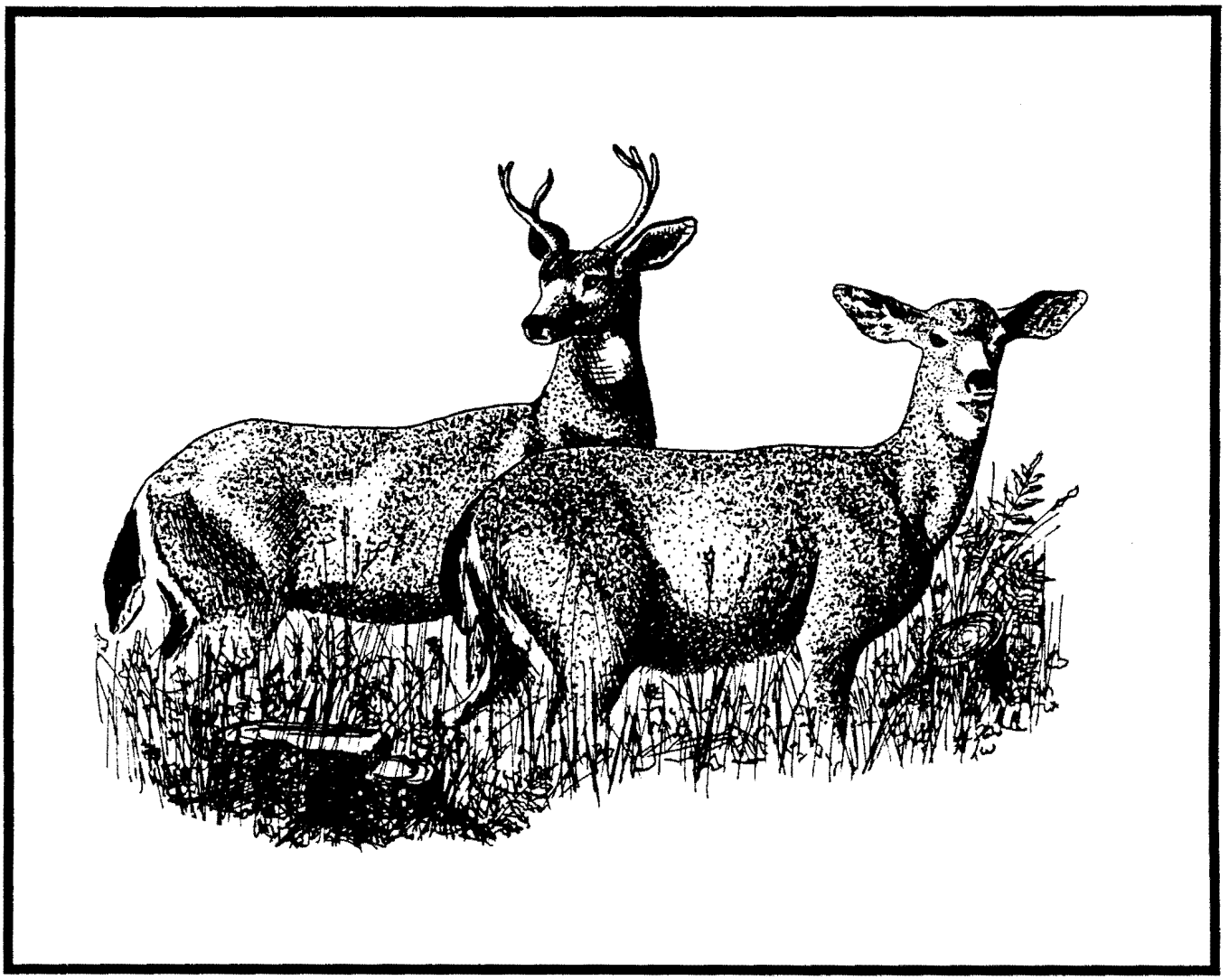
Alaska Department of Fish and Game
Division of Wildlife Conservation

Federal Aid in Wildlife Restoration
Annual Performance Report of
Survey-Inventory Activities
1 July 1991 - 30 June 1992

DEER

Susan M. Abbott, Editor



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Project W-23-5, Study 2.0
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CORRECTION (2/1/93) - Replacement for pages 1-4 (Region I) in
Deer Annual Performance Report of Survey Inventory Activities, July 1, 1991-June 30, 1992
Volume XXIII, Part VI, Project W-23-5, Study 2.0 (November 1992)

Project Title: Southeast Deer Population Management

Overview: Deer are virtually ubiquitous in southeast Alaska. Deer numbers are lowest on the mainland and highest on the west side of Baranof and Chichagof islands. Harvests have declined since the 1987 estimate of nearly 20,000, but this appears to be more because of reduced hunter effort than declining populations. Most deer populations may be at or near all-time highs in northern southeast Alaska. Populations continue to increase in southern and central Southeast, but they remain at low levels on Kuiu, Kupreanof, and adjacent islands.

