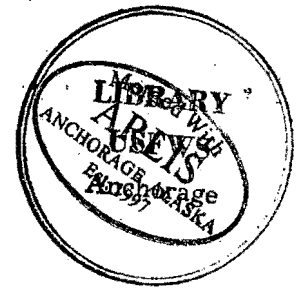


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**BALD EAGLE NEST SURVEYS IN SOUTHEAST
ALASKA - 1987**

**Michael J. Jacobson
and
Patricia A. Rudinsky**

**Key Words: Bald Eagle
 Southeastern Alaska
 Abundance, Distribution, Management**

**Fish and Wildlife Enhancement
• Raptor Management Studies
U.S. Fish and Wildlife Service
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Juneau, Alaska 99802 - 1287**

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Bald Eagle Nest Surveys in Southeast Alaska - 1987

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INTRODUCTION

Bald eagle (*Haliaeetus leucocephalus*) nest surveys were conducted in southeast Alaska from May through September 1987 as part of the work of the Raptor Management Studies project with the Fish and Wildlife Enhancement field station in Juneau. The U.S. Fish and Wildlife Service has conducted bald eagle nest surveys by boat throughout coastal southeastern Alaska since 1969.

These surveys provide information to federal agencies (particularly the U.S. Forest Service), state and local agencies, private organizations and individuals in which to properly plan for eagle habitat protection in their timber harvest schedules, road development plans, and other developments that may affect bald eagle habitat.

A Memorandum of Understanding between the U.S. Fish and Wildlife Service and the U.S. Forest Service establishes a protective management zone of 330 foot radius around all nest trees. This management zone is to be maintained even though the nest or nest tree becomes inactive for any reason. The 330 foot radius management zone is also recommended on state lands, Native corporation lands, and privately owned lands.

In addition to the protective management zone the Memorandum of Understanding provides for the maintenance of trees along the shoreline suitable for use by eagles for hunting, feeding and perching sites.

The Fish and Wildlife Service personnel involved in the 1987 nest surveys were Andrew Anderson, skipper of the 65 foot motor vessel "Surfbird;" Michael Jacobson, eagle management specialist; Patricia Rudinsky, biological technician; and Donald Williamson, fish and wildlife biologist. Several other people, borrowed or recruited as volunteers, helped at various times during the field work.

METHODS

The U.S. Fish and Wildlife Service vessel "Surfbird" provided transportation to and from the survey areas and served as living base during field operations.

Typically, two crews consisting of two observers each would scan the shoreline from separate open skiffs while traveling 50 to 150 meters offshore at a speed of 2 to 5 knots. Nests were nearly always situated in the upper portion of a

dominant or co-dominant tree near the shoreline. When an eagle nest was observed its location was marked on a U.S.G.S. 1:63,360-scale topographic map. A raptor nest survey recording sheet (figure 1) detailing habitat characteristics and status was filled out for each nest. A nest was classified as active if adult eagles were on the nest or behaved defensively or if young were seen. A numbered 5" x 7" yellow or orange bald eagle nest tree sign was placed on each nest tree if possible. Nest data was later transferred to master maps and stored on the Fish and Wildlife Service computer system in Juneau.

RESULTS AND DISCUSSION

A total of 643 miles of shoreline were surveyed during the 1987 field season and 404 bald eagle nests were observed. Location of surveys and survey results are summarized in the appendix.

Surveys conducted later in the season, particularly in September, are often done after eagles have already fledged. Thus several nests not identified as active were labeled as "status unknown" at this time.

The survey results depict the high variability in the number of nests, active nests, and nesting density between different locations of southeast Alaska. This variability is likely due to differences in nesting habitat and food availability at different locations.

The nest locations from these surveys have been forwarded to the U.S. Forest Service, the State of Alaska, Native corporations, and others as appropriate.

Figure 1. Nest survey recording sheet.

