

CHALCIDOID (HYMENOPTERA) PARASITES OF THE BRUCHID
BEETLES IN IRAQ WITH A DESCRIPTION OF A NEW SPECIES.

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ABSTRACT

The present work deals with five species of parasitic Hymenoptera belonging to Pteromalidae, Eupelmidae and Eurytomidae which have been reared from bruchid beetles. A new species, *Eurytoma irakensis* is described and the species, *Bruchotida orientalis* Crawford is recorded for the first time from Iraq.

INTRODUCTION

All species dealt with in this work were reared by the author during an extensive survey on Bruchidae carried out in Iraq from 1976 to 1982. It includes five species of Parasitic Hymenoptera, of which one is new to science. The new species is described together with notes on all the species. Most of the specimens mentioned below are kept in Iraq Natural History Museum.

PTEROMALIDAE

Anisopteromalus calandrae (Howard)

Pteromalus calandrae Howard, in Comstock, 1881, Ann. Rept. Dept. Agric.
U. S. : 273.

Anisopteromalus mollis Ruschka, 1912, Verh. zool. - bot. Ges. Wien, 62 :
243—245.

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Anisopteromalus calandrae (Howard); Graham, 1969, Bull. Brit. Mus. (N. H.) Ent. Suppl. 16 : 433—434.

I have examined several European specimens of this species deposited in Hungarian Natural History Museum. All my specimens are essentially in perfect conformity with them.

Specimens studied : Iraq : Dohuk, 3 FF, 3 MM, em. 1. iv. 1980, 3 FF, 2 MM, em. 2. iv. 1980, 5 FF, 3 MM, em. 4. iv. 1980, 2 FF, 2 MM, em. 7. iv. 1980, 2 FF, 4 MM, em. 12. iv. 1980, 1 F, 3 MM, em. 13. iv. 1980, all ex. *Callosobruchus maculatus* (F.) and *Callosobruchus chinensis* (L.), (Leg. Abdul-Rassoul).

Distribution : Cosmopolitan

Biology : Graham (1969) and Boucek (1970) recorded it as a parasite of Coleoptera Lepidoptera associated with store product. In Iraq this species is a common parasite of *C. maculatus* (F.) and *C. chinensis* (L.) in seeds of *Cicer arietinum* (Papilionaceae).

Dinarmus acutus Thomson

Dinarmus acutus Thomson, 1878. Hym. Scand., 5 : 56.

Sphaerakis mayri Masi, 1924, Ann. Mus. Civ. St. nat. Genova, 50 : 214—215, and 51 : 157—158.

Dinarmus acutus Thomson; Delucchi, 1956, Z. angew. Ent., 39 : 214—215.

Dinarmus acutus Thomson; Graham, 1969, Bull. Brit. Mus. (N. H.) Ent., Suppl. 16, 434—435.

I have seen specimens of this species from Hungary which identified by Erdos and Szelenyi. The Iraqi specimens examined were quite agree with them, differing only in their smaller size.

Specimens studies : Iraq : Baghdad, Waziriya, 1 F, em. 8. iv. 1982, 4 FF, em. 10. iv. 1982, 1 F, 5 MM, em. 11. iv. 1982, 11 FF 1 M, em. 12. iv. 1982, 1 F, em. 26. iv. 1982 all ex. *Bruchidius fulvus* (Allard), (Leg. Abdul-Rassoul).

Distribution : Widely distributed in Europe, also parts of Africa and Asia (Turkey, Iraq), North America.

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Biology : This species has been recorded as a common parasite of several Bruchid species in pods of Leguminosae (Boucek, 1977). Reared in Iraq from *B. fulvus* (Allard) in seed-pods of *Alhagi graecorum* (Papilionaceae).

Habrocytus sequester (Walker)

Pteromalus sequester Walker, 1835, Ent. Mag., 2 : 495.

