DISTRIBUTION AND ABUNDANCE OF STELLER'S EIDERS (*Polysticta stelleri*) IN THE KODIAK ARCHIPELAGO, ALASKA
February, 2010

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December 8, 2010

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Abstract.
The sixth Kodiak Steller's eider winter aerial survey was flown from 3-7 February 2010, covering most of the eastern coastal portion of the Kodiak Archipelago. The survey design consisted of a single flight parallel to the shoreline between 200 and 400 meters offshore, with s-turn patterns as necessary to cover shoals shallower than 20 meters providing known or potential habitat for Steller's eiders. All groups of eiders and other waterbirds and marine mammals were identified and counted or estimated by the pilot and the starboard observer. Observations were dictated into GPS-linked laptop computers, providing electronic records of the location of each observation, and the flight path of the survey aircraft. A total of 2699 Steller's eiders were recorded for the 2010 survey, compared with 5,349 in early March, 1994, and an expanded estimate of 5,341 in 2001. Survey coverage was not complete in all areas but an analysis by area indicates that the number of Steller's Eiders counted was lower across the entire survey with the most pronounced declines in Chiniak Bay.

Key Words: Waterfowl, Steller's eider, *Polysticta stelleri*, aerial, sea duck, Kodiak, Alaska

INTRODUCTION

The Pacific population of Steller's eiders (*Polysticta stelleri*) nests in the maritime tundra of northeast Siberia and northwest Alaska and winters in the Bering Sea of Alaska. In the 1960s it was estimated that 200,000 Steller's eiders wintered along the Alaska Peninsula (Jones 1965), but estimates declined to less than 65,000 in 1991 (Kertell 1991). In 1997 the U.S. Fish and Wildlife Service listed the Alaska breeding population as threatened (USFWS 1997).

Concerns about declines in Steller's eider and other sea duck populations prompted personnel of the Kodiak National Wildlife Refuge to initiate an annual winter aerial survey to assess and monitor sea duck populations. The first survey was conducted in March and April 1992, covering most of the primary Kodiak Steller's eider wintering area as determined by years of incidental aerial and shipboard observations by refuge personnel (Zwiefelhofer 1992). Estimates for all waterfowl and marine mammals were reported for 4 survey zones. A total of 2,892 Steller's eiders were tallied during the 1992 survey. The survey was repeated in 1993, with 4,032 Steller's eiders estimated. Problems relating to weather and aircraft availability in 1993 resulted in the deletion of Chiniak Bay and Ugak Island, which had accounted for 2,120 Steller's eiders in 1992. The survey was repeated again in 1994, with the same study area divided into 88 segments for more precise distributional information. That year refuge funding was not available for the project, so Pilot/Biologist Bill Larned (Waterfowl Management, Soldotna), completed the survey with regional eider funds, using an aircraft and observer (Denny Zwiefelhofer) provided by Kodiak National Wildlife Refuge (Larned and Zwiefelhofer 1995). In 2001 the survey was repeated with the same observers and coverage was expanded to include portions of Afognak and Shuyak Islands. In January 2002 Larned and Zwiefelhofer again attempted the survey but persistent inclement weather resulted in only Chiniak and Ugak Bays being surveyed. Attempts to repeat the survey and expand coverage in subsequent years were unsuccessful, due to scheduling and funding problems. This report describes results of a survey that was successfully completed in early February, 2010.

METHODS

The survey was flown in a Turbine Beaver equipped with amphibious floats, with a crew consisting of pilot/observer Paul Anderson (USFWS Waterfowl Management) and forward right observer Bill Larned. Kodiak NWR biologist Robin Corcoran flew the survey as a training exercise as a right rear seat observer. We conducted a standard shoreline survey, remaining 200 to 400 m offshore, at an altitude of 50 m, and an airspeed of 100 kts. A moving-map system, developed by John Hodges (USFWS Waterfowl Management, Juneau, Alaska) was used to aid in navigation and record waterfowl and marine mammal observations. All observations were recorded using the laptop moving map program, which was linked to the on-board GPS receiver to provide a precise location on the flight path from which each observation was made. We also recorded estimated tide state (low, medium, high), sky condition (clear, scattered, broken, overcast), wind direction and wind speed whenever any of these parameters changed.

The survey area included all habitats known to host significant numbers of wintering Steller's eiders (Fig. 1). This year the shoreline of Afognak and Shuyak Islands were not surveyed since no

eiders were observed during the 2001 survey and years of incidental observations by Kodiak Refuge biologists suggest that this region does not support large numbers of eiders. Steller's eiders prefer shallow protected marine habitats, especially those containing eelgrass beds (Metzner 1993). We therefore digitized the 20m isobath within the survey areas, and displayed this in the moving map, limiting our survey generally to the area between that line and the shoreline. In most cases this included only a narrow survey corridor, allowing us to see and record all Steller's eiders on a single transect parallel to the shoreline (Fig. 2). We covered broader corridors using an S-turn pattern. For analysis we treated these areas as a complete census, though there is undoubtedly a small, unknown number of birds that escaped detection due to rough surface conditions and diving behavior. Data were summarized by geographical areas for comparison with previous surveys.

RESULTS AND CONCLUSIONS

Flight time for the survey included 5.7 hrs. on 4 February, 5.7 hrs. on 6 February, plus 4.4 hrs. ferry time to/from Anchorage .

Steller's eider

On 4 February we successfully surveyed Chiniak and Uyak Bays (areas 1 and 2, Fig. 1), which had a total of 705 Steller's eiders (Fig. 3). Incidental observations were made along the outer exposed coastline of Sitkalidak Island but no Steller's eiders were observed. Sitkalidak Strait (area 3) was not surveyed. On 6 February we completed surveys on the southwest end of Kodiak including Kaguyak Bay (area 4), Geese/Aiaktalik Islands (area 5), an abbreviated coverage of Sitkinak Strait and the Trinity Islands (area 6), Moser Bay (area 7), Akhiok (area 8), and Cape Alitak (area 9). Incidental observations were also made on the return flight along the north and eastern edges of Alitak Bay. All of the areas surveyed on 6 February combined had a total of 1994 Steller's eiders (Fig. 4).

Steller's eider flocks were rather small, ranging from 1 to 130 individuals per observation, with a mean of 22 birds (n=121). Two larger flocks were encountered, one numbering 250 eiders at south Tugidak Passage (area 6) and the second numbering 450 eiders southeast of Aiaktalik Island (area 5). Figures 3-4 show the distribution of observations of Steller's eiders. The highest concentrations were in Sitkinak Strait, the passage between Tugidak and Sitkinak Islands, and Chiniak Bay.

There were fewer eiders counted in all of the areas surveyed when compared to 1994 and 2001 (Table 1). The overall Steller's eider count for 2010 was 2699, compared to an expanded estimate of 5341 in 2001 and a count of 5349 in 1994. Comparing total numbers is complicated by the fact that area 3 was not surveyed and area 6 was not surveyed completely nor was it counted in a systematic pattern that would permit extrapolation as in 2001. However, area 3 was also not surveyed in 1994 and did not have any Steller's eiders when surveyed in 2001.

Table 1. Number of Steller's eiders counted on aerial surveys conducted on the east side of Kodiak, AK 1992-2010.

	Year (Survey Dates)					
	1992	**1993**	**1994**	**2001**	**2002**	**2010**
Area	(Mar. 18 – Apr. 8)	(Mar. 15-18)	(Mar. 10-12)	(Jan. 29 – Feb. 2)	(Jan. 21 – Feb. 3)	(Feb. 3-7)
Chiniak Bay	2120	NS	2191	823	1318	460
Ugak Bay	NS	249	223	641	498	245
Sitkalidak	566	527	NS	0	NS	NS
Geese Islands to Olga Bay	137*	2195	1966	1779 (2786**)	NS	1334
Trinity Islands	69*	1061	969	953 (1091**)	NS	660***
TOTALS	**2892**	**4032**	**5349**	**4196 (5341*)**	**1816**	**2699**

* Late survey (conducted April 7-8 1992) flown by T. Chatto with observer D.Munoz.

** Includes extrapolation from 2001 Steller's eider report.

*** Incomplete survey coverage of Trinity Islands in 2010.

Summarizing the data by area and averaging the most reliable counts based on past reports it appears that declines are most pronounced in Chiniak Bay (Table 3). Comparing the number of Steller's eiders counted in 2010 with the 1992-2002 average indicates that percent declines for Ugak Bay, Geese Islands to Olga Bay, and the Trinity Islands ranged from 37 to 42% while the percent decline in Chiniak Bay was 72%.

