

Notes on the waterfowl of Mongolia

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Introduction

In terms of ornithology Mongolia is, relative to many other Asiatic countries, poorly known. Since the Central Asiatic Expeditions of the 1920s (Andrews 1932), ornithological investigations in Mongolia have been conducted by the Soviet Union (Kozlova 1932, 1933), East Germany (Piechocki 1968, 1972) and, in recent years, by Mongols themselves (Bold 1977). Vaurie (1964) summarises the status of the Mongolian avifauna as known then and points out the regions from which records are more or less absent—northern Hangai, Mongolian and Gobian Altai, Transaltai Gobi, and much of western and eastern Mongolia—i.e. most of the country. Mongolia, occupying an area of some 1,565,000 sq km, is six times the size of the United Kingdom and, notwithstanding the diligent peregrinations of the above investigators, the larger part remains exceedingly under-recorded.

Nowak (1970) spent a week in Ulan Bator and compiled a general report on the waterfowl and their habitats from information supplied by Mongolian colleagues. In 1977 I spent six months studying birds in Mongolia, on a scholarship offered by the British Council under the Cultural Exchange Programme which exists between the UK and Mongolia. The Mongols evidently considered ornithology a somewhat unorthodox topic, but I was finally accepted.

Once in Mongolia I was called upon to propose my own programme. I put forward three trips into the hinterland, and two were sanctioned: one to Orok Nor (Nor lake), and another to the lakes of the Northern Hangai,

a region specifically noted by Vaurie to be little known in terms of its birds. I present here my itinerary, descriptions of the wetlands visited, and a systematic list of waterfowl recorded.

Itinerary

I arrived in the Mongolian capital, Ulan Bator, on 9th February 1977 and remained there until 21st April. During this period I made observations almost daily in the city environs, chiefly at the places marked on the map (Figure 1).

On 21st April I left Ulan Bator on the start of the expedition to Orok Nor (Figure 2), travelling by jeep, accompanied by an interpreter and a driver. We arrived at Orok Nor on 24th, having stopped en route at Booreng (22nd), Toogruk and Gochin Os (23rd), and Taatsing Tsagan Nor (24th). The following 4 days were spent at Orok Nor. On the 29th we visited Adging Tsagan Nor some 70 km to the north-west. We returned the next day to Orok Nor and spent 1st May there. On the 2nd we went into the Gobian Altai, while the 3rd found us at Dava Nor, 20 km north-east of Orok Nor. Dust storms the following day prevented observations; the 5th was our final day at Orok Nor. The next two days we stayed at Taatsing Tsagan Nor, leaving it on the 8th, calling at Booreng and Önjool on the 9th, and reaching Ulan Bator on the 10th, after travelling 2,742 km.

I remained until 16th June in Ulan Bator, recording birds daily in and around the city. On 16th June we set off westwards toward the Hangai mountains and drove beyond Loong. On the 17th we called at Bayan Nor

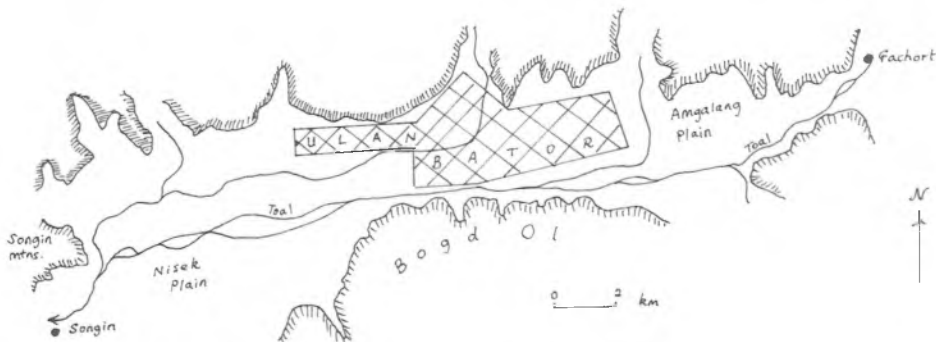


Figure 1. Ulan Bator and Toal Valley.

and Chinging Nor, later continuing to Ögii Nor. The next day we drove into the Hangai, reaching Terhing Tsagan Nor on the 19th. By the 21st we were at Dzoon Nor, and that evening at Sangin Dalai Nor. The next day we came to Tsagan Oling Nor and Hont Nor and went on the 23rd to Jognain Nor and Boost Nor. The following two days were spent at Telming Nor, moving on to Halboh Nor in the latter part of the 25th. We arrived at Oigon Nor on the 26th, our farthest penetration to the west, leaving it the next day. By the 29th we were back at Terhing Tsagan Nor, moving on the 30th to the Cholot river about 40 km southeast; 1st July we were at Boolinging Nor and Shorbok Nor; on the 2nd at Ögii Nor; on the 3rd at Chinging Nor and back to Ulan Bator, having journeyed 2,790 km.

