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# Catalogue of the Hymenoptera in the Natuurmuseum Rotterdam; part I: Introduction & Aculeata of the Ethiopian, Oriental and Australian regions

Vondel, B.J.van, 1995 - Catalogue of the Hymenoptera in the Natuurmuseum Rotterdam; part I: Introduction & Aculeata of the Ethiopian, Oriental and Australian regions - DEINSEA 2: 23-32 [ISSN 0923-9308]. Published 30 November 1995.

The Hymenoptera aculeata from the Ethiopian, Oriental and Australian regions, present in the collection of the Natuurmuseum Rotterdam are catalogued. This is the first part in a series of catalogues dealing with all the Hymenoptera in the collection.

De in het Natuurmuseum Rotterdam aanwezige Bijen, Wespen en Mieren (Hymenoptera of vliesvleugeligen) worden gecatalogiseerd. In dit eerste deel worden de angeldragende soorten (Aculeata) uit het Ethiopische (Afrika beneden de Sahara), het Oriëntale (Zuidoost Azië) en het Australische faunagebied behandeld.

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Keywords: Hymenoptera, Aculeata, Ethiopian region, Oriental region, Australian region.

## INTRODUCTION

In the collection of the Natuurmuseum Rotterdam (NMR) (Natural History Museum Rotterdam) an interesting collection of Hymenoptera is present (about 75.000 specimens). To have better access to the collection and to make the contents better known to specialists, the species will be catalogued. Most of the specimens are identified, but there is also a considerable amount of unidentified specimens.

The catalogue will be published in separate issues, which are provisionally scheduled as follows:

*part 1:* Hymenoptera. Introduction & Aculeata of Ethiopian, Oriental and Australian regions.

*part 2:* Hymenoptera aculeata. Neotropical and Nearctic regions.

*part 3:* Hymenoptera aculeata. Palaearctic region.

*part 4:* Hymenoptera symphyta & parasitica. Palaearctic region.

*part 5:* Hymenoptera symphyta & parasitica. Non-palaearctic regions.

## METHODS & MATERIAL

The Hymenoptera collection is built up during the years since the foundation of this museum in 1927. Important parts of the collection are formed by the large Lindemans-collection with many Neotropical Aculeata and the collection of Aculeata, collected by mr. Pijfers. Especially in the years before 1979 much time was spent in improving the Aculeata collection by the late mr. J.P. van Lith. No revisional work has been done since on this material.

The catalogue will list the names as given in the collection. The family-names are accord-

ing to Goulet & Houbert (1993) and species names are given in alphabetical order. The countries the material originates from are given according to their present names. Type-material in this part of the NMR-collection is restricted to the Oriental Vespidae. It concerns paratypes of the following taxa, all authored by v. d. Vecht: *Allorhynchium concolor* (Fig. 1), *Antherhynchium flavomarginatum flavonigrans* (Fig. 2), *Cyrtolabus suavis* and *Labus pusillum*.

As the author is not an expert in Hymenoptera, specialists are invited to send their remarks on possible synonymy, etcetera.

## CATALOGUE

### ETHIOPEAN REGION

#### CHRYSIDIDAE

*Chrysis lyncea* F.

*Chrysis virescens* Brullé

*Stilbum cyanurum* Först

*Stilbum cyanurum amethystina* F.

MALAWI

MALAWI

MOZAMBIQUE

EGYPT

#### MUTILLIDAE

*Mutilla guineensis* F.

MALAWI

#### SCOLIIDAE

*Campsomeris coelebs* Sichel

MALAWI, NAMIBIA

#### VESPIDAE

*Belonogaster griseus* F.

*Belonogaster guerini* Sauss.

*Eumenes lepeletierii* Sauss.

*Eumenes lepeletierii concinnus* Sauss.

*Eumenes lepeletierii hottentottus* Sauss.

*Polybioides tabida* F.

*Synagris analis* Sauss.