1-2 STATE NO.		3-6 A.O.U. NO.	7-11 MAP NO.	12-14 NEST NO.	15-20 MO-DAY-YEAR	21-23 RECORDER INITIALS	
64-80 NEST - GENERAL AREA			NEST - SPECIFIC LOCATION		24-29 LAT.		
					30-36 LONG.		
37-38 NEST TREE SPECIES		39 LIVE TREE NEST		40 DEAD TREE NEST	41 GROUND NEST	42 NEST FRONTAGE	
1 Alder 2 Birch 3 Cedar 4 Chestnut 5 Cottonwood 6 Cypress 7 Elm 8 Fir 9 Hemlock		1 Hickory 2 Locust 3 Maple 4 Oak 5 Palm 6 Pine 7 Spruce 8 Walnut 9 Other		1 Normal Slender Top 2 Normal Bushy Top 3 Broken Top - Live 4 Dead Top - Unbroken 5 Dead Top - Broken 6 Deformed Top 7 Double Top 8 More Than Two Tops 9 Other	1 Stick Nest On Cliff 2 Scrape On Cliff 3 Cavity In Cliff 4 Open Hillside 5 Level Ground 6 Marsh/Tundra 7 Treeless Islet 8 Sea Stack 9 Other	1 Open Sea 2 Narrow Saltwater Channel 3 Inland Sea or Broad Channel 4 Saltwater Bay 5 Brackish Lagoon - Saltchuck 6 River or Stream 7 Lake 8 Landscape In General 9 Other	
43 TIMBER TYPE		44 TIMBER DEPTH		45 BIRDS IN NEST TERRITORY	46 ACTIVITY AT THE NEST	47 NEST STATUS - SURVEY METHOD	
1 Heavy Old Growth 2 Light Old Growth 3 Second Growth 4 Selective Cutting 5 Tree Left In Logged Area 6 Tree In Logging Leave Strip 7 Scrub Timber 8 Sparse Timber 9 Blowdown Area		1 Landscape Well Timbered 2 Timbered Peninsula 3 Meadows Within 200 Yards 4 Small Islet 5 Narrow Beach Fringe Only 6 Snowslide Area 7 Nest Behind Clearcut 8 Nearly Clearcut 9 Seeding Strip Only		1 None Observed 2 1 Adult On Nest 3 Pair On Nest 4 1 Adult In Nest Tree 5 Pair In Nest Tree 6 1 Adult Near Nest 7 Pair Near Nest 8 1 Adult Flying 9 Pair Flying	1 Defending Nest Territory 2 New Nest Under Construction 3 Adult With Food 4 Adult With Nest Material 5 Young Chirping 6 Whistling Adult 7 Adult Circling Nest Territory 8 Excited Flight Behavior 9 Courtship or Mating Activity	1 Active - Boat 2 Inactive - Boat 3 Active - Helicopter 4 Inactive - Helicopter 5 Active - Plane 6 Inactive - Plane 7 Active - Foot 8 Inactive - Foot 9 Status Unknown	
48 NEST CONDITION		49 HEIGHT, TREE OR CLIFF IN FT.		50 NEST ABOVE GROUND IN FEET	51 NEST TO WATERFRONT, YARDS	52 TIDAL MARGIN, HIGH TO LOW	
1 Excellent - New Material Seen 2 Excellent - Old Material Only 3 Good - New Material Seen 4 Good - Old Material Only 5 Fair - New Material Seen 6 Fair - Old Material Only 7 Poor - Stable 8 Poor - Unstable 9 Remnant Only		1 0-25 Feet 2 25-50 3 50-75 4 75-100 5 100-125 6 125-150 7 150-250 8 250-400 9 400 Feet and Over		1 0-25 Feet 2 25-50 3 50-75 4 75-100 5 100-125 6 125-150 7 150-175 8 175-200 9 200 Feet and Over	1 0-10 Yards 2 10-25 3 25-50 4 50-100 5 100-200 6 200-300 7 300-400 8 400-500 9 500 Yards and Over	1 0-10 Yards 2 10-20 3 20-30 4 30-40 5 40-50 6 50-100 7 100-200 8 200-300 9 300 Yards and Over	
53-54 NEST ABOVE SEA LEVEL		55 NEST MARKING AND ACCESS		56 RESURVEY - NEST NOT FOUND	57 NEST DESTROYED	58 YOUNG IN THE NEST	
1 0-25 Feet 2 25-50 3 50-75 4 75-100 5 100-125 6 125-150 7 150-200 8 200-300 9 300-500		1 500-750 2 750-1000 3 1000-1500 4 1500-2000 5 2000-3000 6 3000-4000 7 4000-5000 8 5000-6000 9 6000 +		1 Tree Easy To Climb 2 Tree Difficult To Climb 3 Tree Impossible To Climb 4 Tree Climability Unknown 5 NEST UNMARKED 6 Inaccessible 7 Accessible By Foot 8 Cliff - Ropes Required - Easy 9 Cliff - Ropes Required - Hard 9 Access Unknown	1 Tree Definitely Destroyed 2 Nest Definitely Destroyed 3 Intense Boat Survey 4 Moderate Boat Survey 5 Superficial Boat Survey 6 Intense Aerial Survey 7 Moderate Aerial Survey 8 Intense Foot Survey 9 Moderate Foot Survey	1 Nest Blown Out of Tree 2 Tree Blown Down 3 Road Building 4 Logging 5 Urban Development 6 Violation of Bald Eagle Act 7 Violation of Other Law 8 Predation 9 Disturbance	58 AGE 59 NUMBER 1 Eggs 2 Downies 3 Eggs and Downies 4 Partly Feathered 5 Near Fledging 6 Flying Young 60 TREE DIAMETER (61-63 SERIAL)

