First Record of the Varied Tit Subspecies *Parus varius varius* from Miyake-jima of the Izu Islands, Central Japan

Yutaka Yamamoto* and Hiroyoshi Higuchi**

**Abstract.** Two individuals of Varied Tit which looked like *Parus varius varius*, the main Japan islands subspecies, were observed on Miyake-jima Island (34°05′N, 139°32′E) in the Izu Islands in the winter of 1996–1997. Following capture and examination of their plumage and body dimensions, they were confirmed to be *P. v. varius*. These birds spent the 1996–1997 winter in the broad-leaved evergreen forest of the southern region of Miyake-jima Island, before migrating elsewhere in April, 1997. This is the first record of the subspecies *P. v. varius* within the geographical range of *P. v. owstoni*.

**Key words:** First record, Miyake-jima Island, Varied Tit *Parus varius varius*.

The Varied Tit, *Parus varius*, is distributed to Japan and its close vicinity including Southern Kurile Islands, Northeast China, North Korea, South Korea and Taiwan. This species is divided into nine subspecies based on plumage and body size (Harrap & Quinn 1996, Ornithological Society of Japan 2000).

In the main islands of Japan, one of the subspecies, *Parus varius varius*, is widely distributed. In the Izu Islands, south of central Honshu, the largest main island, there are two endemic subspecies. One is *P. v. namiyei*, which is distributed on To-shima, Nii-jima and Kozu-shima of the northern Izu Islands. *P. v. owstoni* is resident on Miyake-jima, Mikura-jima and Hachijo-jima of the southern Izu Islands. *P. v. owstoni* is the largest in body size among the nine subspecies, and is darker and more rufous than *P. v. varius* and *P. v. namiyei*. *P. v. namiyei* is intermediate in plumage and body size between *P. v. varius* and *P. v. owstoni* (Kiyosu 1978, Harrap & Quinn 1996).

During the winter of 1996–1997, we observed two individuals which looked like the mainland subspecies *P. v. varius* on Miyake-jima Island (34°05′N, 139°32′E). We captured them, examined their plumage and body size, and concluded that they are *P. v. varius*. We report here the result of our field observations and measurements of the birds.

The first individual (Bird 1) was observed by Tetsuji Hidaka and later by Yamamoto at the feeding station of the Miyake-jima Wild Bird Park in the morning of November 4, 1996. The Miyake-jima Wild Bird Park, at the southern side of Miyake-jima Island, is about 10 hectares in size and is mainly covered with broad-leaved evergreen forest...
Fig. 1. The two individuals (b in A, B) that visited Miyake-jima Wild Bird Park in the winter of 1996–1997 and were judged as *P. v. varius*. b in A and B birds were described as Bird 1 and Bird 2 in the text, respectively. a and c in A were *P. v. owstoni*. 
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Fig. 2. Relationship of body weight and wing length in the three subspecies of Varied Tits. The measurements were obtained from Higuchi (1976) and additional banding data. For further explanation, see Table 1.

Solid circle: P. v. owstoni (N = 57), Open triangle: P. v. namiyei (N = 16)
Open circle: P. v. varius (N = 37), Solid square: Captured birds

dominated by the live oak Castanopsis sieboldii.

This individual was caught with a mist net at the same point on November 7, 1996. This bird had the same plumage as P. v. varius, i.e., the forehead and cheek patches were pale buff, the crown, nape and throat were black, the chest and underpart were rusty, the wing and tail were gray (Fig. 1).

P. v. owstoni has very dark plumage overall, and obviously distinct from P. v. varius, distinguished by its rufous forehead, cheek patches, chest and underpart. The color of forehead and cheek patches of this bird were pale buff and more whitish than P. v. namiyei. So, it seemed that it was P. v. varius from its plumage. The age of the captured bird was judged to be a juvenile based on its skull, which was pinkish, but the sex was unknown.

A few days later, we were aware of the existence of another bird (Bird 2) with the same plumage as P. v. varius and Bird 1. This individual was captured with a mist net on February 10, 1997. The bird was judged to be an adult based on its skull ossification, but the sex was unknown. The two birds spent the 1996–1997 winter in the broad-leaved evergreen forest around the Wild Bird Park. They also used another feeding place in the garden of a tourist resort 300 m from the Wild Bird Park. Our last observation of these birds was on April 19, 1997.

