



## Full length article

# First report of rare genera, *Pteroceraphron* Dessart 1981, *Elysoceraphron* Szelenyi 1936 and *Cyoceraphron* Dessart 1975 (Ceraphronidae: Hymenoptera) from India with new species descriptions

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## ABSTRACT

*Pteroceraphron* Dessart 1981, *Elysoceraphron* Szelenyi 1936 and *Cyoceraphron* Dessart 1975 are three rare genera of family Ceraphronidae (Hymenoptera: Ceraphronoidea). *Pteroceraphron* and *Cyoceraphron* are reported for the first time from India by describing *Pteroceraphron apoorva* Bijoy and Rajmohana sp. nov., *Cyoceraphron indicus* Bijoy and Rajmohana sp. nov. and *Cyoceraphron sahyadri* Bijoy and Rajmohana sp. nov., while *Elysoceraphron* is documented for the first time even from the Oriental region through *Elysoceraphron aadi* Bijoy and Rajmohana sp. nov. Key to genera of Ceraphronidae in India is also provided.

## Introduction

Superfamily Ceraphronoidea (Hymenoptera) comprises of two moderately sized extant families – Ceraphronidae (309 valid species in 16 genera) and Megaspilidae (313 valid species in 12 genera) (Johnson, 2020). They are microhymenopterans and can be easily recognized by their ventrally articulated antennae, the curved stigmal vein in the forewing and by the two tibial spurs on the foreleg (Miko and Deans, 2009).

Ceraphronoids are one of the most commonly collected groups among parasitic Hymenoptera (Martínez de Murgía et al., 2001; Schmitt, 2004) and are known to attack eight insect orders- Coleoptera, Diptera, Hemiptera, Hymenoptera, Mecoptera, Neuroptera, Thysanoptera, and Trichoptera (Mikó et al., 2013). It is rather interesting to note that, of the 16 genera in Ceraphronidae, 10 are monotypic and except for the cosmopolitan genera like *Aphanogmus* Thomson 1858 and *Ceraphron* Jurine 1807, the rest are known by less than ten species only. *Pteroceraphron* Dessart 1981 with type species *Pteroceraphron mirabilipennis* Dessart 1981 and *Elysoceraphron* Szelenyi 1936 with type species *Elysoceraphron hungaricus* Szelenyi 1936 are such monotypic and rare taxa (Johnson and Musetti, 2004; Johnson, 2020). *Pteroceraphron* is so far known only from the Nearctic (Dessart, 1981; Miko, 2020; Mikó

et al., 2016); while the previous records of *Elysoceraphron* were restricted to the Palearctic region (Szelenyi, 1936; Masner, 1957; Dessart and Alekseev, 1980), until Mikó et al. (2013) reported the genus from Oriental region with two unidentified specimens from Thailand. Further, many monotypic genera like *Abacoceraphron* Dessart 1975 (Dessart, 1975), *Ecitonetes* Brues 1902 (Brues, 1902; Masner, 1965) etc. within the family are known by singletons. Seven species of *Cyoceraphron* Dessart 1975 are recorded so far only from Oriental and Afro-tropical region (Johnson and Musetti, 2004). Three species of *Cyoceraphron* are recorded from Oriental region confined mainly to countries like Sri Lanka, Taiwan, and Borneo (Johnson and Musetti, 2004). But no species of the genus is recorded so far from India.

In continuation of our taxonomic studies on the superfamily Ceraphronoidea of India (Bijoy et al., 2014; Bijoy and Rajmohana, 2014), four new species, *Pteroceraphron apoorva* Bijoy and Rajmohana sp. nov., *Elysoceraphron aadi* Bijoy and Rajmohana sp. nov., *Cyoceraphron indicus* Bijoy and Rajmohana sp. nov. and *Cyoceraphron sahyadri* Bijoy and Rajmohana sp. nov. are hereby described and imaged, forming the first report of genus *Elysoceraphron* from the Oriental region and genera, *Pteroceraphron* and *Cyoceraphron* from India.

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