occurred since 1958

c = A number of fires were fought outside the park and they are included in the totals.

Table 3. Individual fires for Big Cypress National Preserve, 1980

Fire Number	Cause	Acres	Cost ($)	Date	Day of Week	Location T-R-S
			JANUARY			
W0001	Man	20	0	1-7	Sun	50S-31E-16
2	Man	10	0	1-7	Sun	50S-30E-16
3	Man	250	0	1-7	Sun	51S-30E-15,16, 21,22,27,28
4	Pasture burn	2,500	0	1-7	Sun	49S-31E-3,4,10, 14,15,16,21, 22,23,24,25, 26,27
5	Pasture burn	25	0	1-7	Sun	49S-30E-22 23,26
6	Pasture burn	35	0	1-7	Sun	49S-30E-23,24,25
7	Pasture burn	20	0	1-7	Sun	49S-31E-19
8	Man	800	0	1-7	Sun	54S-34E-33,34,35 54S-33E-2
9	Man	20	0	1-10	Wed	54S-35E-18
10	Man	300	0	1-10	Wed	52S-30E-17,20
11	Pasture burn	12	0	1-7	Sun	49S-30E-15
12	Pasture burn	50	0	1-14	Sun	49S-31E-29
13	Man	25	0	1-26	Fri	53S-31E-3,4
14	Man-trash fire	100	0	1-28	Sun	52S-30E-9
15	Man	60	0	1-28	Sun	52S-31E-25,30 31,36
Total, 15 fires		4,227	$ 0 (no cost assigned)			
			FEBRUARY			
W0016	Man	35	$ 90	2-1	Thur	53S-30E-1
17	Man	375	480	2-4	Sun	52S-32E-15,22
18	Man-building removal	5	151	2-6	Tue	52S-30E-22
19	Man	320	507	2-7	Wed	53S-33E-8,17
20	Man	1	0	2-7	Wed	53S-30E-1
Total, 5 fires		736	$ 1,228			

Fire Number	Cause	Acres	Cost ($)	Date	Day of Week	Location T-R-S
			MARCH			
W0021	Man	40	$ 30	3-8	Thur	53S-33E-18
22	Man	25	303	3-9	Fri	55S-33E-23
23	Man	1,430	6,000	3-10	Sat	52S-30E-23,24, 25,26
24	Man	10	291	3-11	Sun	53S-35E-18
25	Man	6	35	3-11	Sun	53S-32E-6
26	Man	2,120	6,264	3-13	Tue	52S-30E-12,13, 14,15,22,23
27	Man	280	95	3-14	Wed	50S-31E-18,19
28	Man	60	57	3-16	Fri	53S-33E-7
29	Man	3	124	3-20	Tue	50S-31E-2
30	Man	50	29	3-21	Wed	55S-33E-27
31	Man	40	19	3-21	Wed	55S-33E-15
32	Man	60	48	3-23	Fri	54S-33E-32
33	Man	20	209	3-23	Fri	53S-33E-17
34	Man	50	100	3-25	Sun	53S-33E-17,18
35	Man	4,077	361	3-25	Sun	50S-30E-10,11,12 13,14,15,16 17,20-26,34, 35
36	Man	340	200	3-25	Sun	53S-33E-16,17
37	Man	50	446	3-29	Thur	53S-31E-12
38	Man	250	1,110	3-29	Thur	52S-30E-8,9
39	Man	125	158	3-30	Fri	53S-32E-7,8
40	Man	200	315	3-31	Sat	54S-34E-29,30
Total, 20 fires		9,236	$16,194			
			APRIL			
W0041	Man	250	$ 450	4-2	Mon	54S-34E-20,21
42	Man	6	157	4-14	Sat	52S-30E-3
43	Man	70	109	4-16	Mon	49S-30E-23
44	Man	2,240	2,459	4-17	Tue	51,52S-30E-1,2 3,10,11,34, 35,36