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APPENDIX

Locations and results of 1987 bald eagle
nest surveys



Figure 1. Location of bald eagle nest surveys conducted during 1987.
One inch = 12 miles

Results of bald eagle nest surveys, Chichagof Island, Alaska; 29 May to 4 June, 1987.

Location	# nests observed	# new nests	Resurvey status		Nest status			% active	miles surveyed	# active per mile
			# found	# not found	# active	# inactive	# unknown			
PORT FREDERICK										
Salt Lake Bay, Portage										
Bay, Eight Fathom Bight	25	6	19	8	2	18	5	8	22.8	.09
Neka Bay	6	2	4	4	1	4	1	17	11.9	.08
ICY STRAIT										
Whitestone Harbor	15	2	13	5	5	9	1	33	10.3	.49
CHATHAM STRAIT										
Iyoukeen cove to False Bay	11	1	10	6	1	8	2	9	9.3	.11
FRESHWATER BAY	16	8	8	10	4	11	1	25	12.7	.31
TENAKEE INLET										
Corner Bay Area	1	1	0	6	0	1	0	0	3.7	.00
Cannery Pt. Area to East Pt.	19	9	10	1	4	15	0	21	8.6	.47
CHATHAM STRAIT/TENAKEE INLET										
Basket Bay to Trap Bay	31	5	26	19	6	24	1	19	16.6	.36
PATTERSON BAY/DOUGLAS BAY	9	2	7	4	2	4	3	22	12.4	.16
TOTAL	133	36	97	63	25	94	14	19	108.3	.23