Table 3. Comparison of 2010 Steller's eider aerial survey counts to the average count for surveys conducted between 1992-2002 on the east side of Kodiak, AK.

	Steller's eider counts by Area			
Year	Chiniak Bay	Ugak Bay	Geese Islands to Olga Bay	Trinity Islands
1992	2120	NS	PS*	PS*
1993	NS	249	2195	1061
1994	2191	223	1966	969
2001	823	641	2786**	1091**
2002	1318	498	NS	NS
1992-2002 MEAN	**1613**	**403**	**2316**	**1040**
2010	460	245	1334	660***
PERCENT DECLINE	**72%**	**39%**	**42%**	**37%**

* Late survey (conducted April 7-8 1992) flown by T. Chatto with observer D.Munoz; the only time in the survey history when D. Zwiefelhofer and/or W. Larned were not primary observers.

** Includes extrapolation from 2001 Steller's eider report.

*** Incomplete survey coverage of Trinity Islands in 2010.

Other Species

Totals for other species are listed in Table 3 with 1994 and 2001 totals for comparison. Distribution maps for selected species are included at the end of this report. Since the survey was designed to cover Steller's eider distribution, results for other species are less comprehensive. As

such these data may find use primarily in indicating some important habitats, as well as for long term tracking of wintering distribution and relative abundance.

RECOMMENDATIONS

We would like to see this survey continued on a periodic basis to monitor this important and possibly discrete wintering Steller's eider population. Steller's eiders are currently monitored via spring migration counts and at select molting locations in southwestern Alaska with no studies focused on wintering populations. Data from banding and telemetry efforts by the Alaska Department of Fish and Game suggest strong site fidelity on Kodiak. However, there are potential development threats in this region, particularly in Chiniak Bay. Two recently proposed projects in known areas of eider concentrations (Kodiak Airport Runway expansion and Coast Guard fuel dock renovations) are currently under environmental review. In general on the east side of Kodiak Steller's eiders forage in nearshore marine habitat that is close to human development and prone to oil spills and other marine pollution.

Prospective power analysis using data from the Kodiak wintering Steller's eider aerial surveys in 1993, 1994, and 2001 indicates that by conducting eider surveys on Kodiak every year it would be possible to detect overall changes of 25% in the population over 20 years. Due to logistical constraints yearly surveys are cost prohibitive at this time. Our analysis indicates that declines of 50% in this population could be detected with a survey done at 5-year intervals and it is our recommendation that surveys be conducted on this schedule.

LITERATURE CITED

Forsell, D. J., and P. J. Gould. 1981. Distribution and abundance of marine birds and mammals in the Kodiak area of Alaska. U.S. Fish and Wildl. Serv., FWS/OBS-81/13. 72pp.

Jones, R. D., JR. 1965. Returns of Steller's Eiders banded in Izembek Bay, Alaska. Wildfowl 16:83- 85.

Kertell, K. 1991. Disappearance of the Steller's eider from the Yukon-Kuskokwim Delta, Alaska. Arctic 44(3):177-187.

Larned, W. W. 1995. Distribution and abundance of Steller's eiders in the Kodiak Archipelago, Alaska, March 1994. U. S. Fish and Wildl. Serv. Unpubl. rep. 19pp.

Metzner, K. A. 1993. Ecological strategies of wintering Steller's eiders on Izembek Lagoon and Cold Bay, Alaska. M. S. Thesis, Univ. of Missouri, Columbia, Missouri. 193 pp.

U.S. Fish and Wildlife Service. 1997. Endangered and threatened wildlife and plants; proposed rule to list Spectacled Eider as threatened and notice of 12.month finding for a petition to list two Alaskan Eiders as endangered. Federal Register 57: 19852-19856.

Zwiefelhofer, D. 1992. 1992 winter population survey of Steller's eiders on the Kodiak Island, Alaska. U.S. Fish and Wildl. Serv. Unpubl. rep. 4 pp.

Zwiefelhofer, D. 1993. 1993 winter population survey of Steller's eiders on the Kodiak Island, Alaska. U.S. Fish and Wildl. Serv. Unpubl. rep. 5 pp.

Zwiefelhofer, D. 1994. Status of harlequin ducks (*Histrionicus histrionicus*) on Kodiak Island, Alaska. U.S. Fish and Wildl. Serv. Unpubl. rep. 15 pp.

Zwiefelhofer, D. 1995. Kodiak National Wildlife Refuge 1995 harlequin duck breeding population
and brood surveys. U.S. Fish and Wildl. Serv. Unpubl. Prog. rep. 23 pp.

Table 3. Counts by species for each major geographic area surveyed (see Figure 1), during the Winter Steller's eider aerial survey, Kodiak Archipelago, Alaska, March 10-12 1994, January 29 to 2 February 2, 2001, and February 3-7, 2010.

Table 3. Counts by species for each major geographic area surveyed (see Figure 1), during the Winter Steller's eider aerial survey, Kodiak Archipelago, Alaska, 10-12 March 1994, 29 January to 2 February 2001, and 3-7 February 2010.

	1 Chiniak Bay			2 Ugak Bay			3 Sitkalidak		
Species	**1994**	**2001**	**2010**	**1994**	**2001**	**2010**	**1994**	**2001**	**2010***
Loon spp.	20	28	**10**	11	18	**8**	NS	10	
Red-necked grebe		1		1	2	**4**			
Cormorant spp.	3	159	**322**	227	48	**245**		10	**6**
Canada goose			**43**			**20**			
Emperor goose	195	340	**488**	65	99	**319**			
Mallard	144	75	**325**	100	50	**98**			
Gadwall			**14**			**4**			
Northern pintail			**15**	16		**2**			
American wigeon									
Scaup spp.	121	84	**14**	360	30	**69**		160	
Common eider	58	12	**4**	6					
King eider	39	89		50	75				
Steller's eider	2024	823	**460**	390	641	**245**			
Harlequin duck	237	251	**123**	174	251	**274**		4	**2**
Long-tailed duck	387	410	**65**	361	451	**704**		24	**4**
Surf scoter	75	182	**100**	156	147	**93**		110	
Black scoter	400	318	**573**	838	859	**1703**		3	**158**
White-winged scoter	242	115	**62**	228	135	**1149**			**16**
Unident. scoter		20			5	**360**			**4**
Goldeneye spp.	36	67	**69**	90	143	**130**		8	
Bufflehead	6	13	**12**	16	8	**5**			
Common merganser	20	14		22	7	**4**		4	**20**
Red-breasted merganser	110	61	**28**	254	80	**117**		5	
Bald eagle	23	6	**19**	19	2	**12**			
Large gull	2654	1916		1	168			2	
Mew gull	298	1225			37				
Unident. gull			**822**			**140**			**2**
Murre spp.	1	219	**11**		402	**5**		26	
Pigeon guillemot	20	20			13	**1**		1	
Crested Auklet									
Sea otter	15	23	**74**	2		**1**			
Harbor seal	8	25		24					
Steller's sea lion	85	1	**45**			**21**			

Table 3. (cont.)

Species	4 Kaguyak Bay			5 Geese/Aiaktalik Isl.			6 Trinity Islands		
	1994	2001	2010	1994	2001	2010	1994	2001	2010**
Loon spp.	NS	7	**4**	7	73	**17**	11	17	
Red-necked grebe					2	**25**		1	**4**
Cormorant spp.		12	**239**	25	154	**179**		6	**11**
Canada goose									
Emperor goose			**53**	304	136	**777**	1870	1261	**2526**
Mallard		3	**3**	60	12	**96**	207	109	**12**
Gadwall									**300**
Northern pintail							19	200	**100**
American wigeon									
Scaup spp.							364	20	
Common eider									**2**
King eider		7		87	423	**28**	70	57	**25**
Steller's eider		9		1302	1598	**1141**	969	953	**660**
Harlequin duck			**26**	38	93	**69**	11	3	
Long-tailed duck		111	**40**	63	470	**237**	95	807	**129**
Surf scoter		4	**70**	37	4	**37**	90	63	**63**
Black scoter			**62**	29	460	**383**	547	124	**512**
White-winged scoter		9	**128**		69	**153**	81	99	**80**
Unident. scoter			**30**		14	**205**		40	
Goldeneye spp.		30	**68**			**51**	20	95	**263**
Bufflehead		8	**2**		16	**12**	41	14	**35**
Common merganser		14				**3**	8	3	
Red-breasted merganser		6	**1**	68	29	**23**	61	34	**10**
Bald eagle				5	3	**2**	8		**6**
Large gull		3	**13**		105	**38**	30	548	**56**
Mew gull		4			22			38	
Unident. gull									
Murre spp.		51	**1**	400	27	**712**		3	**2**
Pigeon guillemot		2			16				
Crested Auklet									
Sea otter				3	32	**170**	5	22	**118**
Harbor seal					8		30	131	**96**
Steller's sea lion									

Table 3. (cont.)

