# Afrotropical Asilidae (Diptera) 15. The genus Neolophonotus Engel, 1925. Part 4. The *comatus* species-group (Asilinae : Asilini)

by

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#### ABSTRACT

The comatus species-group of the genus Neolophonotus, containing 117 species, is dealt with; 98 new species are described.

New species: acrolophus, acrophilia, algidus, anatolicus, annae, annettae, arboreus, argyphus, atrox, aureolocus, avus, baeoura, bigoti, boa, botswana, brendani, brunales, carnifex, chrysopylus, circus, clavulus, colubris, costatus, cristatus, currani, cymbius, cynthiae, declivicauda, destructor, diana, dolabratus, dysmicus, ellenbergeri, engeli, feijeni, fumosus, gilvipilosus, gorongoza, gravicauda, hilaryae, hobbyi, holmi, hulli, hymenotelus, iota, jubatus, kerteszi, labeonis, lacustrinus, lasius, leechi, leptostylus, leucodiadema, lindneri, loewi, loganius, longicauda, mafingaensis, malawi, margaracta, mediolocus, meiswinkeli, melanoura, membraneus, mesotopus, midas, milvus, molestus, necator, nero, nisus, nodus, notius, occidualis, oldroydi, pachystylus, penrithae, percus, pusillus, quickelbergei, ramus, raptor, rhopalotus, rudi, saxatilus, schofieldi, sicarius, sinis, spinosus, tribulosus, uncinus, variegatus, vermiculatus, vincenti, walkeri, wiedemanni, xanthodasus, zigzag.

New synonyms: Lophopeltis albion Curran, 1934 = Lophopeltis angola Curran, 1934; Lophopeltis arno Curran, 1934 = Dysmachus parvus Ricardo, 1920; Lophonotus incisuralis Macquart, 1838 = Asilus comatus Wiedemann, 1821; Asilus noas Walker, 1849 = Asilus aphellas Walker, 1849.

New combinations: Dysmachus hirsutus Ricardo, 1920 is transferred to Neolophonotus; Lophybus melanolophus dilatus Hull, 1967 is transferred to Dasophrys.

Revised status: Lophonotus erythracanthus Hermann, 1907, previously synonymised with Asilus comatus Wiedemann, 1821, is reinstated as a valid species within the genus Neolophonotus.

#### INTRODUCTION

This is the last contribution in a series of four articles dealing with a revision of the huge Afrotropical genus Neolophonotus. In the first part (Londt 1985) I gave an account of my conclusions concerning the taxonomy of the genus, and the reader should consult that paper before using any of the subsequent parts. In Part 1 I subdivided the genus into six species-groups and dealt with three of the smaller of these (viz. chionthrix, squamosus and angustibarbus species-groups). Part 22 was devoted to the suillus species-group (including the genotype N. suillus). In Part 3<sup>3</sup> I surveyed the fifth of the groups, the pellitus species-group. This paper is devoted to the sixth, and largest group, the *comatus* species-group.

Ann. Natal Mus. 27(1): 39-114 (1985).
 Ann. Natal Mus. 27(2): 513-600 (1986).
 Ann. Natal Mus. 28(2): 383-454 (1987).

With the completion of the present study of *Neolophonotus* I have dealt with no fewer than 255 valid species, divided amongst the species-groups as follows:

chionthrix	1
squamosus	
angustibarbus	
suillus	
pellitus	
comatus	<u>11</u>
Total	<u>25</u>

To this number it may later be possible to add a few of the species I listed as 'Neolophonotus' species not covered in this study' (Londt 1985:52), should the appropriate type specimens be located. In addition I expect many more new species to be discovered during the course of future collecting. What is certain is that this genus is now the largest in the world asilid fauna.

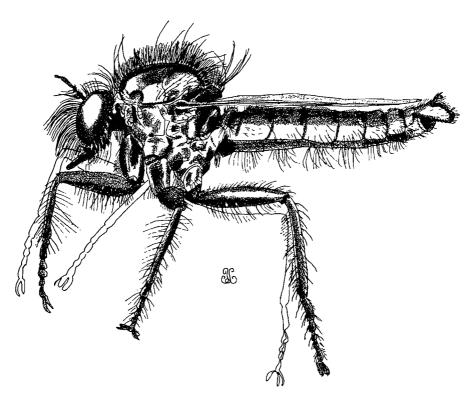


Fig. 1. Neolophonotus comatus (Wiedemann, 1821) entire male.

#### **ACKNOWLEDGEMENTS**

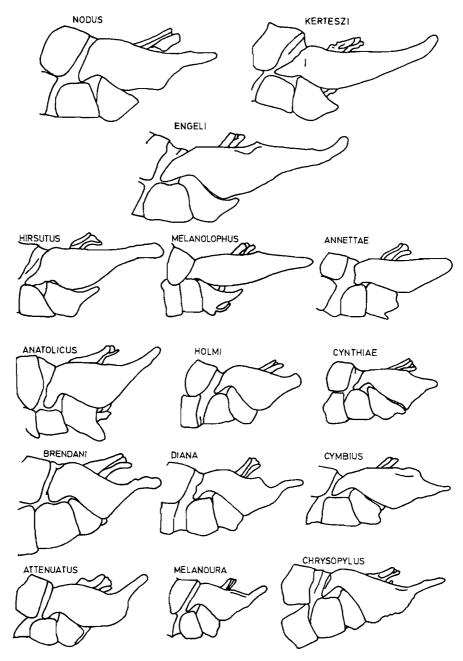
Once again I am indebted to the Council for Scientific and Industrial Research for the Comprehensive Research Grant awarded to me for my work on the Afrotropical Asilidae. Without this financial assistance it would not have been possible for me to visit and collect at many of the localities listed throughout this major work on Africa's largest genus of Robber Flies. I wish to thank Dr Brian Stuckenberg for his constructive comments on the manuscript and Mrs Annette Seymour for the technical assistance she has rendered. A special thanks is due to all those curators who lent me material for this study. Many of the specimens, including types, were lent to me for periods of up to 10 years. Such co-operation is very much appreciated.

#### **TAXONOMY**

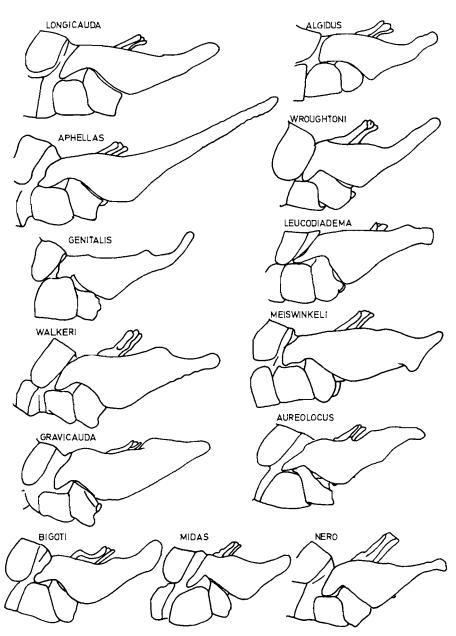
## The Neolophonotus comatus species-group

This species-group is characterised by the following combination of characters: hind coxae possess at least one well-developed, laterally situated bristle, together with fine setae; postpronotal lobes finely setose; mane well developed and of uniform colour (usually black—only one species uniformly white—ie albus). All species have dark red-brown proboscis and palpi. Acrostichal setae may be well developed or not clearly evident amongst the setae of the well-developed mane. Dorsocentral bristles are always present (7–10 pairs) and are found both behind and before the transverse suture. Wing membrane usually transparent and colourless (unless otherwise indicated in descriptions).

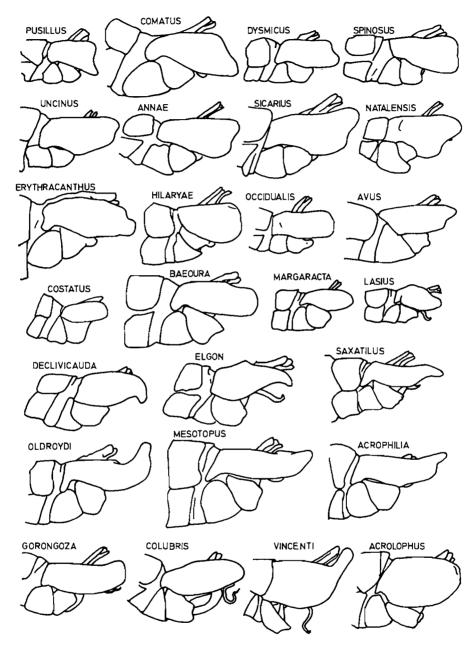
Species in this group resemble each other closely, and there are very few characters, apart from those of the male genitalia, which can be used in the construction of a dichotomous key. I have, for this reason, decided against the provision of this kind of identification aid. Instead, I present the reader with a number of pages of illustrations of male genitalia arranged, rather subjectively, in groups with structural similarities. Workers wishing to identify a species in the comatus group must possess at least one good male specimen, and should be prepared to dissect and clear the genitalia in warm KOH (although this is not always necessary). Most of the species can be readily separated on the basis of external features of the genitalia. The shape of the epandrial lobe is of great importance, as are the shapes of the hypandrium and gonocoxite in lateral aspect, and most of the species can be identified positively using these structures alone. The development of the aedeagus may also be important. Once a match has been made using the visual key to genitalia, the reader should consult the description of the species indicated, and look at other details of the genitalia illustrated for that species. Table 1 may also be of use in establishing quickly the known distribution and seasonal incidence of any particular species.



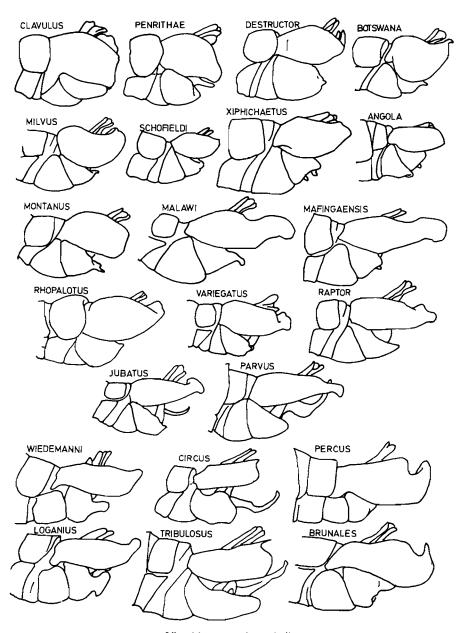
Visual key to male genitalia



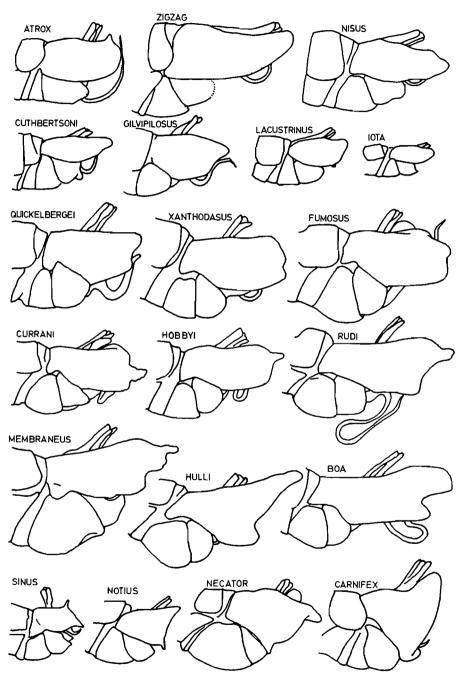
Visual key to male genitalia



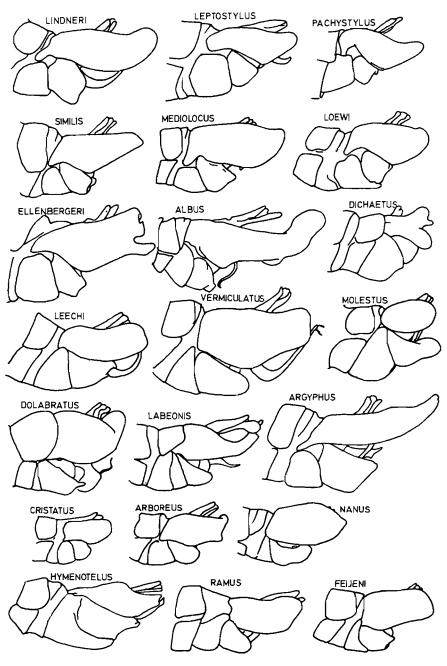
Visual key to male genitalia



Visual key to male genitalia



Visual key to male genitalia



Visual key to male genitalia

## TABLE 1

The distribution and seasonal incidence of species belonging to the *Neolophonotus comatus* species-group.

	Distribution (Climatic regions)	Seasonal incidence (Months of the year)
Species	MAKWS SEED L HNTBZ	J F M A M J J A S O N D
	**	*
acrolophus acrophilia	*	*
albus	*	_ * _ * = * _
algidus	* _ *	***
anatolicus	*	*
angola	* *	* * * *
annae	* _ * *	* * *
annettae	* - *	* *
aphellas	*	* *
arboreus	* *	*
argyphus	**	
atrox	*	_ * * * * *
attenuatus		*
aureolocus avus	*	
avus baeoura		*
bigoti		* * *
boa	*	*
botswana	*_	* *
brendani	*	* * *
brunales	*	* *
carnifex	<del>*</del>	* _
chrysopylus	*	*
circus	* * -	* * _ * _ *
clavulus	*_	* *
colubris	*	* =
comatus		
costatus cristatus		
currani	*	
cuthbertsoni	* * * * _ * * _ *	* * * * * * * *
cymbius	* * * _ * _ *	* * * * * _ * *
cynthiae	*	* _ *
declivicauda	*	* * * *
destructor	*	*
diana	*	*
dichaetus	- * - <del>-</del> - * * *	* - * * * * *
dolabratus	*	**
dysmicus		_ *
elgon	*	
ellenbergeri engeli	*_* * * *	* * * * *
erythracanthi		
feijeni	*	* <b></b>
fumosus	*	*
genitalis	*	* * =
gilvipilosus	*	
gorongoza		*
gravicauda	* * *	* *
hilaryae	*	*
hirsutus	* *	* _ * * * * * * _
hobbyi	**	* * _
holmi	*	*

## TABLE 1 (cont)

The distribution and seasonal incidence of species belonging to the *Neolophonotus comatus* species-group.

						Dist imat				)									asoi onth					)		
Species	M	Α	K	W	S	SE	Ε	D	L	Н	NT	` B	Z		J	F	M	Α	M	J	J	Α	S	o	Ν	D
hulli	_	_	*	*	_	_	_	_	_	_		_		_			_		_	_		_	*	٠	*	_
hymenotelus	_	_		*		_	_	_	_	_	_	_	_	_	_	_	_				_	_	*	_	_	_
iota	_	_	_	*	_	_	_	_	_	_		_	_	_	_	_	_	_	_	_	_	*	*	_	_	
jubatus	_	_		*	_		_	_	_	_	_	_	_	_		_	_	_	_		_	_	*		_	_
kerteszi	*	_	*		_	_		_	_	_	. —	_	_	_		_	_	_	_	_	_	_	_	*	*	_
labeonis	_	_			_	_	_	_		_	_	*	_	_	_	*	_	_	_	_	_	_	_	_		_
lacustrinus	_	_	*	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_		_	_	*	*	*	_
lasius	_	_		_	_	_			_					-		—	_	_	_							
leechi	—	_	_	_	_	_	_	_	_	_	_	_	. *		_		_				_				_	_
leptostylus	*	_	—	_	_	_	—	_	-	_	_			-	_				_					_	_	_
leucodiadema	· —	_	_	_							_	_	_	-	_									_	_	_
lindneri	_	_	_									_	_	-	_				_					_		_
loewi	_	_		_		_					_			-	_				_					_	_	_
loganius		—				_						_	_	-	_	_			_					*		_
longicauda				_		_					*	_	_	-	_	*			*						*	_
mafingaensis	_	—		_	_	_	_	_	_	_	_	~	*		_	—	_		_					*		_
malawi	_	—	—	—	_	_	—	_	_	_	_	_	*		_	—	_		_					*	—	_
margaracta	*		_	—	_	_	_	—	_	_	_		_	-	_	—			_					_		_
mediolocus	_	—	*	*							_	_	-	-					_					—	_	_
meiswinkeli	_	_	_	_	_						*		~	-			_				_			_	_	_
melanolophu	*	*	_	_	_						_			-					—						_	_
melanoura	_				_	_					_	_	_	-					—							
membraneus	_	_	_		_				_		_	_	_	_					-						_	_
mesotopus	_	_				_				_	_	_	_	-					_						*	_
midas	_	_	_	*		_		_	_	•	_	_	_	-					_							
milvus	_	_	_			_		_	_	_	_	_	_	-		_			_							
molestus		_		<i>'</i>		_	_	_	_	_	_		*	-					_							
montanus	_	_	_	_	_	_	_		_	_	_	_							_						_	
nanus natalensis	_	_	_	_	_	_	_	_	_	_						_			_							
necator	_	_				_			_		_			_					_		_			_	_	_
nero		_				=													_	_					Ξ	
nisus	_	_				_					_	_	_	_	_	_			_				_		_	
nodus	_		_	*	_		_	_	_	_	_	_	_	_	_	_							_	*	_	_
notius		_	_	*	_		_	_	_	_	_	_	_	_	_		_	*	*		_		_			_
occidualis		_		*	_	_	_	_	_	_	_	_		-		_	_	_		_	_	_	*	*	_	_
oldroydi	_	_	_	_	*		_	_	_	*	_			-	_	_	*	*	_	_		_		_		_
pachystylus	_		_							_	_	_	_	-	_	_		_	_	-	_	*	*	_		_
parvus					_	_	*	_	_	_	*	*	*		_	—	_	_		*		*	*		_	
penrithae		_				_						_	_	-		—			_						—	—
percus	*		—	_						—	_	—	_	-	_	—	_	—	—			_		_	_	
pusillus	_	_	-	*	_	—	—	_	—	—		_		-	_	—	_	_	—	—	—		*	*	—	_
quickel-																										
bergei	_	—			_				—		_	_	_	-	_	—			—					—	*	-
ramus		_				_						—	_	-					—					_	—	—
raptor	—	_	_			_										_	_	_	_	_		_		*	_	
rhopalotus	_			*		_													_							_
rudi	_	*	_	_	_	_						_							*							*
saxatilus	_	_	_		—						_		_	-	_		*	-	*		—			-		_
schofieldi	_		_	_	_	_					_		_	-	_	_	—		—		_		—	_	—	_
sicarius	_		_	_	_	_					_	_	_	-				a.			lata					
similis	_	_				_					_	_	_	-	_	_	*	*			*					_
sinis	_	—	_	*	_	_	—	_	_	-	_	_	_	-	_	—	_	*	*	*	_	_	_	_	—	-

#### TABLE 1 (cont)

The distribution and seasonal incidence of species belonging to the *Neolophonotus comatus* species-group.

	Distribution	Seasonal incidence											
	(Climatic regions)	(Months of the year)											
Species	M A K W S SE E D L H NT B Z	J F M A M J J A S O N D											
spinosus	* *	* * <b>_</b>											
tribulosus	*	* * * *											
uncinus	*	* * *											
variegatus		* * *											
vermiculatus		::											
vincenti	*												
walkeri wiedemanni	*												
wteaemanni wroughtoni	* * * * *	* * * * * * * * * *											
xanthodasus	*	**											
xiphichaetus	* * * _	* * * * _ * *											
zigzag	*	*											
~-6~-6													
Abbreviations: M —Mediterranean region.													
	A —Southern Cape Coastal region.												
	K —Little and Great Karoo region.												
	W —Desert and Poor Steppe region.												
	S —Southern and Northern Steppe regio	n.											
SE—South-eastern Cape Coastal region.													
E —Subtropical region.													
H—Highveld region.													
NT—Northern Transvaal region.													
	B —Botswana and Northern Namibian re												
	<ul><li>Z —Localities N of South Africa, Botswana and Namibia.</li></ul>												

## Neolophonotus acrolophus sp. n.

### Figs 2-4

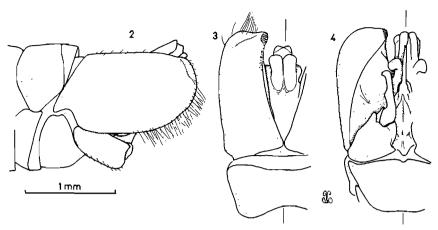
Etymology: Gr. acrolophos—crest of a mountain. Specimens were found on a rocky hilltop.

Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black ventrally, white dorsally. Eye:face ratio 1:0,16; eye:lower facial margin ratio 8,7:1. Mystax black and white (mixed). Occipital setae: upper—white (few black); central—pale yellow; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr not clearly differentiated; dc black; pprn few, small, white; 3/3 yellow npl; 2/2 black spal; 1/1 black pal (+ 1 black seta); mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 6 black bristles and white setae. Wing:  $7.0 \times 2.5$  mm. Legs: black, tibiae red-brown dorsoproximally; cx1 setae white; cx3 with 1 pale yellow bristle laterally. Hind femur: bristles pale yellow, long setae white, short setae white.

Abdomen: Fine gold pruinose. T3 lacks bristles; setae short, white (laterally) and black (dorsally); S3 with short white setae. Genitalia as in Figs 2-4 (holotype



Figs 2-4. Neolophonotus acrolophus sp. n. holotype male (15 km SE Clarens) genitalia. 2. Lateral. 3. Dorsal. 4. Ventral.

illustrated); epandrium short but well developed, equipped with small spine-like setae on internal surface of distal end; hypandrium and gonocoxite poorly developed; aedeagus of moderate length, with longish, slender tip.

Paratypes:  $43\ 109$  similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: *Orange Free State*: 23 (holotype & paratype) 89 (paratypes), 15km SE of Clarens (2828CB), 27.iii.1982, Londt & Schoeman, Rocky Hilltop (NM); 33 29 (paratypes), Golden Gate Nat. Park (2828DA), 27–28.iii.1982, Londt & Schoeman, Mtn. top/rocks + Grass (NM). NM Type No. 3840.

Distribution: Both localities are montane within the Highveld climatic region.

Prey record: Hymenoptera (Formicidae 1).

Relationship: A distinctive species, male genitalia possibly most closely resemble those of *vincenti*.

## Neolophonotus acrophilia sp. n.

Figs 5-7

Etymology: Gr. acron—summit, philia—fondness. Specimen was found on a mountain summit.

Description: Based on unique holotype  $\delta$ .

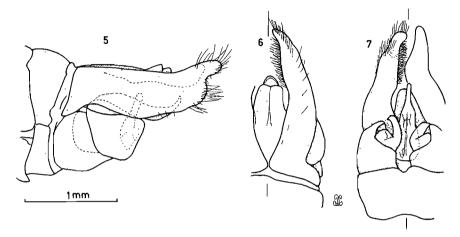
Head: Antenna dark red-brown to black; setae black ventrally (1 white seta), white dorsally. Eye:face ratio 1:0,16; eye:lower facial margin ratio 9,0:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black; lower—white.

Thorax: ktg s black (few white), mtanepst s white (few black). Mesonotal setae & bristles: acr short black; dc black; pprn few, yellow-white; 3/3 black npl; 3/3 black spal; 2/2 black pal; mane black, 2-3 shorter white setae bordering in anterior region. Scutellum with 4 black marginal bristles; disc with 8 black bristles and few

black and white setae. Wing:  $7.5 \times 2.5$  mm. Legs: dark red-brown to black, tibiae yellow-brown dorsoproximally; cx1 setae white; cx3 with 1 yellow bristle laterally. Hind femur: bristles yellow (few black distally), long setae black and white, short setae yellow-white.

Abdomen: Fine gold pruinose (somewhat greasy). T3 with 3 weak yellow bristles; setae short, white (laterally) and black (dorsally); S3 with short shiny yellow setae. Genitalia as in Figs 5-7; epandrium moderate in length with tapering tip; hypandrium and gonocoxite moderately developed; aedeagus of moderate length, with gently upturned, slender tip.

Female unknown.



Figs 5-7. Neolophonotus acrophilia sp. n. holotype male (Naudesnek) genitalia. 5. Lateral. 6. Dorsal. 7. Ventral.

Material examined: SOUTH AFRICA: Cape Province: 13 (holotype), Naudes Nek summit, 15 km E Rhodes (3028CC), 8-9.i.1979, Londt & Stuckenberg, Grassland & stream edges (NM). NM Type No. 3841.

Distribution: Known only from the type-locality in the Drakensberg climatic region.

Relationship: A fairly distinctive species, male genitalia most closely resemble those of saxatilus and mesotopus.

# Neolophonotus albus (Loew, 1858)

Figs 8-11

Lophonotus albus; Loew, 1858:339. Lophonotus albus; Loew, 1860:228. Dysmachus albus; Kertesz, 1909:274.

Neolophonotus albus; Hull, 1962:532; Oldroyd, 1981:340.

Redescription: Based on holotype  $\delta$ .

Head: Antenna dark red-brown; setae white except for 1 large black bristle ventrally on pedicel. Eye:face ratio 1:0,27 (eyes a little distorted); eye:lower facial

margin ratio 11,7:1. Mystax white (few dark red-brown on lower facial margin). Occipital setae: upper—white; central—white; lower—white.

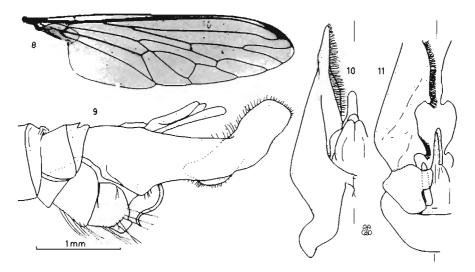
Thorax: ktg s and mtanepst s white (lots). Mesonotal setae & bristles: acr not clearly differentiated; dc dark red-brown; pprn long white; 2/2 yellow-white npl; 2/2 spal (1 yellow-white, 1 dark red-brown); 1/1 yellow-white pal (+ 1 yellow-white seta); mane short white. Scutellum with 8 yellow-white marginal bristles; disc with white setae (no obvious bristles). Wing:  $7.4 \times 2.5$  mm; brown stain in region where stalk of  $R_1$  meets costa (Fig. 8). Legs: femur dark red-brown, tibia and tarsi brown; cx1 setae white; cx3 with 2 white bristles laterally (hidden amongst white setae). Hind femur: bristles white, long setae shortish white, short setae white.

Abdomen: Silver pruinose. T3 covered with white setae, no obvious bristles; S3 with short white setae. Genitalia as in Figs 9-11 (holotype illustrated); epandrium attenuate, upturned distally in lateral view, with distomesial surface plane and covered with spine-like setae; hypandrium moderately developed; gonocoxite smallish, with a small ventromesial flange (seen in both lateral and ventral view); aedeagus slender, of moderate length and sinuous.

Type material: Loew apparently studied a single specimen.

Female: Cerci spine-like forming elements of two-pronged fork-like structure.

Material examined: NAMIBIA: 13 (holotype), 'Kuisip Africae', 'J. Wahlb.' [J. Wahlberg], '6', '299', '380/80' (NRS); 83 69, Swakop River, ca 10 km E Swakopmund (2214DA), 23.iv.1983, Londt & Stuckenberg, dry river course (NM); 23, Swakopmund Dist. Hentjiesbaai (2214AB), 8.ii.1974, Irwin, vegetated sand mounds near coast, 8 m (NM); 163 59 1 pupal case, Swakopmund Dist. Ugab River Mouth (2113BA), 7.ii.1974, Irwin, vegetated sand mounds nr. coast (NM); 139, Okau SE1812AA, 12, 16.xi.1970, H1256 (SMW); 29, False Cape Frio SE1812CA, 13.xi.1970, H1255 (SMW).



Figs 8-11. Neolophonotus albus (Loew, 1858) holotype male (Kuisip). 8. Wing. 9-11. Genitalia. 9. Lateral. 10. Dorsal. 11. Ventral.

Distribution: The five new localities are in the Desert & Poor Steppe climatic region. The species apparently lives in sandy areas near the coast.

Prey record: Diptera (Asilidae 1).

Relationship: A distinctive species with highly characteristic male genitalia. May be most closely related to *vincenti*.

## Neolophonotus algidus sp. n.

Figs 12-14

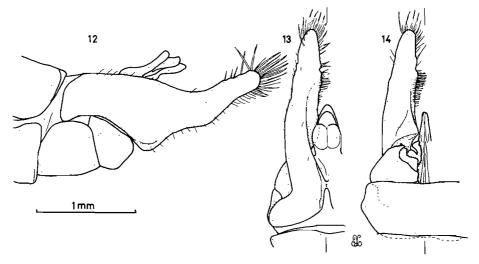
Etymology: L. *algidus* = cold. Refers to type-locality of Cold Bokkeveld.

Description: Based on holotype  $\delta$ .

Head: Antenna dark red-brown to black; scape with setae black ventrally, white dorsally, pedicel with all setae black. Eye:face ratio 1:0,20; eye:lower facial margin ratio 7,7:1. Mystax black and white (mixed). Occipital setae: upper—black (few pale yellow); central—black (few pale yellow); lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn long yellow; 3/3 yellow (1 black on left side) npl; 2/2 black spal; 1/1 black pal (+ 2 black setae); mane black, shorter white setae bordering. Scutellum with 6 black marginal bristles; disc with 16 black bristles and yellow-white setae. Wing: 8,3×2,9 mm; slight brown staining along bases of main veins. Legs: black; cx1 setae white; cx3 with 1 yellow bristle laterally. Hind femur: bristles orange (few black dorsodistally), long setae white (few black), short setae white.

Abdomen: Fine silver and red-gold pruinose. T3 with ca 6 fine, yellow bristles; setae long, white, laterally and short, black dorsally; S3 with black and yellow setae. Genitalia as in Figs 12–14 (paratype illustrated); epandrium attenuate, with a tuft of longish setae on distal end; hypandrium and gonocoxite moderately developed; aedeagus shortish, with longish apex.



Figs 12-14. Neolophonotus algidus sp. n. paratype male (Cold Bokkeveld) genitalia. 12. Lateral. 13. Dorsal. 14. Ventral.

Paratypes: 173 239 similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure. Specimens from Willowmore a little smaller than others.

Material examined: SOUTH AFRICA: Cape Province: 6δ (holotype & paratypes) 12♀ (paratypes), Cold Bokkeveld (3319AB), 30.viii.1981, Londt Schoeman & Stuckenberg, Macchia—Rocky slope (NM); 6δ 2♀ (paratypes), Montagu Bot. Garden (3320CC), 10.ix.1981, Londt, Schoeman & Stuckenberg, Karroid Broken Veld (NM); 2δ 1♀ 2?, Uniondale District (3323CA), x.1952, Mus Exp (SAM); 1δ 1♀ (paratypes), 21 km N Zoar Mission (3321AD), 8.ix.1981, Londt Schoeman & Stuckenberg, False Macchia slopes (NM); 3δ 4♀ (paratypes), Montagu Pass, 5 km NE Ashton (3320CC), 25.ix.1979, Londt, Steep rocky hillside (NM); 1δ 4♀ (paratypes), 9 km SW Willowmore (3323AD), 30–31.x.1978, Londt & Miller, open Karoo scrub (NM); 1δ (paratype), Willowmore, 10.x.1916, Dr Brauns (NM). NM Type No. 3842.

Distribution: Collected in the Mediterranean and Little & Great Karoo climatic regions.

Relationship: A fairly distinctive species with male genitalia resembling those of longicauda.

## Neolophonotus anatolicus sp. n.

Figs 15-17

Etymology: Gr. anatolikos—eastern. Specimens were collected in the eastern Transvaal.

Description: Based on holotype  $\delta$ .

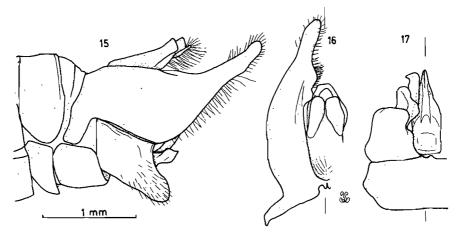
Head: Antenna dark red-brown to black; setae all orange. Eye:face ratio 1:0,17; eye:lower facial margin ratio 8,7:1. Mystax black and white (mixed). Occipital setae: upper—orange and black; central—orange; lower—white.

Thorax: ktg s and mtanepst s orange. Mesonotal setae & bristles: acr black; dc black (hind pair orange); pprn few, small, white; 4/4 orange npl; 3/2 orange (1 black on left side) spal; 3/3 orange pal; mane black, shorter yellow setae bordering. Scutellum with 4 black marginal bristles; disc with 7 black bristles and black and white setae. Wing:  $ca \ 9.2 \times 5 \ \text{mm}$  (twisted). Legs: dark red-brown to black, tibiae orange-brown dorsoproximally; cx1 setae white; cx3 with 2 yellow bristles laterally. Hind femur: bristles pale yellow (few black distally), long setae white, short setae white and yellow (dorsally and laterally) and longish black (ventrally).

Abdomen: Silver and fine red-gold pruinose. T3 lacks bristles; setae pale yellow (laterally) and black (dorsally); S3 with short pale yellow-white setae. Genitalia as in Figs 15-17; epandrium attenuate, slightly upturned distally in lateral view; hypandrium narrow and only moderately developed; gonocoxite well developed and projecting ventrally; aedeagus shortish, fairly thick-set, with pointed tip.

Paratype: 1♂ similar to holotype. ♀ unknown.

Material examined: SOUTH AFRICA: Transvaal: 13 (holotype), Mariepskop (SE2430DB), 17.iv.1979, J. A. Irish, Dept. of Entomology, University of Pretoria



Figs 15-17. Neolophonotus anatolicus sp. n. holotype male (Mariepskop) genitalia. 15. Lateral. 16. Dorsal. 17. Ventral.

(NM); 1& (paratype) Pelgrimsrus (SE2430DA), iv.1979, D. R. Swart, Dept. of Entomology, University of Pretoria (NM). NM Type No. 3843.

Distribution: Both localities are in the Lowveld climatic region.

Relationship: A distinctive species, male genitalia appear to most closely resemble those of *holmi*.

## Neolophonotus angola (Curran, 1934)

Figs 18-20

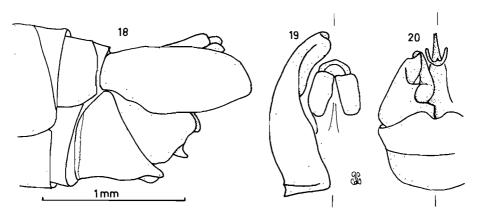
Lophopeltis angola Curran, 1934:14. Lophopeltis albion Curran, 1934:14 syn.n. Neolophonotus Lophopeltis angola; Hull, 1962:533. Neolophonotus Lophopeltis albion; Hull, 1962:533 syn.n. Neolophonotus angola; Oldroyd, 1981:340. Neolophonotus albion; Oldroyd, 1981:340 syn.n.

Redescription: Based on holotype 3.

Head: Antenna dark red-brown; scape with black and white setae dorsally and ventrally, pedicel with black setae ventrally and white setae dorsally. Eye:face ratio 1:0,19; eye:lower facial margin ratio 9,7:1. Mystax black and white, mixed, white longer than black. Occipital setae: upper—black (2 white); central—white; lower—white.

Thorax: ktg s and mtanepst s dark red-brown (larger bristles) and white (setae). Mesonotal setae & bristles: acr—2 pairs anteriorly, 2 pairs posteriorly; dc black; pprn dark red-brown and white; 3/3 dark red-brown npl; 2/2 dark red-brown spal; 1/1 dark red-brown pal (+ 1 black seta); mane black, shorter white setae bordering. Scutellum with 4 dark red-brown marginal bristles; disc with 2 dark red-brown bristles and white setae.

Wing:  $6.9 \times 2.3$  mm. Legs: dark red-brown; cx1 setae white; cx3 with 3 black bristles laterally. Hind femur: bristles dard red-brown, long setae dark red-brown and white, short setae white dorsally and dark red-brown ventrally.



Figs 18-20. Neolophonotus angola (Curran, 1934) holotype male (Capelongo) genitalia. 18. Lateral. 19. Dorsal. 20. Ventral.

Abdomen: Silver pruinose. T3 with 2 black 1 white marginal, 1–2 brown discal bristles; setae short, white; S3 with 4–6 black and white bristles, short white setae. Genitalia as in Figs 18–20; epandrium short and lacking conspicuous diagnostic features; hypandrium and gonocoxite moderately developed; gonocoxite with ventrally directed process in lateral view; aedeagus shortish with trifurcate tip.

Type material: I have studied all of Curran's type material. Curran's unique type of albion is, in all important characters, identical to angola. Curran separates albion on the basis of 'mane wholly white posteriorly' but as the type has most of the larger setae (which would certainly have been black in colour) either bent or broken off altogether, this distinguishing character is unreliable.

Female: Similar to  $\delta$ . Q cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: ANGOLA: 1δ (holotype) 1♀ (paratype), Capelongo (1415CC), 25.vii.1925, Ac. 28500 (AMNH); 1δ (holotype—albion) Capelongo, 25.vii.1925, Ac. 28500 (AMNH); 16δ 4♀, Capelongo, 25.vii.1925, Ac. 28500 (AMNH NM); 1♀ (paratype), Pico Avezedo [? Azevedo—09°23′S:15°37′E], 23-27.vii.1925, Ac. 28500 (AMNH); 2δ, 6 mi. NW of Chibia (1513BA), 20.v.1958, Ross & Leech, 1 500 m (CAS). NAMIBIA: 5δ 1♀ 1?, Gautsche Pan Bushmanland, 19°48′S:20°35′E, 9-13.vii.1971, H2171 (SMW); 3δ 2♀ 2?, Tsotsana 18 km W Bushmanland 19°04′S:20°37′E, 14-19.vi.1971, H2340 (SMW); 1δ 1♀, Otjikotoberg 459, SE1917AB, 8-13.vii.1974, H20159 (SMW).

Distribution: Known from three localities in Angola and one in Namibia (Botswana & N Namibia climatic region).

Relationship: A fairly distinctive species, male genitalia may most closely resemble those of *xiphichaetus* and *schofieldi*.

Remarks: The series of 163 49 found in the AMNH (1 pair donated to NM) were labelled 'Lophopeltis incisuralis Macq.' This was probably done by Curran as he provided a key to a number of Lophopeltis species, including incisuralis. I do not accept Curran's identification of incisuralis, described from the Cape Peninsula, as

there is no evidence that he examined Macquart's material. The key characters used by Curran to separate angola and incisuralis are not reliable and there is no doubt in my mind that all the material from Capelongo should be assigned to one species only. As the Macquart types of incisuralis can not be traced I prefer to retain the name angola for this species. In order to stabilise the taxonomy, I have synonymised incisuralis with comatus, a well-known Cape species.

## Neolophonotus annae sp. n.

Figs 21-24

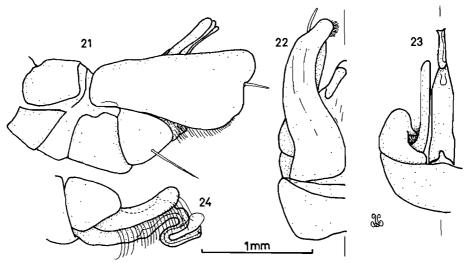
Etymology: Named for my wife Ann who has given me much support and who assisted with the capture of some of the type specimens.