I spent 4th to 17th July in Ulan Bator. I then went by train to Peking, returning to spend 24th and 25th July in the Mongolian capital, departing for good on 26th.

My period in Mongolia may thus, on the basis of trips, be divided into three:

(A) Ulan Bator (9th February to 21st April; 10th May to 16th June; 4th to 17th, 24th and 25th July);

(B) Orok Nor (21st April to 10th May), and

(C) Hangai (16th June to 3rd July).

Subsequent reference to these periods will be made by the respective letters. UB = Ulan Bator.

Habitat descriptions

Mongolia is a land of mountains and steppes; its five major phytogeographic zones as described by Vaurie (1964), are indicated on Figure 2. It is a high plateau, an average 1,580 m. Its climate is extreme continental.

A. Ulan Bator

The city is situated in the wide valley of the river Toal, which here flows east to west. There are no marshes or lakes within the area covered, but water birds were to be found on melt-water sloughs on the Nisek and Amgalang Plains, on the many loops and minor bifurcations of the river, and on the Toal proper (Figure 1). The river's bed is gravel, its banks grass, and its islets covered with willow and poplar brush. It is frozen in winter: the first open water was noted on 26th March and the first aquatic bird on 30th March (Ruddy Shelduck *Tadorna ferruginea*), but most of the water-ways were still iced over as late as 16th April (and it

snowed on 7th June). The Bogd Ol (ol mountain) on the south side is forested, predominantly larch and birch; those to the north are more arid.

In the following notes on the lakes visited, surface areas are approximate, and, unless otherwise stated, all waters are fresh or very slightly salty. Cardinal points are usually abbreviated.

B. Orok Nor

Orok Nor itself, 80 sq km, lies parallel to, and in the shadow of, the Gobian Altai. It is fed from the north by the Toing river. The edges are shallow of sand, mud, grass, and, in the south-west corner, with a patch of reeds. The north-east corner was of flooded grass, an excellent habitat for wildfowl. Beyond the fringe the terrain is flat, arid with xerophytes such as *Caragana* and saxaul *Haloxylon ammodendron*.

Taatsing Tsagan Nor, 24 sq km, lies in the same sandy depression as Orok Nor, about 60 km to the east. It is fed from the Taatsing river at its west end, where the delta, and the wet grassy edges to the lagoon in the north-west corner, form attractive habitats for waders. Otherwise, the edges are more or less sandy.

Davs Nor, 5 sq km, is some 20 km north-east of Orok Nor on the limit of a gravel plain. All shores are sandy with a little mud, and a little grass on the north side. There is a neighbouring lake of similar size, extremely salty (davs=salt) and without birds.

Adging Tsagan Nor is apparently a transient lake, extant only in spring. There were 5 sq km of flooded grass, halophytes, etc., amidst plains of sand and stone chippings. An icy gale prevented thorough coverage.

At Booreng there is an alkaline lake, 10 sq km, on which only Herring Gulls *Larus argentatus* were seen; sandy pools and channels at the south end provided a more suitable habitat for feeding water birds.

These five lakes have in common an open aspect, a lack of substantial aquatic vegetation, and, excepting Booreng, lie in the arid steppe zone. It was too early in the season for most breeding birds, and indeed for many migrants, notably waders.

C. Hangai

Bayan Nor: a number of muddy-rimmed ponds in open country.

Chinging Nor: 4 sq km, unique among the lakes I visited insofar as it is encircled by a broad margin of *Phragmites* and wet marsh, and accordingly abounds in such passerines as