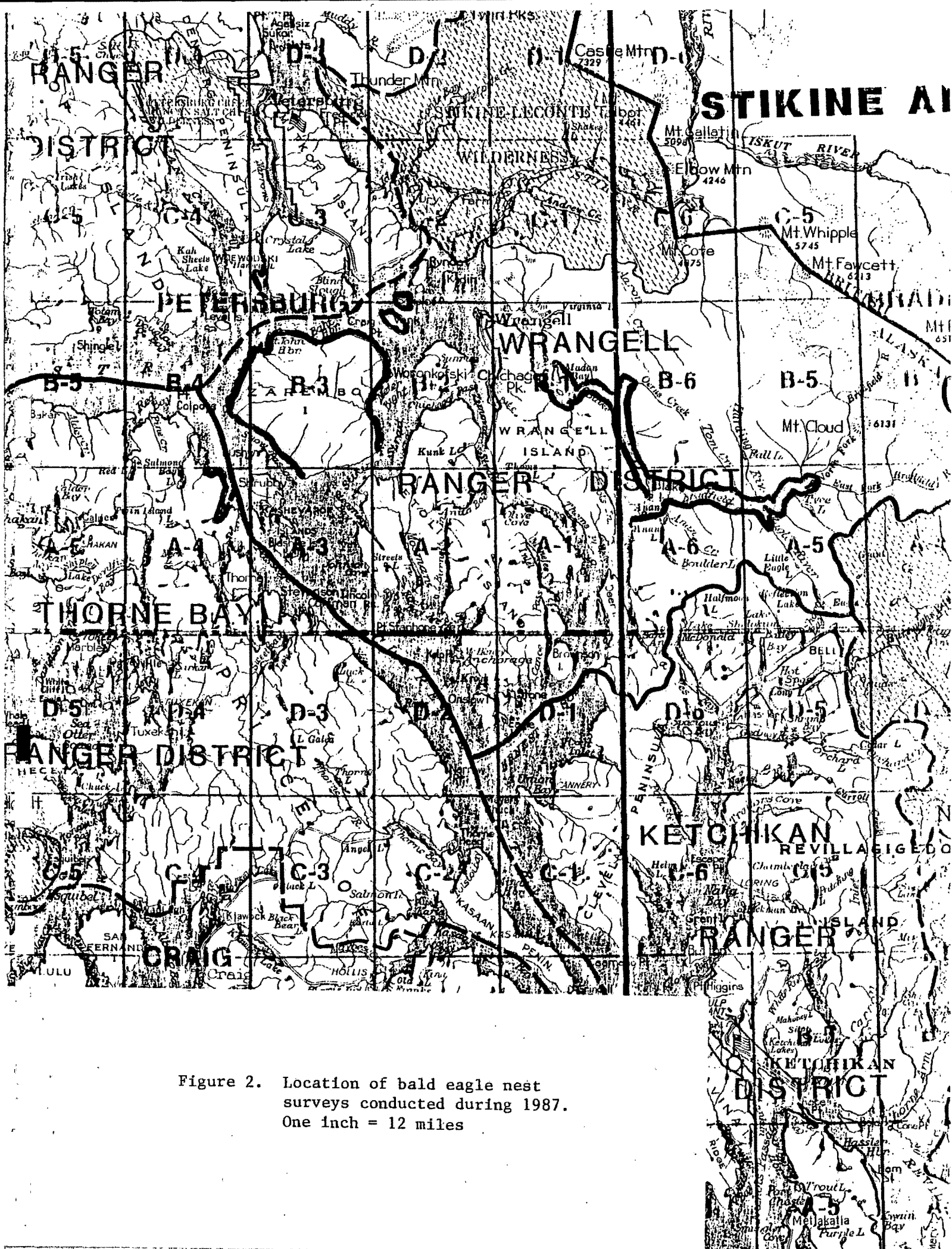


Figure 2. Location of bald eagle nest surveys conducted during 1987.
One inch = 12 miles

Results of bald eagle nest surveys, Wrangell area, Alaska; 18 June to 25 June, 1987.

Location	# nests observed	# new nests	Resurvey Status		Nest Status			% active	miles surveyed	# active per mile
			# found	# not found	# active	# inactive	# unknown			
Eastern Passage/ Blake Channel	32	18	19	5	9	20	3	28	63.9	.14
Bradfield Canal	28	8	20	10	3	24	1	11	54.1	.06
Sokolof Island	8	3	5	0	2	6	0	25	9.2	.22
Vank Island	9	6	3	4	3	6	0	33	10.6	.28
Prince of Wales Island	13	4	9	2	7	6	0	54	18.8	.37
Zarembo Island	53	28	25	18	17	35	0	32	71.8	.24
Woewodski Island	2	1	1	1	1	0	1	50	2.1	.48
Total	145	68	82	40	42	97	5	29	230.5	.18

