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A REDESCRIPTION AND NEW DATA ON THE DISTRIBUTION OF *TETRAMESA PHRAGMITIS* (HYMENOPTERA, EURYTOMIDAE)

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A Redescription and New Data on the Distribution of *Tetramesa phragmitis* (Hymenoptera, Eurytomidae). Zerova, M. D., Fursov, V. N. — Redescription of *T. phragmitis* (Erdös) based on type material is given, along with new data on its distribution in Ukraine, Moldova, Russia, Israel, Tajikistan and Japan.

Key words: *Tetramesa*, Eurytomidae, distribution, Ukraine, Moldova, Russia, Israel, Tajikistan, Japan.

Introduction

The chalcid wasp *Tetramesa phragmitis* (Erdös, 1952) was originally described from Hungary. Erdös considered this and other species *T. phyllostachitis* (Gahan) members of the genus *Gahaniola* Erdös, 1952. The genus *Gahaniola* was segregated based on the presence of 6 flagellomeres and 2-segmented club of the antenna in females. However, Claridge (1961) noted that since the 6 flagellomeres of females is characteristic for many species of *Tetramesa*, it therefore cannot be used as the basis for a separate genus. At the same time Claridge (1961) said that he had not studied the type of *T. phragmitis*, but based on the original description and illustrations alone, he synonymized *Gahaniola* with *Tetramesa*. Later, while visiting Hungary, we managed to study original type material of species described by Erdös. It was compared with our material collected in Ukraine, and the identity and synonymy of *Gahaniola* to the genus *Tetramesa* was confirmed (Zerova, 1976, 1978; Thuróczy, 1992).

The genus *Tetramesa* includes 204 species (Noyes, 2015) of phytophagous wasps worldwide. Their larvae feed inside plants of different families (Zerova, 1976, 1978).

The aim of this study is to redescribe *T. phragmitis*, based on both type, and a compared non-type material, and provide new data on the distribution of *T. phragmitis*.

Material

Lectotype and paralectotypes of *T. phragmitis* from the collection of Hungarian Natural History Museum (HNHM), Budapest, Hungary were examined. The extensive additional material (178 ♀, 66 ♂) of *T. phragmitis* from the collection of the Schmalhausen Institute of Zoology, Kyiv, Ukraine (SIZK) was examined. Ten specimens from Black Sea Reserve were donated for the collection of the Zoological Institute of Russian Academy of Sciences (St. Petersburg, Russia).

Results

This species is recorded here from many localities in Moldova, Ukraine, European part and Far East of Russia, Israel and Central Asia. Studied material reveals the variability of the species and significantly improves the original description of the species.

Tetramesa phragmitis (Erdős, 1952), fig. 1–8

References. Erdős, 1952: 117–121 (♀); 1955: 46 (♂) (*Gahaniola*). — Claridge, 1961: 83; Zerova, 1967: 29–37; 1976: 138; 1978: 120.

Material examined. Type. Lectotype ♀, HNHM N 4136, **Hungary**, designated by Szelenyi in 1973; 6 ♀ (paralectotypes): Hungary, 11.05.1950 (Erdős), on *Phragmites vulgaris* Lam. (HNHM).

Non-type. Ukraine: Kherson Region: Black Sea Reserve, Ivano-Rybalchansky, 17.05.1971 (Zerova), ex stems *Phragmites communis**, exit 25.06.1971, 8.09.1971, 3 ♀, 23 ♂ (Zerova); idem, Ivano-Rybalchansky, ex stems of reeds, 25.04.1974, 14 ♀, 1 ♂ (Zerova); idem, coll. 5.04.1971, exit 25.05.1971, 44 ♀, 8 ♂ (Zerova); idem, coll. 5.04.1971, exit 27.05.1971, 7 ♀, 1 ♂ (Zerova); idem, Solenoozerny, ex stems *Ph. communis*, coll. 25.06.1970, exit 3.09.1970, 18 ♂ (Zerova); idem, ex stems *Ph. communis*, coll. 24.04.1974, exit 20.05.1974, 27 ♀, 4 ♂ (Zerova); Black Sea Reserve, 23.06.1976, 1 ♀ (Kotenko); Odessa Region: Reserve “Dunayski Plavni”, 8.07.1997, 1 ♀ (Kotenko); Donetsk Region: Telmanove, Reserve “Khomutovsky Step”, *Ph. communis*, coll. 24.04.1975, exit 16.05.1975, 33 ♀, 3 ♂ (Zerova); **Moldova:** Chişinau, stems *Ph. communis*, 25.05.1972, 8 ♀, 1 ♂ (Chiauca); Văleni, marshes, 8.06.1967, 1 ♀ (Talitsky); Ciumai, 17.08.1967, 2 ♀ (Talitsky); **Russia:** Stavropol Territory: Kargalinskaya, 16.05.1972, 1 ♀ (Zerova); Astrakhan Region: Astrakhan branch VNPO, laboratory of biological control, ex *Ph. communis*, 11.06.1973, 1 ♀ (Zerova); Astrakhan Reserve, reed, coll. 7.05.1976, exit 16.07.1976, 8 ♀ (Zerova); 2 ♂, idem, coll. 7.05.1976, exit 16.07.1976 (Zerova); 1 ♀, idem, Domchansky uch., 7.05.1976 (Zerova); Primorsky (Maritime) Territory: Reserve “Kedrovaya Pad”, from stems *Ph. japonica*, coll. 1.05.1983, exit 6.07.1983, 20 ♀, 2 ♂ (Zerova); **Tajikistan:** Jilikul, at Vakhsh River, 13.06.1936, 1 ♀; idem, old dock, 22.06.1941, 1 ♂ (V. Gussakovsky); **Israel:** Nahal Alexander, environs Hagera, reared from *Phragmites* sp. at river of Reni, 13.07.2003, 1 ♀ (Simutnik); **Japan:** Kyushu, Ibaraki Pref., Tsukuba, Sakuragaoka, swept on grass & bamboo near forest, 26.04.1997, 3 ♀ (Fursov); Kyushu, Fukuoka Pref., c. Kamiishigama, 12.03.1999 (R. Matsumoto), ex *Ph. japonica*, 04.1999, 2 ♀, 2 ♂ (Kamijo et Matsumoto) (SIZK).

