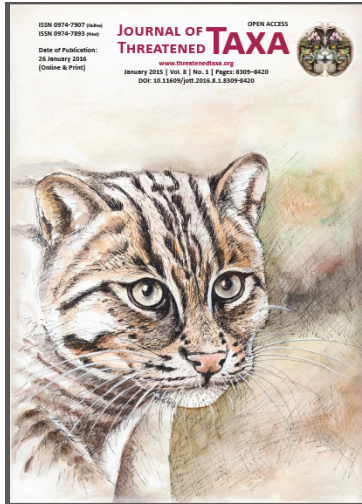


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SHORT COMMUNICATION

DESCRIPTIONS OF FOUR NEW SPECIES OF *DICOPOMORPHA* OGLOBLIN (HYMENOPTERA: CHALCIDOIDEA: MYMARIDAE) FROM INDIA WITH A KEY TO INDIAN SPECIES

A. Rameshkumar & S. Manickavasagam

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DESCRIPTIONS OF FOUR NEW SPECIES OF *DICOPOMORPHA* OGLOBLIN (HYMENOPTERA: CHALCIDOIDEA: MYMARIDAE) FROM INDIA WITH A KEY TO INDIAN SPECIES

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Abstract: Four new species of *Dicopomorpha* Ogloblin (Hymenoptera: Chalcidoidea: Mymaridae), *D. albithorax*, *D. funiculata*, *D. longiscapa* and *D. minuta* are described and illustrated. A key to the Indian species of *Dicopomorpha* is provided.

Keywords: *Dicopomorpha*, Mymaridae, new species, species key.

Abbreviation: ICAR-NBAIR - National Bureau of Agricultural Insect Resources (formerly NBAII), Bangalore, Karnataka, India; EDAU - Entomology Department, Annamalai University, Faculty of Agriculture, Chidambaram, Tamil Nadu, India; fl_x - funicle segment x; mps - multiporous plate sensilla.

Dicopomorpha Ogloblin is a small genus reported from all continents and includes 10 species (Huber 2009; Noyes 2015). Huber (2009) discussed the affinities of *Dicopomorpha* with the other members of *Alaptus* group, namely, *Alaptus* Westwood, 1839, *Dicopus* Enock, 1909, *Mimalaptus* Noyes & Valentine, 1989 and *Kikiki* Huber & Beardsley, 2000, and provided a key to the *Alaptus* group of genera. Triapitsyn & Berezovskiy (2003) published a key to the two species known from the Palearctic region. Manickavasagam

& Rameshkumar (2011) reported *Dicopomorpha* from India. In 1989, Rao described the *Dicopulus indicus* from Karnataka, latter species synonymized under *Dicopomorpha* by Yoshimoto (1990). In this paper, four new species of *Dicopomorpha* are described from India and the Indian species are keyed.

MATERIALS AND METHODS

The study was conducted on specimens collected from surveys for mymarids using yellow pan traps and Malaise traps in a variety of habitats in southern India over a period of five years from 2008 to 2013. Specimens were processed using hexamethyldisilazane (HMDS) before card mounting (Brown 1993) and dissected and mounted on slides in natural Canada balsam. All measurements are in micrometers. Digital images of habitus were taken with Leica S8APO stereo zoom microscope and slide mounts with Leica DMLB phase contrast microscope. Composite images were generated from image stacks using CombineZP. The specimens studied are deposited with EDAU and ICAR-NBAIR.

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Conflict of Interest: The authors declare no competing interests.

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***Dicopomorpha* Ogloblin**

Dicopomorpha Ogloblin, 1955: 387. Type species: *Dicopomorpha macrocephala* Ogloblin, by original designation.

Chromodicopus Ogloblin, 1955: 390. Type species: *Chromodicopus pulchricornis* Ogloblin, by original designation. Synonymy by Yoshimoto (1990: 27).

Dicopulus Ogloblin, 1955: 377. Type species: *Dicopulus stramineus* Ogloblin, by original designation. Synonymy by Yoshimoto (1990: 27).

