

## DEPOSE AUX TERMES DE LA LOI

Les opinions émises dans les publications de la Société sont propres à leurs auteurs. La Société n'en assume aucunement la responsabilité.

La reproduction, même par photocopies, des articles parus dans les publications de la Société est interdite.

## GEDEPONEERD OVEREENKOMSTIG DE WETTELIJKE BEPALINGEN

De meningen welke in de publikaties van de Vereniging uiteengezet worden, zijn eigen aan hun auteurs en blijven onder hun verantwoordelijkheid.

Reproductie, zelfs door fotocopies, van artikels verschenen in de publikaties van de Vereniging, is verboden.

Edité par la Société royale belge d'Entomologie  
Association sans but lucratif, fondée le 9 avril 1855  
Siège social: rue Vautier 29, B-1000 Bruxelles

Uitgegeven door de Koninklijke Belgische Vereniging voor Entomologie  
Vereniging zonder winstoogmerk, opgericht op 9 april 1855  
Sociale zetel: Vautierstraat 29, B-1000 Brussel

Les publications de la Société sont financées avec le concours du Ministère de l'Éducation, de la Recherche et de la Formation de la Communauté Française de Belgique, de la Fondation Universitaire de Belgique, de la Direction Générale, de la Formation et de l'Enseignement artistique de la Communauté Française.

De publikaties van de Vereniging worden gefinancierd met de steun van het Ministerie van Onderwijs, de Universitaire Stichting van België.

ISSN 0374 - 6038

\* \* \*

### Groupes de travail / Werkgroepen

#### Personnes à contacter / contactpersonen

|                             |  |
|-----------------------------|--|
| Carabes/Loopkevers: Carabus | M. DUFRÈNE (U.C.L.)                          |
| Tiques/Teken                | G. VAN IMPE (U.C.L.)                         |
| Odonata: Gomphus            | Ph. GOFFART (U.C.L.) & A. ANSELIN (IRSNB)    |
| Lepidoptera                 | Ch. VERSTRAETEN (Gbx) & M. BAGUETTE (U.C.L.) |
| Orthoptera: Saltabel        | K. DECLER (Gent) & H. DEVRIESE (IRSNB)       |
| Diptera                     | P. GROOTAERT (IRSNB)                         |
| Hymenoptera                 | C. THIRION (Gbx)                             |
| Araignées/Spinnen: Arabel   | L. BAERT (IRSNB)                             |
| Coleoptera                  | G. COULON (IRSNB)                            |

## Notes about Exotic Braconidae (Hymenoptera) in Belgian collections\*

by Yves BRAET

Faculté Universitaire des Sciences Agronomiques de Gembloux; Zoologie Générale et Appliquée (prof. C. Gaspar), Passage des déportés 2, B-5030 Gembloux, Belgique.  
E-mail: zoologie@fsagx.ac.be

### Abstract

During the survey of exotic Braconidae in Belgian entomological collections, we pointed out the presence of *Amicrocentrum* (A.) concolor from Uganda and Zaïre (3 new loc.); A. (A.) curvinervis from Centrafrican Republic (new loc.) and Malagasy (new country); A. (A.) exilis from Ivory Coast (new country) and Zaïre (new loc.); *Euagathis forticarinata*, E. aurea and E. bifoveolata from Java (new loc.); *Zaglyptogastra afenestrata* from Rwanda (new loc.); Z. cristata from Angola, Gabon, Ivory Coast and Zaïre (new countries, 6 new loc.); Z. equitator from Rwanda (new loc.) and Zaïre (new loc.); Z. ?plumosa from Zaïre (new country); Z. pulchricaudis from Zaïre (2 new loc.); Z. spatulata from Zaïre (new loc.); Z. tenuicauda from Zaïre (new loc.); *Stantonia conspurcata* from Java (new country); S. sumatrana from Java (new loc.). Morphological details of a *Gnathopleura semirufa* specimen (French Guiana) are discussed.

Key words: Agathidinae, Alysinae, Amicrocentrinae, Braconinae, Orgilinae, distribution.