Species	7 Moser Bay			8 Akhiok			9 Cape Alitak		
	1994	**2001**	**2010**	**1994**	**2001**	**2010**	**1994**	**2001**	**2010**
Loon spp.	1	1	**2**	1	2	**1**	3	1	**1**
Red-necked grebe		1	**1**			**1**			
Cormorant spp.		9	**2**		40	**8**		8	**7**
Canada goose									
Emperor goose				158	380	**751**	500		**284**
Mallard	14		**22**	12			363		**185**
Gadwall			**5**			**20**			
Northern pintail						**15**	30		
American wigeon						**150**			
Scaup spp.	14		**4**			**50**	18		**2**
Common eider									
King eider	52	14		28		**2**	5		
Steller's eider	34	17	**12**	512	155	**131**	97		
Harlequin duck	20	38	**26**	48	40	**70**	12	33	**6**
Long-tailed duck	277	13	**10**	24	20		415	55	**17**
Surf scoter		8			24		8		**21**
Black scoter	552	21	**2540**	819	127	**117**	204	27	**18**
White-winged scoter		7	**9**	19		**14**	83	50	**1**
Unident. scoter									
Goldeneye spp.	20	70	**36**			**30**		41	**91**
Bufflehead		1	**1**			**45**			**70**
Common merganser	6				4			62	
Red-breasted merganser	112	20	**41**	33	10	**43**	46	70	**219**
Bald eagle				2		**1**			**1**
Large gull		4			18		150	36	
Mew gull								50	
Unident. gull			**4**			**20**			**30**
Murre spp.		1			3	**1**		25	
Pigeon guillemot									
Crested Auklet						**3385**			
Sea otter						**2**			
Harbor seal									
Steller's sea lion									

Table 3. (cont.)

	East Alitak Bay			TOTALS		
Species	**1994**	**2001**	**2010**	**1994**	**2001**	**2010**
Loon spp.	NS	NS	**1**	54	157	**44**
Red-necked grebe				1	7	**35**
Cormorant spp.				255	446	**1019**
Canada goose						**63**
Emperor goose			**1570**	3092	2216	**6768**
Mallard			**70**	900	249	**811**
Gadwall			**53**			**396**
Northern pintail				65	200	**132**
American Wigeon						**150**
Scaup spp.				877	294	**139**
Common eider				64	12	**6**
King eider				331	665	**55**
Steller's eider			**50**	5328	4196	**2699**
Harlequin duck				540	713	**596**
Long-tailed duck				1622	2361	**1206**
Surf scoter				366	542	**384**
Black scoter			**19**	3389	1939	**6085**
White-winged scoter				653	484	**1612**
Unident. scoter					79	**599**
Goldeneye spp.				166	454	**738**
Bufflehead				63	60	**182**
Common merganser				56	108	**27**
Red-breasted merganser			**44**	684	315	**526**
Bald eagle				57	11	**41**
Large gull				2835	2800	
Mew gull				298	1376	
Unident. gull			**47**			**1172**
Murre spp.			**3**	401	757	**735**
Pigeon guillemot				20	52	**1**
Crested Auklet						**3385**
Sea otter				25	77	**365**
Harbor seal				62	164	**96**
Steller's sea lion				85	1	**66**

* Outer Sitkalidak Island surveyed in 2010, previous surveys covered Sitkalidak Strait/Old Harbor.

** Incomplete survey coverage of Trinity Islands in 2010.

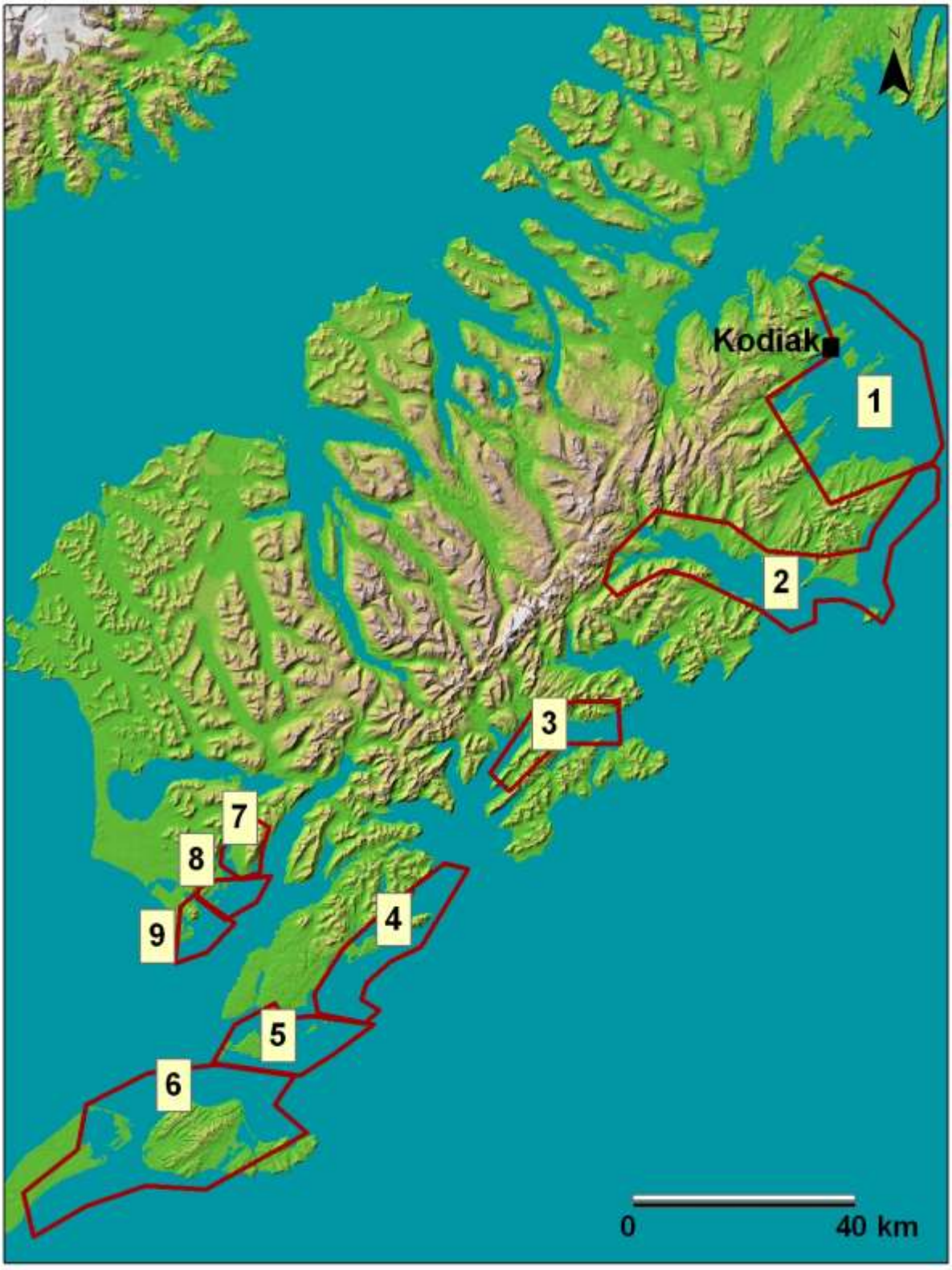

Figure 1. Kodiak Archipelago showing areas surveyed during an aerial wintering waterfowl survey, February 3-7, 2010 (see Table 2).

Figure 2. Kodiak Archipelago showing flightpaths flown during an aerial wintering waterfowl survey, February 3-7, 2010.