*Synagris cornuta* L.

*Synagris mirabilis* Guérin

*Zethus* spec.

CAMEROUN

MADAGASCAR

NAMIBIA

NAMIBIA

NAMIBIA

CAMEROUN

CAMEROUN, ZAMBIA

CAMEROUN

MALAWI

NAMIBIA

#### FORMICIDAE

*Dorylus fimbriatus* (Shuckars)

*Dorylus* spec.

MALAWI

MALAWI, S. AFRICA, CAMEROUN, TANZANIA

#### SPHECIDAE

*Psammophila tydei capensis* Lep.

*Sceliphron brachystyle* Kohl

*Sphex (Isodontia) pelopoliformis* Dhlb.

*Sphex (Harpactopus) tyrannus* Smith

NAMIBIA

CAMEROUN

CAMEROUN, MALAWI

NAMIBIA

*Sphex (Chlorion) xanthocerus* Ill.*Tachytes mira* Kohl**NYSSONIDAE***Bembex capensis* Lep.*Gorytes natalensis* Smith*Stizus fuscipennis* Smith**PHILANTIDAE***Philanthus triangulum diadema* F.*Philanthus* spec.**FIDELIIDAE***Fidelia paradoxa* Friese**MEGACHILIDAE***Anthidium abdominale* Friese*Megachile bombiformis* Gerst*Megachile maxillosa* Gudr.*Megachile tithonus* Sn.*Megachile volkmanni* Friese**ANTHOPHORIDAE***Anthophora acraensis* F.*Anthophora acraensis albocaudata* Dours*Anthophora caerulea* Friese*Anthophora flavicollis* Gerst*Anthophora niveata* Friese*Anthophora nubica* Lep.*Anthophora velutina* Friese*Anthophora vivida* Smith*Crocisa africana* Rad.*Tetralonia minuticornis* Friese*Xylocopa albiceps neglecta* Ritsema*Xylocopa caffra* L.*Xylocopa carinata fulvopilosa* Friese*Xylocopa flavorufa* Deg.*Xylocopa lepeletieri* Enderl.*Xylocopa nigrita* F.*Xylocopa olivacea* Smith*Xylocopa pubescens* Spin.*Xylocopa torrida* Westw.**APIDAE***Apis adansoni* Latr.**ORIENTAL & AUSTRALIAN REGION****CHRYSIDIDAE***Chrysis oculata* F.*Chrysis principalis* Smith*Stilbum cyanurum* Forst*Stilbum cyanurum* var. *amethystina* F.

MALAWI

MALAWI

NAMIBIA

MALAWI

NAMIBIA

CAMEROUN

MALAWI

NAMIBIA

NAMIBIA

MALAWI

NAMIBIA

MALAWI

MALAWI

ZAIRE

CAMEROUN

MALAWI

MALAWI

NAMIBIA

NAMIBIA

NAMIBIA

CAMEROUN

CAMEROUN, MALAWI

NAMIBIA

CAMEROUN

ETHIOPEA

CAMEROUN

NAMIBIA

CAMEROUN

CAMEROUN, MALAWI

CAMEROUN

EGYPT

CAMEROUN

NAMIBIA

SRI LANKA

SUMATRA

SUMATRA, SRI LANKA, S. INDIA

W. JAVA

**MUTILLIDAE**

<i>Mutilla attenuata</i> Smith	JAVA
<i>Mutilla argenteomaculata</i> Smith	S. INDIA
<i>Mutilla indostana</i> Smith	S. INDIA
<i>Mutilla sexmaculata</i> Swed.	S. INDIA