Description: Based on holotype 3.

Head: Antenna dark red-brown to black; setae white except for major ventral bristles which are black. Eye:face ratio 1:0,19; eye:lower facial margin ratio 26,0:1. Mystax black and white (white on lower facial margin, black in upper part). Occipital setae: upper—yellow (few black); central—yellow and black; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn white; 2/2 yellow (1 black on left side) npl; 2/2 black spal; 1/1 black pal (+ 1 black seta); mane black, shorter white setae bordering. Scutellum with 2 black marginal bristles; disc with 4 black bristles and white (laterally) and black (centrally) setae. Wing:  $5.3 \times 1.7$  mm. Legs: femora dark red-brown, rest orange-brown; cx1 setae white; cx3 with 1 yellow-white bristle laterally. Hind femur: bristles pale yellow and black, long setae white, short setae black.

Abdomen: Red-gold pruinose. T3 with 2 yellow marginal and 2 yellow discal bristles; setae short, white (laterally) and black (dorsally); S3 with strong white



Figs 21-24. Neolophonotus annae sp. n. paratype male (Middelburg) genitalia. 21. Lateral. 22. Dorsal. 23. Ventral. 24. Gonocoxite, gonostylus and aedeagus (lateral).

setae. Genitalia as in Figs 21–24 (paratype illustrated); epandrium moderately developed, with a single short bristle distally; hypandrium and gonocoxite moderately developed; gonostylus broad, long, with fine setae along ventral margin in lateral view; aedeagus of moderate length, with thickish sinuous tip.

Paratypes:  $6\mbox{c}\mbox{3}\mbox{9}$  1? similar to holotype.  $\mbox{9}$  cerci laterally compressed forming part of knife-like ovipositor.

Material examined: SOUTH AFRICA: *Natal*: 63 (holotype & paratypes) 29 (paratypes), Spioenkop Nat. Res. (2829CB), 3-6.x.1981, J & A Londt (NM). *Transvaal*: 13 19 19 (paratypes), Middelburg (2529CD), iv.1961, de Jager (NM). NM Type No. 3844.

Distribution: Drakensberg and Highveld climatic regions. The Spioenkop specimens were collected in *Acacia* woodland.

Relationship: A species whose male genitalia appear to most closely resemble those of sicarius.

## Neolophonotus annettae sp. n.

Figs 25-27

Etymology: Named for my research assistant, Mrs Annette Seymour, in appreciation of her valued services.

Description: Based on holotype  $\delta$ .

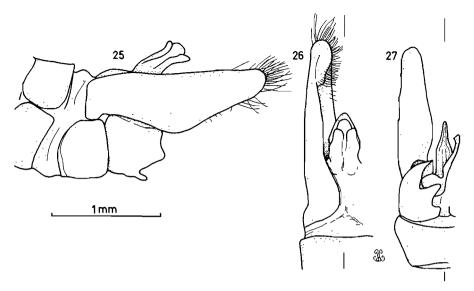
two-pronged fork-like structue.

*Head:* Antenna black; scape with black and yellow setae, pedicel with black setae only. Eye:face ratio 1:0,20; eye:lower facial margin ratio 10,3:1. Mystax black and white (mixed). Occipital setae: upper—black; central—yellow; lower—white.

Thorax: ktg s and mtanepst s orange. Mesonotal setae & bristles: acr black; dc black; pprn yellow; 3/3 black npl; 2/2 black spal; 1/1 black pal (+ 1 black seta); mane black, shorter yellow setae bordering. Scutellum with 4 black marginal bristles; disc with 7 black bristles and yellow setae. Wing:  $7.0 \times 2.3$  mm. Legs: black, tibiae orange-brown dorsoproximally; cx1 setae white (yellow on outer lateral margin); cx3 with 1 orange bristle laterally. Hind femur: bristles orange (few black distally), long setae black and white, short setae white.

Abdomen: Silver and red-gold pruinose. T3 with 3-4 orange marginal bristles, no obvious discals (3 weak black setae present); setae short, white (laterally) and black (dorsally); S3 with 4 orange marginal bristles and long black and white setae. Genitalia as in Figs 25-27 (paratype illustrated); epandrium elongate; hypandrium and gonocoxite moderately developed; gonocoxite, in lateral view, with small ventrally directed process; aedeagus of moderate length, with longish, slender tip. Paratypes: 45♂ 45♀ similar to holotype. ♀ cerci spine-like, forming elements of

Material examined: SOUTH AFRICA: Cape Province: 93 (holotype & paratypes) 99 (paratypes), 20 km SE of Ashton (3320CC), 10.ix.1981, Londt Schoeman & Stuckenberg, False Macchia Slopes (NM); 53 79 (paratypes), Worcester—near dam (3319CB), 11.ix.1982, Londt Schoeman & Stuckenberg, Karroid Broken Veld (NM); 13 (paratype), Montague [Montagu] Bot. Garden (3320CC), 10.ix.1981, Londt Schoeman & Stuckenberg, Karroid Broken Veld



Figs 25-27. Neolophonotus annettae sp. n. paratype male (Worcester) genitalia. 25. Lateral. 26. Dorsal. 27. Ventral.

(NM);  $3\delta$  2\( (paratypes), Montagu, 25.ix.1979, Londt, hillside SE of town (NM);  $2\delta$  2\( (paratypes), Outskirts of Ashton (3320CC), 10.ix.1981, Londt Schoeman & Stuckenberg, False Macchia Slopes (NM);  $2\$  (paratypes), 21 km N Zoar Mission (3321AD), 8.ix.1981, False Macchia slopes (NM);  $10\delta$  13\( (paratypes), 20 km SE Ashton (3320CC), 25.ix.1979, Londt, stony hillside with woody vegetation (NM);  $8\delta$  8\( (paratypes), 5 km W Robertson (3319DD), 26.ix.1979, Londt, stony slopes with woody veget. (NM);  $5\delta$  (paratypes), Robertson (3319DD), 5.ix.1964, Swart (NM);  $3\delta$  2\( (paratypes) 1?, Oudtshoorn Zebra (3322CB), x.1951, Mus Exp (SAM). NM Type No. 3845. SAM Type No. 5301.

Distribution: Found in both the Mediterranean and Little & Great Karoo climatic regions.

Relationship: A fairly distinctive species. Male genitalia may most closely resemble those of *melanolophus*.

Prey records: Diptera (Muscidae 1, ? family 1); Coleoptera (Scarabaeidae 1).

## Neolophonotus aphellas (Walker, 1849)

Figs 28-31

Asilus aphellas Walker, 1849:447.
Asilus noas Walker, 1849:448. Syn.n.
Dysmachus aphellas; Kertesz, 1909:274.
Dysmachus noas; Kertesz, 1909:278. Syn.n.
Neolophonotus Lophybus aphellas; Hull, 1962:533.
Neolophonotus Lophybus noas; Hull, 1962:533. Syn.n.
Neolophonotus aphellas; Oldroyd, 1981:341.
Neolophonotus noas; Oldroyd, 1981:341. Syn.n.

Redescription: Based on holotype & (now defective and in very poor condition). *Head*: Antenna dark red-brown; setae black (ventrally) and dirty white. Eye:face

ratio 1:0,22; eye:lower facial margin ratio 10,5:1. Mystax white-yellow, brown on lower facial margin. Occipital setae: upper—? (obliterated); central—brown-yellow; lower—white-yellow.

Thorax: ktg s and mtanepst s missing. Mesonotal setae & bristles (most missing, bristle number determined from sockets): acr ?; dc black; pprn few, white-yellow; 3/3 yellow-white npl; 2/2 spal; 1/1 pal; mane brown (terrible condition). Scutellum with 4 marginal bristles; disc with short white-yellow setae (most missing). Wing:  $9.7 \times ca$  2.5 mm (width guessed due to damage) Fig. 28 (noas—holotype). Legs: red-brown, rest orange-brown; cx1 setae white; cx3 with 2 bristles laterally. Hind femur: bristles yellow-white (few brown distally), long setae yellow-white, short setae white.

Abdomen: Silver-gold pruinose. T3 bristles not evident; setae short, white; S3 with short white setae. Abdomen broken off beyond segment 5.

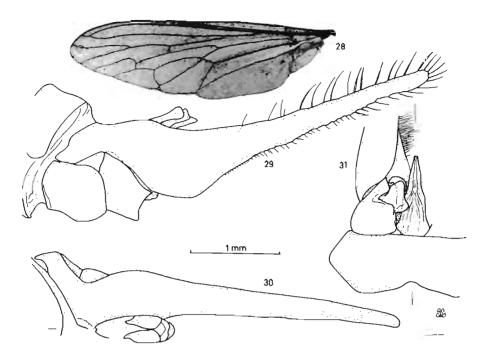
Type materal: The BM contains only the one very poorly preserved specimen. Walker did not state how many specimens he studied and so I must assume that there was only one. He states that the sex was male ('mas.') and so I also assume that the broken specimen I studied is a male. The type of *noas* is a female in only slightly better condition than the *aphellas* type. The two specimens have many features in common and so I synonymise *noas* with *aphellas*. The *noas* female has spine-like cerci, details of which are largely hidden by dirt.

Efforts have been made to find good male specimens of this species. I finally settled on material collected at Nylsvley, in the Nylstroom district, as Dr Andrew Smith, who collected the original Walker specimens, had at least visited a similar area not far removed from this locality (ie Pilanesberg). Because the new material does not agree entirely with Walker's specimen I here give a description of one of the Nylsvley males.

Head: Antenna dark red-brown to black; setae black ventrally, white dorsally. Eye:face ratio 1:0,15; eye:lower facial margin ratio 11,4:1. Mystax black and white (more white in upper part). Occipital setae: upper—black; central—white; lower—white.

Thorax: ktg s and mtanepst s pale yellow-white. Mesonotal setae & bristles: acr long black; dc black; pprn yellow (thickish) and white; 4/3 yellow (1 black on left) npl; 3/3 black (1 yellow on right) spal; 2/2 yellow (1 black on left) pal; mane black, shorter white setae bordering. Scutellum with 6 black marginal bristles; disc with 8–9 black bristles and black and white setae. Wing:  $9.1 \times 3.2$  mm. Legs: black, tibiae orange-brown dorsoproximally; cx1 setae white; cx3 with 2 white bristles laterally. Hind femur: bristles yellow (few black distally), long and short setae black and white.

Abdomen: Fine silver and gold pruinose. T3 with weak bristle-like marginal setae; other setae short, white (laterally) and black (dorsally); S3 with white setae. Genitalia as in Figs 29-31; epandrium greatly attenuate and well developed, more than 3 times as long as combined lengths of hypandrium and gonocoxite; hypandrium and gonocoxite moderately developed; aedeagus shortish and pointed.



Figs 28-31. Neolophonotus aphellas (Walker, 1849). 28. Wing (holotype noas—S. Afr.). 29-31. Male (Nylsvley) genitalia. 29. Lateral. 30. Dorsal. 31. Ventral.

Material examined: SOUTH AFRICA: 18 (holotype, now defective), 'S. Afr.', '44-6', 'one of Walker's series so named', 'Dr. Smith' (BM); 19 (holotype—noas), same date as aphellas type (BM). Transvaal: 18 19, Nylsvley (2428AB), 8.v.1982, UCT Survey, S. Milton, on rock, 12 am (NM); 1?, same data but 15.v.1982, on rocks & road (NM); 28, same data but (2428DA), 17.v.1982, gametrack & road, flood plain (NM); 28, same data but (2428DA), 11.v.1982, gravel & Combretum woodland (NM); 128 79, same data but (2428AD), 7.vi.1982, anthills and rocks (NM); 18, Warmbad (2428CD), v.1972, IMMv Wyk (NM).

Distribution: New material comes from the N Transvaal climatic region. Miss Milton collected specimens resting on the ground or on rocks and termite mounds. Relationship: A distinctive species. Male genitalia resemble those of *wroughtoni* and *longicauda*.

## Neolophonotus arboreus sp. n.

Figs 32-34

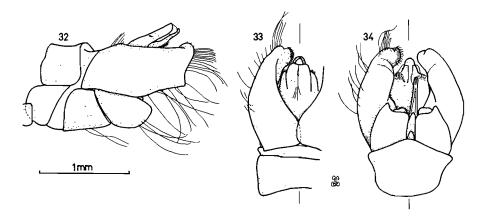
Etymology: L. arboreus—of trees. Specimens were collected in Acacia trees.

Description: Based on holotype  $\delta$ .

Head: Antenna dark red-brown to black; setae black ventrally, black and white dorsally. Eye:face ratio 1:0,21; eye:lower facial margin ratio 13,0:1. Mystax black and white (mixed). Occipital setae: upper—black and white; central—black; lower—white.

Thorax: ktg s and mtanepst s fine pale yellow. Mesonotal setae & bristles: acr black; dc black; pprn long black and white; 3/3 black npl; 2/2 black spal; 1/1 black pal; mane black, shorter white setae bordering. Scutellum with 5 black marginal bristles; disc with 15 black bristles and white setae. Wing:  $5.5 \times 1.8$  mm. Legs: dark red-brown black; cx1 setae white with black setae laterally; cx3 apparently lacking lateral bristles ( $2^{\circ}$  paratypes have 1 black bristle laterally). Hind femur: bristles black and yellow, long setae black and white, short setae white (long black ventrally).

Abdomen: Fine silver pruinose. T3 with 3 white marginal bristles; setae long, white (laterally) and black (dorsally); S3 with long black and white setae. Genitalia as in Figs 32–34; epandrium short, moderately developed, with small seta-covered protuberance on mesial surface of distal end; hypandrium and gonocoxite moderately developed; aedeagus slender and of moderate length.



Figs 32-34. Neolophonotus arboreus sp. n. holotype male (25 km W Windhoek) genitalia. 32. Lateral. 33. Dorsal. 34. Ventral.

Paratypes: 133 similar to holotype. 9 cerci spinose, forming elements of two-pronged fork-like structure.

Material examined: NAMIBIA: 13 (holotype) 39 (paratypes), 25 km W of Windhoek (2216DB), 22.iv.1983, Londt & Stuckenberg, Thornveld (NM). SOUTH AFRICA: Orange Free State: 13 (paratype), Klippiespan 205, Boshoff Dist. [Boshof—2825CA], 21.iv.1948, Munro (NCI). NM Type No. 3846.

Distribution: Recorded from the Desert & Poor Steppe and S & N Steppe climatic regions.

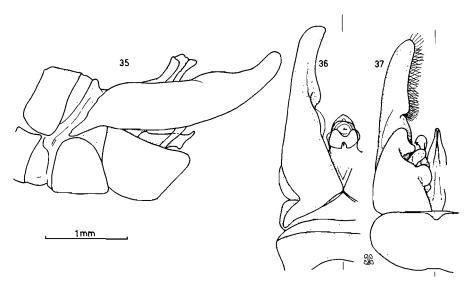
Relationship: A distinctive species with no obvious close relatives.

# Neolophonotus argyphus sp. n.

Figs 35-37

Etymology: Gr. argyphos—silver-white. Specimens have many silver-white setae. Description: Based on holotype  $\delta$ .

Head: Antenna black; setae white except for 1 black bristle ventrally on pedicel.



Figs 35-37. Neolophonotus argyphus sp. n. paratype male (Kamberg) genitalia. 35. Lateral. 36. Dorsal. 37. Ventral.

Eye:face ratio 1:0,19; eye:lower facial margin ratio 8,6:1. Mystax silver-white and black mixed. Occipital setae: upper—black and white; central—pale yellow; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr not clearly differentiated; dc black; pprn long white; 3/3 yellow npl; 2/2 black spal; 1/1 black pal (+ 2 black seta); mane black, shorter white setae bordering. Scutellum with 4 thin black marginal bristles; disc with 6 black bristles and white setae. Wing:  $8.1 \times 2.8$  mm. Legs: black; cx1 setae white; cx3 with 1 weak, white bristle laterally. Hind femur: bristles white, long setae white, short setae longish white.

Abdomen: Fine gold pruinose. T3 with ca 6 white, thin marginal bristles; setae white; S3 with long white setae. Genitalia as in Figs 35-37 (paratype illustrated); epandrium elongate, well developed; hypandrium moderately developed; gonocoxite well developed; aedeagus of moderate length, with slender tip.

Paratypes:  $13 \stackrel{?}{\circ} 26 \stackrel{?}{\circ}$  similar to holotype.  $\stackrel{?}{\circ}$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Natal: 113 (holotype & paratype) 129 (paratypes), Kamberg Nat. Reserve (2929BC), 1-6.x.1978, Londt, riverside/open road (NM); 23 149 (paratypes), Giant's Castle Res. (2929AD), 10.x.1979, Londt, rocks in stream (NM); 13 (paratype), Drakensberg Garden Area (2929CA), 13-14.x.1984, Londt (NM). NM Type No. 3847.

Distribution: The three localities are montane situations within the Drakensberg climatic region.

Relationship: A distinctive species. Male genitalia do not resemble those of any other species.

Prey record: Trichoptera (? family 1).

### Neolophonotus atrox sp. n.

Figs 38-40

Etymology: L. atrox—cruel. Refers to predatory behaviour.

Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black except for some white ones dorsally on scape. Eye:face ratio 1:0,21; eye:lower facial margin ratio 10,0:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn few, white; 3/3 black npl; 2/2 black spal; 1/1 black pal (+ 1 black seta); mane black, few shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 6 black bristles and white (few black) setae. Wing:  $6.4 \times 2.1$  mm. Legs: black; cx1 setae pale yellow-white; cx3 with 1 short white bristle laterally. Hind femur: bristles black and white, long setae black and white, short setae white anteriorly and posteriorly, black dorsally and ventrally.

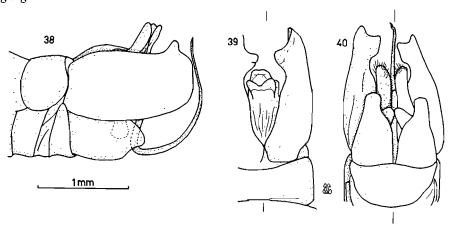
Abdomen: Fine gold pruinose. T3 with 3 white marginal and 2 white discal bristles; setae white (laterally) and black (dorsally); S3 with 6 white bristles and white setae. Genitalia as in Figs 38–40; epandrium short but well developed, with a small dorsally situated lobe; hypandrium moderately developed; gonocoxite well developed; aedeagus elongate, gradually tapering and sinuous.

Paratypes: 3  $\circ$  similar to holotype.  $\circ$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: NAMIBIA: 1♂ (holotype) 3♀ (paratypes), Outskirts of Aus overlooking town (2616CA), 30.viii.1983, Stuckenberg & Londt, Rocky area/ Shrubs (NM). NM Type No. 3848.

Distribution: Known only from the type-locality in the Desert and Poor Steppe climatic region.

Relationship: A distinctive species. Male genitalia superficially resemble those of zigzag and nisus.



Figs 38-40. Neolophonotus atrox sp. n. holotype male (Aus) genitalia. 38. Lateral. 39. Dorsal. 40. Ventral.

## Neolophonotus attenuatus Hull, 1967

Figs 41-43

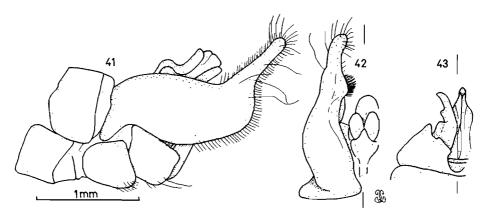
Neolophonotus (Lophybus) attenuatus Hull, 1967:266. Neolophonotus attenuatus; Oldroyd, 1981:340.

Redescription: Based on holotype  $\delta$ .

Head: Antenna dark red-brown; setae black ventrally (few white), white dorsally. Eye:face ratio 1:0,19; eye:lower facial margin ratio 7,0:1. Mystax black and white (mixed). Occipital setae: upper—long black; central—white; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn long black and short white; 4/3 black npl; 3/3 black spal; 2/2 black pal; mane black, shorter white setae bordering. Scutellum with 6 black marginal bristles; disc with 6 black bristles and long white setae (few black). Wing:  $8.4 \times 2.9$  mm. Legs: dark red-brown, tibiae orange-brown proximally; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles pale yellow and black, long setae black (few white), short setae moderately long, white.

Abdomen: Gold-silver pruinose. T3 with 2-3 pale yellow marginal bristles; setae moderately long, yellow (laterally) and shorter black (dorsally); S3 with longish white-yellow setae. Genitalia as in Figs 41-43; epandrium well developed, dorsodistal tip attenuate; hypandrium and gonocoxite moderately well developed; aedeagus shortish, thick-set, with short tapering tip.



Figs 41-43. Neolophonotus attenuatus Hull, 1967 holotype male (8mi ENE Rhodes) genitalia. 41. Lateral. 42. Dorsal. 43. Ventral.

Type material: Hull described the species on a single male specimen.

Female: Unknown.

Material examined: SOUTH AFRICA: Cape Province: 1& (holotype), Drakensbergen, 8 miles ENE Rhodes (3027DD), 10.iii,1951, Brink & Rudebeck, Swedish SA exped. 1950–51, No. 223 (ZML). Natal: 1&, Giant's Castle Nat. Res. (2929AD), 16.ii.1983, Miller (NM); 1&, Will Brook [Willbrook—2928BB], Willow Grange, Mooi River, 17.ix.1913, Wroughton (ZSM); 2&, Cathedral Peak Area, above Mike's Pass, 28°59'S:29°14'E, 28-29.iii 1985, Mansell, 1973m (NCI).

Distribution: Recorded from the Drakensberg climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of melanoura.

#### Neolophonotus aureolocus sp.n.

Figs 44-46

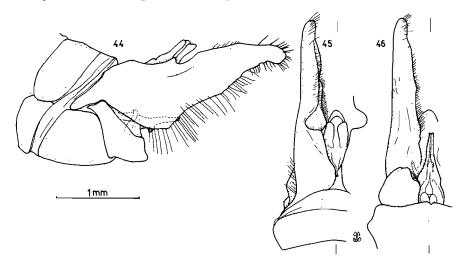
Etymology: L. aurum—gold; locus—place. Refers to Johannesburg, known as the 'city of gold'.

Description: Based on holotype  $\delta$ .

Head: Antenna black; setae yellow and black ventrally, pale white dorsally. Eye:face ratio 1:0,19; eye:lower facial margin ratio 8,3:1. Mystax white and black (mixed). Occipital setae: upper—yellow (few black); central—yellow; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black and orange-yellow; pprn pale yellow; 3/3 orange npl; 2/2 orange spal; 2/2 orange pal (+ 1 orange seta); mane black, shorter yellow setae bordering. Scutellum with 4 black marginal bristles; disc with 4 bristles (3 black 1 orange) and white setae. Wing:  $7.6 \times 2.5$  mm. Legs: dark red-brown, tibiae yellow-brown dorsoproximally; cx1 setae white; cx3 with 1–2 pale yellow-white bristles laterally. Hind femur: bristles yellow (3 black distally), long setae pale yellow (few black), short setae yellow (longer ventrally).

Abdomen: Fine gold pruinose. T3 without obvious bristles; setae long yellow (laterally) and short yellow and black (dorsally); S3 with long pale yellow setae. Genitalia as in Figs 44-46 (paratype illustrated); epandrium attenuate and well developed, with a distinctive mid-dorsal notch; hypandrium moderately developed; gonocoxite poorly developed, with pointed appearance in lateral view; aedeagus relatively short, with longish, slender tip.



Figs 44-46. Neolophonotus aureolocus sp. n. paratype male (Johannesburg) genitalia. 44. Lateral. 45. Dorsal. 46. Ventral.

Paratypes:  $6 \delta 1$  similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: *Transvaal:* 7♂ (holotype & paratype) 1♀ (paratype), Johannesburg, Mondeor (2628AA), 14.iii.1982, R. Elferink (NM). NM Type No. 3849.

Distribution: Known only from the Johannesburg suburb of Mondeor in the Highveld climatic region.

Relationship: A distinctive species. Male genitalia resemble those of gravicauda, walkeri and meiswinkeli.

## Neolophonotus avus sp. n.

Figs 47-49

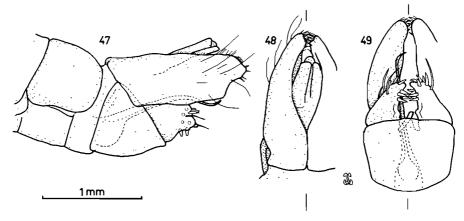
Etymology: L. avus—grandfather. Refers to the type locality of Grootvadersbos (= Grandfather's forest).

Description: Based on unique holotype 3.

Head: Antenna black; setae black (few white laterally on scape). Eye:face ratio 1:0,21; eye:lower facial margin ratio 15,0:1. Mystax black (white on lower facial margin). Occipital setae: upper—long black; central—black; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr long black; dc black; pprn fine white-yellow; 2/2 black npl; 2/2 black spal; 1/1 black pal; mane black, not bordered by pale coloured setae. Scutellum with 6 black marginal bristles; disc with 4 black bristles and white (laterally) and black (centrally) setae. Wing:  $5.9 \times 2.0$  mm; extensively covered with microtrichia giving membrane grey appearance. Legs: dark red-brown, tibiae orange-brown proximally; cx1 setae white; cx3 with 1 yellow-white bristle laterally. Hind femur: bristles yellow (few black distally), long and short setae white.

Abdomen: Fine silver pruinose. T3 with 3 yellow marginal and ca 3 yellow discal bristles; setae fine yellow (laterally) and black (dorsally); S3 with fine yellow-white



Figs 47-49. Neolophonotus avus sp. n. holotype male (Grootvadersbos) genitalia. 47. Lateral. 48. Dorsal. 49. Ventral.

setae. Genitalia as in Figs 47-49; epandrium of moderate length with few, small, spine-like setae distally; hypandrium well developed; gonocoxite moderately developed, equipped with stout spine-like setae (mostly on mesial surface); aedeagus of moderate length, with bulbous base and long, slender tip.

Paratypes: None. 9 unknown.

Material examined: SOUTH AFRICA: Cape Province: 1& (holotype), Grootvadersbos (3320DD), 1-6.xi.1940, G. van Son, Transvaal Museum Collection (NM). NM Type No. 3850.

Distribution: Known only from the type-locality in the Little & Great Karoo climatic region.

Relationship: A distinctive species. Male genitalia perhaps most closely resemble those of *natalensis*.

## Neolophonotus baeoura sp.n.

Figs 50-52

Etymology: Gr. baios—small; aura—tail. The species has relatively small male terminalia.

Description: Based on holotype  $\delta$ .

Head: Antenna dark red-brown; setae black and yellow ventrally, yellow dorsally. Eye:face ratio 1:0,22; eye:lower facial margin ratio 8,3:1. Mystax long yellow with shorter black setae along lateral margins. Occipital setae: upper—black and yellow; central—yellow; lower—white.

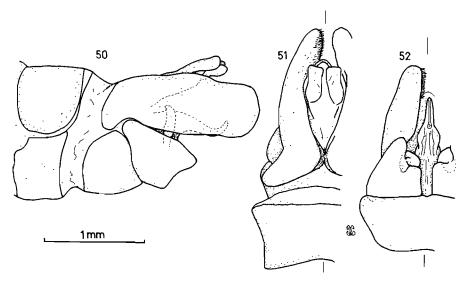
Thorax: ktg s and mtanepst s pale yellow. Mesonotal setae & bristles: acr long black; dc black; pprn strong yellow; 4/4 yellow npl; 3/3 yellow and black spal; 2/2 yellow pal; mane black, shorter white setae bordering. Scutellum with 5 yellow marginal bristles; disc with 8 (7 black 1 yellow) bristles and white setae. Wing:  $10.5 \times ca$  3.9 mm. Legs: dark red-brown, tibiae orange-brown dorsoproximally; cx1 setae pale yellow; cx3 with 3 pale yellow bristles laterally. Hind femur: bristles yellow and black, long setae few black, short setae pale yellow.

Abdomen: Gold-silver pruinose. T3 with 6 strong yellow marginal and 4 strong yellow discal bristles; setae short, yellow (laterally) and black (dorsally); S3 with ca 12 yellow bristles and short yellow setae. Genitalia as in Figs 50–52; epandrium short, moderately developed; hypandrium and gonocoxite moderately developed; aedeagus of moderate length, with longish, slender tip.

Paratypes:  $2\delta 19$  similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: 18 (holotype), Reitz, 18.xi.1938, Ac US (NM). 28 19 (paratypes), no data (NM). NM Type No. 3851.

Note: The type locality can not be fixed with certainty as there are at least two places called Reitz in South Africa, one near Messina (2230AD) in the Transvaal and one near Frankfort (2728CD) in the Orange Free State. I consider that the latter is more probable as it is the bigger of the two and better known. The three



Figs 50-52. Neolophonotus baeoura sp. n. holotype male (Reitz) genitalia. 50. Lateral. 51. Dorsal. 52. Ventral.

paratypes lack locality information. Each is numbered '1/779' '1/780' & '1/782' respectively and each bears an identification label reading 'Lophopeltis albofasciata E. det. Ric.'. The species does not closely resemble Neolophonotus albofasciatus (Ricardo, 1900) which is a member of the pellitus species-group.

Distribution: Not known as material bears insufficient data. Probably from the Highveld climatic region.

Relationship: A distinctive species. Male genitalia resemble those of margaracta.

## Neolophonotus bigoti sp. n.

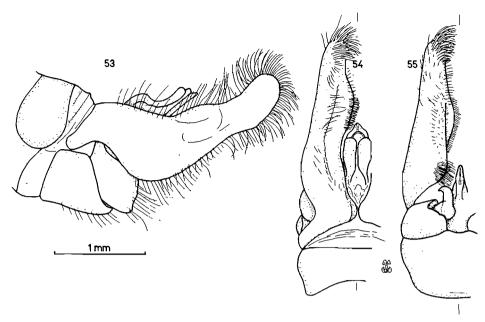
Figs 53-55

Etymology: Named for Dr J. -M. -F. Bigot in recognition of his contribution to our knowledge of African Asilidae.

Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black ventrally except for few white setae on scape, white dorsally. Eye:face ratio 1:0,18; eye:lower facial margin ratio 9,9:1. Mystax black and white (mixed). Occipital setae: upper—black (2 white); central—yellow; lower—white.

Thorax: ktg s and mtanepst s orange. Mesonotal setae & bristles: acr long black; dc black; pprn white; 3/3 orange npl; 2/2 (1 orange 1 black) spal; 2/2 orange (1 black on left) pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 6 black bristles and white setae (few black ones). Wing:  $8.1 \times 2.9$  mm. Legs: dark red-brown to black, tibiae orange dorsoproximally; cx1 setae white (bordered laterally with yellow setae); cx3 with 1 yellow bristle laterally. Hind femur: bristles yellow (few black distally), long setae black and white, short setae white (few longer black ventrally).



Figs 53-55. Neolophonotus bigoti sp. n. paratype male (10 km E Barberton) genitalia. 53. Lateral. 54. Dorsal. 55. Ventral.

Abdomen: Gold-red pruinose. T3 pale yellow and black seta-like marginal bristles; setae short, white (laterally) and black (dorsally); S3 with long white setae. Genitalia as in Figs 53–55 (paratype illustrated); epandrium broad and well developed, equipped with many longish setae; hypandrium and gonocoxite moderately developed; aedeagus shortish, with pointed tip.

Paratypes:  $6\cdot 3\cdot$  similar to holotype.  $\cdot$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Transvaal: 3& (holotype & paratypes) 1& (paratype), 10 km E of Barberton on Saddleback Pass (SE2531CC), 7.iv.1985, J. Londt, Rocky slope (NM); 2& 2& (paratypes), 40 km SE Barberton, Mt Mlembe (2531CC), 15.ix.1986, Londt & Stuckenberg, Forest/Stream/Slopes (NM); 2& (paratype), Barberton, iv.1911, H. Edwards (ZSM). NM Type No. 3852. I collected specimens on rocks in grassveld near forest patches.

Distribution: Both records are from montane localities within the Transvaal Lowveld climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of aureolocus and midas.

## Neolophonotus boa sp. n.

Figs 56-58

Etymology: L. boa—a serpent. The aedeagus is sinuous.

Description: Based on holotype 3.

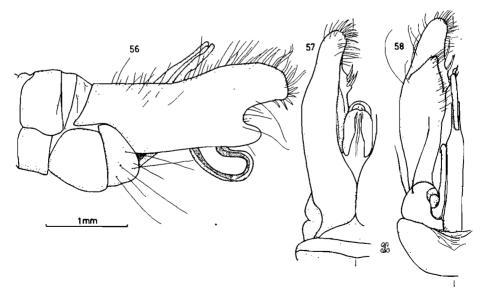
Head: Antenna dark red-brown; setae black and white (mostly black ventrally and white dorsally). Eye:face ratio 1:0,24; eye:lower facial margin ratio 9,5:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black; lower—white.

Thorax: ktg s black; mtanepst s yellow. Mesonotal setae & bristles: acr thin black; dc thin black; pprn black and white; 4/4 orange (1 black on left) npl; 1/1 black spal (+ weak black setae); 1/1 black pal (+ weak black setae); mane black, shorter white setae bordering. Scutellum with 10 black marginal bristles; disc with ca 10 thin black bristles and white setae. Wing: 6,7 × 2,3 mm. Legs: dark red-brown to black, tibiae brown proximally; cx1 setae white bordered laterally with black setae; cx3 with 1 yellow bristle laterally. Hind femur: bristles dark red-brown and orange, long setae black and white, short setae long black ventrally, shorter white dorsally. Abdomen: Silver pruinose. T3 with 3-4 black marginal bristles; setae long, white (laterally) and shorter black (dorsally); S3 with long black and white setae. Genitalia as in Figs 56-58; epandrium broad and well developed in lateral aspect, equipped with long setae and a number of spine-like setae on mesial surface; hypandrium and gonocoxite moderately developed; aedeagus long, relatively thick and coiled.

Paratypes:  $4^{\circ}$  similar to holotype.  $^{\circ}$  cerci spine-like, appearing to form single strong upwardly directed structure.

Material examined: SOUTH AFRICA: Cape Province: 13 (holotype) 49 (paratypes), Aninaus Pass 15 km W of Steinkopf (2917BA), 4.ix.1983, J. Londt & B. Stuckenberg, Rocky Hillside and dry river (NM). NM Type No. 3853.

Distribution: Known only from the type-locality in the Desert and Poor Steppe climatic region.



Figs 56-58. Neolophonotus boa sp. n. holotype male (Aninaus Pass) genitalia, 56. Lateral, 57. Dorsal, 58. Ventral.

Relationship: A very distinctive species. Male genitalia resemble those of *hobbyi* and *currani*.

### Neolophonotus botswana sp. n.

Figs 59-61

Etymology: The type series was collected in Botswana.

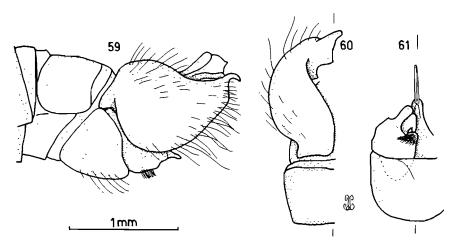
Description: Based on holotype &.

Head: Antenna dark red-brown to black; setae black except for pale yellow-white dorsally on scape. Eye:face ratio 1:0,20; eye:lower facial margin ratio 7,4:1. Mystax black and white (mixed). Occipital setae: upper—black and white; central—black and white; lower—yellow-white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn pale yellow-white; 3/3 yellow npl; 2/2 black (1 black on left) spal; 1/1 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with ca 14 black bristles and white setae. Wing:  $7.0 \times 2.3$  mm. Legs: black; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles black and white, long setae black and white, short setae white dorsally and laterally, dark red-brown ventrally.

Abdomen: Silver and red-gold pruinose. T3 with ca 4 yellow-white marginal bristles; setae short, white and yellow-white (laterally) and black (dorsally); S3 with 4 white bristles posteriorly and long black and white setae. Genitalia as in Figs 59–61; epandrium short but well developed, with a distal process appearing like a small hook when viewed laterally; hypandrium and gonocoxite moderately developed; gonocoxite with distal flange-like projection; aedeagus of moderate length, with long, slender tip.

Paratypes:  $6\center{S}$  5 \cong 1? similar to holotype. \core cerci spine-like, forming elements of two-pronged fork-like structure.



Figs 59-61. Neolophonotus botswana sp. n. holotype male (Tzatonie Pan) genitalia. 59. Lateral. 60. Dorsal. 61. Ventral.

Material examined: BOTSWANA: 2\$\delta\$ (holotype & paratype) 1\$\times\$ 1\$? (paratypes), Tzatonie Pan (2322CD), 15.iv.1969, T, Schofield (NM). NAMIBIA: 20\$\delta\$ 43\$\times\$ 4\$? (5\$\delta\$ 4\$\times\$ paratypes), Aminuis (2319CB), vii.1936, Mus. Staff (SAM); 2\$\delta\$ 1\$\times\$, Beinab (?), vii.1936, SAM (SAM); 2\$\delta\$ 2\$\times\$, Huguis (?), vii.1936 (SAM). NM Type No. 3854, SAM Type No. 5302.

Distribution: Recorded from the Botswana & N Namibian climatic region.

Relationship: A distinctive species. Male genitalia resemble those of *milvus* and *destructor*.

## Neolophonotus brendani sp. n.

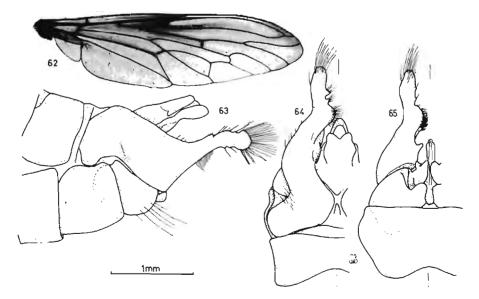
Figs 62-65

Etymology: Named for my son Brendan who has assisted me with the collection of material for the Natal Museum.

Description: Based on holotype ♂.

Head: Antenna dark red-brown to black; setae black except those dorsally on scape which are yellow-white. Eye:face ratio 1:0,21; eye:lower facial margin ratio 8,4:1. Mystax black and yellow-white. Occipital setae: upper—black; central—orange (few black); lower—white and yellow-white.

Thorax: ktg s black; mtanepst s black and orange. Mesonotal setae & bristles: acr black; dc black; pprn black and white; 3/3 (2 black 1 orange) npl; 2/2 black spal; 1/1 black pal (+ 2 black seta); mane black, shorter yellow setae bordering. Scutellum with 3 black marginal bristles; disc with 8 black bristles and white and yellow setae. Wing:  $8.3 \times 2.7$  mm; brown-stained along veins (Fig. 62). Legs: dark red-brown, tibiae yellow-brown dorsoproximally; cx1 setae yellow and white; cx3 with 1 red-



Figs 62-65. Neolophonotus brendani sp. n. paratype male (30 km S Clanwilliam). 62. Wing. 63-65. Genitalia. 63. Lateral. 64. Dorsal. 65. Ventral.

brown bristle laterally. Hind femur: bristles orange-brown and black, long setae black and yellow, short setae pale yellow-white.

