ALASKA DEPARTMENT OF FISH AND GAME

JUNEAU, ALASKA

STATE OF ALASKA
Bill Sheffield, Governor

DEPARTMENT OF FISH AND GAME
Don W. Collinsworth, Commissioner

DIVISION OF GAME
W. Lewis Pamplin, Jr., Director
Robert A. Hinman, Deputy Director

ANNUAL REPORT OF SURVEY-INVENTORY ACTIVITIES

PART VI. DEER

Edited and Compiled by
Alma Seward, Publications Technician

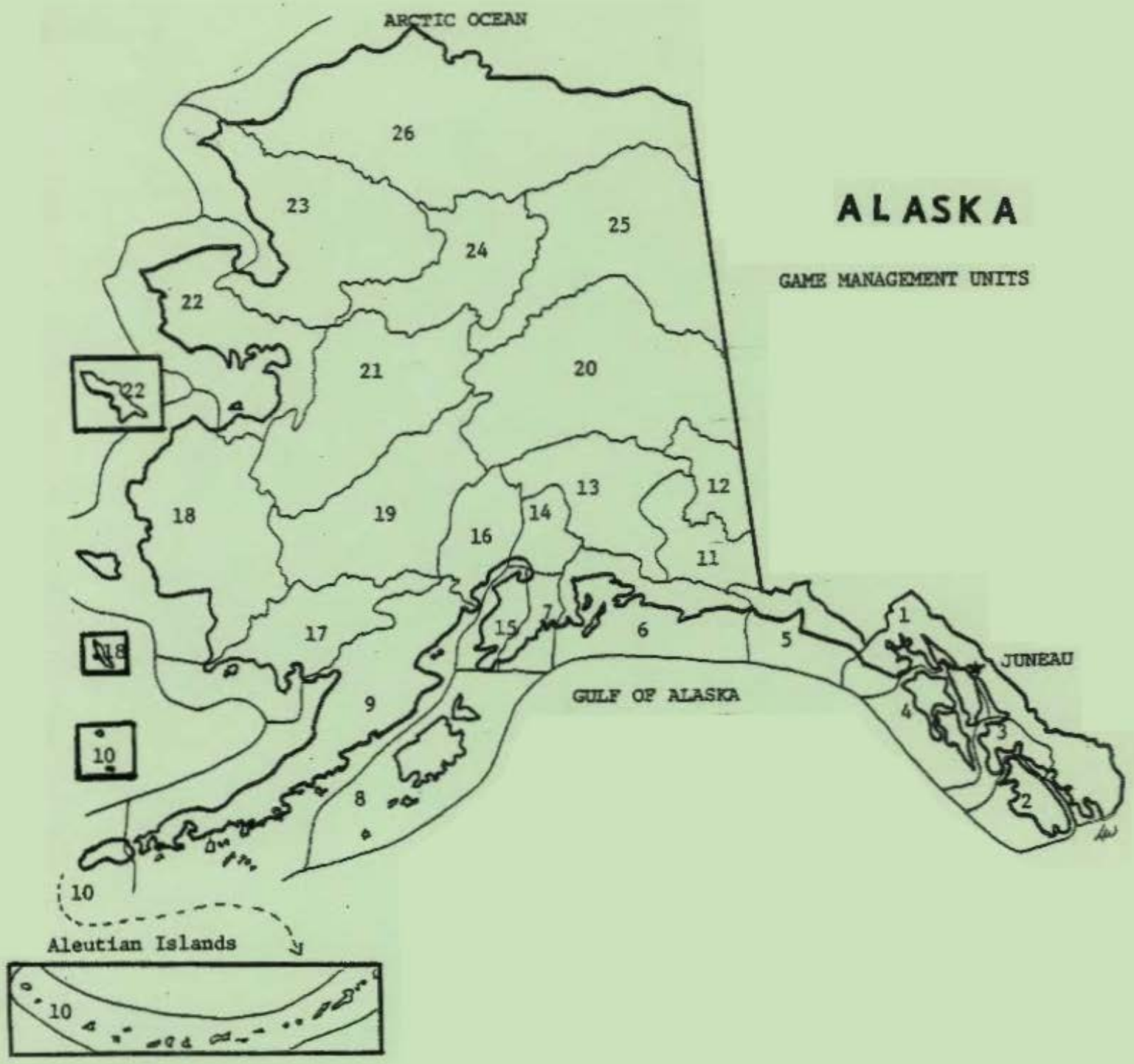
Volume XV

Federal Aid in Wildlife Restoration

Project W-22-3, Job 2.0

(Printed February 1985)

CONTENTS


ARCTIC OCEAN
ALASKA
GAME MANAGEMENT UNITS
26
23
25
24
22
21
20
22
18
19
16
14
13
12
11
17
15
7
6
5
1
JUNEAU
GULF OF ALASKA
18
9
4
10
3
8
2
10
Aleutian Islands
10

Statewide Harvest and Population Status

With another mild winter, deer populations generally improved or stayed at high levels. Both Unit 8 and Unit 4 continue to have very high deer populations. Little natural mortality was noted in 1983-84, except for portions of Raspberry and northern Kodiak Islands, where mortality was low to moderate. Populations in Units 1A and 3 remain low, and are recovering only slowly; those in Unit 2 are increasing.

Deer harvests, estimated from questionnaire data, were highest in Units 4 (8,500) and 8 (6,225). Statewide harvest is estimated to be about 18,600 deer.