Fire Number	Cause	Acres	Cost ($)	Date	Day of Week	Location T-R-S
			APRIL (con't)			
W0045	Man	3,200	$ 1,250	5-22	Sun	54,55S-32E-25 26,27,34,35, 36,11,12,1, 2,3,10
46	Man	35	150	4-27	Fri	53S-31E-9
Total, 6 fires		5,801	$ 4,575			
			MAY			
W0047	Lightning	8	33	5-15	Tue	52S-30E-10
48	Lightning	10	111	5-17	Thur	51S-31E-7
49	Man	10	83	5-23	Wed	52S-31E-19
50	Man	60	32	5-24	Thur	52S-31E-18
51	Man	90	62	5-25	Fri	52S-31E-18
52	Lightning	5	18	5-30	Wed	53S-31E-4
Total, 6 fires		177	$ 339			
			JUNE			
W0053	Man	4	29	6-23	Sat	53S-32E-12
Total, 1 fire		4	$ 29			
			JULY			
W0054	Man	70	131	7-1	Sun	52S-30E-9
55	Man	60	101	7-15	Sun	51S-31E-19
Total, 2 fires		130	$ 232			

AUGUST

No fires recorded

SEPTEMBER

No fires recorded

Fire Number	Cause	Acres	Cost ($)	Date	Day of Week	Location T-R-S
			OCTOBER			
W0056	Man	15	$ 0	10-9	Tue	53S-34E-29
57	Man	5	0	10-9	Tue	53S-34E-21
58	Man	8	0	10-9	Tue	53S-34E-19
Total, 3 fires		28	$ 0			
			NOVEMBER			
W0059	Man	200	200	11-10	Sat	53S-34E-30
60	Man	5	59	11-11	Sun	51S-31E-23
61	Man	51	100	11-11	Sun	53S-34E-29
62	Man	1	48	11-11	Sun	52S-31E-35
63	Man	50	200	11-12	Mon	53S-32E-31
64	Man	300	589	11-12	Mon	52S-30E-28
65	Man	375	800	11-18	Sun	52S-31E-20,21
66	Man	5	247	11-30	Fri	53S-31E-7
69	Man	80	25	11-30	Fri	52S-34E-3,4
Total, 9 fires		1,067	$ 2,268			
			DECEMBER			
W0067	Man	670	1,144	12-2	Sun	53S-31E-14,15, 22,23,27
68	Man	790	344	12-2	Sun	53S-34E-20,21 28,29,32,33
70	Man	60	25	12-11	Tue	51S-34E-28
71	Man	35	25	12-11	Tue	51S-34E-16
72	Man	13	92	12-12	Wed	53S-31E-4,9
73	Man	35	76	12-16	Sun	51S-32E-12,13,14
74	Man	10	67	12-16	Sun	51S-32E-2
75	Man	5	11	12-16	Sun	53S-32E-8
76	Man	35	160	12-23	Sun	51S-33E-6,7
77	Man	320	648	12-24	Mon	50S-30E-4,5
78	Man	465	416	12-29	Sat	53S-31E-16,17, 8,9

Fire Number	Cause	Acres	Cost ($)	Date	Day of Week	Location T-R-S
			DECEMBER (con't)			
W0079	Man	210	$ 349	12-31	Mon	53S-34E-8
80	Man	50	101	12-30	Sun	51S-33E-14,15
81	Man	30	53	12-30	Sun	52S-34E-32,33
Total, 14 fires		2,728	$ 3,511			
Annual Total, 72 fires		24,140 (acres)	$28,376			

Table 4. 1979 Fire statistics for Big Cypress National Preserve

	Man-Caused						Pasture-Burning Permit						Lightning						Total		
	No	%	Acres	%	Cost	%	No	%	Acres	%	Cost	%	No	%	Acres	%	Cost	%	No	Acres	Cost
January	9	60	1,585	37	0[a]	-	6	40	2,642	63	0[a]	-	0	-	0	-	0[a]	-	15	4,227	0[a]
February	5	100	736	100	1,228	100	0	-	0	-	0	-	0	-	0	-	0	-	5	736	1,228
March	20	100	9,236	100	16,194	100	0	-	0	-	0	-	0	-	0	-	0	-	20	9,236	16,194
April	6	100	5,801	100	4,575	100	0	-	0	-	0	-	0	-	0	-	0	-	6	5,801	4,575
May	3	50	160	87	177	52	0	-	0	-	0	-	3	50	23	13	162	48	6	183	339
June	1	100	4	100	29	100	0	-	0	-	0	-	0	-	0	-	0	-	1	4	29
July	2	100	130	100	232	100	0	-	0	-	0	-	0	-	0	-	0	-	2	130	232
August	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	0	0
September	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	0	0
October	3	100	28	100	0	-	0	-	0	-	0	-	0	-	0	-	0	-	3	28	0
November	9	100	1,067	100	2,268	100	0	-	0	-	0	-	0	-	0	-	0	-	9	1,067	2,268
December	14	100	2,728	100	3,511	100	0	-	0	-	0	-	0	-	0	-	0	-	14	2,728	3,511
TOTALS	72	89	21,475	89	28,214	99	6	7	2,642	11	0	-	3	4	23	4	162	4	81	24,140	28,376
Averages			298		$392				440		$0				8		$54			298	$350