**POMPILIDAE**

<i>Aporus cotesi</i> Cam.	S. INDIA
<i>Batazanus ashmead</i> Bingham	S. INDIA
<i>Chryphononyx flavus</i> Banks	S. INDIA
<i>Chryphononyx fulgidipennis</i> Sauss.	S. INDIA
<i>Hemipepsis aureosericeus</i> Guérin	SUMATRA
<i>Hemipepsis ceylonica</i> Sauss.	JAVA
<i>Hemipepsis coeruleopenis</i> Sauss.	S. INDIA
<i>Hemipepsis ducalis</i> Smith	JAVA
<i>Hemipepsis fervidissimus</i> D.T.	JAVA
<i>Hemipepsis fulvipennis</i> Bingham	S. INDIA
<i>Hemipepsis gigas</i> Taschenberg	JAVA
<i>Hemipepsis obsoletus</i> Sauss.	S. INDIA
<i>Hemipepsis perplexus</i> Smith	S. INDIA
<i>Macromeris splendida</i> Lep.	JAVA
<i>Macromeris violacea</i> Lep.	SUMATRA
<i>Monodontonyx aspasia</i> Smith	TANIMBAR ISL
<i>Monodontonyx bipartitus</i> Lep.	JAVA
<i>Monodontonyx festivus</i> Banks	JAVA
<i>Monodontonyx javanus</i> Lep.	JAVA
<i>Monodontonyx madraspatanus</i> Smith	SUMATRA
<i>Monodontonyx sericosomus</i> Smith	JAVA
<i>Mygnumia aviculus</i> Sauss.	JAVA
<i>Paracyphonyx pedestris</i> Smith	W. JAVA
<i>Paragenia argentifrons</i> Smith	JAVA
<i>Platyderes circe</i> Cam.	S. INDIA
<i>Pompilus analis</i> F.	S. INDIA
<i>Pompilus biocarlati</i> Bingham	SUMATRA
<i>Pompilus mitis</i> Smith	S. INDIA
<i>Pompilus unifasciatus</i> Smith	S. INDIA
<i>Pompilus vitiosus</i> Smith	S. INDIA
<i>Priocnemis albiplagiata</i> Smith	JAVA
<i>Pseudagenia aegina</i> Smith	S. INDIA
<i>Pseudagenia aegina</i> var. <i>ater</i> Haupt	W. JAVA
<i>Pseudagenia alaris</i> Sauss.	S. INDIA
<i>Pseudagenia blanda</i> Guérin	W. JAVA, SUMATRA
<i>Pseudagenia callisto</i> Smith	W. JAVA
<i>Pseudagenia clypeata</i> Bingham	S. INDIA
<i>Pseudagenia junio</i> Cam.	S. INDIA
<i>Pseudagenia tincta</i> Smith	S. INDIA
<i>Salius iridipennis</i> Smith	JAVA
<i>Salius rithneyi</i> Cam.	S. INDIA