Abdomen: Red-gold pruinose. T3 lacks obvious bristles; setae black except for few white on dorsal front margin; S3 with short black bristles posteriorly, setae black and pale yellow-white. Genitalia as in Figs 63–65 (paratype illustrated); epandrium moderately well developed, attenuate distally, tip bears a tuft of setae; hypandrium and gonocoxite moderately developed; aedeagus of moderate length, with short, slender tip.

Paratypes: 83 119 similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Cape Province: 7♂ (holotype & paratypes) 11♀ (paratypes), 30 km S of Clanwilliam (3218BD), 31.viii.1981, Londt Schoeman & Stuckenberg, Karroid Broken Veld (NM); 1♂ (paratype), Outskirts of Klawer (3118DC), 2.ix.1981, Londt Schoeman & Stuckenberg, Succulent Karoo (NM); 1♂ (paratype), Top of Botterkloof Pass (3119CD), 16.viii.1973, Irwin, 700 m, white dune assoc. (NM). NM Type No. 3855.

Distribution: Localities are in the southern parts of the Desert and Poor Steppe climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of diana.

### Neolophonotus brunales sp.n.

Figs 66-69

Etymology: L. brun—dusky; ales—winged. Wings are brown-stained.

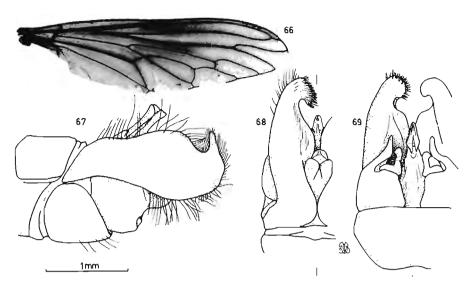
Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black except for some white ones dorsally on scape. Eye:face ratio 1:0,22; eye:lower facial margin ratio 6,3:1. Mystax black and white (mixed). Occipital setae: upper—black and white; central—black and white; lower—white with few black along eye margin.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black, a little longer than mane; dc black; pprn white; 3/3 yellow npl; 2/2 yellow spal; 1/1 yellow pal (+ 2 yellow setae); mane black, shorter white setae bordering. Scutellum with 6 black marginal bristles; disc with 12 black bristles and white setae. Wing:  $7.0 \times 2.5$  mm, veins brown-stained (Fig. 66). Legs: dark red-brown to black; cx1 setae white; cx3 with 1-3 yellow bristles laterally. Hind femur: bristles yellow, long setae black and white, short setae white (few black ventrally).

Abdomen: Gold pruinose. T3 with 6 yellow marginal and ca 4 long thin yellow discal bristles; setae yellow (laterally) and black (dorsally); S3 with 6 yellow bristles and pale yellow-white setae. Genitalia as in Figs 67–69; epandrium moderately well developed, distal end upturned through 90°, hypandrium and gonocoxite well developed; gonocoxite with distal flange-like projection; aedeagus of moderate length, with subapical serrated flange and pointed tip.

Paratypes:  $1 \stackrel{?}{\circ} 1 \stackrel{?}{\circ}$  similar to holotype.  $\stackrel{?}{\circ}$  cerci spine-like, forming elements of two-pronged fork-like structure.



Figs 66-69. Neolophonotus brunales sp. n. holotype male (20 km NE Springbok). 66. Wing. 67-69. Genitalia. 67. Lateral. 68. Dorsal. 69. Ventral.

Material examined: SOUTH AFRICA: Cape Province: 13 (holotype) 19 (paratype), 20 km NE of Springbok (2918CA), 7.ix.1983, Londt & Stuckenberg, Rocky hillside & dry watercourse veget. (NM). NAMIBIA: 13 (paratype), Namib (ca 2315AD), vi.1961, Venter (NCI). NM Type No. 3856.

Distribution: The type-locality is in the Desert & Poor Steppe climatic region.

Relationship: A distinctive species. Male genitalia resemble those of percus.

#### Neolophonotus carnifex sp. n.

Figs 70-72

Etymology: L. carnifex—executioner. Refers to the predatory behaviour of Asilidae.

Description: Based on unique holotype &.

Head: Antenna dark red-brown to black; setae black ventrally, white dorsally. Eye:face ratio 1:0,16; eye:lower facial margin ratio 12,6:1. Mystax black and white (mixed). Occipital setae: upper—black and white; central—black and white; lower—white.

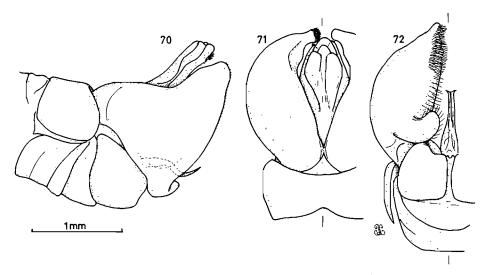
Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn long white; 2/3 yellow npl; 2/2 black (1 yellow on right) spal; 2/2 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 7 (6 black 1 white) bristles and white setae. Wing:  $7.2 \times ca$  2,4 mm. Legs: dark red-brown to black; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles, long and short setae white (dorsally) and dark red-brown (ventrally).

Abdomen: Silver pruinose. T3 with 4 white marginal and 2-4 thin white discal bristles; setae short, white (laterally) and dark red-brown (dorsally); S3 with 6 white bristles and white setae. Genitalia as in Figs 70-72; epandrium short but well developed, distally expanded both dorsally and ventrally to give a triangular appearance in lateral view; hypandrium and gonocoxite moderately developed; aedeagus of moderate length, with longish, slender tip.

Paratypes: None. 9 unknown.

Material examined: NAMIBIA: 13 (holotype), Gt. Karas Mtns (2718BC), xi.1936, Mus. Staff (SAM). SAM Type No. 5303.

Distribution: The type-locality is in the Desert & Poor Steppe climatic region. Relationship: A distinctive species. Male genitalia resemble those of *necator*.



Figs 70-72. Neolophonotus carnifex sp. n. holotype male (Gt. Karas Mtns) genitalia. 70. Lateral. 71. Dorsal. 72. Ventral.

### Neolophonotus chrysopylus sp. n.

Figs 73-76

Etymology: Gr. chrysos—gold; pylos—gate. Refers to the type-locality of Golden Gate National Park.

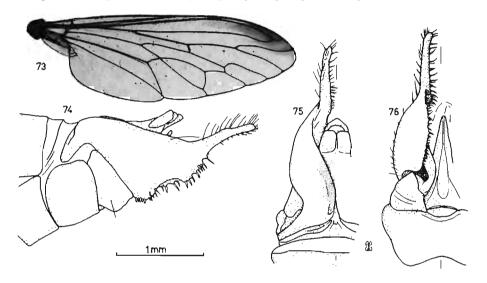
Description: Based on holotype  $\delta$ .

Head: Antenna black; scape with black and white setae dorsally, white setae ventrally; pedicel similar but ventral setae all black. Eye:face ratio 1:0,16; eye:lower facial margin ratio 11,7:1. Mystax black and white (mixed). Occipital setae: upper—black; central—yellow and black; lower—white.

Thorax: ktg s and mtanepst s yellow (1 black mtanepst s on right). Mesonotal setae & bristles: acr black; dc black; pprn short yellow; 3/3 black npl; 2/2 black spal; 2/2 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 6 black bristles and white setae (few black). Wing:

 $7.6 \times 2.8$  mm, thick dark microtrichia distally on front margin (Fig. 73). Legs: dark red-brown to black, tibiae red-brown dorsoproximally; cx1 setae white with yellow bordering laterally; cx3 with 2 yellow bristles laterally. Hind femur: bristles yellow (few black distally), long setae black and white, short setae white and black (along ventral midline).

Abdomen: Fine gold pruinose. T3 with 1-2 thin, black marginal bristles; setae, short yellow (laterally) and long black (dorsally); S3 with short yellow setae. Genitalia as in Figs 74-76 (paratype illustrated); epandrium well developed, attenuate dorsally; hypandrium moderately developed; gonocoxite poorly developed; aedeagus moderately long, tapering to pointed tip.



Figs 73-76. Neolophonotus chrysopylus sp. n. paratype male (Golden Gate Nat. Park). 73. Wing. 74-76. Genitalia. 74. Lateral. 75. Dorsal. 76. Ventral.

Paratypes: 153 8 $\circ$  similar to holotype.  $\circ$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Orange Free State: 163 (holotype & paratypes) 89 (paratypes), Golden Gate Nat. Park (2828DA), 27-28.iii.1982, J. Londt & L. Schoeman, Valley nr. stream (NM). NM Type No. 3857.

Distribution: Known only from the type-locality which is in a mountainous part of the Highveld climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of melanoura and diana.

## Neolophonotus circus sp. n.

Figs 77-79

Etymology: Gr. kirkos—a hawk. Refers to the predatory behaviour of Asilidae.

Description: Based on holotype  $\delta$ .

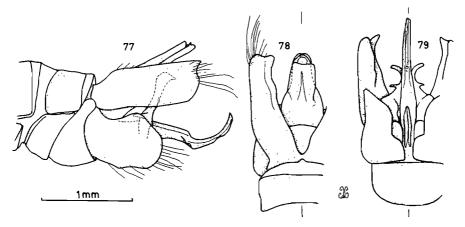
Head: Antenna dark red-brown to black; setae of scape black ventrally (1 white), white dorsally; pedicel setae black. Eye:face ratio 1:0,19; eye:lower facial margin ratio 6,9:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and white; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn few, white; 2/2 (1 yellow 1 black) npl; 2/2 black spal; 1/1 black pal; mane black, shorter white setae bordering. Scutellum with 2 black marginal bristles; disc with 3 black bristles and white setae. Wing:  $5.0 \times 1.7$  mm. Legs: dark red-brown to black; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles, long and short setae black and white.

Abdomen: Silver pruinose. T3 with 4 white marginal and 2 white discal bristles; setae white (laterally) and black (posterodorsally); S3 with 4 white bristles and white setae. Genitalia as in Figs 77–79 (paratype illustrated); epandrium moderate in length, well developed, pointed posterodorsally; hypandrium moderately developed; gonocoxite well developed, with broad distal flange; gonostylus with hooked tip and hook-like process at midlength; aedeagus long, fairly thick and abruptly upwardly bent at about midlength.

Paratypes:  $6 \ \delta \ 4 \ \varphi$  similar to holotype.  $\ \varphi$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: NAMIBIA: 2& (holotype & paratype) 1\$\,^2\$ (paratype), 22 km S Windhoek, Road 1/5, 22°44′S:17°07′E, 29.iii.1984, Stuckenberg & Londt, Scrubland with grass, roadside vegetation (NM); 2& 1\$\,^2\$ (paratypes), Outskirts of Aus overlooking town (2616CA), 30.viii.1983, Stuckenberg & Londt, Rocky area/Shrubs (NM); 1& 1\$\,^2\$ (paratypes), 20 km W Usakos (2115CD), 24.iv.1983, Londt & Stuckenberg, Sparse Savannah (NM); 1& (paratype), Namib (ca 2315AD), vi.1961, Venter (NCI). SOUTH AFRICA: Cape Province: 1\$\,^2\$ (paratype), 116 km WNW Upington (2820AA), 27.viii.1983, Stuckenberg & Londt, Broken veld/Very dry (NM); 1\$\,^3\$ (paratype), 60 km WNW Upington (2820BA), 27.viii.1983, Londt & Stuckenberg, Broken veld/Very dry (NM). NM Type No. 3858.



Figs 77-79. Neolophonotus circus sp. n. paratype male (22 km S Windhoek) genitalia. 77. Lateral. 78. Dorsal. 79. Ventral.

Distribution: Widespread in the Desert & Poor Steppe and Botswana & N Namibian climatic regions.

Relationship: A distinctive species. Male genitalia resemble those of tribulosus.

### Neolophonotus clavulus sp. n.

Figs 80-82

Etymology: L. dim. clavulus—small club. Male has club-shaped abdomen.

Description: Based on holotype  $\delta$ .

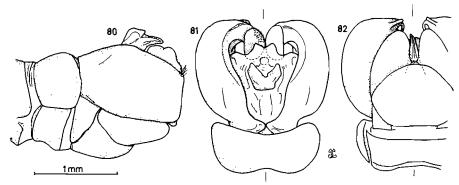
Head: Antenna dark red-brown to black; scape with black and yellow setae ventrally and white setae dorsally; scape with setae black ventrally, white (1 black) dorsally. Eye:face ratio 1:0,16; eye:lower facial margin ratio 14,5:1. Mystax pale yellow, group of black setae on lower facial margin. Occipital setae: upper—black and yellow; central and lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black, poorly developed; dc black; pprn white; 2/2 orange npl; 2/2 black (1 orange) spal; 1/1 black pal; mane weak, black, shorter white setae bordering. Scutellum with 2 black marginal bristles; disc with 3 black bristles and white setae. Wing:  $6.1 \times 2.1$  mm. Legs: black; cx1 setae white; cx3 with 1 short white bristle laterally. Hind femur: bristles white (2 black distally), long setae white and black, short setae white.

Abdomen: Silver pruinose. T3 with 2-3 white marginal bristles; setae short, white and yellow (laterally) and few black (dorsally); S3 with 8 white distal bristles and white setae. Genitalia as in Figs 80-82 (paratype illustrated); epandrium short and well developed, distally inwardly turned; hypandrium and gonocoxite relatively poorly developed; aedeagus of moderate length, with longish, slender tip.

Paratypes:  $20 \ \delta \ 16 \ \varphi$  similar to holotype.  $\ \varphi$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: NAMIBIA: 4♂ (holotype & paratypes) 2♀ (paratypes), Ozambanda Riv. 30 km W Okahandja, Road 7/1 21°54′S:16°37′E, 28.iii.1984, Stuckenberg & Londt, Rocks, grass & scrub (NM); 2♂ (paratypes), 22 km S Windhoek, Road 1/5, 22°44′S:19°07′E, 29.iii.1984, Stuckenberg & Londt, Scrub-



Figs 80-82. Neolophonotus clavulus sp. n. paratype male (Omaruru) genitalia. 80. Lateral. 81. Dorsal. 82. Ventral.

land with grass, roadside vegetation (NM);  $5\ \delta\ 3\ \varphi$  (paratypes), 11 km S Windhoek, Road 1/5, 22°39′S:17°04′E, 29.iii.1984, Stuckenberg & Londt, Rocky hillside grass and trees (NM);  $2\ \delta\ 1\ \varphi$  (paratypes), 13 km S of Windhoek (2217CA), 18.iv.1983, Stuckenberg & Londt, Rocky slopes Mixed Thornveld (NM);  $7\ \delta\ 7\ \varphi$  (paratypes), Omaruru commonage, 21°26′S:15°57′E, 27.iii.1984, Londt & Stuckenberg, Acacia savanna with large boulders (NM);  $1\ \delta\ 3\ \varphi$  (paratypes), Gross Barmen Resort, 22°07′S:16°42′E, 29.iii.1984, Londt & Stuckenberg, Roadside grass & dry river bed at camp (NM). NM Type No. 3859.

Distribution: Localities are all in the Botswana & N Namibian climatic region.

Prey record: Hemiptera (? family 1).

Relationship: A distinctive species. Male genitalia resemble those of destructor.

## Neolophonotus colubris sp. n.

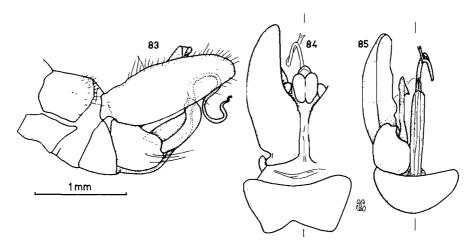
Figs 83-85

Etymology: Gr. coluber-snake or serpent. Aedeagus is sinuous.

Description: Based on unique holotype ♂.

Head: Antenna dark red-brown; setae black (few white laterally on scape). Eye:face ratio 1:0,19; eye:lower facial margin ratio 11,2:1. Mystax with shorter black setae laterally and on lower facial margin. Occipital setae: upper—black; central—black; lower—white.

Thorax: ktg s black (1 orange); mtanepst s black. Mesonotal setae & bristles: acr black; dc black; pprn white (1-2 black); 2/2 black npl; 2/2 black spal; 2/2 black pal; mane black no pale setae bordering. Scutellum with 2 black marginal bristles; disc with white (3 black) setae (no bristles). Wing:  $6.1 \times 2.1 \text{ mm}$ . Legs: Dark red-brown to black, tibiae orange-brown dorsoproximally; cx1 setae white bordered by yellow ones; cx3 with 1 pale yellow bristle laterally. Hind femur: bristles yellow and black, long setae white and black, short setae white.



Figs 83-85. Neolophonotus colubris sp. n. holotype male (Robertson) genitalia. 83. Lateral. 84. Dorsal. 85. Ventral.

Abdomen: Fine gold pruinose. T3 with 3 yellow (1 black on one side) marginal and 2 black discal bristles; setae short, white (laterally) and black (dorsally); S3 with yellow bristles and short white setae. Genitalia as in Figs 83–85; epandrium elongate, oval in lateral view, well developed; hypandrium and gonocoxite moderately developed; gonostylus broad and well developed; aedeagus elongate with filament sinuous.

Paratypes: None. 9 unknown.

Material examined: SOUTH AFRICA: Cape Province: 1& (holotype), Robertson (3319DD), 27.iv.1943, E. C. Anderssen (NM). NM Type No. 3860.

Distribution: Known only from the type-locality in the Mediterranean climatic region.

Relationship: A distinctive species. Male genitalia resemble those of gorongoza.

## Neolophonotus comatus (Wiedemann, 1821)

Figs 1, 86-89

Asilus comatus Wiedemann, 1821:193.
Lophonotus incisuralis Macquart, 1838:128. Syn.n.
Lophonotus comatus; Schiner, 1867:401.
Dysmachus comatus; Kertesz, 1909:276.
Dysmachus incisuralis; Kertesz. 1909:277. Syn.n.
Neolophonotus (Lophopeltis) comata; Engel, 1927:172.
Neolophonotus (Lophopeltis) comatus; Hull, 1962: 533.
Neolophonotus incisuralis; Hull, 1962:532; Oldroyd, 1981:340. Syn.n.
Neolophonotus comatus; Oldroyd, 1981:340.

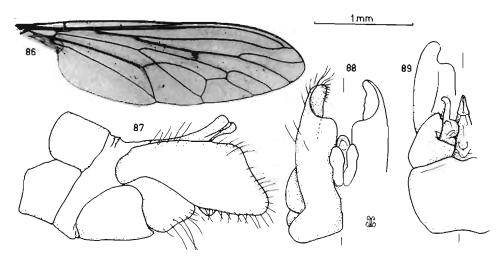
Redescription: Based on lectotype  $\delta$ .

Head: Antenna dark red-brown; setae black (few yellow). Eye:face ratio 1:0,22; eye:lower facial margin ratio 8,0:1. Mystax black and yellow (mixed). Occipital setae: upper—long black; central—black and orange; lower—white.

Thorax: ktg s and mtanepst s orange-brown. Mesonotal setae & bristles: acr black; dc black; pprn black and orange; 3/3 black npl; 3/3 black spal; 2/2 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with black (centrally) and white (laterally) setae. Wing:  $7.4 \times 2.7$  mm, no obvious markings (Fig. 86). Legs: dark red-brown, tibiae little paler dorsoproximally; cx1 setae white and yellow; cx3 with 1-2 orange bristle laterally. Hind femur: bristles orange-brown (few black), long setae dark red-brown, short setae white.

Abdomen: Silver-gold pruinose. T3 with 5 orange marginal and 3 orange discal bristles; setae white (laterally) and black (dorsally); S3 with long black and white setae. Genitalia as in Figs 87–89; epandrium moderately well developed; hypandrium and gonocoxite moderately developed; aedeagus of moderate length, broad basally, tapering fairly abruptly to pointed tip.

Type material: Wiedemann merely indicated ' $\$ ' which could suggest that he saw only a single female specimen. I have, however, seen  $1\$   $\delta$   $1\$  ZMC specimens which I conveniently consider syntypes. Both specimens have similar labels although the  $\delta$  has a determination label while the  $\circ$  does not. I here propose that the  $\delta$  be considered the lectotype and the  $\circ$  a paralectotype.



Figs 86-89. Neolophonoius comatus (Wiedemann, 1821). 86. Wing (paralectotype 3). 87-89. Holotype male genitalia (Cape Good Hope). 87. Lateral. 88. Dorsal. 89. Ventral.

Female: Querci spine-like, forming elements of two-pronged fork-like structure.

Synonymy: The type material of Lophonotus incisuralis Macquart can not be traced. The original description is not good. Macquart says his species resembles molitor (a valid eastern Cape species belonging to the pellitus species-group) but describes the mane as black (crete noire) which suggests that the species belongs rather to the comatus group. The male specimen(s) were collected at 'The Cape' (Du Cap) by M. Serville. Other specimens collected by Serville represent species (heteronevrus and forcipatus) known to inhabit the Cape Peninsula and surrounding area (ie Mediterranean climatic region). For these reasons I have decided that it would be justified to synonymise incisuralis with comatus (perhaps the best-

known member of the species-group to inhabit the south-western Cape) and so add

to the taxonomic stability of the genus.

Material examined: SOUTH AFRICA: Cape Province: 13 (lectotype) 19 (paralectotype), Cape Good Hope, ix.1817, Mus. Westerm. (ZMC); 12, 'Cap' (NMW); 13, Paarl (3318DB), 8.ix.1917, Roberts (NM); 143 99 3?, Stellenbosch (3318DD), various dates in ix. & x.1926, Dr H. Brauns (NM); 38, Stellenbosch, 3.viii.1938 26.ix.1936 1.ix.1928, Ac.US. (NM); 1&, Stellenbosch, Brauns (ZSM); 18, St. bosch, 21.ix.1927, Mostert (ZSM); 78 99, Du Toitskloof summit (3319CC), 11.ix.1981, Londt Schoeman & Stuckenberg, Macchia near tunnel (NM); 13 19, Cold Bokkeveld (3319AB), 30.viii.1981, Londt Schoeman & Stuckenberg, Macchia—Rocky slope (NM); 48 49, Cold Bokkeveld, Ceres Dist., 15-30.x.1934, Versfeld (SAM); 1d, Franschhoek Pass near Franschhoek (3319CC), 7-8.x.1959, Stuckenberg (NM); 19, Wellington (3318DB), 12.ix.1926, Brauns (NM); 18, Cape Town, Driehoek (3318DC), ix.1922, Brauns (NM); 38 19, Cape Town, Lionshead (3318CD), 29.ix.1979, Londt, E slopes above Signal Hill Rd. (NM); 28 19, 30 km NE Wellington, Bainskloof Pass (3319CA), 27.ix.1979, Londt, Stream edges (NM); 13, Kleinmond (3419AC), 23.ix.1979, Londt, Swept from veget. on banks of river (NM); 13, Palmietrivier mouth,

Caledon (3419AB), x.1924, Brauns (NM); 1\$\delta\$, Caledon, 25.ix.1981, Theron (NM); 2\$\delta\$, Kommetjie Hillside (3418AB), 12.ix.1981, Londt Schoeman & Stuckenberg, Macchia vegetation (NM); 1\$\delta\$ 1\$\varphi\$, Swartberg Pass (3322AC), 10.xi.1986, Quickelberge & Londt, 1 265 m, Rocky slopes (NM); 1\$\delta\$, George Dist (3322CD), viii.1931, Theron (SAM); 1\$\varphi\$, 3 km S Prince Albert (3322AA), 10.xi.1986, Londt & Quickelberge, Oukloof Sand ? Acacias (NM); 4\$\delta\$ 5\$\varphi\$, Sneeuwgat Valley Tulbach Div. (3319AC), x.1934, Mus Staff (SAM); 1\$\delta\$ 6\$\varphi\$, Banhoek Valley (3318DD) Stellenbosch Div., x.1934, Mus Staff (SAM); 2\$\delta\$ 3\$\varphi\$, Michells Pass (3319AD) Ceres Div., x.1934, Mus Staff (SAM); 1\$\delta\$, Goedehoop Heidelberg Distr. (3420BB), x.1951, Mus Exp. (SAM); 2\$\delta\$, Rust en Vrede, Oudtshoorn Dist. (3322CA), x.1951, Mus Exp (SAM); 1\$\delta\$, Slypsteen, Towerwaterkloof, Willowmore Dist. (3323AD), x.1938, Mus Staff (SAM); 2\$\varphi\$, Willowmore, 19.viii.1909 & 18.viii.1906, Brauns (ZSM).

Distribution: Fairly widespread in Mediterranean and Little & Great Karoo climatic regions (Fig. 381).

Relationship: A fairly distinctive species. Male genitalia resemble those of pusillus.

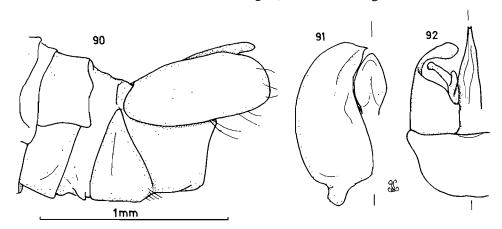
## Neolophonotus costatus sp.n.

Figs 90-92

Etymology: L. costatus—ribbed or flanged. Males have a well-developed flange on the gonocoxite.

Description: Based on holotype 3.

Head: Antenna dark red-brown; setae black ventrally (a few white on scape), white dorsally. Eye:face ratio 1:0,19; eye:lower facial margin ratio 16,2:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black; lower—white. Thorax: ktg s and mtanepst s black and white. Mesonotal setae & bristles: acr black; dc black; pprn black and white; 2/2 black npl; 2/2 black spal; 1/1 black pal; mane black, no pale setae bordering. Scutellum with 2 black marginal bristles; disc with 3 black bristles and white setae. Wing:  $5.1 \times 1.7$  mm. Legs: dark red-brown;



Figs 90-92. Neolophonotus costatus sp. n. paratype male (Kilimandjaro) genitalia. 90. Lateral. 91. Dorsal. 92. Ventral.

cx1 setae white, few black laterally; cx3 with 1 white bristle laterally. Hind femur: bristles black, long setae black and white, short setae white dorsally, black ventrally.

Abdomen: Silver pruinose; T3 with 1 white, 1 brown marginal bristles; setae dark red-brown, few white laterally; S3 with white setae. Genitalia as in Figs 90–92 (paratype illustrated); epandrium short and moderately developed; hypandrium and gonocoxite well developed; gonocoxite with broad distal flange; aedeagus of moderate length, with longish, slender tip.

Paratypes: 2♂ 1♀ similar to holotype. ♀ cerci spine-like.

Material examined: KENYA: 2& (holotype & paratype) 1\( \text{paratype} \) (paratype) Nakuru (0036AC), i.1913, Dr B. L. van Someren (ZSM); TANZANIA: 1& (paratype), Reg. Forest Entre le Kilimandjaro (0337AB) et la Riv Sabaki Special Riv Tsavo, xii.1912, Dr Gromier (MNP).

Distribution: Kenya and Tanzania.

Relationship: A very distinctive species. Male genitalia distinctive and not resembling other species (may superficially look a little like occidualis).

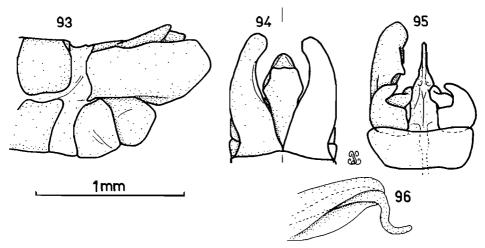
#### Neolophonotus cristatus sp.n.

Figs 93-96

Etymology: L. crista—crested. Specimens have a long crest-like mystax and mane, as well as long setae along dorsal midline of abdomen.

Description: Based on unique holotype 3.

Head: Antenna with yellow-brown scape and pedicel, rest dark red-brown; setae black and white. Eye:face ratio 1:0,21; eye:lower facial margin ratio 16,0:1. Mystax black with white setae bordering laterally. Occipital setae: upper—long black; central—black and yellow; lower—white (black along eye margin).



Figs 93-96. Neolophonotus cristatus sp. n. holotype male (Pretoria N) genitalia. 93. Lateral. 94. Dorsal. 95. Ventral. 96. Detail of aedeagus (ventrolateral view).

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr not clearly differentiated in well-developed mane; dc yellow and black; pprn long, shiny white; 2/2 long yellow npl; 2/2 (1 black 1 yellow) spal; 1/1 yellow pal; mane black, shorter white setae bordering. Scutellum with 9 long, thin, black marginal bristles; disc with long, black bristles and shorter white setae. Wing:  $5.0 \times 1.9$  mm. Legs: brown; cx1 setae white bordered with black setae laterally; cx3 with 1 yellow bristle laterally. Hind femur: bristles yellow (few brown distally), long setae yellow, white and brown, short setae white and black.

Abdomen: Fine silver-gold pruinose. T3 with 2 yellow, 1 black marginal bristles; setae long, white (laterally) and long black and white (dorsally); S3 with long black and white setae. Genitalia as in Figs 93–96; epandrium short but well developed; hypandrium and gonocoxite moderately developed; aedeagus of moderate length, thickish and with sinuose tip.

Paratypes: 6♂ 1♀.

Material examined: SOUTH AFRICA: *Transvaal*: 13 (holotype), Pretoria N [suburb of Pretoria] (2528CA), 30.v.1932, G. van Son (NM); 43 (paratypes), Pta. North [Pretoria North], 18–20.ix.1971, E. Holm, malaise trap (NCI, NM); 13 (paratype), same data but 1–8.ix.1971 (NCI); 13 (paratype), Saartjiesnek, 30 km W. Pta. [Pretoria], 13–20.viii.197?, E. Holm, malaise trap (NCI); 19 (paratype), Hartebeespoort (2527DB), x.1965, P. Poliatseas (NM). NM Type No. 3861.

Distribution: Known only from the type-locality situated in the N Transvaal climatic region.

Relationship: A distinctive species which may be most closely related to arboreus. Male genitalia do not resemble those of other species.

#### Neolophonotus currani sp. n.

Figs 97-99

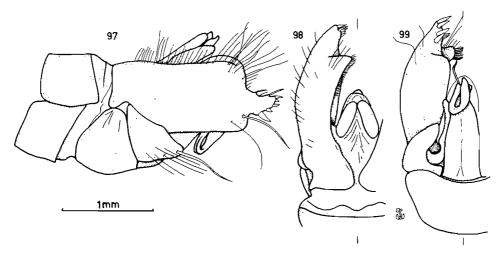
Etymology: Named after Dr C. H. Curran in recognition of his contribution to our knowledge of Afrotropical Asilidae.

Description: Based on unique holotype  $\delta$ .

Head: Antenna dark red-brown to black; setae black ventrally (few yellow on scape), yellow dorsally. Eye:face ratio 1:0,19; eye:lower facial margin ratio 21,3:1. Mystax black and yellow. Occipital setae: upper—black and yellow; central—fine black; lower—fine white.

Thorax: ktg s and mtanepst s fine yellow. Mesonotal setae & bristles: acr not clearly differentiated among setae of mane; dc black; pprn long, thin yellow; 2/2 yellow npl; 1/1 black spal; 2/2 (1 black 1 yellow) pal; mane black, no pale setae bordering. Scutellum with 4 yellow marginal bristles; disc with ca 6 thin, yellow bristles and long, white setae. Wing:  $7.6 \times 2.8$  mm. Legs: dark red-brown, tibiae orange-brown dorsoproximally; cx1 setae white; cx3 with 1 fine yellow bristle laterally. Hind femur: bristles yellow (2 black distally), long setae yellow, short setae fine yellow (few black).

Abdomen: Silver-gold pruinose. T3 with long yellow setae (laterally) and shorter black (dorsally); S3 with long yellow (few black) setae. Genitalia as in Figs 97-99;



Figs 97-99. Neolophonotus curraní sp. n. holotype male (Lichenya Plateau) genitalia. 97. Lateral. 98. Dorsal. 99. Ventral.

epandrium well developed, with a distal process covered with stout spine-like setae; hypandrium and gonocoxite moderately developed; aedeagus long, thick in basal half, coiled distally, tip long and slender.

Paratypes: None. 9 unknown.

Material examined: MALAŴI: 13 (holotype), Lichenya Plateau (1535DC), 9-20.viii.1948, A. Loveridge (MCZ).

Distribution: Known only from the type-locality in Malaŵi.

Relationship: A fairly distinctive species. Male genitalia resemble those of hobbyi.

#### Neolophonotus cuthbertsoni (Curran, 1934)

Figs 100-105

Lophopeltis cuthbertsoni Curran, 1934:12; Engel & Cuthbertson, 1934:40; Cuthbertson, 1935b:48; Cuthbertson, 1937:18; Cuthbertson, 1938:116.

Neolophonotus (Lophopeltis) cuthbertsoni; Hull, 1962:533.

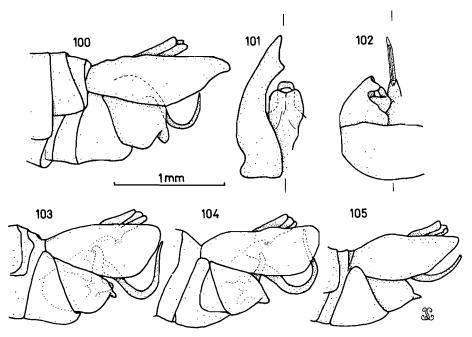
Neolophonotus cuthbertsoni; Oldroyd, 1981:340.

Redescription: Based on holotype 3.

Head: Antenna dark red-brown; setae black. Eye:face ratio 1:0,20; eye:lower facial margin ratio 10,3:1. Mystax black and white (mixed). Occipital setae: upper — black; central—dark red-brown; lower—white.

Thorax: ktg s and mtanepst s black and white. Mesonotal setae & bristles: acr black; dc black; pprn long dark red-brown; 3/3 black npl; 2/2 black spal; 1/1 black pal (+ 1 black seta); mane black, no pale setae bordering. Scutellum with 4 black marginal bristles; disc with 4 black bristles and dark red-brown and white setae. Wing:  $7.2 \times 2.4$  mm. Legs: femur dark red-brown, tibiae and tarsus paler; cx1 setae white (few black laterally); cx3 with 1 black bristle laterally. Hind femur: bristles long black, long setae white and dark red-brown, short setae white (anteriorly and posteriorly) and black (dorsally and ventrally).

Abdomen: Gold-silver pruinose. T3 with 2 black, 1 white marginal, 1 black discal bristles; setae short, white (anterolaterally) and black (posterodorsally); S3 with ca 6 white marginal bristles and white setae. Genitalia as in Figs 100–102; epandrium shortish but well developed; hypandrium and gonocoxite well developed; aedeagus of moderate length, with longish, S-shaped, slender tip.



Figs 100-105. Neolophonotus cuthbertsoni (Curran, 1934) male genitalia. 100-102. Holotype (Lalumba). 100. Lateral. 101. Dorsal. 102. Ventral. 103-105. Variation, lateral views. 103. Zoutpa dist. 3. 104. Olifantshoek 3. 105. Quellerina 3.

Type material: Curran's type series consisted of  $3\eth$  1, all collected at the same locality. I have seen the holotype  $\eth$  and allotype  $\Im$  and  $1\eth$  paratype dated 20.ix.1917 (all listed below), but have not seen the  $\eth$  dated ix.1927. The date of collection published for the allotype (March 8, 1918) is incorrect. The date is written 3-8-18 on the label and this should be read 3rd August 1918.

Female: ♀ cerci spine-like, forming elements of two-pronged fork-like structure. Material examined: ZIMBABWE: 1♂ (holotype), Lalumba, Salisbury [= Harare—1731CC], 8.ix.1912 (AMNH); 1♀ (allotype), Salisbury, 3.viii.1918 (AMNH); 1♂ (paratype), Salisbury, 20.ix.1917 (NMZ); 1♂, Salisbury, 18.vi.1938, Cuthbertson (NMZ); 1♂, Borrowdale (1731CA), Comm Inst Ent Coll, G. H. Bunzli (NMZ); 1♂, Bulawayo (2028BA), 1911, Pead (ZSM). NAMIBIA: 1♂, Aminuis (2319CB), vii.1936, Mus Staff (SAM). SOUTH AFRICA: Transvaal: 1♂, Zoutpan dist [ie Soutpansberg Dist—2229CD], 6.vii.1917, Breyer (NM); 1♂, Pret. [ie Pretoria—2528CA], iii.1971, M.N. (NM); 1♂ ⁴♀, Saartjiesnek 30 km W Pta. (2527DB), 9–16.ix. & 13–20.viii.1971, Holm, Malaise Trap (NCI); 1♂ 1♀, Pretoria, 18.vii.1914 21.ix.1915, Munro (NCI); 3♂ 2♀, Barberton (2531CC),

7.x.1919 12.viii.1916 14.v.1913 15.v.1913 24.v.1913, Munro (NCI); 1♂ 1♀, Berlin Falls (2430DA), 16.ix.1986, Londt & Stuckenberg, Burnt grass nr stream (NM); 2♂ 1♀, Treur River nr. New Chum Falls (2430DB), Londt & Stuckenberg, 16.ix.1986, Rocky, sandy area (NM); 43 79, Johannesburg, Linksfield Ridge (2628AA), 11.vii.1982, Elferink (NM); 1♂ 1♀, Bedford Ridge, JHBG [Johannesburg—2628AA], 24.ix.1947, Capener (NM); 43 49, Quellerina, Roodepoort (2627BB), 4.vii.1982, Elferink (NM); 13, Tongwane R. (2429DB), 15.iv.1979, Meiswinkel, small rock after rain, midday (NM); 13, Benoni (2628AB), 8.viii.1982, Reavel, in swimming pool (NM). Orange Free State: 5♂ 6♀, 46 km W Bloemfontein (2925BB), 26.iii.1982, Londt & Schoeman, Gentle slope with rocks, shrubs & grass (NM); 13, Goedemoed nr Orange Riv (3026CB), xi.1939, Mus Staff (SAM); 1& 19, Bothaville (2726BC) Orange R., Brauns (ZSM). Natal: 6& 8♀, 15 km SE Rorke's Drift, 28°30′S:30°30′E, 29 & 30.v.1982, Miller (NM); 3♂ 19, Isandlwana (2830BC), 30.v.1982, Londt (NM); 16, Mfongosi (2830DB), v.1916, Jones (SAM); 23, same data but iv-v.1934 (SAM). Cape Province: 13 19, Kleinzee [Kleinsee—2917CA], N Namaqualand, iii.1935, Mus Staff (SAM); 10♂ 11♀, Hill nr Olifantshoek (2722DC), 24.iii.1982, Londt & Schoeman, rocky hillside grass & Acacia trees (NM); 18 29, Studer's Pass, 22 km NE of Garies (3018AC), 6.ix.1982, J. Londt & B. Stuckenberg, Stream edge & rocky slopes (NM).

Distribution: Widespread. Recorded from Zimbabwe and the following climatic regions of southern Africa: N Transvaal, Highveld, Desert & Poor Steppe, S & N Steppe, Drakensberg, Little & Great Karoo (Fig. 381).

Variation: The variation shown by this widespread species is considered intraspecific. The variation in  $\delta$  genital structure is illustrated in Figs 103-105.