### Résumé

A l'occasion d'une visite à différentes collections entomologiques de Belgique, nous avons remarqué la présence de *Amicrocentrum* (A.) concolor d'Ouganda et du Zaïre (3 n. loc.); A. (A.) curvinervis de la République Centrafricaine (n. loc.) et de Madagascar (n. pays); A. (A.) exilis de la Côte d'Ivoire (n. pays) et du Zaïre (n. loc.); *Euagathis forticarinata*, E. aurea et E. bifoveolata de Java (n. loc.); *Zaglyptogastra afenestrata* du

\* Received: 12.I.1997.

Rwanda (n. loc.); *Z. cristata* d'Angola, du Gabon, de la Côte d'Ivoire et du Zaïre (n. pays, 6 n. loc.); *Z. equitator* du Rwanda (n. loc.) et du Zaïre (n. loc.); *Z. ?plumosa* du Zaïre (n. pays); *Z. pulchricaudis* du Zaïre (2 n. loc.); *Z. spathulata* du Zaïre (n. loc.); *Z. tenuicauda* du Zaïre (n. loc.); *Stantonia conspurcata* et *S. sumatrana* de Java (n. loc.). Des détails morphologiques d'un spécimen de *Gnathopleura semirufa* (Guyane française) sont discutés.

### Introduction

As the data on known distribution of exotic braconid species are very sparse and rare, we give here some new countries and new localities about specimens previously unsorted in Belgian collections.

### Taxonomy, depositories and state of the specimens

The collections of the "Institut royal des Sciences naturelles de Belgique" (IRSNB), the "Faculté Universitaire des Sciences Agronomiques de Gembloux" (FSAGx) and the "Musée d'Afrique Centrale de Tervuren" (MRAC) have been examined. For the identification of subfamily, genera and species of Orgilinae and Amicrocentrinae, see VAN ACHTERBERG (1979, 1987, 1990, 1993, 1994b); of *Euagathis* species, see SIMBOLOTTI & VAN ACHTERBERG (1994); of *Zaglyptogastra* species, see QUICKE (1991a); of *Gnathopleura* species, see WHARTON (1980) and for the terminology used in this paper, see VAN ACHTERBERG (1988, 1994a). Some biological informations are given below the subfamily name.

According to the subfamilies, we pointed out the presence of:

### Subfamily Agathidinae

The Agathidines are solitary koinobiont endoparasitoids of Lepidoptera larvae. Most are diurnal. The last instar stage leaves the body of the host and consumes the remains externally, except for the head capsule. They spin a cocoon which is often inside the cocoon spun by the final instar larva of the host. The *Euagathis* species were recorded as endoparasites of Lymantriidae and Arctiidae. They are present in Indo-Australian, SE Palearctic and Afrotropical regions.

*Euagathis forticarinata* (CAMERON, 1899)

Java, 2 females + 1 male, Sukhahumi (= Sukakumi) (FSAGx). Missing legs and antenna partly or totally.

*E. aurea* SIMBOLOTTI & VAN ACHTERBERG, 1994

Java, 1 female, Sukhahumi (= Sukakumi) (FSAGx). Missing whole mid and hind left legs and a part of the antenna.

*E. bifoveolata* SIMBOLOTTI & VAN ACHTERBERG, 1994

Java, 1 male, Sukhahumi (= Sukakumi) (FSAGx). Missing mid legs, hind left tarsus and a part of the left antenna.

### Subfamily Amicrocentrinae

The members of this little subfamily are endoparasites of large caterpillars of Lepidoptera (Cossidae and Noctuidae). They are present in Malagasy and Afrotropical regions. Some details about the morphology of the final instar larvae were given by VAN ACHTERBERG (1979).

*Amicrocentrum (Amicrocentrum) curvinervis* VAN ACHTERBERG, 1979

Tanzania (Tanganika), 1 female, Baie de Kala, 24.III.1947 (FSAGx). Antenna broken after the scapus. Except coxa, hind legs missing.

Centrafrican Republic, 1 male, Bambari, III.1964 (G. PIERARD leg.) (MRAC). In good state. This is the first record for this country.

Malagasy, 1 male, Ambodivoangy, V.1960 (J. VADON leg.) (MRAC). In good state. This is the first record for this country.