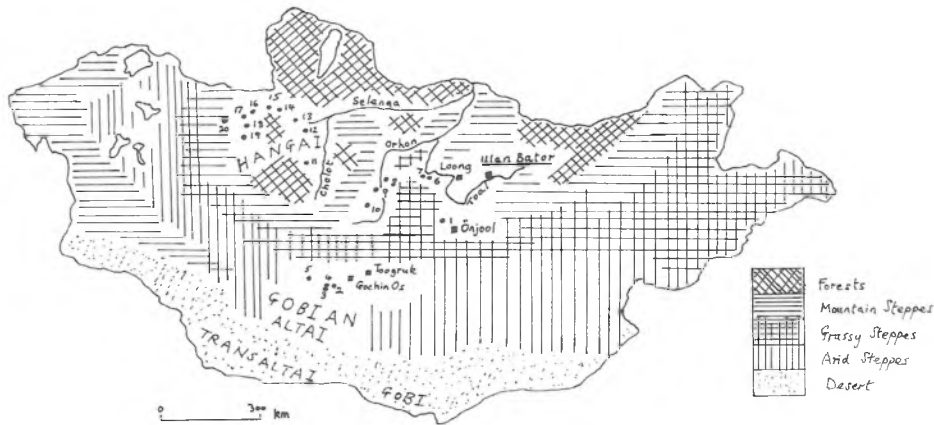


Figure 2. Mongolia: its five phytogeographic zones (after Vaurie 1964), and the lakes visited.

No.	Key to lakes:		No.	Key to lakes:	
	Name	Co-ordinates		Name	Co-ordinates
		N E		N E	
1	Booreng	46°57' 105°00'	11	Terhing Tsagan Nor	48°10' 99°43'
2	Taatsing Tsagan Nor	45 10 101 28	12	Dzoon Nor	49 05 99 30
3	Orok Nor	45 00 100 45	13	Sangin Dalai Nor	49 17 99 00
4	Davs Nor	45 23 100 53	14	Tsagan Oling Nor	49 30 98 32
5	Adging Tsagan Nor	45 32 100 00	15	Hont Nor	49 30 98 00
6	Bayan Nor	47 55 104 30	16	Jognain Nor	49 24 97 35
7	Chinging Nor	47 55 104 17	17	Boost Nor	49 10 97 24
8	Ögii Nor	47 54 102 48	18	Halboh Nor	49 03 97 10
9	Shorbok Nor	47 41 102 19	19	Telming Nor	48 51 97 20
10	Boolinging Nor	47 31 102 00	20	Oigon Nor	49 12 96 32

Acrocephalus warblers, *Flava* wagtails, and Bearded Tits *Panurus biarmicus*, besides a wealth of wildfowl.

Ögii Nor: 12 sq km of open water and, at the western end, an alluvial area of similar size, through which three rivers flow, including the great Orhon. Much of this area is dry pasture, perforated by channels and pools, but there is also marshland and a good deal of aquatic vegetation, although *Phragmites* reeds are practically absent.

Terhing Tsagan Nor: 80 sq km, oligotrophic: at its east end an edge of lava, other edges being of gravel. There are vegetated pools at the west end and these held almost all the birds.

Dzoon Nor: 12 sq km, oligotrophic, with shores entirely of red stone chips.

Sangin Dalai Nor: 150 sq km, as with the last two lakes, this is surrounded by grassy hills and mountains with some larch forest; some muddy and grassy edges, but most gravel. Only the south-east part was covered.

Tsagan Oling Nor: 3 sq km, apparently soda or salt, without vegetation and with

very few birds.

Hont Nor: 1 sq km, eutrophic with flooded grass, water weeds, etc.; full of birds.

Jognain Nor: 40 sq km, oligotrophic with edges of red gravel and larch forests approaching the shores.

Boost Nor: 6 sq km, edges of grass or gravel, forest close by; with a rocky island.

Telming Nor: 180 sq km, the E, N and W shores being visited. The north shore is gravel giving way to grassland. Both west and east ends are shallow, muddy, and with birds. Two islands, one grass, the other rock, were too distant for careful scrutiny. The water was salty.

Halboh Nor: 6 sq km, with chiefly steep, gravel sides and little vegetation.

Oigon Nor: 60 sq km, of which only the east and south sides were covered. This salty lake is in flat country, beyond the Hangai proper, without aquatic plants, but having an extensive area of mud in the south-east corner.

Cholot river: at a distance of about 40 km south-east of Terhing Tsagan Nor the

Cholot river flows north through an impressive canyon. A little up-river the banks become shallow and there are a number of vegetated pools, separated from each other by grassy hummocks, sited on the east bank.

Booiling Nor: 2 sq km. The lake itself was not investigated, and the records relate to a eutrophic pond with rushes nearby.

Shorbok Nor: 1 sq km; one of a number of ponds or shallow, probably saline, lagoons with mud perimeters, amid undulating grassy steppe west of Ögii Nor.