[a] = no cost assigned for January

Table 5. Fire starts by day of week and by month in Big Cypress National Preserve

	Day of Week															
	Sunday		Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Total	
Month	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
January	12	80	-	-	-	-	2	13	-	-	1	7	-	-	15	100
February	1	20	-	-	1	20	2	40	1	20	-	-	-	-	5	100
March	5	25	-	-	2	10	3	15	3	15	5	25	2	10	20	100
April	1	17	2	33	1	17	-	-	-	-	1	17	1	17	6	101
May	-	-	-	-	1	17	2	33	2	33	1	17	-	-	6	100
June	-	-	-	-	-	-	-	-	-	-	-	-	1	100	1	100
July	2	100	-	-	-	-	-	-	-	-	-	-	-	-	2	100
August	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
September	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
October	-	-	-	-	3	100	-	-	-	-	-	-	-	-	3	100
November	4	44	2	22	-	-	-	-	-	-	2	22	1	11	9	99
December	8	57	2	14	2	14	1	7	-	-	-	-	1	7	14	99
	33	41	6	7	10	12	10	12	6	7	10	12	6	7	81	98

Table 6. Vegetation types within the Big Cypress National Preserve (McPherson, 1973). The cypress forest has been subdivided into three units and apparent fire requirements/effects on each community have been added by this author.

Vegetation Type	Acres	Fire Requirements/Effects
1. Cypress forest	249,000	
a. cypress strands		Destroyed by fire during drought
b. cypress domes		Destroyed by fire during drought
c. cypress prairie		Burned frequently by man, (almost annually). Affected adversely by fire during dry seasons.
2. Prairies	137,600	Burned almost annually
3. Pine forest	102,400	Burned almost annually, probably adversely affected by fire during the dry season.
4. Mixed swamp forest	37,120	Potentially destroyed by fire.
5. Inland marsh	23,680	Potentially destroyed by fire, especially during drought conditions.
6. Hammock forest	9,600	Potentially destroyed by fire.
7. Coastal forest	7,680	Unknown, fires are rare.
8. Coastal marsh	5,120	Fire occurs naturally, but frost is a more important influence.
9. Agricultural/disturbed	3,200	Fire may be required to control exotic plants/may carry fire annually.