Brief diagnosis

Antenna with funicle 7-segmented, sometimes 6-segmented, clava entire; mandibles pointing towards each other, with two subequal teeth; frenum entire; fore wing relatively narrow, with posterior margin slightly curved towards apex but relatively straight medially; petiole well over half as wide as propodeum; metasoma broadly sessile (Lin et al. 2007; Huber 2009).

Dicopomorpha is closely related to *Dicopus* from which it is distinguished by the following features: genae in facial view much less convergent (strongly narrowing in *Dicopus*) and mandibles crossing each other with two equal sized teeth (not crossing, with two teeth of unequal size in *Dicopus*).

***Dicopomorpha albithorax* sp. nov.**
(Images 1–6)

urn:lsid:zoobank.org:act:2EF6C64F-5000-4012-9C4B-0B268C4E6763

Material examined

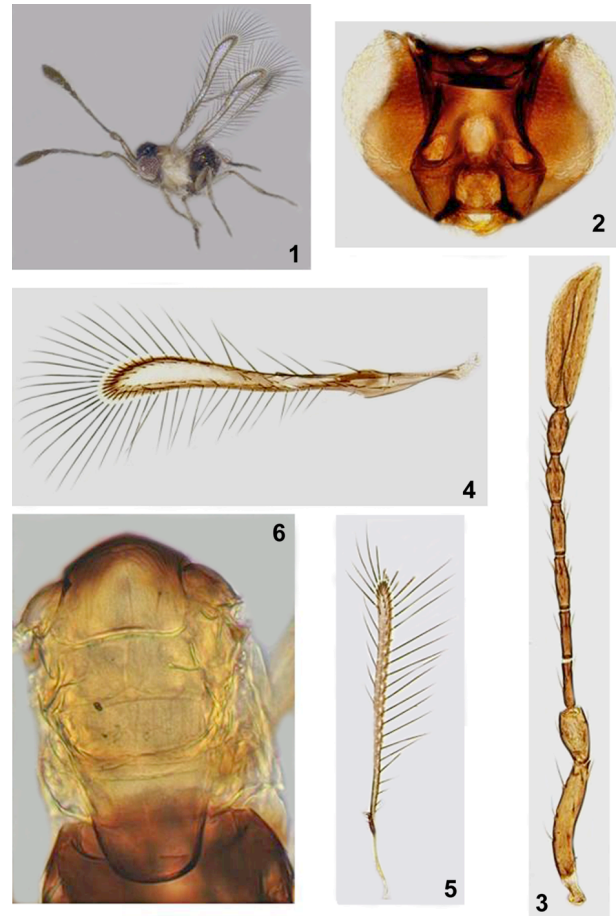
Holotype: Female, (EDAU/Mym 17/2016), 27.v.2012, on slide labeled, "India: Andaman & Nicobar Islands, Diglipur, Ramnagar, Malaise trap, Forest floor, coll. A. Rameshkumar".

Paratype: Female (ICAR/NBAIR/MYM 105), 23.iii.2013, on card, India: Tamil Nadu, Tiruchirappalli, Thuraiyur, Green hills, Kanapadi, yellow pan trap, forest floor, coll. A. Rameshkumar.

Female

Holotype. Length 260 micrometers. Head dark brown to black above, median trabecula slightly paler below; eyes reddish-brown; antenna light brown, darkening towards apex; mesosoma whitish laterally and apically, except mesoscutum basally light brown, fading towards apex and merging with whitish scutellum; tegula white. Legs pale brown; procoxa white, meso- and metacoxa dark brown; femora and tibiae paler, tarsi brown; metasoma dark brown.

Head: Wider than high (1.45×). Face with shallow and



Images 1–6. *Dicopomorpha albithorax* sp. nov. 1 - female; 2 - Head in frontal view; 3 - Antenna; 4 - Fore wing; 5 - hind wing; 6 - mesosoma. © Authors

vertex with deep reticulate sculpture; malar space half the eye height, with two setae; each antennal torulus with a single seta below and two setae between each other; one longer seta next to each posterior ocellus; single seta between anterior ocellus and each posterior ocelli; one seta on each side sublaterally just below lower eye margin.

