

First record of nesting by the Penduline Tit *Remiz pendulinus consobrinus* (Swinhoe) in Russia (Aves: Paridae)

O.A. Burkovskiy

Burkovskiy, O.A. 1997. First record of nesting by the Penduline Tit *Remiz pendulinus consobrinus* (Swinhoe) in Russia (Aves: Paridae). *Zoosystematica Rossica*, 6(1/2): 317-319.

Several nesting pairs of *Remiz pendulinus consobrinus* were observed in the Khasan District of the Primorsk Territory and a single foraging male was met in winter near Luchegorsk in the north of the Primorsk Territory.

O.A. Burkovskiy, Zoological Museum, Far Eastern State University, Okeanskiy pr. 37, Vladivostok 690000, Russia.

The eastern subspecies of the Penduline Tit, *Remiz pendulinus consobrinus* (Swinhoe), is usually separated into a group *consobrinus*, along with the three other groups of subspecies: *pendulinus*, *macronix*, and *coronatus* (Vaurie, 1957, 1959). However in the last revision of the world tits (Harrap & Quinn, 1996), this form was given a rank of a species because it is peculiar both in morphology and distribution: it has an isolated area of nesting in China and flies from there to the southern regions of China, South Korea and Japan (Portenko, 1955; Sonobe & Robinson, 1982; Cheng, 1987). It has been assumed that *R. p. consobrinus* may nest on the Russian side along the Amur River because its nests have been found along the Chinese river bank in the Heilongjiang Province (Harrap & Quinn, 1996). Perhaps, the record of "some Penduline tit on the Amur river by the Bureya mountains" (Portenko, 1954) should be referred to this subspecies.

It was very unexpected to find *R. p. consobrinus* nesting in the south of the Primorsk Territory. In 1994, V.N. Kubanina brought to the Zoological Museum of the Far Eastern State University an incomplete nest of a Penduline tit found 26.III.1994 in the Khasan District on a bird-cherry tree (*Padus asiatica*). The nest turned out to be left from the year before. 31.VII-1.VIII.1996 in the same district we found the birds foraging together: one pair and a bachelor male. The pair drew our attention by their behaving so as if they had chicks. During our second visit to the locality (5.VIII), we managed to see

four juveniles that were fed by the male doubtless belonging to the same pair. The young birds kept together on the tops of reeds, occasionally taking short flights.

V.M. Loskot, the chief of the Ornithology Department of the Zoological Institute of the Russian Academy of Sciences, using our description and the collection of the Institute identified the bird we had met as *R. p. consobrinus* (in China *R. p. stoliczkae* can be found as well). The males of *R. p. consobrinus* have an ash-grey top of the head, which is very noticeable in field, a black stripe over the eye, and a relatively narrow forehead. The adult birds found are characterized by the uniform sandy colour of the ventral side of the body.

In November of the same year, we found in the same region, in an area of 700 m in radius, 8 nests, 4 of which were left from the previous year and located some distance from the present year's nests. The habitats in which they were found are low hills with river valleys and creeks. In the valleys, shortearns (*Calamagrostis* sp.) and reeds (*Phragmites australis*, *P. japonicus*) prevailed in the grass cover, and isolated bushes of willows (*Salix* sp.) grew along the rivers. The hill slopes were covered with open woodlands of oak (*Quercus dentata*) with admixture of some other tree species. Between the hills and at their feet there are small ravines. On the trees growing on the slopes of the ravines the nests were found. Seven nests were on limes (*Tilia amurensis*) and one on a willow (*Salix* sp.). Two nests were found on iso-

Table. Sizes of nests of *Remiz pendulinus consobrinus* (cm)

Measurement	Nest			
	No. 1	No. 2	No. 3	"incomplete"
Nest diameter	8.7	8.7	10.0	6.9
Nest height	14.1	14.0	14.7	10.2
Sling length	3.8	3.7	2.5	2.1
Entrance diameter	1.9	2.4	2.3	
Inside bowl diameter	6.4	7.2	7.3	5.4
Entrance tube length (along the bottom side)	1.6	2.9	0.9	

lated trees and the rest on trees on the edge of groves. The distance between the nests varied from 30 to 800 m. The nests were fixed to the tips of lower branches in the limes, and to a fork of branches in the willow. The nests were hanging on the branches growing in a direction opposite to the slopes, due to which the distance from the ground to the nests increases from 2.1 m to 4.3 m, with average 2.5 m. Among the four nests of the present year, one was of the "incomplete" type (the sizes of the nests are given in the Table). The nests of the "incomplete" type are rather well described in the literature (Komarov, 1961; Gavrilov 1972; Tret'yakov, 1973, etc.). One was hanging on the same tree and on the same level as the one with a clutch, 80 cm from it.