Prey records: Hemiptera (Cicadellidae 1). This is the only new record: the following is a summary of the information published by Cuthbertson and Engel & Cuthbertson. Hemiptera (? family 3, Jassidae 1); Diptera (Muscidae 1); Lepidoptera (Lymantridae 1, Lycaenidae 1, Pyralidae 1). I accept these records as there is little doubt that both Cuthbertson and Engel were correctly identifying *cuthbertsoni*.

Relationship: A fairly distinctive species. Male genitalia closely resemble those of *lacustrinus* and *iota*.

## Neolophonotus cymbius sp.n.

Figs 106-109

Etymology: L. cymba—cup, bowl. Males have cup-shaped structure on medial face of epandrial lobe.

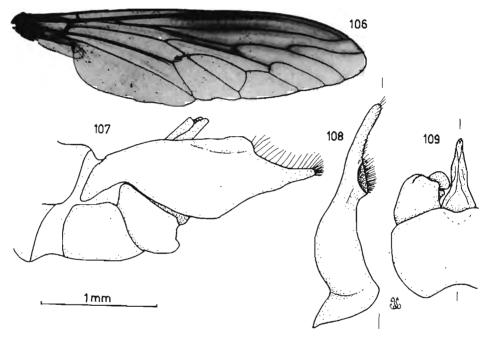
Description: Based on holotype 3.

Head: Antenna black; setae black ventrally, white dorsally. Eye:face ratio 1:0,15; eye:lower facial margin ratio 7,8:1. Mystax black and white (mixed). Occipital setae: upper—black; central—pale yellow-white; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn few, strong, yellow (1 black); 3/3 yellow (1 black) npl; 3/3 black spal;

2/2 black pal (+ 2 black setae); mane black, shorter white setae bordering. Scutellum with 7 black marginal bristles; disc with 7 black bristles and black (centrally) and white (laterally) setae. Wing:  $8.9 \times 3.2$  mm (Fig. 106). Legs: black, tibiae orange-brown dorsoproximally; cx1 setae white; cx3 with 2-3 pale yellow bristles laterally. Hind femur: bristles pale yellow and black, long setae black and white, short setae white (dorsally and laterally) and black (ventrally).

Abdomen: Fine gold pruinose. T3 lacks bristles; setae, white (laterally) and black (dorsally); S3 with long white setae. Genitalia as in Figs 107-109 (paratype illustrated); epandrium attenuate, well developed, with cup-shaped structure on mesial surface; hypandrium and gonocoxite moderately developed; aedeagus of moderate length, tapering to tip.



Figs 106-109. Neolophonotus cymbius sp. n. male. 106. Wing (Hlobane paratype). 107-109. Genitalia (Oltaskaap paratype). 107. Lateral. 108. Dorsal. 109. Ventral.

Paratypes:  $51 \delta 17 \circ 1?$  similar to holotype.  $\circ$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Transvaal: 8\$\delta\$ (holotype & paratypes) 2\$\varphi\$ (paratypes), Halfway House (2528CC), 2.v.1982, R. Elferink (NM); 7\$\delta\$ 2\$\varphi\$ (paratypes), Kleinjukskei R. Randb'g-Witkoppen (2627BB), 25.iv.1982, Elferink (NM); 2\$\delta\$ 1\$\varphi\$ (paratypes), Johannesburg, Linksfield Ridge (2628AA), 16.v.1982, Elferink (NM); 1\$\delta\$ (paratype), Pretoria (2528CA), ii.1963, J. B. R. F., A. R. I. Pretoria (NM); 1\$\delta\$ (paratype), Pretoria, 12.iv.1962, P. C. W., A. R. I. Pretoria (NM); 1\$\delta\$ (paratype), Pretoria (SE2528CC), xii.1980, du Preez (NM); 1\$\delta\$ (paratype), Pretoria, iii.1967, Furguson (NM); 1\$\delta\$ (paratype), Suikerbosrand Dist.

Heidelberg, 8.v.1983, Elferink (NM); 19 (paratype), Cycad Trail Dist. Middelburg (2529CD), 3.i.1983, Elferink (NM); 13 (paratype). Middelburg (SE2529CD), 19.v.1979, Botha (NM); 1♂ (paratype), Doringkloof (2528CC), du Toit (NM); 1♂ (paratype), Jan Kemp (Jan Kempdorp—2724DD), iv.1961, H.S. (NM); 19 (paratype), SE2630DD, 5.iv.1981, Grobbelaar (NM); 1? (paratype), Rustenburg (2527CA), ii.1968, E.J.R. (NM). Cape Province: 13 (paratype), Jan Kemp (Jan Kempdorp—2724DD), iv.1961, H.S. (NM). Natal: 2♂ 2♀ (paratypes), Isandlwana (2830BC), 30.v.1982, Londt, Stones (NM); 5♂ 3♀ (paratypes), 30 km W Babanango (2830BD), 30.v.1982, Londt (NM); 13 (paratype), Royal Natal Nat. Park (2828DB), 28-29.iv.1984, Londt, Forest margins & grasslands (NM); 7♂ 4♀ (paratypes), Hlobane Dam (2730DB), 31.v.1983, Youthed (NM); 1♂ (paratype), Willow Grange [Willowgrange—2929BB] Mooi River, v.1913, Wroughton (ZSM). Orange Free State: 2♂ 1♀ (paratypes), 20 km E of Tweespruit (2927AA), 26.iii.1982, Londt & Schoeman, Rocky hill/Grassveld (NM). ZIM-BABWE: 33 (paratypes), Bulawayo (2028BA), 20.v.1923, Rhodesia Museum (NMZ); 13 (paratype), Bulawayo, 22.vii.1923, Stevenson (SAM). Unknown country & province: 13 (paratype), Oltaskaap (?), iv.1916, Breijer (NM); 13, N.d.T. i.1964, T20 (NM). NM Type No. 3862.

Distribution: A fairly widespread species, recorded from the following climatic regions: Highveld, S & N Steppe, N Transvaal, Drakensberg.

Relationship: A distinctive species. Male genitalia may most closely resemble those of attenuatus and its allies.

Prey record: Hymenoptera (Formicidae 1).

#### Neolophonotus cynthiae sp. n.

Figs 110-112

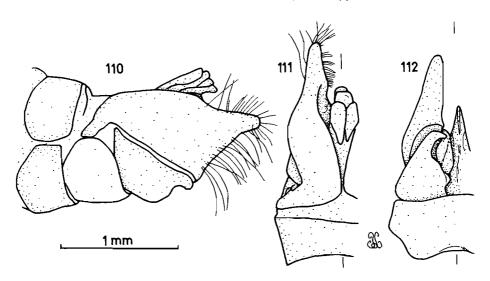
Etymology: Named for my daughter Cynthia who has accompanied me on many entomological outings.

Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black ventrally, white dorsally except for few black setae on pedicel. Eye:face ratio 1:0,20; eye:lower facial margin ratio 8,3:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and pale yellow; lower—white with black along eye margin.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn black and white; 3/3 (1 orange 2 black) npl; 2/2 black spal; 1/1 black pal (+ 1 black seta); mane black shorter white setae bordering. Scutellum with 7 black marginal bristles; disc with 11 black bristles and white setae. Wing:  $5.9 \times 2.1$  mm. Legs: black, tibiae orange-brown dorsoproximally; cx1 setae white bordered by black setae laterally; cx3 with 1 thin black bristle laterally. Hind femur: bristles and setae black and white.

Abdomen: Silver pruinose. T3 with 2 black and yellow marginal bristles; setae short, white (laterally) and black (dorsally); S3 with longish black and white setae. Genitalia as in Figs 110-112; epandrium shortish, distally attenuate, well



Figs 110-112. Neolophonotus cynthiae sp. n. holotype male (Grootpan) genitalia. 110. Lateral. 111. Dorsal. 112. Ventral.

developed; hypandrium and gonocoxite moderately developed; aedeagus of moderate length, tapering from broad base to sharp tip.

Paratypes:  $1 \stackrel{?}{\circ} 1 \stackrel{?}{\circ} 1$ ? similar to holotype.  $\stackrel{?}{\circ}$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Cape Province: 1& (holotype) 1\(\times\) (paratype), Grootpan E Lime Acres (2823BC), 25.iii.1982, J. Londt & L. Schoeman, grass in pan centre (NM). Orange Free State: 1& 1? (paratypes), Bloemfontein (2926AA), 16.v.1920 (&) 30.v.1920 (?), H. K. Munro (NM). NM Type No. 3863.

Distribution: Both localities are in the N & S Steppe climatic region.

Relationship: A distinctive species. Male genitalia resemble those of holmi.

#### Neolophonotus declivicauda sp. n.

Figs 113-115

Etymology: L. declivus—sloping; cauda—tail. The male epandrial lobes are bent downward distally.

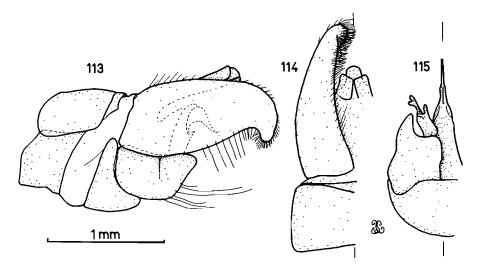
Description: Based on holotype ♂.

Head: Antenna dark red-brown to black; setae black except for those dorsally on scape which are white. Eye:face ratio 1:0,19; eye:lower facial margin ratio 11,5:1. Mystax black and white (mixed). Occipital setae: upper—black, 1-2 white; central—black and white; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn white, few black; 3/3 black npl; 2/2 black spal; 2/2 black pal; mane black, few, shorter white setae bordering. Scutellum with 7 black marginal bristles; disc with ca 10 black bristles and white setae. Wing:  $8.1 \times 2.5$  mm. Legs: dark red-brown to

black; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles black, long setae black ventrally, white dorsally, short setae white.

Abdomen: Fine silver and red-gold pruinose. T3 with 5-6 black and white lateral bristles; setae, white (laterally) and black (dorsally); S3 with 6 white bristles and long and short white setae. Genitalia as in Figs 113-115 (paratype illustrated); epandrium moderately well developed, distal tip downturned in lateral view; hypandrium and gonocoxite moderately developed; aedeagus longish, with long, slender tip.



Figs 113-115. Neolophonotus declivicauda sp. n. paratype male (NE Zoutp. dist.) genitalia. 113. Lateral. 114. Dorsal. 115. Ventral.

Paratypes: 12359 1? similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: *Transvaal*: 5\$\displaystyle{\displaystyle{\textit{Transvaal}}}\$: 5\$\displaystyle{\textit{Coutpansberg}}\$-2229DD], 7 & 8.16 [vii & viii 1916], H.G. Breyer (NM); 7\$\displaystyle{\textit{A}}\$ (paratypes), Blinkwater (2329AA), 9.iv.1979, large flat rock, R. Meiswinkel (NM); 1\$\displaystyle{\textit{Coutpansberg}}\$, 20 km from Pietersburg on Mooketsi Rd, 23°36'S:30°06'E, 23.xii.1980, 6 am. wet grass (NM). NM Type No. 3864.

Distribution: Both localities are in the N Transvaal climatic region.

Relationship: A distinctive species. Male genitalia may superficially resemble those of *elgon*.

## Neolophonotus destructor sp. n.

Figs 116-118

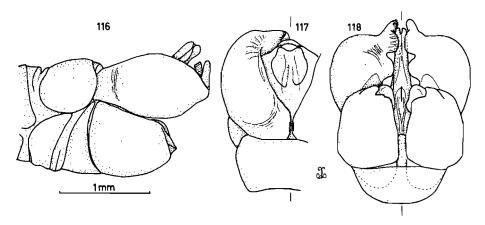
Etymology: L. destructor—destroyer. Refers to the predatory behaviour of Asilidae.

Description: Based on unique holotype 3.

Head: Antenna dark red-brown to black, joints slightly paler; setae black except for dorsal half of scape which has white setae. Eye:face ratio 1:0,16; eye:lower facial margin ratio 9,7:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and white; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black (mostly broken off); dc black; pprn white; 3/3 yellow npl; 2/2 black spal; 1/1 black pal; mane black, shorter white setae bordering. Scutellum with 2 black marginal bristles; disc with 4 black bristles and white setae. Wing:  $6.3 \times 2.1$  mm. Legs: dark red-brown to black; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles and long setae dark brown and white, short setae white (few dark red-brown ones ventrally).

Abdomen: Silver pruinose. T3 with 2 white marginal bristles; setae short, white (laterally) and black (posterodorsally); S3 with short white setae. Genitalia as in Figs 116–118; epandrium short, bulbous, well developed; hypandrium moderately developed; gonocoxite well developed; aedeagus dorsoventrally flattened, moderately long and upwardly directed tip.



Figs 116-118. Neolophonotus destructor sp. n. holotype male (65 km N Grunau) genitalia. 116. Lateral. 117. Dorsal. 118. Ventral.

Paratypes: None. 9 unknown.

Material examined: NAMIBIA: 13 (holotype), 65 km N of Grunau (2718BA), 29.viii.1983, B. Stuckenberg & J. Londt, Karasberg Mountains Dry river (NM). NM Type No. 3865.

Distribution: Known only from the type-locality in the Desert & Poor Steppe climatic region.

Relationship: A distinctive species. Male genitalia resemble those of *clavulus*.

#### Neolophonotus diana sp. n.

Figs 119-121

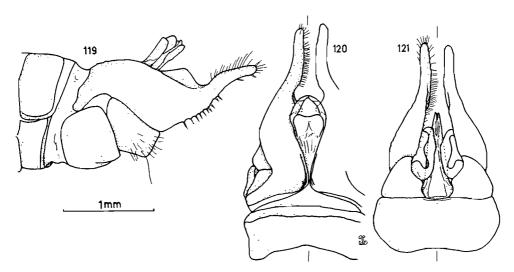
Etymology: L. Goddess of the chase. Refers to the predatory behaviour of Asilidae.

Description: Based on unique holotype  $\delta$ .

Head: Antenna dark red-brown; setae black ventrally, white dorsally. Eye:face ratio 1:0,18; eye:lower facial margin ratio 9,7:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and yellow; lower—white.

Thorax: ktg s and mtanepst s orange. Mesonotal setae & bristles: acr black; dc black; pprn short yellow; 3/3 black (1 orange on left side) npl; 2/2 black spal; 2/2 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 5 black bristles and few white and black setae. Wing:  $6.5 \times 2.3$  mm. Legs: dark red-brown to black, tibiae orange-brown dorsoproximally; cx1 setae white; cx3 with 1-2 yellow bristles laterally. Hind femur: bristles yellow (few brown distally), long setae black (few white), short setae white (few dark ones ventrally).

Abdomen: Fine gold pruinose. T3 lacks bristles; setae short, white (laterally) and black (dorsally); S3 with white setae. Genitalia as in Figs 119–121; epandrium longish, attenuate distally and with flange-like projection dorsally in lateral view; hypandrium and gonocoxite moderately developed; aedeagus of moderate length, with pointed tip.



Figs 119-121. Neolophonotus diana sp. n. holotype male (Bo Kouga) genitalia. 119. Lateral. 120. Dorsal. 121. Ventral.

Paratypes: None. ♀ unknown.

Material examined: SOUTH AFRICA: Cape Province: 13 (holotype), Bo Kouga (3323CB) Uniondale Distr., iii.1954, S.A. Museum (SAM). SAM Type No. 5304.

Distribution: Known only from the type-locality in the Little & Great Karoo climatic region.

Relationship: A distinctive species. Male genitalia resemble those of brendani and cymbius.

# Neolophonotus dichaetus Hull, 1967

Figs 122-126

Neolophonotus (Lophybus) dichaetus Hull, 1967:267. Neolophonotus dichaetus: Oldroyd, 1981:340; Londt & Harris, 1987:427-434.

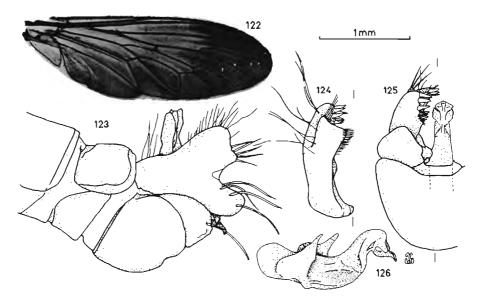
Redescription: Based on holotype 3.

Head: Antenna dark red-brown to black; setae black. Eye:face ratio 1:0,21; eye:lower facial margin ratio 13,3:1. Mystax black in upper part, white in lower part. Occipital setae: upper—long black; central—pale yellow; lower—white.

Thorax: ktg s and mtanepst s pale yellow. Mesonotal setae & bristles: acr few black; dc black; pprn long, fine pale yellow; 2/2 (black anteriorly yellow posteriorly) npl; 1/1 yellow spal; 1/1 yellow pal; mane black, no pale setae bordering. Scutellum with 2 black marginal bristles; disc with fine yellowish setae. Wing:  $5.2 \times 1.9$  mm (Fig. 122). Legs: black, tibiae orange dorsoproximally; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles pale yellowwhite, long setae white, short setae yellow-white, moderately long.

Abdomen: Fine gold pruinose. T3 with 2 white marginal and few thin yellow discal bristles; setae white-yellow (laterally) and black (dorsally); S3 with longish white setae. Genitalia as in Figs 123–126 (Grahamstown & illustrated); epandrium short but well developed, bifurcate distally, equipped with small spine-like setae on internal surfaces of distal lobes; hypandrium well developed; gonocoxite relatively poorly developed; aedeagus of moderate length and somewhat bulbous subapically.

Type material: Hull described the species on a single  $\delta$ .



Figs 122-126. Neolophonotus dichaetus Hull, 1967 male. 122. Holotype (Elands Height) wing. 123-126. Genitalia (Grahamstown 3). 123. Lateral. 124. Dorsal. 125. Ventral. 126. Detail of aedeagus (lateral).

Female: Female specimens to hand resemble males. Ovipositor laterally compressed, cerci not spine-like.

Material examined: TRANSKEI: 18 (holotype), Elands Height (3028CD) 15 mi. SW Mount Fletcher, 9.iii.1951, Brinck & Rudebeck, loc. no. 217 (ZML); 19, Prt. St. John (3129DA), Swinny (NM); 12, Coffee Bay (3129CC), 16-20.x.1970, Londt (NM). SOUTH AFRICA: Natal: 18, Ramsgate (3030CD), 8-17.i.1982, Londt (NM). Cape Province: 1& 19, Grahamstown (3326BC), 9.xi.1971, Londt, Belmont Valley (NM); 1δ 29 1?, Grahamstown, 18.x.1967(?) 26.ix.1968(9) 16.xi.1970(♂) 11.xii.1971(♀) Londt (NM); 1♀, Grahamstown, 7.xii.1952, Stuckenberg (NM); 1& 4\angle, Grahamstown 33°18'S:26°31'E, 9.xi.1984, Harris (NM); 5&, Grahamstown, 30.xi. & 7.xii.1984, Harris (NM); 19, Strowan, Grahamstown, 15.x.1967, Jacot-Guillarmod (AM); 19, Port Alfred (3326DB), 30.xii.1985, Londt, Centenary Park, Bush on banks of estuary (NM); 13 19, Port Alfred, 9.i.1971, Londt (NM); 19, Port Alfred, 27.ix.1979, Theron (NM); 13, New Year's Dam (3326AC) Alicedale, 5.xi.1978, Miller & Londt, dam margin (NM); 19, Mountain Zebra National Park, 24 km W Cradock (3225AB), 21.i.1984, Barraclough, Rocky hillside (NM); 18, ca 16 km NE Hogsback on Cathcart Road (3226BD), 19.i.1984, Barraclough, Rocky hillside (NM); 13, 10 km N of Hogsback (3226DB), 14.xii.1985, Londt, Grassy slopes & river banks (NM); 13, 15 km W Alexandria (3326CA), 3.xi.1978, Londt & Miller, hillside vegetation (NM); 13, Loerie (3325CC), i.1960, SAM (SAM).

Distribution: Widespread, from S Cape Coastal, SE Cape Coastal, S & N Steppe, Drakensberg and Subtropical climatic regions (Fig. 381).

Relationship: A very distinctive species. Male genitalia not resembling other species in the group.

Prey records: Those published by Londt & Harris¹ who also described aspects of the biology and first instar larvae of this interesting species: Homoptera—Cicadellidae (3), Diptera-Muscidae & ? family (2), Hymenoptera—Ichneumonoidea (1); Coleoptera—Staphylinidae (1), Heteroptera—Reduviidae (1). Reference material of prey not available.

A specimen in the AM was pinned with prey: Lepidoptera-Pyraustidae 1 (Karoo moth).

#### Neolophonotus dolabratus sp. n.

Figs 127-129

Etymology: L. dolabratus—shaped like an axe. Refers to the form of the aedeagus in lateral view.

Description: Based on unique holotype  $\delta$ .

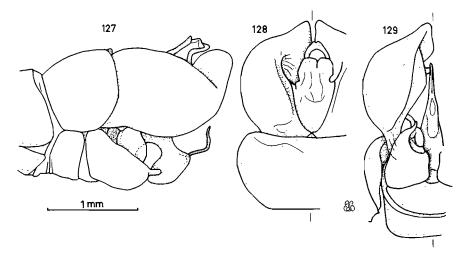
Head: Antenna black; setae black. Eye:face ratio 1:0,16; eye:lower facial margin ratio 16,3:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and yellow-white; lower—yellow-white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn white; 3/3 yellow npl; 2/2 yellow (1 black on right) spal; 1/1 black pal;

<sup>&</sup>lt;sup>1</sup> J. ent. Soc. sth. Afr. 50(2): 427-434.

mane black, shorter white setae bordering. Scutellum with 5 (4 yellow 1 black) marginal bristles; disc with ca 8 yellow bristles and yellow-white setae. Wing:  $6.8 \times 2.1$  mm. Legs: uniform dark red-brown; cx1 setae yellow-white; cx3 with 1–2 yellow bristles laterally. Hind femur: bristles yellow, long setae yellow-white and dark red-brown, short setae longish yellow-white dorsally, dark red-brown ventrally.

Abdomen: Silver-gold pruinose. T3 with ca 3 yellow marginal bristles; setae yellow, longish especially dorsally. Genitalia as in Figs 127–129; epandrium shortish but well developed, upwards and inward turned distally; hypandrium and gonocoxite relatively poorly developed; aedeagus of moderate length, highly characteristic, axe-shaped with a thin filament dorsally.



Figs 127-129. Neolophonotus dolabratus sp. n. holotype male (3 mi E Maltehohe) genitalia. 127. Lateral. 128. Dorsal. 129. Ventral.

Paratypes: None. 9 unknown.

Material examined: NAMIBIA: 18 (holotype), 3 mi E of Maltehohe (2417CC), 7.vii.1978, E. S. Ross & R. E. Leech, 1 320 m (CAS).

Distribution: Known only from the type-locality in the Desert and Poor Steppe climatic region.

Relationship: A very distinctive species. Male genitalia may superficially resemble those of *vincenti*.

#### Neolophonotus dysmicus sp. n.

Figs 130-132

Etymology: Gr. dysmikos—western. Specimens were collected on the west coast of South Africa.

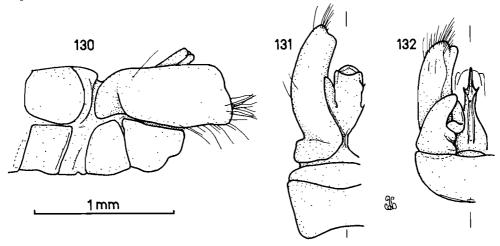
Description: Based on holotype ♂

Head: Antenna dark red-brown to black; setae black and white ventrally, white dorsally. Eye:face ratio 1:0,21; eye:lower facial margin ratio 17,7:1. Mystax black

and white (mixed). Occipital setae: upper—black; central—black; lower—white, black along eye margin.

Thorax: ktg s and mtanepst s black (few small white). Mesonotal setae & bristles: acr not clearly differentiated; dc black; pprn white (few black); 2/2 black npl; 2/2 black spal; 1/1 black pal; mane long black, shorter white setae bordering. Scutellum with ca 10 black marginal bristles; disc with ca 12 thin black bristles and long white setae. Wing:  $5.7 \times 1.7$  mm. Legs: dark red-brown to black; cx1 setae white, row of black ones laterally; cx3 with 1 fine black bristle laterally. Hind femur: bristles black, long setae black ventrally, white dorsally, short setae long black ventrally, shorter white dorsally.

Abdomen: Silver pruinose. T3 with fine black bristle-like setae marginally; other setae shortish, white (laterally) and longer black (dorsally); S3 with white setae anteriorly, black posteriorly. Genitalia as in Figs 130–132 (paratype illustrated); epandrium, hypandrium and gonocoxite moderately developed; aedeagus of moderate length, with subapical, lateral spine-like processes and longish, slender tip.



Figs 130-132. Neolophonotus dysmicus sp. n. paratype male (5 km E Lamberts Bay) genitalia. 130. Lateral. 131. Dorsal. 132. Ventral.

Paratypes: 403 169 similar to holotype. Some specimens lack lateral bristles on metacoxa. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Cape Province: 13& (holotype & paratypes) 4\(\text{P}\) (paratypes), 5 km E of Lambert's Bay (3218AB), 31.viii.1981, Londt Schoeman & Stuckenberg, Westcoast Strandveld (NM); 6& 2\(\text{P}\) (paratypes), 15 km E Lambert's Bay (3218AB), 1.ix.1981, Londt Schoeman & Stuckenberg, Westcoast Strandveld (NM); 8& 3\(\text{P}\) (paratypes), 10 km E Garies (3017DB), 3.ix.1981, Londt Schoeman & Stuckenberg, Succulent Karoo (NM); 2& 4\(\text{P}\) (paratypes), 10 km W Garies (3018AC), 3.ix.1981, Londt Schoeman & Stuckenberg, Namaqualand Broken veld (NM); 10& 2\(\text{P}\) (paratypes), 5 km N Nieuwoudtville (3119AC), 5.ix.1981, Londt Schoeman & Stuckenberg, W. Mountain Karoo (NM); 1\(\text{P}\)

(paratype), 2 km N Calvinia (3119BD), 5.ix.1981, Londt Schoeman & Stuckenberg, False Succulent Karoo (NM); 1♂ (paratype), Namaqualand, Bowesdorp [Kamieskroon—3017BD], ix.1941, Mus Staff (SAM); 1♂ (paratype), 5 m N Nieuwoudtville (3119AC), ix.1961, SAM (SAM). NM Type No. 3866, SAM Type No. 5305.

Distribution: Known from a few localities in the Desert & Poor Steppe climatic region.

Relationship: A fairly distinctive species. Male genitalia appear to most closely resemble those of *comatus*.

### Neolophonotus elgon Oldroyd, 1939

Figs 133-135

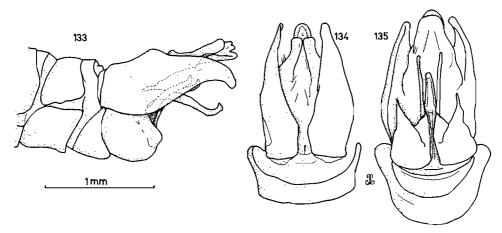
Neolophonotus elgon Oldroyd, 1939:35; Oldroyd, 1981:340. Neolophonotus (Lophybus) elgon; Hull, 1962:533.

Redescription: Based on holotype 3.

Head: Antenna dark brown; setae brown and white ventrally, white dorsally. Eye:face ratio 1:0,20; eye:lower facial margin ratio 16,6:1. Mystax black and white (mixed, mostly white in upper part and black in lower). Occipital setae: upper—black; central—pale white; lower—white.

Thorax: ktg s and mtanepst s yellow-white. Mesonotal setae & bristles: acr black; dc black; pprn fine white; 3/2 black npl; 2/2 black spal; 1/1 black pal (+ 1 black seta); mane black. Scutellum with 3 black marginal bristles; disc with 4 black bristles and white setae. Wing:  $6.1 \times 2.1$  mm. Legs: dark red-brown, tarsi slightly paler; cx1 setae white; cx3 with 1-2 white bristles laterally. Hind femur: bristles white and brown, long setae white, short setae white.

Abdomen: Silver-gold pruinose. T3 lacks obvious bristles; setae shiny, short, white (laterally) and black (dorsally); S3 with short white setae. Genitalia as in Figs 133-135 (paratype illustrated); epandrium attenuate, gently downturned



Figs 133-135. Neolophonotus elgon Oldroyd, 1939 paratype male (Mt. Elgon) genitalia. 133. Lateral. 134. dorsal. 135. Ventral.

distally in lateral view, well developed; hypandrium moderately developed; gonocoxite poorly developed; aedeagus longish, slightly sinuous in lateral view, tip turned upwards.

Type material: Oldroyd lists  $1\delta$  holotype,  $1\mathfrak{P}$  allotype and  $2\delta$   $1\mathfrak{P}$  paratypes. I have seen all this material.  $\mathfrak{P}$  cerci spine-like, forming elements of two-pronged fork-like structure.

Distribution: Known only from the type-locality in Kenya.

Relationship: A distinctive species. Male genitalia appear to most closely resemble those of *saxatilus*.

## Neolophonotus ellenbergeri sp. n.

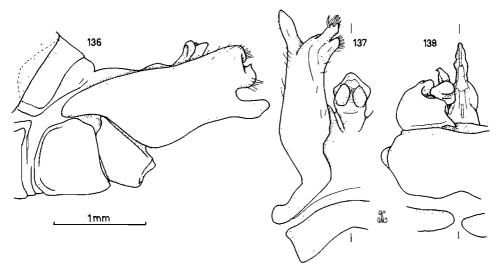
Figs 136-138

Etymology: Named for the collector of the paratype, A. Ellenberger, who enriched the collections of the Paris Museum.

Description: Based primarily on holotype  $\delta$ .

Head: Antenna (missing in holotype) dark red-brown; setae black ventrally, white dorsally. Eye:face ratio 1:0,18; eye:lower facial margin ratio 8,9:1. Mystax black and white (mixed). Occipital setae: upper—yellow (few smaller black); central—yellow; lower—pale yellow-white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn pale yellow; 4/4 yellow npl; 3/3 yellow spal; 2/2 yellow pal (+ 1 yellow seta); mane black, white setae bordering. Scutellum with 7 black (1 yellow)



Figs 136-138. Neolophonotus ellenbergeri sp. n. paratype male (Selukwe) genitalia. 136. Lateral. 137. Dorsal. 138. Ventral.

marginal bristles; disc with 8 (6 black 2 yellow) bristles and white setae. Wing:  $9.2 \times 3.2$  mm. Legs: dark red-brown, tibiae yellow-brown dorsoproximally; cx1 setae pale yellow; cx3 with 2-3 yellow bristles laterally. Hind femur: bristles yellow (few black distally), long setae few black and white, short setae white dorsally, longer dark red-brown ventrally.

Abdomen: Gold pruinose. T3 lacks bristles (few weak yellow marginal setae present); setae short, yellow (laterally) few black (dorsally); S3 weak setae S8 separated midventrally by membrane. Genitalia as in Figs 136–138 (paratype illustrated); epandrial lobes well developed, equipped with various lobes distally; hypandrium and gonocoxite moderately well developed; aedeagus of moderate length.

Paratypes:  $1\delta$ , similar to holotype but in poor condition. 9 unknown.

Material examined: ZIMBABWE: 13 (holotype), Popoteke Gorge, Fort Victoria (2030BB), 27.ix.1973, Pinhey & F. de Moor, Nat Mus S Rhodesia (NMZ); 13 (paratype), Rhodesia du Sud, Selukwe (1930CA), 1915, A. Ellenberger (MNP).

Distribution: Recorded only from Zimbabwe.

Relationship: A distinctive species. Male genitalia do not closely resemble those of other species in the group.

#### Neolophonotus engeli sp. n.

Figs 139-141

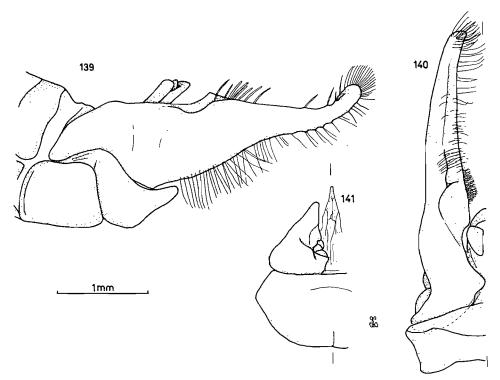
Etymology: Named after Dr E. O. Engel in recognition of his many contributions to the study of Afrotropical Asilidae.

Description: Based on holotype 3.

Head: Antenna dark red-brown to black; setae all yellow. Eye:face ratio 1:0,15; eye:lower facial margin ratio 9,3:1. Mystax white and white-yellow with black laterally. Occipital setae: upper—yellow, few black; central—yellow; lower—white.

Thorax: ktg s and mtanepst s orange. Mesonotal setae & bristles: acr not clearly differentiated; dc black and orange; pprn few, small, white; 4/4 orange npl; 6/4 orange spal; 4/4 black pal; mane black, shorter yellow setae bordering. Scutellum with 7 black marginal bristles; disc with ca 14 orange (1 black) bristles and white and black setae. Wing:  $10.7 \times 3.6$  mm. Legs: dark red-brown, tibiae orange-brown dorsoproximally; cx1 setae pale yellow-white; cx3 with 3 yellow bristles laterally. Hind femur: bristles pale yellow (1 black distally), long setae white, short setae white (longish ventrally).

Abdomen: Fine gold pruinose. T3 with 3 strong yellow marginal bristles; setae longish yellow (few black intermixed dorsally); S3 with longish white setae. Genitalia as in Figs 139–141 (paratype illustrated); epandrium considerably attenuate, well developed, with depressed area dorsally at level of proctiger, equipped with cluster of setae distally; hypandrium and gonocoxite well developed; aedeagus relatively short, with pointed tip.



Figs 139-141. Neolophonotus engeli sp. n. paratype male (Fountains) genitalia. 139. Lateral. 140. Dorsal. 141. Ventral.

Paratypes:  $323 \cdot 199$  similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: *Transvaal*: 218 (holotype & paratypes) 129 (paratypes), Suikerbosrand Natr. Res. Heidelberg (2628AD), 12.iv.1982, R. Elferink (NM); 28 49 (paratypes), same data, 17.iv.1983 (NM); 19 (paratype), same data, 8.v.1983 (NM); 38 (paratypes), Fountains [Pretoria—2528CA], 12.iv.1922, G. van Dam (NM); 28 19 (paratypes), Pretoria, 10.vi.1914 31.v.1915 9.xii.1916, Munro (NCI); 18 (paratype), Nelspruit (2530BD), du Toit, Dept. Entomology, Univ. Pretoria (NM); 19, Pienaars R. (2528AD) dam, 4.v.1970 (NM); 18 (paratype), Chuniespoort (2429BA), 1.iv.1979, Schoeman (NM); 18 19 (paratypes), Tongwane R. (2429DB), 15.iv.1979, Meiswinkel, small rock after rain, midday (NM); 18 (paratype), Kaapmuiden (2531CB), 3.v.1920, Munro (NCI). *Natal*: 18 (paratype), 15 km SE Rorke's Drift, 28°30'S:30°30'E, 29.v.1982, Miller (NM). *Country & province unknown*: 18, D. R. Karino, 2.ii.1967 (NM). NM Type No. 3867.

Distribution: Recorded from the Highveld, N Transvaal and Drakensberg climatic regions.

Relationship: A fairly distinctive species. Male genitalia resemble those of *kerteszi* and *hirsutus*.

Prey record: Diptera—Muscidae 1 (NCI).

## Neolophonotus erythracanthus (Hermann, 1907) stat. rev.

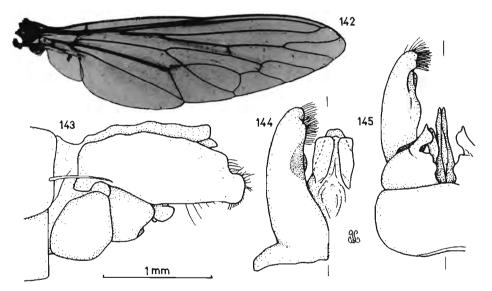
Figs 142-145

Lophonotus erythracanthus Hermann, 1907:73.

Redescription: Based on holotype \( \barphi \).

Head: Antenna dark red-brown; setae black ventrally (few yellow), yellow dorsally. Eye:face ratio 1:0,22; eye:lower facial margin ratio 5,8:1. Mystax dark red-brown and yellow-white (mixed). Occipital setae: upper—black; central—short brown-yellow; lower—yellow-white.

Thorax: ktg s and mtanepst s brown-orange. Mesonotal setae & bristles: acr black; dc black; pprn long, fine pale orange; 3/3 orange-brown npl; 2/2 orange-brown spal; 2/2 orange-brown and black pal; mane black, shorter white setae bordering. Scutellum with 8 black marginal bristles; disc with long black bristles (1 orange-brown) and white setae. Wing:  $10.1 \times 5.5$  mm (Fig. 142). Legs: dark red-brown, tibiae a little paler dorsoproximally; cx1 setae white; cx3 with 2-3 brown-yellow bristles laterally. Hind femur: bristles orange-brown, long setae black and yellow, short setae pale yellow.



Figs 142-145. Neolophonotus erythracanthus (Hermann, 1907). 142. Wing (Willowmore holotype ?). 143-145. Male (Willowmore) genitalia. 143. Lateral. 144. Dorsal. 145. Ventral.

Abdomen: Gold and silver pruinose. T3 with ca 6 orange marginal and ca 5 orange or dark red-brown discal bristles; setae short, white (laterally) and black (dorsally); S3 with mostly black but groups of yellow setae laterally. Genitalia: cerci spinelike, forming elements of two-pronged fork-like structure.

Type material: Hermann described the species on a single  $\circ$  specimen.

Male: Similar to Q. Genitalia as in Figs 143-145 (Willowmore & illustrated); relatively small; epandrium of moderate length, with a ventrodistal lobe;

hypandrium well developed; gonocoxite well developed, with distal flange-like projection; aedeagus of moderate length.