Antenna: Scape 5.7× as long as wide, 2.66× as long as pedicel, pedicel 1.87× as long as wide; radicle not separated from scape by a groove; funicle 6-segmented, all segments longer than wide; fl₁ & fl₂ and fl₃ & fl₄ equal in length; fl₅ and fl₆ subequal; clava 3.15× as long as wide, longer than preceding three segments; mps absent in funicle segments, two mps on clava.

Mesosoma: Subequal to metasoma, 1.3× as long as wide; sculpture on mesoscutum deep lineolate, on anterior scutellum shallow lineolate, on frenum shallow reticulate; anterior scutellum longer than frenum; dorsellum and propodeum short.

Wings: Fore wing 10.5× as long as wide; longest

marginal fringe $3.69\times$ wing width and $0.35\times$ wing length; disc with five microtrichia except for the usual marginal microtrichia; proximal macrochaeta absent; hypochaeta near apex of submarginal vein; hind wing $19\times$ as long as wide, longest marginal fringe $5.25\times$ wing width and $0.27\times$ wing length, hind wing with one row of microtrichia along hind margin.

Metasoma: Slightly longer than wide, cercal setae long and curved; ovipositor shorter than mesotibia (85:123).

Measurements: Head width, 160; height, 110; eye length, 90; malar space length, 40; antennal torulus height, 20; width, 15; distance between antennal toruli, 40; distance between antennal toruli and transverse trabecula, 30; distance between anterior ocellus and transverse trabecula, 30; length and width of antennal segments, scape, 100 : 18; pedicel, 37 : 20; fl₁, 32 : 7.5; fl₂, 32 : 7.5; fl₃, 35 : 10; fl₄, 35 : 10; fl₅, 32 : 12; fl₆, 32 : 17; clava, 103 : 32; fore wing length, 420; width, 40; longest marginal fringe length, 147; hind wing length, 380; width, 20; longest marginal fringe length, 105; mesosoma length, 143; width, 108; metasoma length, 138; width, 118; mesotibia length, 123; ovipositor length, 85; cercal seta length, 103.

Male: Unknown.

Etymology

The specific epithet is of Latin origin (“alba”= white; + thorax) and refers to the whitish thorax.

Comments

This species is distinct and can be easily differentiated from the other species from India by its 6-segmented funicle (7-segmented funicle in all other Indian species).

Dicopomorpha funiculata sp. nov. (Images 7–13)

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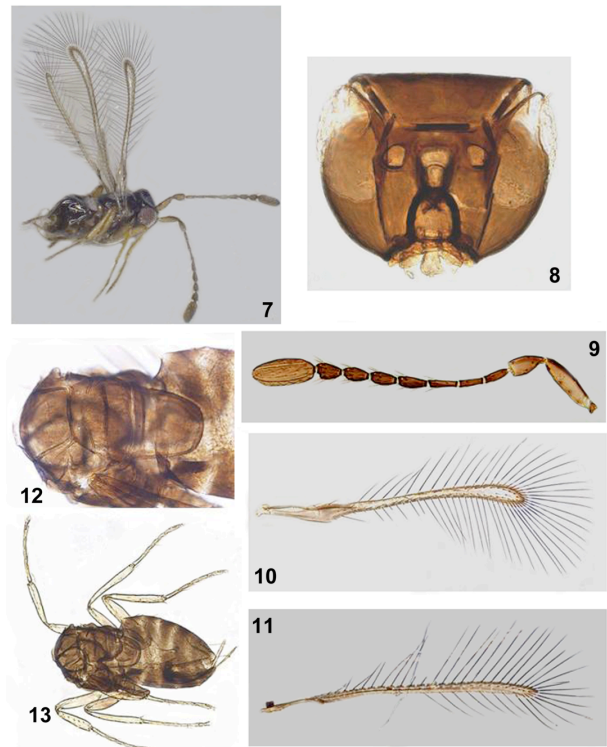
Material examined

Holotype: Female, (EDAU/Mym 18/2016), 27.v.2012, on slide labeled, “India: Andaman & Nicobar Islands, Diglipur, Ramnagar, Malaise trap, forest floor, coll. A. Rameshkumar”.