Human pressures

As a rule Mongols are not destructive toward their wildlife, and, for instance, birds of prey are plentiful around the city of Ulan Bator. The Bogd Ol there is maintained as a nature reserve.

Nowak (1970) intimates that hunting pressure on waterfowl in Mongolia is insignificant. My observations support this intimation. During my six months in Mongolia I travelled some 5,600 km and visited numerous lakes, which were often crowded with ducks. And yet this source of meat apparently goes untapped by the inhabitants (at least in spring and summer), for I never saw anyone shooting wildfowl, and the occasional gun furnishing a home was said to be used against wolves and fur-bearing mammals in general.

At Ulan Bator I did come upon two groups (one Russian) shooting ground voles *Microtus brandtii* and a shepherd firing at a Goshawk *Accipiter gentilis*. I also found a dead Upland Buzzard *Buteo hemilasius*, which I considered to have been shot.

At the lakes I visited fish were also evidently ignored and I only saw two boats. Such apathy toward wildfowl and fish resources may be explained by the abundance of domestic meat in Mongolia. In the southern parts there is a lack of timber to build boats, and, particularly in the past, the nomadism of the populace prevented the establishment of permanent bases necessary for the construction and maintenance of craft.

On two occasions I suspected human pilfering of eggs to account for empty nests, first concerning Herons at Orok Nor, second the Whooper Swans of Telming Nor.

In the summer the Toal offers strong amenity value, and disturbance from anglers and bathers affected the local breeding birds such as Common Tern and Little Ringed Plover.

Systematic list

Black-throated Diver *Gavia arctica*.

Apparently a late visitor, unrecorded before 17th June.

C. Present on most lakes: Ögii Nor 1 pr; Terhing Tsagan Nor 2 prs; Dzoon Nor 1; Sangin Dalai Nor 2 prs; Hont Nor 3; Boost Nor 2 prs, of which a single bird was sitting; Telming Nor 9 prs, including a sitting bird and another swimming with a tiny chick upon its back; a flock of 5; Oigon Nor 1 pr and a group of 3; Cholot river 1 on nest containing single egg on the shore of a pond.

Great Crested Grebe *Podiceps cristatus*

B. 2 on water-hole Gochin Os 23rd April; 140 Taatsing Tsagan Nor 6th May; up to 60 daily at Orok Nor; 20 Dava Nor 3rd May; 2 Booreng 9th.

C. 50 Ögii Nor 17th June, of which 2 appeared to be sitting on nests, but no nests and few birds present on 2nd July; 1 Chinging Nor 3rd July.

Slavonian Grebe *Podiceps auritus*

B. 3 Orok Nor 5th May, 3 Taatsing Tsagan Nor 6th, 7 Booreng 9th.

Black-necked Grebe *Podiceps nigricollis*

B. A pair on a water-hole near Önjool, 9th May, no doubt migrants.

C. Single Halboh Nor 25th June, also presumed a non-breeder, since suitable habitat was absent; 10 Ögii Nor 2nd July and 110 Chinging Nor on 3rd; no evidence of nesting despite aquatic vegetation at both.

Cormorant *Phalacrocorax carbo*

B. At Taatsing Tsagan Nor 17 on 24th April, 200 6th May, almost all of which were immatures or non-breeding adults. At Orok Nor about 700 on entire lake; maximum seen on one day 560 28th April, all in breeding plumage, at a colony near SE corner, with 55 occupied nests. At Dava Nor on 3rd May 107 nests were counted with 250 adults on an island. As with the Orok Nor colony, all the nests were on the ground, and both colonies were shared by Herons *Ardea cinerea*, and, at Dava Nor, by Herring Gulls too.

C. In June 7 immatures Ögii Nor, 20 Terhing Tsagan Nor, 7 Telming Nor, and 62 Sangin Dalai Nor. The latter site seemed likely to be a breeding station.

Dalmation Pelican *Pelicanus crispus*

B. 3 Orok Nor 24th April and 1st May, having scarlet bills typical of breeding birds; 6 Taatsing Tsagan Nor 7th May.

Heron *Ardea cinerea*

A. Up to 7 Amgalang Plain 10th to 20th April and 2 there 16th May; 1 Nisek Plain 12th April.

B. 23rd April 1 Toogruk, 2 Gochin Os. At Taatsing Tsagan Nor 20 24th April, 30 6th and 7th May. At Orok Nor a heronry, on south shore adjacent to Cormorant colony, of 85 birds and 18 nests. The nests were of twigs, built either directly on muddy shore, or supported in remnant stumps, no more than one foot high. The nests held only one egg between them, and that cold and muddy. There was probably human interference at this exposed and vulnerable site. At Adging Tsagan Nor 5 29th April. At Davs Nor on 3rd May 50 birds and 23 ground nests on lower slopes of the Cormorant colony isle.