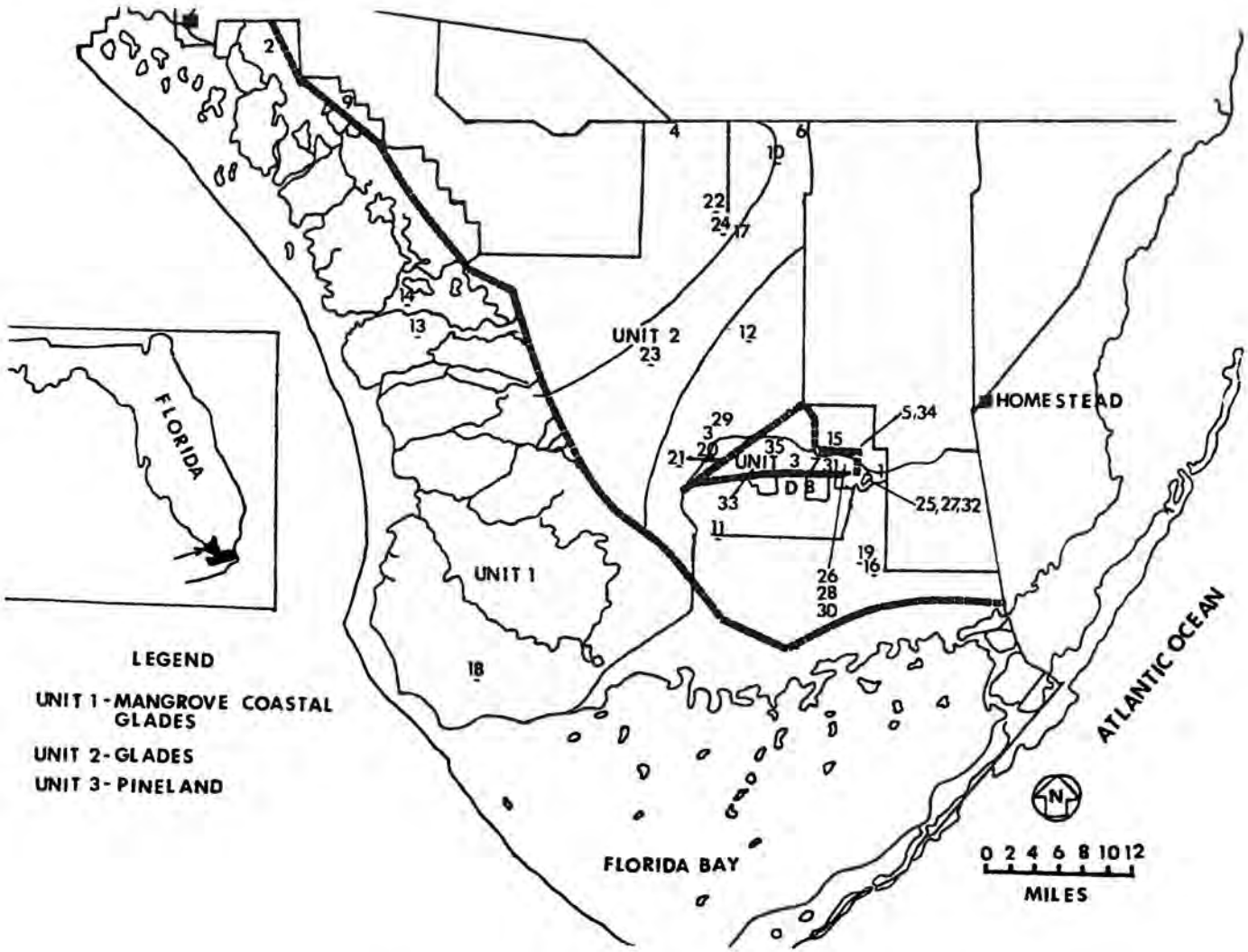

Figure 1. Approximate location of 1979 fires within Everglades National Park.

