

A New Species of *Encarsia* (Hymenoptera: Aphelinidae) Parasitising *Aleuromarginatus tephrosiae* (Hemiptera: Aleyrodidae) in Iran and Oman

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Abstract.—*Encarsia indigoferae* Polaszek & Manzari, new species, is described and illustrated. It is known from Iran and Oman, and all known specimens were reared from the whitefly *Aleuromarginatus tephrosiae* Corbett.

The purpose of this paper is to describe a new species in the genus *Encarsia*. *E. indigoferae* is clearly a member of the *Encarsia strenua*-group, having scutellar sensilla separated by approximately the maximum diameter of one sensillum (see Fig. 4), a characteristic stigmal vein with an asetose area above it, and a seta present at the junction of the marginal and submarginal veins. It differs from other species of the *strenua*-group in having a combination of three setae on the submarginal vein and a rugose stemmaticum. The host, *Aleuromarginatus tephrosiae* Corbett, was described from Sierra Leone (Corbett 1935) and is widespread in Africa and Asia, apparently specific to various Papilionaceae (Bink-Moennen 1983). It seems probable that *E. indigoferae* is more widespread than is currently known. It is worth mentioning that within the colony of *A. tephrosiae* on *Indigofera* sp. collected in Iran, parasitised pupae of *Zaphanera cyanotis* Corbett with parasitoid emergence holes were also collected. These two whitefly species, which had heavily infested *Indigofera* sp. in the collecting areas, were found to be mostly parasitised. It is quite likely that *Z. cyanotis* is also being parasitised by *E. indigoferae* but no parasitoid was reared from the former species.

Encarsia species are mostly parasitoids of whiteflies and armoured scale insects (Diaspididae), and are of considerable economic importance. The systematics and biology of the genus are treated in detail by Heraty et al. (2008).

Abbreviations.—

NHM	Natural History Museum, London, U.K.
HMIM	Hayk Mirzayans Insect Museum, Iranian Research Institute of Plant Protection, Tehran, IRAN.

Encarsia indigoferae Polaszek & Manzari
new species
Figs 1–4

Description.—Female

Colour. Head and body yellow except the following areas pigmented with brown (Fig. 1): three spots on stemmaticum (Fig. 3), adjacent to ocelli; pronotum and front of mesoscutum, notauli (especially posteriorly); most of axillae, but fading posteriorly; T2 and T3–T6 either just laterally or more extensively. Antennae and legs uniformly pale brown, or appearing paler, almost yellow. Fore wings hyaline.

Morphology. Stemmaticum with densely rugose surface sculpture (Fig. 3). Antennal formula 1,1,3,3 (Fig. 2). Pedicel equal in

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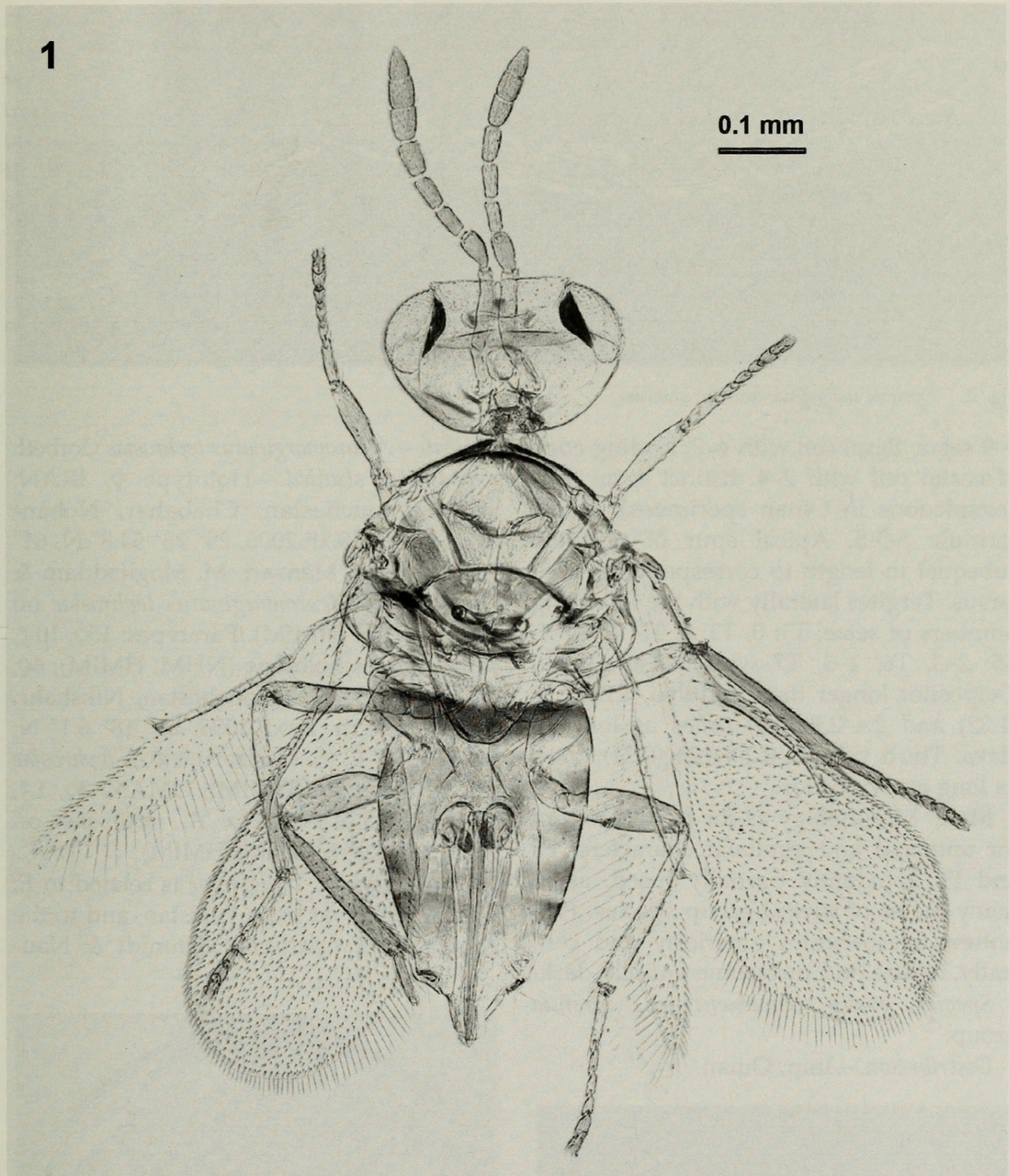