Female

Holotype. Length 420. Body uniformly dark brown; eye reddish-brown; legs pale yellow; antenna pale brown; apex of metasoma below cercal plate whitish.

Head: Wider than high; malar space $1.17\times$ of eye



Images 7–13. *Dicopomorpha funiculata* sp. nov.

7 - female; 8 - Head in frontal view; 9 - Antenna; 10 - Fore wing; 11 - hind wing; 12 - mesosoma; 13 - meso and metasoma. © Authors

length; sculpture on vertex deep reticulate, shallow on face; setal arrangement as follows: two on malar space; two between antennal toruli; one each near inner side of each posterior ocellus; two pairs of long setae on clypeus region (above mouth margin); two pairs of setae on temple; one between anterior ocellus and each posterior ocellus; two on anterior eye margin.

Antenna: Scape $4.44\times$ as long as wide, $2\times$ as long as pedicel, latter $2\times$ as long as wide; funicle 7-segmented, all segments longer than wide, gradually increasing in width distally; fl₁ & fl₅, fl₃ & fl₄, fl₆ & fl₇ equal in length; clava $2.3\times$ as long as wide, shorter than preceding three segments; mps absent on funicle segments, three on clava.

Mesosoma: Shorter than metasoma, with reticulate sculpture on mesoscutum and scutellum.

Wings: Fore wing $15\times$ as long as wide; longest marginal fringe $5.38\times$ as long as wing width; fore wing disc with two setae; hind wing $28\times$ as long as wide; longest marginal fringe $7.5\times$ as long as wing width.

Metasoma: Ovipositor exerted, $1.4\times$ as long as mesotibia.

Measurements: Head width, 200; height, 160; eye length, 100; malar space length, 85; antennal torulus

height, 20; distance between antennal toruli and transverse trabecula, 13; length and width of antennal segments, scape, 100 : 23; pedicel, 50 : 25; fl₁, 38 : 10; fl₂, 33 : 10; fl₃, 40 : 10; fl₄, 40 : 15; fl₅, 38 : 18; fl₆, 35 : 20; fl₇, 35 : 23; clava, 88 : 38; fore wing length, 600; width, 40; longest marginal fringe length, 215; hind wing length, 560; width, 20; longest marginal fringe length, 150; mesosoma length, 170; metasoma length, 250; mesotibia length, 158; ovipositor length, 225; cercal seta length, 88.

Male: Unknown.

Etymology

The specific epithet is an adjective in reference to the normal 2nd funicle segment.

Comments

It differs from all other Indian species by the ring-less 2nd segment and the narrow fore wing, about 15× as long as wide (less than 11× as long as wide in all other Indian species).

Dicopomorpha minuta sp. nov.

(Images 14–19)

urn:lsid:zoobank.org:act:81D91F76-4295-4D6F-9C76-46044663C256

Material examined

Holotype: Female, (EDAU/Mym 19/2016), 13.x.2010, on slide labeled, "India: Tamil Nadu: Cuddalore, Chidambaram, Annamalai University premises, yellow pan trap, mango orchard, coll. A. Rameshkumar".

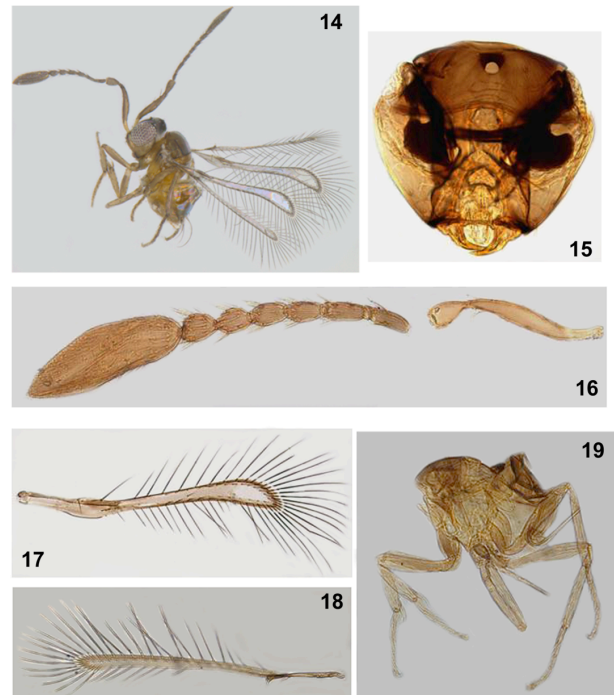
Paratypes: 3 Females, (ICAR/NBAIR/MYM 106-108), 10.xii.2013, on card, India: Tamil Nadu, Cuddalore, Chidambaram, Annamalai University premises, Malaise trap, mango orchard, coll. A. Rameshkumar.

