

RESULT OF WATER-BIRDS CENSUS, 1981 AUTUMN—1982 SPRING IZUNUMA

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Introduction

We are continuing our water-birds census, especially observing wild geese, in each winter since 1973. After being carried privately, it has been done under the support and program of Japan Association for Preservation of Birds, once a month. It is used as our basic monthly data, however, as we also do 4-6 times geese-countings per a month, the geese numbers in this don't always coincide with the monthly maximum nor half-monthly maximum in our other data.

Location and environmental situation of census area

Lake Izunuma, 376 ha, Lake Uchinuma 138 ha. Belonging to com. Wakayana, Tsukidate, Hasama. Miyagi Pref., Japan. By N 38° 43' E 141° 6'. Including about 80% water-surface, 10% natural marsh, 10% paddyfield. The ratio of water and marsh varies in relation to water level which is controlled for agricultural use. A part of specified "the first class river". Inland. Surrounding paddyfields, population, low hillsides with sparse artificial forest constitute a typical landscape of NE Japan. Those paddyfields are important in productivity and as geese wintering area.

Monthly average temperature, -4-0. The lowest was -15, Jan 31.

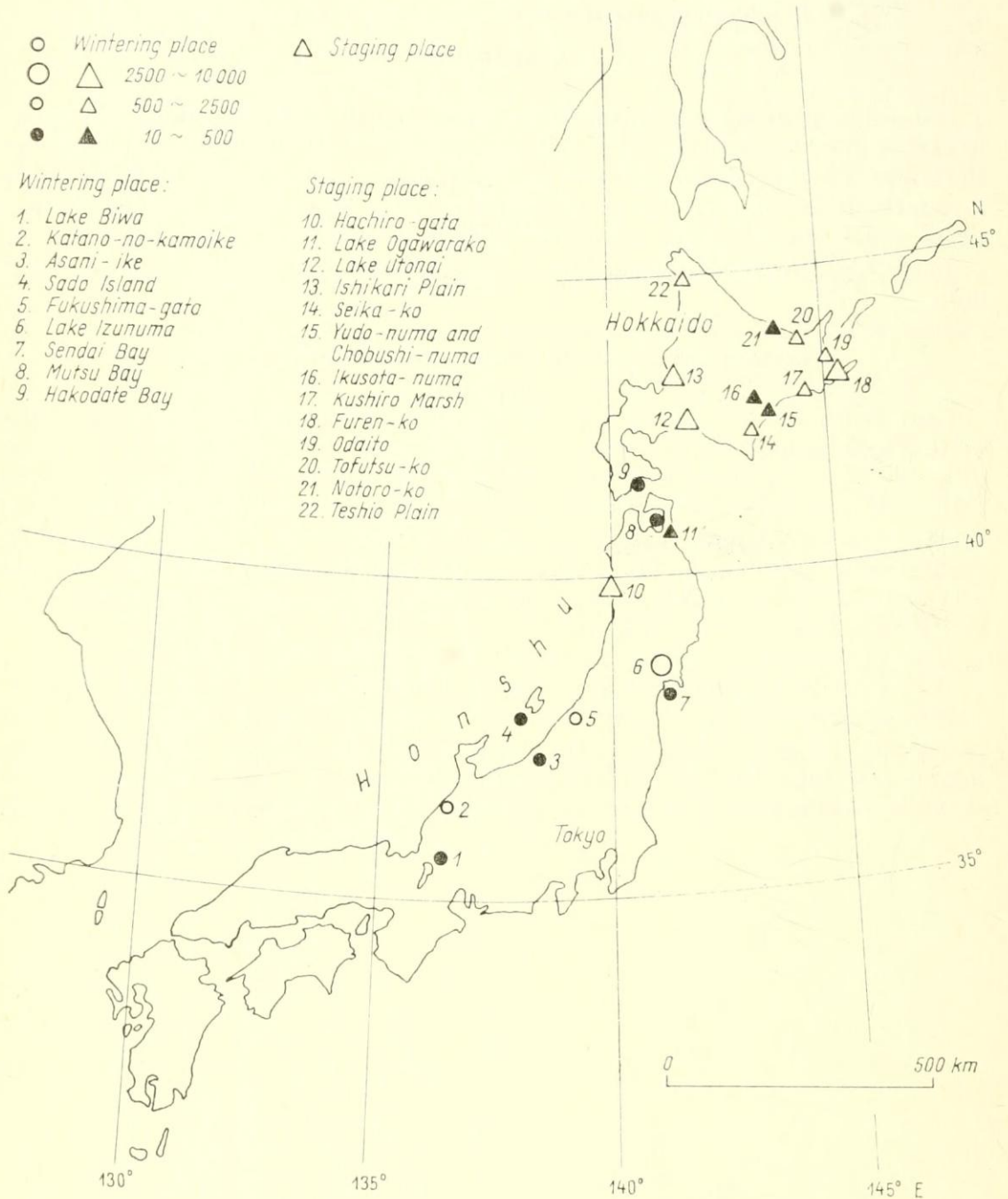
Water depth in the lowest level, about 2 m.

Dominant species in summer vegetation: (marsh-emersiherbosa) *Phragmites communis*, *Zizania latifolia*, (water-leaf floating) *Nelumbo nucifera*, *Trapa natans*, (water-submerged) *Cabomba caloriniana*, *Hydrilla verticillata*, *Ceratophyllum demersum* and others. *Cabomba* was introduced in a recent year.

Designation on natural reservation

Water surface and birds — a natural monument — fixed in 1967.