**SCOLIIDAE**

<i>Campsomeris asiatica</i> Klug.	W. JAVA
<i>Campsomeris aureicollis</i> Lep.	W. JAVA
<i>Campsomeris collaris</i> F.	S. INDIA
<i>Campsomeris defectiva</i> Betrem	AMBON
<i>Campsomeris habrocoma</i> Smith	W. JAVA
<i>Campsomeris indica</i> Sauss.	JAVA
<i>Campsomeris javana</i> Lep.	W. JAVA
<i>Campsomeris limbata</i> Sauss.	W. JAVA
<i>Campsomeris lindenii</i> Lep.	W. JAVA
<i>Campsomeris lindenii</i> var. <i>buitenzorgi</i> Betrem	W. JAVA
<i>Campsomeris marginella</i> Klug.	S. INDIA
<i>Campsomeris micans diversipennis</i> Grib.	AMBON
<i>Campsomeris phalerata</i> Sauss.	SUMATRA
<i>Campsomeris quadrifasciata</i> Betrem	SUMATRA
<i>Campsomeris quadriguttulata</i> Burm.	SUMATRA
<i>Campsomeris reticulata</i> Cam.	S. INDIA
<i>Campsomeris sumatrensis</i> ssp. <i>dohrni</i> Mant.	W. JAVA
<i>Campsomeris vanoordti</i> Betrem	S. INDIA
<i>Scolia arnicola</i> Betrem	AMBON
<i>Scolia aureipenniformis</i> Betrem	S. INDIA
<i>Scolia azurea</i> Christ	JAVA
<i>Scolia azurea</i> var. <i>intermedia</i> Betrem	W. JAVA
<i>Scolia azurea</i> var. <i>rubiginosa</i> F.	W. JAVA, S. INDIA
<i>Scolia crythrosoma</i> Burm.	SUMATRA
<i>Scolia deliensis</i> Betrem	JAVA
<i>Scolia erratica</i> Smith	JAVA
<i>Scolia jurinei</i> Sauss.	S. INDIA
<i>Scolia melanosoma</i> Sauss.	W. JAVA
<i>Scolia monticola</i> Betrem	JAVA
<i>Scolia monticola</i> var. <i>campsoeriformis</i> Betrem	JAVA
<i>Scolia obscuropunctata</i> Betrem	S. INDIA
<i>Scolia opalina</i> ssp. <i>brevicornis</i> Sauss.	W. JAVA
<i>Scolia peradenigensis</i> Betrem	S. INDIA
<i>Scolia picteti</i> Sauss.	S. INDIA
<i>Scolia procer</i> Ill.	JAVA
<i>Scolia quadripustulata</i> F.	AUSTRALIA (VICTORIA)
<i>Scolia quadripustulata</i> var. <i>bipunctata</i> Klug.	S. INDIA
<i>Scolia ruficeps</i> Smith	W. JAVA
<i>Scolia saussurei</i> Gribodo	NEW GUINEA
<i>Scolia scutellaris</i> Gribodo	MINDANAO
<i>Scolia vandervechti</i> Betrem	W. JAVA
<i>Scolia velutina</i> Sauss.	AMBON
<i>Scolia vollenhovi</i> Sauss.	JAVA

**VESPIDAE**

<i>Allorhynchium concolor</i> v.d. Vecht	JAVA [4 paratypes] Fig. 1
<i>Allorhynchium vollenhovi</i> (Sauss.)	JAVA
<i>Antepipona brunnipes</i> (F.)	SUMATRA
<i>Antherhynchium flavomarginatum flavonigrans</i> v.d. Vecht	W. JAVA [2 paratypes]
<i>Cyanopterus zethus</i> F.	JAVA

