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**New records and distribution update
of *Polistes (Gyrostoma) wattii* Cameron, 1900
(Hymenoptera: Vespidae: Polistinae)**

**Новые данные о находках и распространении
Polistes (Gyrostoma) wattii Cameron, 1900
(Hymenoptera: Vespidae: Polistinae)**

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Key words: Hymenoptera, Vespidae, *Polistes wattii*, first records, new records, distribution.

Ключевые слова: Hymenoptera, Vespidae, *Polistes wattii*, первые указания, новые находки, распространение.

Abstract. The distribution of *Polistes (Gyrostoma) wattii* Cameron, 1900 is summarized and new occurrence records are given through collected or photographed material. The known distributional range of the species is here expanded westward and the first records from Israel, Uzbekistan, Samangan (Afghanistan) and Assam (India) are provided. A map of the countries for which *P. wattii* is reliably recorded is quoted. Another one about the known Indian states of occurrence of the species is provided, emphasizing different faunistic knowledge between the north-western and north-eastern parts of this country. Further research is certainly needed to better define the distribution of *P. wattii* in Central Asia and in India.

Резюме. Суммированы данные по распространению осы *Polistes (Gyrostoma) wattii* Cameron, 1900, представлены новые находки по коллекционным или сфотографированным экземплярам. Ареал вида значительно шире в западной части, чем считалось ранее. Вид впервые указан для Израиля (Эйлат), Узбекистана (Наманган), регионов Саманган в Афганистане и Ассам в Индии. Дана карта стран, в которых *P. wattii* зарегистрирован достоверно. Представлено распространение этой осы по штатам Индии, анализируются различия в полноте фаунистических данных между северо-западными и северо-восточными частями страны. Для более точного представления об ареале *P. wattii* в Центральной Азии и Индии необходимы дополнительные исследования.

Introduction

Polistes (Gyrostoma) wattii Cameron, 1900 is a temperate species of paper wasp nesting in cavities of trees or human building [Temreshev, 2018]. It is widespread in almost all central south Asia: Das and Gupta [1989] and Carpenter [1996] synthesized the faunistic knowledge of this wasp reporting overall the following countries in which it was known: Saudi Arabia, United Arab Emirates,



Fig. 1. Countries for which *Polistes wattii* is reliably recorded. Question mark is due to the lack of precise localities in China, for which only a generic “S China” is reported. Arrow shows Mauritius. Circles mark the countries added by this work.

Рис. 1. Страны, в которых *Polistes wattii* зарегистрирован достоверно. Вопросительный знак связан с отсутствием точных местонахождений в Китае (в литературе указан «Южный Китай»). Стрелкой показан Маврикий. Кругами отмечены страны, добавленные в этой работе.

Oman, Iraq, Iran, Afghanistan, Pakistan, India, China, and Mauritius (herein probably imported) (Fig. 1). Subsequently, other countries have been added to those in which this



Fig. 2. *Polistes wattii* from Aybak District, Afghanistan (photo by Nasser Halaweih).

Рис. 2. *Polistes wattii*, Айбак, Афганистан (фото Насера Халавеи).

species was known: Kazakhstan [Kazenas, 2014; Temreshev, 2018], Tajikistan [Castro, Dvorak, 2010; Dubatolov, 2019], and Turkmenistan [Dubatolov, 2019] (Fig. 1).

Most of the data come from Pakistan and India. In the first country, *P. wattii* is recorded in all provinces except Balochistan [Das, Gupta, 1984, 1989; Gusenleitner, 2007; Mahmood et al., 2012; Siddiqui et al., 2015; Faiz et al., 2016; Habib et al., 2017; Rafi et al., 2017; A.K. Khan et al., 2017; K. Khan et al., 2018; M.T. Khan et al., 2018], while in India the known distribution is more fragmented. After Das and Gupta [1989] and Carpenter [1996], who summarized the distribution of the species in India in many states (Himachal Pradesh, Punjab, Delhi, Uttar Pradesh, West Bengal, Meghalaya, Gujarat, Orissa), other states (Bihar, Chhattisgarh, Haryana, Jammu and Kashmir, Jharkhand, Madhya Pradesh, Rajasthan, Uttarakhand) are overall reported in Girish Kumar [2010], Tan et al. [2014], and Girish Kumar and Sharma [2015].