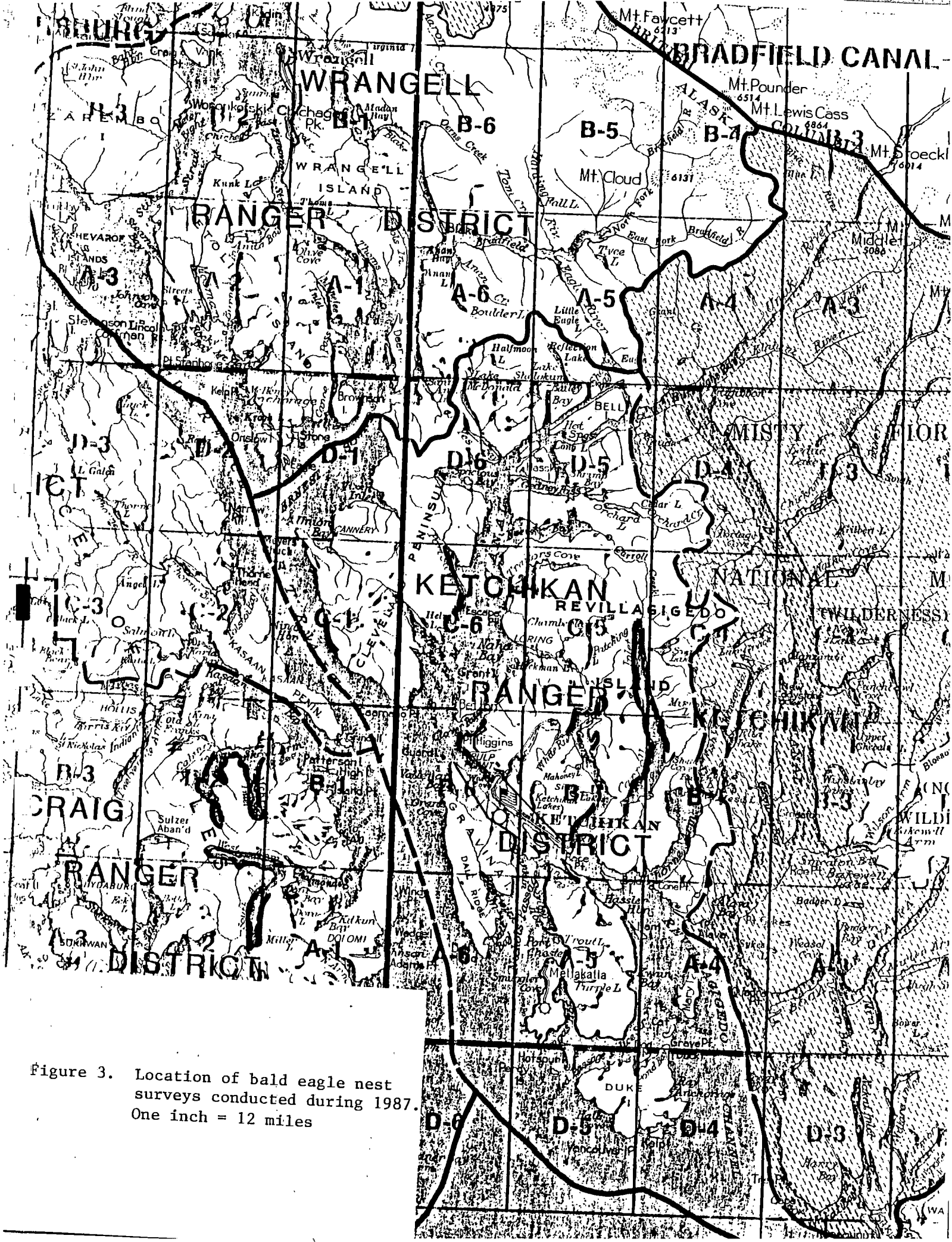


Figure 3. Location of bald eagle nest surveys conducted during 1987.
One inch = 12 miles

Results of bald eagle nest surveys, Ketchikan area, Alaska; 8 August to 14 August, 1987.

Location	# nests observed	# new nests	Resurvey status		Nest status			% active	miles surveyed	active per mile
			# found	# not found	# active	# inactive	# unknown			
REVILLAGIGEDO ISLAND										
Carroll Inlet	20	5	15	6	3	17	0	15	51.5	.06
George Inlet	6	1	5	4	3	3	0	50	24.1	.12
Traitor's Cove	2	0	2	1	0	2	0	0	3.9	.00
Clover Pass./Tongass Nar.	7	2	5	4	1	6	0	14	15.3	.06
PRINCE OF WALES ISLAND										
Cholmondeley Sound										
West Arm	8	3	5	3	1	6	1	13	23.1	.04
South Arm	6	2	4	1	1	5	0	17	20.2	.05
Dora Bay	1	0	1	1	1	0	0	100	1.2	.83
Skowl Arm										
Polk Inlet	11	5	6	7	1	10	0	9	35.9	.03
McKenzie Inlet	9	0	9	1	1	8	1	11	22.0	.05
MAINLAND COAST										
Clarence Strait	8	4	4	0	0	8	0	0	6.1	.00
Behm Canal	6	2	4	5	0	5	1	0	10.8	.00
TOTAL	84	24	60	53	12	70	2	14	214.1	.06