<i>Cyrtolabus suavis</i> v.d.Vecht	S. INDIA [2 paratypes] Fig. 2
<i>Diryichium flavolineatum</i> (Smith)	W. JAVA
<i>Eumenes architectus</i> Smith	SUMATRA
<i>Eumenes arcuata</i> F.	SUMATRA, TANIMBAR ISL.
<i>Eumenes arcuata amboiniensis</i> v.d.Vecht	AMBON
<i>Eumenes arcuata</i> var. <i>blanchardi</i> Sauss.	W. JAVA
<i>Eumenes arcuata</i> var. <i>flavopicta</i> Blanch.	S. INDIA, SRI LANKA
<i>Eumenes bicincta</i> Sauss.	AUSTRALIA (VICTORIA)
<i>Eumenes conica</i> F.	S. INDIA
<i>Eumenes esuriens</i> F.	S. INDIA
<i>Eumenes punctata</i> Sauss.	S. INDIA
<i>Eumenes pyriformis</i> F.	S. INDIA, SIKKIM, AMBON
<i>Eumenes pyriformis</i> var. <i>cincinalis</i> F.	W. JAVA
<i>Gribodia confluenta</i> (Smith)	W. JAVA
<i>Labus pusillum</i> v.d.Vecht	S. INDIA [3 paratypes]
<i>Odynerus fragilis</i> Smith	SUMATRA
<i>Parabolybia meadeana</i> Schulth.	SUMATRA
<i>Pareumenes depressa</i> Sauss.	JAVA
<i>Parischnogaster mellyi</i> Sauss.	W. JAVA
<i>Parischnogaster striatulus</i> Buysson	SUMATRA
<i>Polistes confusus</i> Smith	TAIWAN
<i>Polistes diabolicus</i> Sauss.	JAVA
<i>Polistes hebraeus</i> F.	JAVA
<i>Polistes sagittarius</i> Sauss.	SUMATRA, JAVA
<i>Polistes stigma</i> F.	S. INDIA
<i>Polistes tenebricosus hoplites</i> Sauss.	SUMATRA
<i>Polybioides raphigastra</i> Sauss.	SUMATRA
<i>Provespa ashmead dorylloides</i> Sauss.	SUMATRA
<i>Pseudozumia indica</i> Sauss.	JAVA
<i>Rhynchium argentatum</i> F.	S. INDIA
<i>Rhynchium brunneum</i> F.	S. INDIA, SRI LANKA, TANIMBAR ISL.
<i>Rhynchium haemorrhoidale</i> F.	JAVA, SUMATRA
<i>Rhynchium metallicum</i> Sauss.	S. INDIA
<i>Rhynchium nitidulum</i> F.	S. INDIA
<i>Ropalidia artifex</i> Sauss.	SUMATRA, S. INDIA
<i>Ropalidia cyathiformis</i> F.	JAVA
<i>Ropalidia ferruginea</i> F.	SUMATRA, S. INDIA
<i>Ropalidia flavopicta</i> Smith	SUMATRA
<i>Ropalidia malayana</i> var. <i>erythrospila</i> Cam.	SUMATRA
<i>Ropalidia marginata</i> Lep.	S. INDIA
<i>Ropalidia picta</i> Sauss.	SUMATRA
<i>Ropalidia sumatrae</i> Weber	SUMATRA
<i>Stenogaster micans</i> Sauss.	SUMATRA
<i>Vespa affinis</i> F.	SUMATRA
<i>Vespa affinis moluccana</i> v.d.Vecht	AMBON
<i>Vespa analis</i> F.	W. JAVA
<i>Vespa luctuosa</i> var. <i>borneensis</i> Bequart	SUMATRA
<i>Vespa tropica</i> L.	W. JAVA
<i>Vespa tropica haematodes</i> Bequart	S. INDIA
<i>Vespa tropica trimeres</i> v.d.Vecht	SULAWESI

