

## A New *Chlorophorus* (Coleoptera, Cerambycidae) from the Ogasawara Islands, with Notes on its Derivation

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**Abstract** A new species of the cerambycid genus *Chlorophorus* is described from the Island of Muko-jima of the Ogasawara Islands under the name of *C. kusamai*. Derivation and distribution of the four *Chlorophorus* species hitherto recorded from the Ogasawara Islands are briefly discussed.

Several years ago, a *Chlorophorus* species taken on the Island of Muko-jima of the Ogasawara Islands was submitted to me for taxonomic study. After a careful study, I have concluded that it is new to science, since it is different from all the species of the genus previously known from the Ogasawara Islands in the pattern of dorsal markings and the structure of the male genitalia. I am therefore going to describe it in the following lines, with brief notes on its derivation and distribution. The new species will be dedicated to the memory of the late Professor Dr. Keiichi KUSAMA. He had deep interest in the cerambycid fauna of these islands and published the result of his study in 1973.

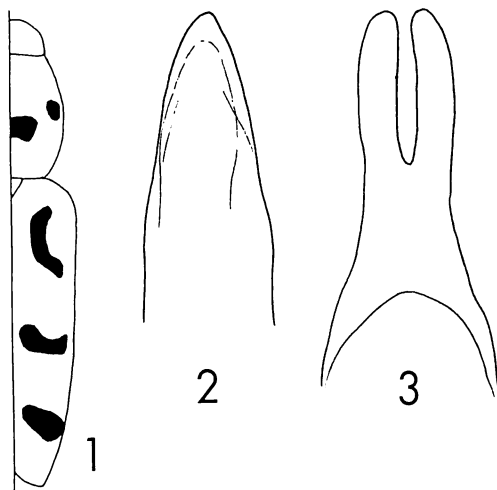
Before going further, I wish to thank Dr. Shun-Ichi UENO for his kindness in reading the manuscript of this paper.

### *Chlorophorus kusamai* M. SATÔ, sp. nov.

(Figs. 1–3)

**Male.** Body almost black and densely covered with yellowish recumbent pubescence all over except for the markings of pronotum and elytra, which are covered with brownish pubescence; maxillary and labial palpi, tarsal segments and claws brown. Pronotum and each elytron furnished with three markings, which are respectively arranged as follows: pronotum with a transverse band just behind the middle of the disc and an oval spot at each lateral side of the middle; elytron with a C-shaped maculation at basal third, a transverse one just behind the middle and an oblique oval spot at apical third.

Head a little broader than the anterior margin of pronotum; median furrow indistinct; surface finely and somewhat sparsely punctate, but the punctures in lateral and posterior areas are rugose; gena about 1.4 times as deep as the lower eye-lobe; anten-



Figs. 1–3. *Chlorophorus kusamai* M. SATÔ, sp. nov. — 1, Markings of pronotum and left elytron; 2, apical portion of median lobe of male genitalia; 3, apical portion of tegmen of male genitalia.

nae almost reaching the middle of elytra, approximate ratio in length of respective segments:— 4.5 : 1 : 3 : 3.5 : 3.5 : 3 : 3 : 2.5 : 2.5 : 2.5 : 2.5. Pronotum moderately convex, about 1.5 times as broad as head, slightly longer than broad, and broadest near the middle; posterior margin about 1.4 times as broad as the anterior; sides gently rounded; surface strongly and rugosely punctate in most areas. Scutellum finely and closely punctate. Elytra about 1.2 times as broad as pronotum, about 2.2 times as long as broad, broadest at the shoulders, thence gently narrowed posteriad; apex obliquely truncate; surface closely and rugosely punctate. Legs moderate in size, hind tibia almost straight; proximal segment of hind tarsus longer than the remaining segments taken together and about 0.6 times as long as elytral breadth. Male genitalia as shown in text-figures; median lobe stout, tegmen relatively small.

Female. Unknown.

Length: 9.7 mm; breadth: 2.8 mm.

Holotype: ♂ Muko-jima Is., Ogasawara Islands, Japan, 22-V-1974, M. IGA leg. Preserved in the collection of the Entomological Laboratory, College of Agriculture, Ehime University, Matsuyama.

*Distribution.* Ogasawara Islands (Muko-jima).

