

## Occurrence of *Thalassoduvallius* (Coleoptera, Trechinae) on Two Isolated Islands off Kyushu, West Japan<sup>1)</sup>

Shun-Ichi UÉNO

Department of Zoology, National Science Museum (Nat. Hist.),  
3–23–1 Hyakunin-chô, Shinjuku, Tokyo, 169 Japan

**Abstract** The halophilous trechine beetle, *Thalassoduvallius masidai masidai* S. UÉNO, is recorded from two isolated islands off Kyushu, West Japan. It is considered that the unusually wide range of distribution of this nominotypical subspecies along the northwestern side of West Japan may have been formed under the influence of the Tsushima Current.

In my revision of halophilous beetles of the trechine genus *Thalassoduvallius* (UÉNO, 1978), I classified the specimens then known into three subspecies of a single species, *T. masidai*, and concluded that the subspecific differentiation of this species may have been effected under the influence of different tidal currents.

Since then, two more localities of *T. masidai* were discovered on two isolated islands, both uninhabited, off Kyushu, West Japan. One of them is the Island of Oshima of the Danjo Islands lying in the East China Sea about 70 km south-southwest of the Island of Fukué-jima of the Gotôs, and the other is the Island of Oki-no-shima lying in the Genkai-nada about 55 km northwest of the nearest point of northern Kyushu. The former is the largest of the five main islands forming the Danjos, which are wholly composed of welded tuff, and is 2.1 km<sup>2</sup> in area, 3.5 km in major axis and 225 m in height. The latter is a solitary basaltic island 0.69 km<sup>2</sup> in area, 1.6 km in major axis and 244 m in height. At both the localities, the trechine beetle was found from beneath stones lying on the ground under cliffs well above the high tide mark.

After a careful examination, it has become apparent that the populations of these islands can be referred to the nominotypical subspecies of *T. masidai*, though the Oshima population is somewhat different from the others. This was unexpected, since the Island of Oki-no-shima is about 190 km distant to the west-southwest from the estuary of the Sufu-gawa River in western Honshu, the type locality, and the Island of Oshima is about 295 km farther to the southwest. No other apterous species of Japanese trechines occupy an range almost 500 km long.

This unusually wide, but discontinuous, distribution of *T. masidai masidai* must have been achieved through the agency of the Tsushima Current, which flows through the three known localities of the subspecies. Its native place may have been some-

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where in northern Kyushu, from where the beetle dispersed northeastwards along the coast of the Japan Sea. Beyond all reasonable doubt, new localities of this subspecies will be found in future on the Gotô Islands and in the coastal areas of northern Kyushu.

This short paper is dedicated to the memory of the late Mr. Masao EZIMA, who unexpectedly passed away on April 14, 1990, at the age of 39, less than a year after his discovery of *Thalassoduvallius* on the Danjo Islands. Hearty thanks are also due to Messrs. Sumao KASAHARA, Rikio MATSUMOTO and Yûichi OKUSHIMA, who kindly arranged deposit of invaluable specimens to the National Science Museum (Nat. Hist.), Tokyo.

*Thalassoduvallius masidai masidai* S. UÉNO, 1956

*Thalassoduvallius masidai* S. UÉNO, 1956, Mem. Coll. Sci. Univ. Kyoto, (B), 23, p. 65, figs. 1–2; type locality: estuary of the Sufu-gawa River in Shimané Pref.

*Thalassoduvallius masidai masidai*: S. UÉNO, 1978, Mem. natn. Sci. Mus., Tokyo, (11), pp. 124–127; 1985, Coleopt. Japan Col., Osaka, 2, p. 68. — CASALE & LANEYRIE, 1982, Mém. Biospéol., Moulis, 9, p. 117, fig. 88.

*Additional specimens examined.* 1 ♂, 1 ♀, Is. Oki-no-shima, Genkai-nada, Ohshima-mura, Fukuoka Pref., 9–X–1993, R. MATSUMOTO leg.; 7 ♂♂, 12 ♀♀ (incl. 2 teneral ♂♂ and 5 teneral ♀♀), Nishidomari, Is. Oshima, Danjo Islands, Nagasaki Pref., 25–V–1989, M. EZIMA & Y. IKEZAKI leg. All deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

*Notes.* The Oki-no-shima specimens recorded above are perfectly identical with the type series, whereas the Oshima specimens are variable to some extent according to individuals. Many specimens from the Oshima population agree well with the type series, but there are a few others that vary towards the Pacific subspecies. This is particularly apparent in the basal part of the pronotum, whose sides are convergent posteriad as in *T. m. pacificus*, and in the shallow external striae on the elytra. It is possible that subspecific differentiation is not yet pronounced in the western part of the distributional range of the species *masidai*, but at the present moment, I prefer to regard the Oshima population as belonging to the nominotypical subspecies, seeing that the great majority of the specimens examined accords with it, and that any *Thalassoduvallius* for comparative study has not been found until now at the western side of the main island of Kyushu.

The insular populations under consideration are different from the mainland ones in their existence well above the high tide mark. On the Island of Oki-no-shima, the beetle was found from beneath fist-sized stones lying on the wet gravelly soil about 10 m removed from the water edge of the sea. This spot was situated under a cliff and was fed by a seepage. On the Island of Oshima, the trechine beetle was found at two spots about 50 m apart by narrow streams at the eastern side of the island. These streams were issued from crevices of welded tuff forming a precipitous slope and ran down on a sandy beach into the sea. The *Thalassoduvallius* dwelt under stones lying on wet fine sand more than 20 m above the high tide mark.