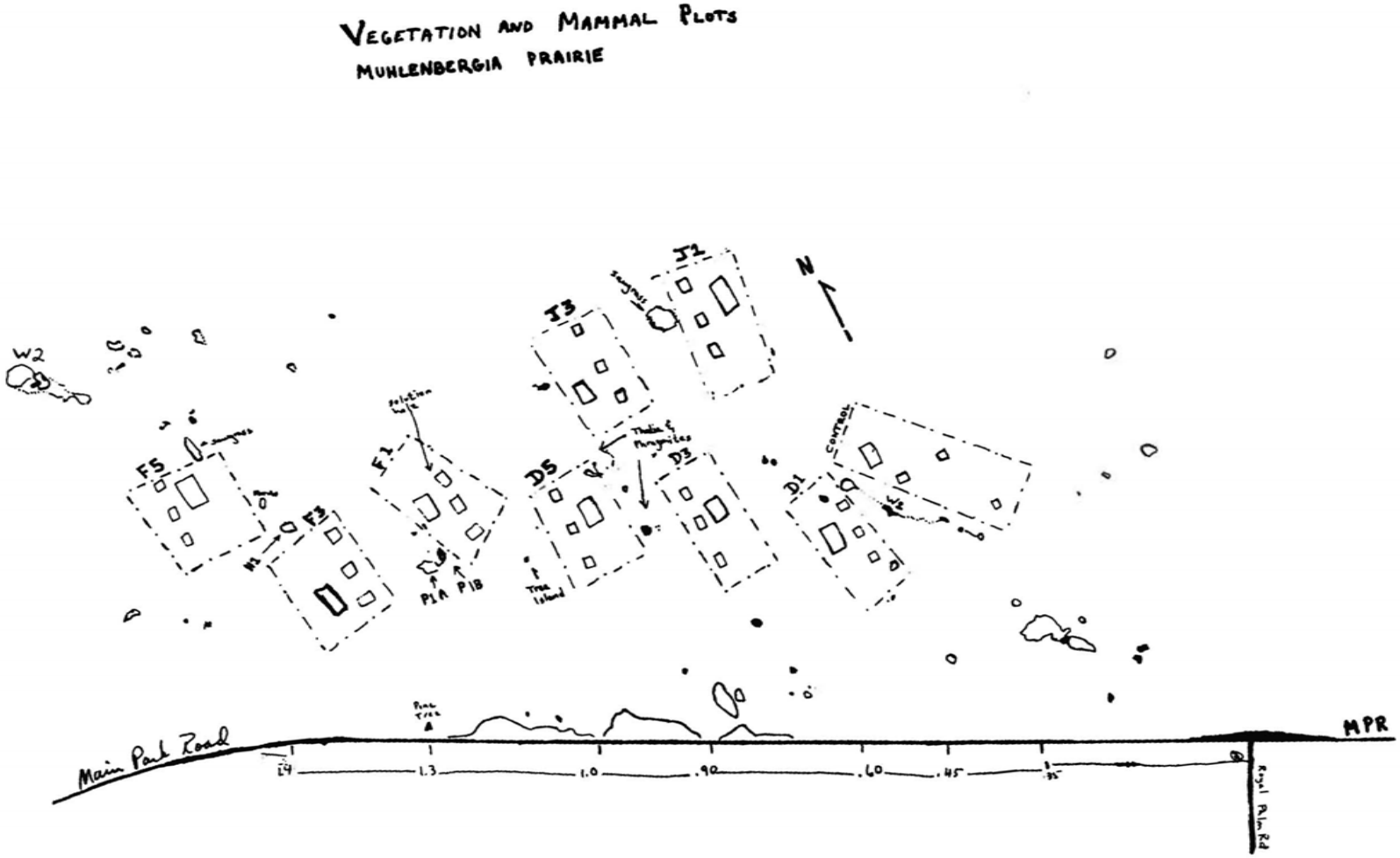

Figure 2. Location of study plots in Muhlenbergia prairie.