Habrocytus sequester (Walker); Graham, 1969, Bull. Brit. Mus. (N. H.) Ent., Suppl. 16 : 496, 516, 554—555.

To be sure that my identification of the Iraqi specimens is correct. I compared them with Erdos specimens deposited in Hungarian Natural History Museum. In all respects, there is a full agreement.

Specimens studied : Iraq : Baghdad - Greaat, 2 FF, 1 M, em. 22. ix. 1976, 2 FF, 1 M, em. 24. ix. 1976, 1 M, em. 26. ix. 1976, all ex. *B. fulvus* (Allard); Baghdad - Waziriya, 2 FF, em. 22. ix. 1976, 1 F, 1 M, em. 10. x. 1976, 1 M, em. 23. ix. 1976, all ex. *B. fulvus* (Allard), (Leg. Abdul-Rassoul).

Distribution : Whole Europe, Iraq.

Biology : It has been recorded as a parasite of Bruchid beetles in pods of Leguminosae and some other Curculionid beetles (Boucek, 1977). In Iraq I have reared this species from *B. fulvus* in seed - pods of *Alhagi graecorum* (Papilionaceae), and also from *Leppidotychius morawitzi* Becker (Curculionidae), in ovaries and seed - pods of the same host plant.

EUPELMIDAE

Bruchocida orientalis Crawford

Bruchocida orientalis Crawford. 1913, Proc. Nat. Mus. 45 (1979) : 247.

This species was originally described by Crawford from three female specimens in India. I have not examined the type and any other representatives of this species, but the original description fits completely the Iraqi specimens. Particularly its colour and the white hairs of the base of the forewing.

Specimens studied : Iraq : Baghdad - Waziriya, 3 FF, em. 1. xii.

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1982, ex. *Spermophagus sericeus* (Geotr); Baghdad - Waziriya, 1 F, em. 28 ix. 1976, 1 F, em. 30. xi. 1976, ex. *B. fulvus*; Baghdad - Abu - Ghraib, 2 FF, em. 30. iii. 1982, 1 F, em. 1. iv. 1982, 1 F, em. 7. iv. 1982, 1 F, em. 21. iv. 1982, 1 F, em. 8. v. 1982, all ex. *B. fulvus* (Leg. Abdul - Rassoul).

Distribution : India. Iraq, South Africa

Biology : Crawford (1913) originally recorded this species as a parasite of *Bruchus chinensis* L. (= *Callosobruchus chinensis* (L.)), in India. Skaife (1926) reared it from *Bruchus pisorum* (L.) and *Bruchus cicatricosus* Fahr. in pods of *Crotalaria capensis* and from *Bruchus rufulus* Fahr. in seeds of *Acacia horrida* in South Africa. I have reared the Iraqi specimens from *B. fulvus* in seed - pods of *A. graecorum* and from *S. sericeus* in seeds of *Convolvulus arvensis* (Convolvaceae).

EURYTOMIDAE

Eurytoma irakensis sp. n.

Body black, femora, mid portion of tibiae, fore tarsi, mid and hind pretarsi, scapes, pedicel, anelli and sometimes first two segments of funicle reddish yellow; femora basally, tibiae basally and apically, mid and hind basal - tarsi white - yellow; venation orange - yellow.

Female - Length 3.5—3.7 mm., head transverse distinctly wider than pronotum; vertex, frons except area beneath antennal scrobes densely umbilicate, clothed with fine white silvery hairs, lower face with strong striae diverging from mouth; prominent and shiny area between ventral orbit and base of mandible present. Antennal scrobes smooth, their lateral margins with raised carina extended to dorsal margin; dorsal margin present; frontal crest present and very well developed. Compound eyes prominent, surrounded by roughly pitted furrow. Clypeus not projecting towards mandibles, striated. Occipital carina strongly developed and post gonial lamella present. Antenna with scape long reaches median ocellus, cylindrical with granulous surface; pedicel pear-shaped, slightly longer than wide; anellus slightly thick; first funicle segment more than twice as long as wide, and slightly longer than second; following segments longer than wide; fifth segment subquadrate; club shorter than two preceding segments.