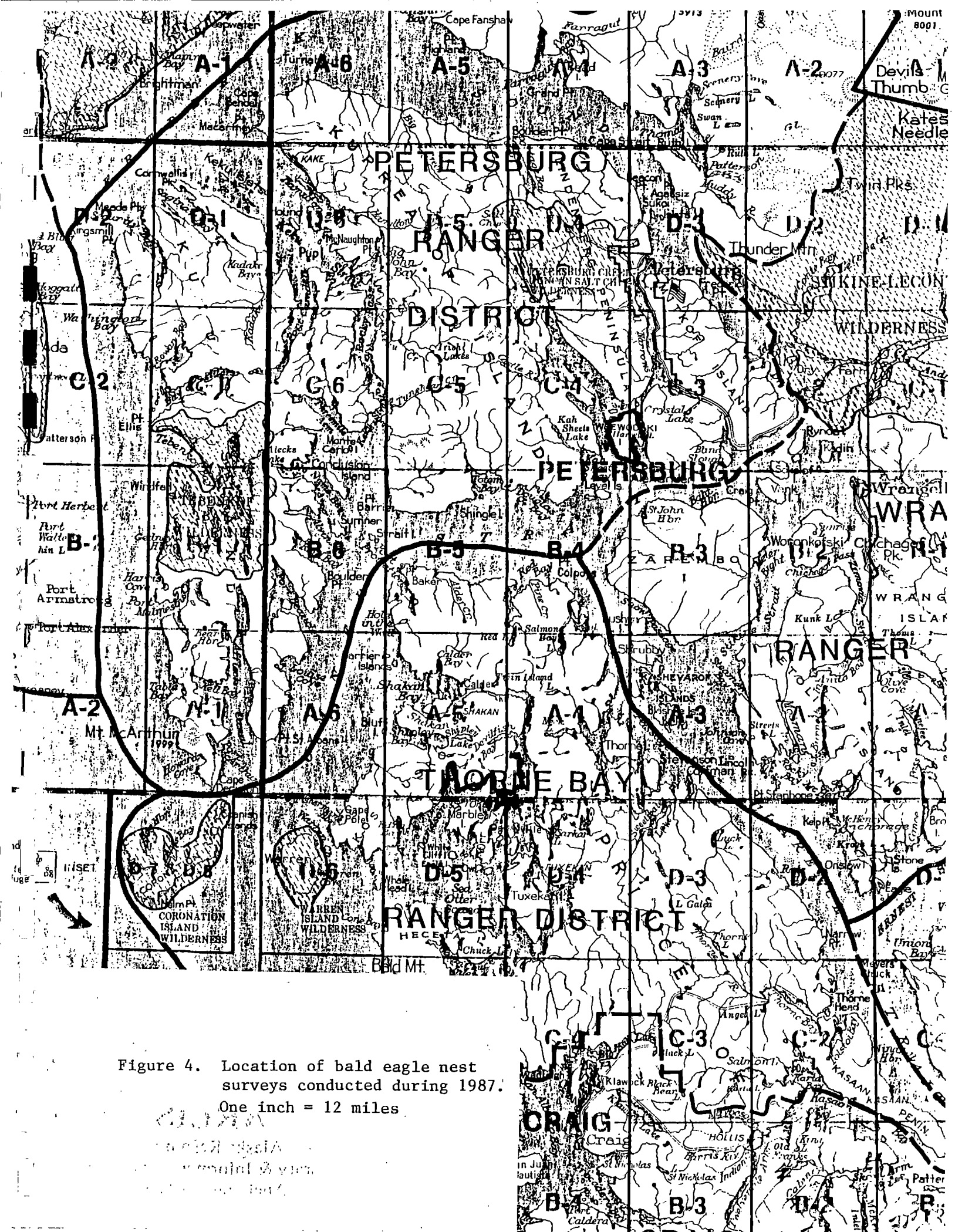


Figure 4. Location of bald eagle nest surveys conducted during 1987.
One inch = 12 miles

Results of bald eagle nest surveys, Prince of Wales and Woewodski Islands, Alaska; 24 to 28 September, 1987.

Location	# nests observed	# new nests	Resurvey status		miles surveyed	nests per mile
			# found	# not found		
WOEWODSKI ISLAND	10	5	5	3	25.5	.39
Butterworth Island	0	0	0	0	3.7	.00
PRINCE OF WALES ISLAND						
Davidson Inlet	14	7	7	0	7.9	1.77
Tokeen Bay	5	1	4	0	23.1	.22
El Capitan/Tenass Passages	13	4	9	2	29.5	.44
TOTAL	42	17	25	5	89.7	.47

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