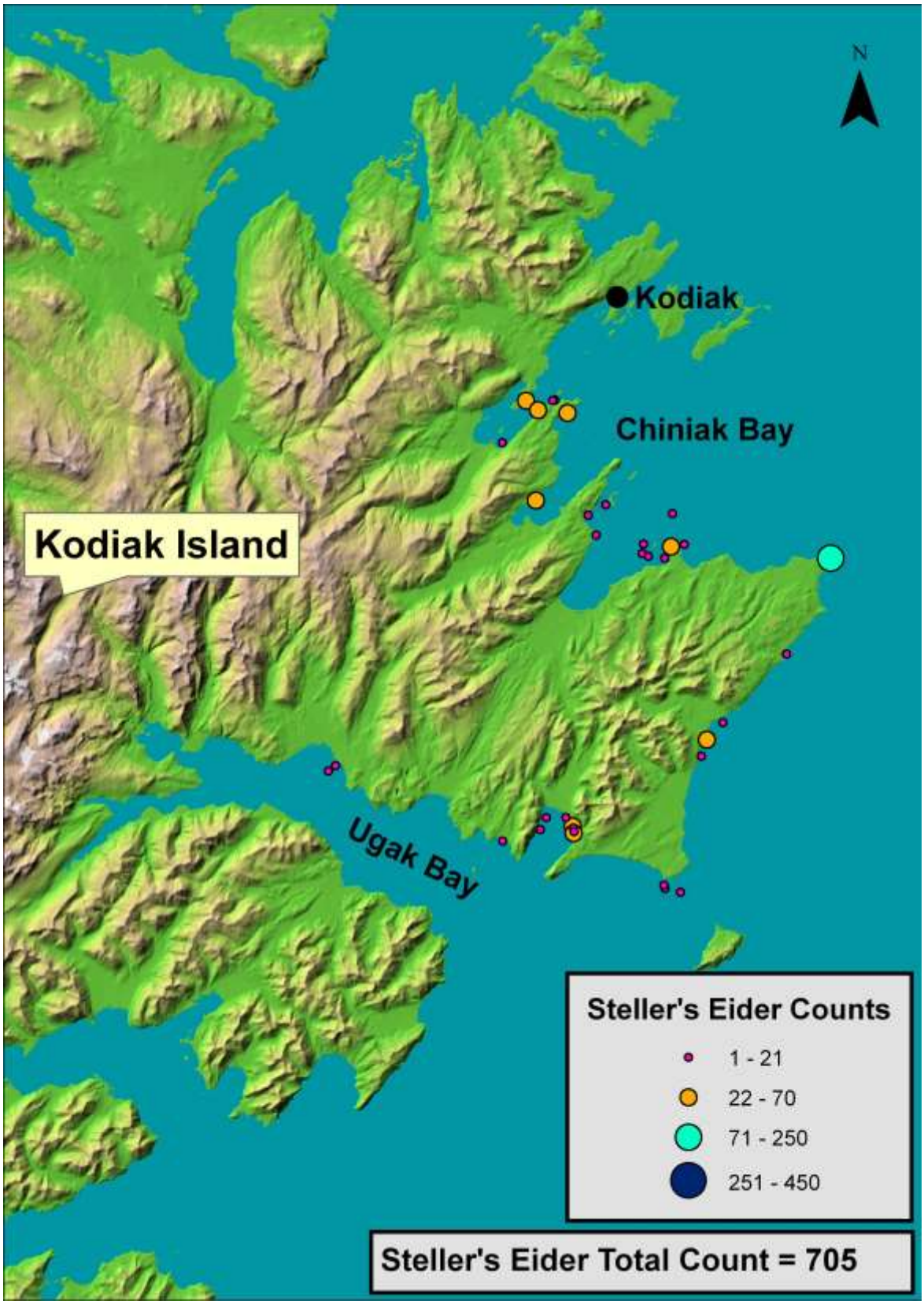
N
Kodiak
Chiniak Bay
Kodiak Island
Ugak Bay
Steller's Eider Counts
1 - 21
22 - 70
71 - 250
251 - 450
Steller's Eider Total Count = 705

Figure 3. Location and numbers of Steller's eiders recorded during an aerial survey in Chiniak and Ugak Bay, Kodiak Archipelago, Alaska, February 3-7, 2010.

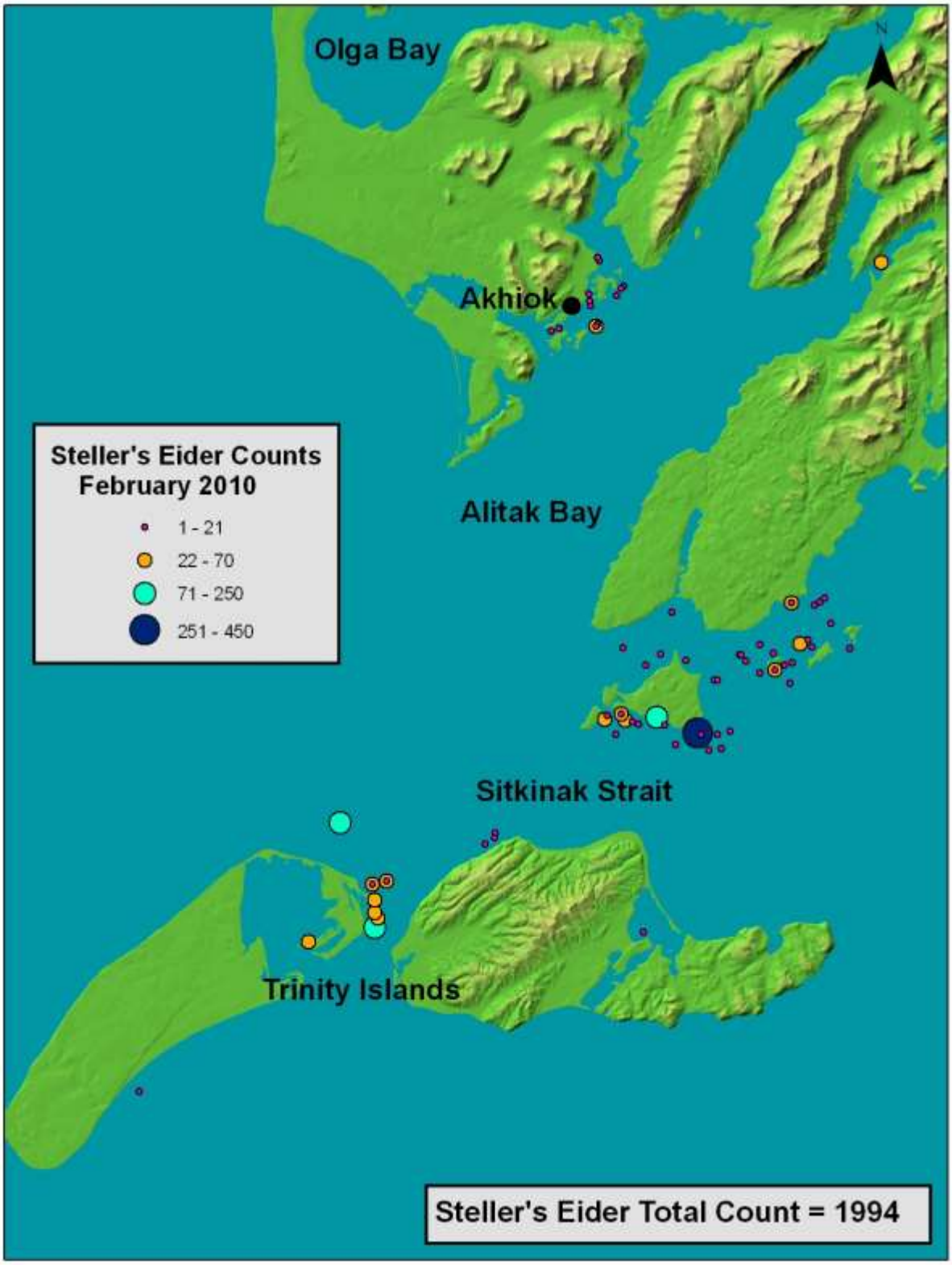

Figure 4. Location and numbers of Steller's eiders recorded during an aerial survey in Sitkinak Strait/Geese Islands, Trinity Islands, and Alitak Bay north to Olga Bay, Kodiak Archipelago, Alaska, February 3-7, 2010.

