



**A new species of *Trichogramma* (Hymenoptera: Trichogrammatidae) parasitic on eggs of pomegranate fruit borer, *Deudorix isocrates* (Fabricius) (Lepidoptera: Lycaenidae)**

**H. NAGARAJA and ANKITA GUPTA**

Project Directorate of Biological Control, Post Bag No. 2491,  
H.A. Farm Post, Bellary Road, Hebbal, Bangalore – 560024, Karnataka, India  
E-mail: hulikalnagaraja@yahoo.com

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**ABSTRACT:** *Trichogramma manii* sp. nov., a new egg parasitoid of pomegranate fruit borer, *Deudorix isocrates* (Fabricius) (Lepidoptera: Lycaenidae), is described and illustrated from Bangalore, India.

**KEY WORDS:** New species, pomegranate fruit borer, Trichogrammatidae, *Trichogramma manii* sp. nov.

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The fruit borer, *Deudorix isocrates* (Fabricius) (Lepidoptera: Lycaenidae), is a serious pest of pomegranate (*Punica granatum* L.). A new species of *Trichogramma* Westwood (Hymenoptera: Trichogrammatidae), reared from the eggs of this butterfly, is described in this paper.

The holotype and paratypes are deposited in the collections of Project Directorate of Biological Control (PDBC), Bangalore, and National Pusa Collection (NPC), IARI, New Delhi.

***Trichogramma manii* sp. nov. (Figs. 1-8)**

**Male**

Length 0.53 mm (0.50-0.56; N-7); width across head 0.21 mm (0.18-0.22; N-7). Head light ochreous, ocelli carmine red, eyes dark carmine; antenna dull ochreous with fuscous hairs. Prothorax blackish, mesonotum, parapsides fuscous anteriorly, scutellum and axillae light fuscous; metathorax and

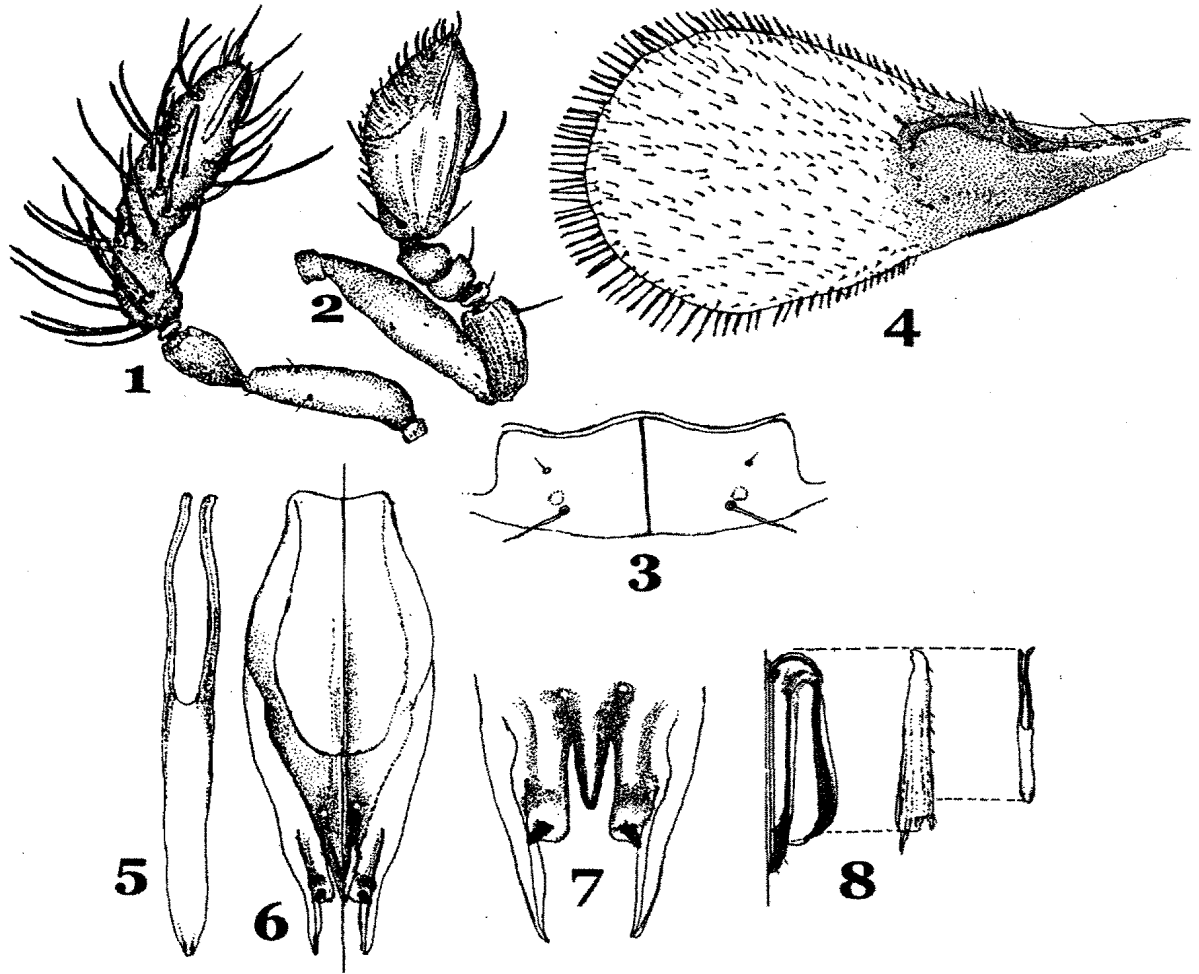
propodeum light fuscous; legs dull ochreous with proximal hind coxae fuscous, abdomen (metasoma) medium to dark fuscous with anteriormost terga lighter.