Southeast Alaska deer management is oriented primarily toward providing deer for subsistence and personal use. Trophy hunting is a small fraction of total deer hunting effort. Viewing deer is of great interest to nonhunters and hunters alike, and this use can be provided for by maintaining healthy populations.

The greatest threat to deer in southeast Alaska is continued large-scale logging of prime habitats on U.S. Forest Service (USFS) and private lands. Division staff spend much time working with USFS and private timber managers, attempting to reduce these losses. Existing habitat losses and scheduled cutting will inevitably result in smaller, less resilient deer populations.

Project Location: Subunit 1A and Unit 2 (8,911 mi^2)
Subunit 1A - Ketchikan area including mainland areas draining into Behm and Portland Canals.

Unit 2 - Prince of Wales and adjacent islands south of Sumner Strait and west of Kashevarof Passage and Clarence Strait.

Project Objectives and Activities: Subunit 1A and Unit 2 objectives and activities are to: 1) maintain deer populations in excess of 45 deer per mi^2 of winter range (1.4 pellet groups per plot) and 2) monitor deer densities using pellet-group surveys.

Work Accomplished During the Project Segment Period: Deer pellet-group surveys were completed in 6 VCUs within Subunit 1A and 6 within Unit 2. In addition to the long-established transects, new transects were established in VCUs 575 and 584 (Thorne Lake and Little Ratz, respectively). Helicopter and fixed-wing alpine deer surveys were flown over portions of Subunit 1A and Unit 2 during July. The deer harvest from Subunit 1A and Unit 2 was determined from regional questionnaires mailed to a random sample of deer hunters. Preliminary data indicate that the deer harvest in Subunit 1A was the lowest in eight years (499), while the Unit 2 harvest was the third highest in eight years (3,138). Hunter success was 36% and 68% in Subunit 1A and Unit 2, respectively.

Progress Towards Meeting Project Objectives: Pellet-group data indicated that the 45 deer/mi^2 objective was not met in any sampled VCUs, although Thorne Lake, Helm Bay, and Gravina Island came closest with 38-40 deer/mi^2. Pellet-group numbers may have been low partially because of heavy rains and negligible snow accumulation in southern southeast Alaska during 1991-92, which reduced the persistence of pellet groups through fall and winter. Regardless of this fact, it appears as though spring deer numbers throughout southern southeast declined slightly between 1991 and 1992. The highest apparent density was at Helm Bay (40 deer/mi^2), the lowest at Whitman Lake (6 deer/mi^2). Only Gravina Island had an observed, although negligible, increase in pellet-groups per plot (1.22 in 1992 compared with 1.12 in 1991). Of the 9 transects extending from below 500 feet to above 1,000 feet in elevation, one-third had their highest deer densities the three elevational categories (<500 ft.; Exchange Cove, 12-Mile, and Whitman Lake; 501 - 1,000 ft.; Little Ratz, Helm Bay, and Moth Bay; and >1,000 ft.; Thorne Lake, George Inlet, and Gravina Island).

Project Location: Subunit 1B and Unit 3 (5,900 mi^2)
Southeast mainland from Cape Fanshaw to Lemesurier Point and adjacent islands

Project Objectives: Increase populations on deer winter range (<1,500 ft. elevation) to moderate levels (32 deer/mi^2) as measured by a mean pellet density of 1 pellet-group/20 m^2 plot.

Work Accomplished During the Project Segment: Harvest data was collected and analysis is in progress. We noted apparent changes in harvest patterns from preceding years based on informal hunter interviews. We collected anecdotal information from hunters and others to better understand public perceptions. Several public meetings were held by local groups and a conservative open season was proposed for portions of Unit 3. The Board of Game adopted the proposal. Pellet-group surveys were conducted during spring in Subunit 1B and in Unit 3 on Etolin, Kupreanof, Conclusion, Mitkof, Woronkofski and Woewodski islands.