The present work adds new records of *P. wattii*, also documenting new countries or regions for this species, and updates its distribution.

Material and methods

The examined material consists of collected or photographed specimens from Natural History Museum of the University of Florence, Italy (MZUF) and iNaturalist (IN, www.inaturalist.org). For each site, the following information is provided: number of specimens (specifying sex when possible), locality, geographical coordinates, date, collector or photographer, repository or source. The uncertainty (un) of data is indicated according to the point-radius method [Wieczorek et al., 2004].

Each record was identified or confirmed by the author.

Polistes (Gyrostoma) wattii Cameron, 1900

Material. Israel: 1 specimen, Southern District, Eilat, 29.55913°N / 34.947639°E (un = 31 m), 10.03.2018 (photo by Eitan-Shmuel Palti, IN).

United Arab Emirates: 1♀, Dubai Emirate, Dubai, Emirates Towers, 25.215636°N / 55.281337°E, 24.04.2015 (photo by Tamsin Carlisle, IN); 3 specimens, same locality, Mushrif Park, 25.21421°N / 55.448165°E (un = 202 m) (photos by Tamsin Carlisle, IN); 1 specimen, Sharjah Emirate, Arabian Wildlife Centre, 25.280124°N / 55.695489°E, 10.10.2015 (photo by Tamsin Carlisle, IN); 1♀, Sharjah Emirate, Al Bataeh, 25.281851°N / 55.69566°E, 16.04.2019 (photo by John Pereira, IN); 1♀, Sharjah Emirate, 25.346357°N / 56.280569°E (un = 8 m), 25.04.2019 (photo by John Pereira, IN); 1♀, Fujairah Emirate, Al Hayl, 25.082886°N / 56.224325°E, 26.11.2016 (photo by Tamsin Carlisle, IN); 1♀, Fujairah emirate, 24.986111°N / 56.235833°E, 20.03.2019 (photo by John Pereira, IN); 1 specimen, Fujairah Emirate, 25.35247°N / 56.261187°E (un = 4 m), 7.05.2019 (photo by "brendanwj", IN).

Oman: 1♀, Ad Dakhiliyah Governorate, Saiq Plateau, Jebel Akhdar, 23.1°N / 57.4°E (un = 7.98 km), 12.04.2013 (photo by Tamsin Carlisle, IN); 1♀, Ad Dakhiliyah Governorate, Nizwa, 23.112721°N / 57.476186°E (un = 6.16 km), 9.01.2019 (photo by Arno Beidts, IN); 1 specimen, Muscat Governorate, Muscat Province, Sultan Qaboos Street, 23.586666°N / 58.391388°E, 11.11.2017 (photo by Matt Rempel, IN); 1 specimen, Muscat Governorate, Muttrah Province, 23.622347°N / 58.474667°E (un = 201 m), 15.12.2018 (photo by Arno Beidts, IN).

Afghanistan: 1♀ (Fig. 2), Samangan Province, Aybak District, 36.315551°N / 67.964286°E (un = 10.29 km), 15.10.2016 (photo by Nasser Halaweih, IN).

Uzbekistan: 1♀, Namangan Region, Namangan District, Namangan, 40.991236°N / 71.605797°E (un = 31 m), 5.10.2015 (photo by Vyacheslav Yusupov, IN); 2♀ on the nest, Namangan Region, Turakurgan District, 40.883135°N / 71.453325°E (un = 244 m), 29.05.2017 (photo by Vyacheslav Yusupov, IN); 1♀, same locality, 30.05.2017 (photo by Vyacheslav Yusupov, IN).

India: 1♀ (MZUF), National Capital Territory of Delhi, New Delhi [in original label the name of the state Haryana is added in brackets, but it is apparently a mistake], 25.09.1979, (leg. M.L. Azzaroli); 10♀ (MZUF), Punjab State, Chandigarh, 10.1979 (Punjab University leg.); 1♀ (MZUF), Assam State, Barpeta District, Barpeta road, 23–24.06.1995 (leg. L. Bartolozzi, K. Werner); colony in the nest, Madhya Pradesh State, Satna District, 24.26936°N / 80.756651°E (un = 2.63 km), 25.11.2015 (photo by Chief RedEarth, IN); 1♀, Rajasthan State, Jhunjhunun District, Mandawa, 28.055319°N / 75.150589°E (un = 562 m), 4.10.2017 (photo by Lorenzo Zambetti, IN); 2 specimens, same locality, 28.055471°N / 75.150932°E (un = 697 m), 4.10.2017 (photo by Lorenzo Zambetti, IN); 1 specimen, Rajasthan State, Jodhpur District, Gulab Sagar, 26.296483°N / 73.023743°E (un = 9 m) (photo by Julie, IN).