The body weight of these captured birds was much smaller in relation to the wing length than P. v. owstoni, near to small individuals of P. v. namiyei, and in average of P. v. varius (Fig. 2 & Table 1). Captured birds were also much smaller in culmen length, bill depth and tarsus length than P. v. owstoni (Table 1). It is concluded from their plumage and body size that these individuals are P. v. varius. This is the first record of the subspecies from within the range of P. v. owstoni.

We do not know the origin of the two individuals of P. v. varius. Miyake-jima Island
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Table 1. Body size measurements of three subspecies of Varied Tits and the two individuals captured at Miyake-jima Wild Bird Park. For the three subspecies, measurements of natural wing length, exposed culmen, bill depth at nostril, and tarsal length were obtained from skins in the collection of the Yamashina Institute for Ornithology.

<table>
<thead>
<tr>
<th>Subspecies</th>
<th>N</th>
<th>Natural wing length (mm)</th>
<th>Exposed culmen (mm)</th>
<th>Bill depth at nostril (mm)</th>
<th>Tarsus (mm)</th>
<th>Body weight (g)*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Range  Mean±SE</td>
<td>Range  Mean±SE</td>
<td>Range  Mean±SE</td>
<td>Range  Mean±SE</td>
<td>Range  Mean±SE</td>
</tr>
<tr>
<td>P. v. owstoni</td>
<td>15</td>
<td>73.3–82.3  77.8±0.8</td>
<td>11.9–14.8  13.0±0.2</td>
<td>4.9–5.7  5.5±0.1</td>
<td>20.0–22.7 21.0±0.2</td>
<td>21.5–28.4 24.8±0.2</td>
</tr>
<tr>
<td>P. v. namiyei</td>
<td>10</td>
<td>71.4–79.5  75.3±0.9</td>
<td>11.0–13.3  12.2±0.3</td>
<td>4.8–5.5  5.1±0.1</td>
<td>19.0–20.3 19.5±0.1</td>
<td>17.0–26.5 19.9±0.6</td>
</tr>
<tr>
<td>P. v. varius</td>
<td>42</td>
<td>69.7–80.1  75.6±0.4</td>
<td>10.0–13.3  11.6±0.1</td>
<td>4.5–5.5  4.9±0.0</td>
<td>16.9–19.9 18.5±0.1</td>
<td>15.6–19.5 17.8±0.2</td>
</tr>
</tbody>
</table>

Captured birds
- Band No. 2F89339**: 71.5  10.3  5.1  19.8  17.7
- Band No. 2F89342**: 73.2  10.6  4.8  19.3  17.6

* Body weight measurements were obtained from Higuchi (1976) and additional banding data of Higuchi and Yamamoto for P. v. owstoni (N = 57), from Seiichi Isebi's banding data for P. v. namiyei (N = 16), and from Higuchi's (1976) and additional banding data for P. v. varius (N = 37).

** The measurements of captured birds were obtained from Yamamoto's banding data.
is located about 80 km from the end of the Izu Peninsula and about 60 km off O-shima Island, the northernmost island of the Izu Islands, both within the geographical range of \textit{P. v. varius}. The two individuals may have dispersed in autumn from somewhere within the range of \textit{P. v. varius}, and returned there in the breeding season.

\textbf{Acknowledgments}

We are grateful to Takashi Hiraoka for allowing us to measure the specimens of Yamashina Institute for Ornithology, to Seiichi Isobe for permitting us to use his banding data of \textit{P. v. namiyei} in Nii-jima Island. Thanks are also due to Dr. Jack T. Moyer for his helpful comments on the English.

\textbf{References}


伊豆諸島三宅島における亜種ヤマガラの初記録

ヤマガラ \textit{Parus varius} の 1 亜種オーストンヤマガラ \textit{Parus varius owstoni} の分布域である伊豆諸島南部の三宅島 (34°05’N, 139°32’E) で、亜種ヤマガラ \textit{P. v. varius} と思われる 2 個体が 1996/1997 年の秋冬期に観察された。これら 2 個体は、羽色や計測值から、亜種ヤマガラ \textit{P. v. varius} と判断された。これら 2 個体は、三宅島南部のスダギ \textit{Castanopsis cuspidata} var. \textit{Sieboldii} が優占する常緑広葉樹林で、1997 年 4 月まで継続して観察されたが、その後、姿を消した。亜種オーストンヤマガラの分布域での亜種ヤマガラの確認は、本報告が初めてである。

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