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Winter censuses on *Haliaeetus pelagicus* in the Kamchatka and northern Japan in 1985

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Haliaeetus pelagicus breeds in the Kamchatka Peninsula, Shantar Islands, northern Sakhalin, Southern Koryaku Highland and along the coast of the Okhotsk Sea, and winters from Kamchatka southward to the Korean Peninsula and southern China in the continent and in northern Japan (Ornithological Society of Japan 1974, Stepanyan 1975).

Censuses on *Haliaeetus pelagicus* and *H. albicilla* wintering in eastern Hokkaido have been conducted every year since 1980 by the Sea-eagle Research Group (1982, 1985). As the results of these censuses, it is appeared that *H. pelagicus* occurred along the sea coast and on lakes in eastern Hokkaido during winter and concentrated in the Rausu area, Nemuro Strait, in February.

In the second Japan-USSR conference for bird protection held in Khabarovsk in September 1984, a joint census on *H. pelagicus* was proposed by one of the authors, E. G. Lobkov. In the winter of 1985 as an initial step the first joint census was made both in the Kamchtka Peninsula and northern Japan. Censuses in Japan was conducted as a part of the scientific activities of the Wild Bird Society of Japan with the aid of members of the society.

Study areas

In Japan censuses were conducted in 114 points of 34 areas situated along sea coasts, rivers and on lakes in Hokkaido (Fig. 1; 001-026), the Tohoku district (027-031; Aomori, Akita, Iwate and Miyagi Prefectures) and the Chubu district (032-034; Ishikawa, Niigata and Shizuoka Prefectures). Census points were selected based on previous information on this species in each area. The points were cotinuous in eastern Hokkaido, where great number of sea eagles occur in winters.

In Kamchatka censuses were conducted in 166 areas including the Kronotsky Natural Biosphere Reserve (9, 640 km^2) and the "Yuzhno-Kamchatski"Game Reserve (2, 250 km^2). Besides, in Koryak Highland censuses were conducted along 3 rivers

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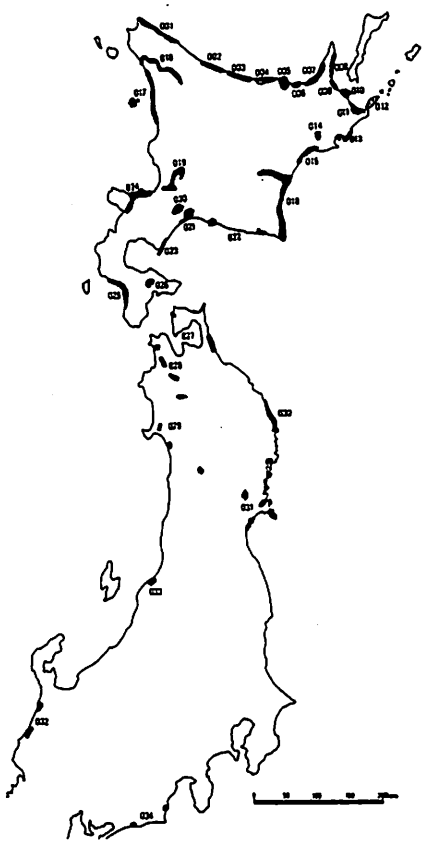


Fig. 1. A map showing census points in northern Japas.