Constructing the nests, the birds used in addition to plant floss numerous vegetable fibres (bast) making the nests durable, the 'sling' is braided with fibres as well. The plant floss is composed mainly of floss of some composites; in construction of the nests cobweb is also used and in one nest some animal hair has been recorded. The lining of the inner cup contains a large amount of soft floss, apparently of willow or poplar (*Populus* sp.). In the nest lining some addled eggs have been found; besides, in an old nest an abandoned clutch of 5 eggs remained. The sizes of all the eggs found (12) are 14.4-16.6 × 10.2-10.9, average 15.9 × 10.5 mm. The eggs and nests are kept in the Zoological Museum of the Far Eastern State University.

One more encounter with this Penduline Tit happened to be in vicinity of Luchegorsk in the north of the Primorsk Territory on 18th of February, 1997. For several days an individual male occasionally foraged on a cat's-tail bed (*Typha* sp.) in a small frozen artificial pond. The bird was pulling at the seed-heads of the cat's-tails the way as by

the Marsh Tits (*Parus palustris*) observed there as well. While taking a closer look at the seed-heads, 1 to 5 insect larvae 3-7 mm long were found.

The Southern Primor'e, the Khasan District in particular, is a rather well studied area; therefore the probability that this species could be missed in the previous years by the investigators, is doubtful. Harrap & Quinn (1996) pointed to the fact that in recent years the number of wintering birds has sufficiently increased and the distribution of the species has widened. This explanation of how *R. p. consobrinus* happened to nest in Primor'e seems to be more reasonable. In any case, *R. p. consobrinus* enriches the list of Russian avifauna. Our having met the birds in winter indicates not only ability of individuals to winter, but probably a wider distribution of *R. p. consobrinus*. The new find of the bird nesting substantially expands the eastern limit of its distribution. As the species is not adequately studied and rare in China, there is no question that it deserves attention.

Acknowledgements

The author is thankful to V.M. Loskot (St.Petersburg) for identification of the birds.

References

- Sonobe, K. & Robinson, J.W. (eds). 1982. *A field guide to the birds of Japan*. 336 p. Tokyo, Wild Bird Society of Japan.
- Cheng, T.H. 1987. *A synopsis of avifauna of China*. 1222 p. Beijing.
- Gavrilov, E.I. 1972. Family Remizidae. In: Korelov, M.N. & Kovshar', A.F. (eds). *Ptitsy Kazakhstana* [Birds of Kazakhstan], 4: 243-263. Alma-Ata. (In Russian).
- Harrap, S. & Quinn, D. 1996. *Tits, nuthatches and treecreepers*. 464 p. London. Helm identification guides.

- Komarov, B.A.** 1961. About ecology of Penduline Tit (*Remiz pendulinus caspius*) in the Volga River delta. *Trudy Astrakhan. gos. Zapovednika*, **5**: 262-268. (In Russian).
- Portenko, L.A.** 1954. Birds of the USSR, part 3. *Opred. faune SSSR*, **54**. 255 p. Moskva-Leningrad. (In Russian).
- Portenko, L.A.** 1955. Review of forms of Palaearctic Penduline Tits and taxonomy appraisal. *Trudy zool. Inst. Akad. Nauk SSSR*, **18**: 459-492. (In Russian).
- Tret'yakov, P.L.** 1973. Some patterns of biology of reproduction in *Remiz pendulinus* in the Volga River delta. *Zool. Zhurn.*, **12**: 1880-1882. (In Russian).
- Vaurie, Ch.** 1957. Systematic notes on Palearctic birds. No. 28. The families Remizidae and Aegithalidae. *Amer. Mus. Novit.*, **1853**: 1-21.
- Vaurie, Ch.** 1959. *The birds of the Palearctic fauna. A systematic reference. Order Passeriformes. XII*. 762 p. London.

Received 23 April 1997