Discovery of Nine Species of Bees from the Southwestern Islands, Japan (Hymenoptera, Apoidea)

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Abstract Distribution of 9 species of bees, Coelioxys ducalis SMITH, *Megachile disjunctiformis* COCKERELL, *Ceratina iwatai* YASUMATSU, *C. dentipes* FRIESE, *Nomada* sp., *Lasioglossum naitoi* EMBER et MAETA, *L.* sp. Y-1, *L.* sp. Y-2, and *L.* sp. O-1 are newly or additionally recorded from subtropical southwestern islands, Japan.

Key words : Distribution record; *Coelioxys*; *Megachile*; *Ceratina*; *Nomada*; *Lasioglossum*; Southwestern Is.

The bee fauna and distribution of each bee species were well studied in Japanese subtropical southwestern islands from the Tokara to Yaeyama Islands (approx. lat. 30°–24°N) by IKUDOME (2000). Up to the present, a total of 64 species of bees, belonging to the 17 genera and 5 families were recorded from the above mentioned areas (MAETA *et al*., 1998). Through our studies on the partnership between bees and their flower resource plants, we added the following 9 species of bees to the bee fauna so far has been known.

The name of the collectors is abbreviated as follows: Y. M.: Y. MAETA; R. M.: R. MIYANAGA; Md. A. H.: Md. A. HANNAN. The specimens are preserved in Laboratory of Insect Management, Faculty of Life and Environmental Science, Shimane University.

1. *Coelioxys* (*Torridapis*) *ducalis* SMITH

IWATA (1939) briefly mentioned that Taiwanese *C. ducalis* was a cleptoparasite of *Megachile monticola* SMITH. The host species commonly occurs in southwestern archipelago, Japan. We have been trying to collect *C. ducalis* in these areas, since 1982. Our first discovery was from Ishigaki Is. in 1994. In this finding, an abandoned nest of *Xylocopa albinotus* MATSUMURA, which was superseded by *M. monticola,* involved a dead female adult of the cleptoparasite (MAETA & HIASA, 1994; MAETA *et al*., 1996). The condition of specimen was poor, however, there was no difficulty to identify the species. The second discovery was made on September 16, 2003 by Y. M. in Iriomote Is., locating 20 km westward from Ishigaki Is. A male of *C. ducalis* (Fig. 1) was captured on a flower of *Bidens pilosa* var. *radiata* SCHULTZ-BIP. during the sampling of pollinators of the plant. *Coelioxys ducalis* was recorded from India (Dharamsala) (GUPTA, 1993), Indonesia (Sulawesi) (MICHENER, 2000), and Japanese southern archipelago, suggesting a wide range of distribution. From the previous studies, only the female adult is

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