

Latham's Snipe Oh-Jishigi (Jpn) *Gallinago hardwickii*

Morphology and classification

Classification: Charadriiformes Scolopacidae

Total length:	28-33cm	
Natural wing length:	♂ 148.7 ± 3.55mm	♀ 149.2 ± 3.00mm
Tail length:	♂ 67.5 ± 3.34mm	♀ 64.6 ± 2.79mm
Culmen length:	♂ 68.6 ± 3.52mm	♀ 72.8 ± 2.75mm
Tarsus length:	♂ 36.4 ± 1.09mm	♀ 38.3 ± 2.27mm
Weight:	♂ 171.35 ± 33.98g	♀ 186.17 ± 38.68g

Total length after Kirihara et al. 2000, and the other measurements (mean ± S.D.; n = 40 in males and 24 in females) after Ura 2005.

Appearance:

Males and females are similar in plumage coloration. The abdomen is white. The superciliary is yellowish white and conspicuous, tapering to the nape. They have a black eye stripe with a lateral streak under it, which is similar in color to the superciliary. They also have a brownish black temporal stripe with fine brown flecks. The scapular is brownish black with pale yellow outer edge.



Photo 1. Latham's Snipe. Ryu-gasaki City, Ibaraki Pref. July 2007. [Hisashi Kishi]

They are paler in color than the other four snipes observed in Japan. The dark horizontal band in the wing covert is conspicuous in the adult of this species. The tail feathers are brown with a black base and black band next to a white tip. But the outer few feathers of the tail have black and white flecks. In contrast to adults, juveniles have flight feathers with a white tip, and the dark stripe of the wing covert looks U-shaped.

Vocalization:

Latham's Snipes croak like "Djepp" or "Zbee, zbee". They call not only on the ground but also on tree branches and utility poles. When they show a display flight in the breeding period, they fly in circles calling "Djij, jij, jij, jij, jee" and dive muttering "Zbyahk, zbyahk" with a loud windy noise of "Za-za-za-za", which arises from the air resistance of the tail feathers. They utter "Chiryoo, chir-chiryoo", when they go out of the nose dive phase to shoot up.

Distribution and Habitat

Distribution:

Latham's snipes breed primarily in Hokkaido, northernmost Japan and southern Sakhalin, Russia, but they also breed in the highlands of Honshu and Kyushu and the estuary of the Amur River, Russia. They winter along the east coast of Australia and in the northern part of Tasmania Island. They are observed throughout Japan in the migration season.

Habitat:

In the breeding season they prefer the open habitats of a riverbed and the lowlands, such as dry reed and sedge fields, *Sasa* (bamboo grass) fields, meadows and cropland. In the wintering and migratory seasons they use principally the wetland and the shores of lakes and marshes.

Life history



Breeding system:

Latham's Snipes are promiscuous. Males neither take care of the young nor defend food resources. They

show a group display along with an aerial display in a lek (Nakamura & Shigemori 1995).

Nest:

They build a plate-shaped nest in a hollow on the ground at the base of a bush and in the thicket of grass. In the study site, they built a nest crushing grass such as sedge in a spiral and placed a "lid" of grass on top of it. The nest was 18cm by 14cm with a depth of 6cm. It is said that a nest is usually built at the edge of a marshland distant from a lek, but this nest was located in the vicinity of a lek site.



Photo 2. Nest and eggs of Latham's Snipes.

Egg:

The clutch size is generally 4 eggs. The egg is grayish brown or light gray with dark brown and pale purple flecks scattering densely on the blunt end. The egg that the author discovered was about 3.7mm by 2.8mm and 19g in weight.

Display flight:

In the breeding period Latham's Snipe males carry out a display flight, making a loud noise by the air resistance of the wide-opened tail feathers when they dive after circling over the territory. Depending on the breeding sites and regions, the display flight starts between 5th and 20th of April, and its peak begins from late April to early May and continues until late May. It decreases gradually afterwards, and is hardly observed in early July (Nitta & Fujimaki 1985, Nakamura & Shigemori 1995, Iida 1991).

In the study site of Tomakomai, Hokkaido, for instance, the display flight reached its peak in early May and almost ceased to be performed in late June (Fig. 1). On the other hand, the display flight reaches its daily peak before and after sunset (Fig. 2).

Migration:

There is little information on the spring migration, but Latham's Snipes leave the wintering grounds of Australia from late February to early March. The autumn migration starts in early July and reaches its peak between 15th and 20th of August (Ohata 1989) and in early September. After the second peak it rapidly slackens off and ends by the end of September.

Diet and foraging behavior

The diet of Latham's Snipes consists of grass seeds as well as soil invertebrates, such as annelids (earthworms), gressorial insects, spiders, molluscs, isopods and centipedes. The fecal analysis of Latham's Snipes wintering in Australia showed that the diet was comprised of the imagoes and larvae of aquatic beetles and diptera, the larvae of trichoptera, adults of hydrachnellae and grass seeds (Todd 2000), but aquatic beetles represented the largest proportion.

