Long-billed Plover Ikaru-chidori (Jpn) *Charadrius placidus*

Morphology and classification

Classification: Charadriiformes Charadriidae

Total length:	207mm (197-222)	
Wing length:	♂ 142.6±3.5mm (N=32)	♀ 144.2±3.2mm (40)
Tail length:	♂ 77.6±3.3mm (32)	♀ 77.6±3.8mm (40)
Culmen length:	♂ 19.5±0.8mm (32)	♀ 19.8±0.8mm (40)
Tarsus length:	♂ 32.4±1.3mm (32)	♀ 32.5±1.3mm (40)
Weight:	♂ 63.6±3.3g (32)	♀ 68.1±4.2g (40)

Hatchling: Weight 8.5±0.6mm (30), Tarsus length 22.1±0.6mm (18), Culmen length 9.2±0.4mm (18), and Total length 65.9±2.5mm (18).

Total length is after Enomoto (1941), and the other measurements are the mean values in Tokigawa in Saitama Prefecture in the incubation period. For the hatchlings the mean values on the day of hatching.

Appearance:

Males and females are similar in plumage coloration. They are grayish brown on the back and white on the belly. They have black bands on the head and breast. The iris is dark brown and the eye is ringed with yellow bare skin, which is paler and less conspicuous than that of Little Ringed Plovers (*Charadrius dubius*). In the breeding plumage (summer plumage), however, there are some differences between the sexes. The feathers around the eye become darker in males than in females. The black band on the forehead is also wider in males than in females. In the non-breeding plumage (winter plumage), on the other hand, buff-colored feathers increase on the face in both sexes, but it is difficult to distinguish a male from a female, though there is a slight difference between them. They molt completely into the non-breeding plumage from July to August, while they molt partially into the breeding plumage from November to January.

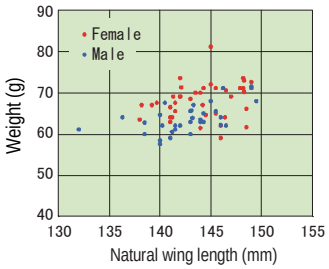

Fig. 1. Relationship between the natural wing length and weight of Long-billed Plovers.

Photo 1. Long-billed Plover male in summer plumage.

Vocalization:

Long-billed Plovers fly flapping their wings vigorously and uttering a staccato call which sounds like "Fi, fi, fi, fi, fi" in the breeding period. Males sometimes call like "Gee, gee" quietly, thrusting the chest as well. When on the alert, they make a single call that sounds like "Pyuoo- !", but they call like "Pip-pip-pip", when they take shelter.

Distribution and Habitat

Distribution:

Long-billed Plovers are distributed in Japan and the Chinese Continent. They are mostly a year-round resident in Honshu, Shikoku and Kyushu (the main islands of Japan), but they leave Hokkaido (the northernmost main island of Japan) for temperate regions in winter. They are breeders in the north-central China and winter residents in southern China through Myanmar.

Habitat:

Long-billed Plovers usually occur in the gravel ground with little or no vegetation in the middle reaches of a river valley. In winter, however, they are also found in paddy fields and the muddy ground of a river.

Life history

Breeding system:

Long-billed Ringed Plovers are basically monogamous and pairs hold their territory. Male and female share the incubation of their eggs and nestlings alike at the early stage of breeding. If they raise their young successfully half through the nestling period, however, females sometimes leave their nestlings in the care of their partner and attempt to breed again with another male (successive polyandry). If they frequently fail in their breeding attempts, females usually divorce their partner and leave the territory, but males rarely abandon the territory.

Breeding behavior:

The breeding behavior is observed from late February. The male presses the chest against the ground to dig a shallow hole raking out the gravel by the feet and call for the female from the hole. When the female comes, the male stands up and opens the tail to make a courtship display with the open tail. The female enters the hole under the tail of the male. The male digs many holes at this time and puts on a display to lead the female to them. The female lays eggs in one of them.

Nest and egg:

The nest hole of Long-billed Plovers is about 13cm in diameter and about 4cm in depth dug into the gravel ground by the male. They occasionally nest in the arable land adjacent to a river. They use as nest materials pebbles with a diameter of less than 1cm in diameter and 1-3cm dry grass stalks.

Photo 2. Nest and eggs of Long-billed Plovers.

The clutch size is mostly four eggs. The egg size is 34.8 ± 1.3mm (30.7-38.6mm, 512) by 28.2 ± 0.7mm (23.1-28.2mm, 512). The egg weighs 11.8 ± 0.9 g (8.7-14.2g, 512). The egg has brown or dark brown flecks all over, but more densely around the blunt end, on a bluish gray or grayish brown ground.

Incubation and nestling periods and fledging rate:

They lay one egg every other day and it takes about seven days to complete the clutch. Four eggs hatch about 29 days on average after the incubation started, but the incubation period somewhat varies due to frequent human disturbance. When enemies approach the nest during the incubation, the parent birds leave the nest quietly and watch over the nest in the distance. When enemies approach the nest at the time of hatching, the parent birds move toward them and feign injury while calling loudly. The hatchlings leave the nest several hours after hatching and start feeding by themselves, while watched over by the parents. The young increase in weight by about 1g per day and they come to fly at the age of about 40 days. Then they disperse from the parents' territory. In the study site only about 15% of the laid eggs hatched and less than half of it survived due to predation or accidents. When they failed in breeding, they laid eggs again in about seven days.