C. Present, but less than 20 at following localities; Ögii Nor, Terhing Tsagan Nor, Sangin Dalai Nor, Tsagan Oling Nor, Telming Nor, Oigon Nor, Cholot river, Booling Nor, Chinging Nor. Only sign of breeding was reed-carrying at last site.

Black Stork *Ciconia nigra*

A. Probably 3 breeding pairs: an occupied nest on a rock face in the Songin Mountains 21st May, 12th June, and 1 or 2 on Amgalang Plain and in Bogd Ol regularly in May and June.

B. First seen 25th April, 12 at Orok Nor, thereafter 1 or 2 till 5th May; 1 Taatsing Tsagan Nor 6th May.

C. 1 north of Terhing Tsagan Nor 20th June, 1 Halboh Nor 25th, 2 Booling Nor 1st July, 3 Chinging Nor on 3rd.

Spoonbill *Platalea leucorodia*

B. Taatsing Tsagan Nor 70 24th April, only 6 6th May; maximum of 80 Orok Nor on 25th April; 1 Davs Nor 3rd May.

C. In June 4 Ögii Nor, 1 Terhing Tsagan Nor, 2 Boost Nor, 1 Telming Nor, 1 Oigon Nor.

Mute Swan *Cygnus olor*

B. Orok Nor only: 2 24th and 25th April, 3 on 28th.

Whooper Swan *Cygnus cygnus*

B. Two on Taatsing Tsagan Nor 24th April; at Orok Nor a peak of 9, 28th April; a pair Davs Nor 3rd May.

C. Widespread breeder: Ögii Nor 2 pairs, 1–2 cygnets and 25 apparent non-breeders 2nd July; Terhing Tsagan Nor 4 pairs; Sangin Dalai Nor 3 pairs, including one with 6 cygnets; Hont Nor 1 pair at nest; Boost Nor 2 pairs, 1 nest; Telming Nor 3 pairs, flock 18, 2 nests; Halboh Nor 4; Oigon Nor 1 pair with 4 cygnets; Cholot river 1 pair.

Swan Goose *Anser cygnoides*

B. At Orok 10 1st May, 3 on 5th; 2 Davs Nor 3rd.

C. Not seen on the true mountain lakes: at Ögii Nor 300 17th June, 1,000 2nd July and 4 pairs with creche of 20 goslings on latter date; at Oigon Nor flock of 12 and pair with 2 goslings 27th June.

Bean Goose *Anser fabalis*

A. 50 flew N and 60 W in period 10th to 13th April.

B. 11 Orok Nor 27th April, and 1st May; 1 Taatsing Tsagan Nor 6th May.

C. Flock 155 Sangin Dalai Nor 22nd June; 1 Telming Nor 24th. No indication of nesting.

Greylag Goose *Anser anser*

Contrary to Nowak's statement (1970) that this is the 'most numerous goose species' in Mongolia, I found it the least common of the four geese occurring there.

B. At Orok Nor 21 26th April; 2 Taatsing Tsagan Nor 6th May.

C. 20 Ögii Nor 17th June.

Bar-headed Goose *Anser indicus*

A. 1 Nisek Plain 13th May.

B. One first seen 24th April at Taatsing Tsagan Nor; daily at Orok Nor, maximum 10, 26th April. 6 Davs Nor 3rd May.

C. A common nesting bird on mountain lake shores, a habitat sometimes shared with Herring Gulls. Broods of up to 5 swimming goslings were frequent. At Ögii Nor 40 2nd July, 2 broods, a creche of 30; Terhing Tsagan Nor only 50 19th June, but 2,100 on 29th including 1 albino—none was seen in flight and this may have been a moulting group: Dزون Nor 210, 1 nest, 4 broods; Sangin Dalai Nor 170, 7 nests; Tsagan Oling Nor 40; Hont Nor 31; Jognain Nor 80, 4

broods; Boost Nor 20; Telming Nor 80, 5 nests, 12 broods; Holboh Nor 560, 3 broods; Oigon Nor 1.