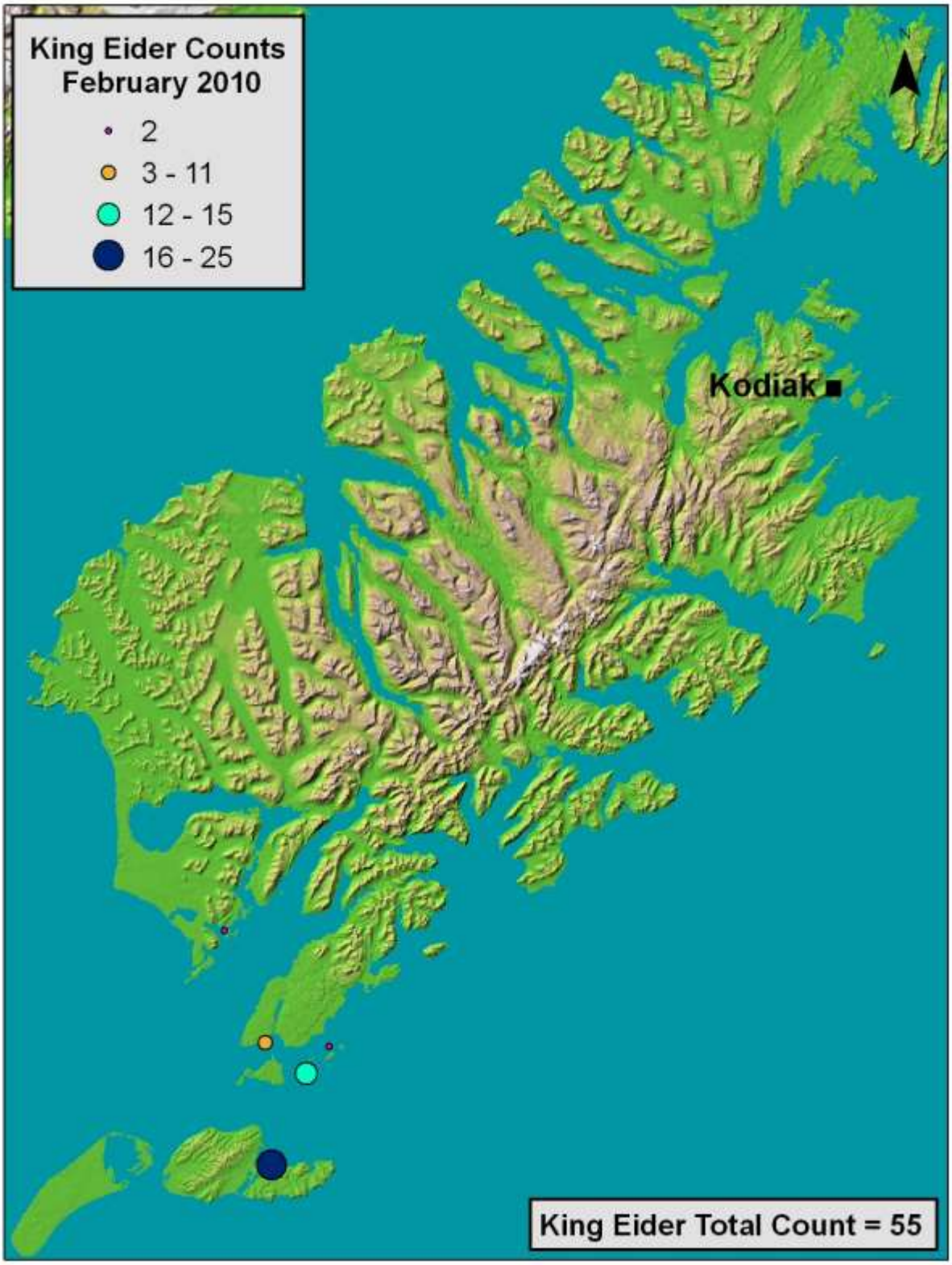

Figure 5. Locations of King Eiders recorded during an aerial survey, Kodiak Archipelago, Alaska February 3-7, 2010.

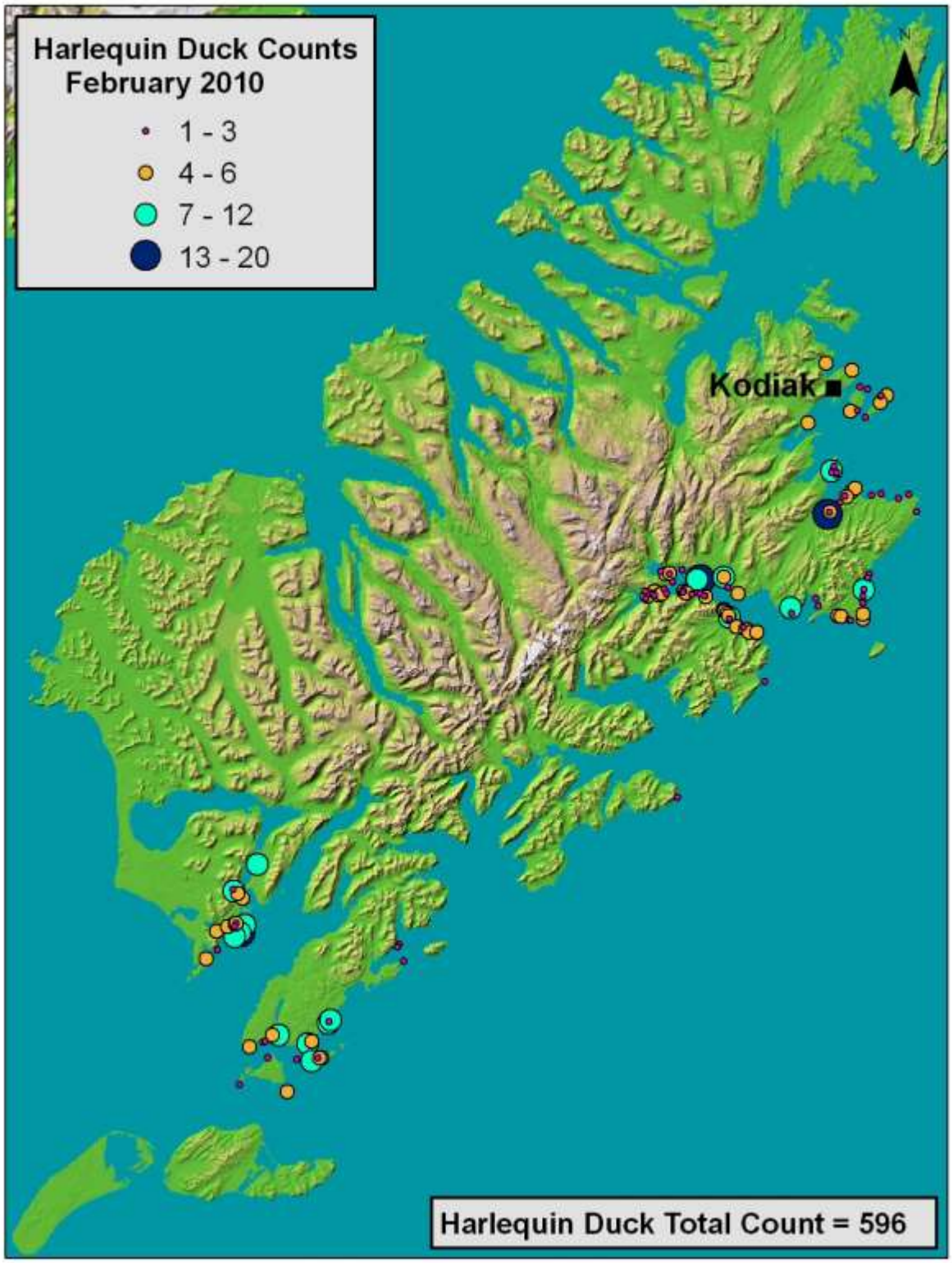

Figure 6. Locations of Harlequin Duck recorded during an aerial survey, Kodiak Archipelago, Alaska February 3-7, 2010.

