

New Record of *Ionympha* Graham (Chalcidoidea: Eulophidae) from India with Description of a New Species

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ABSTRACT

Genus *Ionympha* Graham (Hymenoptera: Eulophidae) is recorded first time from India and Oriental region. A new species, *I. lenis* sp. nov. is described from Uttar Pradesh, India.

Key words: Hymenoptera, Entedoninae, new record, Oriental region.

INTRODUCTION

lonympha Graham (Eulophidae: Entedoninae) is little-known genus, containing only two species *l. carne* (Walker, 1839) and *l. ochus* (Walker, 1839) (Noyes, 2019). Both species are recorded in Europe (Boucek & Askew 1968) and the Nearctic and Neotropical regions (Hansson 1988).

In this paper, genus *lonympha* Graham is recorded first time from India as well as Oriental region with description of a new species *l. lenis* sp. nov. An identification key to species is also provided.

MATERIAL AND METHODS

The body colour was noted from card mounted specimens before clearing and mounting the specimens on slides in Canada balsam. Body length is given in millimetres. All other relative measurements are taken from the divisions of a linear scale of a micrometer placed in the eye piece of a compound microscope. These measurements were taken at 100× magnification of the microscope.

The photographs of slide mounted body parts were taken with a digital camera (Nikon DS-Fi1c) attached to a compound microscope (Nikon Eclipse Ci).

The following abbreviations are used in the text:

F1-4 = Funicle segment 1 to 4

ZDAMU = Insect collections, Department of Zoology, Aligarh Muslim University, Aligarh, India.

RESULTS AND DISCUSSION

Genus *lonympha* Graham

lonympha Graham, 1959: 199. Type species *Entedon ochus* Walker, 1839: 21, by original designation.

Diagnosis

Female: Head with frontal grooves V-shaped; scrobal grooves ending separately on frontal grooves, extending below toruli (Fig. 1); clypeus not delimited by suture; gena with strong incision below each eye to fit the base of mandibles when open. Antenna (Fig. 2) with 5 well-separated flagellomeres in male, the last two united in female. Mesosoma with pronotum reduced dorsally; propodeum smooth and shiny, without median carina. Fore wing with postmarginal vein subequal or shorter than stigmal vein; stigma petiolate. Petiole reduced to a narrow dorsal band. Ovipositor very short.

Male: Similar to female except sexual dimorphism and antenna with setae.

Key to world species of *lonympha* Graham, females

1. Antenna with pedicel mainly white in colour..... *l. carne* (Walker)
- Antenna with pedicel dark brown in colour.....2

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2. Mesoscutum dull with strongly reticulation. Fore wing with postmarginal vein as long as stigmal vein (Fig. 9)..... *I. ochus* (Walker)
 -Mesoscutum shiny and smooth. Postmarginal vein indistinct or rudimentary (Fig. 5)
 *I. lenis* sp. nov.

***Ionympha lenis* sp. nov. (Figs 1-8)**

Holotype Female: Body length: 1.23 mm. Head metallic dark brown to black. Antenna dark brown. Mesosoma metallic dark brown to black. Wings (Figs 5, 6) hyaline. Legs including coxae dark brown except tarsomeres 1-3 pale brown, 4th tarsomere brown. Gaster metallic dark brown.

Head (Fig. 1) in frontal view, 1.26× as broad as high; eye height 1.7× as long as malar space; antennal toruli situated slightly above the lower eye margin. Antenna (Fig. 2) with scape 4.25× as long as broad, 2.8× as long as pedicel; pedicel 1.57× as long as broad; pedicel + flagellum slightly longer than head width; flagellum with 2 anelli; F1 1.4× as long as broad, subequal in length to F2 (in one antenna F1 distinctly longer than F2 as in figure 3; F3 subequal to F4; clava 2.4× as long as broad, shorter than all funicle segments individually.