Unit	Hunter Harvest	Population Status
1A	393	low
2	1,655	moderate, increasing
1B	19	low
3	86	low to moderate
1C	497	moderate
4	8,500	high
6	1,234	high
8	6,225	high

Robert A. Hinman
Deputy Director

DEER

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 1A and 2

GEOGRAPHICAL DESCRIPTION: Ketchikan Area and Prince of Wales Island

PERIOD COVERED: 1 July 1983-30 June 1984

Season and Bag Limit

See Hunting Regulations No. 24.

Population Status and Trend

Deer populations in most of GMU 1A appear to be relatively stable, while in the northern and western portions of GMU 2 populations appear to be increasing and are currently at fairly high levels. There are still major portions of both units, however, where deer numbers remain low.

Permanent pellet group transects were established and read in 4 areas during April 1984. Of these 4 areas, Hecata Island had the highest deer densities, while Revilla Island had the lowest. Deer per square mile estimates at 70% CL were: Hecata Island, 45-96; Gravina Island, 35-65; Helm Bay, 20-45; and Revilla Island, 9-24. Over a period of years, these transects should provide population trend information.

Population Composition

No data were available.

Mortality

Winter 1983-84 was very mild throughout GMU 1A and 2. No significant winter mortality was expected, and the beach winter mortality transects were not walked. Field observations and other reports indicated no mortality due to winter conditions and the few dead deer examined were in excellent condition.

Harvest information and hunter data for the 1983 hunting season were obtained from a mail survey of 25% of the 11,380 Southeast licensees who received deer harvest tickets. Three mailings were sent and 1,653 returns (58% of the sample) were received from the 3 mailings. Seventy-two percent of all harvest ticket holders actually hunted. Figures used in this report are estimated totals based on the 25% sample.

Tabulations were made by game management unit and area. Consequently, a hunter who hunted in more than 1 area or more than 1 GMU will be tallied as a hunter in each of those GMUs or areas.

In Subunit 1A, 876 hunters spent 4,621 days in the field and killed 393 bucks. Thirty-one percent of the hunters were successful. Average number of days hunted was 5.3, and 11.8 hunter days were expended per deer taken. All calculations indicate slightly better hunting this year than in 1982.

Eighty-five percent of the hunter effort in Subunit 1A occurred on Revilla and Gravina Islands. Hunter success was 36% on Gravina Island and 20% for the rest of the subunit.

In Unit 2, 1,462 hunters killed 1,655 deer in 10,545 days of hunting. Sixty-three percent of the hunters were successful and 1.1 deer per hunter were taken. The number of hunters, the number of deer killed and hunter success were all up from last year. Hunter success was again much higher in Unit 2 than in Subunit 1A.

Most of the GMU 2 harvest was taken from the northern half of Prince of Wales Island and coincided closely with the interconnected logging road system on the island. About 85% of the GMU 2 harvest and hunter effort took place in this area.

The best hunter success in terms of deer per hunter day was on Hecata Island. There, 4.6 hunter days were expended for every deer taken, compared to 6.3 hunter days per deer taken for the road system area. The lowest success was in the southwest part of the Island, 8.4 days per deer taken.

The roaded portion of Unit 2, while having deer populations at the same or lower levels than the outer islands of Unit 2, is attractive to many hunters because of the ease of hunting from a road system. None of the problems generally associated with boat travel are involved, and the popularity of this area is shown when the hunting efforts of only Ketchikan residents are tabulated. Of the 8,917 hunter days spent in the roaded area, 4,122, or 46%, were by Ketchikan hunters. In all of Unit 2, Ketchikan hunters spent 4,940 days hunting, and 83% of this time was on the roaded portion of Prince of Wales Island. Of the total hunter days spent in all areas by Ketchikan hunters, 44% were in this roaded area of Unit 2. Considering the effort involved for Ketchikan residents in getting to the roaded section of Unit 2, these figures indicate a strong preference for that type of hunting.

Management Summary and Conclusions

Deer populations in much of Unit 2 appear to be increasing, and some areas are already at a fairly high level. In Subunit 1A, the indications show generally stable to slightly increasing deer numbers. Range conditions appear good in both game management units and with the exception of a few smaller islands, are probably capable of supporting higher deer numbers.

The harvest is currently concentrated in the northern half of Prince of Wales Island along the road system. This concentrated effort will probably continue in that area, and even increase, as ferry access improves and knowledge of the area spreads among hunters.

Some consideration will be given to recommending antlerless seasons in the areas of higher deer numbers.

PREPARED BY:

Robert E. Wood
Game Biologist III

SUBMITTED BY:

Steven R. Peterson
Acting Management Coordinator

DEER

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 1B and 3

GEOGRAPHICAL DESCRIPTION: 1B - Alaska Mainland from Cape Fanshaw to Lemesurier Point on Cleveland Peninsula

3 - Islands of the Petersburg, Kake, and Wrangell Area in Southeast Alaska

PERIOD COVERED: 1 July 1983-30 June 1984

Season and Bag Limit

See Hunting Regulations No. 24.

Population Status and Trend

Sitka black-tailed deer are found on most of the islands in Game Management Unit 3 and on the mainland area of Subunit 1B. Populations in these units have periodically reached peaks in the past and then crashed. These declines can be attributed to many factors, of which the most prominent are severe winter weather, predation by wolves, excessive or illegal hunting, and deterioration of the range from overpopulation and clear-cut logging.

Winter surveys were not conducted during the period, since winter 1983-84 was again a mild one with little persistent snow. Deer have not been forced to the beach by deep snows since winter 1981-82.