Latham's Snipes forage during the day and night in the wintering

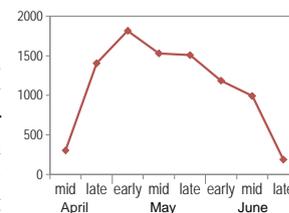


Fig. 1. Seasonal change of the daily observation frequency of Latham's Snipe display flights in Tomakomai City, Hokkaido

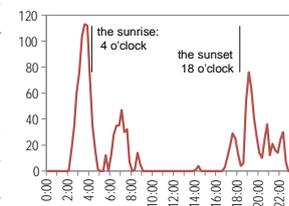


Fig. 2. Display flight frequency of Latham's Snipes per 15 minutes on a day in late April in Tomakomai City, Hokkaido.

ground, but they usually feed in open habitats, such as the tidal flat in the daytime and in the muddy ground covered with shallow water adjacent to a thicket of herbaceous plants during the night. The foraging success rate is higher in soft muddy habitats (Todd 2000). In the study site (the shore of Benten-numa Marsh in Tomakomai, Hokkaido) which is the muddy ground dotted with communities of reeds and sweet gales, however, this species was not sighted in the daytime, even though they were frequently detected at night in the migration period.

Topics of ecology, behavior and conservation

● Sexual dimorphism

Latham's Snipe males are said to be smaller than females. A theory has been proposed that there is a greater difference in body size between males and females in the birds that perform more acrobatic aerial displays (Figueroa 1999). The author captured 64 adult birds and 456 juveniles, measured their body size and weight, and determined their sexes based on DNA analysis in order to study the relationship between the sexual difference in body size and the display flight.

The study showed that females were significantly greater in culmen and tarsus lengths for both adults and juveniles. On the other hand, males had significantly longer tail feathers than females in adult birds, which was not true of juveniles. The number of the tail feathers varied between individuals, ranging from 14 to 18 feathers. Most (82.7%) of the 18-tail-feathered birds were males, and most (74.8%) of the 16-tail-feathered birds and all the 14-tail-feathered birds were females (Ura et al. 2005). Males are smaller with more tail feathers which become longer as they mature probably because a tail with greater drag makes a louder noise in a display flight and a smaller body helps increase aerial maneuverability. It is assumed, therefore, that the sexual dimorphism of Latham's Snipes evolved as a result that males more specialized in aerial displays attracted more females; a case of sexual selection.

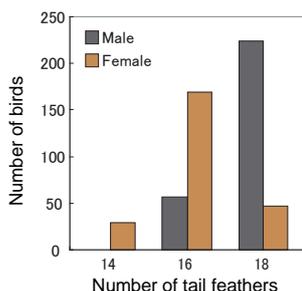


Fig. 3. Relationship between the number of tail feathers and the sexes.



Photo 3. Latham's Snipe in display flight.

● Present state of Latham's Snipes

Latham's Snipes are designated as a Near Threatened species in the red list of the Ministry of the Environment. It has been pointed out for a long time that the species and its habitats have decreased in Honshu (the largest main island of Japan). It has thought to be recently declined in Hokkaido, northernmost Japan as well. The abundance of Latham's Snipes wintering in Australia declined in the 1970's, which resulted in removing them from the game species list around 1980.

The study conducted in Tochigi Prefecture, central Honshu showed that their habitats and population markedly decreased in number in 2003 and 2004 compared with 1986 (Hirano et al. 2005). It is assumed that the habitat loss is principally responsible for their decline, but they decreased in meadows as well despite their unchanged conditions. In the Tokachi region, Hokkaido, on the other hand, Latham's Snipe abundance also declined in 2001 compared to 1978-1991. They decreased in the cropland and meadows, but they did not in farmland with remaining woods, which can be attributed to the undergrowth of *Sasa nipponica* in

the woods that they frequently use as a nest site (Kitajima & Fujimaki 2003). Cropland and meadows alone would not satisfy their breeding requirements. The author had the impression that Latham's Snipes also declined in my former study site of the Yufutsu Wetland (Tomakomai, Hokkaido), where a large proportion of the reed bed was recently changed into cropland.

The flat and open environment which Latham's Snipes prefer has a very strong possibility for industrial and housing development. Consequently, they might be gone without being noticed not only in Honshu but also in Hokkaido which is their stronghold. Before it is too late, therefore, it is important, at least in Hokkaido, to obtain detailed information on the major habitats as well as the breeding sites and population through regular monitoring and be ready to take prompt action when an unusual change occurs to Latham's Snipes.

Literature

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Languages of literature cited other than English: [J] in Japanese, [J+E] in Japanese with English summary.



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I started to work for the Wild-Bird Society of Japan through the study of Latham's Snipes two years ago. I owe it to this snipe that I have been engaged in bird conservation. I would like to put effort into the monitoring of grassland and wetland birds and their habitats, such as Latham's Snipes and Eastern Marsh Harriers because these species are readily exposed to a risk of population decline. Now I am mostly involved in desk work, but I have been trying to keep myself in good shape for field work.

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