**Antenna**

Flagellum stout (Fig. 1), measuring 1.68 (1.56-1.78; N-10) times the scape with short 22 (19-27; N-12) hairs; 1.67x (1.31-2.08; N-12) as long as maximum width of flagellum, incomplete ring segment at base of undivided flagellum (Fig. 1).

**Thorax**

Scutellum having small anterior and long posterior pairs of bristles with a pair of ovoid, very indistinct sensillae between bristles (Fig. 3). Fore wing (Fig. 4) 1.99x (1.92-2.01; N-6) as wide as remigium with somewhat longer setae, longest on tornus, about 0.17x (0.14-0.21; N-6) as long as width of remigium. Rs track setae 2-3; premarginal,



**Figs. 1 - 8. *Trichogramma manii* sp. n.:** 1. Male antenna; 2. Female antenna; 3. Scutellum, male; 4. Fore wing, male; 5-7. Male genitalia: 5. Aedeagus; 6. Genital capsule; 7. Enlarged view of terminal region; 8. Relative lengths of ovipositor, hind tibia and aedeagus

marginal and stigmal veins somewhat stout; basal infuscation reaching stigma. Hind wing with fringe setae long, 1.29x (1.11-1.43; N-6) as long as longest setae on fore wing tornus.

#### Genitalia

Chelate structures (CS) at 0.88 (0.86-0.95; N-11) level of gonoforceps (GF); median ventral projection (MVP) sharp, at 0.86 (0.83-0.88; N-11) level of GF; median ridge (MR) reaching nearly middle of genital capsule, with pair of median tubercles (MT) behind base of MVP. Dorsal expansion of gonobase (DEG) acutely triangular, with almost straight sides, very indistinct basal

notches and pointed apex, reaching level of CS. Aedeagus (Fig. 5) 1.11x (1.00-1.19; N-13) as long as apodemes, both together 0.81x (0.69-0.89; N-10) as long as hind tibia (Fig. 8).

#### Female

Length 0.54 (0.50-0.57; N-15) mm; width across head 0.22 (0.20-0.23; N-15) mm. Head dull ochreous with light fuscous shades; ocelli carmine, eyes dark carmine; Antennae ochreous. Prothorax light fuscous; pronotum, anterior mesonotum, parapsides fuscous, scutellum, metanotum and propodeum ochreous with dark fuscous shades. Anteriormost abdominal tergites dark fuscous

followed by light fuscous posterior ones. Rest of body is ochreous.

Thorax with scutellum having short anterior and long posterior bristles as in male. Antenna (Fig. 2) with club 0.84x (0.80-0.89; N-8) as long as scape, with basal incomplete ring segment (Fig. 2). Fore wing twice as long as wide, with longest fringe setae on tornus 0.16x (0.13-0.20; N-8) width of remigium. Rs vein track containing 2-3 setae. Hind fringe 1.40x (1.22-1.75; N-8) as long as fore wing ones on tornus. Ovipositor (Fig. 8) 1.15x (1.09-1.23; N-10) as long as hind tibia.

**Specimens examined:** Holotype: ♂ Ex: Eggs of *Deudorix isocrates* (Fab.) on pomegranate. IHR Hesaraghatta, 08.ii.1999, M. Mani coll. (PDBC). Paratypes: 1♂ & 1♀, with same data as holotype (PDBC, NPC).

#### Etymology

This species is named after Dr. M. Mani, Principal Scientist, National Research Centre for Grapes, Pune, who collected the specimens.

#### Remarks

*Trichogramma manii* resembles *T. kashmirica* Nagaraja *et al.* (Nagaraja *et al.*, in press), but for the former's (1) lighter colour, (2) DEG being acutely triangular with pointed apex, and (3) ovipositor slightly longer than hind tibia.

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#### REFERENCE

- Nagaraja, H., Ahmad, J. and Gupta, A. 2007. Description of a new species of *Trichogramma* from Anantnag, Jammu & Kashmir, India. *Journal of Biological Control* (this issue).

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