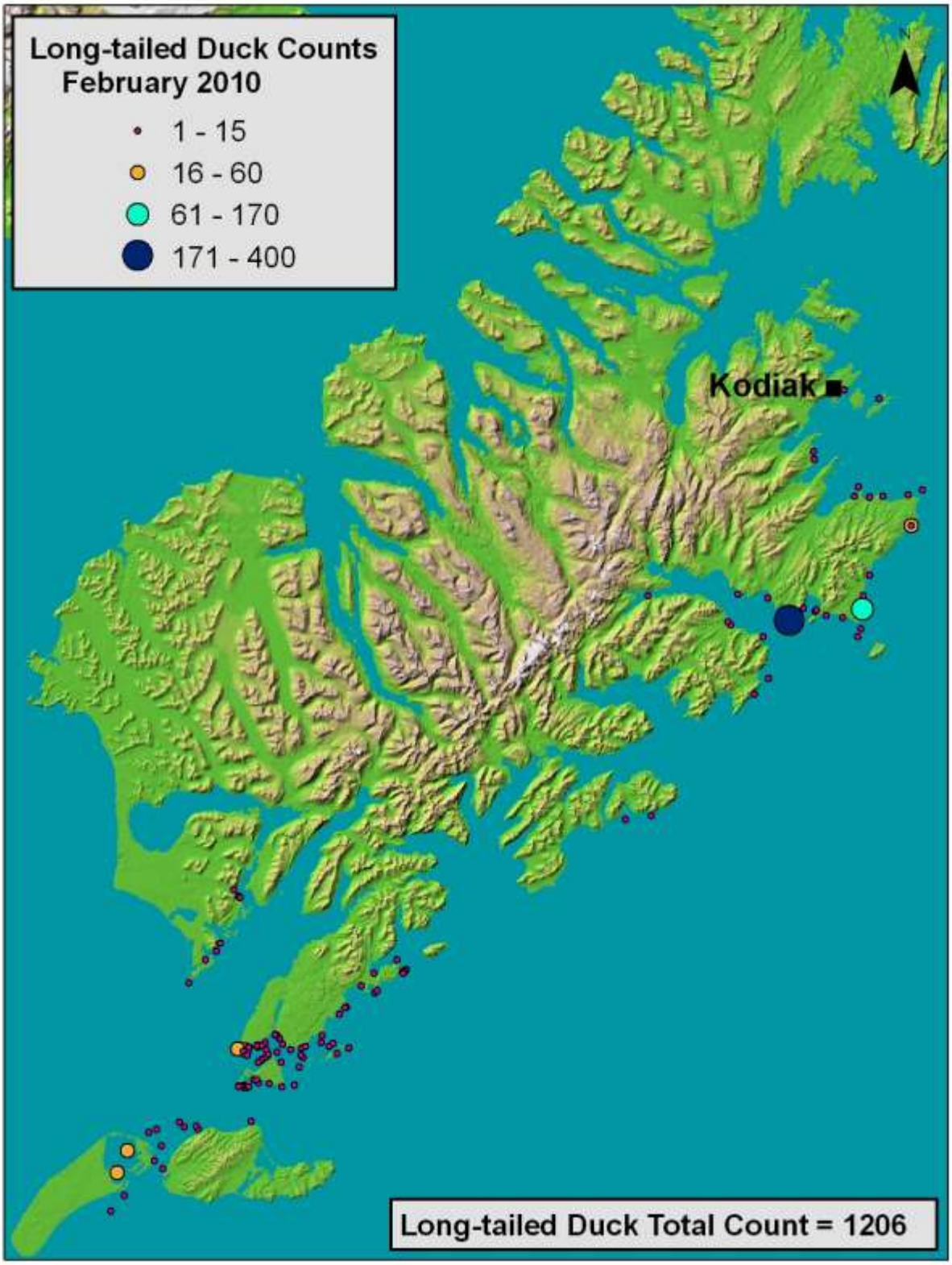

Figure 7. Locations of Long-tailed Ducks recorded during an aerial survey, Kodiak Archipelago, Alaska February 3-7, 2010.

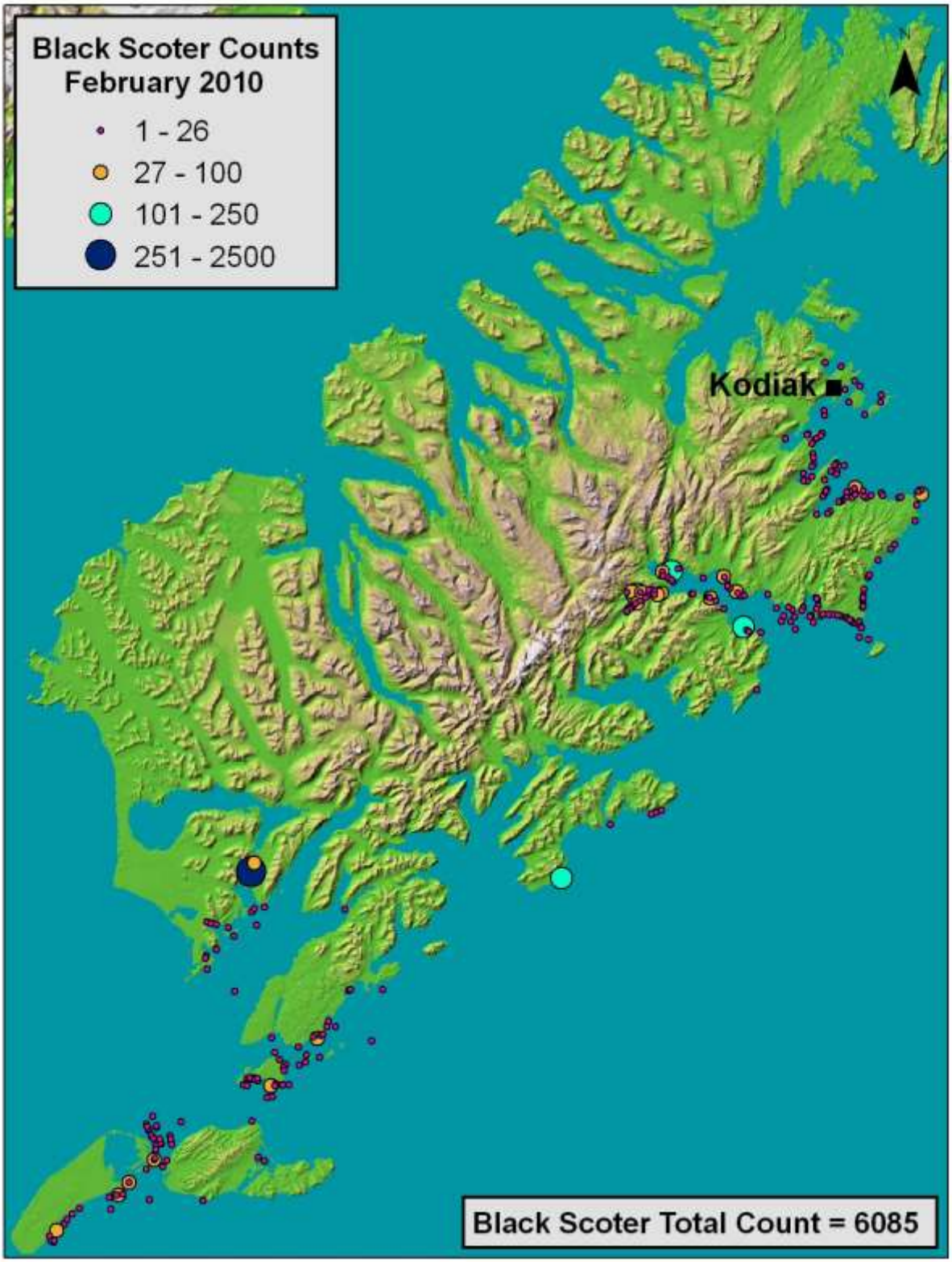

Figure 8. Locations of Black Scoters recorded during an aerial survey, Kodiak Archipelago, Alaska February 3-7, 2010.