Female

Holotype. Length 250. Body more or less uniformly yellowish-brown with metallic reflection; mesoscutum with light bluish-green reflections; face above trabecula with coppery blue reflection and below trabecula yellowish; legs uniformly yellowish-brown.

Head: 1.13× as wide as high; vertex with deep reticulate sculpture; eye 0.66× of head height and 2.23× as long as malar space, malar space with two setae on each side; vertex, area between anterior ocellus and eye margin with a single seta each; one pair of setae between antennal toruli; two pairs of setae between antennal toruli and mouth margin.

Antenna: Scape 7.9× as long as wide, 3.29× as long as



Images 14–19. *Dicopomorpha minuta* sp. nov. 14 - female; 15 - Head in frontal view; 16 - Antenna; 17 - Fore wing; 18 - hind wing; 19 - mesosoma. © Authors

pedicel, latter 1.9× as long as wide; funicle 7-segmented; fl₁, fl₄ and fl₆ equal in length; fl₅ and fl₇ equal in length; fl₂ smallest (ring-like) and fl₃ longest segment; all funicle segments as long as wide except fl₁ and spine like setae present in all the funicle segments; mps absent in funicle segments; clava 2.95× as long as wide, slightly longer than preceding four funicle segments with two mps.

Mesosoma: Longer than metasoma, with lineolate-reticulate sculpture in mesoscutum and scutellum.

Wings: Fore wing 10.75× as long as wide; longest marginal fringe 3.75× as long as wing width; hind wing 21× as long as wide; longest marginal fringe 5.75× as long as wing width; fore wing disc with single seta in middle; hind wing with single line of marginal setae, wing disc bare.

Metasoma: Ovipositor not exerted, 1.2× as long as mesotibia; cercal plate long, slightly smaller than ovipositor.

Measurements: Head width, 145; height, 128; eye length, 85; malar space length, 38; antennal torulus height, 15; distance between antennal toruli and transverse trabecula, 8; length and width of antennal segments, scape, 158 : 20; pedicel, 48 : 25; fl₁, 25 : 10; fl₂, 8 : 8; fl₃, 33 : 13; fl₄, 25 : 15; fl₅, 28 : 15; fl₆, 25 : 15; fl₇, 28 : 18; clava, 118 : 40; fore wing length, 430; width, 40;

longest marginal fringe length, 150; hind wing length, 420; width, 20; longest marginal fringe length, 115; mesosoma length, 140; metasoma length, 85; mesotibia length, 125; ovipositor length, 150; cercal seta length, 130.

Male: Unknown.

Etymology

The specific epithet is an adjective derived from Latin and refers to its very small size.

Comments

This species is close to *D. indica* (Subba Rao) and *D. longiscapa* sp. n. (India). It differs from these species by the following features: scape 7.9× as long as wide and ovipositor 1.2× as long as mesotibia (in *longiscapa*, scape about 9× as long as wide and ovipositor shorter than mesotibia; in *indica*, scape 5× as long as wide).

Dicopomorpha longiscapa sp. nov.

(Images 20–25)

urn:lsid:zoobank.org:act:35E42BA5-8E07-4550-BB08-D85DDF8BD92E

Material examined

Holotype: Female, (EDAU/Mym 20/2016), 17.xii.2008, on slide labeled, "India: Kerala, Calicut, Malaise trap, paddy field, coll. K. Rajmohana".