<i>Vespa tropica trisignata</i> Pér.	AMBON
<i>Vespa velutina</i> Lep.	W. JAVA
<b>FORMICIDAE</b>	
<i>Camponotus gigas</i> Latr.	SUMATRA
<i>Camponotus mistura</i> Smith	SUMATRA
<i>Carebara lignata</i> Westwood	W. JAVA
<i>Cleranoplus mucronatus</i> Smith	SUMATRA
<i>Cremastogaster brevidentata</i> Vich.	SUMATRA
<i>Cremastogaster inflata</i> Smith	SUMATRA
<i>Dolichoderus affinis</i> Em.	SUMATRA
<i>Echinopla melanarctos</i> Smith	SUMATRA
<i>Odontomalus rixosus</i> Smith	SUMATRA
<i>Polyrhachis bihamata</i> Drury	SUMATRA
<i>Polyrhachis mayri</i> Rog.	SUMATRA
<i>Polyrhachis proxima</i> Rog.	SINGAPORE
<i>Prenolepis longicornis</i> Latr.	SUMATRA
<b>AMPULICIDAE</b>	
<i>Ampulex compressa</i> F.	S. INDIA
<b>SPHECIDAE</b>	
<i>Ammophila atripes</i> Smith	S. INDIA, W. JAVA
<i>Ammophila humbertiana</i> Sauss.	S. INDIA
<i>Ammophila laevigata</i> Smith	S. INDIA
<i>Chlorion splendidum</i> F.	S. INDIA
<i>Liris nigripennis</i> Cam.	S. INDIA
<i>Lyroda formosa</i> Smith	SUMATRA[?]
<i>Notogonia jaculatrix</i> Smith	SUMATRA, W. JAVA
<i>Notogonia subtesselata</i> Smith	SUMATRA
<i>Prionyx crudelis</i> (Smith)	S. INDIA
<i>Sceliphron bengalense</i> (Dahlb.)	S. INDIA, SUMATRA, JAVA
<i>Sceliphron coromandelicum</i> Lep.	INDIA
<i>Sceliphron javanum</i> Smith	JAVA, SUMATRA
<i>Sceliphron laetum</i> Smith	TANIMBAR ISL.
<i>Sceliphron madraspatanum</i> (F.)	INDIA, SUMATRA, JAVA, AMBON
<i>Sphecius malayanus</i> Handl.	TANIMBAR ISL.
<i>Sphex argentatus</i> F.	AMBON
<i>Sphex aurulentus</i> F.	S. INDIA, SRI LANKA
<i>Sphex diabolicus</i> Smith	S. INDIA
<i>Sphex formosus</i> Smith	AMBON
<i>Sphex lobatus</i> F.	S. INDIA, SIKKIM
<i>Sphex luteipennis</i> Mocs.	AMBON
<i>Sphex maurus</i> Smith	N. SULAWESI, AMBON
<i>Sphex moroso triodon</i> Kohl	JAVA
<i>Sphex ochropterus</i> Kohl	JAVA
<i>Sphex resplendens</i> Kohl	AMBON
<i>Sphex sericeus ferocior</i> v.d.Vecht & Krauben	AMBON
<i>Sphex umbrosus</i> Christ.	S. INDIA, SRI LANKA, SULAWESI
<i>Sphex viduatus</i> Christ.	S. INDIA

<i>Tachytes modesta</i> Smith	S. INDIA, SRI LANKA
<i>Tachytes spec.</i>	SUMATRA, W. JAVA
<i>Tachysphex erythrogaster</i> Cam.	S. INDIA
<i>Theronica zebra</i> Voll.	S. INDIA
<i>Xanthopimpla immaculata</i> Marley	S. INDIA
<b>CRABRONIDAE</b>	
<i>Crabro spec.</i>	S. INDIA
<i>Larra carbonaria</i> Smith	SUMATRA
<i>Larra maura</i> (F.)	S. INDIA
<i>Larra rufipes</i> Smith	W. JAVA
<i>Oxybelus squamosus</i> Smith	S. INDIA
<b>NYSSONIDAE</b>	
<i>Bembex borrei</i> Handl.	S. INDIA
<i>Bembex trepanda</i> Dahlb.	S. INDIA
<i>Gorytes alipes</i> Bingham	S. INDIA
<i>Nysson rugosus</i> Cam.	S. INDIA
<i>Nysson spec.</i>	S. INDIA
<i>Stizus bichlypeatus</i> Christ.	S. INDIA
<i>Stizus prismaticus</i> Smith	S. INDIA
<i>Stizus rufescens</i> Smith	S. INDIA
<i>Stizus vespiformis</i> (F.)	S. INDIA
<b>ANTHOPHORIDAE</b>	
<i>Anthidium orientale</i> Bingham	S. INDIA
<i>Anthophora bicincta</i> F.	S. INDIA
<i>Anthophora violacea</i> Lep.	S. INDIA
<i>Anthophora zonata</i> L.	S. INDIA, SUMATRA, W. JAVA
<i>Ceratina hieroglyphica</i> Smith	S. INDIA
<i>Ceratina sexmaculata</i> Smith	S. INDIA
<i>Ceratina viridissima</i> Dall. Torr.	S. INDIA
<i>Crocisa emarginata</i> Lep.	W. JAVA
<i>Crocisa histrio</i> F.	SRI LANKA
<i>Lithurgus atratus</i> Smith	S. INDIA
<i>Megachile atrata</i> Smith	SUMATRA[?]
<i>Megachile bicolor</i> F.	S. INDIA
<i>Megachile disjuncta</i> F.	S. INDIA
<i>Megachile lanata</i> F.	S. INDIA
<i>Megachile metathoracica</i> Smith	W. JAVA
<i>Megachile quartinae</i> Gribodo	S. INDIA
<i>Xylocopa aestuans</i> L.	JAVA
<i>Xylocopa amethystina</i> Bingham	S. INDIA
<i>Xylocopa aruana</i> Ritsema	NEW GUINEA
<i>Xylocopa auripennis</i> Lep.	S. INDIA
<i>Xylocopa auripennis iridipennis</i> Lep.	JAVA
<i>Xylocopa caerulea</i> F.	W. JAVA
<i>Xylocopa collaris</i> Lep.	W. JAVA, S. INDIA
<i>Xylocopa confusa</i> Per.	SUMATRA
<i>Xylocopa fenestrata</i> F.	S. INDIA
<i>Xylocopa flavonigrescens</i> Smith	SUMATRA
<i>Xylocopa forbesii</i> Kirby	TANIMBAR ISL.