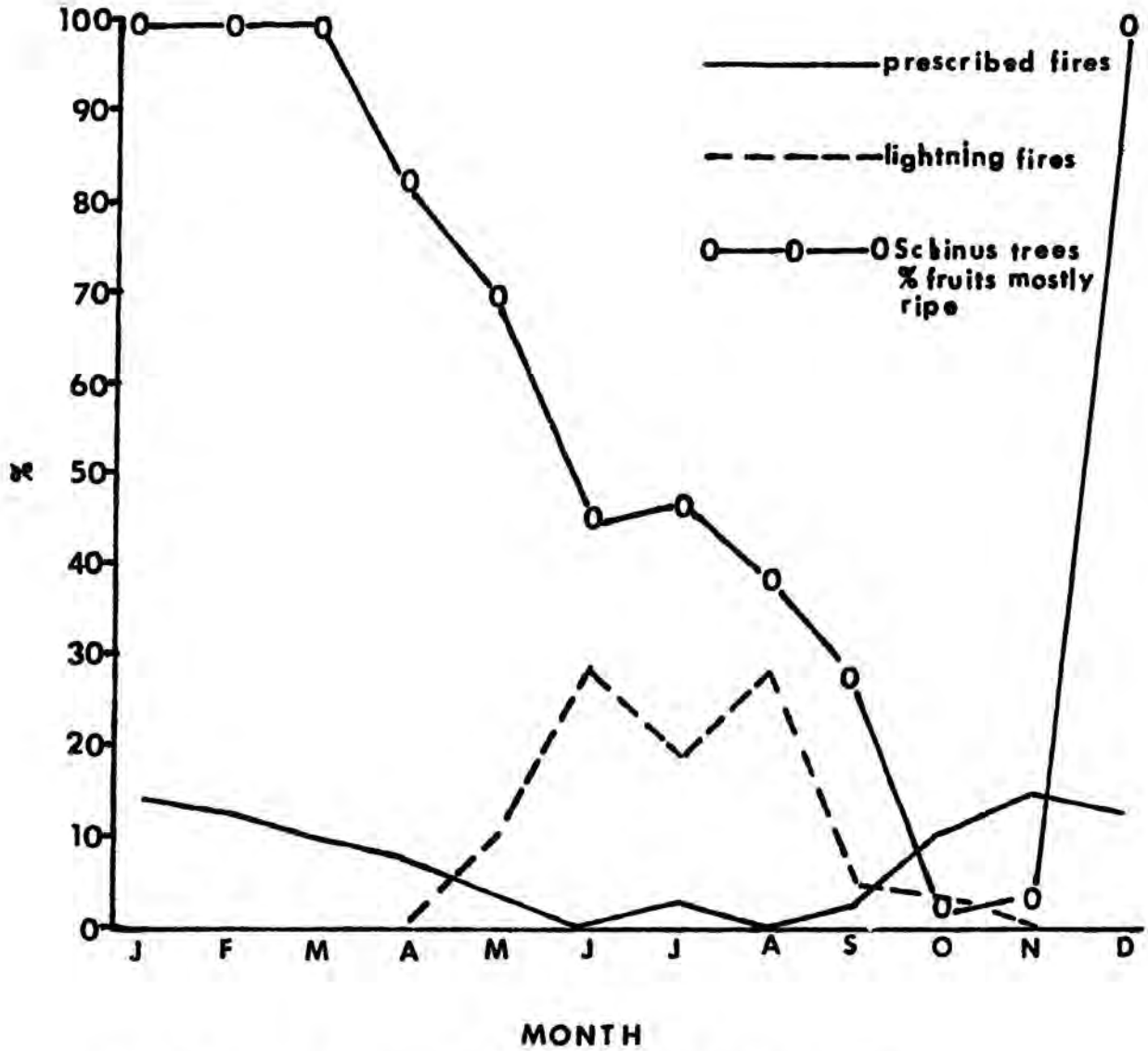

Figure 3. Time of prescribed fire and lightning fire occurrence relative to Schinus fruit phenology in Everglades National Park (from Ewel 1980 and Taylor 1980).