Female

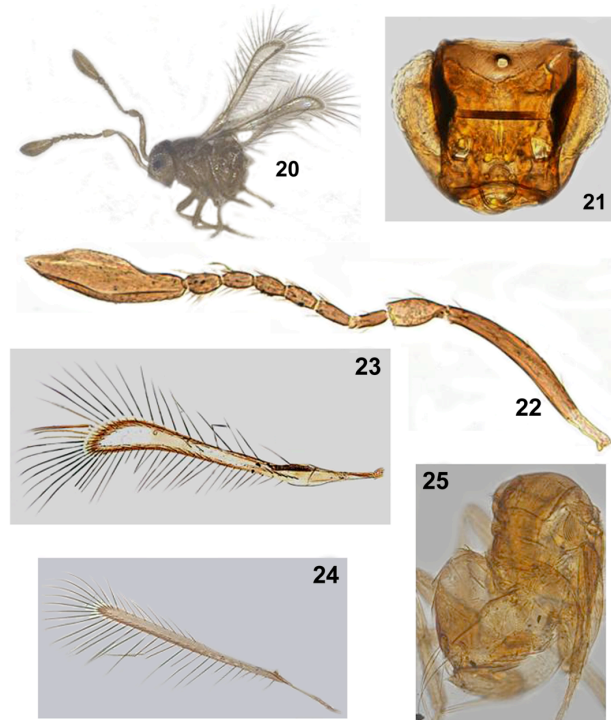
Holotype. Length 350. Body dorsally brown, antenna, legs and rest of ventral side slightly paler.

Head: 1.3× as wide as high; face with shallow rugose punctures; eye large, 0.6× of head height, more than half malar space, latter with two setae; each posterior ocellus with one long seta, two minute setae on anterior ocellus.

Antenna: Scape 8.9× as long as wide, 3.5× as long as pedicel; pedicel 2.2× as long as wide, longer than fl₁; funicle 7-segmented, fl₂ shortest (ring-like) and fl₃ longest segment; fl₄, fl₅ and fl₆ equal; mps absent in funicle segments; clava large, 3.5× as long as wide and longer than preceding four segments, with two large mps.

Mesosoma: Mesoscutum smooth with shallow reticulate sculpture; scutellum not clearly divided, both anterior scutellum and frenum with reticulate sculpture; propodeum short.

Wings: Fore wing 10× as long as wide; longest marginal fringe 3.2× as long as wing width; fore wing disc with four microtrichia on middle and also usual two



Images 20–25. *Dicopomorpha longiscapa* sp. nov. 20 - female; 21 - Head in frontal view; 22 - Antenna; 23 - Fore wing; 24 - hind wing; 25 - mesosoma. © Authors

rows along anterior and posterior margin; hypochaeta situated at junction of submarginal and marginal vein; proximal macrochaeta absent; discal macrochaeta placed almost at midpoint of marginal vein; hind wing 24.5× as long as wide; longest marginal fringe 6.6× as long as wing width, hind wing gradually widening towards rounded apex.

Metasoma: Ovipositor shorter than length of mesotibia.

Measurements: Head width, 180; height, 140; eye length, 90; malar space length, 40; antennal torulus height, 20; distance between antennal toruli, 50; distance between antennal toruli and transverse trabecula, 10; length and width of antennal segments, scape, 177 : 20; pedicel, 50 : 23; fl₁, 28 : 10; fl₂, 10 : 10; fl₃, 33 : 13; fl₄, 28 : 15; fl₅, 28 : 15; fl₆, 28 : 15; fl₇, 30 : 17; clava, 140 : 40; fore wing length, 500; width, 50; longest marginal fringe length, 162; hind wing length, 490; width, 20; longest marginal fringe length, 132; mesosoma length, 125; metasoma length, 138; mesotibia length, 158; ovipositor length, 113; cercal seta length, 163.

Male: Unknown.

