Closterocerus oryzamyntor (Hymenoptera: Eulophidae: Entedoninae), a larval parasitoid of the rice hispa Dicladispa armigera in Bangladesh (Coleoptera: Chrysomelidae: Hispinae)

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Abstract

A new species of the genus Closterocerus (Hymenoptera: Eulophidae), Closterocerus oryzamyntor Gumovsky & Zhu sp. nov., is described based on morphological and molecular data. C. oryzamyntor is a larval endoparasitoid of a major pest of rice, Dicladispa armigera (Chrysomelidae: Hispinae). C. oryzamyntor is known so far only from Bangladesh, and only from this host. The species is characterized by the following morphological features: 1) deep sutures on the vertex of the male, connected to form a complete transvertexal suture in the female; 2) a comparatively long malar space, which is 0.3 times as long as the eye height, and 0.7 times as long as the breadth of the mouth; 3) predominantly pale femora, tibiae, tarsi and antennal scape; 4) the comparatively wide scape of the male, 2.6–2.7 times as long as broad; 5) the male pedicel, flagellum, coxae and gaster, which are all dark.

Partial gene sequences of the 28S D2 ribosomal region were identical for all individuals sampled, but differed from two Closterocerus sequences on GenBank by 24 and 27 base pairs (about 6%). Both CytB and COI mitochondrial gene fragments demonstrated slight variation within the species, but no other eulophids have been sequenced for these genes, thus comparative data are lacking for these genes.

Key words: 28S, Bangladesh, biological control, Chrysomelidae, Closterocerus, COI, Cytochrome B, Dicladispa armigera, DNA, Eulophidae, gene sequences, hispa, parasitoid wasps, rice