Description

Female. Length of body 2.7–4.3 mm. Body quite strong, with fairly wide mesosoma and large head. Colouration black with some bright yellow spots around clypeus, on cheeks, in some specimens around eyes, and sometimes on sides of mesothorax; tegula yellow. Yellow spots on pronotum, being typical for vast majority of *Tetramesa* species, are very variable in size, from small, at outer corner of pronotum, to very large, well spaced throughout lateral side of pronotum. Coxae mostly black, yellow at apex, rest of legs bright yellow. Fore wing with unclear yellow spot under marginal vein; veins yellow. Antenna brownish-yellow. Pubescence of body weakly noticeable.

Head dorsally much broader than pronotum, massive, round, no more than 1.5 × wider than long; POL 1.2–1.3 × OOL, temples very short, twice shorter than eye. Head, in frontal view, wider than its height, with ratio 52 : 40; frons visibly prominent; clypeus with very weakly convex outer edge, unclearly delimited; frontal cavity deep, unclearly bordered, with subparallel edges, tapering only slightly upwards. Eye glabrous; cheek as long as longitudinal diameter of eye.

Face sculpture distinct, reticulated-cellular, with very short and sparse pubescence. Head, in lateral view, with antenna attached slightly above middle of face; scape long, not convexed, reaching level of middle of eye; flagellum relatively short, with 6 flagellomeres; 1st flagellomere longest, 1.5 × as long as wide; 2–5th flagellomeres more or less transverse, almost quadrate; clava 2-segmented, its segments clearly separated, apical processes clearly expressed; width of clava not exceeding width of flagellum; anellus very small.

Mesosoma in lateral view not convex, elongated. Propodeum slightly inclined, in dorsal view almost as long as mesoscutum. Scutellum elongate-oval, 1.8 × as long as wide medially. Sculpture of pronotum and mesonotum small-cellular, with rare, scattered, small, round spots, more distinct on scutellum. Propodeum long, tapering towards top, with a distinct deep median furrow, peripherally coarsely rugose.

* *Ph. communis* is considered now a synonym of *Ph. australis* (see Cherepanov, 1981).

