

Present status of the Latham's snipe *Gallinago hardwickii* on Sakhalin

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(Received : May 8, 1997)

ABSTRACT

Latham's Snipe *Gallinago hardwickii* were surveyed in the south part of Sakhalin for 17 years from 1971 to 1995. Snipe occur in southern Sakhalin and northernmost limit of the present range is at approximately 49 N. One to five males were counted per 1 km transect. The whole population size in Yuzhno-Sakhalinsk and southward was estimated to be 500 breeding pairs in the late 1980s. Main habitats are grasslands and shrub grasslands both in coastal and inland areas. Egg laying period ranged from early May to early June. Chicks hatched in late May to early June in most cases and in early July in late clutches. At present snipe do not need any protection measures because the breeding range has expanded northward and they are increasing in numbers.

Key words : abundance, distribution, *Gallinago hardwickii*, Latham's snipe, Sakhalin

The Latham's Snipe *Gallinago hardwickii* is included in the Red Data Book of both Russia and Japan (Kostenko et al. 1989, Environment Agency 1991). The present breeding range of this snipe includes Hokkaido, Honshu, probably Kyushu (Vaurie 1965, Ornithological Society of Japan 1974, Howard & Moore 1980), southern Sakhalin (Nechaev 1991), South Kuriles (Kunashir, Iturup, Shikotan and probably Urup and Habomai) (Nechaev 1969, Nechaev & Fujimaki 1994). The species occurs also in the coastal area of Primor'ye from the Edinka River of northern Ternei region (Nazarenko 1990) to the western coast of Peter the Great Bay (Labzyuk et al. 1971, Elsukov

& Labzyuk 1981, Gluschenko & Shibnev 1984).

It is well known that Sakhalin Island is the northernmost part of the Snipe range. However, there is no detailed information about distribution and abundance of the species on Sakhalin.

We summarize distribution, abundance and some biological aspects of the Latham's Snipe in Sakhalin based on records obtained during 17 years from 1971 to 1995.

STUDY AREAS AND METHODS

The main study areas were Kril'on Peninsula, Aniva Bay area, Tonino-Anivskii Peninsula, Lake Tunaicha, Yuzhno-Sakhalinsk area, Ter-

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peniya Bay area and the northwestern and north-eastern coastal areas.

Birds counts were carried out along roads or paths in the early morning during the breeding season from early May to mid-June in 1971–1978, 1980, 1983–1986, 1988, 1989, 1994 and 1995. Whilst walking on the census route, all birds identified by sight or voice on both sides of the route were counted.

Four males, 2 females and 2 juveniles were shot to examine breeding condition during years between 1971 and 1989.

RESULTS AND DISCUSSION

1. Distribution of Latham's snipe.

Latham's Snipe occur in southern Sakhalin. The northernmost limit of the present breeding range is located a little north of Shakhtersk (49.20 N) on the west coast and Poronaisk (49.15N) in Terpeniya Bay on the east coast. In recent years the range has expanded northward. In the 1940s the species was not recorded from Sakhalin (Gizenko 1955). The snipe expanded its range from Hokkaido to southern Sakhalin probably in the late 1940s or early 1950s. In 1962 the snipe was recorded for the first time in southwestern coastal areas of Kril'on Peninsula (Korotkikh 1962), where its breeding was confirmed in 1971 (Nechaev 1991). Breeding was recorded in Cape Lamanon (48.46 N) in 1978 and along Uglegorka River (49.03 N) and near Shakhtersk in 1984. These data indicate that in the 1970s snipes occurred widely in the southern part of Poyasok Isthmus (48.00 N) (Fig. 1).