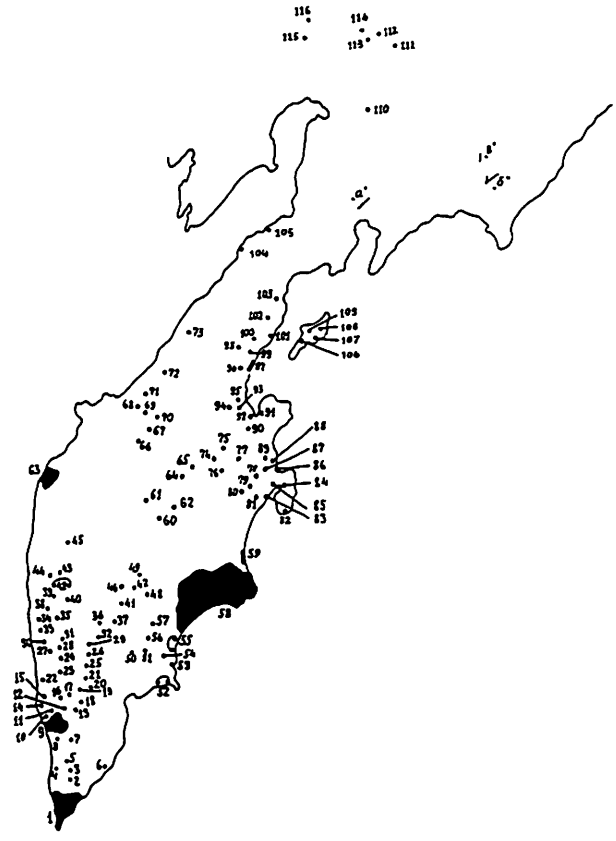


Fig. 2. A map showing census points in the Kamchatka Peninsula.
1 : "Yuzhno-Kamchatski" Game Reserve, 9 : Udochka Game Reserve, 58 : Kronotsky Natural Biosphere Reserve, 63 : Moroshechny Game Reserve

where water did not frozen. In Kamchatka Peninsula the total area censused were 42, 029 km², which correspond to 16. 66% of the peninsula.

Methods

Census methods were different between Japan and Kamchatka. In Japan censuses were conducted as a rule between 9 : 00 and 10 : 00 both on 17 February and 31 March 1985 by 199 members of the Wild Bird Society of Japan and the Sea Eagle Research Group. The numbers of birds for both *H. pelagicus* and *H. albicilla* were counted by using binocular and telescope and their age (adult or juvenile) was recorded. If species of eagles sitting on ice or flying at great distance were not distingished, total numbers of eagles were counted, then these numbers were divided proportionally based on known proportion of two species of eagles and age composition observed in the same area. Besides, conditions of ice and fishery were recorded at the same time.

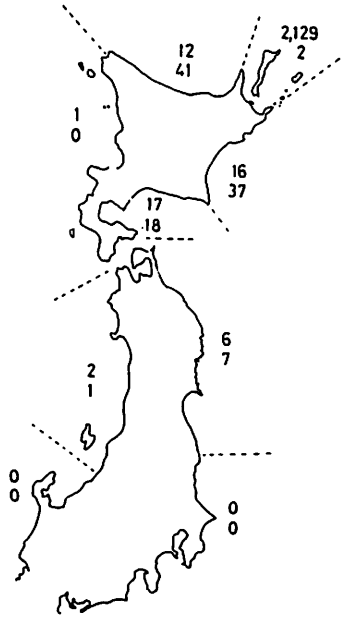
In Kamchatka the numbers of birds were counted from a light helicopter along large rivers with open waters and the sea coast in the Kronotsky Natural Biosphere Reserve and the "Yuzhno-Kamchatski" Game Reserve, and also were counted from light plaine along the coast of the peninsula from Shipunsky to Bolshaya River on 1 February with the range of 10 days before and after (e.g. between 20 January and 10 February) by E. G. Lobkov, S.A. Alekseev, S.P. Silko, V.A. Bazilevich and V.N. Burkanov. Local game reserves and hunting areas were censesed during the same period by 223 persons with the support of the Kamchatka Hunting Society. Then the total number was estimated based on the numbers of birds counted in the selected areas above mentioned.

Besides, questionnarie were made for 784 persons through the All Union Society of Nature Conservation. Of them 300 ansers were obtained.