Fig. 1. *Encarsia indigoferae* holotype female, habitus.

length to F1 and F2. Flagellomeres with the following numbers of sensilla: F1: 1–2 (1), F2: 1–2 (1), F3: 2–3 (2), F4: 3–4 (3), F5: 3–4 (4), F6: 2–3 (3). Midlobe of mesoscutum (Fig. 4) with 12–15 (14) setae arranged symmetrically, side lobes with 3 setae each. Scutellar sensilla close together, separated by a distance of about the width of a

sensillum. Distance between anterior pair of scutellar setae smaller than between posterior pair. Fore wing 2.3–2.5 (2.4) times as long as width of disc. Marginal fringe 0.19–0.20 times as long as width of disc (0.16 times in Oman specimens). Submarginal vein with 3 setae (4 on one side in one individual), marginal vein anteriorly with

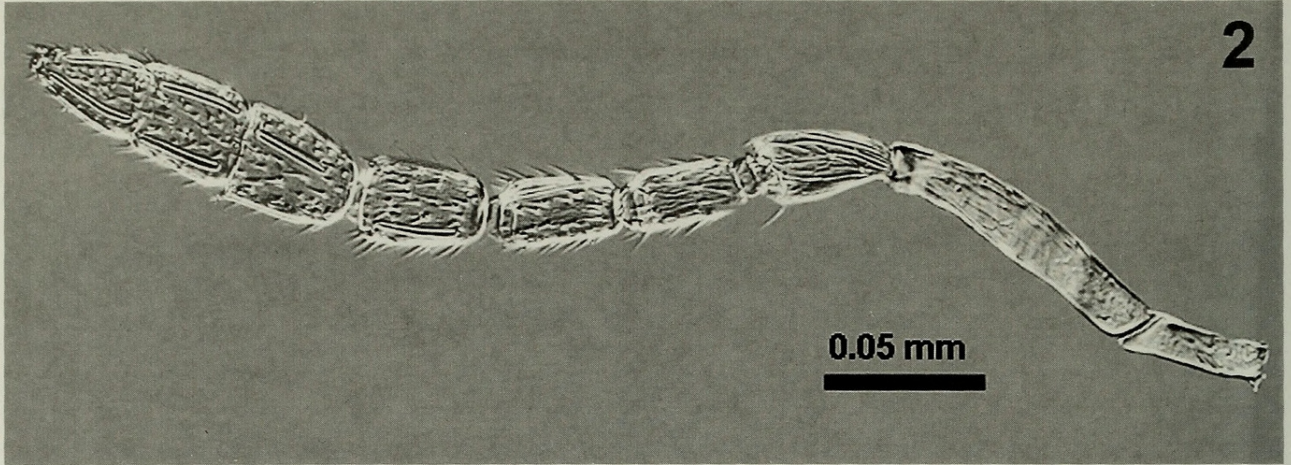


Fig. 2. *Encarsia indigoferae* female, antenna.