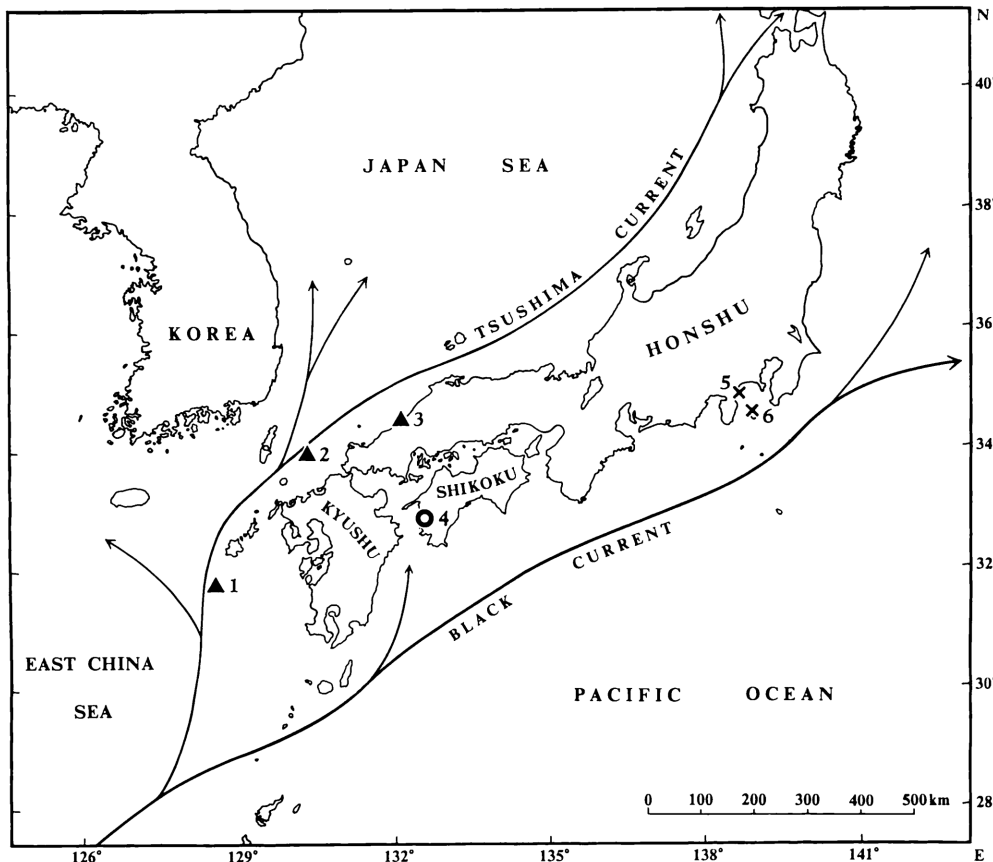


Fig. 1. Map showing the known localities of *Thalassoduvalius*. — 1, Is. Oshima of the Danjo Islands (*T. m. masidai*); 2, Is. Oki-no-shima (*T. m. masidai*); 3, estuary of the Sufu-gawa River (*T. m. masidai*); 4, Uwajima (*T. m. kurosai*); 5, Cape Manazuru-misaki (*T. m. pacificus*); 6, Aki-no-hama on Is. Oh-shima (*T. m. pacificus*).

Thus, the habitats of *Thalassoduvalius* on both Oki-no-shima and Oshima are not intertidal, though still littoral. On these small islands in the distant sea, however, splash of salty water is blown up incessantly for a considerable distance, which makes various small marine animals dwell well above the intertidal zone. *Thalassoduvalius* can also be regarded as one of such cases, even though it may have been derived from a riparian ancestor.

要 約

上野俊一：男女群島男島および筑前沖ノ島のイソチビゴミムシ。——東シナ海に浮かぶ男女群島の男島と玄界灘の沖ノ島で採集されたイソチビゴミムシを検討した結果、これらがともに基亜種 *Tha-*

*lassoduvallius masidai masidai* S. UÉNO に属するものと認めて記録した。ただし、男島産のものには個体変異があり、太平洋側の亜種に似た特徴を合わせもつ少数の個体が含まれている。後翅が退化しているにもかかわらず、このチビゴミムシが 500 km 近い長距離に拡散することができたのは、その特異な生息条件によるもので、既知の産地 3 カ所を通る対馬海流に運ばれたからだろう。

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## New Combinations of Diaperine Tenebrionid Beetles of the Genus *Platydemia*

Kimio MASUMOTO

Institute of Human Living Sciences, Otsuma Women's University,  
12 Sanbancho, Chiyoda-ku, Tokyo, 102 Japan

In the course of my study on the genus *Ceropria* from Asia, I was able to examine the following species, which should be transferred to the genus *Platydemia* from the genus *Ceropria*.

*Platydemia opacipenne* (PIC, 1921), comb. nov.

*Ceropria opacipennis* PIC, 1921, *Mél. exot.-ent.*, (34): 26.

Type depository: MNHN, Paris (1 ex.).

*Platydemia reitteri* (PIC, 1934), comb. nov.

*Ceropria Reitteri* PIC, 1934, *Ent. Nachr.-bl.*, **8**: 85.

Type depository: MNHN, Paris (2 exs.).