Material examined: SOUTH AFRICA: Cape Province: 19 (holotype), Capland, Willowmore (3323AD), [no date], Dr Brauns (ZSM); 38 19, Willowmore, 22. viii. 1906 viii. 1908, Brauns (ZSM); 2♂ 2♀, same data, x. 1911, Dr Brauns (NM); 13 19, same data, 15.ix.1907, Brauns (NM); 13, same data, 22.viii.1906 (NM) 13, same data, 2.viii.1920 (NM); 12, same data, ix.1916 (NM); 13, St. bosch [Stellenbosch—3318DD], 3.vii.1941 (NM); 13, 23 km WSW Touwsrivier (3319BD), 25.viii.1973, Irwin, 950 m, small dunes in pass (NM); 13, 10 km E Garies (3018CA), 6.ix.1983, Stuckenberg & Londt, rocky slopes/bushes (NM); 38 49, Bowesdorp [Kamieskroon—3017BB], ix.1941, Mus Staff (SAM); 19, 20 km NE Springbok (2918CA), 7.ix.1983, Londt & Stuckenberg, rocky hillside & dry watercourse veget. (NM); 13, 45 km N Vanrhynsdorp (3118BA), 4.ix.1981, Londt Schoeman & Stuckenberg, Succulent Karoo (NM); 23 39, 2 km N Calvinia (3119BD), 5.ix.1981, Londt Schoeman & Stuckenberg, Succulent Karoo; 3& 29, 13 km SW Sutherland (3220BC), 6.ix.1981, Londt Schoeman & Stuckenberg, Mountain Renosterbos (NM); 19, 35 km NW Merweville (3221CA), 7.ix.1981, Londt Schoeman & Stuckenberg, Rocky hillside (NM); 33 69, 25 km E Nieuwoudtville (3119AD), 5.ix.1981, Londt Schoeman & Stuckenberg, W. Mountain Karoo (NM); 28 69, 25 km N Middelpos (3120CA), 6.ix.1981, Londt Schoeman & Stuckenberg, W. Mountain Karoo (NM); 23, 8 km N Prince Albert Road (3221DC), 7.ix.1981, Londt Schoeman & Stuckenberg, open area (NM); 53 59, Prince Albert Rd Stn, vii.1945, Hesse (SAM). NAMIBIA: 28 59, 50 km NW of Karasburg (2718DA), 28.viii.1983, Londt & Stuckenberg, in Karasberg Mountains, Succulent veld (NM);  $43^{\circ}$ ,  $49^{\circ}$ , 5 km E of Aus (2616CB), 30.viii.1983, Londt & Stuckenberg, open veld with low green grass & shrubs (NM).

Distribution: Widespread; recorded from the Mediterranean, Little & Great Karoo, Desert & Poor Steppe climatic regions (Fig. 382).

Relationship: A distinctive species. Male genitalia superficially resemble those of hilaryae.

Prey records: Coleoptera (Scarabaeidae 1), Diptera (Mydidae 1).

Remarks: Engel (1927) synonymised erythracanthus (as erythracantha) with comatus (as comata), and this synonymy was accepted by subsequent workers. On re-examination of the type, together with other male specimens from the type-locality, I am certain that this synonymy was not correct and that erythracanthus is a valid species.

### Neolophonotus feijeni sp. n.

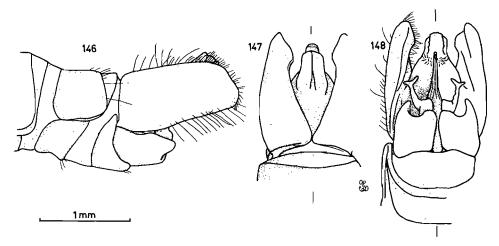
Figs 146-148

Etymology: Named for Dr Hans Feijen who collected the unique holotype and donated many useful specimens to the Natal Museum.

Description: Based on unique holotype 3.

Head: Antenna dark red-brown to black; setae black and white ventrally, white dorsally. Eye:face ratio 1:0,19; eye:lower facial margin ratio 13,6:1. Mystax white

with black margins. Occipital setae: upper—black; central—white; lower—white. Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr long black; dc black; pprn white (1–2 black); 3/3 black npl; 2/3 black spal; 2/2 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with ca 8 black bristles and white setae. Wing: 8,1 × 2,5 mm. Legs: dark red-brown to black; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles black, long setae black and white, short setae white dorsally, longer black ventrally. Abdomen: Silver pruinose. T3 with 2 black and 2 white marginal bristles; setae short, white (laterally) and many black (dorsally); S3 with 2 black and 2 white bristles posteriorly and long white setae. Genitalia as in Figs 146–148; epandrium moderately well developed; hypandrium and gonocoxite moderately developed; gonostylus with bifurcate tip; aedeagus of moderate length, with longish, slender tip.



Figs 146-148. Neolophonotus feijeni sp. n. holotype male (Namaacha) genitalia. 146. Lateral. 147. Dorsal. 148. Ventral.

Paratypes: None. 9 unknown.

Material examined: MOZAMBIQUE: 13 (holotype), Namaacha (2532CC), 19.v.1980, H. R. Feijen (NM). NM Type No. 3868.

Distribution: Known only from the type-locality in Mozambique.

Relationship: A distinctive species. Male genitalia superficially resemble those of dysmicus.

## Neolophonotus fumosus sp. n.

Figs 149-151

Etymology: L. fumus—smoke. Refers to smoky appearance of wingtip.

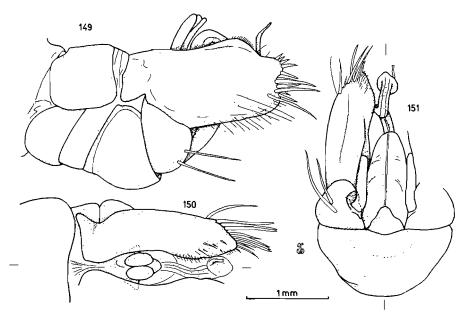
Description: Based on holotype  $\delta$ .

Head: Antenna dark red-brown to black; setae black ventrally, yellow dorsally except for a few black setae on scape. Eye:face ratio 1:0,22; eye:lower facial margin

ratio 12,0:1. Mystax yellow with black in upper and lateral parts. Occipital setae: upper—black; central—yellow; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr few black; dc black; pprn fine yellow; 2/3 yellow npl; 4/4 (2 yellow 2 black) spal; 2/2 yellow pal; mane black, shorter white setae bordering. Scutellum with 4 (3 black 1 yellow) marginal bristles; disc with 7 black bristles and white and black setae. Wing:  $8.1 \times 3.2$  mm. Legs: dark red-brown, tibiae slightly paler dorsoproximally; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles yellow (3 black distally), long setae white (few black ventrally), short setae pale yellow.

Abdomen: Fine gold pruinose. T3 with 3 yellow marginal bristles; setae short, yellow (laterally) and few black (dorsally); S3 with few yellow bristles and short to moderately long yellow setae. Genitalia as in Figs 149–151; epandrium well developed, equipped with strong, longish bristles distally; hypandrium and gonocoxite well developed; aedeagus thick, long, strongly sinuous, bulbous subapically, with fine filamentous tip.



Figs 149-151. Neolophonotus fumosus sp. n. holotype male (8 km S Amersfoort) genitalia. 149. Lateral. 150. Dorsal. 151. Ventral.

Paratypes:  $2^{\circ}$  similar to holotype.  $^{\circ}$  ovipositor laterally compressed, reminiscent of *Dasophrys* species.

Material examined: SOUTH AFRICA: *Transvaal*: 1¢ (holotype) 2¢ (paratypes), 8 km S of Amersfoort (SE2729BB), 5.iv.1985, J. G. H. Londt, roadside long grass (NM). NM Type No. 3869.

Distribution: Known only from the type-locality in the Highveld climatic region. Relationship: A distinctive species. Male genitalia resemble those of *currani*.

# Neolophonotus genitalis (Ricardo, 1925)

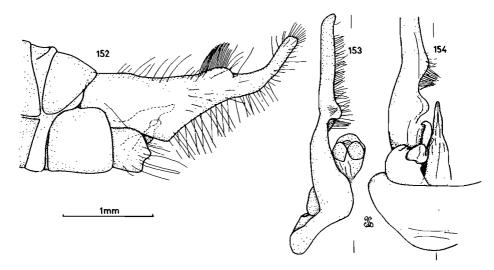
Figs 152-154

Dysmachus genitalis Ricardo, 1925:235. Lophopeltis genitalis; Curtan, 1934:11. Neolophonotus (Lophopeltis) genitalis; Hull, 1962:533. Neolophonotus genitalis; Oldroyd, 1981:340.

Redescription: Based on lectotype 3.

Head: Antenna dark red-brown to black; setae black ventrally, yellow dorsally. Eye:face ratio 1:0,18; eye:lower facial margin ratio 7,4:1. Mystax yellow-white and black (mixed). Occipital setae: upper—black and yellow; central—yellow; lower—white-yellow.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr long black; dc black; pprn fine longish yellow; 3/3 long yellow npl; 2/2 (1 black 1 yellow) spal; 2/2 yellow pal; mane black, shorter yellow setae bordering. Scutellum with 4 black marginal bristles; disc with 7–8 black bristles and white-yellow setae. Wing:  $7.6 \times 2.8$  mm. Legs: dark red-brown, tibiae yellow-brown dorsoproximally; cx1 setae white; cx3 with 2 yellow bristles laterally. Hind femur: bristles yellow (1–2 black distally), long setae white dorsally black ventrally, short setae white-yellow (few black ventrally).



Figs 152-154. Neolophonotus genitalis (Ricardo, 1925) lectotype male (Zomba) genitalia. 152. Lateral. 153. Dorsal. 154. Ventral.

Abdomen: Gold-silver pruinose. T3 with 2 yellow marginal bristles; setae yellow (laterally) and black (dorsally); S3 with long yellow-white setae. Genitalia as in Figs 152–154; epandrium attenuate, well developed, with a mesial bump at about midlength; hypandrium and gonocoxite moderately developed; aedeagus shortish with slender tip.

Paralectotypes:  $3\eth 2\Im$  similar to holotype.  $\Im$  cerci spine-like, forming elements of two-pronged fork-like structure.

Lectotype designation: Ricardo's specimens are syntypes; I here designate a & from Zomba as lectotype and the other specimens listed by Ricardo as paralectotypes.

Material examined: MALAŴI: 23 (lectotype & paralectotype) 29 (paralectotypes), Zomba (1535AD), 1924-207, H. S. Stannus (BM). ZIMBABWE: 13 (paralectotype), Umtali [= Mutare], Vumba (1832DS), v.1932, J. Ogilvie (BM); 13, Hopefount. [Hopefountain—2028BC], 3.vi.1923, Stevenson (NMZ).

Distribution: Known from the eastern highlands of Zimbabwe and Zomba (a high plateau) in Malaŵi.

Relationship: A distinctive species. Male genitalia resemble those of *leucodiadema* and *walkeri*.

#### Neolophonotus gilvipilosus sp. n.

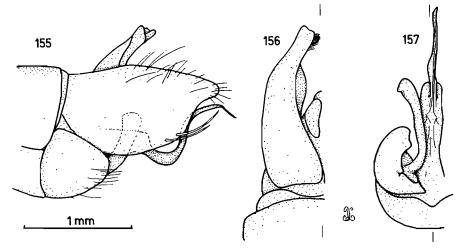
Figs 155-157

Etymology: L. gilvus—yellow; pilosus—hairy. A species with much yellow pilosity.

Description: Based on unique holotype  $\delta$ .

Head: Antenna black; setae black ventrally, yellow dorsally except for a few black ones distally on pedicel. Eye:face ratio 1:0,26; eye:lower facial margin ratio 5,0:1. Mystax yellow with black lateral margins. Occipital setae: upper—black and yellow; central—thin yellow; lower—shiny yellow.

Thorax: ktg s and mtanepst s orange-yellow. Mesonotal setae & bristles: acr weak black; dc brown-yellow; pprn yellow; 3/3 yellow npl; 2/2 yellow spal; 2/2 yellow pal; mane black, shorter yellow setae bordering. Scutellum with 11 yellow marginal bristles; disc with ca 12 long yellow bristles and many long yellow setae. Wing:  $8.2 \times 2.7$  mm. Legs: dark red-brown; cx1 setae white; cx3 with 1 long weak white bristle laterally. Hind femur: bristles yellow-brown, long setae yellow, short setae yellow.



Figs 155-157. Neolophonotus gilvipilosus sp. n. holotype male (Brandkop area) genitalia. 155. Lateral, 156. Dorsal, 157. Ventral.

Abdomen: Gold and silver pruinose. T3 with 3 yellow marginal bristles; setae longish yellow; S3 with long yellow setae. Genitalia as in Figs 155–157; epandrium moderately well developed, equipped with cluster of setae on mesial surface of distal end; hypandrium and gonocoxite moderately developed; aedeagus of moderate length, with long slender penisfillum.

Paratypes: None. 9 unknown.

Material examined: SOUTH AFRICA: Cape Province: 13 (holotype), Brandkop area Calvinia Dist (3119DD), 14.x.1964, B & P Stuckenberg (NM). NM Type No. 3870.

Distribution: Known only from the type-locality in the Desert & Poor Steppe climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of cuthbertsoni.

## Neolophonotus gorongoza sp.n.

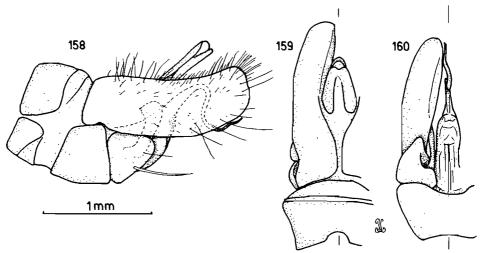
Figs 158-160

Etymology: Named after the Gorongoza Mountain, the type-locality.

Description: Based on unique holotype  $\delta$ .

Head: Scape and pedicel pale brown, flagellum dark red-brown; setae black ventrally, yellow dorsally. Eye:face ratio 1:0,18; eye:lower facial margin ratio 4,9:1. Mystax black in upper part, white below. Occipital setae: upper—black (1-2 white); central—dark red-brown and yellow; lower—white.

Thorax: ktg s and mtanepst s pale yellow. Mesonotal setae & bristles: acr black; dc black; pprn white; 2/2 yellow npl; 2/2 black spal; 1/1 black pal; mane black without shorter white setae bordering. Scutellum with 2 black marginal bristles; disc with 2 fine black bristles and sparse black and white setae. Wing:  $5.3 \times 1.8$  mm. Legs:



Figs 158-160. Neolophonotus gorongoza sp. n. holotype male (Gorongoza) genitalia. 158. Lateral. 159. Dorsal. 160. Ventral.

femora dark red-brown, rest orange-brown; cx1 setae white; cx3 with 1 pale yellow bristle laterally. Hind femur: bristles yellow (1-2 brown), long yellow, short setae shiny white.

Abdomen: Fine gold pruinose. T3 with 2 yellow marginal and 2-3 yellow discal bristles; setae yellow (laterally) and black (dorsally); S3 with longish white setae. Genitalia as in Figs 158-160; epandrium longish and broad in lateral view; hypandrium and gonocoxite moderately developed; aedeagus with a broad base and long sinuous distal portion.

Paratypes: None. ♀ unknown.

Material examined: MOZAMBIQUE: 13 (holotype), Manica Sofala Dist., Gorongoza Mountain (1834CB), ix.1957, Stuckenberg, 840 m, Gallery forest (NM). NM Type No. 3871.

Distribution: Known only from the type-locality in Mozambique.

Relationship: A distinctive species. Male genitalia resemble those of colubris.

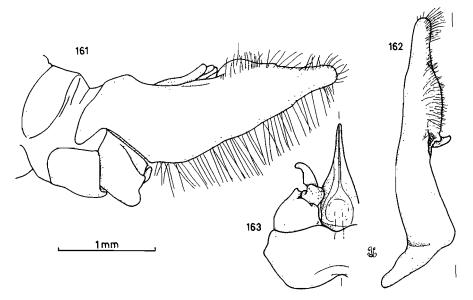
#### Neolophonotus gravicauda sp.n.

Figs 161-163

Etymology: L. gravis—heavy; cauda—tail. Males have large heavy-looking epandrial lobes.

Description: Based on holotype 3.

Head: Antenna dark red-brown to black; setae black and white-yellow ventrally, white-yellow dorsally. Eye:face ratio 1:0,16; eye:lower facial margin ratio 7,4:1. Mystax black and white (mixed). Occipital setae: upper—black and brown-yellow; lower—white.



Figs 161-163. Neolophonotus gravicauda sp. n. paratype male (Piet Retief) genitalia. 161. Lateral. 162. Dorsal. 163. Ventral.

Thorax: ktg s and mtanepst s brown-yellow and white. Mesonotal setae & bristles: acr black; dc black; pprn ca 4 brown-yellow; 3/3 brown-yellow npl; 2/3 black spal; 2/2 brown-yellow pal; mane black, shorter yellow-white setae bordering. Scutellum with 4 black (1 orange) marginal bristles; disc with 8 black (1 orange) bristles and white setae. Wing:  $7.8 \times 2.6$  mm. Legs: dark red-brown, tibiae paler brown dorsoproximally; cx1 setae white; cx3 with 3 yellow bristles laterally. Hind femur: bristles pale yellow, long setae white dorsally dark red-brown ventrally, short setae white dorsally dark red-brown ventrally.

Abdomen: Silver pruinose. T3 lacks bristles; setae long, white (laterally) and black (dorsally); S3 with long white setae. Genitalia as in Figs 161–163; epandrium large and heavy in appearance; hypandrium and gonocoxite moderately well developed; aedeagus relatively short, wide basally and tapering quickly to pointed tip.

Paratypes: 3♂ similar to holotype. ♀ unknown.

Material examined: SOUTH AFRICA: *Transvaal*: 23 (holotype & paratype), Piet Retief (2730BB), 15.iii.1918, Dr Brauns (NM); 13 (paratype), Woodb. Vill. [Woodbush Village—2330CC], iv.1915, C. J. Swierstra, 3268 (NM). *Natal*: 13 (paratype) Natal, A. E. Hunt, 189 (SAM). NM Type No. 3872.

Distribution: Known from the Highveld and Lowveld climatic regions.

Relationship: A fairly distinctive species. Male genitalia resemble those of meiswinkeli and aureolocus.

## Neolophonotus hilaryae sp. n.

Figs 164-166

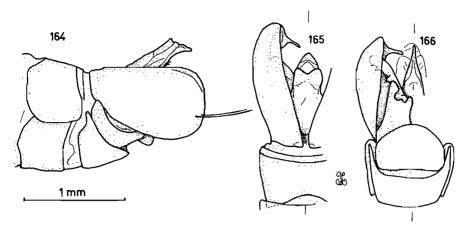
Etymology: Named for my daughter Hilary who has assisted me on a number of my insect collecting expeditions.

Description: Based on holotype 3.

Head: Antenna black; setae of scape black and white dorsally and ventrally, white dorsally, setae of pedicel all black. Eye:face ratio 1:0,18; eye:lower facial margin ratio 13,0:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and white; lower—white.

Thorax: ktg s white and yellow; mtanepst s yellow. Mesonotal setae & bristles: acr black; de black; pprn white; 3/3 black npl; 2/2 black spal; 1/1 black pal (+ 1 black seta); mane black, shorter white setae bordering. Scutellum with 2 black marginal bristles; disc with 5 black bristles and white setae. Wing:  $5.3 \times 1.7$  mm. Legs: dark red-brown to black; cx1 setae white; cx3 with 1-2 pale white bristles laterally. Hind femur: bristles black and white, long setae black and white, short setae white.

Abdomen: Silver and fine gold-red pruinose. T3 with 3 black and white marginal and 2 white discal bristles; setae short, white (laterally) and black (posterodorsally); S3 with white bristles and setae. Genitalia as in Figs 164–166 (paratype illustrated); epandrium short but well developed; hypandrium moderately developed with a tuft of white setae distally; gonocoxite poorly developed, rather narrow in lateral view, with distal flange-like lobe; aedeagus of moderate length, tip tapering to sharp point.



Figs 164–166. Neolophonotus hilaryae sp. n. paratype male (10 km SE Hotazel) genitalia. 164. Lateral. 165. Dorsal. 166. Ventral.

Paratypes:  $413 \ 379$  similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Cape Province: 11& (holotype & paratype) 13\$\times\$ (paratypes), 17 km SE of Kuruman (2723CB), 23.iii.1982, Londt & Schoeman, Rocky hilltop/Grass (NM); 3& 8\$\times\$ (paratypes), 10 km E Papkuil (2823DA), 25.iii.1982, Londt & Schoeman, Dry stony area/low trees (NM); 7& 7\$\times\$ (paratypes), 10 km N Danielskuil (2823BA), 25.iii.1982, Londt & Schoeman, Rocky slopes/Shrubs (NM); 6& 5\$\times\$ (paratypes), ca 10 km SE Hotazel (2723AC), 23.iii.1982, Londt & Schoeman, Rocky area/big shrubs (NM); 2& (paratypes), ca 5 km W Hotazel (2722BB), 23.iii.1982, Londt & Schoeman, Acacias/Grass/Shrubs (NM). Orange Free State: 7& 4\$\times\$ (paratypes), 20 km W Bloemfontein (2926AA), 26.iii.1982, Londt & Schoeman, Open grass & sand (NM); 1& (paratype), 46 km W Bloemfontein (2925BB), 26.iii.1982, Londt & Schoeman, Gentle slope with rocks, shrubs & grass (NM); 4& (paratypes), 30 km W Thaba Nchu (2926BA), 26.iii.1982, Londt & Schoeman, Grass / Shrubs nr Riv. (NM); 1& (paratype), ca 8 km SW Winburg, Banks Klein-Vet Riv. (2826DB), 16.iii.1982, Londt & Schoeman, Grassveld & Acacias (NM). NM Type No. 3873.

Distribution: Localities fall in the S & N Steppe climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of occidualis.

Neolophonotus hirsutus (Ricardo, 1920) comb. n.

Figs 167-170

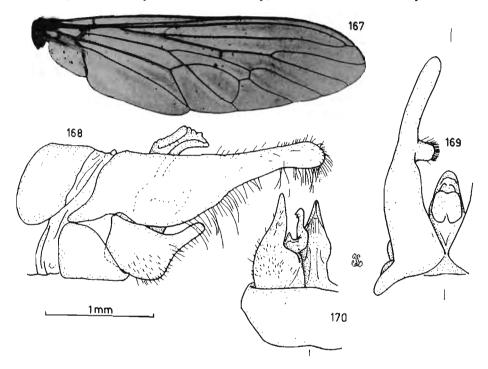
Dysmachus hirsutus Ricardo, 1920:433. Lophopeltis hirsutus; Curran, 1934:11.

Redescription: Based on lectotype  $\delta$ .

Head: Antennae missing (others: black; setae mostly black ventrally, white dorsally). Eye: face ratio 1:0,18; eye: lower facial margin ratio 6,8:1. Mystax black

and white (mostly black). Occipital setae: upper—black; central—black (few yellow); lower—white with dark red-brown along eye margin.

Thorax: ktg s and mtanepst s black (1–2 yellow-brown). Mesonotal setae & bristles: acr black; dc black; pprn long black and orange-brown; 5/5 black npl; 4/4 black spal; 4/4 black pal; mane black, few shorter yellow setae bordering. Scutellum with 8 black marginal bristles; disc with ca 9 black bristles and black (centrally) and white (laterally) setae. Wing:  $7.6 \times 2.8$  mm (Fig. 167 paralectotype d illustrated). Legs: dark red-brown to black, tibiae slightly paler dorsoproximally; d cx1 setae yellow-white with few black along outer lateral margin; d cx3 with 2–3 dark red-brown bristles laterally. Hind femur: bristles dark red-brown, long setae dark red-brown, short setae yellow-white dorsally, dark red-brown ventrally.



Figs 167-170. Neolophonotus hirsutus (Ricardo, 1920) paralectotype male (Ulundi). 167. Wing. 168-170. Genitalia. 168. Lateral. 169. Dorsal. 170. Ventral.

Abdomen: Gold-red pruinose. T3 with ca 5 dark red-brown marginal and ca 3 dark red-brown discal bristles; setae dark red-brown except for few yellowish ones laterally; S3 with longish dark red-brown bristles and setae (few yellow). Genitalia as in Figs 168–170; epandrium attenuate, well developed, with well-developed lobe mesially at about midlength; hypandrium and gonocoxite well developed; aedeagus shortish, rapidly tapering to pointed tip.

Type material: Ricardo records  $2\delta$  from Ulundi and 19 from Willow Grange. These specimens are regarded as syntypes and so I here designate one of the Ulundi males as lectotype and the other specimens as paralectotypes. The  $2\delta$  specimens

are in the BM but the location of the Willow Grange  $\mathfrak P$  is not known. It should be noted that the locality Ulundi is apparently not the modern town of that name (2831AD) but an old name for a Zulu tribal area near present-day Giant's Castle Game Reserve (2929AD) (Stuckenberg, pers. comm.).

Female: 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Natal: 1♂ (lectotype) 1♀ (paralectotype), Ulundi (ca 2929AD), ix.1896, G. A. K. Marshall, 5000-65000', 1903-17 (BM); 1& 19, Ulundi, ix.1896 [no collector name—probably same as types] (NM); 12& 139, Elandskop Dist. ca 40 km W Pietermaritzburg (2930CA), 10.ix.1979, Londt, Rocky ridge grassland & Proteas (NM); 11& 19, Bulwer (2929DD), 23.vii.1978, Londt, on road (NM); 63 39, Kamberg Nat. Reserve (2929BC), 1-6.x.1978. Londt, riverside/open road (NM); 11& 79, Cathedral Peak area, Ukhahlamba Res. Stn. (2829CC), 28-31.v.1983, Londt, above 1700 m (NM); 3& 9\, same data but 10-13.vii.1984 (NM); 29, Cathedral Peak area, Mlambonja R nr Hotel (2829CC), 13.vii.1984, Londt, below 1700 m (NM); 18, Cathedral Peak area (2829CC), 28-31.v.1981, Miller, grassland (NM); 1♂ 2♀, SE Cathedral Area, vii.1946, Marriott (NCI); 33 49, Drakensberg Garden Area (2929CA), 13-14.x.1984, Londt (NM); 13 29, Nkandla Forest 3108E 2843S, 25.v.1986, Reavell, 1200 m, on rock in grassland (1\$\delta\$ 1\$\times\$) Ngongoni grassland (1\$\times\$) (NM); 18, Ntshongweni Dam (2930DC), 22.vii.1982, Londt, open hillside grass (NM); 39, Howick, Umgeni Valley (2930AD), 19.vii.1982, Londt (NM); 63, Nhlosane (2929DB), 11.viii.1980, Londt (NM); 26, Giants Castle Res. (2929AD), 10.x.1979, Londt, contour path near camp (NM); 1♂ 1♀, Giants Castle Reserve, 18.x.1971, Stuckenberg & Irwin, 5800' (NM); 1♂ 19, Giants Castle Res., 1.ix.1972, Irwin (NM); 1♂ 2♀, Giants Castle Res. 18–23.ix.1961, Stuckenberg, 5800' (NM); 13, Karkloof range nr. Mt Alida, Geekies Farm (2930AB), 12.x.1969, Lamoral, 1500 m (NM); 1♂ 1♀, Bushmans Nek (2929CC), 16.xi.1981, Londt, slopes above hotel (NM); 13, Lundys Hill (2929DB) summit, 1.x.1981, Schoeman (NM).

Distribution: Known from a number of localities in the Drakensberg and Subtropical climatic region (Fig. 382).

Relationship: A fairly distinctive species. Male genitalia resemble those of engeli.

Remarks: This species has been almost completely ignored since its description in 1920. Although Curran (1934) keyed it along with 25 other species known to him, Hull (1962) failed to record it in his extensive work and Oldroyd did not note this omission. Originally placed in *Dysmachus*, the species has now been transferred to *Neolophonotus* (as have all the other *Dysmachus* species described by Ricardo).

#### Neolophonotus hobbyi sp. n.

Figs 171-174

Etymology: Named for Mr B. M. Hobby, formerly of Hope Entomological Collections, Oxford University, in recognition of his contribution to our knowledge of Afrotropical Asilidae.

Description: Based on holotype 3.

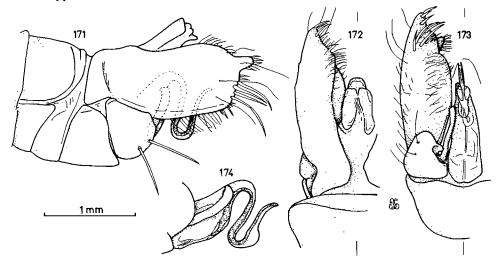
*Head*: Antenna black; setae black ventrally, black and white dorsally. Eye:face ratio 1:0,22; eye:lower facial margin ratio 11,2:1. Mystax white with black laterally. Occipital setae: upper—black and white; central—black (1 white); lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn pale yellow (1 yellow bristle); 3/3 yellow npl; 4/4 black spal; 2/2 black pal; mane black, no white setae bordering. Scutellum with 4 black marginal bristles; disc with 6 black bristles and black and white setae. Wing: 6,8 × 2,4 mm. Legs: dark red-brown, tibiae orange-brown dorsoproximally; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles yellow (few dark red-brown), long setae dark red-brown and white, short setae white (longish dark red-brown ventrally).

Abdomen: Silver pruinose. T3 with 4 yellow marginal bristles; setae yellow (laterally) and black (dorsally); S3 with long white setae. Genitalia as in Figs 171–174 (paratype illustrated); epandrium moderately long, well developed, with small lobe and number of well-developed bristles distally; hypandrium and gonocoxite moderately well developed; aedeagus longish, sinuous, with subapical bulbous region and slender, pointed tip.

Paratypes: 1037 similar to holotype. 9 ovipositor laterally compressed and blade-like.

Material examined: SOUTH AFRICA: Cape Province: 2\$\displaystyle (holotype & paratype) 2\$\paratypes)\$, Beaufort West (3222AB), 16.x.1982, L. E. Schoeman (NM); 6\$\displaystyle (paratypes)\$, Karoo National Park, Beaufort West (3222AB), 12.xi.1986, Londt & Quickelberge, 1810 m, Area near Met Stn. (NM); 1\$\displaystyle 1\$\paratypes\$, Koup Siding—Laingsburg (3320BB), x.1952, Mus Exp (SAM); 1\$\displaystyle (paratype)\$, Somerset West (3418BB), xi.1940, Smithers (SAM). Natal: 2\$\displaystyle 3\$\paratypes\$ (paratypes), Giants Castle G. Res. (2929AD), 22.xi.1982, R. M. Miller, 19–2200M (NM). NM Type No. 3874, SAM Type No. 5306.



Figs 171-174. Neolophonotus hobbyi sp. n. paratype male (Beaufort West) genitalia. 171. Lateral. 172. Dorsal. 173. Ventral. 174. Aedeagus (lateral).

Distribution: Localities, although in montane situations, are very widely separated, one in Little & Great Karoo, the other in the Drakensberg climatic region. The Natal material may represent a very closely related and different species, but as meaningful differences cannot be distinguished at present I prefer to consider all the above material as belonging to a single species. See also remark under kerteszi.

Relationship: A fairly distinctive species. Male genitalia resemble those of *currani* and *rudi*.

# Neolophonotus holmi sp. n.

Figs 175-177

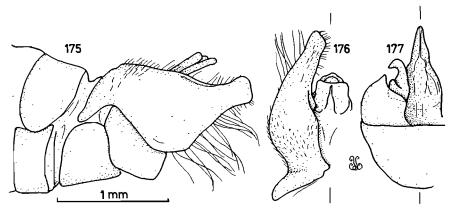
Etymology: Named for Prof. Erik Holm, University of Pretoria, who has generously donated valuable Asilidae, including the types of this species, to the Natal Museum.

Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black (1-2 white dorsally). Eye:face ratio 1:0,15; eye:lower facial margin ratio 19,3:1. Mystax black and white (mixed). Occipital setae: upper—black; central black and yellow; lower—white with black along eye margin.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr shortish black; dc black; pprn pale yellow-white, few black; 3/3 (2 yellow 1 black) npl; 2/2 black spal; 2/2 black pal; mane black, shorter white setae bordering. Scutellum with 6 black marginal bristles; disc with 10 black bristles and white setae. Wing:  $5.8 \times 2.1$  mm. Legs: black, tibiae orange-brown dorsoproximally; cx1 setae white, black laterally; cx3 with 1 or 2 black bristles laterally. Hind femur: bristles black and yellow, long setae black (few white), short setae white anteriorly and posteriorly, black dorsally and ventrally.

Abdomen: fine silver and red-gold pruinose. T3 with ca 3 fine black and white seta-like marginal bristles; setae white (laterally) and black (dorsally); S3 with white fine bristles and white setae. Genitalia as in Figs 175-177 (paratype illustrated);



Figs 175-177. Neolophonotus holmi sp. n. paratype male (2430Cd) genitalia. 175. Lateral. 176. Dorsal. 177. Ventral.

epandrium shortish but well developed, shortly attenuate; hypandrium and gonocoxite moderately well developed; aedeagus shortish, with pointed tip.

Paratypes: 1♂ similar to holotype. ♀ unknown.

Material examined: SOUTH AFRICA: *Transvaal:* 23 (holotype & paratype), 2430Cd [near Ohrigstad], 15/20.vii.1977, Dept. Entomology, Univ. of Pretoria (NM). NM Type No. 3875.

Distribution: The locality, given only as a quarter-degree grid reference lies in the N Transvaal climatic region (close to the boundary with the Transvaal Lowveld region).

Relationship: A fairly distinctive species. Male genitalia appear to most closely resemble those of cynthiae.

# Neolophonotus hulli sp. n.

Figs 178-180

Etymology: Named for Dr Frank M. Hull in recognition of his contribution to the study of world Asilidae.

Description: Based on holotype ♂.

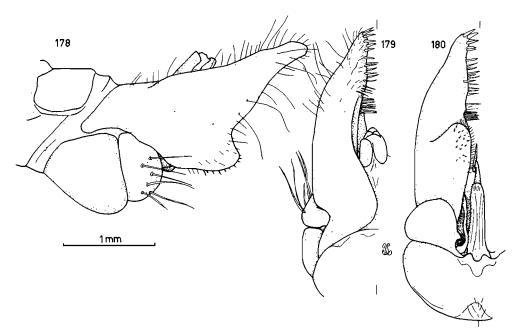
Head: Antenna black; setae black ventrally except for a few white setae on scape, white dorsally. Eye:face ratio 1:0,23; eye:lower facial margin ratio 14,8:1. Mystax white with black laterally. Occipital setae: upper and central—black; lower — white.

Thorax: ktg s and mtanepst s black and yellow. Mesonotal setae & bristles: acr few black not well developed; dc black; pprn long white; 3/3 orange npl; 2/2 black spal; 2/2 black pal (+ 2 black setae); mane black, few shorter white setae bordering. Scutellum with 6 black marginal bristles; disc with ca 9 black bristles and black and white setae. Wing:  $9.5 \times 3.2$  mm. Legs: dark red-brown, tibiae orange proximally; cx1 setae white; cx3 with 1 pale yellow-white bristle laterally. Hind femur: bristles orange and black, long setae black and white, short setae longish white (black ventrally).

Abdomen: Silver pruinose. T3 lacks obvious bristles; setae short, black and white (laterally) and black (dorsally); S3 with long white setae. Genitalia as in Figs 178–180 (paratype illustrated); epandrium highly characteristic, fairly attenuate, with a ventral lobe in lateral view, equipped with short bristles on medial surface; hypandrium and gonocoxite moderately well developed; aedeagus of moderate length, slender, sinuous, with slender pointed tip.

Paratypes:  $9\mbox{3}\mbox{9}$  similar to holotype.  $\mbox{9}$  cerci spine-like, forming elements of upturned pronged structure.

Material examined: SOUTH AFRICA: Cape Province: 2δ (holotype & paratype), Hantamsberg (3119BD), 22.x.1982, L. E. Schoeman (NM); 1δ (paratype), Observatory, Sutherland (3220BD), 16.x.1981, L. E. Schoeman (NM); 1δ (paratype), Swartkop 31 km NW of Sutherland (3220BA), 18–19.xi.1986, Londt & Quickelberge, 1600 m, Rocks Woody Macchia (NM); 5δ 2♀ (paratypes), Augusfontein (Calvinia) (3119CB), ix.1947, Mus Exp (SAM); 1δ 1♀ (paratypes),



Figs 178-180. Neolophonotus hulli sp. n. paratype male (Sutherland) genitalia. 178. Lateral. 179. Dorsal. 180. Ventral.

Moordenaars Karoo, Lammerfontein (3220DD), x.1952, Mus Exp (SAM). NM Type No. 3876, SAM Type No. 5307.

Distribution: Recorded from the Desert & Poor Steppe and Little & Great Karoo climatic regions.

Relationship: A distinctive species. Male genitalia resemble those of rudi.

# Neolophonotus hymenotelus sp. n.

Figs 181-184

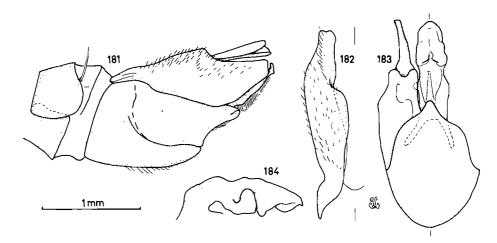
Etymology: Gr. hymen—a membrane; telos—end. Refers to membranous nature of male terminalia.

Description: Based on unique holotype  $\delta$ .

Head: Antenna black; setae mostly black ventrally, mostly white dorsally. Eye:face 1:0,18; eye:lower facial margin ratio 11,8:1. Mystax black and white (mixed). Occipital setae: upper—black; central—yellow-white; lower—white.

Thorax: ktg s and mtanepst s yellow-brown and white. Mesonotal setae & bristles: acr black; dc black; pprn white; 2/3 orange npl; 2/2 black spal; 1/1 black pal; mane black, shorter white setae bordering. Scutellum with 3 black marginal bristles; disc with 4 black bristles and white setae. Wing:  $6.2 \times 2.0$  mm. Legs: dark red-brown; cx1 setae white; cx3 with 1 yellow bristle laterally. Hind femur: bristles orange-brown and black, long setae white, short setae white.

Abdomen: Fine silver pruinose. T3 lacks obvious bristles; setae numerous, white (laterally) black (dorsally); S3 with long white setae. Genitalia as in Figs 181-184;



Figs 181-184. Neolophonotus hymenotelus sp. n. holotype male (13.5 mi SSW Springbok) genitalia. 181. Lateral. 182. Dorsal. 183. Ventral. 184. Aedeagus (lateral).

epandrium poorly developed; hypandrium with hind margins merging into membranous intersegmental area; gonocoxite closely attached to epandrium and with membranous posterior part; gonostylus jutting out posteriorly (beyond epandrium in lateral aspect); aedeagus longish, thickset and with large bulbous head.

Paratypes: None. ♀ unknown.

Material examined: SOUTH AFRICA: Cape Province: 1♂ (holotype), 13.5 mi SSW Springbok nr Neweputs Farm (2917DD), 7.ix.1972, M E & B J Irwin (NM). NM Type No. 3877.

Distribution: The type-locality lies in the Desert & Poor Steppe climatic region.

Relationship: A distinctive species. Male genitalia do not resemble those of any other species in the group.

#### Neolophonotus iota sp. n.

Figs 185–187

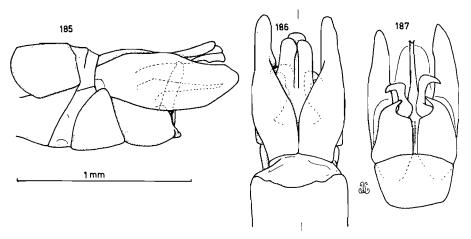
Etymology: Gr. iota—anything minute. This is one of the smallest species in the genus.

Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black and white ventrally, white dorsally. Eye:face ratio 1:0,15; eye:lower facial margin ratio 9,2:1. Mystax black and white (mixed). Occipital setae: upper—black and white; central—white; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn white; 3/3 yellow npl; 2/2 black spal; 1/1 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 6 black bristles and white setae. Wing:  $4.9 \times 1.7$  mm. Legs: dark red-brown; cx1 setae white; cx3 with 2 white bristles laterally. Hind femur: bristles dark red-brown (few white), long setae white and black, short setae white (black ventrally).