6–9 setae. Basal cell with 4–7, leading edge of costal cell with 2–4 distinct setae (less conspicuous in Oman specimens). Tarsal formula 5-5-5. Apical spur of midtibia subequal in length to corresponding basitarsus. Tergites laterally with the following numbers of setae: T1: 0, T2: 1, T3: 1, T4: 1, T5: 2–3, T6: 2–3, T7 with 5–8 (6) setae. Ovipositor longer than midtibia, 1.22–1.37 (1.22) and 2.4–2.9 (2.4) times as long as clava. Third valvula 0.20–0.21 (0.21) times as long as ovipositor.

Male. Morphology as for female, except for antennal and genitalia characters. F5 and F6 apparently partially fused, as in many males of *strenua*-group species. Pronotum, mesoscutum anteriorly and centrally, axillae and metasoma entirely dark.

Species group placement.—*E. strenua* group.

Distribution.—Iran, Oman.

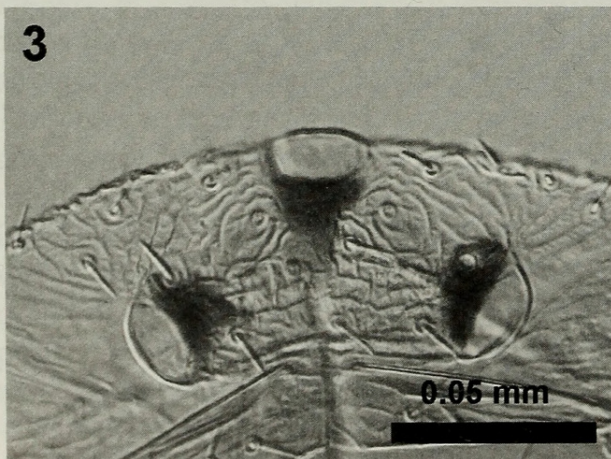


Fig. 3. *Encarsia indigoferae* female, stemmaticum.

Host.—*Aleuromarginatus tephrosiae* Corbett.

Material studied.—Holotype ♀, IRAN: Sistan-Balouchestan, Chabahar, Nobandian, 28 m. 18.xii.2006, 25° 28' 54.8" N, 61° 9' 21.9" E. (S. Manzari, M. Moghaddam & Durbin), ex *Aleuromarginatus tephrosiae* on *Indigofera* sp. (HMIM). Paratypes: 15♀, 10♂, same data as holotype (NHM, HMIM); 4♀, 1♂, IRAN: Sistan-Balouchestan, Nikshahr, Geshig, 631 m. 20.xii.2006, 26° 18' 6.1" N, 60° 20' 3.7" E. (S. Manzari), ex *A. tephrosiae* on *Indigofera* sp. (HMIM). OMAN: 3♀, 1♂, Rumais, 18.iii.1992, ex *A. tephrosiae* on weed IIE 22998 (NHM, HMIM).

Comments.—*E. indigoferae* is related to *E. dialeurodis* Hayat from Pakistan, and to the Australian *E. oakeyensis* Schmidt & Nau-

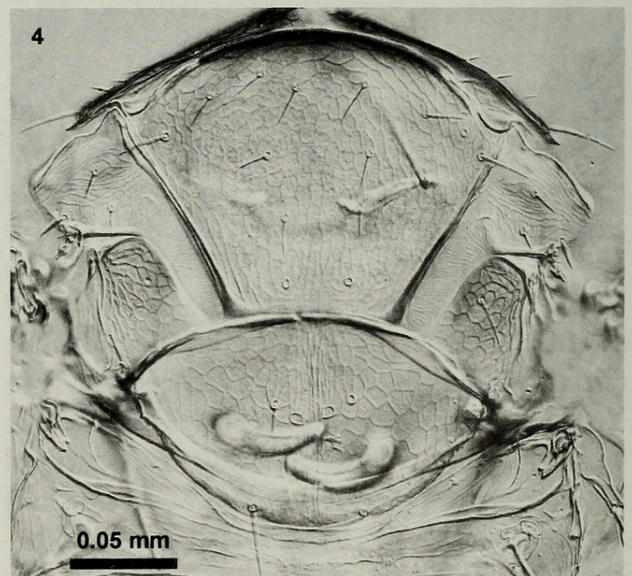


Fig. 4. *Encarsia indigoferae* female, mesosoma.

mann. It differs from both these species in having three setae on the submarginal vein. It can be further distinguished from other species in the *strenua*-group having 3 or more setae on the submarginal vein by the rugose (rather than reticulate or striate) stemmaticum (Fig. 3).

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