Progress Towards Meeting Project Objectives: Deer populations seem to be increasing according to results of deer pellet surveys. Overall, pellet-group densities in Unit 3 increased slightly over those of the previous year. Deer mortality surveys in Unit 3 showed very few winterkilled deer. Numerous wolf kills were located. Deer numbers on southern Mitkof Island increased by 18%.

New survey lines were established at Frosty Bay, in Subunit 1B, to get a baseline indicator before the timber sale scheduled for this year. Deer numbers appeared moderate. The season remained closed in most of Unit 3 north of Sumner Strait but opened on a part of Mitkof and all of Woewodski and Butterworth islands starting in fall 1991. Deer

have increased on Mitkof Island to the extent that they are becoming a problem in Petersburg and the incidence of road kills has increased greatly.

Project Location: Subunit 1C (7,562 mi^2)
The southeast Alaska mainland, and the islands of Lynn Canal and Stephens Passage lying between Cape Fanshaw and the latitude of Eldred Rock, including Sullivan Island and the drainages of Berners Bay.

Project Objectives and Activities: Subunit 1C deer management objectives are to maintain population densities on Douglas, Lincoln and Shelter islands at high levels as reflected by a mean pellet density of 2.0 pellet groups per plot.

Subunit 1C deer management activities are to: a) monitor harvest; b) participate in public planning meetings; and c) participate in annual deer pellet survey.

Work Accomplished During the Project Segment Period: Preliminary harvest data from the regional mail questionnaire sent to a stratified sample of deer hunters indicated that hunter success declined substantially from the previous season (from 34.3% to 24.8%). Total take in the subunit declined 10%. This trend concurs with declines seen elsewhere in southeast Alaska (i.e., Unit 4). Anecdotal harvest information indicated that hunters experienced difficulty finding deer, but relatively few comments were received compared to Unit 4. No planning meetings were held during the report period.

Pellet group surveys were conducted at Pt. Hilda on Douglas Island. Staff measured 205 plots in three transects, for an average pellet group density of 2.04 pellet groups per plot.

Progress Towards Meeting Project Objectives: The Douglas Island pellet group densities fell almost exactly at objectives set out for Subunit 1C deer populations. This information indicates that the deer herd is growing after the decline seen during the hunting season. However, this figure may overestimate deer abundance because of the low number of plots sampled and a bias toward low elevations.

Project Location: Unit 4 (5,800 mi^2)
Admiralty, Baranof, Chichagof, and adjacent islands

Project Objectives and Activities:

Unit 4 management objectives are to: a) maintain a population density capable of sustaining an average hunter kill of at least 1.5 deer; b) maintain a population capable of providing a minimum success rate of 1 deer killed per 4 days hunting; and c) maintain the male deer component of the harvest at a minimum of 60%.

Unit 4 deer management activities are to: a) collect population data through fecal pellet surveys; b) use survey questionnaires to sample deer hunters and determine harvest and effort; and c) after severe winters, conduct deer mortality transects in key areas.

Work Accomplished During the Project Segment Period: Population data were gathered by pellet-group surveys conducted on Baranof, Chichagof, and Admiralty islands. A survey questionnaire was mailed to a sample of deer harvest ticket holders to obtain deer hunter effort and success. Hunters were asked to indicate hunting locations by harvest areas. Mortality transects 1 mile in length were examined by 2-person crews to determine the extent of deer mortality. One observer searched for sign of dead deer at the high tide line and the other surveyed the area just inside the timber fringe. Sex, age, and bone marrow condition of winter killed deer were recorded.

Progress Towards Meeting Project Objectives: According to preliminary results of the 1991-92 hunter survey, all three objectives were achieved. The average kill was 1.8 deer per hunter with a hunting effort of 2.9 days per deer. Males made up 62 % of the harvest.

Project Location: Unit 5 (5,770 mi^2)
Cape Fairweather to Icy Bay, eastern Gulf of Alaska coast.

Project Objectives and Activities: No management objectives have been established for deer in Unit 5.

Work Accomplished During the Project Segment Period: We monitored harvest through the use of the regional mail questionnaire, which reported 3 bucks killed. Anecdotal information from hunters indicated up to five deer may have been taken.

Progress Towards Meeting Project Objectives: In the absence of objectives, no specific tasks were done.