One of reasons for range expansion is the presence of an unoccupied ecological niche in the man-made environment created by intensive agricultural developments. During the breeding season Common Snipe *Gallinago gallinago*, which is considered to be a competitor, does not occur in the range of Latham's Snipe. In addition to this, the ecological plasticity of the species may enable

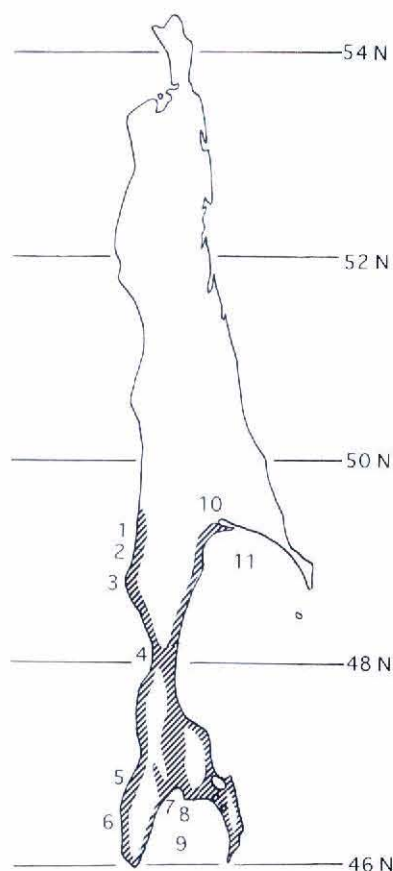


Fig. 1. Distribution of Latham's snipe *Gallinago hardwickii* on Sakhalin.

1=Shakhtersk, 2=Uglegorla River, 3=Cape Lamanon, 4=Poyasok Isthmus, 5=Kuril'on Peninsula, 6=Shebninka River, 7=Lyutoga River, 8=Lososei Bay, 9=Aniva Bay, 10=Poronaisk, 11=Terpeniya Bay.

it to occupy open unwooded and sparsely wooded habitats on plains, gentle hill slopes of coastal areas, and river-side areas.

2. Number of birds counted

Five to six males were counted on a 5-km transect along Shebninka River on the Kril'on Peninsula in mid-May 1971 and 1981. Numbers of males counted were 4 to 5 along the Ropatinka River (48.19 N) in mid-May 1979, and 5 to 6 along the Kuznetsovka River (46.03 N) in mid-May 1979 and late June 1980. In Novoaleksandrovsk (46.13

N) up to 5 displaying males were counted on along a 1-km transect in mid-May in different years. Two to three males were recorded on 1-km transects along the lower reaches of the Susuya River (46.51N) near Yuzhno Sakhalinsk in mid-May 1986. Two to three males were recorded along 3 km transects in suitable habitat on the Poyasok Isthmus. In the 1994 census one male was seen on 2-km transect at Solov'evka (46.44N) in the Lososei Bay area in both late June and early July, but no snipe was observed in the Lake Nevskoe area (49.19N) in late June.

The population size has increased gradually. For example, in the coastal area of Lososei Bay (Aniva Bay) numbers of birds counted were only 1 pair in the late 1970s, whilst 10 displaying males were counted along a 10-km transect in 1988, and numbers had increased to 16 to 18 males in 1990 and about 20 males in 1992–1995 on the same distance. In recent years the population trend of the snipe in southern Sakhalin has been relatively stable. The whole population size in Yuzhno-Sakhalinsk and southwards is estimated to be 500 breeding pairs in the late 1980s.

3. Habitats

Snipes occur in open areas along the lower reaches of rivers, at lake surrounds on plains, gentle slopes of hills and sea coast terraces. They prefer man-made habitats in coastal areas and in inland areas 20 to 30km from sea coast. Breeding habitat vegetation consists of shrub-grasslands, especially bamboo (*Sasa kurilensis*) grassland with grasses, herbs and scattered trees, marshes with tussocks, and also pastures. They are also not uncommon in altered landscapes such as agricultural lands.

4. Breeding biology

Snipes arrive at southern Sakhalin in late April to early May. The first sight record in 1992 was on 22 April in the Lososei Bay area. Active displays were observed until mid July. The breeding season is in May and June. The

testes of a male captured on 5 May was undeveloped, but those of male captured on 16 May were developed. The testes of a male captured on 20 June were 20×7 mm and 17×7 mm in size.

The nest building period is in May. Six nests were found; two were in dry grasslands with sparse trees at 30 to 50 m from a sage-reed marsh, two were in a small wet marsh of *Juncus* sp., *Phragmites*, *Carex*, *Chamedaphne*, one in bamboo grassland (18–25m high) and one in grassland of *Phleum* and *Triforium* (23 to 30 cm high). Nest diameters were 100×105 , 105×110 , 130×140 , 130×150 mm and the depths were 42, 45, 45 and 50 mm, respectively.

