Records of *Latrodectus geometricus* (Araneae: Theridiidae) from Japan

Hirotugu ONO

小野展嗣：日本におけるハイイロゴケグモ（クモ目：ヒメゴ科）の記録

Abstract The brown widow spider, *Latrodectus geometricus* C. L. Koch, 1841, is recorded from Japan for the first time. Some females with egg sacs and numerous spiderlings were collected in the winter season in an urban park adjoining the container wharf at the port of Yokohama. According to the information received from colleagues by personal communication, spiders of this species were also found at the ports of Tokyo, Nagoya, Osaka and Okinawa, and some other dominant trade ports in Japan.

*Latrodectus* spiders commonly known to be poisonous occasionally bring serious problems of the public health in the world; for instance, *Latrodectus tredecimguttatus* Rossi, 1790, in southern Europe and Africa bordering the Mediterranean, “*L. mactans*” (*L. hesperus* Chamberlin et Ivie, 1935, and *L. variolus* Walckenaer, 1937) in North and Central America, *L. curacaviensis* (Müller, 1776) in South America, and *L. hasseltii* Thorell, 1870, in Australia (Maretić, 1987; Maretić & Lebez, 1979; Thorp & Weldon, 1945; Gertsch, 1979; Sutherland, 1989; etc.).

Though the amount of trade has increased year by year, the policy for naturalization of animals was not the best in Japan. *Latrodectus* spiders were not known in Japan with the exception of “*Latrodectus hasseltii*” recorded from Yaeyama Islands (Ikehara & Shimojana, 1975; Yaginuma, 1986). A case of serious illness caused by the spider was also reported from Iriomotejima Island (Ori, 1973). However, these records were based on a misidentification; having examined some specimens identified with “*L. hasseltii*” collected in Ishigakijima Island by courtesy of Dr. C. Okuma, I recognized that the spiders, in fact, belong to another species presumably a native of East Asia (ONO, in preparation).

On the other hand, in the autumn of this year, occurring of the true red back spider, *Latrodectus hasseltii*, was recognized in Japan. A juvenile female specimen was collected at Takaishi-shi, Osaka on the 11th September. That was the start of a hygienic and arachnological problem of *Latrodectus* spiders in Japan. Many red back spiders were found in the urban areas of Takaishi-shi, Sakai-shi and Kishiwada-shi in Osaka Prefecture and Yokkaichi-shi in Mie Prefecture. The spider was identified by Prof. Y. Nishikawa with “*Latrodectus mactans hasseltii*” and the
discovery was reported and published under the same name (NISHIKAWA, 1995 a–d; NISHIKAWA & KANAZAWA, 1995). A kind of arachnophobia and an overcare reaction of the Japanese journalism and broadcasting partly arose from this treatment. All the data of the species, *Latrodectus mactans*, sensu LEVI (1959) were considered for the Japanese case. His taxonomic treatment was revised by himself (LEVI, 1983).

Through a notification by the Ministry of Health and Welfare, researches on *Latrodectus* spiders were made at each quarantine station in Japan. In one of the control areas of Yokohama Office of the Ministry, namely in an urban park adjoining the container wharf of the port of Yokohama, two females of a *Latrodectus* species were collected by the staff on the 27th November. These were identified by Mr. H. IKEDA, arachnologist, with *Latrodectus geometricus* (C. L. KOCH, 1841). Following his advice I made a half day research at the same park and obtained several specimens of the spider occurring there. These records are reported in the following lines.

Before going further I wish to express my cordial thanks to Mr. Hiroyoshi IKEDA, Kanagawa, for giving me the opportunity to study this interesting spider, to Prof. Yoshiaki NISHIKAWA, Osaka, for his invaluable advice, and to Mr. Akio TANIKAWA, Kanagawa, for critically reading the manuscript of the present short paper. Many thanks are also due to Dr. Rokuro KANO, Tokyo, Mr. Kiyoto OGATA, Aichi, Dr. Chiyoko OKUMA, Fukuoka, and Mr. Eiichi SHINKAI, Tokyo, for their various aid.

*Latrodectus geometricus* (C. L. KOCH, 1841)

(Figs. 1–2)

*Latrodectus geometricus* C.L. KOCH, 1841, p. 117 (type area: Colombia, South America).

For the literatures see BONNET (1957) and further catalogues. Life history of the spider was studied by HEERES (1991, 1993) in South Africa.

**Specimens examined.** 6 ♀ 1 juv. ♂, 3 egg sacs with numerous juveniles, about 50 new and old egg sacs, the park of Symbolic Tower, Honmoku, Yokohama Pref., Japan, 9–XII–1995, H. ONO leg. (the specimens are preserved in the arachnid collection of the Department of Zoology, National Science Museum, Tokyo).

**Notes.** The spiders were collected from underside of benches put in a corner in the park adjoining the place for containers of transport companies (Fig. 3). Eighteen webs from 7 benches (Fig. 4) were observed. Of these, 6 were respectively occupied by a female with egg sacs; in 9 webs, only old egg sacs were found; remaining 3 webs were vacant. The temperature under a bench was 11°C at 15:00. According to the condition of the spiders and their webs, this spider seems to be able to overwinter in this place.

The colour of abdomen of the females was variable from light beige to black.

After preparation of the manuscript of this paper I was informed by colleagues (personal communication) further records of this species from the ports of Tokyo (SHINKAI), Nagoya (OGATA), Osaka and Urasoe, Okinawa Island (NISHIKAWA), and some other dominant trade ports in Japan. While *Latrodectus hasseltii* was found only in Osaka and Yokkaichi, *L. geometricus* seems to be widely distributed in southern Japan.
Latrodectus geometricus from Japan

Fig. 1–4. 1–2, Latrodectus geometricus, female from Yokohama, Japan.—1, Dorsal view; 2, lateral view (scale bar: 5 mm). 3, Containers of the Honmoku Wharf, Yokohama. 4, A view of the urban park adjoining the wharf, habitat of Latrodectus geometricus.

References