*Xylocopa latipes* Drury  
*Xylocopa myops* Ritsema  
*Xylocopa perversa* Wiedem.  
*Xylocopa pubescens* Spin.  
*Xylocopa tenniscapa* Westwood  
*Xylocopa tranquebarica* F.  
*Xylocopa unicolor* Smith  
*Xylocopa verticalis* Lep.

W. JAVA, SUMATRA  
SUMATRA  
W. JAVA  
S. INDIA  
S. INDIA, SRI LANKA  
S. INDIA  
AMBON  
S. INDIA

**APIDAE**

*Apis dorsata* F.  
*Apis florea* F.  
*Apis indica* F.

W. JAVA, SUMATRA  
S. INDIA  
SUMATRA

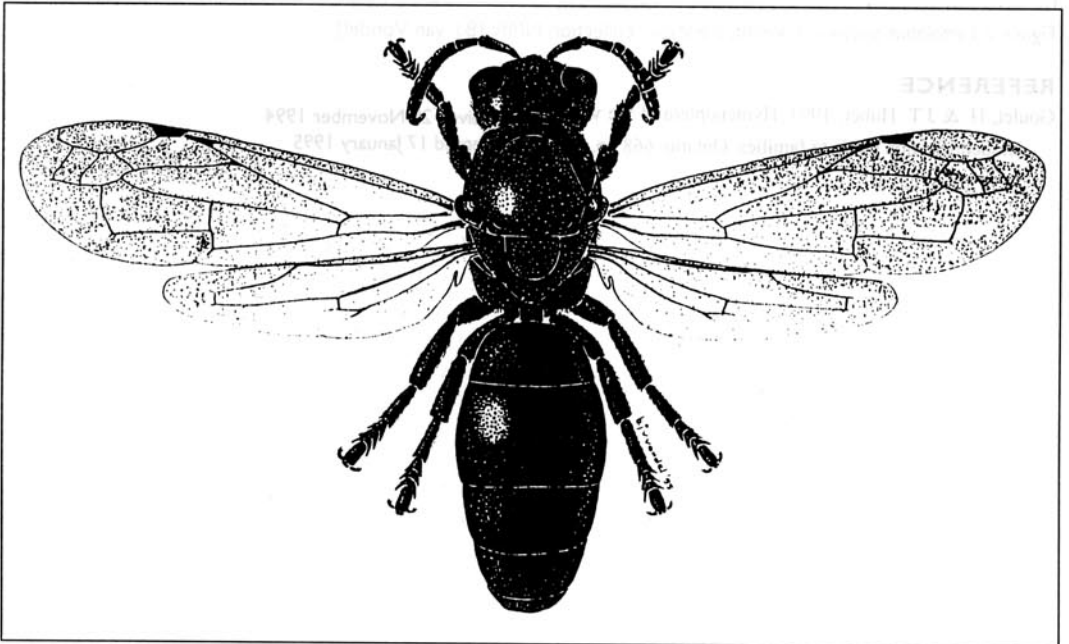


Figure 1 *Allorhynchium concolor* v.d Vecht, paratype, collection NMR; [B.J. van Vondel]