Ruddy Shelduck *Tadorna ferruginea*

Common and widespread as a breeding visitor, present usually as solitary pairs, not only on almost every water body, but also occasionally in arid mountains and even larch forests far from open water.

A. First on 30th March, henceforward single pairs were seen regularly on Nisek and Amgalang Plains, on the Toal at Ulan Bator and in the Bogd Ol.

B. Seen at all lakes, maximum 40 Adging Tsagan Nor 29th April.

C. From 17th June onwards broods of small ducklings were to be seen on most ponds and lakes, the largest brood being 15, average being 7.4 (± 3.4 , $n = 29$). Bayan Nor 3 pairs, 3 broods; Ögii Nor 54 18th June but none 2nd July; Terhing Tsagan Nor 30, 3 broods; between there and Dzoon Nor 40 ducklings on a pond; Dzoon Nor 12, 3 broods; Sangin Dalai Nor 20, 1 brood; Hont Nor 2 and 70 between there and Tsagan Oling Nor; Jognain Nor 12, 2 broods; Boost Nor 4 broods; Telming Nor 60; Oigon Nor 60, 1 brood; Cholot river 15 pairs, 7 broods; Booling Nor 3 pairs and 120 between there and Ögii Nor; 20 Chinging Nor 3rd July.

Shelduck *Tadorna tadorna*

Far less numerous than Ruddy Shelduck (298 birds observed on 26 dates vs. 1,093 birds on 63 dates), probably as a result of its more specialised habitat requirement for burrows and muddy shores. Contrary to Nowak's statement (1970) that this species arrives earlier than other ducks, I found it later than most.

B. Apparently suitable nesting sites offered by all lakes. Twenty-four at Booreng 22nd April were the first seen; 10 there 9th May; 30 Taatsing Tsagan Nor 24th April, 8 on 6th May; up to 24 Orok Nor; 10 Adging Tsagan Nor 29th April; 16 Davs Nor 3rd May.

C. On 17th June 1 Bayan Nor, 12 Ögii Nor; at Chinging Nor 35 3rd July, of which 1 pair almost certainly with young; 4 Tsagan Oling Nor; 25 Telming Nor of which 1 pair with brood of 8; 15 Oigon Nor including 1 pair with brood of 6; 15 Shorbok Nor 1st July.

Wigeon *Anas penelope*

A. Not more than 3 on any date. First 12th

April, last 28th May.

B. 16 Booreng 22nd April, 20 9th May; 100 Taatsing Tsagan Nor 24th April, 40 7th May; about 500 at Orok Nor including 400 on 1st May in NE corner.

C. Terhing Tsagan Nor 14; Dzoon Nor 1; Sangin Dalai Nor 23; Hont Nor 20; Jognain Nor 1; Boost Nor 20; Telming Nor 100 25th June; Oigon Nor 80; Ögii Nor 60 2nd July; Chinging Nor 300 on 3rd.

Falcated Teal *Anas falcata*

A. 2 in Toal valley 50 km SW of Ulan Bator 10th May, and 2 Amgalang Plain 16th May.

C. 6 Ögii Nor 18th June, 4 2nd July; 7 Telming Nor 24th June; 4 Oigon Nor 26th and 27th.

Gadwall *Anas strepera*

B. First seen were 4 Orok Nor 25th April, then up to 11 daily; 11 Davs Nor 3rd May; 8 Taatsing Tsagan Nor 6th May.

C. Sangin Dalai Nor 3; Hont Nor 5; Telming Nor 8; Oigon Nor 25; Ögii Nor 45 2nd July; 100 Chinging Nor on 3rd.

Teal *Anas crecca*

A. Passage migrant: recorded 3rd to 20th April and 12th and 22nd May, maximum of 25 Amgalang Plain 20th April.

B. 30 Booreng 22nd April, 18 9th May; at Orok Nor max 100 26th April; fewer at other lakes.

C. Less than 50 on each of following lakes: Ögii Nor, Terhing Tsagan Nor, Sangin Dalai Nor, Hont Nor, Jognain Nor, Telming Nor, Halboh Nor, Oigon Nor, Booling Nor; and 1,000 at Chinging Nor 3rd July.

Teal, Pintail & Goldeneye were the only ducks seen in flocks of a thousand or more.

Mallard *Anas platyrhynchos*

A. Passage migrant: seen 9th to 20th April and 12th to 28th May along Toal, particularly on the two plains; a maximum of 34 12th April.

