



The genus *Cyrtoptyx* Delucchi (Hymenoptera: Chalcidoidea: Pteromalidae) from India, with a description of a new species from the southern Western Ghats of Kerala

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Abstract: A taxonomic account on *Cyrtoptyx* Delucchi (Hymenoptera: Pteromalidae) is given and a new species, *C. wayanadensis*, is described from the southern Western Ghats of Kerala, India. The affinities of the new species with the related species are discussed.

Keywords: *Cyrtoptyx*, Hymenoptera, Chalcidoidea, Pteromalidae, new species, Kerala, India.

The genus *Cyrtoptyx* Delucchi (1956) belongs to the pteromalid subfamily Pteromalinae. Noyes (2011) lists a total of nine described species from the world, but from India (Tamil Nadu) and Pakistan, only one species, *C. latipes* (Rondani), was recorded by Bouček et al. (1979). During the faunal exploration

surveys conducted in the forested tracts of the southern Western Ghats of Wayanad District, Kerala, interesting specimens of *Cyrtoptyx* were collected by sweeping over vegetations from a patch of moist deciduous forest located at the foothills of Banasura peak. The specimens were identified as belonging to an undescribed species and are described hereunder.

The morphological terminology used in the paper follows that of Bouček (1988). The type material of the new species is deposited in the Zoological Survey of India, Western Ghat Regional Centre, Kozhikode, Kerala (ZSIK).

Cyrtoptyx Delucchi, 1956

Cyrtoptyx Delucchi, 1956: 240, 252. Type species *Dinarmus robustus* Masi, 1907, by original designation.

Diagnosis: Body stout, metallic, generally bluish black, dark metallic green or bronze tinged; anterior margin of clypeus shallowly emarginate; antennal formula 11353 in female and 11263 in male; clava with sutures straight, area of micropilosity restricted to the third segment; mesosoma convex; pronotal collar almost as broad as mesoscutum, not margined anteriorly or at the most with a weak carina in the middle; mesoscutum with notauli incomplete; propodeum without nucha, with distinct median carina; forewing with PMV longer than STV (at least 1.8x); metasoma sessile, lanceolate; hind margin of T1 produced.

Hosts: *Cyrtoptyx* species are mainly parasitoids of *Dacus* flies (Diptera: Tephritidae), Curculionidae, Anthribidae (Coleoptera), Gelechiidae, Coleophoridae,

Abbreviations: F1–F6 - funicular segments 1–6; MV - marginal vein; OOL - minimum distance between a posterior ocellus and the corresponding eye margin; PMV - postmarginal vein; POL - minimum distance between the two posterior ocelli; SMV - submarginal vein; STV - stigmal vein; T1–T5 - gastral tergites 1–5.

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Tortricidae, Pyralidae (Lepidoptera), Cynipidae and some Hymenoptera (Noyes 2011).

Species and distribution: World species nine (Noyes 2011). These are: *Cyrtoptyx bruchi* (Blanchard 1940) from Argentina; *C. flavida* Xiao, Chen & Huang, 2003, from Beijing, China; *C. gallicola* Dzhanokmen, 1976, from Kazakhstan; *C. gilloni* Rasplus, 1989, from the Ivory Coast; *C. latipes* (Rondani, 1874) from the holarctic, oriental and afrotropical regions; *C. lichtensteini* (Masi, 1922) from the Holarctic and Afrotropical regions; *C. pistaciae* (Nikol'skaya 1935) from the palaeartic region; and *C. robustus* (Masi, 1907) from the palaeartic region. Delucchi (1956) considered *C. cynipidis* (Masi, 1922) as a probable synonym of *C. robustus*, and this was followed by Graham (1969).

Comments: *Cyrtoptyx* closely resembles the genera *Oxysychnus* Delucchi and *Ischyroptyx* Delucchi in general morphology. It differs from *Oxysychnus* in having pronotal collar only weakly carinate in the middle, clava with the area of micropilosity limited to its apical segment and propodeum not much flat (in *Oxysychnus*, pronotal collar with a complete fine carina, clava with area of micropilosity extending all along its length and propodeum between spiracles almost flat or weakly carinate). *Cyrtoptyx* differs from *Ischyroptyx* in having MV not thickened and at least 1.8x as long as STV, forewing hyaline or subhyaline, hairs on thorax thin and not conspicuous (in *Ischyroptyx*, MV slightly thickened from base, at most about 1.4x as long as STV, forewing often with slight broad infumation and hairs on mesosoma curved and broad, usually white and conspicuous).