*A. (A.) exilis* VAN ACHTERBERG, 1979

Ivory Coast, Bingerville, 1 male, VII.1962 and 1 female, 13-31.III.1964 (J. DECELLE leg.) (MRAC); Zaïre (Congo belge), 1 male, Yangambi (Stanleyville), 28.V.1960 (J. DECELLE leg.) (parasite de *Eulophonotus myrmeleon*, récolté sur [collected on] cacaoyer) (MRAC) with an original annotation paper. The three specimens are in good state. This species is recorded for the first time for these country and locality respectively.

*A. (A.) concolor* (SZÉPLIGETI, 1904)

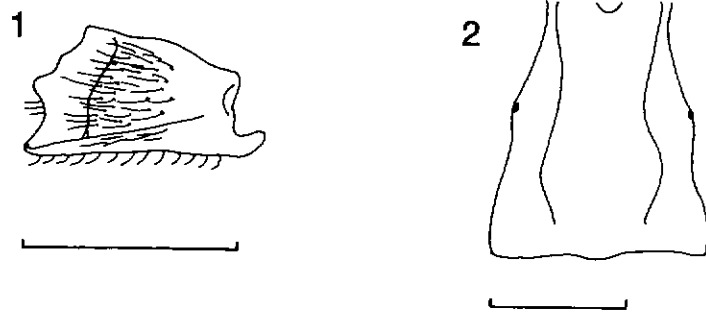
Uganda, 1 specimen, Ile Buvuma (L. Victoria), Tome Bay, II.1968 (E. VERTRIEST leg.) (MRAC). Zaïre, 1 male (MRAC), Kivu, N'dalage, Parc National Albert, 12.VIII.1935 (Dr. H. DAMAS leg.); 1 female (MRAC), Katanga, Kasompi, terr. Jadotville (= Likasi), forêt claire, X.1956, (Miss. Z. BACQ, G. MARLIER, R. LAURENT, N. LELEUP leg.). The three specimens are in good state. This species is recorded for the first time for these localities.

### Subfamily Alysinae

The Alysines were recorded as internal parasitoids of Cyclorrhapha Diptera larva. They have a cosmopolitan distribution but they are much more present in temperate regions.

*Gnathopleura semirufa* (BRULLÉ, 1846)

One female from Cayenne (IRSNB). This specimen is in good state. It was only recorded from South America. PENTEADO-DIAS (1995) has given a description of a *Gnathopleura* sp. related to the *G. semirufa*. In comparison with his description, on one hand, the second and third teeth of mandibles are rounded apically (Fig. 1), differing thus from the description of FISCHER (1975) but, on other hand, we observed a pit in the basal part of propodeal carina as described by PENTEADO-DIAS (1995). Moreover, our specimen has a slightly different shape of scutelar sulcus and a shallow end of the carina on the first tergite (Fig. 2). As suggested by this author, it could be a normal variation for this species or may be a new species. The species described by PENTEADO-DIAS parasitize larvae of Sarcophagidae. The development of the solitary parasitoid larval is approximatively one month.



Figs 1-2. Morphological details of *G. semirufa* (BRULLÉ, 1846). 1: aspect of the left mandible; 2: dorsal aspect of the first tergite. Scale line: 1 mm.

## Subfamily Braconinae

Most members are idiobiont ectoparasites of concealed larvae of xylophagous and stem-boring Coleoptera and Lepidoptera, and rarely Diptera and Symphyta. Gregarious endoparasitism of Lepidoptera pupae was encountered in several genera. The biology of *Zaglyptogastra* species was unknown but host data are only available for a member of *Z. cristata* group that have been reared from *Dirphya princeps* (Col., Cerambycidae) in twigs of coffee (EL-HENEIDY & QUICKE, 1991). The arched ovipositor of the *Zaglyptogastra* spp. is probably used to access to the host tunnel via frass hole (QUICKE, 1991b).

*Zaglyptogastra afenestrata* QUICKE, 1991

Rwanda, 2 females, Rubona, 1970 (1700m) (FSAGx); 1 female, Rubona, 1971 (FSAGx). In good state.

*Z. cristata* (SZEPLIGETI, 1905)

Zaire (Congo belge), 1 female, Bambesa, 26.XII.1939 (J. VRYDAGH leg.) (IRSNB). Antenna broken apically; face yellow-orange with a black point medially; ovipositor dark-brown.