Spring pellet group surveys were conducted on Etolin, Kuiu, Kupreanof, and Mitkof Islands. The survey plots measured 20 m^2 and were positioned along a predetermined compass course.

Although there have been reports from bear hunters and loggers of increasing deer populations in the Security Bay area of Kuiu Island, pellet group surveys ($\underline{N}$ = 360) in that area indicated extremely low deer numbers (Table 1), based on a count of 0.02 pellet groups/plot. There is no open season on Kuiu.

A count of 0.19 pellet groups/plot ($\underline{N}$ = 312) in the vicinity of Castle River and on adjacent Big Castle Island was recorded for Kupreanof Island. Kupreanof is closed to deer hunting.

Mitkof Island had the highest count, with 0.89 pellet groups/plot ($\underline{N}$ = 295) in the area adjacent to Wrangell Narrows and 1.08 pellet groups/plot ($\underline{N}$ = 115) in the Woodpecker Cove area. Deer spotlight surveys were conducted in May and June 1984 in the Woodpecker Cove area and on the Dry Straits road area of Mitkof Island.

On Etolin Island where the season is currently open, plots surveyed ($\underline{N}$ = 321) on south Etolin and on adjacent Brownson Island showed 0.36 pellet groups/plot.

Deer pellet group counts should not be used to determine actual populations in Unit 3, because many variables influence the data. Problems include the following: defecation rates may vary with diet and season; persistence of pellets is not known for the sampled areas; experience and visual acuity of observers vary; visibility of pellets is affected by light conditions, vegetation and terrain; and pellets are not evenly distributed. The technique can be useful for determining annual trends in the populations and for comparison of deer populations on different islands (M. Thomas, pers. commun.) A population index interpreted as deer/mi^2 was developed for comparative purposes. The index is an estimate based on a use period of 180 days (Fisch 1979), and an arbitrary defecation rate of 13 groups/deer/day. Pellet group surveys indicate a wide variation in populations throughout Unit 3 (Table 1).

Deer were also censused on Mitkof Island utilizing an experimental technique, the spotlight count. The method employed a driver and 2 observers using spotlights. Visibility in yards was recorded at 0.1 mi intervals, and the average width was multiplied by the length of the transect to determine the visible area. Six transects were established in the Woodpecker Cove area, an area which has an extensive road system and a growing deer population. Deer numbers observed varied from 5 to 40 deer/mi^2 (Figure 1). Data collected on 3 combined lines which were run 10 times between 29 May and 21 June indicated a sharp drop in deer observability after mid-June (Figure 1). Spotlight census would be most effective in April and early May before visibility is reduced by prolific vegetation growth, and before deer begin to move into alpine areas.

The acreage observable was directly attributable to the amount of clear-cut area along the transect. Deer were rarely seen in old-growth areas, since visibility was poor in that vegetation type. Succulent growth in recent clear-cuts in early spring attract deer, but as conifers began to dominate, deer use declines drastically (Schoen and Wallmo 1979). This phenomenon was evident during spotlight surveys.

Population Composition

Binoculars were used to determine the sex of deer seen on Mitkof Island spotlight counts. The presence of antlers or antler pedicels was used to identify bucks. Antlers were in velvet and could be seen when deer looked directly at the observer. A deer call was used to attract the attention of deer so that the top of the head could be observed.

The observations of known-age deer yielded a sex ratio of 77 bucks:100 does. Fawn counts showed 22 fawns:100 does, a number which is thought to be low because fawning was not completed by 21 June when counts were completed. The bulk of the sightings (54%) were of deer which could not be identified as to sex or age. No composition data were collected elsewhere in the project area.

Mortality

A survey designed to determine the legal kill was mailed to a sample of licensed hunters who obtained deer harvest tickets in southeast Alaska during the 1983 hunting season. It was estimated from the survey results that 324 hunters took 86 bucks in Game Management Unit 3, while 76 hunters took 19 bucks in Subunit 1B (Table 2).

Area 25 (Figure 2), which includes Sokolof, Vank, and Woronkofski Islands, was again the most popular hunting area in the 2 game management units, and accounted for 71% of the hunters and 80% of the deer harvest in Game Management Units 1B and 3. Hunting success was highest on the mainland south of Thomas Bay, in Areas 28 and 29 (Table 2).

While established mortality transects were not sampled, no dead deer were located during the pellet group surveys. There was little chance of winter-caused mortality in Game Management Units 1B and 3 because of the mild weather and excellent habitat conditions.

An opinion questionnaire was provided to hunters who applied for mountain goat registration permits in Petersburg and Wrangell in 1983. A total of 84 hunters completed the questionnaire. Hunters were asked: "What is the single largest factor controlling deer numbers in the Petersburg/Wrangell area at present?" Of the 26 Wrangell hunters, 42% listed predation, 38% listed weather, 21% listed hunting and/or poaching, 8% listed habitat, and 21% had no opinion. Several listed more than one of the above factors as being equally important. In Petersburg, 42% of the 58 hunters listed predation as a factor, 27% listed hunting and/or poaching, 13% listed weather, and 7% listed habitat. Lack of breeding stock

and predation by stray dogs got 1 vote each, while 8% of the respondents did not express an opinion. Many listed several of the above factors as being equally important.

Summary

Pellet group data on a portion of Mitkof Island showed a population index of 31-74 deer/mi^2 (70% confidence interval), while observed populations on spotlight census counts varied from 5 to 40 deer/mi^2. The same techniques will be used in 1985 to determine the trend of the population. Pellet group surveys and spotlight counts provide the basis for a deer population index which is useful in determining trends.