H. Nakagawa, one of the scientific stuff of the Shiretoko Museum, arranged the results of censuses obtained in Japan and E.G. Lobkov, Kronotsky Natural Biosphere Reserve, arranged those from Kamchatka.

Results and discussion

In northern Japan 971 *H. pelagicus*, 326 *H. albicilla* and 1, 448 sea eagles of unknown species were counted on 17 February. The corresponding values on 31 March were 82, 98 and 51 respectively. The total numbers of *H. pelagicus* estimated based on these counts were 2, 183 in mid-February and 106 in late March (Fig. 3). Of them adult birds accounted for 93% of the total population estimated in February and 36% in March.



F42. 3. Estimated numbers of *Haliaeetus pelagicus* on 17 February (above) and 31 March (below), 1985 in northern Japas.

In mid-February most of birds were seen in the Rausu area, where the greatest number of birds, 91% of the estimated population in Japan, was observed on the strech of coast from Rausu to north for about 15 km. A few birds were found along the Okhotsk coast and the Pacific coast of Hokkaido and the Tohoku district. Only 3 birds were seen on Lake Jusan and Taisei on the Sea of Japan. These facts indicate that the sea coast of Numuro Straiat including the Rausu area is a main wintering area in Japan for this species. This area was followed by southern Hokkaido and the Pacific coast of the Tohoku district.

In late March a few birds were found on the Okhotsk coast, the Pacific coast from Hokkaido to the Tohoku district, and at Hachiro-gata, Akita Prefecture. The total number of birds decreased perphaps becaus their northerly migration have begun already.

During the study the southernmost points where the species was recorded were Kitakami, Miyagi Prefecture, on the Pacific coast and Hachiro-gata, Akita Prefecture on the coast of the Sea of Japan. No wintering birds were found along the coast of the Sea of Japan and the Pacific coast in the Chubu district.

In February a large number of eagles were found in the areas with sea ice and on the lakes. Perhaps, these areas were used as feeding or perching sites because of abundant food supply such as fishes and waterfowl. In the case of the Rause area, eagles began to consentrate with start of the fishry of Walleye Pollock (*Thagra chalcogramma*). In other fishery places in eastern Hokkaido (Lakes Saroma, Abashiri, Furen and Akkeshi, and Notsuke Bay) eagles lived also in dependence on the fishery of *Hypomesus olidus* or *Eleginus gracilis*. These findings show that the large consentration of sea eagles related closely with fishery.

In Kamchatka 954 adult birds of *H. pelagicus* were counted in 105 points from late January to early February. Although the counts were conducted for 20 days, the possibility of counting the same birds in different points meight be very low because their distribution was stationaly in this season throughout Kamchatka. The total number of wintering birds estimated based on the counts obtained in selected census areas suitable of wintering of eagles was 3, 535 (Fig. 4). Of them adult birds accounted for 79.4%. In southern coasts of the peninsula the densitieis of birds were relatively high, an average being 25 birds per 1,000 km^2 of area suitable for eagles. These areas were followed by northern part of the eastern coast and central part of the western coast (Fig. 5). Consentrations of birds were found along Berezovaya River, and Shumnaya and Tikhaya Rivers of Kronotsky Natural Biosphere Reserve.

In conclusion, the total number of *H. pelagicus* wintering in Kamchatka and northern Japan was estimated to be around 5,200.