Segment Period Project Costs:

	Personnel	Operating	Total
Planned	$74.6	$33.2	$107.8
Actual	$74.6	$33.2	$107.8
Difference	0	0.0	0.0

Submitted by:

W. Bruce Dinneford
Management Coordinator

Project Title: Southcentral Alaska Deer Management

Project Location: Unit 6 (10,140 mi^2)
Prince William Sound, north Gulf Coast

Project Objective: Maintain a deer population in Unit 6 that will sustain an annual harvest of 60% males, and minimum hunter success rate of 50%.

Work Accomplished During the Project Segment Period: We monitored hunting activities and harvest by a mail questionnaire. Estimated harvest was 1,687, males comprised 76% of the take, success rate was 41%, and successful hunters took a mean of 1 deer. Montague Island provided 48% of the take, while Hawkins and Hinchinbrook islands produced 21% and 15%, respectively.

We conducted aerial composition surveys on 3 March 1992. We searched beaches on Montague, Hinchinbrook, and Hawkins islands and classified deer as fawns or adults. Fawns comprised 15% of 384 deer observed. We saw no mortalities and condition of most animals was good.

We conducted pellet group surveys between 31 May and 5 June on Montague, Knight, Naked, Hinchinbrook and Hawkins islands. Analysis of these data is incomplete.

Progress Towards Meeting Objectives: Harvest of males was well above the objective and success rate was below the desired level. A combination of regulation changes and declining deer density probably caused this. The bag limit was reduced from 5 to 4 deer, and the antlerless season opening date changed from 15 September to 1 November. Deer density declined because of poor overwinter survival the previous 3 years.

Project Location: Unit 8 (8,750 mi^2)
Kodiak, and adjacent islands

Project Objective and Activities: Maintain a deer population that will sustain an annual harvest of at least 8,000 deer. Perform mail questionnaire survey of deer hunters. Conduct mortality surveys in selected coastal winter range and complete aerial composition surveys in summer alpine range.

Work Accomplished in Project Segment Period: We monitored hunting activities and harvest with a post-season hunter questionnaire mailed to a sample of hunters who obtained harvest tickets for the 1991-92 survey. Final analysis of the 1990-91 survey was also completed by the Statistics Section during this report period.

The preliminary estimate of deer harvested in 1991-92 was 9,110 deer: 6,697 (74%) males and 2,413 (26%) females. This was an increase from the 1990-91 estimated harvest of 8,106 deer (5,367 [66%] males and 2,739 [34%] females). An estimated 4,767 hunters went afield in 1991-92, a slight increase from the 4,176 hunters afield in 1990-91. Hunter success increased from 74% in 1990-91 to 77% in 1991-92.

Moderate overwinter mortality occurred throughout Unit 8, with the most severe losses in western Kodiak Island. Snow up to 2 ft deep prevailed at sea level from late February to mid-April when many of the mortalities occurred. During a winter mortality survey done in April 1992, we found 109 deer carcasses in a 5-mile coastal transect near Chief Cove on western Kodiak Island. Only 8 deer carcasses were located in a comparable survey during March 1992. Weak-appearing deer were observed by residents of western Kodiak Island into late April.

We flew three replicate deer composition surveys in alpine habitat of northwestern Kodiak Island in August 1991. We counted a mean of 131 deer/hr (range = 88-181). The least variable parameter of population composition observed was the 33% fawns recorded in each of the 3 replicate surveys. We will continue to evaluate aerial alpine surveys to monitor deer population trends in 1992.

Progress Towards Meeting Objectives: Preliminary results of the 1991-92 mail questionnaire indicate that hunters harvested at least 9,110 deer, well above the 8,000 deer annual harvest objective. The 1991-92 harvest was also above the 1990-91 take estimated at 8,106 deer, in spite of a reduction in the bag limit from 5 to 4 deer on State and private lands. An increase from 4,176 hunters afield in 1990-91 to 4,480 hunters in 1991-92 and a comparable increase from 74% to 77% hunter success countered the reduced bag limit. The bag limit remained at 5 deer for residents on Unit 8 hunting on the Kodiak National Wildlife Refuge under federal subsistence hunting regulations.

The percentage of bucks in the harvest increased from 66% in 1990-91 to 74% in 1991-92. Hunters reported seeing numerous yearling bucks, confirming that overwinter survival was high. The effects of a new regulation restricting the doe bag limit to 1 animal and a 14-day later opening date for does in the northern Kodiak and Afognak islands area may have contributed to the increased buck:doe ratio in the harvest.