Hunters accounted for an estimated 105 bucks during the 1983 season. Winter mortality was not an important factor during the report period.

Literature Cited

Fisch, G. 1979. Deer pellet deterioration. In O. C. Wallmo and J. W. Schoen, eds. Sitka black-tailed deer--Proc. of a conference in Juneau, Alaska. U.S. Dep. Agric., For. Serv., in coop. with Alaska Dep. Fish and Game. Series No. R10-48.

Wallmo, O. C., and J. W. Schoen. 1980. Response of deer to secondary forest succession in southeast Alaska. For. Sci. 26(3):448-462.

PREPARED BY:

E. L. Young, Jr.
Game Biologist

SUBMITTED BY:

Steven R. Peterson
Acting Management Coordinator

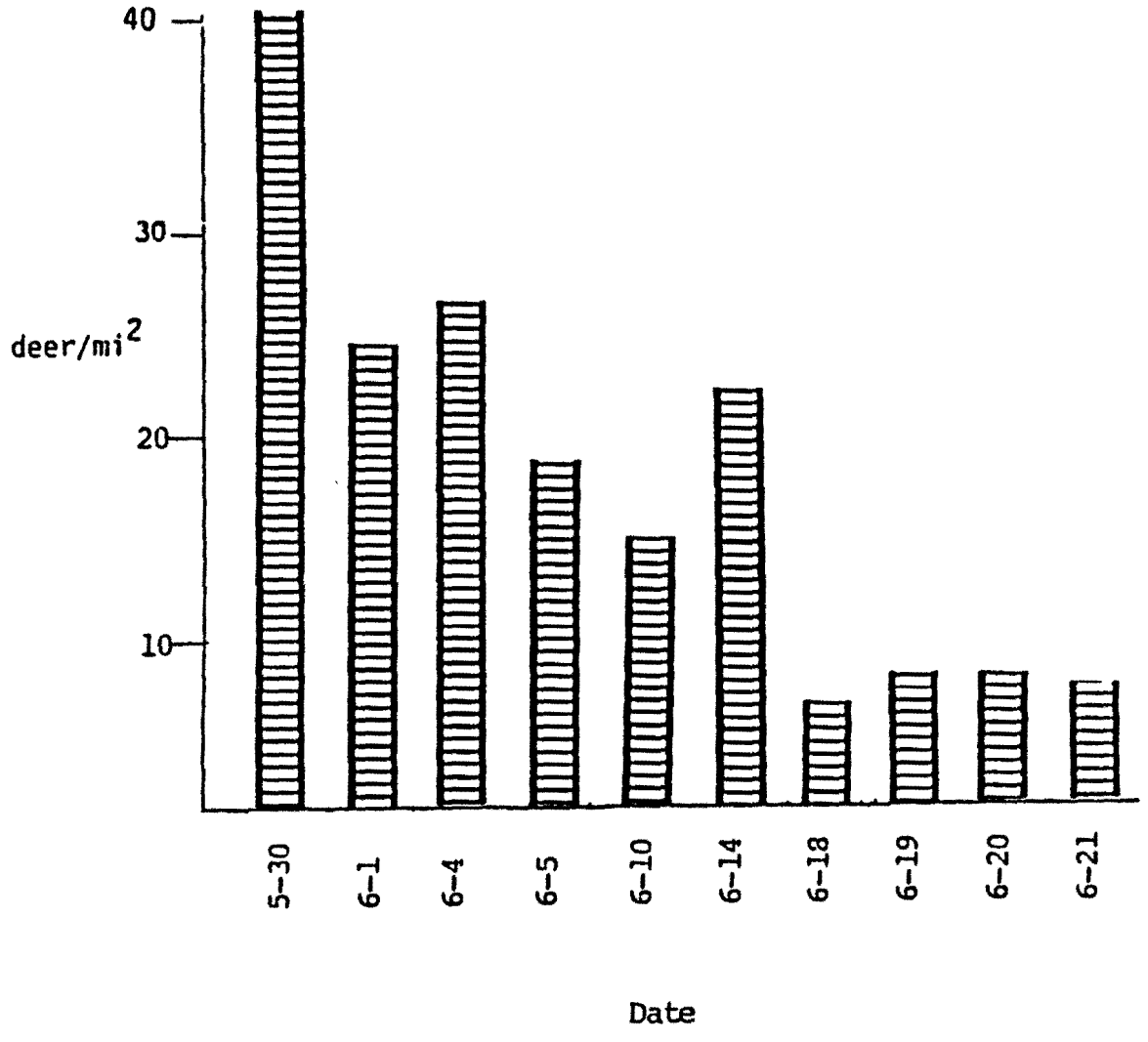


Figure 1. Deer observed on spotlight counts, Mitkof Island, 1984

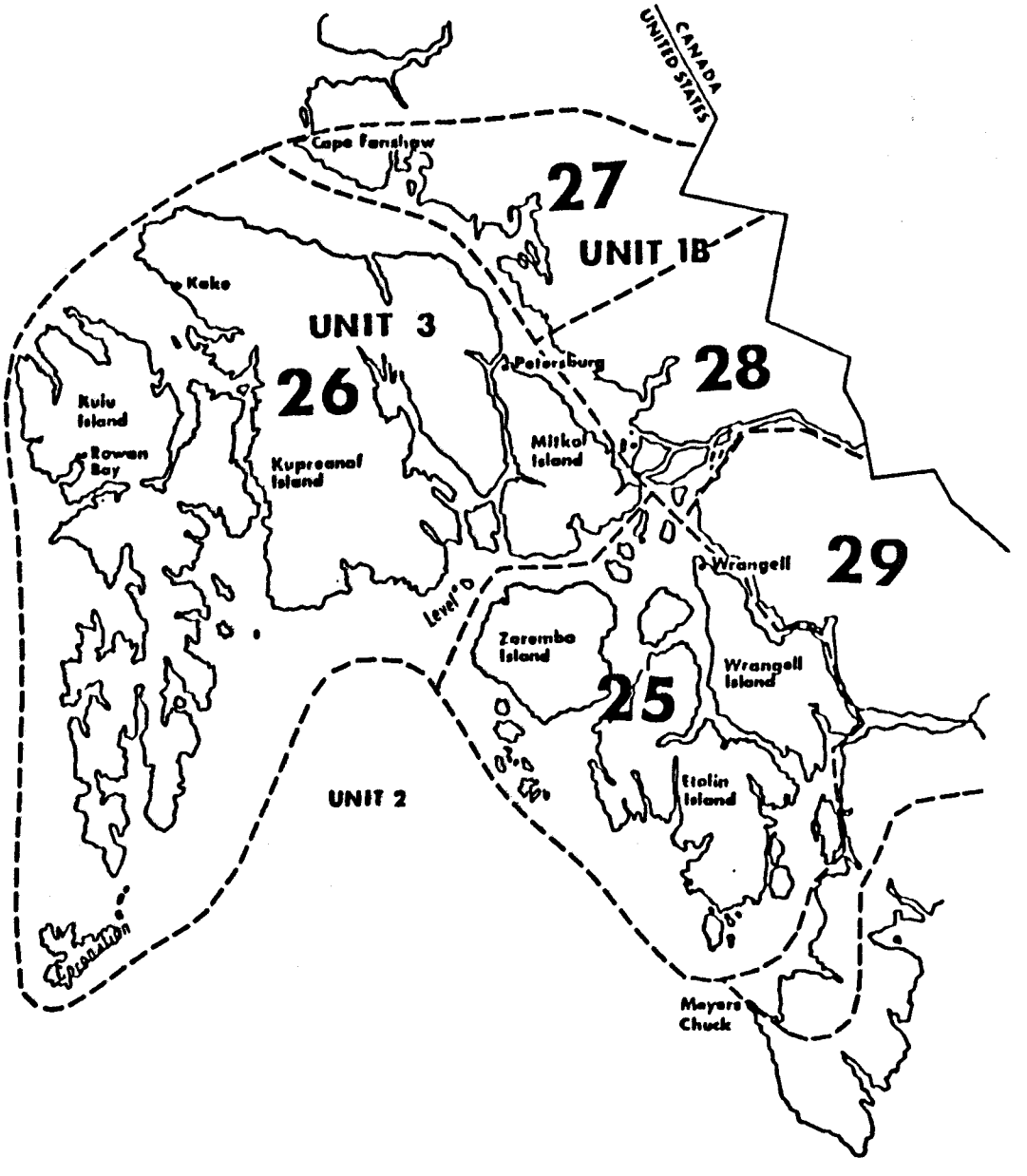


Fig. 2. Deer harvest areas reported by hunters

Table 1. Results of 1984 pellet group surveys[a] in Game Management Unit 3.

Area	Island	Groups/plot	No. plots	Deer/mi^2
Security Bay	Kuiu	0.02	360	1-3
Castle River	Kupreanof	0.19	312	5-18
Wrangell Narrows	Mitkof	0.89	295	31-74
South Etolin	Etolin	0.37	321	12-32

[a] At 70% confidence interval (analysis provided by M. Thomas).

Table 2. 1983 deer harvest results[a], Subunit 1B and Unit 3.

Area	No. hunters	Successful		No. days hunted	Days/deer	No. deer killed
		N	%			
25	290	76	26%	1,255	15.2	83
26	21	0		76	--	--
27	34	0		117	--	--
28	21	7	33%	34	5.0	7
29	41	14	33%	76	5.5	14
Totals	407	97		1,558	15.0	104