Zaire (Congo belge), 1 female, Mpese, 5.VI.1937 (R.P.J. COOREMAN leg.) (IRSNB). Propodeum dark-brown to black; structure of sculptures of first and second tergites different than the first specimen.

Zaire (Congo belge), 1 female, Lulua, Kapunga, V.1933 (F.G. OVERLAET leg.) (MRAC); Côte d'Ivoire, 1 female, Bingerville, 16-30.IV.1964 (J. DECELLE leg.) (MRAC); Angola, 1 female, Kabinda (à 900 m), 8.II.1933 (Mme GILLARDIN leg.) (MRAC); Gabon, 1 female, Poubara (1°48'S 13°31'E), 29.I.1986, forêt près des chutes (Coll. A. PAULY) (FSAGx). These specimens were in good state.

Until a complete revision of the *Z. cristata* complex species, these specimens should be considered as *Z. cristata*. They are the first records of this species for the Zaire, the Ivory Coast and the Gabon.

*Z. equitator* (WIEDEMANN, 1824)

Zaire (Congo belge), 1 female, Kolwezi, 11.VIII.1969 (FSAGx); 1 female, Sankuru, M'Pemba Zeo (Ganqajika), 10.III.1960 (R. MARÉCHAL leg.); 1 female, Lumbumbashi (Elisabethville), 26.VI.1953 (Ch. SEYDEL leg.) (MRAC). Rwanda, 1 female, Kibungu (=Kibungo), X-XII.1937 (R. VERHULST leg.) (MRAC). The specimen of Kolwezi have the right hind wing missing. The others are in good state except the loss of last flagelomers.

*Z. insidiator* (SZEPLIGETI, 1915)

Zaire, 1 female, Bambesa, 15.IX.1933 (H.J. BRÉDO) (MRAC). In good state.

*Z. sp.* (*Z. ?plumosa* (KIRBY, 1896))

Zaire (Congo belge), 1 female, Mpese, 5.VI.1937 (R.P.J. COOREMAN leg.) (IRSNB). Antenna broken apically; face black except around the clypeus; width of ovipositor at penultimate node less than 1.15 times width of ovipositor at midpoint between base and proximal-most node; propodeum slightly infuscate medially; metasoma brown; ovipositor yellow-clear except for the brown apices of the three arch-like segments; ovipositor sheath hairs markedly lengthened preapically. Probably this species is not a *Z. plumosa* because of the completely black face, the presence of only three arch-like on ovipositor and its width, nor a *Z. afer* because the presence of lengthened preapical hairs on the ovipositor sheath.

*Z. pulchricaudis* (SZEPLIGETI, 1905)

Zaire (Congo belge), 1 female, Stanleyville (=Kisangani), 1925 (J. GHES-

QUIÈRE leg.); 1 female, Lulua, Kafakumba, IX.1933 (F.G. OVERLAET leg.) (MRAC). In good state.

*Z. spathulata* (SZÉPLIGETI, 1914)

Zaïre (Congo belge), 1 female, Stanleyville (= Kisangani), Yangambi, 14-15.XII.1952 (P. BASILEWSKY leg.); 1 female, Wamba, 1936 (Dr. DEGOTTE leg.) (MRAC). In good state.

*Z. tenuicauda* QUICKE, 1991

Zaïre (Congo belge), 1 female, Mpese, 7-26.VI.1993 (R.P.J. COOREMAN leg.) (IRSNB); 1 female, Eala, VI.1935 (J. GHESQUIÈRE leg.) (MRAC). The specimen from Mpese have the face completely black, the width of ovipositor at penultimate node less than 1.15 times width of ovipositor at midpoint between base and proximal-most node and the ovipositor orange-brown with the four arch-like segments brown. The second is in good state.

*Z. tincticanaliculata* var. *tomentosa* (FAHRINGER, 1931)

Zaïre, 1 female, Mbanza Ngungu, 15.IV.[19]84 (FSAGx). In good state.

**Subfamily Orgilinae**

The Orgilinae were a small subfamily of Pyralidae and Tortricidae parasitoids. They have a cosmopolitan distribution.