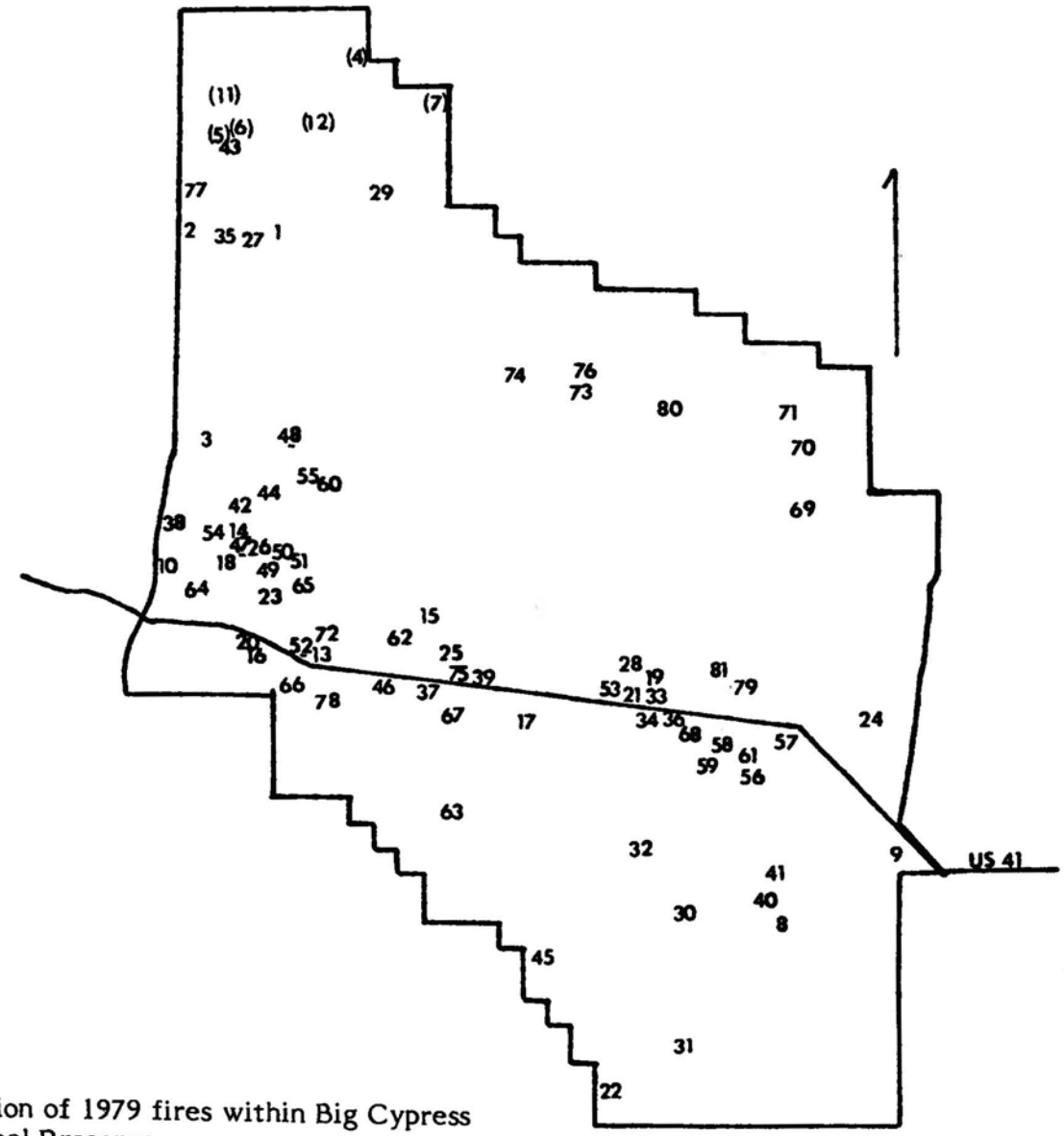

Figure 4. Location of 1979 fires within Big Cypress National Preserve

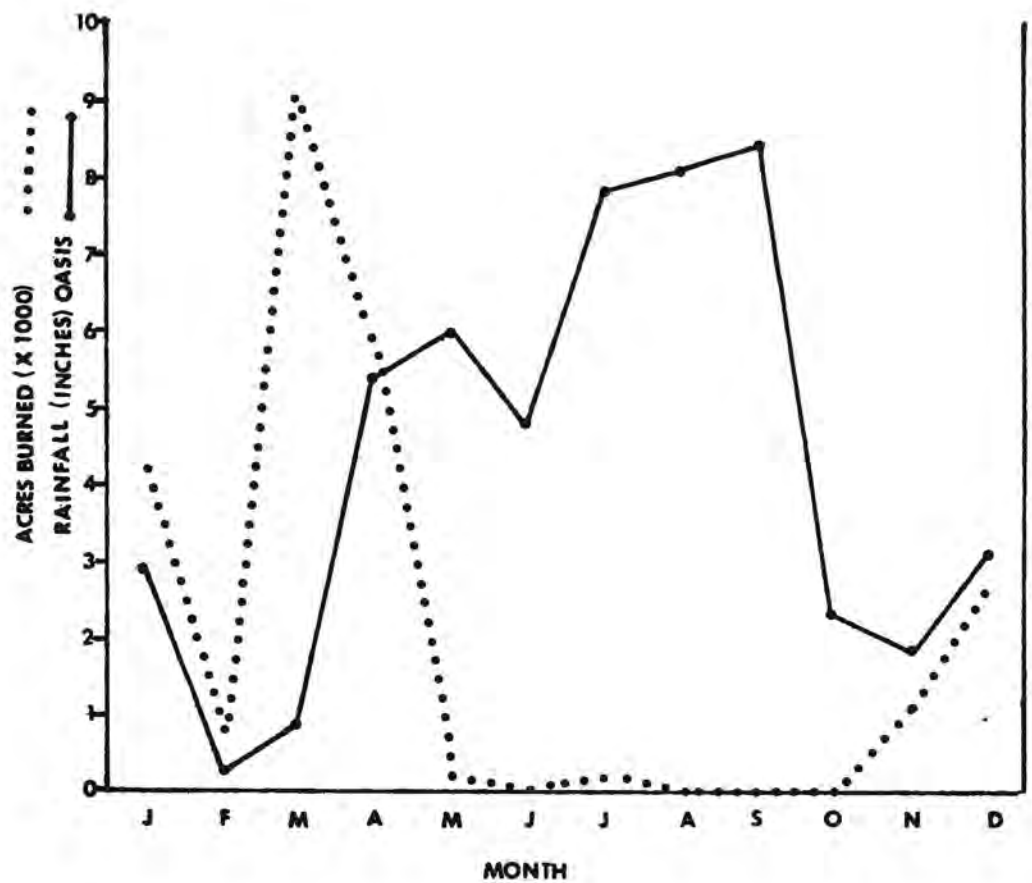

Figure 5. Rainfall and acres burned by month due to all causes in Big Cypress National Preserve.

