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## New records of Aphidiidae (Hymenoptera) from Kenya

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**Abstract:** Aphidiidae (Hymenoptera) are parasitoids only of the Aphidoidea (aphids) (STARY 1988). Some of the species are important biological control agents of aphids worldwide (STARY 1970). Four species from Aphidiidae are reported for Kenya. *Binodoxys communis* (GAHAN 1927) and *Pauesia abietis* (MARSHALL 1896) are new for the fauna of Kenya. The aphidiids are collected by Malaise trap. The trap was located in Nairobi range.

**Key words:** Aphidiidae, Hymenoptera, parasitoid, aphid, Kenya, Aphid parasitoids.

### Introduction

The Aphidiidae is not very well studied in Kenya. Just three species were known from that region (STARY 1974). They are *Aphidius camerunensis* (MACKAUER 1966); *Aphidius platensis* (BRETHES 1913) and *Diaeretiella rapae* (M'INTOSH 1855). Some species like *Pauesia juniperorum* (STARY 1960), was unsuccessfully introduced for biological control there (DAY 1997).

This work reports the species of parasitoids of aphids, the aphidiids (Hymenoptera, Aphidiidae) collected in Kenya. The objective was to study the aphidiid fauna in the region.

In this paper was reported *Aphidius colemani*. The species is not new for the Kenyan fauna. It was reported as *Aphidius platensis* BRETHES (STARY 1974), and now is considered as a synonym for *A. colemani* (STARY 1975).

### Material and methods

The materials were gathered in Nairobi, Kenya (1°16'42.96"S; 36°48'39.26"E) with Malaise trap. The trap was deposited for twenty days (1-20.07.2005). In this period invertebrates were collected in 75 % alcohol. From all the material 28 aphidiids were separated. They were stick on triangle plates for determination. The determination is carried out only on the basis of females (STARY 1966).

The studied and identified material is preserved in the collection of the Regional Museum of Natural History-Plovdiv.

## Results

### ***Aphidius camerunensis* (MACKAUER 1966)**

*Aphidius camerunensis* MACKAUER 1966 - Ent. Mag. **101**: 116-118.

M a t e r i a l : Nairobi, Kenya, 1.-20.07.2005.

H o s t s : Sitobion.

E c o n o m y i m p o r t a n c e : indifferent.

### ***Aphidius colemani* (VIERECK 1912)**

*Aphidius colemani* VIERECK 1912 - Proc. U. S. Natn. Mus. **42**: 141.

*Aphidius platensis* BRETHERS 1913 - An. Mus. Nac. Hist. Nat. B. Aires. **24**: 41.

*Aphidius hubrichi* BRETHERS 1913 - An. Mus. Nac. Hist. Nat. B. Aires. **24**: 41-42.

*Aphidius porteri* BRETHERS 1913 - Ann. Zool. Apl. **2**: 3.

*Aphidius aphidiphilus* BENOIT 1955 - Ann. Mus. R. Congo Belge, Ser. 8 Vo, Zool. **36**: 349.

*Aphidius leroyi* BENOIT 1955 - Ann. Mus. R. Congo Belge, Ser. 8 Vo, Zool. **36**: 350.

M a t e r i a l : Nairobi, Kenya, 1.-20.07.2005.

H o s t s : *Aphis*, *Aulacorthum*, *Brachycaudus*, Brevicorinae, *Capitophorus*, *Dysaphis*, *Hialopterus*, *Hayhurstia*, *Hyadaphis*, *Hypermizus*, *Macrosiphon*, *Melanaphis*, *Micromizus*, *Mizodes*, *Mizus*, *Pterocoma*, *Rhopalosiphum*, *Schizaphis*, *Thelaxis*, *Toxoptera*.

E c o n o m y i m p o r t a n c e : one of the most important biological control agents.

### ***Binodoxys communis* (GAHAN 1927)**

*Trioxys communis* GAHAN 1926 - Proc. U. S. Nat. Mus. **70**: 4-5.

M a t e r i a l : Nairobi, Kenya, 1.-20.07.2005.

H o s t s : *Aphis*, *Rhopalosiphum*, *Capitophorus*.

E c o n o m y i m p o r t a n c e : biological control agent of the melon aphid (*Aphis gossypii*).

### ***Pauesia abietis* (MARSHALL 1896)**

*Aphidius abietis* MARSHALL 1896 - In: ANDRE, Spec. Hym. Eur. d'Alg. **5**: 565-566.

M a t e r i a l : Nairobi, Kenya, 1.-20.07.2005.

H o s t s : *Cinara*.

E c o n o m y i m p o r t a n c e : little.