[a] Data provided by R. Flynn.

DEER

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 1C

GEOGRAPHICAL DESCRIPTION: Mainland from Cape Fanshaw to latitude of Eldred Rock

PERIOD COVERED: 1 July 1983-30 June 1984

Season and Bag Limit

See Hunting Regulations No. 24.

Population Status and Trend

After 2 consecutive mild winters, deer populations in Subunit 1C are believed to be in good condition.

Pellet transects were established on Shelter and Lincoln Islands in 1984 to assess relative changes in deer population levels from year to year. Transects will also be established on Douglas Island, and all will be analyzed yearly.

Mortality

One of every 4 deer harvest ticket holders who were issued harvest tickets in southeastern Alaska in 1983 were mailed a questionnaire to assess harvest and hunter pressure. Based on 42% of this sample ($\underline{N}$ = 2,876 harvest ticket holders) and 14.5% of the total harvest tickets holders ($\underline{N}$ = 11,380), it is estimated that 869 hunters spent a total of $\overline{3}$,110 days hunting deer in Subunit 1C and killed 497 animals (276 males and 221 females), averaging 0.57 deer/hunter. The mean number of days spent hunting deer was 3.58 days/hunter. The success rate was 19%.

The survey also showed that Juneau area hunters, including Auke Bay and Douglas, favored Admiralty Island in Unit 4 to hunt deer in 1983. The area most often hunted in Subunit 1C was Douglas Island, a 4-1 margin over the next area.