Discussion

New records of *P. wattii* are provided, adding some particularly interesting data.

The record from Eilat is the first one for Israel. So far Iraq and Saudi Arabia were the most western states in which this species was known; therefore its known distributional range is here expanded westward.

Records from the Namangan Region are the first ones from Uzbekistan. In Afghanistan, although this country is often quoted among ones in which *P. wattii* is present [Carpenter, 1996; Schmid-Egger et al., 2017] and in Dunford et al. [2014] it is reported "very common near man-made structures located on military installations", exact localities are listed in literature only for Herat, Nangarhar, and Kabul provinces [Blüthgen, 1961 (sub *Polistes* aff. *Hebraeus* (F.), but identified as *P. wattii* by Gusenleitner [1972]); Gusenleitner, 1972; Tan et al., 2014]; Gusenleitner [1972] supposed that records of *P. olivaceus* (DeGeer, 1773) reported by Giordani Soika [1962] in other regions of Afghanistan are attributable to *P. wattii*, but he could not confirm it. Record from Aybak is the first one for Samangan Province. Further researches is certainly needed to better define the distribution of this species in Central Asia.

The first record from Assam State is given through specimen collected in Barpeta. Faunistic knowledge about

P. wattii in India is still not satisfactory: this species is known in Northern India, but, whilst the western part of subcontinent was recently well investigated [Girish Kumar, 2010; Tan et al., 2014; Girish Kumar, Sharma, 2015], few records come from eastern part, where so far *P. wattii* was known only for West Bengala and Meghalaya [Das, Gupta, 1989; Carpenter, 1996]. Figure 3 summarizes the faunistic distribution for India, emphasizing different knowledge between the north-western and north-eastern parts. Further research is needed to understand how this difference is real or it results from lack of samples.

Although many papers cite the species occurring in China [Das, Gupta, 1989; Carpenter, 1996; Rafi et al., 2017] no exact localities are reported in literature. Also Tan et al. [2014] in their work about the subgenus *Gyrostoma* Kirby, 1828 in China wrote “No specimens from China were available” and mentioned *P. wattii* among Chinese wasp fauna because recorded from China by Das and Gupta [1984, 1989] and Carpenter [1996]. The only reference giving a more precise indication is one by Schmid-Egger et al. [2017] who indicated South China.

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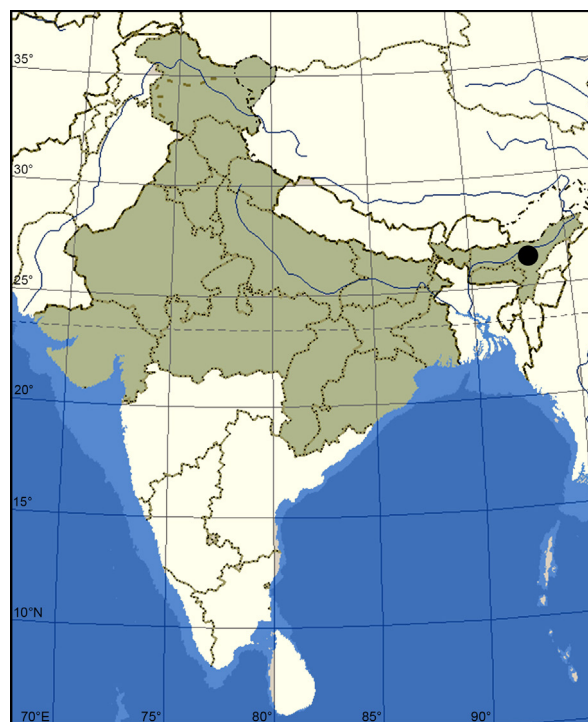


Fig. 3. Map of the known Indian states of occurrence of *Polistes wattii*. Circle marks the state added with the present work.

Рис. 3. Карта распространения *Polistes wattii* в Индии (по штатам). Кругом отмечен штат, добавленный в этой работе.

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