Prothorax with pronotum convex and transverse, three times as wide as long, dorsal surface strongly umbilicate punctate; antero-lateral angles present. Mesosternum with sterno-transversal carina strongly curving upward; distance between median portion of sterno-transversal carina and mid coxae as long as mid coxa. Metathorax shallowly excavated medially, and limited by two grooves laterally and deeper groove posteriorly.

Propodeum with wide median furrow, distinctly wider than metascutellum; two teethlike projection present on anterior margin of median furrow. Anterior face of fore coxa with ventral carina strongly and sharply pronounced outwardly, projects very low, approaching lamella, area beneath ventral carina narrow, with umbilicate punctate sculpture.

Fore wing with marginal vein shorter than stigmal vein; postmarginal vein longer than stigmal vein. Mid coxa with small lamella. Gaster elongately ovate, with lateral sides compressed, covered with heavier alutaceous sculpture except second tergite, shorter than head and thorax together; petiole shorter than hind coxa, 7th gastral tergite without longitudinal keel-like projection on dorsal surface; 8th tergite short, U-shaped, without swollen dorsal surface without transversal depression basally. Ovipositor sheath slightly directed upwards.

Male - As female, but usually smaller; antennae longer, funicular segments nodose, pedicellate at apex, each node with two whorls of long hairs; gaster short, triangular, petiole longer than hind coxa.

Specimens studied : Iraq : Baghdad, Zaafaraniya, 1F (holotype) emerged on 5.x. 1976, 1M (allotype) em. 5.v. 1977, 1M (paratype) em. 31. vii. 1979, 2FF, 1M (paratypes) em. 5. viii. 1979, 1F, 2MM (paratypes) em. 15.viii. 1979, 1M (paratype) em. 1. ix. 1979, all ex. *Carydon fuscus* Gze. (Leg. Abdul-Rassoul). The types are deposited in the Iraq Natural History Museum.

Distribution : Iraq

Biology: Reared from *C. fuscus* Gze. in seeds and seed-pods of *Acacia franesiana*.

Eurytoma irakensis sp. n. is closely allied to *E. nodularis* Both. but differs from it by the shape of the anterior face of fore coxa, the presence of the lamella on mid coxa, the presence of the heavier alutaceous sculpture on gaster, the shorter marginal vein of fore wing and by the antennal characters of female.

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Male - As female but usually smaller, antennae longer, funicular segments nodose, pedicellate at apex, each node with two whorls of long hairs, gaster short, triangular, petiole longer than hind coxa.

Specimens studied: Iraq: Baghdad, Nataniya, 1♀ (holotype) emerged on 2.x.1976, IM (holotype) and 5.v.1977, IM (paratype) em. 31.vii.1979, 3E♀, IM (paratype) em. 4.viii.1979, IM, 2MM (paratypes) em. 16.viii.1979, IM (paratype) em. 1.ii.1979, all ex. *Caraden fusca* (Gao) (loc. Abol-Kassab). The type are deposited in the Iraq National History Museum.

Distribution: Iraq

Biology: Reared from *C. fusca* Gao. in seeds and seed-pods of

Acacia farnesiana.

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Bull. Iraq nat. Hist. Mus.

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طفيليات غشائية الاجنحة على خنافس البقول في العراق مع وصف نوع جديد

محمد صالح عبدالرسول

متحف التاريخ الطبيعي - جامعة بغداد - بغداد

يتعامل البحث الحالي مع خمسة أنواع من طفيليات غشائية الاجنحة

Eurytomidae, Eupelmidae, Pteromalidae التابعة لعوائل

كانت قد وجدت متطفلة على خنافس البقول .

وصف *Eurytoma irakensis* كنوع جديد للعلم فيما سجل

Bruchocida orientalis لأول مرة للعراق .

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