Key to Indian species of *Dicopomorpha*

- 1 Antenna with funicle 6-segmented (Image 3); mesoscutum mostly whitish (Images 1 and 6) *D. albithorax* sp. nov.
 - Antenna with funicle 7-segmented (Images 9, 16 & 22); mesoscutum yellow to dark brown (Images 7, 14 & 20) 2
- 2 Fl₂ not ring-like, as long as other segments (Image 9); scape about 4.5× as long as wide; fore wing 15× as long as wide (Image 10) *D. funiculata* sp. nov.
 - Fl₂ ring-like, much shorter than other segments (Images 16 and 22); scape more than 4.5× as long as wide; fore wing less than 15× as long as wide (Images 17 and 23) 3
- 3 Scape 5× as long as wide; fore wing about 11× as long as wide; hind wing about 18× as long as wide (Rao 1989)
 *D. indica* (Subba Rao)
 - Scape more than 7× as long as wide (Images 16 and 22); fore wing less than 11× as long as wide (Images 17 and 23); hind wing more than 20× as long as wide 4
- 4 Ovipositor 1.2× as long as mesotibia; scape 7.9× as long as wide (Image 16); fore wing 10.8× as long as wide (Image 17); hind wing 21× as long as wide *D. minuta* sp. nov.
 - Ovipositor shorter than mesotibia; scape 8.9× as long as wide (Image 22); fore wing 10× as long as wide; hind wing about 24× as long as wide *D. longiscapa* sp. nov.

Etymology

The specific epithet is an adjective of Latin origin in reference to the scape, which is longer than that in all other known species.

Comments

This species is close to *D. indica*, but differs from the following characters: scape about 9× as long as wide; fore wing 10× as long as wide and hind wing about 25× as long as wide (in *indica*, scape 5× as long as wide; fore wing 11× as long as wide and hind wing 21× as long as wide).

REFERENCES

- Brown, B.V. (1993).** A further chemical alternative to critical point drying for preparing small (or large) flies. *Fly Times* 7: 10.
- Enock, F. (1909).** New genera of British Mymaridae (Haliday). *Transactions of the Entomological Society of London* 1909: 449–459.
- Huber, J.T. (2009).** The genus *Dicopomorpha* (Hymenoptera, Mymaridae) in Africa and a key to *Alaptus*-group genera. *Zookeys* 20: 233–244; <http://dx.doi.org/10.3897/zookeys.20.116>
- Huber, J.T. & J.W. Beardsley (2000).** A new genus of fairyfly, *Kikiki*, from the Hawaiian Islands (Hymenoptera: Mymaridae). *Proceedings of the Hawaiian Entomological Society* 34: 65–70.
- Lin, N.Q., J.T. Huber & J. LaSalle (2007).** The Australian genera of Mymaridae (Hymenoptera: Chalcidoidea). *Zootaxa* 1596: 1–111.
- Manickavasagam, S. & A. Rameshkumar (2011).** First report of three genera of fairyflies (Hymenoptera: Mymaridae) from India with description of a new species of *Dicopus* and some other records. *Zootaxa* 3094: 63–68.
- Noyes, J.S. (2015).** Universal Chalcidoidea Data Base. world wide web electronic publication. <http://www.nhm.ac.uk/chalcidoid>
- Noyes, J.S. & E.W. Valentine (1989).** Mymaridae (Insecta: Hymenoptera) - introduction, and review of genera. *Fauna of New Zealand* 17, 95pp.
- Ogloblin, A.A. (1955).** Los nuevos representantes de la fam. Mymaridae (Hym.) de la Republica Argentina. *Bollettino del Laboratorio di Zoologia generale e agraria "Filippo Silvestri"* 33: 377–397.
- Rao, B.R.S. (1989).** On a collection of Indian Mymaridae (Chalcidoidea: Hymenoptera). *Hexapoda* 1: 168–169.
- Triapitsyn, S.V. & V.V. Berezovskiy (2003).** Review of the Mymaridae (Hymenoptera: Chalcidoidea) of Primorskii Krai: genera *Arescon* Walker and *Dicopomorpha* Ogloblin. *Far Eastern Entomologist* 124: 1–15.
- Westwood, J.O. (1839).** Synopsis of the genera of British insects. In: An introduction to the modern classification of insects, founded on the natural habits and corresponding organization of the different families, 1–158pp.
- Yoshimoto, C.M. (1990).** A review of the genera of new world Mymaridae (Hymenoptera: Chalcidoidea). *Flora & Fauna Handbook* No.7, 1–66.





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