Abdomen: Fine gold pruinose. T3 with 5 white marginal bristles; setae longish, white (laterally) few black (dorsally); S3 with 6 white bristles posteriorly, long white setae. Genitalia as in Figs 185–187 (paratype illustrated); epandrium of moderate length, without obvious distinguishing features; hypandrium and gonocoxite moderately well developed; gonocoxite with distal hook-like projection; gonostylus well developed; aedeagus of moderate length, with longish, slender tip.



Figs 185-187. Neolophonotus iota sp. n. paratype male (30 km NW Karasberg) genitalia. 185. Lateral. 186. Dorsal. 187. Ventral.

Paratypes:  $63\ 129$  similar to holotype. 9 cerci spine-like, forming elements of upturned pronged structure.

Material examined: NAMIBIA: 43 (holotype & paratypes) 69 (paratypes), 60 km S Aus (2716AB), 1.ix.1983, J. Londt & B. Stuckenberg, Broken veld at base of small hill (NM); 3369 (paratypes), 30 km NW of Karasburg (2718DA), 28.viii.1983, J. Londt & B. Stuckenberg, Arid Karoo type veget. (NM). NM Type No. 3878.

Distribution: Both localities are in the Desert & Poor Steppe climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of cuthbertsoni.

#### Neolophonotus jubatus sp. n.

Figs 188-190

Etymology: L. jubatus—maned, crested. Refers to the well-developed mane.

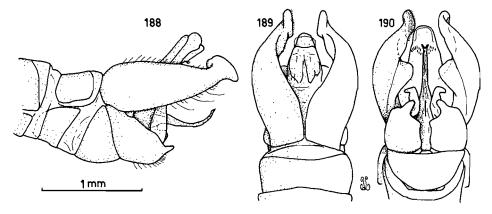
Description: Based on unique holotype  $\delta$ .

Head: Antenna dark red-brown; setae black except for some white on dorsal aspect of scape. Eye:face ratio 1:0,18; eye:lower facial margin ratio 9,4:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and white; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn few white; 2/2 dark red-brown npl; 2/2 dark red-brown spal; 1/1 dark red-brown spal; 1/1 dark red-brown spal; 1/1 dark red-brown spal; 1/1 dark red-brown spal; 1/2 dark red-brown sp

brown pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 5 black bristles and white setae. Wing:  $5.1 \times 1.5$  mm. Legs: black; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles dark red-brown (1 white), long setae dark red-brown and white, short setae white (dark red-brown ventrally).

Abdomen: Silver pruinose. T3 with 2 white and 1 dark red-brown marginal and 2 weak white or dark red-brown discal bristles; setae short, white (laterally) and black (dorsally); S3 with white bristles and setae. Genitalia as in Figs 188–190; epandrium longish, well developed, with pad-like distal tip; hypandrium and gonocoxite moderately well developed; aedeagus longish, slender, with forked tip.



Figs 188-190. Neolophonotus jubatus sp. n. holotype male (Richtersveld) genitalia. 188. Lateral. 189. Dorsal. 190. Ventral.

Paratypes: None. ♀ unknown.

Material examined: SOUTH AFRICA: Cape Province: 13 (holotype), Richtersveld, 1 km E of Grootderm (2816DA), 2.ix.1983, J. Londt & B. Stuckenberg, foot of small hill (NM). NM Type No. 3879.

Distribution: Known only from the type-locality in the Desert & Poor Steppe climatic region.

Relationship: A distinctive species. Male genitalia resemble those of parvus, raptor and variegatus.

#### Neolophonotus kerteszi sp. n.

Figs 191-193

Etymology: Named after Dr C. Kertesz in gratitude for his useful Catologus Dipterorum of 1909.

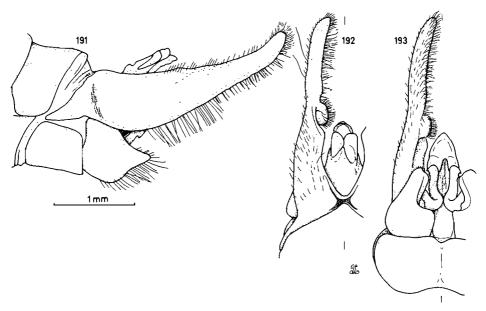
Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black ventrally (few white on scape), white dorsally. Eye:face ratio 1:0,18; eye:lower facial margin ratio 9,0:1. Mystax black and white (mixed). Occipital setae: upper—black and white; central—yellow; lower—white.

.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn yellow; 3/3 yellow and black npl; 2/2 black spal; 3/3 black pal (+ 2 black setae); mane black, shorter white setae bordering. Scutellum with 6 black marginal bristles; disc with 16 black bristles and long white setae. Wing:  $8.9 \times 3.2$  mm. Legs: dark red-brown; cx1 setae white (few black laterally); cx3 with 1 yellow bristle laterally. Hind femur: bristles black and yellow, long setae black and white, short setae pale yellow-white dorsally and laterally, black ventrally.

Abdomen: Gold-red pruinose. T3 bristles not obviously developed; setae pale yellow-white (laterally) and black (dorsally); S3 with short white setae. Genitalia as in Figs 191–193; epandrium greatly attenuate, well developed, equipped with small medial lobe at about midlength; hypandrium and gonocoxite well developed; aedeagus shortish, with pointed tip.



Figs 191-193. Neolophonotus kerteszi sp. n. holotype male (Beaufort West) genitalia. 191. Lateral. 192. Dorsal. 193. Ventral.

Paratypes:  $8\cdot{\circ}6\cdot$  similar to holotype.  $\cdot$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Cape Province: 28 (holotype & paratype), Beaufort West (3222AB), 16.x.1982, L. E. Schoeman (NM); 48 49 (paratypes), Karoo National Park, Beaufort West (3222AB), 12.xi.1986, Londt & Quickelberge, 1760 m, Area near radio mast (NM); 28 29 (paratypes), same data but 1810 m, Area near Met. Stn. (NM); 18 (paratype), Cape Town (3318CD), 1909, Peringuey (ZSM). NM Type No. 3880.

Distribution: Recorded from the Mediterranean and the Little and Great Karoo climatic region.

Relationship: kerteszi strongly resembles hirsutus (recorded from the Natal Drakensberg) but has small though consistent differences in genital form. This close resemblance is interesting as the localities are widely separated. This is paralleled by hobbyi, also collected at the Karoo National Park and the Natal Drakensberg.

# Neolophonotus labeonis sp. n.

Figs 194-196

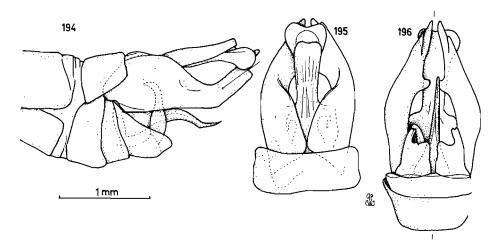
Etymology: L. *labeonis*—one with large lips. Refers to the large lower lamellae of the proctiger.

Description: Based on unique holotype  $\delta$ .

Head: Antenna dark red-brown; setae black ventrally, white dorsally. Eye:face ratio 1:0,18; eye:lower facial margin ratio 12,7:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and white; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn long white; 2/3 black npl; 2/2 black spal; 1/1 black pal (+ 1 black seta); mane black, short anteriorly, shorter white setae bordering. Scutellum with 2 black marginal bristles; disc with 5 (4 black 1 white) bristles and white setae. Wing:  $5.7 \times 1.8$  mm. Legs: black; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles white (few black distally), long setae white and black, short setae white.

Abdomen: Fine silver pruinose. T3 with 1 white marginal bristle; setae short, white (few black dorsodistally); S3 with white bristles and short white setae. Genitalia as in Figs 194–196; epandrium attenuate, distal part narrow, upwardly turned; proctiger elongate with large lower anal lamellae; hypandrium and gonocoxite relatively poorly developed; gonostylus well developed; aedeagus longish, sinuose, with longish, slender tip.



Figs 194-196. Neolophonotus labeonis sp. n. holotype male (Windhoek) genitalia. 194. Lateral. 195. Dorsal. 196. Ventral.

Paratypes: None. Q unknown.

Material examined: NAMIBIA: 13 (holotype), Bellerode Farm 22°30'S:17°12'E, Windhoek, 24.ii.1975, F. C. de Moor, Nat Mus Bulawayo (NMZ).

Distribution: Known only from the type-locality in the Botswana and N Namibia climatic region.

Relationship: A very distinctive species. Male genitalia unique.

# Neolophonotus lacustrinus sp. n.

Figs 197-199

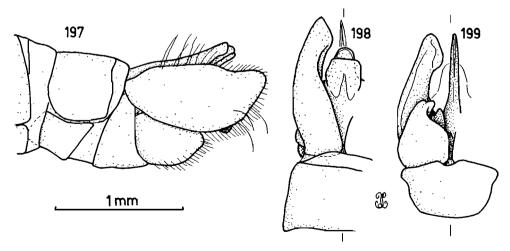
Etymology: L. lacustrinus—of lakes. Specimens were collected near a lake.

Description: Based on holotype ♂.

Head: Antenna black; scape with setae black and white, pedicel with all setae black. Eye:face ratio 1:0,20; eye:lower facial margin ratio 9,3:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and white; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn black and yellow; 3/3 black npl; 2/2 black spal; 1/1 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 3 black bristles and black and white setae. Wing:  $6.1 \times 2.0$  mm. Legs: dark red-brown to black; cx1 setae white; cx3 with 1 yellow bristle laterally. Hind femur: bristles white and black, long setae black and white, short setae white.

Abdomen: Silver pruinose. T3 with 2 black 2 white marginal and 2-4 discal bristles; setae short, white (laterally) and black (dorsally); S3 with white bristles and setae. Genitalia as in Figs 197-199; epandrium short but well developed; hypandrium and gonocoxite poorly developed; aedeagus of moderate length, with longish, slender tip.



Figs 197-199. Neolophonotus lacustrinus sp. n. holotype male (Lake Mentz) genitalia. 197. Lateral. 198. Dorsal. 199. Ventral.

Paratypes:  $8 \delta 6$  similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Cape Province: 1δ (holotype) 3♀ (paratypes), Lake Mentz (3325AA), 29.x.1978, Londt & Miller, margin & below wall (NM); 1δ 2♀ (paratypes), Karoo National Park, 15 km N Beaufort West (3222AB), 12.xi.1986, Londt & Quickelberge, Dry Acacia woodland (NM); 1δ (paratype), 73 km N Beaufort West (3122CD) Loxton Rd., 13.xi.1986, Londt & Quickelberge, 1550 m, Rocky hillside scrub (NM); 2δ (paratype), Dikbome, Merweville (3221DA) Koup, x.1952, Mus Exp (SAM); 1δ (paratype), Koup Siding, Laingsburg (3320BB), x.1952, Mus Exp (SAM); 1δ 1♀ (paratypes), Lammerskraal, Prince Albert Dist (3221DC), ix.1947, Mus Exp (SAM); 1δ (paratype), Albert Dist bet. Burgersdorp & Nooitgedacht (3026CD), x.1935, Mus Staff (SAM); 1δ (paratype), Colesberg (3025CA), xi.1939, Mus Staff (SAM). NM Type No. 3881, SAM Type No. 5308.

Distribution: Known from the Little & Great Karoo, Southern & Northern Steppe and Desert & Poor Steppe climatic regions.

Relationship: A fairly distinctive species. Male genitalia resemble those of cuthbertsoni.

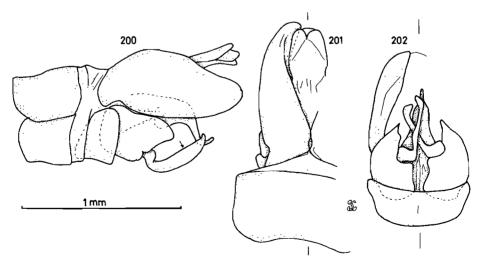
# Neolophonotus lasius sp.n.

Figs 200-202

Etymology: Gr. lasios—woolly. Specimens have long white abdominal setae.

Description: Based on holotype 3.

Head: Antenna brown; setae black except for those on dorsal aspect of scape which are yellow. Eye:face ratio 1:0,22; eye:lower facial margin ratio 10,1:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and white; lower—white.



Figs 200-202. Neolophonotus lasius sp. n. paratype male (Willowmore) genitalia. 200. Lateral. 201. Dorsal. 202. Ventral.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn white; 2/2 black npl; 2/2 black spal; 1/1 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 10 black bristles and white (laterally) and black (centrally) setae. Wing: 4,8 × 1,4 mm. Legs: dark brown; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles dark red-brown and white, long setae dark red-brown and white, short setae long white.

Abdomen: Silver pruinose. T3 with 4 white marginal bristles; setae long, white; S3 with long white bristles and setae. Genitalia as in Figs 200–202 (paratype illustrated); epandrium short but well developed; hypandrium and gonocoxite moderately well developed; gonostylus well developed (pulled down for drawing) aedeagus of moderate length, with longish, slender, somewhat sinuose tip.

Paratypes: 3♂. ♀ unknown.

Material examined: SOUTH AFRICA: Cape Province: 4& (holotype & paratypes), Capland, Willowmore (3323AD), viii.1916, Dr Brauns, 3018/6 (SAM, NM). SAM Type No. 5309, NM Type No. 3882.

Distribution: Known only from the Little and Great Karoo climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of margaracta.

## Neolophonotus leechi sp. n.

Figs 203-205

Etymology: Named for one of the collectors, R. E. Leach.

Description: Based on holotype 3.

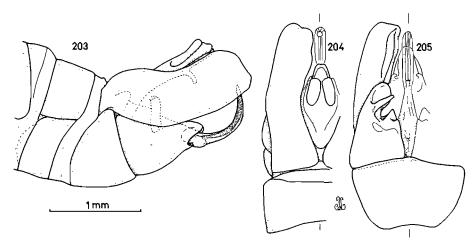
Head: Antenna black; setae black and white (pedicel lacks white setae ventrally). Eye:face ratio 1:0,19; eye:lower facial margin ratio 14,0:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and white; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn white; 3/3 black (1 yellow on right) npl; 2/2 black spal; 2/2 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 4 black bristles and white setae. Wing:  $7,4 \times 2,8$  mm. Legs: dark red-brown to black; cx1 setae white; cx3 with 2 white bristles laterally. Hind femur: bristles black and white, long setae black and white, short setae white.

Abdomen: Gold pruinose. T3 with 3-4 white marginal and 2 white discal bristles; setae white (laterally) and black (dorsodistally); S3 with 6 white bristles and white setae. Genitalia as in Figs 203-205 (paratype illustrated); epandrium moderately well developed; ventral surface of proctiger with pair of finger-like processes; hypandrium well developed; gonocoxite well developed, with ventral process visible in lateral aspect; aedeagus of moderate length, well developed, with longish, stoutly built distal portion.

Paratypes:  $5 \delta 3$  similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: ANGOLA: 3♂ (holotype & paratypes) 1♀ (paratype), 5 mi. W of Nova Lisboa (1215DB), 27.v.1958, E. S. Ross & R. E. Leech, 1740 m (CAS,



Figs 203–205. Neolophonotus leechi sp. n. paratype male (5 mi W Nova Lisboa) genitalia. 203. Lateral. 204. Dorsal. 205. Ventral.

NM);  $1\eth$  1\Pmathbb{?} (paratypes), Cacula (0913DA), 25.v.1958, Ross & Leech, 1530 m (CAS);  $2\eth$  (paratypes), 19 mi. NE of Sada Bandeira (1413CD), Ross & Leech, 1650 m (CAS);  $1\Pmathbb{?}$  (paratype), Vila Arriaga (1413CD), 21.v.1958, Ross & Leech, 1000 m (CAS). NM Type No. 3883 ( $1\eth$  paratype).

Distribution: All localities are in Angola.

Relationship: A distinctive species. Male genitalia unique.

# Neolophonotus leptostylus sp. n.

Figs 206-208

Etymology: Gr. leptos—thin; stylus—extension of gonocoxite. Refers to slender gonostylus.

Description: Based on holotype ♂.

Head: Antenna dark red-brown to black; setae black ventrally (except for some white on scape), white dorsally. Eye:face ratio 1:0,24; eye:lower facial margin ratio 6,3:1. Mystax black and white (mixed). Occipital setae: upper—black and white; central—black and white; lower—white (few black along eye margin).

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn long white; 3/3 (2 yellow 1 black) npl; 2/2 black spal; 1/1 black pal (+ 2 black setae); mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 10 black bristles and white setae. Wing:  $6,6 \times 2,4$  mm. Legs: black, tibiae red-brown dorsoproximally; cx1 setae white; cx3 with 1 yellow bristle laterally. Hind femur: bristles red-brown and yellow, long setae black and white, short setae white (few black ventrally).

Abdomen: Silver and red-gold pruinose. T3 with 2-4 weak black marginal bristles; setae short, white (laterally) and black (dorsally); S3 with long black and short white setae. Genitalia as in Figs 206-208 (paratype illustrated); epandrium of

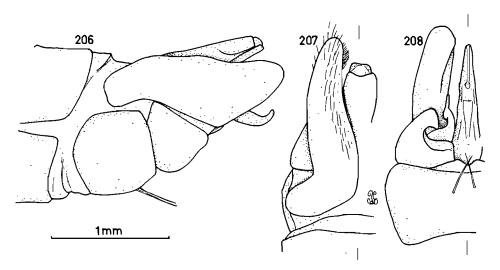
moderate length, well developed; hypandrium and gonocoxite moderately well developed; hypandrium with pair of strong bristles; gonostylus slender; aedeagus of moderate length, with longish, tapering tip.

Paratypes: 103 129 similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Cape Province: 4δ (holotype & paratypes) 4♀ (paratypes), 20 km NE Muizenberg (3418BA), 29.viii.1981, J. Londt L. Schoeman & B. Stuckenberg, Coastal Macchia (NM); 3δ 2♀ (paratypes), 5 km E Lambert's Bay (3218AB), 31.viii.1981, Londt Schoeman Stuckenberg, Westcoast Strandveld (NM); 1δ 4♀ (paratypes), 15 km E Lambert's Bay (3218AB), 1.ix.1981, Londt Schoeman & Stuckenberg, Westcoast Strandveld (NM); 1δ (paratype), Nuwekloof 5 km E Gouda (3319AC), 29.viii.1981, Londt Schoeman & Stuckenberg, Coastal Renosterbos (NM); 1♀ (paratype), Outskirts of Klawer (3118DC), 2.ix.1981, Londt Schoeman & Stuckenberg, Succulent Karoo (NM); 2δ 1♀ (paratypes), Melkbosstrand (3318CB), 29.viii.1965, Gess (SAM). NM Type No. 3884, SAM Type No. 5310.

Distribution: Localities are in the Mediterranean climatic region.

Relationship: A distinctive species. Male genitalia resemble those of pachystylus.



Figs 206-208. Neolophonotus leptostylus sp. n. paratype male (20 km NE Muizenberg) genitalia. 206. Lateral. 207. Dorsal. 208. Ventral.

# Neolophonotus leucodiadema sp. n.

Figs 209-211

Etymology: Gr. leukos—white; diadema—crown. Upper occipital bristles are white.

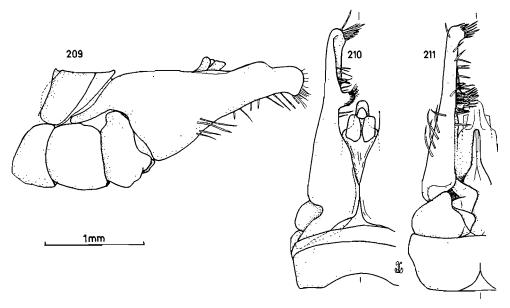
Description: Based on unique holotype ♂.

Head: Antenna black; setae black ventrally, white dorsally (a few black on

pedicel). Eye:face ratio 1:0,18; eye:lower facial margin ratio 9,7:1. Mystax black and white (mixed). Occipital setae: upper—white; central and lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn white; 3/3 yellow npl; 2/2 black spal; 1/1 black pal (+ 1 black seta); mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 4 black (1 white) bristles and white setae. Wing:  $6.7 \times 2.5$  mm. Legs: black, tibiae dark red-brown dorsoproximally; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles pale yellow, long setae black and white, short setae white (long dark red-brown ventrally).

Abdomen: Fine gold pruinose. T3 with 1 white marginal bristle; setae short, white (laterally) and few black (dorsally); S3 with long black and white setae. Genitalia as in Figs 209–211; epandrium attenuate, moderately well developed, with small lobe medially at about midlength and group of thick setae distally; hypandrium and gonocoxite well developed; aedeagus of moderate length, with longish, slender tip.



Figs 209-211. Neolophonotus leucodiadema sp. n. holotype male (Cathedral Peak) genitalia. 209. Lateral. 210. Dorsal. 211. Ventral.

Paratypes: None. 9 unknown.

Material examined: SOUTH AFRICA: *Natal*: 13 (holotype), Cathedral Peak Area (2829CC), 5.viii.1982, J. G. H. Londt, nr. Hotel on sand nr. river (NM). NM Type No. 3885.

Distribution: Known only from the type-locality in the Drakensberg climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of walkeri.

# Neolophonotus lindneri sp. n.

Figs 212-214

Etymology: Named after Dr Erwin Lindner in recognition of his contributions to the study of Afrotropical Asilidae.

Description: Based on holotype 3.

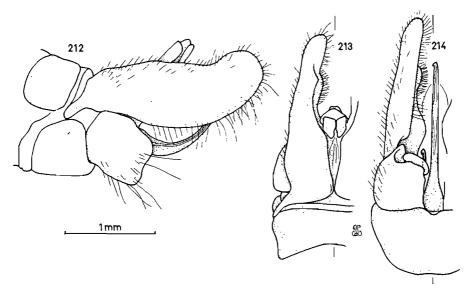
Head: Antenna dark red-brown to black; setae black and white ventrally, white dorsally. Eye:face ratio 1:0,17; eye:lower facial margin ratio 11,8:1. Mystax black and white (mixed). Occipital setae: upper—black and pale yellow; central—yellow; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn pale yellow-white; 3/3 orange npl; 3/3 black spal; 1/1 black pal (+ 2 black setae); mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 9 black bristles and white (few black) setae. Wing:  $7.6 \times 2.7$  mm. Legs: dark red-brown to black, tibiae orange-brown dorsoproximally; cx1 setae white; cx3 with 2 yellow bristles laterally. Hind femur: bristles yellow, long setae black and white, short setae white, long black ventrally.

Abdomen: Fine gold-red pruinose. T3 with 1-2 yellowish marginal bristles; setae short, white (laterally) and black (dorsally); S3 with white setae. Genitalia as in Figs 212-214 (paratype illustrated); epandrium longish, well developed; hypandrium and gonocoxite well developed; aedeagus long and slender.

Paratypes:  $13 \ \delta \ 8 \ \varphi$  similar to holotype.  $\ \varphi$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: *Transvaal*: 143 (holotype & paratypes) 89 (paratypes), Bourkes Potholes 60 km N Graskop (2430DB), 14.iv.1985, J & B Londt (NM). NM Type No. 3886.



Figs 212-214. Neolophonotus lindneri sp. n. paratype male (Bourkes Potholes) genitalia. 212. Lateral. 213. Dorsal. 214. Ventral.

Distribution: Known only from the type-locality on the escarpment between the N Transvaal and Lowveld climatic regions.

Relationship: A distinctive species. Male genitalia may superficially resemble those of *leptostylus*.

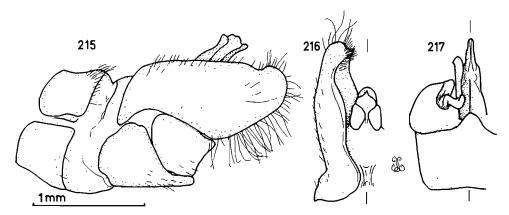
Remark: The specimens were resting on the ground between tall grass-tussocks.

# Neolophonotus loewi sp. n.

Figs 215-217

Etymology: Named after Dr H. Loew, the 'father of Afrotropical Asilidology'. Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black except for white setae dorsally on scape. Eye:face ratio 1:0,18; eye:lower facial margin ratio 8,1:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and yellow; lower—white. Thorax: ktg s and mtanepst s yellow (few black). Mesonotal setae & bristles: acr black; dc black; pprn white and black; 3/3 (1 orange 2 black) npl; 2/2 black spal; 1/1 black pal (+ 2 black setae); mane black, shorter white setae bordering. Scutellum with 6 black marginal bristles; disc with 9 black bristles and white setae. Wing:  $7.5 \times 2.5$  mm. Legs: dark red-brown; cx1 setae white; cx3 with 1 yellow bristle laterally. Hind femur: bristles orange and black, long setae black and white, short setae white.



Figs 215-217. Neolophonotus loewi sp. n. paratype male (Laingsburg) genitalia. 215. Lateral. 216. Dorsal. 217. Ventral.

Abdomen: Silver and red-gold pruinose. T3 with 4 yellow marginal, 1 yellow discal bristles; setae short, white (laterally) and black (dorsally); S3 with white setae. Genitalia as in Figs 215–217 (paratype illustrated); epandrium moderately well developed; hypandrium well developed with midventral lobe-like projection; gonocoxite well developed; aedeagus of moderate length, with slender tip.

Paratypes:  $8\mbox{c} 7\mbox{\ensuremath{$\circ$}}$  similar to holotype.  $\mbox{\ensuremath{$\varphi$}}$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Cape Province: 88 (holotype & paratypes) 79 (paratypes), 50 km SE Laingsburg (3321AC), 8.ix.1981, J. Londt L. Schoeman

& B. Stuckenberg, False Macchia slopes (NM); 13 (paratype), Koup Siding, Laingsburg (3320BB), x.1952, Mus Epd (SAM). NM Type No. 3887, SAM Type NO. 5311.

Distribution: Known only from the Little & Great Karoo climatic region.

Relationship: A distinctive species. Male genitalia superficially resemble those of *mediolocus*.

# Neolophonotus loganius sp. n.

Figs 218-220

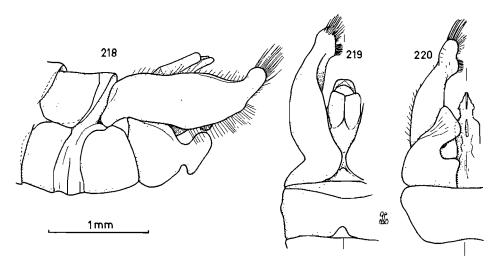
Etymology: Gr. loganion—a dewlap, flap or fringe. Refers to flap-like gonocoxite process.

Description: Based on unique holotype  $\delta$ .

Head: Antenna black; setae of scape black and white ventrally, white dorsally, setae of pedicel all black. Eye:face ratio 1:0,21; eye:lower facial margin ratio 7,9:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black; lower—white.

Thorax: ktg s and mtanepst s yellow and black. Mesonotal setae & bristles: acr black; dc black pprn black and white; 4/4 black npl; 2/2 black spal; 2/2 black pal; mane black, shorter white setae bordering. Scutellum with 8 black marginal bristles; disc with ca 20 black bristles and black and white setae. Wing:  $6.5 \times 2.3$  mm. Legs: black; cx1 setae white; cx3 with 1 pale yellow bristle laterally. Hind femur: bristles black and yellow, long setae black and white, short setae white dorsally, black ventrally.

Abdomen: Fine gold-red pruinose. T3 lacks obvious bristles; setae short, virtually all black (few white laterally); S3 with long black and few, short white setae. Genitalia as in Figs 218–220; epandrium of moderate length, well developed, tip



Figs 218–220. Neolophonotus loganius sp. n. holotype male (Sutherland) genitalia. 218. Lateral. 219. Dorsal. 220. Ventral.

upturned and equipped with small groups of setae; hypandrium well developed; gonocoxite well developed, with flag-like distal flange (in lateral aspect); aedeagus of moderate length, with shortish, arrow-head shaped tip.

Paratypes: None. 9 unknown.

Material examined: SOUTH AFRICA: Cape Province: 1& (holotype), Observatory Sutherland (3220BC), 16.x.1981, L. E. Schoeman (NM). NM Type No. 3888.

Distribution: Known only from the type-locality at the southern end of the Desert & Poor Steppe climatic region.

Relationship: A distinctive species. Male genitalia resemble those of wiedemanni.

# Neolophonotus longicauda sp.n.

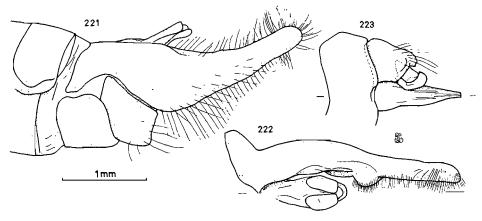
Figs 221-223

Etymology: L. longus—long; cauda—tail. Refers to the elongate epandrial lobes. Description: Based on holotype  $\delta$ .

Head: Antenna dark red-brown to black; setae mixed black and pale yellow-white. Eye:face ratio 1:0,17; eye:lower facial margin ratio 7,9:1. Mystax black and white (mixed). Occipital setae: upper—yellow and black; central—yellow; lower—white.

Thorax: ktg s and mtanepst s orange. Mesonotal setae & bristles: acr black; dc black; pprn 4 strong orange bristles and orange setae; 4/4 orange npl; 3/3 orange spal; 2/2 orange pal; mane black, shorter white setae bordering. Scutellum with 5 (3 orange 2 black) marginal bristles; disc with 13 black bristles and white setae. Wing:  $9.1 \times 3.3$  mm. Legs: dark red-brown to black, tibiae orange dorsoproximally; cx1 setae white; cx3 with 3 yellow bristles laterally. Hind femur: bristles yellow, long setae black and white, short setae white.

Abdomen: Fine gold pruinose. T3 with 7 yellow marginal bristles; all setae white; S3 with yellow bristles and setae. Genitalia as in Figs 221-223 (paratype illustrated); epandrium stoutly attenuate, well developed, with small medial lobe at



Figs 221–223. Neolophonotus longicauda sp. n. paratype male (Pretoria) genitalia. 221. Lateral. 222. Dorsal. 223. Ventral.

!

about midlength and many long setae especially distally; hypandrium and gonocoxite well developed; aedeagus of moderate length, tapering to slender tip. Paratypes: 18329 similar to holotype. 92 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: *Transvaal*: 103 (holotype & paratypes) 112 (paratypes), Hennops Pride, Hennops River (Henopsrivier 2727DD), 20.v.1982, R. Elferink (NM); 13 (paratype), Pretoria (2528CA), v.1971, ERL (NM); 13 (paratype), Pretoria, 11/66 (xi.1966), HP (NM); 13 (paratype), Pretoria, SE2528CA, ii.1981, Swain (NM); 13 12 (paratypes), Pretoria, 31.v.1913, Munro (NCI); 13 (paratype), Wonderboom [Pretoria], 5.vii.1907, Swierstra (ZSM); 13 (paratype), Saartjiesnek 30 km W Pta. 13–20.viii.197?, Holm, Malaise Trap (NCI); 13 (paratype), Middelburg (2529CD), iv.1973, Kirsten (NM). *Orange Free State*: 13 (paratype), Hoopstad (2725DD), ii.1962, ARI Pretoria (NM). SWAZILAND: 13 (paratype), Mhlosheni, SE2731AA, 12.vii.1980, Crafford (NM). NM Type No. 3889.

Distribution: Localities are in the N Transvaal, Highveld and S & N Steppe climatic regions.

Relationship: A fairly distinctive species. Male genitalia resemble those of algidus and wroughtoni.

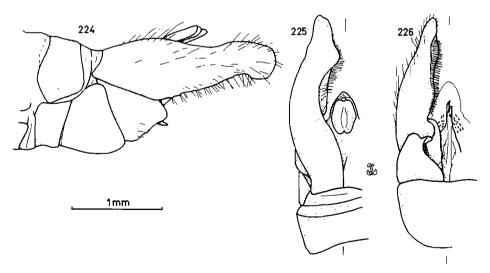
# Neolophonotus mafingaensis sp.n.

Figs 224-226

Etymology: Named after the type-locality (Mafinga Mountains) in Zambia.

Description: Based on holotype 3.

Head: Antennal scape and pedicel brown, rest dark red-brown to black; setae black ventrally, white dorsally. Eye:face ratio 1:0,17; eye:lower facial margin ratio



Figs 224-226. Neolophonotus mafingaensis sp. n. holotype male (Mafinga Mtns) genitalia. 224. Lateral. 225. Dorsal. 226. Ventral.

16,3:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and white; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr not clearly differentiated; dc black; pprn few, short black and white; 2/2 black npl; 3/3 black spal; 2/2 black pal; mane sparse posteriorly, black, shorter white setae bordering. Scutellum with 2 black marginal bristles; disc with 3 black bristles and white setae. Wing:  $6.9 \times 2.2$  mm. Legs: black; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles black and white, long and short setae white.

Abdomen: Silver pruinose. T3 with 3 black marginal (1 white) bristles; setae short, white (laterally) and black (dorsally); S3 with 4 white bristles and long white setae. Genitalia as in Figs 224–226; epandrium longish, well developed; hypandrium and gonocoxite well developed; aedeagus of moderate length, with slender tip.

Paratypes:  $1\vec{c}$   $1\vec{Q}$  similar to holotype.  $\vec{Q}$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: ZAMBIA: 1♂ (holotype), Mafinga Mtns (0933CD), 14.ix.1981, I. Bampton, 7000 ft (NM). TANZANIA: 1♂ 1♀ (paratypes), Ugano 15–1700m, Matengo Hochland WSW v. Songea (1035DA), 3.ix. & 29.1936, F. Zimmer (NMW). NM Type No. 3890.

Distribution: Known from Zambia and Tanzania.

Relationship: A distinctive species. Male genitalia resemble those of malawi.

#### Neolophonotus malawi sp. n.

Figs 227-229

Etymology: Named after the country of Malaŵi.

Description: Based on holotype 3.

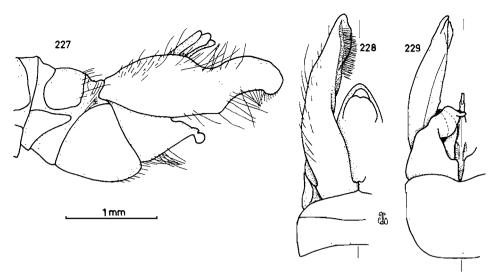
Head: Antenna dark red-brown to black; setae black ventrally, white dorsally. Eye:face ratio 1:0,18; eye:lower facial margin ratio 14,8:1. Mystax predominantly black in lower part, white in upper part (mixed centrally). Occipital setae: upper—black; central—black and white; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn few, black and white; 3/3 black npl; 3/3 black spal; 2/2 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 6 black bristles and white setae. Wing:  $6.5 \times 2.3$  mm. Legs: dark red-brown to black; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles black and white, long setae white, short setae white.

Abdomen: Silver pruinose. T3 with 3 white marginal (1 black) and 1–2 weak discal bristles; setae short, white (laterally) and black (dorsally); S3 with white bristles and setae. Genitalia as in Figs 227–229; epandrium longish, well developed; hypandrium well developed; gonocoxite well developed, with complicated distal projection; aedeagus of moderate length, with longish, slender tip.

Paratypes: 1♂ similar to holotype. ♀ unknown.

Material examined: MALAŴI: 1♂ (holotype), Zomba (1535CB), 24.ix.1980, Ivan



Figs 227-229. Neolophonotus malawi sp. n. holotype male (Zomba) genitalia. 227. Lateral. 228. Dorsal. 229. Ventral.

Bampton (NM); 1& (paratype), Zomba Plateau, Chiradzulu Forest, 22–23.x.1983, A. Freidberg (NM). NM Type No. 3891.

Distribution: Known only from the Zomba Plateau in southern Malaŵi.

Relationship: A distinctive species. Male genitalia appear to most closely resemble those of *mafingaensis*.

#### Neolophonotus margaracta sp. n.

Figs 230-232

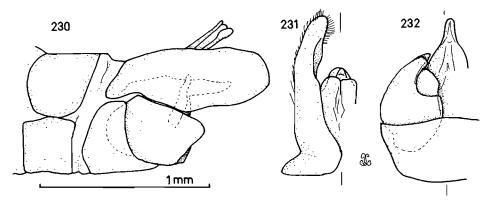
Etymology: L. margarita—pearl; acta—beach. Refers to type-locality of Pearly Beach.

Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black ventrally, black and white dorsally. Eye:face ratio 1:0,24; eye:lower facial margin ratio 9,5:1. Mystax black and white (mixed). Occipital setae: upper—black; central—yellow; lower—white.

Thorax: ktg s and mtanepst s orange. Mesonotal setae & bristles: acr black; dc black; pprn yellow; 4/3 black npl; 2/2 black spal; 2/2 black pal; mane black, shorter yellow setae bordering. Scutellum with 4 black marginal bristles; disc with 8 black bristles and black and white setae. Wing:  $6.3 \times 2.2$  mm. Legs: dark red-brown, tibiae orange-brown dorsoproximally; cx1 setae white; cx3 with 1 orange bristle laterally. Hind femur: bristles dark red-brown and orange, long setae black and white, short setae white (black ventrally).

Abdomen: Fine gold pruinose. T3 with 4 black marginal bristles; setae black, few white laterally; S3 with black (few white) setae. Genitalia as in Figs 230-232 (paratype illustrated); epandrium shortish but well developed; hypandrium and gonocoxite moderately well developed; aedeagus shortish, thick-set with rapidly tapering tip.



Figs 230–232. *Neolophonotus margaracta* sp. n. paratype male (Pearly Beach) genitalia. 230. Lateral. 231. Dorsal. 232. Ventral.

Paratypes:  $3\mbox{ degree 4}$  1? similar to holotype.  $\mbox{ erci spine-like, forming elements of two-pronged fork-like structure.$ 

Material examined: SOUTH AFRICA: Cape Province: 48 (holotype & paratypes) 49 1? (paratypes), Pearly Beach (3419CB) Bredasdorp, ix.1959, SAM (SAM, NM). SAM Type No. 5312, NM Type No. 3892.

Distribution: Known only from the type-locality in the Mediterranean climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of baeoura.

### Neolophonotus mediolocus sp.n.

Figs 233-235

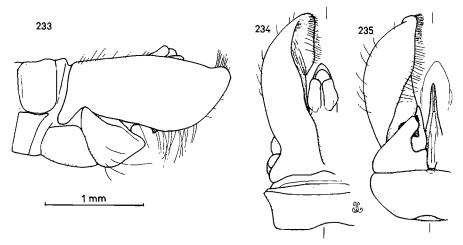
Etymology: L. medius—middle; locus—place. Refers to the type-locality of Middelpos (= Middle Post).

Description: Based on holotype 3.

Head: Antenna dark red-brown to black; setae of scape yellow dorsally, black and yellow ventrally; setae of pedicel all black. Eye:face ratio 1:0,18; eye:lower facial margin ratio 11,4:1. Mystax black and yellow (mixed). Occipital setae: upper—black; central—black; lower—pale yellow with black setae along eye margin.

Thorax; ktg s and mtanepst s orange. Mesonotal setae & bristles: acr black; dc black; pprn black and yellow; 3/3 black npl; 2/2 black spal; 2/2 black pal; mane black, shorter yellow setae bordering. Scutellum with 5 black marginal bristles; disc with 10 black bristles and white setae. Wing:  $6.6 \times 2.1$  mm. Legs: black; cx1 setae white; cx3 with 1 yellow bristle laterally. Hind femur: bristles black and yellow, long setae black and white, short setae white.