Increased harvest and hunter success in 1991 confirmed the deer population increased after a 3-year decline. The brief recovery stopped during the 1991-92 winter when moderate winter losses occurred throughout Unit 8.

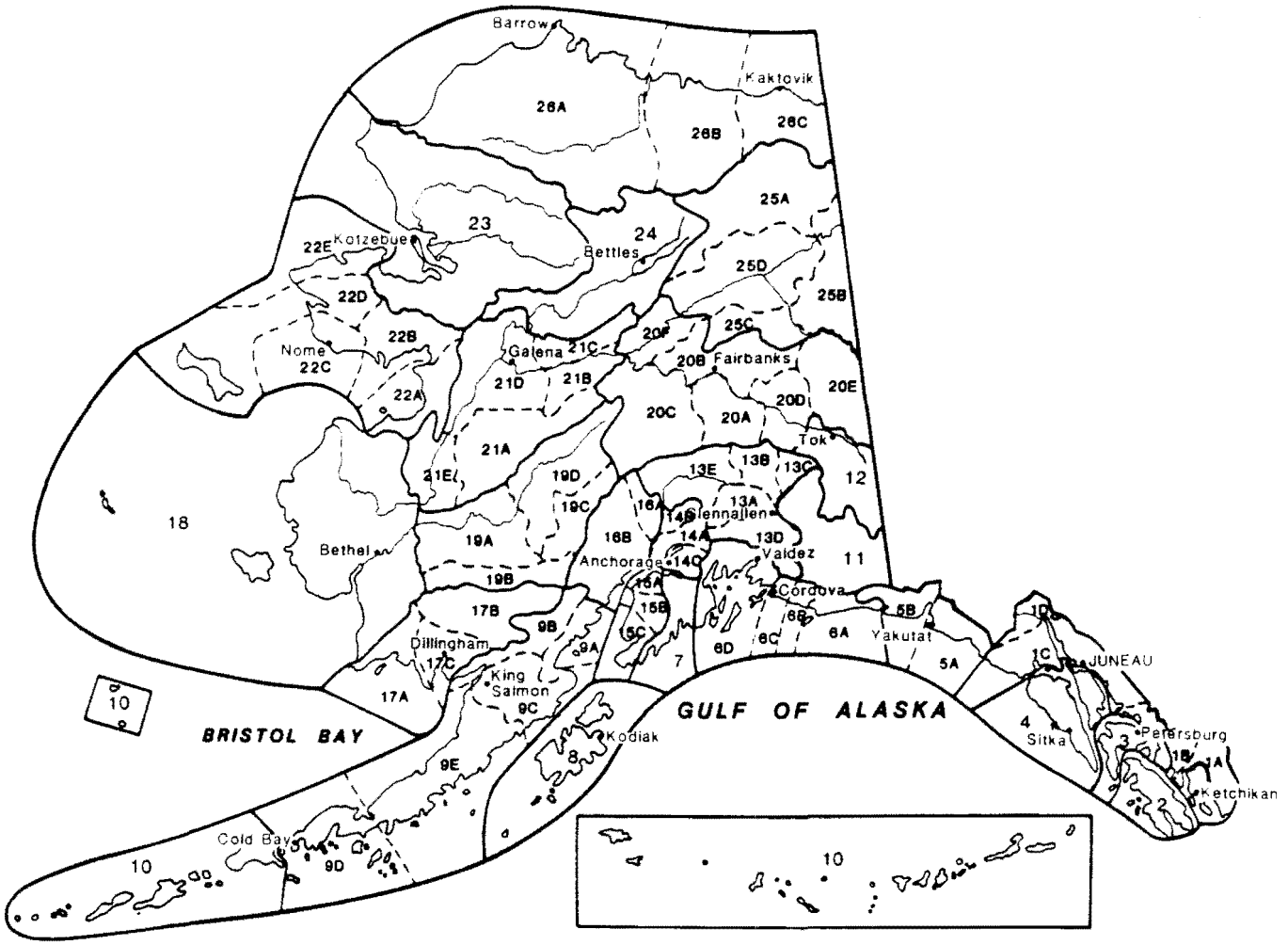
Segment Period Project Costs:

	Personnel	Operating	Total
Planned	30.5	7.6	38.1
Actual	30.5	7.3	37.8
Difference	0	+0.3	+0.3

Submitted by:

John Trent
Management Coordinator

Alaska's Game Management Units



WILDLIFE RESTORATION

Project funded by Federal Aid in Wildlife Restoration