***Cyrtoptyx wayanadensis* sp. nov.**

(Images 1-7)

Material examined: Holotype: Female, 19.xi.2011, 11°67.7'40"N & 75°93.5'06"E, altitude 834m, foot hills of Banasura peak, south Wayanad forest Division, Wayanad District, Kerala, India, coll. P.M. Sureshan (ZSI/WGRS/IR-INV-2145)

Paratypes: Three females, one male, data same as holotype except Reg. Nos.: Females: ZSI/WGRS/IR-INV-2146, 2233, 2234; Male: ZSI/WGRS/IR-INV-2235) (one female paratype used for SEM, ZSI/WGRS/IR-INV-2146).

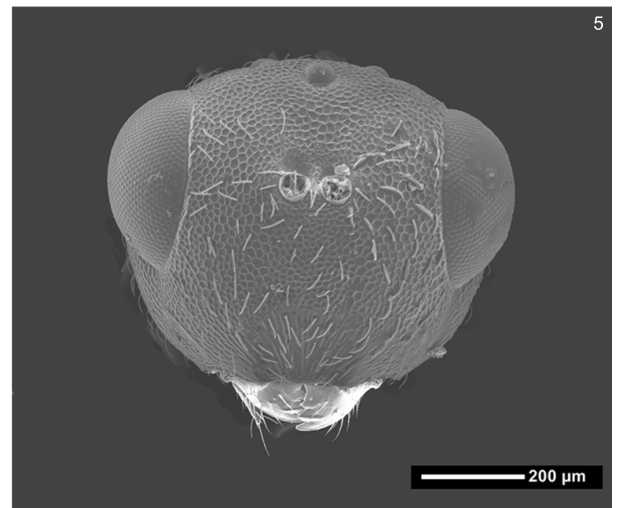
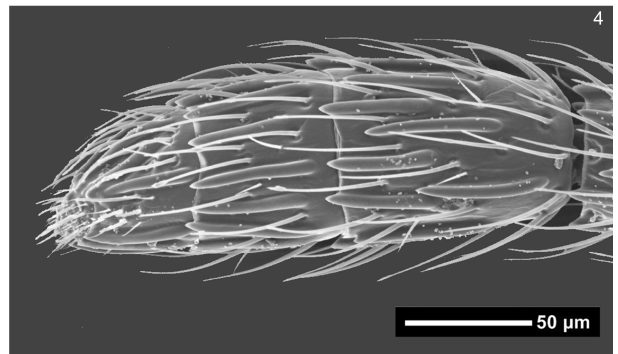
Etymology: The species name is derived from the

name of the district (Wayanad) where the specimens were collected.

Description: Female: Length 3.0–3.9 mm (holotype 3.9mm). Colour: Head metallic blue; eyes cupreous; ocelli yellow; antennae yellowish-brown with scape, pedicel and anelli more yellowish; mandibles yellow with apical half brown; mesosoma metallic blue; tegulae pale yellowish-brown; wings hyaline; veins pale yellowish-brown; stigmal knob dark brown; discal pubescence brown; coxae concolorous with mesosoma except middle coxae brown; femora yellowish-brown except fore femora brown; rest of legs yellowish-white with tips of tarsi brown; gaster blackish-brown with metallic blue bands laterally in the middle of tergites and base of T1 dorsally;