Management Summary and Recommendations

Despite fewer hunters and a success rate equal to 1982, the deer harvest increased 67% in Subunit 1C. The reason for the increase was a higher individual take (3 deer/hunter in 1983 vs. 1.5 deer/hunter in 1982), suggesting a much improved deer

population. Bucks comprised 56% of the reported harvest, essentially the same (55%) as in 1982.

The winter of 1983-84 was also mild, and further increases in deer numbers are expected for 1984-85.

The loss of deer habitat in Subunit 1C due to urbanization and logging will reduce deer populations in those areas affected.

PREPARED BY:

David W. Zimmerman
Game Biologist II

SUBMITTED BY:

Steven R. Peterson
Acting Management Coordinator

DEER

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 4

GEOGRAPHICAL DESCRIPTION: Admiralty, Baranof, Chichagof, and adjacent Islands

PERIOD COVERED: 1 July 1983-30 June 1984

Season and Bag Limit

See Hunting Regulations No. 24.

Population Status and Trend

Mild winter weather prevailed during winters 1983-84, and natural mortality was very low. The current pattern of mild winters extends back to the early 1970's. Winter severity (i.e., snowfall) is the greatest influence on deer numbers, so deer populations over most of Unit 4 are presently high. It is likely that the current population is at or above the carrying capacity of the range, at least on areas of undisturbed habitat. Existing deer numbers on areas of disturbed habitat, notably clear-cuts, are artificially high because of good winter survival conditions.

Population Composition

Classification counts, which have been recorded on an opportunistic basis, show fawns to represent about 20% of all deer classified (see Table 1). As was noted in the 1981 Deer S&I report for Unit 4, the significance of these data is not clear, owing to the fact that there are no baseline data, particularly reproductive data, for comparison. Twenty percent young-of-the-year appears somewhat low in a population of ungulates. A low reproductive rate might well be expected in Unit 4 where the habitat is probably fully stocked.

Mortality-Natural

Little or no natural deer mortality is observed in southeastern Alaska following mild winters, using beach mortality transect techniques. Nonetheless, to provide continuity of data, 13 1-mi transects were examined in spring 1984. No instances of winter mortality were observed. In addition, vertical hillside transects to measure pellet group densities were read in spring 1984. The results of these studies will be presented elsewhere, but no instances of natural mortality were observed in the approximately 32 mi of transects read.

Mortality-Regular Season

The regular season harvest in 1983 was determined using a harvest questionnaire sent to a random sample of deer harvest ticket holders. The procedure for this questionnaire was described in the 1982 report. The 1983 harvest estimate was based on a random sample of 14.5% of all harvest ticket holders.

The results of the 1983 survey (see Tables 2 and 3) show that persons pursuing deer in Unit 4 had excellent success, taking a near record harvest of about 8,500 deer, which was over 75% of the regionwide total harvest. The 1983 data showed an increase in the number of deer taken per hunter, a reduction in days of hunting effort expended per deer taken, and a high percentage of bucks taken. All of these factors are indicative of a high deer population, especially when the harvest was taken with little or no snow present.

The hunter survey provides additional data on human use of Unit 4 deer. This information is available in regional and area office files and can be readily retrieved for specific purposes.

West Admiralty Special January Season

Residents of the community of Angoon have frequently expressed a desire to legally utilize the abundant deer resource in their area during the month of January. That interest has typically been expressed in the form of a post-season petition for an emergency season extension, which has always been rejected. In 1983, Angoon submitted a formal regulatory proposal for a scheduled season during January. The Board of Game adopted that proposal for January 1984. The hunt was regulated by a registration permit system. Conditions of the permits were that each person wishing to participate must obtain a permit in person at the temporary Alaska Department of Fish and Game field office in Angoon. Permits were good for 1 deer of either sex. Upon reporting a deer kill within 5 days and providing the jaw and required biological specimens (reproductive tracts from female deer), a 2nd permit could be obtained. Specimens from and timely reporting of the 2nd deer were also required. Permits were nontransferable, and a valid 1984 hunting license was required where appropriate.

Seventy-three persons obtained permits: 48 from Angoon, 19 from Juneau, and 6 from elsewhere in Alaska. These persons reported taking 7 deer: 5 bucks and 2 does. Three of the successful hunters were from Angoon and 4 were from Juneau. One person, a former resident of Angoon now living in Juneau, took 2 deer.

The rather limited interest in the hunt was influenced by 3 factors. First, deer were extremely plentiful throughout Unit 4 in 1983 so most persons, including the residents of Angoon, were able to obtain their desired harvest during the regular season. Second, weather conditions were warm and rainy in January so deer were not readily available at lower elevations. Third, there was a surprisingly substantial percentage of Angoon people who stopped by the field office to express their view that deer taken in January are not especially palatable.

Management Summary and Recommendations

The mild winters of 1982-83 and 1983-84 were favorable for over-winter survival of deer. It is assumed the Unit 4 deer populations, on areas of unaltered habitat, are at maximum desired levels. A staff-developed regulation adopted by the Alaska Board of Game, effective for the 1984 season, should provide for the maximum consumptive utilization of this resource.

Winter mortality and accelerated timber harvests, which are concentrated in the critical high volume stands of old-growth timber, continue to be the only serious impacts on deer numbers in Unit 4.

PREPARED BY:

Loyal J. Johnson
Game Biologist III

SUBMITTED BY:

Steven R. Peterson
Acting Management Coordinator

Table 1. Annual deer classification counts, Game Management Unit 4, 1979-1984.

