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Leaf Beetles (Coleoptera, Chrysomelidae) New to Gaja-jima Is., the Tokara Isls., North Ryukyus, Southwestern Japan

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Gaja-jima Is. in the Tokara Isls., North Ryukyus, southwestern Japan is located in about 28 km west of Nakanoshima Is. This is a small volcanic island (4.5 km^2) with a maximum altitude of 495 m and surrounded by the sea cliffs ranging from 50 to100 m in height (Naruo, 1995). The insect fauna of this island has never been satisfactorily investigated because this island became uninhabited in 1970 (Matsumura, 1995). To date, 54 chrysomelid beetles have been known from the Tokara Islands (Nakane & Kimoto,1961; Kimoto, 1980; Takizawa, 2006–2014; Isowa, 2012; Suenaga *et al*., 2017). With regards to the coleopteran fauna, there have been reports on the Scarabaeoidea, Cerambycidae, and Erotylidae (Languriinae) from Gaja-jima Is., but nothing has been known about the chrysomelid fauna of this island until now (Matsushita, 1999; Hosoya, 2011; Toki & Hosoya, 2012; Hosoya *et al*., 2013 a, b).

In the summer of 2010 and 2011, T. Hosoya (TH) and W. Toki (WT) conducted field surveys over twice for beetle fauna of Gaja-jima Is. and collected some chrysomelids which were later identified into three species by H. Shigetoh (HS) and H. Yoshitake. In this paper, we record the three chrysomelid species in two subfamilies. These specimens are preserved in the Institute for Agro-Environmental Sciences, NARO, Tsukuba (NIAES). All species recorded herein are new to the fauna of Gaja-jima Is.

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Figs. 1–3. Leaf beetles from Gaja-jima Is., the Tokara Isls, North Ryukyus, southwestern Japan. —— 1, *Acrothinium gaschkevitchii tokaraense*; 2, *Psylliodes brettinghami*; 3, *Aphthona* sp.

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Family **Chrysomelidae** Latreille, 1802

Subfamily **Eumolpinae** Hope, 1840

1. ***Acrothinium gaschkevitchii tokaraense*** Nakane, 1956

[Japanese name: Akagane-saru-hamushi]

(Fig. 1)

Specimen examined. 1 ex., Kyû-shûraku, Gaja-jima Is., 13.VII.2011, W. Toki leg.

Distribution. Japan: the Tokara Isls. (Nakanoshima Is. and Kuchinoshima Is.; Gaja-jima Is. – new record).

Subfamily **Alticinae** Newman, 1835

2. ***Psylliodes brettinghami*** Baly, 1862

[Japanese name: Ruri-nagasune-tobi-hamushi]

(Fig. 2)

Specimen examined. 1 ex., near Lighthouse, Gaja-jima Is., 26.VII.2010, T. Hosoya leg.

Distribution. Japan: Honshu, Sado Is., the Ogasawara Isls. (Chichi-jima Is., Haha-jima Is. and Iwo-jima Is.), Shikoku, Kyushu, the Tokara Isls. (Nakanoshima Is.; Gaja-jima Is. – new record) and Amami Isls. (Amami-Ôshima Is.); Oceania, China, Taiwan, Vietnam, Burma, Nepal, India, the Philippines, Indonesia, and Australia.

3. ***Aphthona*** sp.

(Fig. 3)

Specimen examined. 1 ex., near Lighthouse, Gaja-jima Is., 13.VII.2011, T. Hosoya leg.

Notes. The examined specimen was identified as a *Aphthona* species based on the form of frontal tubercle and pronotum with no distinct transverse impressions. Presently, the genus *Aphthona* contains six known species from the Ryukyus (Takizawa, 2012). The specimen in question seems not to belong to any other congeners from the Ryukyus, but we could not identify it to species due to the bad condition.

References

Hosoya, T., 2011. Biogeography of insects in the Tokara Islands. *The Nature & Insects*, *Tokyo*, **46** (8): 5–8. (In Japanese, with English title.)