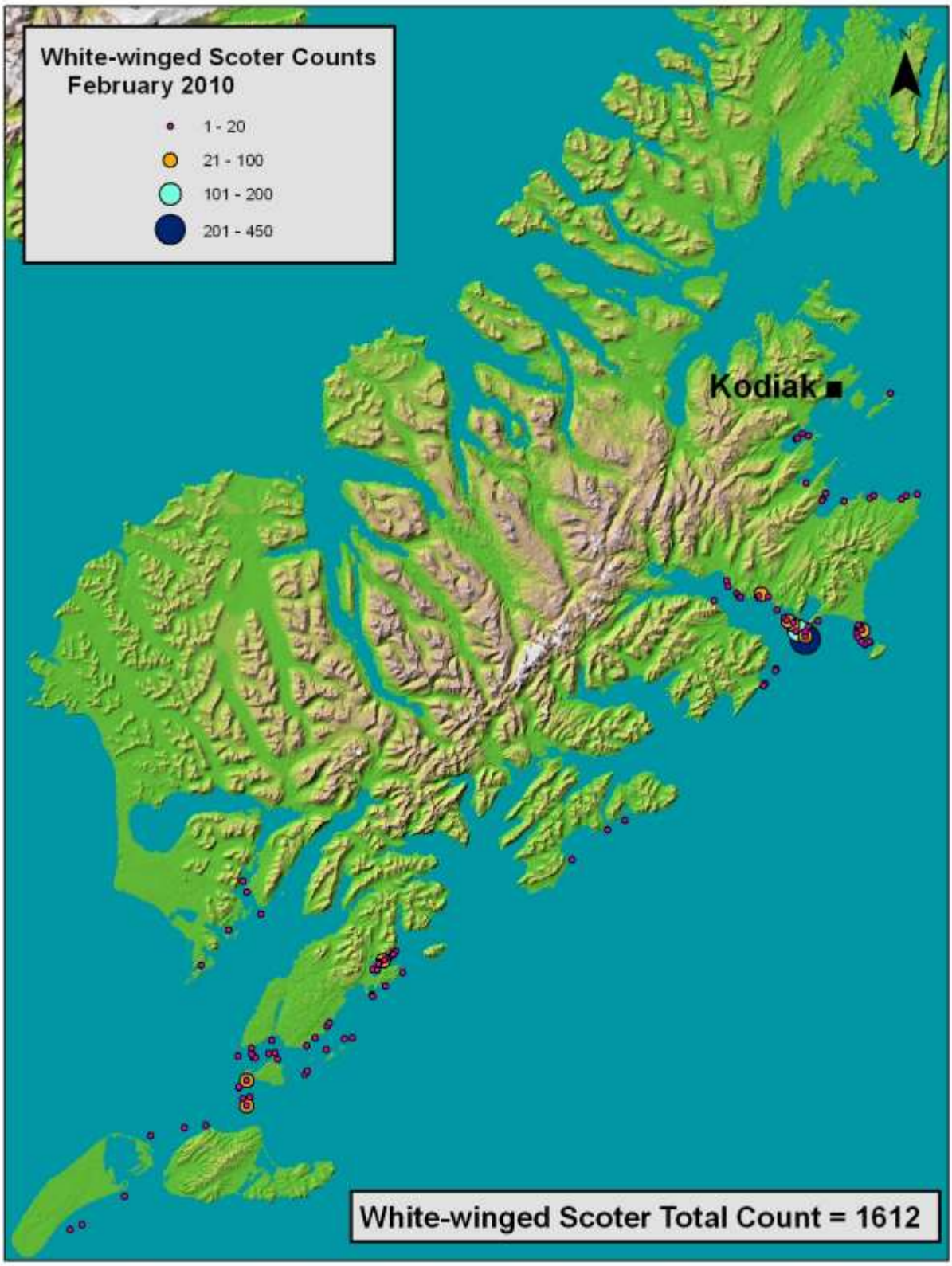

Figure 9. Locations of White-winged Scoters recorded during an aerial survey, Kodiak

Archipelago, Alaska February 3-7, 2010.

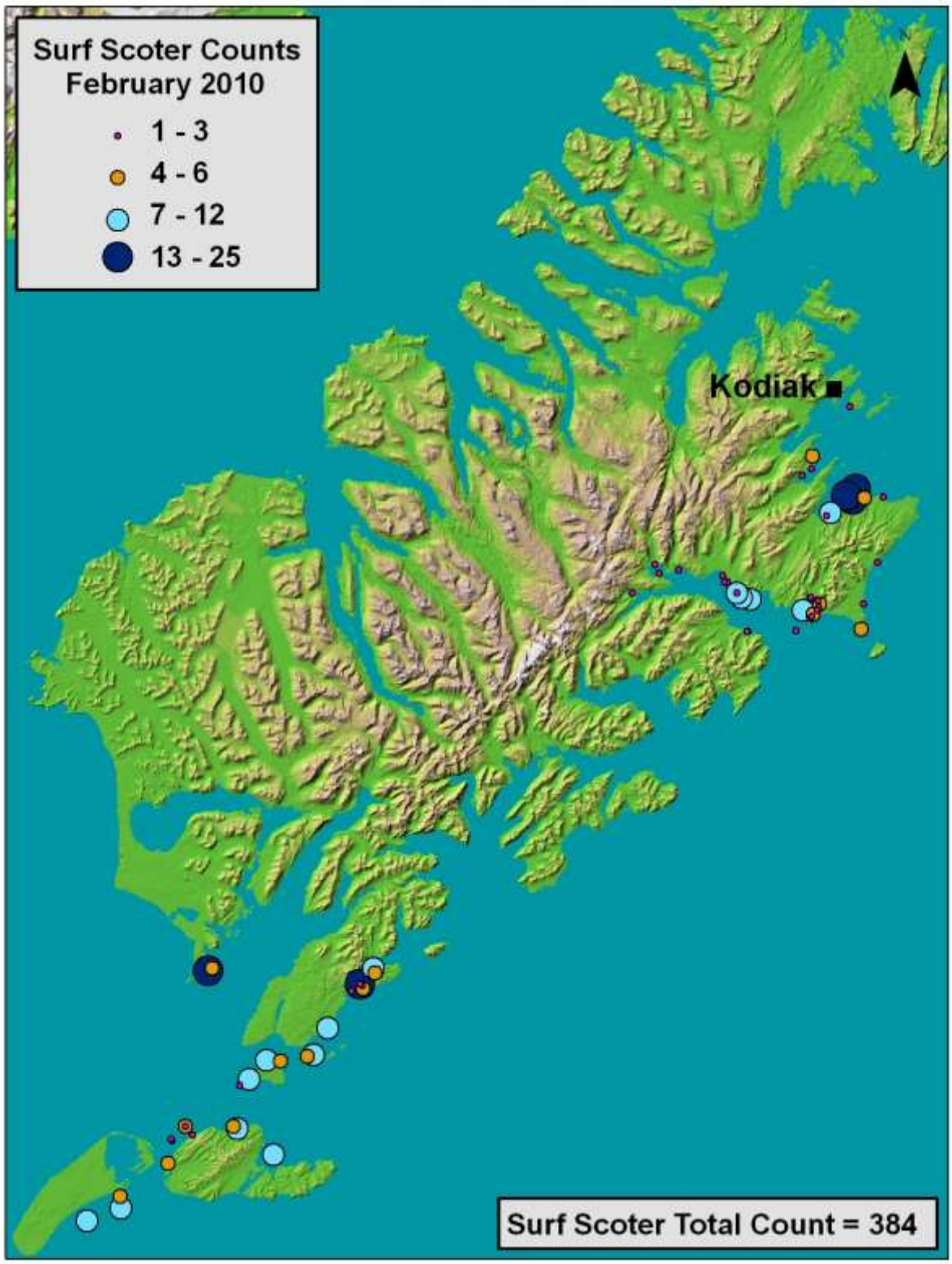

Figure 10. Locations of Surf Scoters recorded during an aerial survey, Kodiak Archipelago, Alaska February 3-7, 2010.