Head (Images 2, 5) distinctly reticulate with moderately dense white pubescence; in dorsal view head width 1.9x length; temple narrow, 0.2x eye length; POL 1.62x OOL; occiput not margined. In front view head width 1.3x height; scrobe deep, not reaching median ocellus; clypeus radiately striated, anterior margin very slightly emarginate; malar grooves indicated; malar space 0.6x as long as eye in profile; eye length 1.3x width in profile; eyes separated 1.4x their length at level of toruli; both mandibles with 3 teeth. Antennae (Images 3, 4) inserted above middle of face, distinctly above lower ocular line; toruli separated 0.32x their individual diameter; scape exceeding well above median ocellus, little shorter than eye and 4.9x as long as pedicel; pedicel plus flagellum 1.3x as long as head width; pedicel 1.6x as long as broad; third anellus little longer than second; anelli together 0.62x as long as pedicel; funicular segments slender, elongated, with uniform thickness, decreasing in length; F1 longest, F2 0.9x F1, F5 shortest, 0.64x F1; F1 and F2 with five irregular rows of sensillae, other segments with four rows of sensillae, clava little wider than funicle, 2.7x as long as broad and 1.51x as long as F5; area of micropilosity restricted to tip of clava; sutures almost straight; pubescence moderately long.

Mesosoma: (Image 6) In dorsal view 1.52x as long as broad, uniformly reticulate punctate with moderately dense white curved hairs, reticulation closer on sides. Pronotum not carinate anteriorly, sharp edged in the middle. Mesoscutum 1.7x as broad as long, notauli incomplete. Scutellum as long as broad, frenum not separated. Dorsellum distinctly reticulate, little elevated. Propodeum finely reticulate, median area



Images 1–7. 1 - *Cyrtoptyx wayanadensis* sp. nov., male body in profile; 2–7: Female: 2 - body in profile; 3 - antenna; 4 - antennal clava; 5 - Head in front view; 6 - Mesosoma in dorsal view; 7 - propodeum and metasoma dorsal view. Photo credit: WGRC, ZSI, Calicut.

more polished, nucha absent, posterior margin deeply emarginate, median carina complete, anterior margin of propodeum with a transverse depression, traversed by rugae; plicae indicated posteriorly; spiracle elongate ovate, almost touching hind margin of metanotum; callus with long white hairs. Prepectus short, finely reticulate, almost equal to length of tegula. Mesopleuron almost completely reticulate except for a narrow triangular smooth area beneath wings. Metapleuron reticulate punctate. Forewing length 2.5x width, basal part almost bare, basal vein represented by few hairs in the upper end; speculum open below; costal cell hairy on upper half and distal end; stigma moderately capitate. Relative lengths of SMV, 18; MV, 12; STV, 5; PMV, 10. Fore and hind coxae distinctly reticulate; mid coxae finely reticulate; hind coxae with tuft of white hairs on the anterior-lateral margin, 1.5x as long as broad; hind femora 3.3x as long as broad; hind tibiae with two unequal spurs.

Metasoma: (Image 7) Gaster lanceolate, 1.4x as long as head plus mesosoma combined in profile; in dorsal view 2.9x as long as broad, slightly collapsing dorsally, posterior margin of T1 slightly produced; T2 almost straight, T3-T5 concave; surface of T2 onwards finely transversely striate reticulate; ovipositor sheath slightly protruded; tergites moderately and densely pubescent on dorso-lateral areas; hypopygium reaching middle of T4.

Male: (Image 1) Length 2.6mm. Colour metallic greenish-blue. Differs from female in having antennae with two anelli and five long funicular segments with dense pubescence; gaster compressed, with an elongated brownish-yellow spot in the base dorsally and completely yellow ventrally.

Remarks: This species is unique in having long slender antennae in both the sexes. In the nature of gaster, forewing venation and general morphology it resembles *C. latipes* (Rondani) but differs from it in the nature of antennae which are long and slender, combined length of pedicel plus flagellum 1.3x as long as head width, F1 and F2 with five irregular rows of sensillae, other segments with four rows of sensillae, gaster with hind margin of T1 only slightly produced. (in *C. latipes*, antennae not long and slender combined length of pedicel plus flagellum slightly shorter than head width, F1-F3 with three rows of sensillae and F4 and F5 with two rows of sensillae, hind margin of T1 moderately produced.). It also resembles *C. flavida*

Xiao et al. 2003, but differs from it in having antennae inserted above middle of face, funicular segments with more than two rows of sensillae, gaster 2.9–3.1x as long as broad with hind margin of T1 slightly produced, and body metallic blue (in *C. flavida*, antennae inserted middle of face, each funicular segments with two rows of sensillae, hind margin of T1 moderately produced, body black with metallic gloss).

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