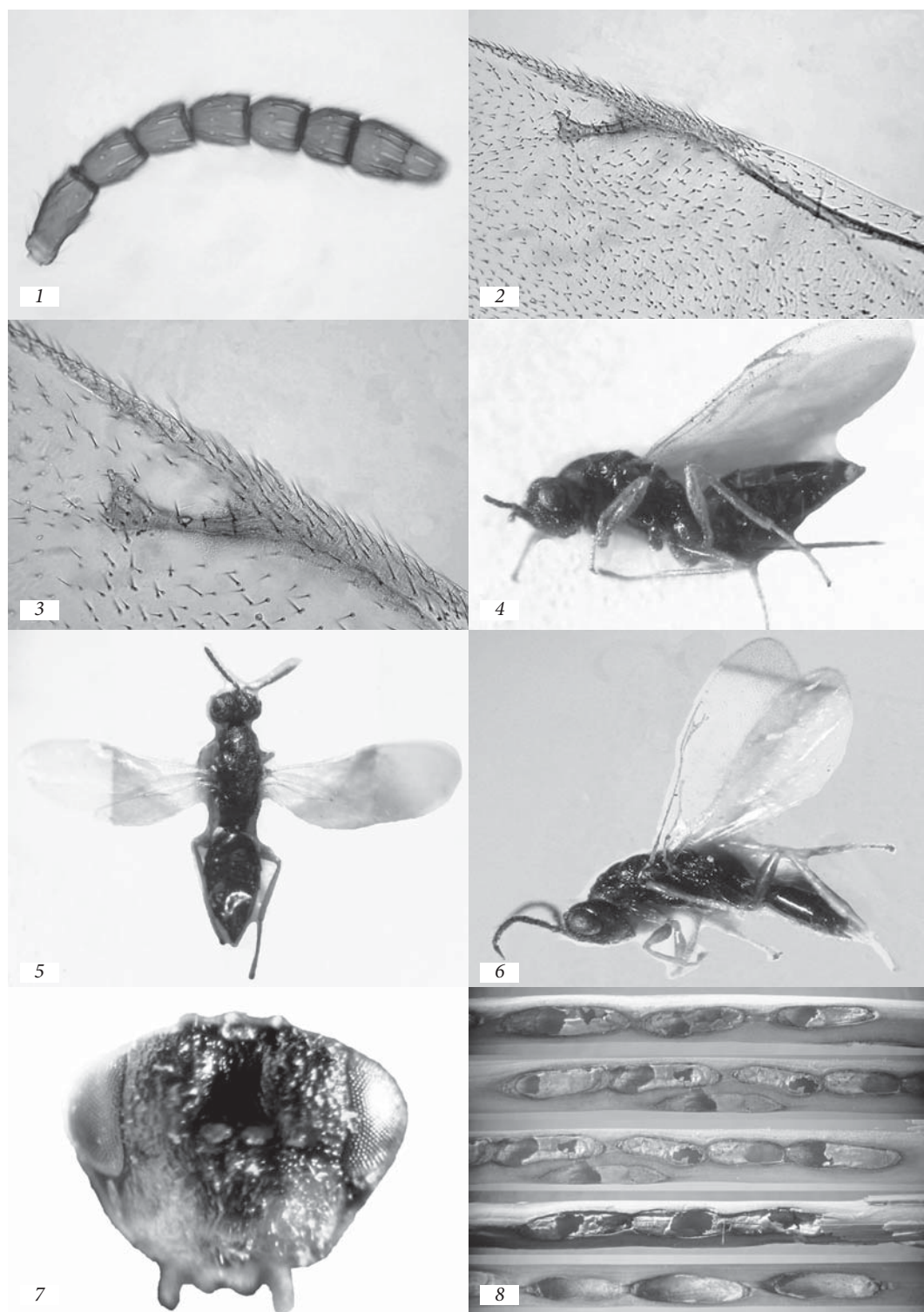


Fig. 1. *Tetramesa phragmitis*, 1-5 — female, 6, 7 — male: 1 — antenna; 2 — fore wing venation; 3 — radial and marginal veins; 4 — adult, lateral view; 5 — adult, dorsal view; 6 — adult, lateral view; 7 — head, frontal view; 8 — infested stems of *Phragmites* sp. with emergence holes.

Fore wing 2.6–2.7 × as long as its maximum width, with obscure black spot under marginal vein. Disc long and narrow. Marginal vein relatively short and slightly expanded; ratio of marginal and radial veins = 28 : 20 : 14.

Hind coxa elongate, with weak sculpture.

Metasoma elongated, severely narrowed towards top (in lateral view), with very short petiole, 1st tergite longest, almost as long as 2nd and 3rd tergites combined; 2–5th tergites of equal length; 6th tergite 1.5 × as long as 5th tergite, epipygium very short. All tergites shiny, with very small, weakly visible punctures.

Male. Length of body 3.1–3.3 mm. Coloration and sculpture as in female, but yellow spots are smaller and predominate on face and upper corners of pronotum. Antenna with 7 flagellomeres and very short diffuse pubescence. Petiole of first tergite short, at most twice longer than its width. Metasoma long, 0.5–0.65 × as long as mesosoma.

Variability: Yellow spots on head and thorax vary from relatively small to large. Specimens collected in southern territories (Israel, Tajikistan) are lighter, sometimes almost entirely yellow.

Comparative notes. *T. phragmitis* differs from other species of the genus by the combination of following characters: fore wings with relatively short and slightly enlarged marginal vein; male metasoma with short petiolus; male antenna with very short diffuse pubescence.

Biology. Phytophagous chalcid wasp. Larvae develop inside stems of *Phragmites* spp. Each larva forms an individual cell at the top of cane stalks. One stalk usually contains several (up to 10 or more) cells with larvae of *T. phragmitis*. The importance for biological control of *Phragmites* was not studied.

Distribution. Trans-Palaearctic species: Central Europe (Hungary, Czech Republic) through Moldova, Southern Ukraine, Caspian Sea region, Stavropol Territory and Kuban of Russia, Middle East, Central Asia to south of the Russian Far East (Primorsky Territory) and Japan. Abundant in southern regions of Europe. In Ukraine this species is abundant in swamps at rivers (Danube, Southern Bug, Dnieper), but was not recorded earlier in northern regions of Ukraine (but only in the north of Kherson and Donetsk Regions). Abundant in Kuban region and Stavropol Territory of Russia and in Israel along the rivers.

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