Abdomen: Silver pruinose. T3 with 3-4 yellow marginal and 2-3 yellow discal bristles; setae white (laterally), black (dorsally); S3 with 6 yellow bristles and white setae. Genitalia as in Figs 233-235 (paratype illustrated); epandrium of moderate length and well developed; hypandrium and gonocoxite well developed; aedeagus of moderate length, with longish, slender tip.



Figs 233-235. *Neolophonotus mediolocus* sp. n. paratype male (5 km NW Merweville) genitalia. 233. Lateral. 234. Dorsal. 235. Ventral.

Material examined: SOUTH AFRICA: Cape Province: 3& (holotype & paratypes) 4\$\times\$ (paratypes), 20 km SE Middelpos (3220AB), 6.ix.1981, J. Londt L. Schoeman & B. Stuckenberg, W Mountain Karoo (NM); 1& 4\$\times\$ (paratypes), 5 km NW Merweville (3221CB), 7.ix.1981, Londt Schoeman & Stuckenberg, Karroid Broken Veld (NM); 3\$\times\$ (paratypes), 25 km N Middelpos (3120CA), 6.ix.1981, Londt Schoeman & Stuckenberg, W. Mountain Karoo (NM). NM Type No. 3893.

Distribution: Localities are in the southern parts of the Desert & Poor Steppe and the northern edge of the Little & Great Karoo climatic regions.

Relationship: A distinctive species. Male genitalia resemble those of *loewi*.

# Neolophonotus meiswinkeli sp. n.

Figs 236-238

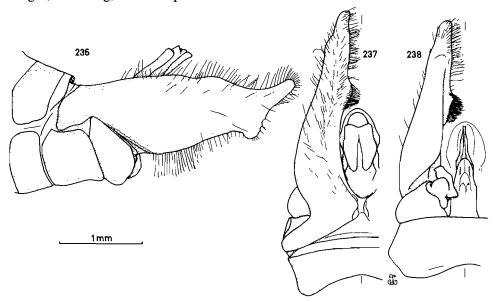
Etymology: Named for Rudi Meiswinkel, the collector and donor of the holotype. Description: Based on unique holotype  $\delta$ .

Head: Antenna black; setae black ventrally (except for a few white setae on scape), white dorsally. Eye:face ratio 1:0,17; eye:lower facial margin ratio 7,9:1. Mystax black and white (mixed). Occipital setae: upper—black; central—white; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn thick yellow and fine black; 3/3 yellow npl; 2/2 (1 yellow 1 black) spal; 3/2 yellow and black pal; mane black, shorter white setae bordering. Scutellum with 4 yellow marginal bristles; disc with 7 (5 black 2 yellow) bristles and white (few black) setae. Wing:  $8.0 \times ?$  mm (hind margins tatty). Legs: dark red-brown to black, tibiae orange-brown dorsoproximally; cx1 setae white; cx3 with 2 yellow

bristles laterally. Hind femur: bristles yellow (1 black at tip), long setae black and white, short setae white (long black ventrally).

Abdomen: Silver pruinose. T3 with 5 yellow marginal and ca 4 long, thin discal bristles; setae short, white (laterally) and black (dorsally); S3 with ca 8 short yellow setae. Genitalia as in Figs 236–238; epandrium stoutly elongate, very well developed; hypandrium and gonocoxite well developed; aedeagus of moderate length, with long, slender tip.



Figs 236–238. Neolophonotus meiswinkeli sp. n. holotype male (Haenertsberg) genitalia. 236. Lateral. 237. Dorsal. 238. Ventral.

Paratypes: None. 9 unknown.

Material examined: SOUTH AFRICA: *Transvaal:* 13 (holotype), Haenertsberg (2329DD), 28.v.1979, R. Meiswinkel, short grasses (NM). NM Type No. 3894.

Distribution: Known only from the type-locality in the N Transvaal climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of walkeri, aureolocus and gravicauda.

#### Neolophonotus melanolophus (Loew, 1858)

Figs 239-242

Lophonotus melanolophus Loew, 1858:364; Loew, 1960:229. Dysmachus melanolophus; Kertesz, 1909:278; Ricardo, 1920:237. Neolophonotus (Lophybus) melanolophus; Engel 1927:166; Hull, 1962:533. Lophybus melanolophus; Bromley, 1949:65. Neolophonotus melanolophus; Oldroyd, 1981:340.

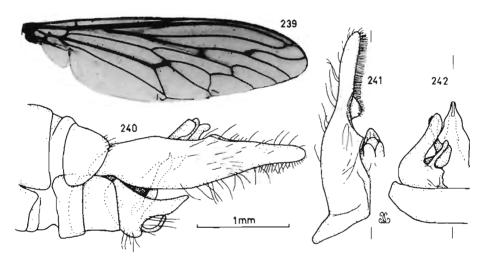
Redescription: Based on holotype  $\delta$ .

Head: Antenna dark red-brown to black; setae black ventrally, white dorsally (except for some black ones on scape). Eye:face ratio 1:0,20; eye:lower facial

margin ratio 7,1:1. Mystax black and white (mixed). Occipital setae: upper—black; central—yellow and black; lower—white.

Thorax: ktg s dark red-brown; mtanepst s dark red-brown and yellow. Mesonotal setae & bristles: acr black; dc black; pprn dark red-brown; 3/3 black npl; 2/2 black spal; 1/1 black pal (+ 1 black seta); mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 4 black bristles and white setae. Wing:  $6.5 \times 2.3$  mm (Fig. 239). Legs: black; cx1 setae white (few black laterally); cx3 with 1 black bristle laterally. Hind femur: bristles dark red-brown, long setae dark red-brown, short setae white (longer dark red-brown ventrally).

Abdomen: Gold pruinose. T3 lacks obvious bristles; setae longish dark red-brown and shorter white (laterally) and black (dorsally); S3 with long dark red-brown and short white setae. Genitalia as in Figs 240–242; epandrium elongate, well developed, with small median lobe at about midlength; hypandrium well developed; gonocoxite well developed, projecting distally and with finger-like ventral process; aedeagus of moderate length, stout, with rapidly tapering tip.



Figs 239-242. Neolophonotus melanolophus (Loew, 1858) holotype male (Cap. B Sp.). 239. Wing. 240-242. Genitalia. 240. Lateral. 241. Dorsal. 242. Ventral.

Type material: Loew studied a single male specimen.

Female: Unknown.

Material examined: SOUTH AFRICA: Cape Province: 13 (holotype), 'Cap. B. Sp.', 'Wahlberg', '13', '300'. '381/80', 'Riksmuseum Stockholm' (NRS); 13, Bergvliet Retreat (Simonstown—3418AB), iii.1938, Mus. Staff (SAM); 13, Mosselbay (3422AA), 14.viii.1896, Penther (ZSM); 13, Algoa Bay [Port Elizabeth—3325DC], 20.ix.1894, Brauns (ZSM).

Distribution: Known with certainty from the Mediterranean and S Cape Coastal climatic regions.

Relationship: A fairly distinctive species. Male genitalia resemble those of annettae.

Remarks: Loew described the species from a single specimen collected by Wahlberg at 'Cape. B. Sp.' (Cape of Good Hope). Transvaal material studied by Engel was misidentified and is included elsewhere in this paper.

The subspecies Lophybus melanolophus dilatus Hull, 1967:263 is transferred to the genus Dasophrys (comb.n.). The species is valid in the combination Dasophrys dilatus (Hull, 1967) and was not handled in my revision of Dasophrys (ie Londt, 1981).

## Neolophonotus melanoura sp. n.

Figs 243-245

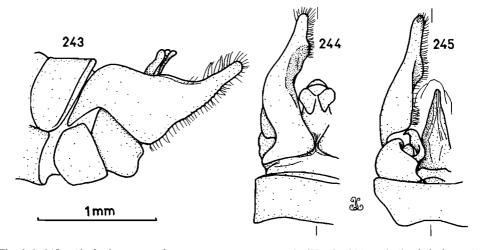
Etymology: Gr. melan—black; oura—tail. Refers to the shiny black male genitalia.

Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black ventrally (a few white on scape), white dorsally. Eye:face ratio 1:0,19; eye:lower facial margin ratio 13,0:1. Mystax black and white (mixed). Occipital setae: upper—black; central—pale yellow; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn white; 3/3 black (1 yellow on right) npl; 2/2 black spal; 2/2 black (1 yellow) pal; mane black, shorter white setae bordering. Scutellum with 2 black marginal bristles; disc with 4 black bristles and white setae. Wing:  $5.9 \times 2.2$  mm, cell  $R_1$  with brown stain at midlength. Legs: black, tibiae orange-brown dorsoproximally; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles pale yellow (1 black distally), long setae black and white, short setae white.

Abdomen: Fine gold pruinose. T3 with 1 yellow marginal bristle; setae short, yellow (laterally) and black (dorsally); S3 with short white setae. Genitalia as in Figs 243–245 (paratype illustrated); epandrium short, attenuate, well developed; hypandrium and gonocoxite well developed; aedeagus of moderate length, with tapering tip.



Figs 243–245. *Neolophonotus melanoura* sp. n. paratype male (Harrismith) genitalia. 243. Lateral. 244. Dorsal. 245. Ventral.

Paratypes:  $6\vec{c}$   $4\vec{a}$  similar to holotype.  $\vec{a}$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Orange Free State: 4& (holotype & paratypes) 1\(^9\) (paratype), Harrismith (2829AC), 17–18.xii.1981, L. E. Schoeman (NM); 1& 3\(^9\) (paratypes), Golden Gate Nat. Park (2828DA), 27–28.iii. 1982, J. Londt & L. Schoeman, Valley nr. stream (NM). Transvaal: 2& (paratypes), Kangwane, 40 km SE Barberton Mt Mlembe (2531CC), 15.ix.1986, Londt & Stuckenberg, Forest/Stream/Slopes (NM). NM Type No. 3895.

Distribution: Localities are in the Highveld climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of attenuatus.

Prey record: Diptera (Tachinidae 1).

# Neolophonotus membraneus sp.n.

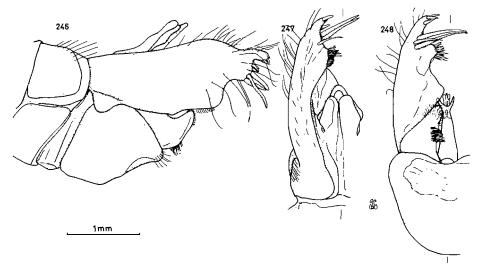
Figs 246-248

Etymology: L. membraneus—of skin or parchment. Refers to weakly sclerotised hypandrium.

Description: Based on holotype  $\delta$ .

Head: Antenna dark red-brown; setae black ventrally, white (few black) dorsally. Eye:face ratio 1:0,26; eye:lower facial margin ratio 10,9:1. Mystax white (few black midlaterally). Occipital setae: upper—black (few white); central—black; lower—white.

Thorax: ktg s and mtanepst s black and white. Mesonotal setae & bristles: acr very weak black; dc black; pprn white (1 black); 3/2 orange npl; 5/5 black (+ 2 black



Figs 246-248. Neolophonotus membraneus sp. n. holotype male (Hantamsberg) genitalia. 246. Lateral. 247. Dorsal. 248. Ventral.

setae) spal; 3/3 black pal (+ ca 8 black setae); mane black, shorter white setae bordering. Scutellum with 6 black marginal bristles; disc with ca 12 black bristles and black and white setae. Wing:  $9.6 \times 3.1$  mm. Legs: black, tibiae orange-brown dorsoproximally; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles yellow and dark red-brown, long setae white and black, short setae white (long black ventrally).

Abdomen: Fine silver and red-gold pruinose. T3 with weak black seta-like bristles; setae long black and white laterally, short, black dorsally; S3 with long black (few white) setae. Genitalia as in Figs 246–248; epandrium of moderate length, well developed, equipped with groups of setae and bristles distally; hypandrium well developed, hind part membranous; gonocoxite relatively poorly developed; aedeagus of moderate length, with trifurcate tip in ventral view.

Paratypes:  $1^{\circ}$  similar to holotype.  $^{\circ}$  ovipositor laterally compressed, cerci not two-pronged.

Material examined: SOUTH AFRICA: Cape Province: 1♂ (holotype) 1♀ (paratype), Hantamsberg (3119BD), 23.x.1986, L. E. Schoeman (NM). NM Type No. 3896.

Distribution: Known only from the type-locality in the Desert & Poor Steppe climatic region.

Relationship: A very distinctive species. Male genitalia unique.

# Neolophonotus mesotopus sp.n.

Figs 249-251

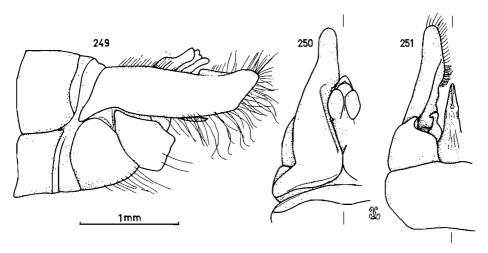
Etymology: Gr. mesos—middle; topos—place. Refers to type-locality of Middelpos (Afrikaans for Middle Post).

Description: Based on holotype  $\delta$ .

*Head:* Antenna black; setae black (1-2 white on scape). Eye:face ratio 1:0,18; eye:lower facial margin ratio 7,6:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black; lower—white with black along eye margin.

Thorax: ktg s and mtanepst s yellow and black. Mesonotal setae & bristles: acr black; dc black; pprn black and yellow; 3/4 black npl; 2/2 black spal; 2/2 black pal (+ 1 black seta); mane black, shorter white setae bordering. Scutellum with 9 black marginal bristles; disc with ca 18 black bristles and white setae. Wing:  $7.1 \times 2.4$  mm. Legs: black, tibiae slightly paler red-brown dorsoproximally; cx1 setae white, black laterally; cx3 with 1-2 black bristles laterally. Hind femur: bristles dark red-brown to black, long setae dark red-brown (few white), short setae white dorsally, black ventrally.

Abdomen: Fine gold pruinose. T3 with ca 6 black and yellow marginal bristles; setae long black dorsally and laterally, few white laterally; S3 with long black and short white setae. Genitalia as in Figs 249–251 (paratype illustrated); epandrium moderately long, well developed; hypandrium and gonocoxite well developed; aedeagus of moderate length, with longish, slender tip.



Figs 249–251. Neolophonotus mesotopus sp. n. paratype male (20 km SE Middelpos) genitalia. 249. Lateral. 250. Dorsal. 251. Ventral.

Paratypes:  $83 \ 109$  similar to holotype; Fraserburg 3 has slightly more slender epandrial lobes in lateral view. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Cape Province: 5& (holotype & paratypes) 6\$\paratypes\$ (paratypes), 20 km SE Middelpos (3220AB), 6.ix.1981, J. Londt L. Schoeman & B. Stuckenberg, W. Mountain Karoo (NM); 5& 4\$\paratypes\$ (paratypes), Leeuwkloof, Nieuweveld, Beaufort W. (3222BC), x.1935, Mus. Staff (SAM); 1& (paratype), Fraserburg (3121DC), 4-85 [iv.'85], E.S. Alsbon [indistinct] (SAM); 1& 1\$\paratyre{2}\$, Middelburg Div (3318DC), xi.1935, Mus Staff (SAM). NM Type No. 3897, SAM Type No. 5313.

Distribution: Known from a few localities in the Desert & Poor Steppe climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of saxatilus and oldroydi.

#### Neolophonotus midas sp. n.

Figs 252-254

Etymology: Gr. Mythical king at whose touch everything turned to gold. Refers to the type-locality of Johannesburg, the 'city of gold'.

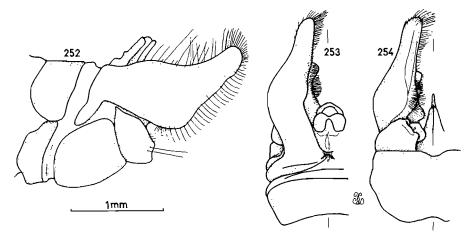
Description: Based on holotype 3.

Head: Antenna black; setae black ventrally, white dorsally (few black setae on pedicel). Eye:face ratio 1:0,19; eye:lower facial margin ratio 10,3:1. Mystax black and white (mixed). Occipital setae: upper—black and yellow; central—yellow; lower—white.

Thorax: ktg s and mtanepst s orange. Mesonotal setae & bristles: acr black; dc black; pprn white; 3/3 yellow npl; 2/2 yellow spal; 1/1 orange pal (+ 2 orange seta);

mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 7 black bristles and white (few black) setae. Wing:  $7.4 \times 2.5$  mm. Legs: black, tibiae orange-brown dorsoproximally; cx1 setae white, orange laterally; cx3 with 1 yellow bristle laterally. Hind femur: bristles yellow (1–2 black distally), long setae black and white, short setae white (black ventrally).

Abdomen: Fine red-gold pruinose. T3 lacks obvious bristles; setae shortish black and yellow (laterally) and black (dorsally); S3 with short yellowish setae. Genitalia as in Figs 252–254 (paratype illustrated); epandrium shortish, tapering distally, well developed, equipped with numerous small spine-like setae on medial surface; hypandrium well developed; gonocoxite relatively poorly developed; aedeagus of moderate length, with longish, slender tip.



Figs 252-254. Neolophonotus midas sp. n. paratype male (Johannesburg) genitalia. 252. Lateral. 253. Dorsal. 254. Ventral.

Paratypes: 15♂ 24♀ similar to holotype. ♀ cerci spine-like, forming the elements of a two-pronged fork-like structure.

Material examined: SOUTH AFRICA: *Transvaal*: 113 (holotype & paratypes) 169 (paratypes), Johannesburg, Northcliff (2628AA), 27.xii.1981, R. Elferink, Rocky area Grassveld (NM); 13 59 (paratypes), Johannesburg, Mondeor (2628AA), 14.iii.1982, R. Elferink (NM); 13 (paratype), Joh-burg [Johannesburg], 22.xii.1942, Anderssen (NM); 33 39 (paratypes), Halfway House (2528CC), 22.xii.1981, Elferink, by river (NM). NM Type No. 3898.

Distribution: Localities are in the Highveld climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of bigoti and melanoura.

#### Neolophonotus milvus sp. n.

Figs 255-257

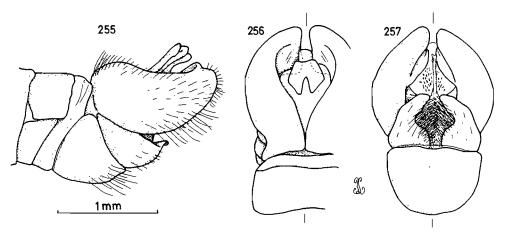
Etymology: L. milvus—kite, hawk. Refers to predatory habit.

Description: Based on holotype 3.

Head: Antenna black; setae black ventrally, white dorsally. Eye:face ratio 1:0,19; eye:lower facial margin ratio 9,6:1. Mystax black and white (mixed). Occipital setae: upper—black and white; central and lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn white; 3/3 yellow npl; 2/2 (1 yellow 1 black) spal; 1/1 black pal (+ 1 yellow seta); mane black, shorter white setae bordering. Scutellum with 3 black marginal bristles; disc with 6 black bristles and white setae. Wing:  $5.4 \times 1.5$  mm. Legs: black; cx1 setae white; cx3 with 1 weak white bristle laterally. Hind femur: bristles white (2 black distally), long setae black and white, short setae white (longish black ventrally).

Abdomen: Silver and gold pruinose. T3 with 3 white marginal bristles; setae short, white (laterally) and black (dorsally); S3 with 4 white bristles and white setae. Genitalia as in Figs 255–257 (paratype illustrated); epandrium short with broad inwardly turned distal tip, well developed; ventral aspect of proctiger equipped with many short spine-like setae; hypandrium well developed; gonocoxite moderately well developed, extended as flattened flange distally; aedeagus longish, with long, slender, minutely bifurcate tip.



Figs 255-257. Neolophonotus milvus sp. n. paratype male (50 km NW Karasburg) genitalia. 255. Lateral. 256. Dorsal. 257. Ventral.

Paratypes:  $3\delta$  16 $\circ$  similar to holotype.  $\circ$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: NAMIBIA: 2\$\delta\$ (holotype & paratype) 16\$\times\$ (paratypes), 50 km NW of Karasburg (2718DA), 28.viii.1983, J. Londt & B. Stuckenberg, In Karasberg Mountains (NM); 1\$\delta\$ 2\$\times\$ (paratypes) 1?, Kalkrand (1914DB), vi.1961, Venter (NCI). SOUTH AFRICA: Cape Province: 1\$\delta\$ (paratype), Twee Rivieren (2620BC), Dept. of Entomology, Univ. Pretoria (NM). NM Type No. 3899.

Distribution: Localities are in the Desert & Poor Steppe climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of schofieldi and botswana.

#### Neolophonotus molestus sp. n.

Figs 258-260

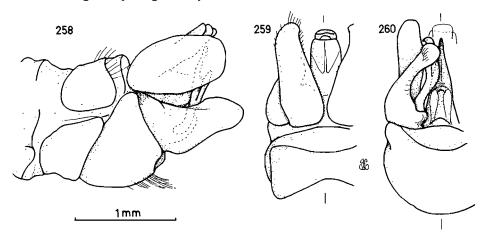
Etymology: L. molestus—disturbing. Refers to predatory behaviour.

Description: Based on unique holotype  $\delta$ .

Head: Antenna dark red-brown; setae black, few white dorsally and ventrally on scape. Eye:face ratio 1:0,17; eye:lower facial margin ratio 13,2:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black (1 white); lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black, small; dc black; pprn dark red-brown and white; 3/3 dark red-brown (1 yellow) npl; 2/2 dark red-brown spal; 1/1 black pal (+ 1 black seta); mane black, shorter white setae bordering. Scutellum with 2 black marginal bristles; disc with 5 black bristles and white setae. Wing:  $7.0 \times 2.3$  mm. Legs: black; cx1 setae white; cx3 with 3 white bristles laterally. Hind femur: bristles black and white, long setae black and white, short setae white (few black).

Abdomen: Silver-gold pruinose. T3 with 3-5 white marginal, ca 4 short white discal bristles; setae short, white (laterally) and black (dorsally); S3 with short white bristles and setae. Genitalia as in Figs 258-260; highly characteristic; epandrium short, poorly developed, oval in lateral view; hypandrium well developed, with indented hind margin; gonocoxite well developed, extended distally to just beyond level of epandrial tip; gonostylus elongate, with complicated structure; aedeagus of moderate length, tapering distally.



Figs 258-260. Neolophonotus molestus sp. n. holotype male (Richmond dist.) genitalia. 258. Lateral. 259. Dorsal. 260. Ventral.

Paratypes: None. 9 unknown.

Material examined: SOUTH AFRICA: Cape Province: 18 (holotype), Richmond Dist. C.P. (3123BD), iii.1931, Museum Staff (SAM). SAM Type No. 5314.

Distribution: In the gazetteer to hand there are no fewer than 5 places in the Cape Province with the name Richmond. The largest, and perhaps most well known, is in 3123BD, in the Desert & Poor Steppe climatic region.

Relationship: A very distinctive species. Male genitalia unique.

## Neolophonotus montanus (Ricardo, 1920)

Figs 261-263

Dysmachus montanus Ricardo, 1920:434.

Lophopeltis montanus; Curran, 1934:11. Neolophonotus (Lophopeltis) montanus; Hull, 1962:533.

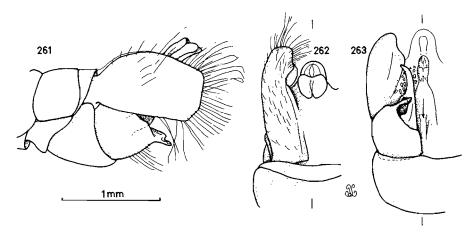
Neolophonotus montanus; Oldroyd, 1981:341.

Redescription: Based on lectotype  $\delta$ .

Head: Antenna black; setae black ventrally, white-yellow dorsally. Eye: face ratio 1:0,17; eye:lower facial margin ratio 16,0:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn few, black and white; 2/2 black npl; 2/2 black spal; 2/2 black pal; mane black, shorter white setae bordering. Scutellum with 2 black marginal bristles; disc with 5 black bristles and white setae. Wing: 7,4 × 2,5 mm. Legs: dark red-brown, tarsi and proximal parts of tibiae orange-brown; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles black (1-2 black distally), long and short setae white.

Abdomen: Silver pruinose. T3 with 1 black, 1 white marginal bristles; setae short, white (laterally) and black (dorsally); S3 with white bristles setae. Genitalia as in Figs 261–263 (lectotype illustrated); epandrium short but well developed; ventral aspect of proctiger with short spine-like setae; hypandrium well developed; gonocoxite well developed, with tapering distal process; gonostylus elongate with hook-like process at midlength; aedeagus of moderate length, with slightly clubshaped tip.



Figs 261-263. Neolophonotus montanus (Ricardo, 1920) lectotype male (Mt Mlanje) genitalia. 261, Lateral. 262, Dorsal. 263. Ventral.

Type material: Ricardo described the species on 13 19 from Malawi. I consider her specimens to be cotypes and so here designate the  $\delta$  as lectotype and the  $\mathfrak{P}$  as paralectotype.

Female: Querci spine-like, forming elements of two-pronged fork-like structure.

Material examined: MALAŴI: 13 (lectotype) 19 (paralectotype), Nyassaland, Mt. Mlanje (1635BA), 19.ix.1913, S. A. Neave (BM); 13, Zomba Plateau, Chingwe's hole (1535AD), 24-27.xi.1980, 1900m, Londt & Stuckenberg, Montane grassveld (NM).

Distribution: Known only from montane situation in southern Malaŵi.

Relationship: A distinctive species. Male genitalia resemble those of malawi.

# Neolophonotus nanus (Bezzi, 1906) Figs 264-267

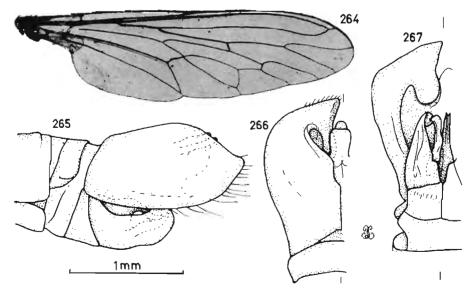
Lophonotus nanus Bezzi, 1906:288. Dysmachus nanus; Kertesz, 1909:278; Ricardo, 1920:236. Neolophonotus nanus; Hull, 1962:532; Oldroyd, 1981:341.

Redescription: Based on holotype  $\delta$ .

Head: Antenna dark brown; setae black ventrally, white dorsally. Eye:face ratio 1:0,17; eye:lower facial margin ratio 13,3:1. Mystax dark red-brown and white (mixed). Occipital setae: upper—white and brown; central—white; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn white; 2/2 black npl; 2/3 black spal; 2/2 black pal; mane sparse (ie made up largely of acrostichals). Scutellum with 4 black marginal bristles; disc with 6 black bristles and white setae. Wing:  $5.1 \times 1.7$  mm (Fig. 264). Legs: dark red-brown; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles brown and white, long setae white and brown, short setae moderately long white.

Abdomen: Dull (somewhat greasy). T3 with 3-4 white marginal bristles; setae short, white (laterally) and black (dorsally); S3 with 4 white bristles and short white



Figs 264-267. Neolophonotus nanus (Bezzi, 1906) holotype male (Adi-Caie). 264. Wing. 265-267. Genitalia 265. Lateral. 266. Dorsal. 267. Ventral.

setae. Genitalia as in Figs 265–267; epandrium shortish, well developed, broad distal end turned inward; hypandrium poorly developed; gonocoxite well developed largely obscuring gonostylus in lateral view; aedeagus of moderate length, with longish, slender tip.

Type material: Bezzi described the species on a unique  $\delta$ .

Female: Unknown.

Material examined: ERITREA: 13 (holotype), Adi-Caie [Adi Keyih 14°51'N:39°22'E], x.1902, Dr A. Andreini (MZF).

Distribution: Known only from the type-locality in Eritrea.

Relationship: A very distinctive species. Male genitalia superficially resemble those of *clavulus*.

## Neolophonotus natalensis (Ricardo, 1920)

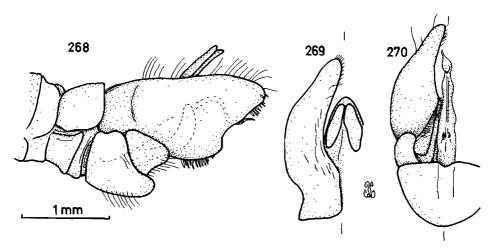
Figs 268-270

Dysmachus natalensis Ricardo, 1920:389. Lophopeltis natalensis; Curran, 1934:11. Neolophonotus natalensis; Oldroyd, 1981:341.

Redescription: Based on lectotype  $\delta$ .

Head: Antenna black; setae black (few white at base of scape, dorsolaterally). Eye:face ratio 1:0,22; eye:lower facial margin ratio 11,6:1. Mystax mostly white, black in upper part. Occipital setae: upper—black (few yellow); central—thin black and yellow; lower—white.

Thorax: ktg s and mtanepst s sparse yellow. Mesonotal setae & bristles: acr not clearly differentiated; dc black; pprn long, fine, yellow; 2/2 yellow npl; 3/3 black spal; 1/1 yellow pal (+ 2 yellow setae); mane black, few shorter white setae bordering. Scutellum with 3 yellow-white marginal bristles; disc with few long yellow-white bristles and yellow-white setae. Wing:  $6.5 \times 2.3$  mm. Legs: black,



Figs 268-270. Neolophonotus natalensis (Ricardo, 1920) lectotype male (Willow Grange) genitalia. 268. Lateral. 269. Dorsal. 270. Ventral.

tibiae orange-brown proximally; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles shortish yellow, long and short setae white.

Abdomen: Fine gold pruinose. T3 with 2 white marginal and 1–2 white discal bristles; setae short white; S3 with long white setae. Genitalia as in Figs 268–270; epandrium of moderate length, well developed, apparently closely fused with upper part of gonocoxite; hypandrium well developed; gonocoxite poorly developed; gonostylus blade-like, well developed; aedeagus long, sinuous, with thin membranous tip.

Type material: Ricardo lists  $2\eth$   $1 \heartsuit$  from Willow Grange and  $1\eth$  from S. Africa. I have studied all the specimens housed in the BM and find  $1\eth$   $2 \heartsuit$  1? all with the Willow Grange label. I consider all these specimens to be cotypes and here designate the only complete  $\eth$  as lectotype and the other specimens as paralectotypes.

Female: Similar to male, Ovipositor laterally compressed, blade-like and cerci not spine-like.

Material examined: SOUTH AFRICA: Natal: 13 (lectotype) 29 1? (paralectotypes), Willow Grange [Willowgrange—2929BB], R. C. Wroughton (BM); 23 39, Loteni Nature Res. (2929BC), 28.iii.-2.ix.1986, J. & B. Londt, Campsite/Grassveld (NM).

Distribution: Both localities are in the lower foothills of the Natal Drakensberg escarpment in the Drakensberg climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of sicarius.

## Neolophonotus necator sp. n.

Figs 271-273

Etymology: L. necator—slayer. Refers to predatory behaviour.

Description: Based on unique holotype 3.

Head: Antenna dark red-brown to black; setae black except for a few white dorsally on scape. Eye:face ratio 1:0,18; eye:lower facial margin ratio 10,8:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and white; lower—white.

Thorax: ktg s and mtanepst s black and white. Mesonotal setae & bristles: acr black; dc black; pprn white; 3/3 black npl; 2/2 black spal; 1/1 black pal (+ 1 black seta); mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 10 black bristles and white (few black) setae. Wing:  $6.9 \times 2.2$  mm. Legs: black; cx1 setae white; cx3 with 1 black bristle laterally. Hind femur: bristles black, long setae black and white, short setae white (black ventrally).

Abdomen: Fine silver pruinose. T3 with 4 white marginal, 1 white or black discal bristles; setae short, white (laterally) and black (dorsally); S3 with ca 9 white bristles and white setae. Genitalia as in Figs 271-273; epandrium well developed, triangular in lateral view, equipped with many small spine-like setae on medial

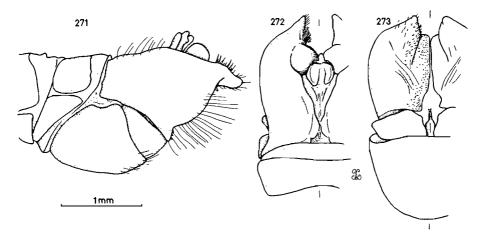
surface; hypandrium well developed; gonocoxite relatively poorly developed; aedeagus small with slender tip.

Paratypes: None. ♀ unknown.

Material examined: NAMIBIA: 13 (holotype), 25 km W of Windhoek (2216DB), 22.iv.1983, Londt & Stuckenberg, Thornveld (NM). NM Type No. 3900.

Distribution: Known only from the type-locality in the Desert and Poor Steppe climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of *carnifex* and *notius*.



Figs 271-273. Neolophonotus necator sp. n. holotype male (25 km W Windhoek) genitalia. 271. Lateral. 272. Dorsal. 273. Ventral.

## Neolophonotus nero sp. n.

Figs 274-276

Etymology: Named after Nero, a roman emperor known for his cruelty. Refers to the species' predatory behaviour.

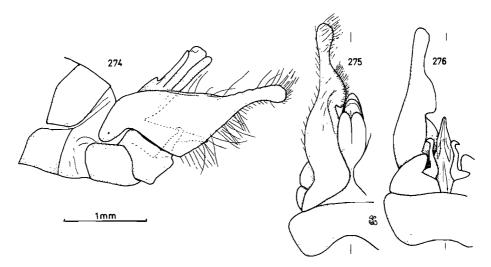
Description: Based on unique holotype  $\delta$ .

Head: Antenna dark brown, flagellum a little darker; setae black except for yellow setae dorsally on scape. Eye:face ratio 1:0,19; eye:lower facial margin ratio 9,4:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and yellow; lower—white.

Thorax: ktg s and mtanepst s orange. Mesonotal setae & bristles: acr black; dc black; pprn dark red-brown and yellow; 3/3 black npl; 2/2 black spal; 2/2 black pal; mane black, shorter silver-white setae bordering. Scutellum with 4 black marginal bristles; disc with 9 black bristles and white setae. Wing:  $6.9 \times 2.8$  mm. Legs: dark red-brown, tibiae yellow-brown dorsoproximally; cx1 setae white, dark red-brown laterally; cx3 with 2 orange bristles laterally. Hind femur: bristles pale yellow-brown, long setae dark red-brown, short setae silver-white.

Abdomen: Gold pruinose. T3 with 5 yellow marginal and 1-3 dark red-brown discal bristles; setae dark red-brown, few yellow laterally; S3 with ca 6 yellow bristles and long dark red-brown and yellow setae. Genitalia as in Figs 274-276; epandrium attenuate, well developed; hypandrium and gonocoxite moderately well developed; aedeagus of moderate length, with tapering tip.

Paratypes: None. ♀ unknown.



Figs 274–276. Neolophonotus nero sp. n. holotype male (Willowmore) genitalia. 274. Lateral. 275. Dorsal. 276. Ventral.

Material examined: SOUTH AFRICA: Cape Province: 1& (holotype), Capland, Willowmore (3323AD), viii.1916, Dr Brauns (SAM). SAM Type No. 5315.

Distribution: Known only from the type-locality in the Little & Great Karoo climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of midas.

Remark: The holotype bears an identification label reading 'Lophonotus erythracanthus Herm.' which is obviously incorrect.

## Neolophonotus nisus sp. n.

Figs 277-279

Etymology: Gr. Fabled king who changed into a hawk. Refers to predatory behaviour.

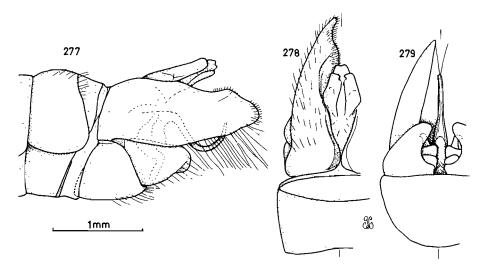
Description: Basted on holotype  $\delta$ .

Head: Antenna black; setae all white. Eye:face ratio 1:0,19; eye:lower facial margin ratio 8,3:1. Mystax black and white (mixed). Occipital setae: upper—black and white; central black and white; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn strong white; 3/3 yellow npl; 3/2 yellow and black spal; 3/3 yellow and

black pal; mane poorly developed, black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 7 black bristles and white (few black) setae. Wing:  $9.2 \times 3.2$  mm. Legs: black, tibiae brown dorsoproximally; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles black and white, long setae black (few white), short setae white (few black ventrally).

Abdomen: Gold and silver pruinose. T3 with 2-3 black and white marginal, 4 black and white discal bristles; setae short, white (laterally) and black (dorsally); S3 with 6 white bristles and white setae. Genitalia as in Figs 277-279 (paratype illustrated); epandrium of moderate length, well developed; hypandrium and gonocoxite moderately well developed; aedeagus longish, sinuose.



Figs 277-279. Neolophonotus nisus sp. n. paratype male (30 km NW Karasburg) genitalia. 277. Lateral. 278. Dorsal. 279. Ventral.

Paratypes:  $63\ 10^{\circ}$  similar to holotype (Brukkaros Volcano  $^{\circ}$  somewhat smaller than other specimens).  $^{\circ}$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: NAMIBIA:  $3\ \delta$  (holotype & paratypes)  $2\ \varphi$  (paratypes), 30 km NW of Karasburg (2718DA), 28.viii.1983, J. Londt & B. Stuckenberg, Karoo-type veget. (NM);  $1\ \delta$  (paratype), 50 km NW of Karasburg, 28.viii.1983, J. Londt & B. Stuckenberg, In Karasberg Mountains (NM);  $2\ \varphi$  (paratypes), 65 km N of Grunau (2718BA), 29.viii.1983, B. Stuckenberg & J. Londt, Karasberg Mountains Dry River (NM);  $1\ \delta$  1\(\varphi (paratypes), Brukkaros Volcano 10 km N Berseba,  $25\ 5'5'5'5:17'47'E$ , 17.x.1984, C. & T. Griswold, 4000' (NM);  $1\ \delta$  2\(\varphi (paratypes), Barby 26, Bethanie SE2515DC,  $2\ -7.x.1972$ , H9191 (SMW). SOUTH AFRICA: Cape Province:  $1\ \delta$  3\(\varphi (paratypes), Onseepkans ne. Orange Riv. Bushmanland (2819CB), x.1939, Mus Staff (SAM). NM Type No. 3901, SMW Type No. T702.

Distribution: Localities are in the Desert & Poor Steppe climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of zigzag.

#### Neolophonotus nodus sp. n.

Figs 280-282

Etymology: L. nodus—swelling. Refers to swelling of lower anal lamellae.

Description: Based on holotype  $\delta$ .