*Stantonia sumatrana* ENDERLEIN, 1908

Java, 2 males, Sukahumi (= Sukakumi) (FSAGx). Legs and antenna partially or totally missing.

Java, 2 females + 2 males, Soekaboemi (= Sukakumi) (IRSNB). One female have only the basal flagelomers. The other specimens are in good state.

*Stantonia conspurcata* ENDERLEIN, 1908

Java, 1 male, Soekaboemi (= Sukakumi) (IRSNB). Good state except for the missing part of legs and antenna.

**Acknowledgments**

I wish to thank the following persons for providing specimens, help in bibliography search and/or useful informations and suggestions: Dr. P. GROOTAERT, Ir. P. DESSART, Mr. P. DEGREVE (IRSNB); Prof. C. GASPAR, Mss C. THIRION and J. BORTELS, Mr. C. WONVILLE (FSAGx); Dr. E. DE CONINCK and Mr J. DEBECKER (MRAC). I thank D. LÉONARD who reviewed this text.

**Bibliography**

- ACHTERBERG, C. VAN, 1979. - A revision of the species of Amicrocentrinae, a new subfamily (Hymenoptera, Braconidae), with a description of the final larval instar of *Amicrocetrum curvinervis* by J.R.T. SHORT. *Tijdschr. Ent.* 122: 1-28.
- ACHTERBERG, C. VAN, 1987. - Revisionary note on the subfamily Orgilinae (Hymenoptera, Braconidae). *Zool. Verh. Leiden* 242: 1-111.
- ACHTERBERG, C. VAN, 1988. - Revision of the subfamily Blacinae FOERSTER (Hymenoptera: Braconidae). *Zool. Verh. Leiden* 249: 1-324.
- ACHTERBERG, C. VAN, 1990. - Illustrated key to the subfamilies of the Holarctic Braconidae (Hymenoptera: Ichneumonoidea). *Zool. Meded. Leiden* 64: 1-20.
- ACHTERBERG, C. VAN, 1993. - Illustrated key to the subfamilies of the Braconidae (Hymenoptera: Ichneumonoidea). *Zool. Verh. Leiden* 283: 1-189.
- ACHTERBERG, C. VAN, 1994a. - New morphological terms. *Ichnews* 14: 5.
- ACHTERBERG, C. VAN, 1994b. - Two new genera of the tribe Orgilini ASHMEAD (Hymenoptera: Braconidae: Orgilinae). *Zool. Meded. Leiden* 68: 173-190.
- ENDERLEIN, G., 1908. - Neue Arten der Braconidengattung *Stantonia* [Nouvelles espèces du genre *Stantonia* (Braconidae)]. *Stett. ent. Ztg* 69: 110-112.
- FISCHER, M., 1975. - Taxonomische Untersuchungen an neotropischen Alysini, besonders solchen aus dem British museum (Nat. Hist.) in London (Hymenoptera, Braconidae: Alysinae). *Studia ent.* 18 (1-4): 127-152.
- QUICKE, D.L.J., 1991a. - The african species of *Zaglyptogastra* (Hymenoptera) with a checklist of world species. *J. nat. Hist.* 25: 755-771.
- QUICKE, D.L.J., 1991b. - Ovipositor mechanics of the braconine wasp genus *Zaglyptogastra* and ichneumonid genus *Pristomerus*. *J. nat. Hist.* 25: 971-977.
- PENTEADO-DIAS, A.M., 1995. - Notes on the biology of *Gnathopleura* sp. (Hymenoptera: Braconidae) in Brazil. *Ent. News* 106 (3): 127-129.
- SIMBOLOTTI, G. & ACHTERBERG, C. VAN, 1994. - Revision of the *Euagathis* species (Hymenoptera: Braconidae: Bassinae) from Sunda Islands. *Zool. Verh. Leiden* 263: 1-62.
- SZÉPLIGETI, G.V., 1904. - Hymenoptera, Fam. Braconidae. *Genera Insect.* 22: 1-253.
- WHARTON, R., 1980. - Review of the Nearctic Alysini (Hymenoptera: Braconidae) with discussion of generic relationships within the tribe. *Univ. Calif. Publ. Ent.* 88: 1-112.