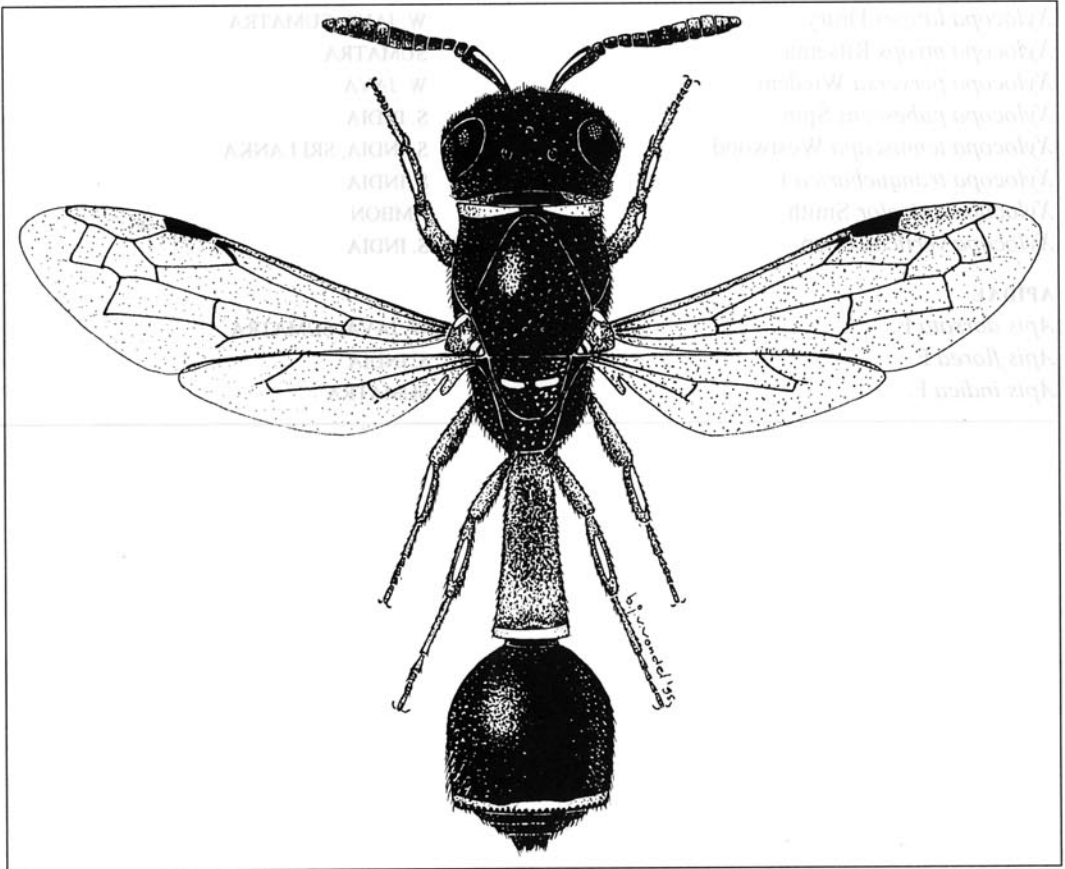


Figure 2 *Cyrtolabus suavis* v.d. Vecht, paratype, collection NMR; [B.J. van Vondel].

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received 29 November 1994  
accepted 17 January 1995