Territory:

Long-billed Plovers have monogamous breeding system and pairs maintain their territory. They establish a territory on the bare ground such as gravel, but not on a dry riverbed covered with vegetation. The territory generally extends about 100m along a river. They actively carry out a territorial display, flying around the territory in the air many times while calling. The boundary between the territories on the ground is distinctly demarcated and territory owners frequently run parallel to each other along the boundary, threatening with their chest thrusted early in the breeding season. They occasionally jump up and peck at each other viciously in a territorial dispute. Females also take part in a territorial dispute.

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Diet and foraging behavior

Long-billed Plovers forage for prey at the shoreline of a river, and when they catch sight of prey, they suddenly move toward it and catch it. Although it is rare that the prey species is confirmed, they are assumed to capture small insects in the water. I observed them capture imagoes of midges that fell at the edge of the water, aquatic insects, adult dragonflies, larvae of beetles and earthworms, etc., but they ingest no vegetable matter.

Topics of ecology, behavior and conservation

Roost

The male and female roost together in their territory during the breeding season. In July when the breeding period is over, however, Long-billed Plovers form a colonial roost in a flock of several to three dozen birds from the morning to the evening in a dry riverbed or the arable land with bare areas adjacent to a river. A roosting flock consists primarily of birds within a range of about 1km of the roost site. In the study site, for instance, a roosting flock was composed half of breeders and half of immigrants.

Seasonal changes of behavior

Long-billed Plovers are diurnal during the breeding period which starts in February. They leave their roost to feed at dawn and return to their roost at dusk. When the breeding season is over in July, on the other hand, they form a communal roost in the daytime and they return to a river at dusk to forage along the shoreline. Around December, however, they keep irregular hours. Some birds sleep and others forage in the daytime.

Dispersal and establishment of juveniles

Three males and four females were confirmed to settle down in my study site. One of the males established its territory the next year and started breeding. Another male returned to the study site and attempted to breed two years later, but it failed and left the study site again. The third male bred in a riverbed a dozen kilometers away from the study site the following year. Four females attempted to breed the year after they had fledged. But they failed several times and left the study site except for one female, which remained there for as long as 14 years. The study showed that males and females sometimes stayed in the vicinity of the natal site and that they started to breed the year after they had fledged.

Psychology of Long-billed Plover males

It is relatively easy to observe most of their daily life except for in the nighttime because Long-billed Plovers hold their territory in an open habitat. The private life of banded birds can be exposed. During my seven-year study of Long-billed Plovers, I observed many interesting episodes, among which I would like to introduce a very amusing one I observed only once.

There was a pair I named BF in the study site. I captured and banded the male (BF♂) and female (BF♀) of this pair in 1988. They maintained their pair-bond until the male (BF♂) disappeared three years later. They failed in the first breeding attempt in 1989, but I observed BF♂ uttering a courtship call from a hole he had dug in the riverbed of the territory in May of the same year. There appeared a ♀ without a color leg band in response to his call. Speeding up the tempo of the call, BF♂ stood up and opened the tail to invite her. The female accepted his courtship and squatted down in the hole.

At that time, however, BF♀ (his wife) came running from a distance and attacked the young female that was accepting the courtship from BF♂, as if to say "What the hell are you doing in my place!". (Please pardon such a personification.) The female stood up and ran away a short distance. Then, BF♂ changed his attitude completely toward the female that had accepted his courtship up to then, and rushed to peck at her, as if to say "Boy, you are not my wife!". The female gave out a scream and flew away to the waterside. BF♂ stood for a moment, looking embarrassed. After BF♀ walked away, however, BF♂ started to invite the young female to the hole with a courtship call again. Then, the female came running back to him and squatted under his tail, accepting his courtship again. Soon BF♀ arrived again. Seeing his wife, BF♂ stopped courting at once and started to peck and chase away the female from under the tail. The female flew away screaming, but the male chased after her obstinately to drive her out of the territory. When BF♂ returned to his wife as if nothing unusual had happened, she walked away from him again. Left alone, BF♂ looked somewhat crestfallen.

Now let us think about the reasons behind this male's behavior. When Long-billed Plovers fail in their breeding attempt, the females sometimes divorce their partner and leave the territory, but the males usually remain in the territory. Since the males are always at risk of being divorced, they seem to be tolerant toward intruding females.

I consider that this behavior reflects the "psychology of Long-billed Plover males". What do you think of it ?

The author has not published this study in a form of a monograph. It is the result of the study he carried out for seven years from 1987 to 1994 in the Tokigawa River, Saitama Prefecture, central Japan.

Literature

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

Author

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Since I find it too much trouble to go to distant sites, I make it a rule to look for research topics in the vicinity of my house. It takes just about 15 minutes to drive to the study site of Long-billed Plovers from my house. Incidentally, the study sites of Cuckoos, Goshawks and Little Cuckoos are 45, 20 and 20 minutes away by car, respectively. When I study a target bird species for several years and I have got a general idea of it, I tend to think I have fully understood it and lose interest and start working on another species. Since I go from one theme to another with leaving collected data alone, I have hardly ever published scientific papers. It is a bad habit of mine as an amateur ornithologist. I regret it.

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