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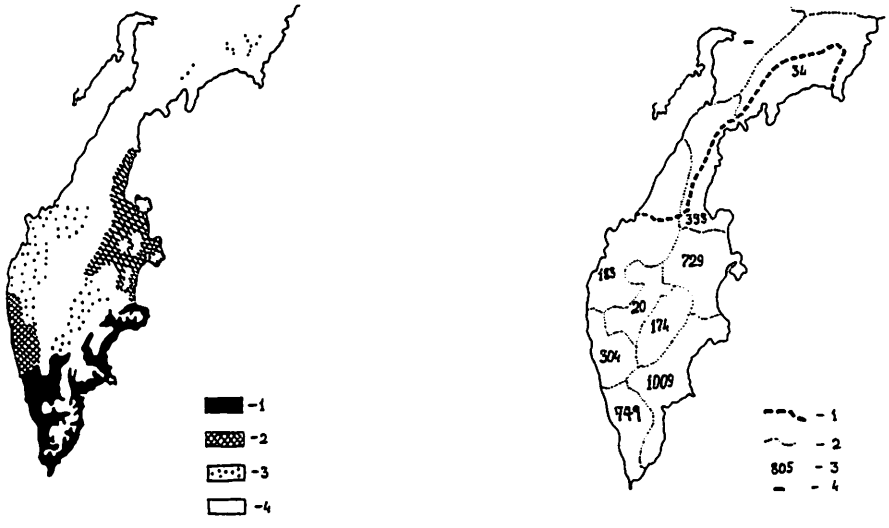

Fig. 5. Population densities of *Haliaeetus pelagicus* in Kamchatka in the winter of 1985. 1 : 25 (25.2-37.7) birds per 1,000 km² of area susitable for eagles, 2 :10-25 (13.3-23.3), 3 : less than 10 (2.6-9.6), 4 : no birds or occurred accsidentally.

Fig. 4. Estimated numbers of *Haliaeetus pelagicus* from late January to early February in the Kamchatka Peninsula.
1 : northern limit where eagles were found in January and February, 2 : range of census, 3 : estimated numbers, 4 : no eagles were found.

and V.N. Burkanov, and members of the wild Bird Bird Society, the Sea-eagle Research Group and the Kamchatka Hunting Society for their kind help in the censuses. We also wish to thank the All Union Soceity of Nature Conservation for his help in questionnarie.

Literature cited

Ornithological Society of Japan, 1974. Check-list of Japanese Birds. Fifth and revised edition. Gakken, Tokyo.

Sea Eagle Research Group, 1982. Census report of *Haiaeetus albicilla* and *H. pelagicus* wintering in eastern Hokkaido. I. 12 p.

Sea Eagle Research Group, 1985. Census report of *Haliaeetus albicilla* and *H. pelagicus* wintering in eastern Hokkaido. II. 28 p.

Stepanyan, L.S., 1975. Composition and distribution of birds in the USSR. Non-passeriformes. Nauka, Moscow. (in Russian)

日ソ共同のオオワシ調査結果（1985年）

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1984年9月にハバロフスクで開催された第2回日ソ鳥類保護シンポジウムにおける提案に基づき，1985年2，3月に日本北部の34地域114か所，1月20日－2月10日にカムチャツカ半島の42,029 km²（半島の16.7%に相当）と南コリャク高地の3河川沿いで越冬するオオワシの生息数調査を行なった．日本側は日本野鳥の会とオジロワシ・オオワシ合同調査グループの会員199名が調査に参加した．ソ連側は自然保護区の研究者5名がヘリコプターや軽飛行機から調査したほか，カムチャツカ狩猟協会の223名が調査に参加した．この他ソ連ではアンケート調査も行ない，784名中300名から解答が得られた．

日本北部では，2月17日にオオワシ971羽，オジロワシ326羽，種不明のワシ1,448羽が数えられ，3月31日にはそれぞれ82，98，51羽が数えられた．これらに基づくオオワシの推定生息数は2月に2,183羽，3月下旬に106羽で，その大部分は知床半島の羅臼地域に集中していた．また成鳥の割合はそれぞれ93%，36%であった．カムチャツカ半島では105か所で954羽のオオワシが数えられ，このうち成鳥は79%を占めた．ワシの生息に適した面積を考慮すると越冬数は3,535羽と推定された．密度は南部で高く，生息適地1,000 km²当たり平均25羽であった．今回の調査の結果，カムチャツカ半島と日本北部で越冬するオオワシは5,200羽と推定された．

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