Year	No. deer classified	No. fawns	Percent fawns	Remarks
1979-80	74	9	12	Late summer only
1980-81	363	58	16	Late summer only
1981-82	1,264	302	24	Heavy snow
1982-83	417	77	16	Yearlong
1983-84	476	97	20	Late summer only

Table 2. GMU 4 1983 deer harvest statistics by community.

Community	Total number harvest tickets issued	Total Unit 4 hunters	Estimated harvest
Sitka	2,192	1,688	3,162
Juneau	3,301	1,996	2,740
Petersburg	672	329	725
Ketchikan and residents of GMU 1A and 2	3,190	69	140
Wrangell	716	130	155
Hoonah	368	297	658
Angoon	100	100	209
Pelican	92	59	105
Kake	83	69	103
Port Alexander	13	11	28
Tenakee Springs	53	42	85
Gustavus	46	37	64
Haines/Skagway	185	59	60
Elfin Cove	16	8	3
Funter Bay	2	0	0
Other	332	121	164
Totals	11,361	5,015	8,401

Table 3. Annual deer harvest data for Game Management Unit 4, 1969-1983.

Year	Total kill[a]	Percent males	Days hunter effort/deer	Deer/ hunter	Winter mortality /mi of transect
1983	8,400	74	3.7	1.7	0.00[b]
1982	5,630	72	4.7	1.3	0.00[c]
1981	5,700[d]	77	3.8	1.5	1.25
1980	4,500	75	6.7	1.4	0.00
1979	950	70	4.5	1.0	0.00
1978	2,024	70	2.5	1.1	0.72
1977	2,945	ND[e]	1.6	1.2	0.00
1976	1,475	67	7.5	0.7	0.00
1975	4,247[f]	57	2.2[g]	2.1[g]	0.96
1974	7,118	57	3.1	2.3	0.41
1973	7,000	67	3.5	2.5	0.78
1972	2,500	54	4.9	1.4	0.64
1971	3,040	ND[e]	3.3	1.7	1.11
1970	4,040	56	ND[e]	2.1	1.61
1969	1,756	45	8.0	0.8	0.00

[a] Data for 1980-1983 based on hunter questionnaires; data for 1975-1979 based on harvest ticket/reports; data through 1974 obtained from hunter interviews.

[b] Thirteen transects examined.

[c] Seven transects examined.

[d] Range: 4,190-7,227.

[e] No data available.

[f] Hunter interview data calculated harvest of 14,700.

[g] Data on Sitka hunters only for this year and preceding years.

DEER

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 6

GEOGRAPHICAL DESCRIPTION: Prince William Sound

PERIOD COVERED: 1 July 1983-30 June 1984

Season and Bag Limit

See Hunting Regulations No. 24.

Population Status and Trend

The Prince William Sound deer population is at a high level. A series of mild winters has allowed this deer herd to gradually increase from low levels in the early 1970's.

Population Composition

Age data were determined from a sample of 84 deer jaws obtained from Cordova hunters. The sample contained 6 (7%) fawns, 33 (39%) yearlings, 5 (6%) 2-year-olds, 20 (24%) 3-year-olds, 12 (14%) 4-year-olds, and 8 (10%) 5-year-olds.

Mortality

A deer hunter questionnaire was mailed to a sample of 6,000 hunters who obtained deer harvest tickets during the 1983 season. Only hunters who resided in Units 6, 8, and the "railbelt" (Kenai Peninsula to Fairbanks) received questionnaires. The questionnaire was mailed in late January, and follow-up reminder letters were not sent. The rate of return was 44.6% (2,673 questionnaires). The deer harvest and hunting effort for each subunit were projected, using results of a 1980 deer hunter questionnaire in which all hunters received questionnaires.

Results of the 1983 deer hunter questionnaire are shown in Table 1. The projected deer harvest was 1,234 deer taken by 674 hunters. About half (48%) of the harvest and 43% of the hunting effort occurred on Montague Island. Hawkins Island followed, with 13% of the harvest and 14% of the effort. Hinchinbrook Island was similar to Hawkins Island in harvest and effort. The remainder of Unit 6 was well below these 3 major islands. Data on chronology of the harvest and residency of hunters were not available.

Management Summary and Recommendations

The 1983 deer hunter questionnaire was the 2nd questionnaire utilized to gather information on the Unit 6 deer harvest. The harvest of 1,234 deer was slightly less than the 1980 harvest of 1,337 deer. Hunting effort decreased from 4,385 days in 1980 to 3,486 days in 1983. The reasons for declining effort and increased hunter success are unknown.

The winter of 1983-84 was relatively snow-free. Deep snow moved deer onto beaches in late February, but heavy rains in early March melted most of the snow at lower elevations. Under these conditions, winter mortality should have been normal.

PREPARED BY:

Julius L. Reynolds
Game Biologist III

SUBMITTED BY:

Leland P. Glenn
Survey-Inventory Coordinator

Table 1. Projected 1983-84 deer hunting effort and harvest in Unit 6 from hunter questionnaires.

Area	Deer killed			Days hunted		Hunter success (%)	Average trip success	
	N	%	% males	N	%		Deer /hunt	Days /hunt
Montague Island	593	48.1	61.1	1,485	42.6	83.7	1.78	4.3
Hinchinbrook Island	153	12.4	55.6	457	13.1	63.4	.79	2.2
Hawkins Island	165	13.4	46.1	490	14.0	67.6	.51	1.5
Knight Island	79	6.4	74.7	290	8.3	59.5	1.10	3.9
Naked Island	77	6.2	70.1	236	6.8	70.4	1.18	3.4
Southwestern PWS	99	8.0	82.8	314	9.0	53.8	.84	2.4
Eastern PWS	28	2.3	71.4	107	3.1	36.8	.52	2.1
Green Island	30	2.4	73.3	66	1.9	63.6	1.36	2.8
Northern PWS	10	.8	60.6	41	1.2	30.0	.50	2.0
Totals	1,234	100.0	62.1	3,486	100.0	67.7[a] (80.5)	1.00	2.7

[a] Overall hunter success was 80.5%. The calculation of 67.7% is based on the fact that some hunters were successful in 1 subunit and not in another.