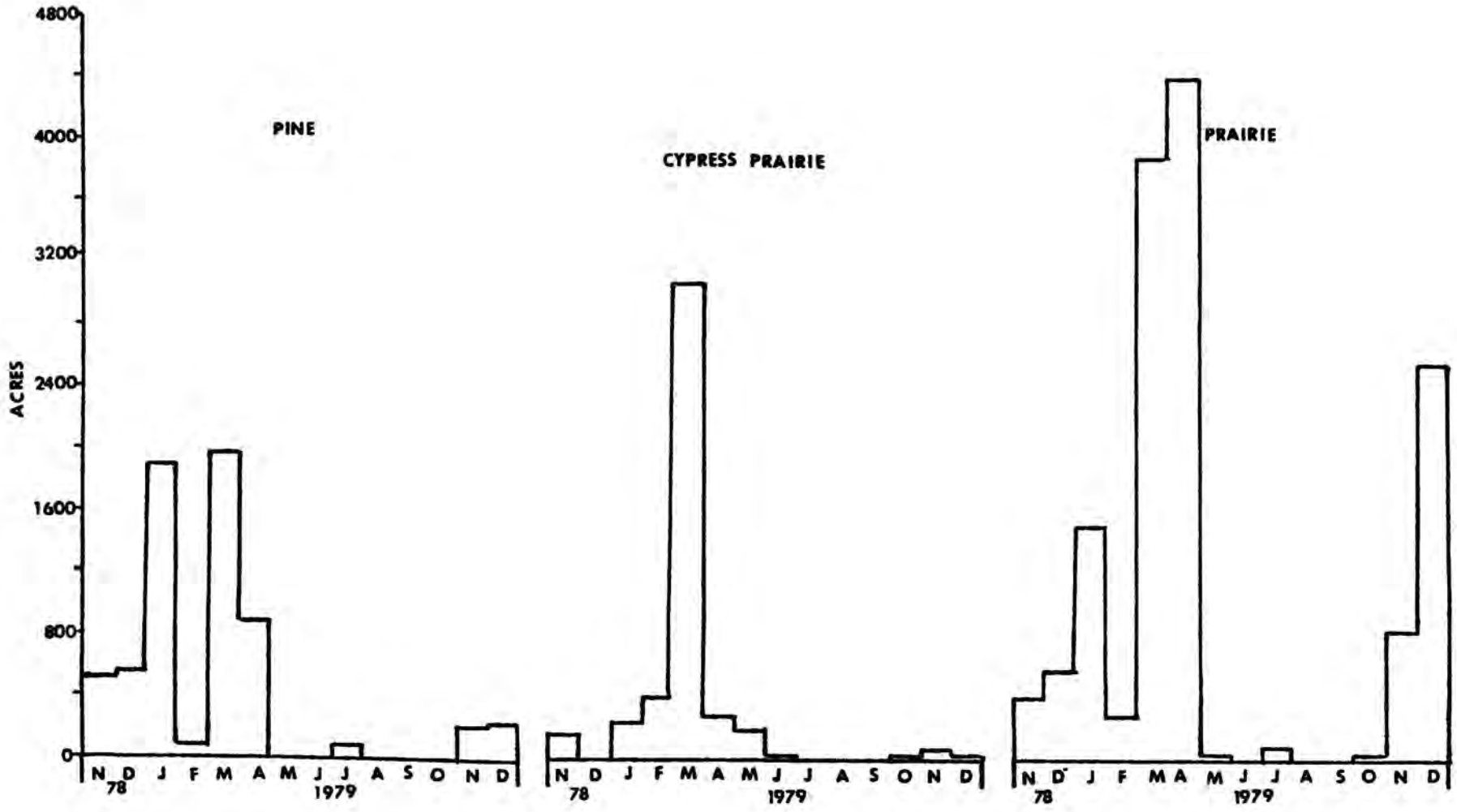

Figure 6. Number of acres burned by month in three vegetation types within Big Cypress National Preserve.