The present new species belongs to the *yayeyamensis* group of *Chlorophorus* and is closely similar to *C. kobayashii* KOMIYA in general appearance, but is distinguished from the latter by small tegmen and stout median lobe of the male genitalia, by lacking the humeral spot of each elytron and by apparent rugosity of elytral punctures.

### Brief Notes on the Derivation and Distribution of the *Chlorophorus* Species of the Ogasawara Islands

Four species of the genus *Chlorophorus* have hitherto been recorded from the Ogasawara Islands. They all belong to the *yayeyamensis* group and are considered to have been derived from ancestors that reached the islands either on raft carried by tidal current or by aerial dispersal. As is shown in Table 1, *C. yayeyamensis*, which is the highly probable candidate of the ancestor of the Ogasawara species, is widely spread over the Pacific side of the Japanese arc, from the Ryukyu Islands via the southern side of the Japanese mainland to the Izu Islands. This distributional pattern suggests that the species may have dispersed mainly through the agency of the Kuroshio Current and partly by aerial dispersal, above all by typhoon.

Such a drifting dispersal cannot be surmised for the ancestors of the Ogasawara species, unless there was a radical change of the route of the warm current in the past. KUROSAWA (1972) suggested that if a long peninsula was formed in some geological period by connection of the Izu Peninsula with the Izu Islands, the warm current may have flowed farther south than it is now and washed the Ogasawara Islands. However, there is no geological evidence to support his hypothesis. All the islands of the Izu group are of volcanic origin, so is the Izu Peninsula. They erupted from the ocean floor one by one and were never connected with one another with the exception of the Izu Peninsula, which is said to have been an island in old times but connected with the mainland by moving of plate and by eruption of small volcanoes. In all probability, the ancestral species of *Chlorophorus* must have reached the Ogasawara Islands by aerial dispersal from somewhere in or near the Ryukyus.

It is difficult to determine whether the four Ogasawara species have been derived from a single ancestor or from two or more immigrants, but if the latter was the case, they may have become more diverse. I am therefore rather inclined to regard them as

Table 1. List of the *Chlorophorus* species of the *yayeyamensis* group and their distribution.

|                                            |                                                                                                                                                                                                                                                                   |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>C. yayeyamensis</i> KANO                |                                                                                                                                                                                                                                                                   |
| Distribution:                              | Taiwan, Haderuma-jima, Iriomote-jima, Ishigaki-jima, Miyako-jima, Okinawa-hontô, Toku-no-shima, Amami-Ôshima, Takara-jima, Naka-no-shima, Kuchi-no-shima, Kuchinoerabu-shima, Tane-ga-shima, Tori-shima, Hachijô-jima, Kyushu, Shikoku, Honshu (Yamaguchi Pref.). |
| <i>C. boninensis</i> KANO                  |                                                                                                                                                                                                                                                                   |
| Distribution:                              | Ogasawara Islands (Chichi-jima, Haha-jima).                                                                                                                                                                                                                       |
| <i>C. kobayashii</i> KOMIYA                |                                                                                                                                                                                                                                                                   |
| Distribution:                              | Ogasawara Islands (Chichi-jima, Haha-jima, Higashi-jima).                                                                                                                                                                                                         |
| <i>C. kusamai</i> M. SATÔ                  |                                                                                                                                                                                                                                                                   |
| Distribution:                              | Ogasawara Islands (Muko-jima).                                                                                                                                                                                                                                    |
| <i>C. minamiwo</i> M. SATÔ et N. OHBAYASHI |                                                                                                                                                                                                                                                                   |
| Distribution:                              | Ogasawara Islands (Minami-iwôjima).                                                                                                                                                                                                                               |

being monophyletic, becoming differentiated by isolation of the islands on which settled down the ancestors of the respective species.

### 要 約

佐藤正孝：小笠原諸島群島産のクロトラカミキリ属の1新種とその由来。—— 群島で得られたクロトラカミキリの1種は、小笠原諸島からこれまでに知られている近似の3種のいずれとも異なる新種であることがわかったので、*Chlorophorus kusamai*と命名してここに記載した。あわせて、近似種を含めたこの属のカミキリムシ類が、小笠原諸島での分布形成にいたった背景について若干の考察を加えた。

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