DEER

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 8

GEOGRAPHICAL DESCRIPTION: Kodiak and adjacent islands

PERIOD COVERED: 1 July 1983-30 June 1984

Season and Bag Limit

See Hunting Regulations No. 24.

Population Status and Trend

The deer population remained high throughout most of Unit 8. Light to moderate natural mortality occurred during the winter and contributed to a localized decline on Afognak Island and the northern portion of Kodiak Island.

Population Composition

Deer surveys were flown on 14 and 23 February, in the northwestern portion of Kodiak Island. A total of 1,705 deer were counted in 5.2 hrs (328 deer/hr) of flight time. Deer were observed wintering from sea level to 1,800 ft elevation. During the 14 February survey, which covered parts of Uganik Island, Kupreanof Peninsula and Kizhuyak Bay drainages, 993 deer were seen in 3.3 hrs (297 deer/hr). Six hundred forty deer were counted on Uganik Island. The 23 February survey included the coast from West Pt. in Uganik Bay to Chief Cove in Spiridon Bay, and resulted in a total count of 712 deer in 1.9 hrs (375 deer/hr) of flight time.

Mortality

The extent of the Kodiak deer harvest and hunting effort was estimated using data from questionnaires mailed to 6,000 residents of southcentral Alaska who obtained deer harvest tickets. Results obtained from these questionnaires are shown in Table 1 and were projected using correction factors derived from the more intensive 1980 statewide hunter survey.

A projected total of 13,776 hunter-days was spent afield, a 21% increase over the 11,283 days afield projected for the 1980-1981 season. Thirty-four percent of the hunting effort (4,680 days) was spent on Afognak Island. The northern islands, Afognak, Raspberry and Shuyak, supported 44% (6,095

Heavy snows in February and March resulted in light to moderate natural morality. Winter losses were most severe in northern Kodiak Island and in the Afognak, Raspberry and Shuyak Islands areas. Forty-one deer mortalities were found by walking 32 transect mi (1.3 carcasses/mi) of coastal winter range on northern Kodiak, Raspberry and Afognak Island. Sixteen more deer carcasses were found along the Kodiak road system. Body condition of necropsied deer were poor, and bone marrow examinations confirmed advanced malnutrition in most cases. In several cases, harassment by dogs was believed to be a factor contributing to mortality. The age composition of the 57 deer mortalities was 10 adults (18%), 15 yearlings (26%), and 32 fawns (56%).

Management Summary and Recommendations

The high deer population and increasing trend in hunting pressure continued during this reporting period. The projected harvest of 6,225 deer represents a 16% increase over the 5,347 deer kill estimated from the 1980-81 statewide questionnaire. It was similar, however, to the harvest of 6,000 deer estimated for the 1982-83 season.

The bag limit was reduced from 7 to 5 deer in 1983, and the season was closed 3 weeks earlier on 7 January. These changes, implemented largely in response to public concern about the potential for overharvest and wanton waste, apparently had minimal effect on the overall deer harvest. Hunters generally reported that deer were as abundant or more abundant than in previous seasons, with the exception of Shuyak Island and parts of Afognak Island. Relatively easy accessibility and the opportunity to hunt both deer and elk resulted in high hunting effort on Afognak Island. The eastern side of Kodiak Island remained lightly hunted.

Although light to moderate natural mortality occurred in localized areas, the overall impact on the population was apparently minor. Heavy to moderate browsing on elderberry, highbush cranberry and willow was noted in most coastal winter ranges examined during late spring. Aerial surveys confirmed that deer densities remained high even in heavily hunted areas such as Uganik Island.

The present liberal seasons and bag limits should be retained to maximize harvest while the deer population remains high. More effort should be made to direct hunters into the less heavily hunted parts of Kodiak Island where deer are most abundant.

PREPARED BY:

Roger B. Smith
Game Biologist III

SUBMITTED BY:

Leland P. Glenn
Survey-Inventory Coordinator

Table 1. Projected 1983-84 deer hunting effort and harvest in Unit 8 from hunter questionnaires[a].

	No.	Percent
Total hunters afield	2,587	100.0
Successful hunters	2,103	81.3
Unsuccessful hunters	484	18.7
Mean number of deer taken/hunter afield	2.5	--
Mean number of deer taken/successful hunter	3.0	--
Total days hunted	13,776	--
Mean number of days hunted/deer taken	2.2	--
Total kill	6,225	100.0
Male kill	4,552	73.1
Female kill	1,530	24.6
Unknown sex kill	143	2.3
Successful hunters who took:		
1 deer	494	24.0
2 deer	408	19.0
3 deer	352	17.0
4 deer	331	16.0
5 deer	492	23.0
5+ deer	21	1.0
Harvest chronology		
August	305	6.3
September	454	9.5
October	158	3.3
November	2,328	48.6
December	1,114	23.2
January	436	9.1
Harvest location		
Afognak, Raspberry, Shuyak	2,480	40.0
western Kodiak	2,892	46.0
eastern Kodiak	853	14.0

[a] Projections based on 1,209 questionnaires.