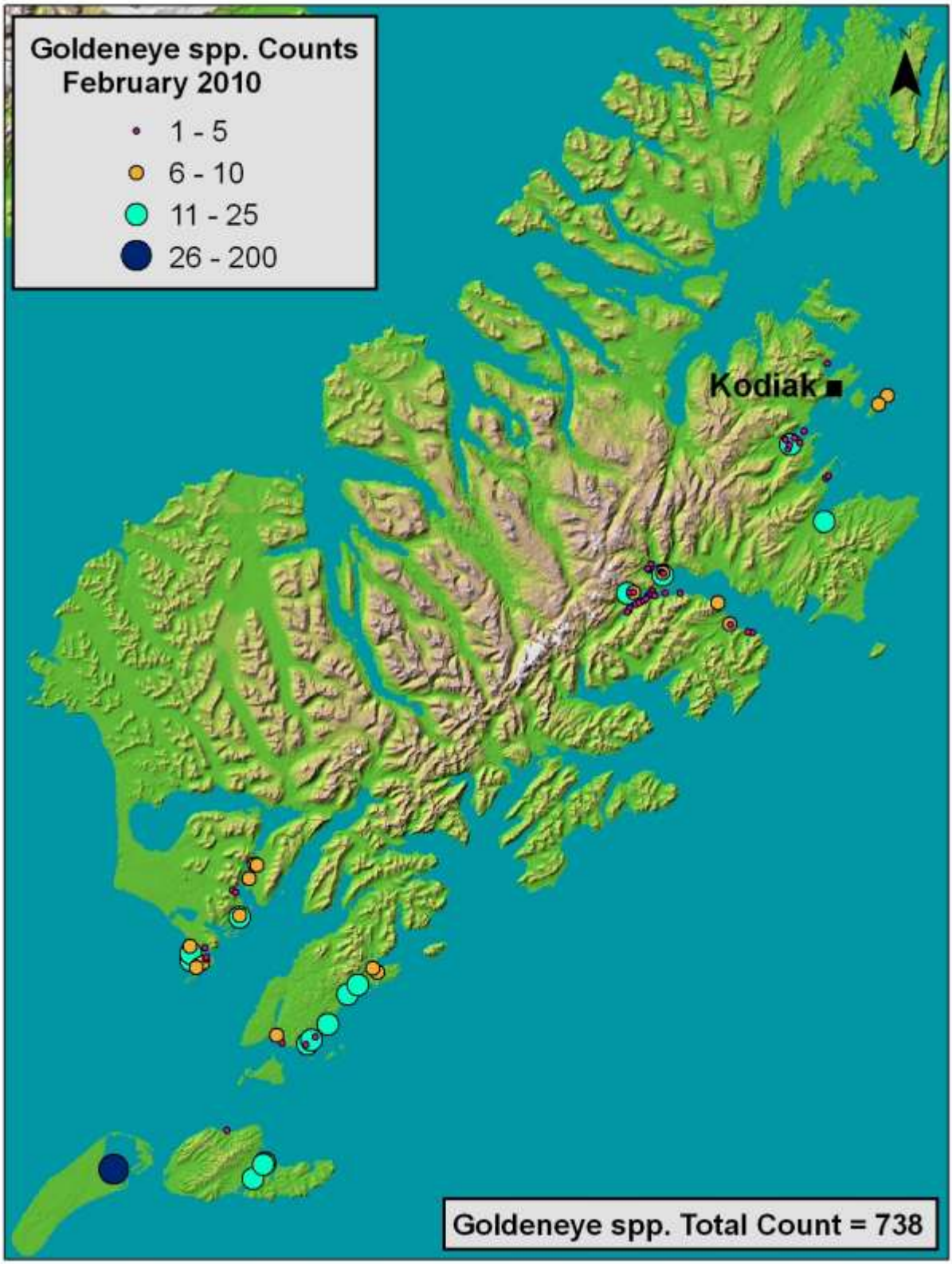

Figure 11. Locations of Goldeneye spp. recorded during an aerial survey, Kodiak Archipelago, Alaska February 3-7, 2010.

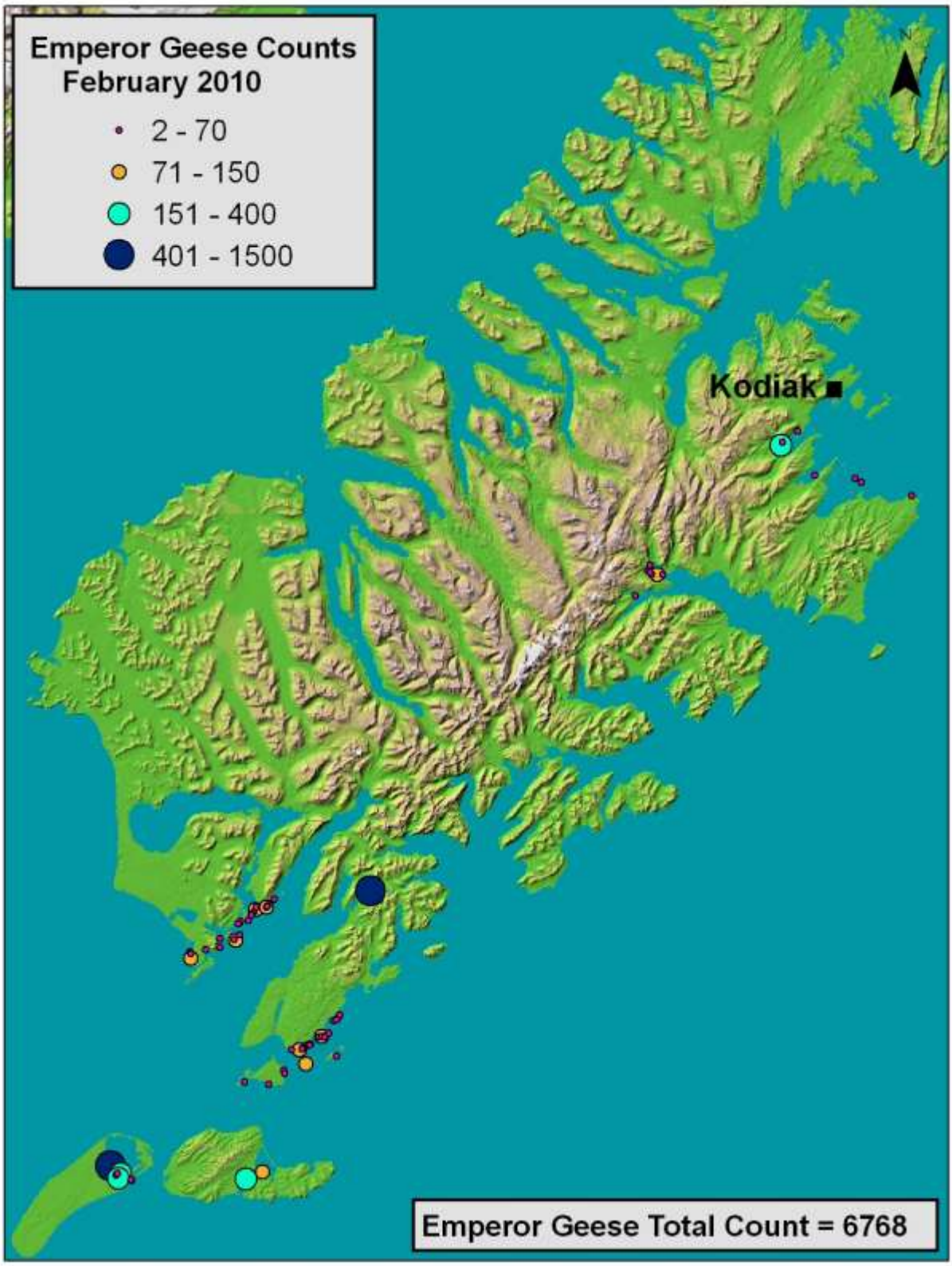

Figure 12. Locations of Emperor Geese recorded during an aerial survey, Kodiak Archipelago,

Alaska February 3-7, 2010.

APPENDIX 1. Common and scientific names of species mentioned in the text and tables.

Common Name	Scientific Name
Birds:	
Loon spp.	*Gavia immer, G. pacifica,G. adamsii, G. stellata*
Red-necked grebe	*Podiceps grisegena*
Cormorant spp.	*Phalacrocorax auritus, P. pelagicus*
Canada goose	*Branta canadensis*
Emperor goose	*Chen canagica*
Mallard	*Anas platyrhynchos*
Gadwall	*Anas strepera*
Northern pintail	*Anas acuta*
American wigeon	*Anas Americana*
Scaup spp.	*Aythya marila, A. affinis*
Common eider	*Somateria mollissima*
King eider	*Somateria spectabilis*
Steller's eider	*Polysticta stelleri*
Harlequin duck	*Histrionicus histrionicus*
Long-tailed duck	*Clangula hyemalis*
Surf scoter	*Melanitta perspicillata*
Black scoter	*Melanitta nigra*
White-winged scoter	*Melanitta deglandi*
Goldeneye spp.	*Bucephala clangula, B. islandica*
Bufflehead	*Bucephala albeola*
Common merganser	*Mergus merganser*
Red-breasted merganser	*Mergus serrator*
Bald eagle	*Haliaeetus leucocephalus*
Large gull	*Larus argentatus, L. hyperboreus, L. glaucescens.*
Mew gull	*Larus canus*
Murre spp.	*Uria spp.*
Pigeon guillemot	*Cepphus columba*
Crested auklet	*Aethia* cristatella
Marine mammals:	
Sea otter	*Enhydra lutris*
Harbor seal	*Phoca vitulina richardsi*
Steller's sea lion	*Eumetopias jubatus*