The total area inside the surrounding dikes-an environmental reservation area of prefecture – in 1973 – wild animals and birds reserve – in 1966.



1. Wintering and staging places of geese in Japan (1975-80) JAWGP

Methods

Line and fixed censuses are used together. Aggregated total number of person was 80 per 6 times, including beginners training.

The whole area (Fig. 1) is divided into 5 counting area. Geese counting is done within about one hour soon after sunrise as to count while their morning flights. Swan was counted at 9–10, and ducks and coot at 7–10. Varied owing to weather.

All species observed on/above water surface was counted.

In this result, total numbers from Nov. to Feb. are mentioned, required by Japan Association for Preservation of Birds, however the data of male/female ratio and eclipse of ducks, bill patterns of Bewick's swan can be referred.

Notice

In this season numbers of ducks except genera *Mergus* and *Aythya* were less, that is nearly a half of that in usual winter in maximum.

Maxima of swan numbers were also less, especially of Bewick's Swan. About Whooper Swan, they were often observed feeding in paddyfields near though outside of lakes themselves, however that had hardly been seen in past ten years in this prefecture.

Noticeably dying leaves of lotus, *Nelumbo nucifera* are very few in the last days, which make a peculiar landscape in general winter, because of very high water surface level in the last two summers. On the same reason the belt of *Zizania latifolia* got damage. The other species of plants have been changing.

Climate was in standard. Days of complete freezing-up were seven or less. Disturbance by fishing boats (occupying) were very often seen, and it seemed easy to move by boat as there were less ice and dying plants.

Maxima of geese numbers out of whole data of us in this season were following:

<i>Anser albifrons</i>	Izunuma	8500 (Dec.–Feb.)
	Pref. tot.	8500 (Dec.–Feb.)
<i>Anser fabalis</i>	Izunuma	1945 (Jan. 24)
	Pref. tot.	2050 (Jan. 15–20.)

Additional noticeable observation:

Aythya valisineria 2 males Dec. 13.

Anas querquedula 100± Oct. 2.

Summary

In water-birds census, 1981 autumn – 1982 spring, we got 44 species in Lake Izunuma area. Numbers of swans and ducks were less compared with the passed season. Geese numbers' maxima were not always taken in this series. One of this reason is that most care and time was used for 'training of counters' especially as a program.

Table 1,

Species	Climate data is added behind			
	15. Nov.	20. Dec.	24. Jan.	21. Feb.
<i>Podiceps ruficollis</i>	14	4	3	
<i>P. griseigena</i>	1			
<i>P. cristatus</i>	2			
<i>Egretta alba</i>	4	4	12	12
<i>E. intermedia</i>	1		2	
<i>E. garzetta</i>	129	156	4	13
<i>Ardea cinerea</i>	2	4	1	
<i>Branta canadensis</i>			1	
<i>leucopareia*</i>				
<i>Anser albifrons</i>	6 312	7 317	5 169	5 882
<i>A. erythropus</i>				2
<i>A. fabalis</i>	133	134	1 945	570
<i>A. caerulescens</i>			1	1
Undecided geese		371	1 532	1 985
<i>Cygnus olor</i>				1
<i>C. cygnus</i>	36	212	1 071	604
<i>C. columbianus</i>	86	35	39	43
Undecided swans	321	56	267	235
<i>Anas platyrhynchos</i>	2 313	2 568	2 715	2 326
<i>A. poecilorhyncha</i>	442	635	1 291	691
<i>A. crecca</i>	100	56	153	198
<i>A. formosa</i>			6	1
<i>A. falcata</i>				24
<i>A. strepera</i>	1	5		2
<i>A. penelope</i>	8			7
<i>A. acuta</i>	2 926	6 211	8 627	8 575
<i>A. clypeata</i>	1	1		2
<i>Aythya ferina</i>	56	52	287	318
<i>A. fuligula</i>	173	12	66	63
<i>A. marila</i>	6			
<i>Bucephala clangula</i>	15		2	
<i>Mergus albellus</i>	295	70	185	156
<i>M. merganser</i>	47	176	458	228
Undecidecid ducks	3 470		367	1 487
<i>Milvus migrans</i>	9	12	3	
<i>Haliaeetus albicilla</i>			2	
<i>Phasianus colchicus</i>		4		
<i>Fulica atra</i>	94		26	7
<i>Pluvialis squatarola</i>	1			
<i>Limnodromus</i>		1	1	1
<i>scelopaceus</i>				
<i>Tringa erythropus</i>				3
<i>T. nebularia</i>	2			
<i>Gallinago gallinago</i>	4			
<i>Larus ridibundus</i>	4	9		
<i>L. crassirostris</i>		4		
<i>L. tridactylus</i>				2
<i>Motacilla alba</i>				2
<i>M. grandis</i>	5	1	2	
Tot.	17 013	20 616	24 242	23 439
Density nos./ha	33.1	40.1	47.2	45.6
Climate data weather	cloudy	cl.-snowy	cl.-sn.	sn.-cl.
wind	N 3	N-NW 1-3	NNW 1-3	O-N 1

Species	Climate data is added behind			
	15. Nov.	20. Dec.	24. Jan	21. Feb.
temp. max.				4
min.		-2	-6.5	-2
of the day		10	10-85	0-10
snow depth agg. nil.		mm	mm	mm

* This species was observed continuously from Oct. to Feb.

Concludingly we suppose the possibility of existence of influences of vegetation exchange and/or resulted artificial disturbances. It will be difficult but important to consider how to keep an adequate water level for water flora in summer.

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