Mesosoma (Fig. 4) smooth, 1.44× as long as broad; pronotum narrow, hardly visible in dorsal view; mesoscutum shorter than scutellum; notauli almost complete; mid lobe of mesoscutum with 4 setae; axillae elongate, reaching more than half length of scutellum; scutellum longer than broad with 2 setae, one seta near each lateral margin; dorsellum 2.7× as broad as long; propodeum 1.5× as long as dorsellum; propodeal callus with 3 setae. Fore wing (Fig. 5) densely setose, 2.08× as long as broad, without any row of setae radiating from stigmal knob; speculum closed; radial cell setose; marginal vein + parastigma 1.84× submarginal vein, 10.2× as long as stigmal vein; postmarginal vein 0.3× stigmal vein length; longest marginal seta 0.16× maximum wing width. Hind wing (Fig. 6) 5.6× as long as broad with apex pointed; longest marginal seta 0.5× maximum wing width.

Metasoma (Fig. 7). Petiole 2.76× as broad as long; gaster longer than mesosoma; ovipositor occupying more than half length of gaster, not exerted beyond apex of gaster; ovipositor 1.3× as long as hind tibia.

Relative measurements (holotype slide). Head height: width, 30: 38; eye height, 18; malar space, 10.5. Antennal segments length: width- scape, 17: 4; pedicel, 6: 3.75; F1, 6.5: 4; F2, 6.5: 4; F3, 5.75: 3.5; F4, 5.5: 3.5; clava, 5: 2.5; spicula, 2. Mesosoma length: width, 49: 34. Fore wing length: width, 104: 50; longest marginal seta, 8; submarginal vein length, 25; parastigma length, 6; marginal vein length, 40; postmarginal vein length, 1.5; stigmal vein length, 4.5. Hind wing length: width, 90: 16; longest marginal seta, 8. Hind tibia length, 30. Metasoma. Petiole length: width, 3.25: 9; gaster length, 55; ovipositor length, 39.

Male: Similar to female except sexual diamorphism. Antenna (Fig. 8) with scape 2.5× as long as broad, 3.45× as long as pedicel; pedicel 1.22× as long as broad; F1 2× as long as broad, slightly longer than F2; clava 2.3× as long as broad, subequal to F4.

Relative measurements (paratype slide): Antennal segments length: width- scape, 19: 7.5; pedicel, 5.5: 4.5; F1, 9.5: 4.75; F2, 9: 4.25; F3, 8: 3.5; F4, 7.5: 3.5; clava, 7.5: 3.25; spicula, 3. Genitalia length, 26; phallobase length, 19.

Material examined: Holotype (ZDAMU), female (on slide under four coverslips, slide No. EUL.218), INDIA: UTTAR PRADESH: Aligarh, Dhadda, 19.iii.2016, Coll. M.T. Khan.

Paratypes, 1 female, 1 male. 1 female (on card); 1 male (on slide, slide No. EUL.235), with same data as for holotype. (ZDAMU).

Host: Unknown.

Etymology: This species name is derived from its smooth body (in *Latin*, *lenis* = smooth).

Distribution: India: Uttar Pradesh.

Comments

Ionympha lenis sp. nov. comes close to *I. ochus* (Walker) (Fig. 9) by having more or less similar body colour, but it differs from the later by the characters given under key to species.



Figs. 1-9. *Ionympha lenis* sp. nov. (1-8), holotype: 1, head, frontal view; 2, antenna; 3, antenna with enlarge F1; 4, mesosoma; 5, fore wing; 6, hind wing; 7, metasoma. Paratype, male: 8, antenna. *Ionympha ochus* (Walker), lectotype: 9, habitus in dorsal view.

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ACKNOWLEDGEMENTS

Thanks to Dr Shahid Bin Zeya, Department of Zoology, Aligarh Muslim University, Aligarh, for constant help and encouragements. Thanks also to Dr Christer Hansson for the confirmation of the genus and Natalie Dale-Skey, Curator, Hymenoptera section, BMNH London, for providing the photographs of card-mounted Lectotype of *Ionympha ochus* (Walker).

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Received: August 07, 2019

Accepted: February 19, 2020