B. At Orok Nor peak 115 25th April; 16 Davs Nor 3rd May; 4 Taatsing Tsagan Nor 6th May.

C. Terhing Tsagan Nor 30; Dzoon Nor 6; Sangin Dalai Nor 20; Hont Nor 20; Boost Nor 12; Telming Nor 5; Oigon Nor 25; Cholot river 4; Booling Nor 6 and 2 nests 1st July containing 5 and 8 eggs; 60 and nest with 3 eggs Ögii Nor 2nd July; 400 Chinging Nor on 3rd.

Spotbill *Anas poecilorhyncha*

- A. 1 pair Nisek Plain 13th April.
 B. 1 pair Orok Nor 25th April.
 C. 1 Chinging Nor 17th June; 1 pair Hont Nor 22nd; 1 pair Telming Nor 25th.

Pintail *Anas acuta*

A. A pair Amgalang Plain 12th April, 9 there 28th May; 2 Nisek Plain 13th May.

B. 12 Taatsing Tsagan Nor 24th April, 30 7th May; 400 Adging Tsagan Nor 29th April; 20 Davs Nor 3rd May; up to 70 west end Orok Nor 25th April to 5th May, 200 SE corner 28th April, and 1,000 NE corner 1st May.

C. Ögii Nor 5; Terhing Tsagan Nor 2; Sangin Dalai Nor 28; Hont Nor 80 2nd June; Boost Nor 2; Telming Nor 70; Oigon Nor 100 27th June; Chinging Nor 30 3rd July.

Garganey *Anas querquedula*

Far less numerous than Teal, 264 being seen on 25 dates (1,903 on 36 dates for Teal).

A. First seen were 4 some 50 km west of Ulan Bator on 21st April; 2 Amgalang Plain 12th to 28th May and 10 Nisek Plain on 13th.

B. At Orok Nor daily peak of 22 5th May; 5 Taatsing Tsagan Nor 7th; 2 Booreng 9th.

C. At Chinging Nor 20 17th June, 50 3rd July; 20 Ögii Nor 18th June, and 2nd July; 6 Terhing Tsagan Nor; 6 Sangin Dalai Nor; 15 Hont Nor; 10 Boost Nor; 6 Telming Nor.

Shoveler *Anas clypeata*

A. 6 at marsh 50 km SW of Ulan Bator 10th May; 2 Amgalang Plain 16th May.

B. Population of 50 Orok Nor 25th April to 5th May; 24 Taatsing Tsagan Nor 7th May; 20 Booreng 9th May.

C. Terhing Tsagan Nor 5; Hont Nor 6; Jognain Nor 3; Telming Nor 12; Halboh Nor 7; Oigon Nor 80 27th June; Ögii Nor 100 2nd July; Chinging Nor 120 on 3rd.

Red-crested Pochard *Netta rufina*

On three lakes only.

B. At Orok Nor max 73 26th April; 12 Taatsing Tsagan Nor 6th May.

C. At Ögii Nor 3 7th June, 2 18th.

Pochard *Aythya ferina*

B. 3 Gochin Os 23rd April; 50 Taatsing Tsagan Nor 24th April, 25 7th May; 78

Davs Nor 3rd May; daily peak of 285 Orok Nor 26th April; 10 Booreng 9th May.

C. Ögii Nor 60; Sangin Dalai Nor 7; Hont Nor 9; Jognain Nor 7; Telming Nor 70; Halboh Nor 800 25th June; Oigon Nor 500 27th; Cholot river 6; at Booling Nor 25 and 2 nests holding 7 and 11 eggs 1st July; Chinging Nor 400 on 3rd.

Tufted Duck *Aythya fuligula*

Uncommon.

A. 4 Nisek Plain 19th April.

B. At Orok Nor 100 25th April to 5th May; 44 Davs Nor 3rd May; 32 Taatsing Tsagan Nor 7th May; 1 Booreng 9th May.

C. Chinging Nor 15; Ögii Nor 10; Terhing Tsagan Nor 10; Hont Nor 3; Telming Nor 2; Halboh Nor 100; Oigon Nor 30; Cholot river 26 30th June, of which 1 pair possibly nesting; Shorbok Nor 2.

Velvet Scoter *Melanitta fusca*

This species is not mentioned in Vaurie (1964), and Piechocki (1968) gives only a single example. The following records on six lakes in the Hangai is more likely to reflect inadequate observer coverage in the past, rather than recent colonization.

C. Predominantly in pairs: Terhing Tsagan Nor 13 pairs 19th June, 7 birds on 29th; Dزون Nor 13 pairs; Jognain Nor 23 pairs; Boost Nor 1; c 50 pairs Halboh Nor; 1 pair Oigon Nor.