Hosoya, T., M. Tanahashi & Y. Murai, 2013 a. Records of four Scarabaeoidea beetles (Coleoptera, Scarabaeidae and Lucanidae) from the uninhabited island, Gaja Island in the Tokara Islands, the Ryukyu Archipelago, Japan. *Kogane*, *Yachimata*,

(14): 125–127.

Hosoya, T., M. Tanahashi, W. Toki & M. Katayama, 2013 b. Record of Scarabaeoidea fauna (Coleoptera, Scarabaeidae and Lucanidae) on the uninhabited island, Gaja Island in the Tokara Islands, the Ryukyu Archipelago, Japan. *Kogane*, *Yachimata*, (14): 133–142.

Isowa, R., 2012. Geographical distribution of genus *Pagria* in Japan (Chrysomelidae, Eumolpinae). *Sayabane*, *Tokyo*, (n. ser.), (7): 13–17. (In Japanese, with English title.)

Kimoto, S., 1980. Catalogs of the Chrysomelidae of Tokara Is., Kikaigashima and Okierabujima in the Ryukyu Archipelago. *Kurume University Journal*, *Kurume*, **29**: 153–159.

Nakane, T., & S. Kimoto, 1961. Entomological results from the scientific survey of the Tokara Islands. Coleoptera: Chrysomelidae. *Bulletin of the Osaka Museum of Natural History*, *Osaka*, (13): 71–79.

Matsumura, M., 1995. [Government of Toshima.] Pp. 1115–1285. *In* Editing Committee of Toshima-sonshi (ed.), [Toshima-sonshi]. 1758 pp. Toshima-mura, Japan. (In Japanese.)

Matsushita, T., 1999. [Report on insect collecting trip to an uninhabited island (Gaja-jima Is., the Tokara Isls).] *Gekkan-Mushi*, *Tokyo*, (340): 86–97. (In Japanese.)

Naruo, E., 1995. [Location of Toshima.] Pp. 1–55. *In* Editing Committee of Toshima-sonshi (ed.), [Toshima-sonshi]. 1758 pp. Toshima-mura, Japan. (In Japanese.)

Suenaga, H., C.-F. Lee & J. Bezdek, 2017. Two new species of the genus *Menippus* Clark (Coleoptera, Chrysomelidae) from islands of Ryukyu-rettô, Japan, and redescription of *M. issikii* (Chûô). *Entomologische Blätter und Coleoptera*, **113**; 231–240.

Takizawa, H., 2006. [Biological notes on Japanese species of the family Chrysomelidae (1).] *Kanagawa-Chûhô*, *Odawara*, (156): 1–8. (In Japanese.)

Takizawa, H., 2007. [Biological notes on Japanese species of the family Chrysomelidae (2).] *Kanagawa-Chûhô*, *Odawara*, (157): 17–26. (In Japanese.)

Takizawa, H., 2007. [Biological notes on Japanese species of the family Chrysomelidae (3).] *Kanagawa-Chûhô*, *Odawara*, (158): 37–48. (In Japanese.)

Takizawa, H., 2009. [Biological notes on Japanese species of the family Chrysomelidae (4).] *Kanagawa-Chûhô*, *Odawara*, (168): 1–11. (In Japanese.)

Takizawa, H., 2011. [Biological notes on Japanese species of the family Chrysomelidae (5).] *Kanagawa-Chûhô*, *Odawara*, (173): 35–51. (In Japanese.)

Takizawa, H., 2012. [Biological notes on Japanese species of the family Chrysomelidae (6).] *Kanagawa-Chûhô*, *Odawara*, (177): 33–51. (In Japanese.)

Takizawa, H., 2013. [Biological notes on Japanese species of the family Chrysomelidae (7).] *Kanagawa-Chûhô*, *Odawara*, (179): 17–33. (In Japanese.)

Takizawa, H., 2014. [Biological notes on Japanese species of the family Chrysomelidae (8).] *Kanagawa-Chûhô*, *Odawara*, (182): 37–46. (In Japanese.)

Toki, W., & T. Hosoya, 2012. New host plant and southernmost records of asymmetric lizard beetle *Doubledaya bucculenta* Lewis (Coleoptera: Erotylidae: Languriinae). *Elytra*, *Tokyo*, (n. ser.), **1**: 253–254.

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