



A putative extinct stem chalcidoid family from the lowermost Cretaceous or uppermost Jurassic in Mongolia (Hymenoptera, Chalcidoidea)

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A tiny impression fossil (body 1.3 mm long) collected from the lowermost Cretaceous or uppermost Jurassic deposits of Khutel-Khara in East Mongolia was studied under an environmental chamber scanning electron microscope. The fossil appears to be a chalcidoid in general habitus and character analysis suggests that it belongs to a putative stem group of the Chalcidoidea. However, different interpretations (e.g. Cynipoidea) cannot be ruled out completely at present. Characters supporting relationship to the Chalcidoidea are: (i) long, but not entire, multiporous plate sensillae; (ii) upper (at above eye mid-height) antennal attachment; (iii) reduction in forewing venation approaching the chalcidoid state and (iv) Cu vein on forewing angled at M+Cu fork, similar to that of Jurassic Jurapriidae, Cretaceous Serphitidae and various chalcidoids. The last character might be a synapomorphy of Chalcidoidea + Serphitoidea (including Mymaromatidae) + Jurapriidae, possibly a sister clade to Platygastroidea. It is proposed that the fossil represents a new family.

Oviposition and larval preference of *Chilo partellus* (Lepidoptera: Crambidae) for cultivated and wild host plants

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Oviposition and larval preference of *Chilo partellus* for cultivated and wild host plants was evaluated in no-choice and multiple-choice tests in the laboratory. Oviposition preference tests were carried out in wire mesh cages while larval preference tests were done in petri-dishes. Oviposition preference was evaluated using host plants grown in pots. Leaf discs were used in the case of larval preference evaluation. The cultivated host plants were maize (CRN 3414), sorghum (SNK 3860), pearl millet (Okashana-1), and sweet sorghum (Marega). The wild grasses were *Pennisetum purpureum* (Napier grass) and *Hyparrhenia tamba* (Blue thatching grass). In a multiple-choice test, significantly more eggs were laid on *H. tamba* than on any other host plant. Although few larvae were recovered on *H. tamba* and *P. purpureum* in the presence of other host plants, differences were not significant. In the no-choice test, few larvae were recovered from *H. tamba* while *P. purpureum* and *H. tamba*, which did not differ significantly, had more eggs. The study indicates that some grasses grown together with cultivated host plants may be preferred for oviposition, however, they may not be preferred by neonate larvae. These grasses therefore have potential for use in pest management systems.



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