

New Records of *Zatypota albicoxa* (Hymenoptera, Ichneumonidae) and its Potential Host Spider *Parasteatoda tepidariorum* (Araneae, Theridiidae) from Vietnam

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Abstract *Zatypota albicoxa* and also its potential host spider, *Parasteatoda tepidariorum*, are recorded from northern Vietnam for the first time. This may be the southernmost record of the *tepidariorum* population of *Z. albicoxa*.

Zatypota albicoxa (WALKER, 1874) (Pimplinae, Ephialtini, *Polysphincta* group) is a widespread species but distributed only in Arctogaeian realm; Europe, north India, Oriental China, Far East Russia, Japan (YU *et al.*, 2012), and Java, Indonesia (TAKASUKA *et al.*, 2011). This wasp belongs to the *Polysphincta* genus group whose members are exclusively koinobiont ectoparasitoids of spiders with high host-specificity. For the present, *Z. albicoxa* utilizes only *Parasteatoda* ARCHER 1946 spiders (Araneae, Theridiidae) as hosts whilst it ranges multiple species depending on its distribution. European population utilizes commonly *P. lunata* (CLERCK, 1975) (NIELSEN, 1923; FITTON, 1987, 1988; BORDONI, 2003) and rarely *P. simulans* (THORELL, 1875) in Britain (HUDSON, 1985; FITTON *et al.*, 1988) (***lunata* population**). Chinese population utilized *P. tepidariorum* (KOCH, 1841) (HE *et al.*, 1996) and Japanese population utilizes commonly *P. tepidariorum* (UCHIDA, 1940; IWATA 1942; TAKASUKA, *et al.* 2009; MATSUMOTO & TAKASUKA, 2010) and rarely *P. tabulata* (LEVI, 1980) and *P. oculiprominens* (SAITO, 1939) (MATSUMOTO & TAKASUKA, 2010) (***tepidariorum* population**). Indonesian population utilizes *P. merapiensis* YOSHIDA & TAKASUKA, 2011 (TAKASUKA *et al.*, 2011) (***merapiensis* population**). Host spiders of Indian and Far East Russian populations have been unknown.

The system which has different host spiders depending on the geographical region suggests that *Z. albicoxa* has been spread from origin to another with its host spider shifted. In the system, distribution record of the wasp and its host spider in intermediate area between two host-dependent populations is important to detect the point where the host spider was shifted.

Zatypota albicoxa (Figs. 1, 2) was newly collected in Tram Ton (1,926 m), Lao Cai Prov., northern Vietnam where potential host, *P. tepidariorum*, exist sympatrically. Several empty cocoons from which *Z. albicoxa* seemingly emerged were hung in the web

of *P. tepidariorum* (Fig. 3). Although no larva of *Z. albicoxa* attaching to *P. tepidariorum* was collected, *P. tepidariorum* is thus thought to be host of *Z. albicoxa* there. This record indicates that northern Vietnamese population of *Z. albicoxa* next to Chinese one (Yunnan), belongs to the *tepidariorum* population, meaning the southernmost record of the population. Further investigations of the wasp and its host spiders in Indochina Pen., Malay Pen. and Sumatra Is., lying between the *tepidariorum* and *merapiensis* populations are needed.

Distribution record of *P. tepidariorum* from Vietnam is unclear. Although PLATNICK (2012) describes the spider as cosmopolitan, an investigation of specimens records of spider in Vietnam covering 1837 to 2011 found no record of *P. tepidariorum* (ONO et al., 2012). We thus record *P. tepidariorum* with its parasitoid, *Z. albicoxa*, from Vietnam for the first time.

***Zatypota albicoxa* (WALKER, 1874)**

(Figs. 1–2)

Specimens examined. 1♀1♂, N22°20', E103°46', Tram Ton (1,900 m alt.), Lao Cai Prov., Vietnam, 23 Apr. 2012, T. MITA leg.



Figs. 1–2. Adult and habitats of *Zatypota albicoxa*. — 1, Female; 2, male; 3, a probable cocoon of *Z. albicoxa* hanging from a web of *P. tepidariorum* under eaves (photo by H. YOSHITOMI); 4, location where *P. tepidariorum* and probable cocoons of *Z. albicoxa* were found (photo by H. YOSHITOMI).

Distribution records. Western Palearctic, Far East Russia, Sakhalin, Kuril Isls., Japan, China, India, Vietnam (**new record**), Indonesia.

Potential host in Vietnam. *Parasteatoda tepidariorum*.

***Parasteatoda tepidariorum* (C. L. KOCH, 1841) (Theridiidae)**

Specimens examined. 9♀, 5♀ juv., Tram Ton Sapa, Lao Cai Prov., Vietnam, N22 21.182 E103 46.490, ca 1,926 m, 22–23, 26, 29. VI. 2012, H. YOSHITOMI leg.

Remarks. New record from Vietnam. They were found under the eaves of an old residence (Fig. 4). This species is thought to be utilized by *Zatypota albicoxa* also in Vietnam.

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