The egg laying period ranged from early May to early June peaking in the second half of May. In a late clutch, egg laying occurred in late June. Nests with eggs were found on 17 and 27 May in southwestern coast of Kril'on Peninsula and on 20 and 26 May 1995 in coastal area of Lososei Bay. Sizes (mm) of eggs from 4 clutches found in Kuril'on Peninsula and 2 clutches in the coastal area of Lososei Bay were:

- 1) 43×33 , 44.5×33 , 45×32.5 , 45×33.5
- 2) 42×32 , 42.5×31.5 , 43×32 , 43.8×31.5
- 3) 40×31 , 41×31 , 42×30.5 , 43×30.5
- 4) 41×30 , 44.5×31.5 , 44.5×32 , 45×31

Average size is 43.1×31.7 mm ($n=16$).

Chicks hatched in late May to early June in most nests and in early July in a late clutch. The hatching period is almost the same as in Hokkaido (Fujimaki & Skira 1984). Eggs in process of hatching were found on 30 May 1981. One to three day old chicks were observed on 5 June 1971 in Kril'on Peninsula and on 20 July 1978 in Cape Lamanon. After leaving the nest females with their chicks move a short distance. Autumn migrations were observed in August and September. Migrating single birds and small groups of three to five snipe were seen from 16 August to 5 September at the same point along the Lyutoga River (Aniva Bay area) and on 25 to 27 September

1971 along the Shebuninka River (Kril'on Peninsula). Flocks of 10 to 15 snipe were observed from 27 to 30 July 1986 - 1988 in the coastal area of Lososei Bay.

Climatic factors affecting breeding success include cold weather in May and early June, and prolonged rain during the pre-fledging period. Sometimes nests with eggs and chicks are trampled by cows or horses. Red Foxes *Vulpes vulpes*, Raccoon Dogs *Nyctereutes procyonoides*, Goshawk *Accipiter gentilis* and Eagle Owl *Bubo bubo* are probably predators of snipe.

Body weight was 139 and 156 g in May, and 142.2 and 144 g in June for males, and 175.5 and 213.4 g in May for females. Juveniles attained 152 and 126.5 g in body weight by late July.

5. Protection

Currently the conservation status of Latham's Snipe on Sakhalin is secure. They do not need any protection measures because the breeding range is expanding northward and they are increasing in numbers. A potential threat to the population is burning of shrub-grasslands and pastures in the spring. In addition to this, there is possible illegal hunting because hunters cannot separate Latham's Snipe and other snipe species, such as Common *G. gallinago* and Pintail Snipe *G. stenura* which are game birds in Russia.

For complete protection of the Latham's Snipe it is necessary to prohibit hunting of all species of waders on their breeding ground, especially in the Lososei Bay (Aniva Bay) area. In addition to this, conservation of habitats is needed by proclaiming local hunting prohibition areas on the Kril'on Peninsula and the coastal area of Lososei Bay. At present the hunting-prohibition area "Poluostrov Kuril'on" conserves Latham's Snipe breeding habitat.

Acknowledgment: We wish to thank Mr. Mark Barter, Australasian Wader Studies Group, for his kindness in reading and correcting the manuscript.

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サハリンにおけるオオジシギ
Gallinago hardwickii の生息状況

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摘 要

サハリン南部におけるオオジシギ *Gallinago hardwickii* の生息状況について1971～1995年のうち17年間にわたって調査した。オオジシギはサハリン南部に分布し、現在の分布北限は約北緯49度である。生息数は1kmのトランセクトで雄1～5羽であった。ユジノ・サハリンスク以南におけるオオジシギの全個体数は1980年代後半には推定約500羽であった。主要な生息環境は、海岸部や内陸の草原、灌木草原である。産卵期は5月上旬～6月上旬で、雛は多くの場合5月下旬～6月上旬、遅い例では7月上旬に孵化する。現在、オオジシギの分布域は北に拡大しつつあり、生息数も多く、このシギについてとくに保護のための対策を必要としていない。

キーワード：生息数、分布、オオジシギ、*Gallinago hardwickii*、サハリン