Goldeneye *Bucephala clangula*

No breeding evidence was obtained, but large numbers were apparently summering in Hangai.

A. 3 pairs on Toal 20th April.

B. 1 Booreng 22nd April, 3 9th May; 16 Orok Nor 26th April; 1 Davs Nor 3rd May; 3 Taatsing Tsagan Nor 7th May.

C. Males predominated (up to 95%) in the big concentrations. 130 Ögii Nor 17th June, none there 2nd July; 9 Terhing Tsagan Nor 19th June; 154 Dزون Nor 21st; 140 Jognain Nor 23rd; 2 Boost Nor; 14 Telming Nor; 1,200 Halboh Nor on 25th.

Smew *Mergus albellus*

A. 1 on Toal 30th April.

B. At Taatsing Tsagan Nor 38 24th April, 20 6th May; at Orok Nor 90 25th April, thereafter only 12; 3 Booreng 9th May.

C. Sangin Dalai Nor 6; Telming Nor 6; Ögii Nor 1 2nd July; Chinging Nor 2 3rd July.

Red-breasted Merganser *Mergus serrator*

The record is not the first for Mongolia, for Nowak (1970) mentions it, but not Vaurie (1964), nor Piechocki (1968).

C. At Terhing Tsagan Nor 10 19th June, 7 females, 3 males, along larva shore which looked suitable for breeding.

Goosander *Mergus merganser*

A. The only duck found breeding in this locality. See 9th to 19th April, 12th to 31st May, with up to 8 13th May, and on 9th July a female was seen with brood of 19 ducklings on the Toal near Gachort.

B. At Orok Nor up to 6 24th April; 1 Days Nor 3rd May; 2 Taatsing Tsagan Nor 7th May.

C. Only in high Hangai: Terhing Tsagan Nor 15; Sangin Dalai Nor 70; Boost Nor 4; Telming Nor 140 25th June; Cholot river 5 females 30th June.

The following species were also recorded:

Pallas' Sea Eagle *Haliaeetus leucoryphus*
 Sea Eagle *Haliaeetus albicilla*
 Marsh Harrier *Circus aeruginosus*
 Osprey *Pandion haliaetus*
 Baillon's Crake *Porzana pusilla*
 Coot *Fulica atra*
 Crane *Grus grus*
 White-naped Crane *Grus vipio*
 Demoiselle Crane *Anthropoides virgo*
 Great Bustard *Otis tarda*
 Avocet *Recurvirostra avosetta*
 Black-winged Stilt *Himantopus himantopus*
 Little Ringed Plover *Charadrius dubius*
 Kentish Plover *Charadrius alexandrinus*
 Greater Sand Plover *Charadrius leschenaultii*
 Oriental Plover *Charadrius veredus*
 Lesser Golden Plover *Pluvialis dominica*

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Grey Plover *Pluvialis squatarola*

Lapwing *Vanellus vanellus*
 Turnstone *Arenaria interpres*
 Temminck's Stint *Calidris temminckii*
 Long-toed Stint *Calidris subminuta*
 Ruff *Philomachus pugnax*
 Snipe *Gallinago gallinago*
 Pintail Snipe *Gallinago stenura*
 Solitary Snipe *Gallinago solitaria*
 Asiatic Dowitcher *Limnodromus semipalmatus*
 Black-tailed Godwit *Limosa limosa*
 Curlew *Numenius arquatus*
 Spotted Redshank *Tringa erythropus*
 Redshank *Tringa totanus*
 Marsh Sandpiper *Tringa stagnatilis*
 Greenshank *Tringa nebularia*
 Green Sandpiper *Tringa ochropus*
 Wood Sandpiper *Tringa glareola*
 Terek Sandpiper *Xenus cinereus*
 Common Sandpiper *Actitis hypoleucos*
 Arctic Skua *Stercorarius parasiticus*
 Great Black-headed Gull *Larus ichthyaetus*
 Asiatic or Relict Gull *Larus relictus*
 Black-headed Gull *Larus ridibundus*
 Common Gull *Larus canus*
 Herring Gull *Larus argentatus*
 Gull-billed Tern *Gelochelidon nilotica*
 Caspian Tern *Sterna caspia*
 Common Tern *Sterna hirundo*
 Little Tern *Sterna albifrons*
 White-winged Black Tern *Chlidonias leucopterus*

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