## Key to the species

- 1 (6) Last abdominal sternite lacking projections (fig. 2)
- 2 (3) Propodeum with wide areola, covering more than half of its surface (fig. 3) ..... *Pauesia*  
Antennae 21-22 segmented. Pterostigma dark brown ..... *P. abietis* MARSHALL 1896
- 3 (2) Propodeum with small areola (fig. 4)
- 4 (5) Radial cells and median cell of fore wing fused, closed by intermedian + median vein on the lower side and by interrarial vein on the external side (fig. 7) ..... *Aphidius*

- 1 (2) Anterolateral parts of 1-st abdominal tergite costulate with 6-8 costulae (fig. 5).  
Antennae 16-17 segmented ..... *A. camerunensis* MACKAUER 1966
- 2 (1) Anterolateral parts of 1-st abdominal tergite costate (fig. 6). Antennae 15-16  
segmented ..... *A. colemani* VIERECK 1912
- 5 (4) Fore wing venation reduced; only radial vein developed, intermedian + median vein  
and interradial veins absent (fig. 8) ..... *Diaretiella*  
Antennae 13-15 – segmented. Head and thorax black ..... *D. rapae* M'INTOSH
- 6 (1) Last abdominal sternite with two processes (fig. 1) ..... *Binodoxys*  
- Distance between primary and secondary tubercles less than width at spiracles.  
Antennae 11 segmented. Pedicel and F1 yellow ..... *B. communis* GAHAN 1927

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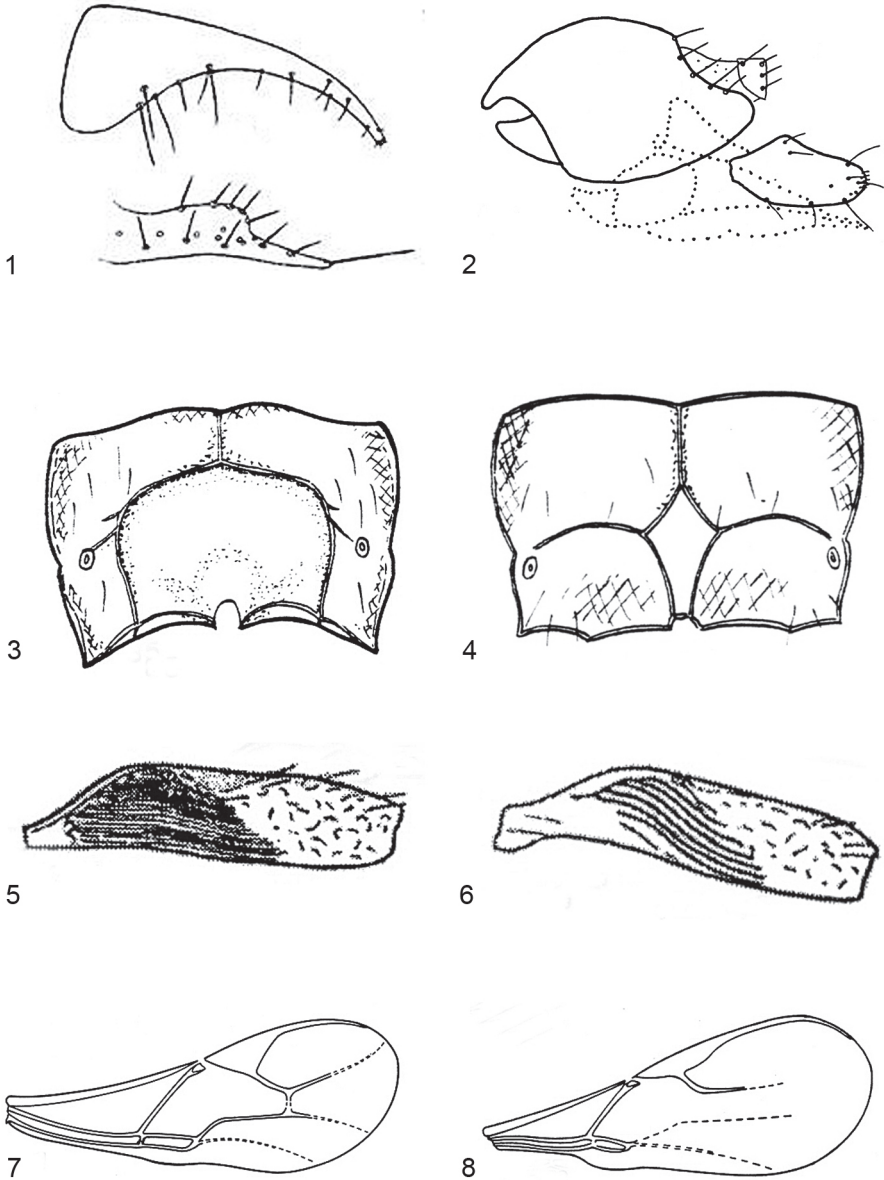
### Zusammenfassung

Vier Arten der Familie Aphidiidae (Hymenoptera) wurden aus Kenia nachgewiesen. *Binodoxys communis* (GAHAN 1927) und *Pauesia abietis* (MARSHALL 1896) sind neu für die kenianische Fauna. Das untersuchte Material ist in der Sammlung des Autors im Naturkundemuseum in Plovdiv.

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**Figs 1-8:** (1) Ovipositor of *B. communis*; (2) Ovipositor of *D. rapae*; (3) Propodeum of *P. abietis*; (4) Propodeum of *A. camerunensis*; (5) Anterolateral parts of 1-st abdominal tergite of *A. camerunensis*; (6) Anterolateral parts of 1-st abdominal tergite of *A. colemani*; (7) Fore wing of *A. camerunensis*; (8) Fore wing of *D. rapae*.

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