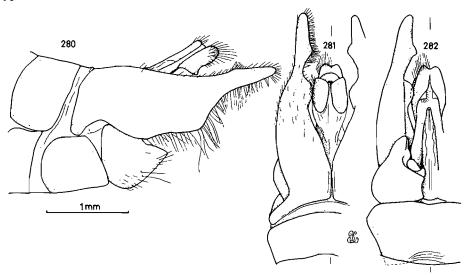
*Head:* Antenna black; setae of scape black and yellow, pedicel all black. Eye:face ratio 1:0,20; eye:lower facial margin ratio 7,0:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black; lower—white.

Thorax: ktg s and mtanepst s yellow and black. Mesonotal setae & bristles: acr black; dc black; pprn white, few black; 3/3 black npl; 2/2 black spal; 2/2 black pal; mane black, shorter white setae bordering. Scutellum with 6 black marginal bristles; disc with ca 13 black bristles and black and white setae. Wing:  $7.6 \times 2.8$  mm. Legs: black; cx1 setae white; cx3 with 1 pale yellow bristle laterally. Hind femur: bristles dark red-brown and yellow, long setae black and white, short setae white (few black).

Abdomen: Silver pruinose. T3 with 1 strong yellow marginal bristle; setae yellow (laterally) and black (dorsally); S3 with pale yellow bristles and white setae. Genitalia as in Figs 280–282 (paratype illustrated); epandrium attenuate, well developed; lower anal lamellae enlarged; hypandrium and gonocoxite moderately well developed; aedeagus of moderate length, with tapering tip.

Paratypes:  $1 \stackrel{?}{\circ} 3 \stackrel{?}{\circ}$  similar to holotype.  $\stackrel{?}{\circ}$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Cape Province: 13 (holotype) 39 (paratypes), Vredehoek, Sutherland (3220BC), 18.x.1981, L. E. Schoeman (NM); 13 (paratype), Verlatekloof (3220DA), 16.x.1981, L. E. Schoeman (NM). NM Type No. 3902.



Figs 280-282. Neolophonotus nodus sp. n. holotype male (Sutherland) genitalia. 280. Lateral. 281. Dorsal. 282. Ventral.

Distribution: Both localities are in montane situations at the southern limits of the Desert & Poor Steppe climatic region.

Relationship: A distinctive species. Male genitalia resemble those of kerteszi.

## Neolophonotus notius sp. n.

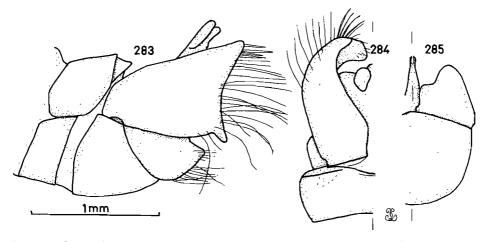
Figs 283-285

Etymology: Gr. notios—southern. Specimens were collected in the southern parts of Namibia.

Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black ventrally, white dorsally except for a few black setae on scape. Eye:face ratio 1:0,18; eye:lower facial margin ratio 11,8:1. Mystax black and white (mixed). Occipital setae: upper—black and white; central—black and white; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn long, yellow and white; 3/3 yellow (1 black) npl; 2/2 black spal; 1/1 black pal; mane black, shorter white setae bordering. Scutellum with 5 black marginal bristles; disc with ca 16 black bristles and white setae. Wing:  $6.3 \times 2.0$  mm. Legs: black; cx1 setae white, black laterally; cx3 with 1 white or black bristle laterally. Hind femur: bristles black and white, long setae dark red-brown and white, short setae white (dark red-brown ventrally).



Figs 283–285. *Neolophonotus notius* sp. n. paratype male (Karasberge) genitalia. 283. Lateral. 284. Dorsal. 285. Ventral.

Abdomen: Silver and red-gold pruinose. T3 with 3 white marginal and 2 (black and white) fine discal bristles; setae longish, white (laterally) and black (dorsally); S3 with longish black and white setae. Genitalia as in Figs 283–285 (paratype illustrated); epandrium triangular in lateral aspect, moderately well developed; hypandrium and gonocoxite well developed; aedeagus short, tapering to pointed tip.

Paratypes:  $3\eth 6$ \$\text{ similar to holotype. } \$\text{ cerci spine-like, forming elements of two-pronged fork-like structure.} \$\$

Material examined: NAMIBIA: 2\$\delta\$ (holotype & paratype) 1\$\forall (paratype), Karasberge, Farm Noachabib (2718BB), 8-10.iv.1972, Jones & Strydom (NM); 1\$\delta\$ 5\$\operatypes), Noachabeb 97, Keetmanshoop SE2718AD/BC, 22-28.iv.1972, H8023 (SMW); 1\$\delta\$ (paratype), Valencia Farm, Rehoboth Dist. (2317AC), 7-17.v.1965, J. H. Potgieter (NM). NM Type No. 3903, SMW Type No. T703.

Distribution: All three localities are in the Desert & Poor Steppe climatic region. Relationship: A fairly distinctive species. Male genitalia resemble those of *sinis* and *necator*.

## Neolophonotus occidualis sp. n.

Figs 286-288

Etymology: L. occidualis—western. A species found in the western parts of southern Africa.

Description: Based on holotype  $\delta$ .

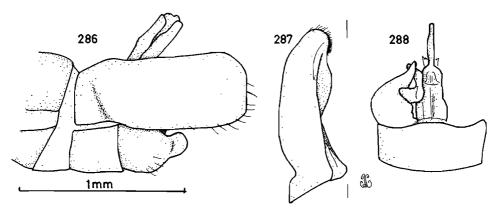
Head: Antenna dark red-brown to black; setae black and white ventrally, white dorsally. Eye:face ratio 1:0,19; eye:lower facial margin ratio 16,6:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and yellow-white; lower—white.

Thorax: ktg s and mtanepst s brown-yellow and white. Mesonotal setae & bristles: acr black; dc black; pprn white; 3/3 yellow (1 black) npl; 2/2 black spal; 1/1 black pal (+ 1 black seta); mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 7 black bristles and white (few black) setae. Wing:  $5.4 \times 1.9$  mm. Legs: dark red-brown; cx1 setae white; cx3 with 1 pale yellow bristle laterally. Hind femur: bristles dark red-brown, few brown-yellow, long and short setae white.

Abdomen: Silver pruinose. T3 with 3 thin yellow marginal bristles; setae white (laterally) and black (dorsally); S3 with white setae. Genitalia as in Figs 286–288 (paratype illustrated); epandrium small, moderately well developed, broad blunt distal end in lateral view; hypandrium moderately well developed; gonocoxite well developed, with distal flange-like projection; aedeagus of moderate length, with longish, slender tip.

Paratypes: 503419? similar to holotype, some variation in size. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Cape Province: 38 (holotype & paratypes) 79 1? (paratypes), Karoo at junction of Calvinia-Sutherland Rd nr Inverdoorn Ceres D. (3319BA), 2-3.x.1959, B. & P. Stuckenberg (NM); 38 79 (paratypes), 10 km N Tulbach (3319AA), 27.ix.1979, J. Londt, Lower slopes of mts. hard soil Woody veget. (NM); 28 19 (paratypes), 12 km W Soutfontein (3017DA), 4.ix.1981, Londt Schoeman & Stuckenberg, Succulent Karoo (NM); 48 (paratypes), 10 km E Garies (3017DB), 3.ix.1981, Londt Schoeman & Stuckenberg, Succulent Karoo (NM); 38 49 (paratypes), 10 km E Garies (3018CA), 6.ix.1983, Stuckenberg & Londt, Rocky slopes/Bushes (NM); 19 (paratype), 10 km W Garies (3018CA), 3.ix.1981, Londt Schoeman & Stuckenberg, Namaqual. Broken veld (NM); 28 19 (paratypes), Studers Pass 22 km NE Garies (3018AC),



Figs 286-288. *Neolophonotus occidualis* sp. n. paratype male (Ceres Dist.) genitalia. 286. Lateral. 287. Dorsal. 288. Ventral.

6.ix.1983. Londt & Stuckenberg, Stream edge & rocky slopes (NM); 9♂ 4♀ (paratypes), Outskirts of Klawer (3118DC), 2.ix.1981, Londt Schoeman & Stuckenberg, Succulent Karoo (NM); 38 89 (paratypes), 10 km E Kamieskroon (3018AA), 17.x.1977, Miller, 630 m (NM); 1♂ 2♀ (paratypes), 17 km S Kamieskroon (3017BD), 5.ix.1983, Londt & Stuckenberg, Slopes with succulent plants and bushes (NM); 23 39, Bowesdorp [= Kamieskroon], ix.1941, Mus Staff (SAM); 18 (paratype), 34,5 km S Soetwater (3119CD), 29.ix.1977, Miller, 500 m, Malaise trap (NM); 23 (paratypes), 32 km NE Clanwilliam, Brandewyn R. (3219AA), 2-3.x.1977, Miller (NM); 13 (paratype), 13.5 mi SSW Springbok nr. Neweputs Farm (2917DD), 7.ix.1972, Irwin, 2600 ft (NM); 23 (paratypes), Bitterfontein (3118AB), 14.ix.1982, Schoeman (NM); 8♂ 4♀ (paratypes), Aninaus Pass (2917BA) 15 km W Steinkopf, 4.ix.1983, Londt & Stuckenberg, Rocky hillside & dry river (NM); 28 29 (paratypes), 25 km N Kamieskroon (2917DD), 5.ix.1983, Stuckenberg & Londt, Rocky hillside veget. (NM); 4♂ 1♀ (paratypes), 20 km NE Springbok (2918CA), 7.ix.1983, Londt & Stuckenberg, Rocky hillside & dry watercourse veget. (NM); 18 19 (paratypes), Michells Pass, Ceres div. (3319AD), x.1934, Mus Staff (SAM); 13 (paratype), Near Doornbosch [Doornbos 3324AC], ix.1961, SAM (SAM); 18 (paratype), East of Pakhuis Pass (3218BB), ix.1947, Mus Exp (SAM); 1♂ (paratypes), Swart Doring R. (3018CA) Namaqualand, 2-3.x.1966, SAM (SAM). NM Type No. 3904, SAM Type No. 5316.

Distribution: All localities are in the Desert & Poor Steppe climatic region (Fig. 383). The species is commonly found resting on large rocks.

Relationship: A fairly distinctive species. Male genitalia resemble those of hilaryae.

Prey records: Isoptera (Hodotermitidae 1); Hemiptera (Miridae 1).

# Neolophonotus oldroydi sp. n.

Figs 289-291

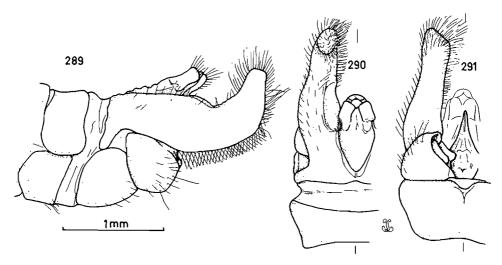
Etymology: Named after Harold Oldroyd in recognition of his contribution to our understanding of Afrotropical Asilidae.

Description: Based on holotype  $\delta$ .

Head: Antenna dark red-brown to black; setae black ventrally except for a few white on scape, white dorsally. Eye:face ratio 1:0,18; eye:lower facial margin ratio 9,4:1. Mystax black and white (mixed). Occipital setae: upper—black; central—yellow; lower—white.

Thorax: ktg s and mtanepst s pale yellow. Mesonotal setae & bristles: acr black; dc black; pprn few white; 2/2 orange npl; 2/2 black spal; 1/1 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 2 black bristles and white setae. Wing:  $7.0 \times 2.5$  mm. Legs: black, tibiae orange-brown dorsoproximally; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles yellow, long and short setae white.

Abdomen: Fine gold pruinose. T3 lacks obvious bristles; setae short, white (laterally) and black (dorsally); S3 with short white setae. Genitalia as in Figs 289–291 (paratype illustrated); epandrium elongate, well developed, with distal end turned upwards; hypandrium and gonocoxite moderately well developed; aedeagus shortish, tapering rapidly to pointed tip.



Figs 289-291. Neolophonotus oldroydi sp. n. paratype male (15 km NE Ficksburg) genitalia. 289. Lateral. 290. Dorsal. 291. Ventral.

Paratypes: 2234 similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Orange Free State: 14& (holotype & paratypes) 2\$\paratypes\$ (paratypes), 15 km NE of Ficksburg (2827DD), 27.iii.1982, Londt & Schoeman, Rocky Hill/Grassveld (NM); 2\$\delta\$ (paratypes), 20 km W Bloemfontein (2926AA), 26.iii.1982, Londt & Schoeman, Open grass & sand (NM); 6\$\delta\$ 2\$\tag{paratypes}\$, 20 km E Tweespruit (2927AA), 26.iii.1982, Londt & Schoeman, Rocky hill/Grassveld (NM). LESOTHO: 1\$\delta\$ (paratype), Mamathes (2927BB), 10.iv.1950, Bevis (DM). NM Type No. 3905.

Distribution: Localities are in the S & N Steppe and Highveld climatic regions. Relationship: A distinctive species. Male genitalia resemble those of *mesotopus* and *argyphus*.

#### Neolophonotus pachystylus sp. n.

Figs 292-296

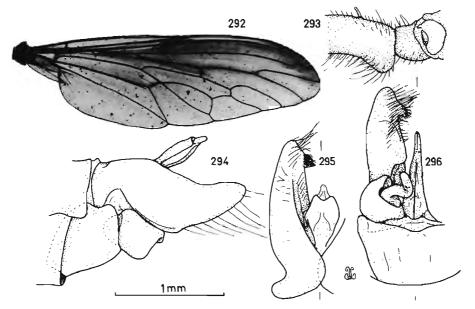
Etymology: Gr. pachys—thick; stylus. Refers to thick gonostylus.

Description: Based on holotype  $\delta$ .

Head: Antenna black, scape twice length of pedicel; setae black ventrally (1 white), white dorsally on scape, black dorsally on pedicel (1 white). Eye:face ratio 1:0,22; eye:lower facial margin ratio 7,2:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and white; lower—white.

Thorax: ktg s and mtanepst s black and yellow. Mesonotal setae & bristles: acr black; dc black; pprn long white; 3/3 black and yellow npl; 2/2 black spal; 1/1 black pal (+ 5-6 black seta); mane black, shorter white setae bordering. Scutellum with 6 black marginal bristles; disc with ca 20 black bristles and white setae. Wing:  $8.7 \times 2.9$  mm, with darkly shaded veins (Fig. 292). Legs: black, tibiae red-brown dorsoproximally; cx1 setae white; cx3 with 1 yellow bristle laterally. Hind femur: with characteristic flange-like spur on mesial surface (Fig. 293); bristles yellow (dorsally) dark red-brown (ventrally), long setae dark red-brown (few white), short setae long dark red-brown (ventrally) white (dorsally).

Abdomen: Silver pruinose. T3 with ca 6 black, weak marginal bristles; setae black, few white; S3 with long black bristles and black and white setae. Genitalia as in



Figs 292-296. Neolophonotus pachystylus sp. n. paratype male (Pakhuis Pass). 292. Wing. 293. Metathoracic femur (proximal). 294-296. Genitalia. 294. Lateral. 295. Dorsal. 296. Ventral.

Figs 294–296 (paratype illustrated); epandrium of moderate length, with a small medial, subapical lobe; hypandrium well developed; gonocoxite relatively poorly developed; gonostylus fairly thick; aedeagus of moderate length, with longish, slender tip.

Paratypes:  $10 \ \delta \ 8 \ \varphi$  similar to holotype.  $\ \varphi$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Cape Province: 2δ (holotype & paratype), 10 km W Garies (3018CA), 3.ix.1981, J. Londt L. Schoeman & B. Stuckenberg, Namaqual. Broken veld (NM); 2δ 5♀ (paratypes), 10 km E Garies (3017DB), 3.ix.1981, Londt Schoeman & Stuckenberg, Succulent Karoo (NM); 3δ (paratypes), Pakhuis Pass (3219AA) west side, 17.viii.1973, Irwin, 750 m, meadow with stream (NM); 6δ 2♀ (paratypes), Pakhuis Pass, ix.1961, SAM (SAM); 3δ 3♀ (paratypes), 5 km N Nieuwoudtville (3119AC), 5.ix.1981, Londt Schoeman & Stuckenberg, W. Mountain Karoo (NM); 1δ (paratype), Giftsberg [Gifberg—3118DC], Rhynsdorp, ix.1911 (ZSM). NM Type No. 3906.

Distribution: Localities are in the Desert & Poor Steppe climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of leptostylus.

# Neolophonotus parvus (Ricardo, 1920)

Figs 297-303

Dysmachus parvus Ricardo, 1920:386.
Neolophonotus (Lophopeltis) parva; Engel, 1927:148; Hull, 1962:533.
Lophopeltis parvus; Curran, 1934:12.
Lophopeltis arno Curran, 1934:13; Hull, 1962:533. Syn.n.
Neolophonotus parvus; Cuthbertson, 1938:117; Cuthbertson, 1939:137; Oldroyd, 1981:341.
Neolophonotus arno; Oldroyd, 1981:340. Syn.n.

Redescription: Based on lectotype 9.

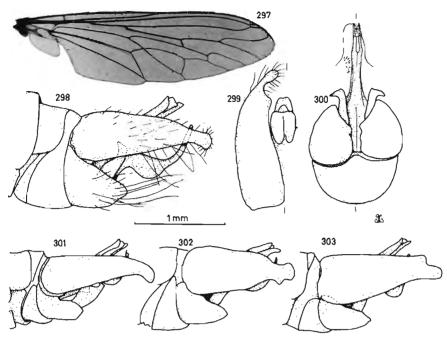
Head: Antenna black; setae black and white ventrally, white dorsally. Eye:face ratio 1:0,19; eye:lower facial margin ratio 12,6:1. Mystax black and white (mixed). Occipital setae: upper—black; central—white; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn longish white; 2/2 black npl; 2/2 black spal; 1/1 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 4 black bristles and white setae. Wing:  $7.0 \times 2.3$  mm (Fig. 297). Legs: dark red-brown; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles white and black, long setae white (few black), short setae white (few black distally).

Abdomen: Silver pruinose. T3 with 3 black or white marginal bristles; setae short, white (laterally) and black (dorsally); S3 with longish white bristles and setae. Genitalia:  $\varphi$  cerci spine-like, forming elements of two-pronged fork-like structure.

Type material: Ricardo lists  $1\& 1\$ ? from Mababe. The BM now has only  $1\$ ? and these I consider cotypes. I here designate the  $\$ 2 as lectotype and the other specimen as paralectotype. I have studied Curran's unique type of *arno* and perceive it to be a fairly typical specimen of *parvus*.

Male: Similar to ♀. Genitalia as in Figs 298–300 (Umhlatuzi R. ♂ illustrated); epandrium attenuate, well developed; hypandrium and gonocoxite well developed;



Figs 297-303. Neolophonotus parvus (Ricardo, 1920). 297. Lectotype female (Mababe) wing. 298-303. Male genitalia. 298-300. Nr. Umhlatuzi Riv. 3. 298. Lateral. 299. Dorsal. 300. Ventral. 301-303. Variation (lateral aspects only). 301. Vallee du Pompoue 3. 302. Melsetter 3 (holotype—arno). 303. Bembisi River 3.

aedeagus long, sinuose, with longish, slender tip. Some variation in shape is seen (Figs 301-303).

Material examined: BOTSWANA: 19 (lectotype) 1? (paralectotype), Mababe, 100 miles N of L. Ngami, 9.viii.1909, R. B. Woosnam, 3000', 1910-196 (BM); 13 19, Serowe (2226BC), 3 & 26.viii.1983, Forchhammer, Malaise (NM); 19, Serowe, 21.viii.1982, Forchhammer, day (NM); 1d, Serowe, 27.vi.1982, Mal. trap (NM); 1d, Farmers Brigade ca 5 km SE Serowe, 30.vii.1984, Forchhammer, 13000 m A. tortillus woodland, Malaise trap 3, forest nursery (NM); 39, 20 km W of Ghanzi (2121DB), 28.viii.1983, Stockmann, day (NM); 13 29, Tsoclilo Hills [? = Tsodilo Hill—1821DB], 8.v.1985, Meakin (NM). NAMIBIA: 18, Popa Falls 18°07'S:21°33'E, 26-31.viii.1971, H4034 (SMW). ZIMBABWE: 18 (holotype arno), Melsetter (1932DD), x.1921, Dept Agric (AMNH); 13 19, Salisbury [= Harare—1731CC], ix.1936, Cuthbertson, Dept Agric (ZSM); 18, Bembisi Riv. [? = Bembezi—2129AB], 27.viii.1922, Stevenson (NM); 13, Chirundu (1628BB), 20.v.1965, Borthwick (NM); 13 19, Bulawayo (2028BA), 3.vi.1924, Rhodesia Museum (NMZ). ZAMBIA: 2♂ 1♀, Lusaka (1528AA), 6.vi.1971, Mitchell (NM); 23, Lusaka, 17.v.1971, Mitchell (NM). ANGOLA: 13, 6mi. NW of Chibia (1513BA), 20.v.1958, Ross & Leech, 1500m (CAS). MOZAMBIQUE: 1♂ 1♀ 1?, Nova Chupanga (1835BA), 1927, Surcouf (MNP); 13 19, Env. de Vila Pery (1933AB), Auzinai 2.x.1929, Lesne (MNP); 16, Env. de Chemba (1734BB), Inhacoro (1634CA), 22.v.1928, Lesne (MNP); 3d, Vallee du Pompoue [? = Rio Pompue—1634DC], vii.1929, Lesne (MNP); 1\$\delta\$, Manhica (? = 1234BC), ix.1955, Will Smith (DM); 2\$\delta\$ 3\$\darkappa\$, Funhaloura Mabobe [? = Funhalouro—2334AB], 9.vi.1963, Gess (SAM); 1\$\darkappa\$, Ricatla Mission, 17 m N Lourenco Marques [= Maputo—2532DC], vi.1963, Gess (SAM). SOUTH AFRICA: Natal: 1\$\delta\$, Zululand, nr. Umhlatuzi R. (2831DC), 4.v.1926, R. E. Turner, Brit. Mus. 1926—194 (BM); 2\$\darkappa\$, Lebombo foothills (2732AC) 5 km N Josini, 8.viii.1982, Stuckenberg, under fig tree (NM); 1\$\darkappa\$, Dingaanstad (2831AD), 31.v.1982, Londt, ground (NM). Transvaal: 2\$\darkappa\$ 2\$\darkappa\$, N.E. Zoutpan. Dist. [Soutpansberg—2229CD], vii & viii.1916, Breyer (NM); 7\$\darkappa\$, Zoutpa. Dist. vi-vii.1917, Breyer (NM); 2\$\darkappa\$ 3\$\darkappa\$, Vastval Zoutpansberg, 6.ix.1978, Meiswinkel, on ground midday (NM); 1\$\darkappa\$, Zoutpan (2327CC), Meiswinkel (NM); 1\$\darkappa\$, Premier Mine (2528DA), 21.ix.1919, Harper (NCI).

Distribution: Widespread; southern African records are from the Botswana & N Namibia, N Transvaal and Subtropical climatic regions. Also recorded from Angola, Mozambique, Zimbabwe and Zambia (Fig. 381). Cuthbertson (1938) says 'Widely distributed in the Hatley and Lomagundi districts. The flies occur on the ground and fly up at passing insects. They are prevalent from May to September.' Cuthbertson (1939) further adds 'Widely distributed in Mashonaland during the period October to December, but is not numerically abundant.'

Relationship: A fairly distinctive species. Male genitalia resemble those of *jubatus* and *raptor*.

Prey records: Although no new records are available Cuthbertson's records are believed to be valid as *parvus* has never been a problematic species to identify. Cuthbertson (1938) records the following data regarding prey: 'Male with a leaf-hopper, *Scaphoideus* sp. (Jassidae)', 'three females each with a male, male and female tsetse-fly, *Glossina morsitans*'. Cuthbertson (1939) further records 'female with winged termite, *Termes (Cyclotermes) aquaticus* Sjost'.

# Neolophonotus penrithae sp.n.

Figs 304-306

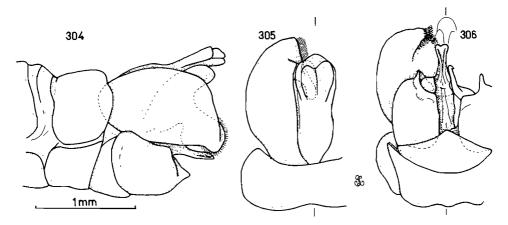
Etymology: Named for Mary-Lou Penrith who collected the type material.

Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black ventrally, white dorsally. Eye:face ratio 1:0,15; eye:lower facial margin ratio 10,3:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and white; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn few white; 2/2 black npl; 2/2 black spal; 1/1 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 7 black bristles and white setae. Wing:  $7.0 \times ?$  mm (hind margin damaged). Legs: dark red-brown; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles dark red-brown and white, long setae dark red-brown and white, short setae white (dark red-brown ventrally).

Abdomen: Silver pruinose. T3 with 3 white marginal, ca 3 long white discal bristles; setae white (laterally) and black (dorsally); S3 with ca 8 white bristles and white



Figs 304-306. *Neolophonotus penrithae* sp. n. holotype male (Namuskluft 88) genitalia. 304. Lateral. 305. Dorsal. 306. Ventral.

setae. Genitalia as in Figs 304–306; epandrium rounded, well developed, with ventrodistal seta bearing lobe; hypandrium relatively poorly developed; gonocoxite moderately well developed, with pointed distal flange; aedeagus of moderate length, with longish, bilobed tip.

Paratypes:  $4^{\circ}$  similar to holotype.  $^{\circ}$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: NAMIBIA: 1♂ (holotype) 4♀ (paratypes), Namuskluft 88, SE2716Dd, 7–15.x.1970, H11077 (SMW). SMW Type No. T704.

Distribution: The type-locality is in the Desert & Poor Steppe climatic region. Relationship: A distinctive species. Male genitalia resemble those of *destructor*.

## Neolophonotus percus sp.n.

Figs 307-309

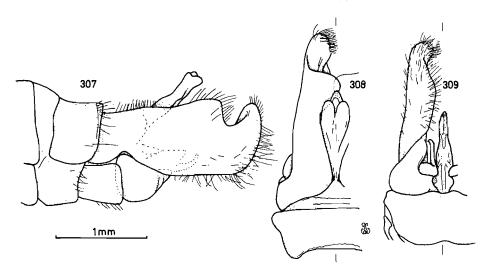
Etymology: Gr. perkos—hawk. Refers to predatory behaviour.

Description: Based on holotype  $\delta$ .

Head: Antenna dark red-brown; setae all black. Eye:face ratio 1:0,21; eye:lower facial margin ratio 10,4:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and yellow; lower—white.

Thorax: ktg s and mtanepst s black. Mesonotal setae & bristles: acr black; dc black; pprn long black and white; 3/2 black npl; 2/2 black spal; 2/2 black pal; mane black, shorter white setae bordering. Scutellum with 3 black marginal bristles; disc with 7 black bristles and black and white setae. Wing:  $6.1 \times 2.1$  mm. Legs: dark redbrown, tibiae brown dorsoproximally; cx1 setae white, black laterally; cx3 with 1 orange bristle laterally. Hind femur: bristles orange and dark red-brown, long setae dark red-brown and white, short setae white.

Abdomen: Fine gold pruinose. T3 with 3 black marginal bristles; setae black; S3 with long black bristles and setae. Genitalia as in Figs 307-309 (paratype



Figs 307-309. Neolophonotus percus sp. n. paratype male (Pearly Beach) genitalia. 307. Lateral. 308. Dorsal. 309. Ventral.

illustrated); epandrium broad, well developed, upturned distally; hypandrium well developed; gonocoxite moderately well developed, closely associated with lower margin of epandrium; aedeagus of moderate length, with longish, slender tip.

Paratypes: 1319 similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Cape Province: 28 (holotype & paratype) 19 (paratype), Pearly Beach (3419CB) Bredasdorp, ix.1959, SAM (SAM). SAM Type No. 5317.

Distribution: Known only from the type-locality in the Mediterranean climatic region.

Relationship: A distinctive species. Male genitalia resemble those of brunales.

#### Neolophonotus pusillus sp. n.

Figs 310-312

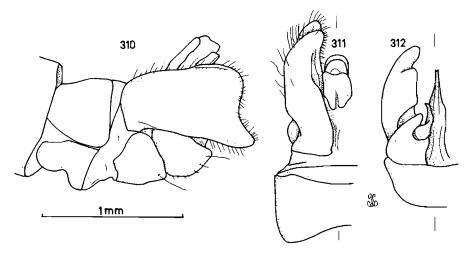
Etymology: L. pusillus—very little, small. Refers to ♂ terminalia.

Description: Based on holotype 3.

Head: Antenna black; setae black except for white dorsally on scape. Eye:face ratio 1:0,18; eye:lower facial margin ratio 11,8:1. Mystax black and white (mixed). Occipital setae: upper—black; central—yellow; lower—white.

Thorax: ktg s and mtanepst s black. Mesonotal setae & bristles: acr black; dc black; pprn fine black; 2/2 orange npl; 2/2 black spal; 1/1 black pal; mane black, shorter white setae bordering. Scutellum with 6 black marginal bristles; disc with 8 black bristles and white setae. Wing:  $6.5 \times 2.1$  mm. Legs: black; cx1 setae white; cx3 with 1-2 orange bristles laterally. Hind femur: bristles black and orange, long setae black and white, short setae white.

Abdomen: Silver-red pruinose. T3 with 2 black marginal bristles; setae black (few white laterally); S3 with long black setae (few short white). Genitalia as in Figs 310-312 (paratype illustrated); epandrium short, triangular in lateral aspect, well developed; hypandrium and gonocoxite moderately well developed; aedeagus of moderate length, with longish, slender tip.



Figs 310-312. Neolophonotus pusillus sp. n. paratype male (2 km N Calvinia) genitalia. 310. Lateral. 311. Dorsal. 312. Ventral.

Paratypes:  $163 \ 229$  similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Cape Province:  $3\delta$  (holotype & paratypes) 7\$ (paratypes), 2 km N of Calvinia (3119BD), 5.ix.1981, J. Londt L. Schoeman & B. Stuckenberg, False Succulent Karoo (NM); 1\$ (paratype), 5 km N Nieuwoudtville (3119AC), 5.ix.1981, Londt Schoeman & Stuckenberg, W. Mountain Karoo (NM);  $1\delta$  5\$ (paratypes), 8 km E Kamieskroon (3018AA), 5.ix.1983, Londt & Stuckenberg, Montane old land with rocks & bushes nearby (NM);  $1\delta$  3\$ (paratypes), Studers Pass 22 km NE Garies (3018AC), 6.ix.1983, Londt & Stuckenberg, Stream edge & rocky slopes (NM);  $8\delta$  2\$ (paratypes), Richtersveld (2816BD) 40 km S of Ochta Mine, 2.ix.1983, Londt & Stuckenberg, Mixed Karoo bush with few flowers (NM);  $4\delta$  4\$ (paratypes), 17 km S Kamieskroon (3017BD), 5.ix.1983, Londt & Stuckenberg, Slopes with succulent plants and bushes (NM);  $1\delta$  (paratype), Bushmanland Jackall Water [? 3021CA], x.1911, Lightfoot (ZSM). NM Type No. 3907.

Distribution: All localities are in the Desert & Poor Steppe climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of comatus.

## Neolophonotus quickelbergei sp. n.

Figs 313-315

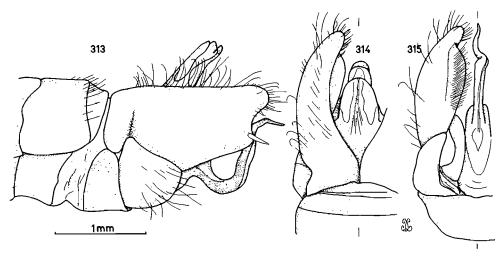
Etymology: Named for Clive Quickelberge of the Durban Museum of Natural History who has assisted me with the collection of asilids.

Description: Based on holotype 3.

Head: Antenna black; setae black, small shiny white dorsally and ventrally on scape. Eye:face ratio 1:0,26; eye:lower facial margin ratio 5,3:1. Mystax black with white cluster centrally above lower facial margin. Occipital setae: upper—black; central—black; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr not clearly differentiated; dc many black; pprn black and white; 3/3 yellow npl; 2/3 black spal; 3/3 yellow (+ yellow setae); mane short black, no paler bordering setae. Scutellum with 10 yellow marginal bristles; disc with ca 12 yellow bristles and white setae (few black). Wing:  $8.7 \times 2.9$  mm. Legs: black; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles yellow, long setae white (few dark red-brown), short setae white (dark red-brown ventrally).

Abdomen: Silver pruinose. T3 with 4 yellow marginal, 3-4 yellow discal bristles; setae short, white (laterally) and black (dorsally); S3 with long white setae. Genitalia as in Figs 313-315; epandrium shortish, well developed, hypandrium and gonocoxite well developed; aedeagus stout, with longish, fairly thick distal portion.



Figs 313–315. *Neolophonotus quickelbergei* sp. n. holotype male (Swartkop) genitalia. 313. Lateral. 314. Dorsal. 315. Ventral.

Paratypes:  $1^{\circ}$  similar to holotype.  $^{\circ}$  ovipositor laterally compressed, cerci not spine-like.

Material examined: SOUTH AFRICA: Cape Province: 13 (holotype) 19 (paratype) [taken copulating], Swartkop 31 km NW Sutherland (3220BA), 18–19.xi.1986, Londt & Quickelberge, Rocks Woody macchia (NM). NM Type No. 3908.

Distribution: Known only from the type-locality near the southern boundary of the Desert & Poor Steppe climatic region.

Relationship: A distinctive species. Male genitalia resemble those of *xanthodasus*. The affinities of this species may be with members of the *suillus* group.

#### Neolophonotus ramus sp. n.

Figs 316-318

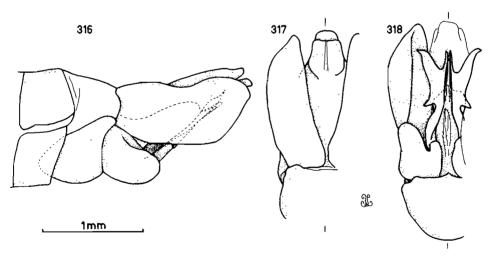
Etymology: L. ramus = branch, antler. Refers to antler-like gonostylus.

Description: Based on holotype  $\delta$ .

Head: Antenna black; scape with black and white setae dorsally and ventrally, pedicel with all setae black. Eye:face ratio 1:0,19; eye:lower facial margin ratio 13,4:1. Mystax black and white mixed. Occipital setae: upper—black; central—black and white; lower—white.

Thorax: ktg s yellow, mtanepst s yellow and white. Mesonotal setae & bristles: acr black; dc black; pprn few white; 3/3 yellow npl; 2/2 black spal; 1/1 yellow (+ 1 black seta); mane black, white setae bordering. Scutellum with 4 yellow marginal bristles; disc with 8 black bristles and white setae. Wing:  $7.5 \times 2.3$  mm. Legs: dark redbrown to black; cx1 setae white; cx3 with 2 white bristles laterally. Hind femur: bristles white and dark red-brown, long setae black and white, short setae white.

Abdomen: Silver and gold pruinose. T3 with 4 white (1 black on left) marginal, ca 6 short white discal bristles; setae short, white (laterally) and few black (dorsally); S3 with white bristles and setae. Genitalia as in Figs 316-318 (paratype illustrated); epandrium of moderate length, well developed; hypandrium and gonocoxite well developed; gonostylus very well developed, with antler appearance (ventral aspect); aedeagus well developed, broad in lateral view, distal end pointed.



Figs 316-318. Neolophonotus ramus sp. n. paratype male (Groblershoop) genitalia. 316. Lateral. 317. Dorsal. 318. Ventral.

Paratypes:  $13\ 19$  similar to holotype. 9 cerci spine-like forming elements of two-pronged structure.

Material examined: SOUTH AFRICA: Cape Province: 2♂ (holotype & paratype) 1♀ (paratype), Groblershoop 28°53′S:21°59′E, 13–17.iv.1981, C. G. E. Moolman, National Coll. of Insects, Pretoria (NCI).

Distribution: Known only from the type-locality in the Desert & Poor Steppe climatic region.

Relationship: A distinctive species. Male genitalia superficially resemble those of feijeni.

## Neolophonotus raptor sp.n.

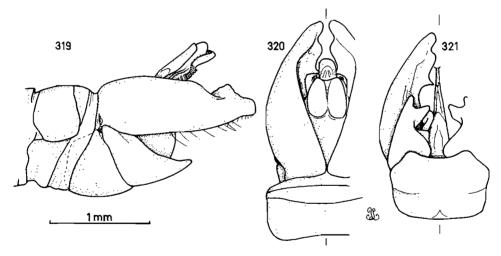
Figs 319-321

Etymology: L. raptor—robber. Refers to the common name 'robber fly'.

Description: Based on holotype ♂.

Head: Antenna black; setae black except for some white setae dorsally on scape. Eye: face ratio 1:0,19; eye: lower facial margin ratio 9,4:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn white; 3/3 black npl; 2/2 black spal; 1/1 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 8 black bristles and white setae. Wing:  $7.5 \times 2.4$  mm. Legs: black; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles black and white, long setae black and white, short setae white.



Figs 319–321. *Neolophonotus raptor* sp. n. paratype male (30 km N Rosh Pinah) genitalia. 319. Lateral. 320. Dorsal. 321. Ventral.

Abdomen: Silver pruinose. T3 with 3 white marginal bristles; setae short, white (laterally) and black (dorsally); S3 with 4 white bristles and white setae. Genitalia as in Figs 319-321 (paratype illustrated); epandrium of moderate length, well developed; hypandrium well developed; gonocoxite well developed, jutting out distally and bifurcate in ventral view; aedeagus of moderate length, with longish, slender, minutely bifurcate tip.

Paratypes:  $113 \ 249$  similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: NAMIBIA: 9♂ (holotype & paratypes) 17♀ (paratypes), 30 km N of Rosh Pinah (2716DA), 1.ix.1983, J. Londt & B. Stuckenberg, Green bushes and flowers (NM); 4♀ (paratypes), 60 km S Aus (2716AB), 1.ix.1983, Londt & Stuckenberg, Broken Veld at base of small hill (NM); 3♂ 2♀ (paratypes), Namuskluft 88 SE2716DD, 7–14.x.1970, H 14193 (SMW). NM Type No. 3909, SMW Type No. T705.

Distribution: All three localities are in the Desert & Poor Steppe climatic region. Relationship: A fairly distinctive species. Male genitalia resemble those of variegatus, jubatus, parvus and rhopalotus.

## Neolophonotus rhopalotus sp. n.

Figs 322-324

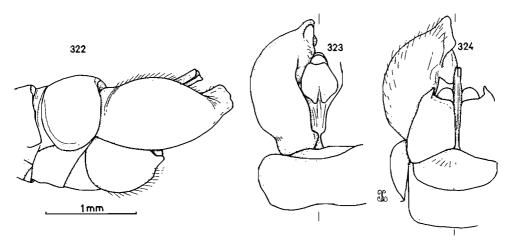
Etymology: Gr. rhopalotos—club-like. Refers to club-like male terminalia.

Description: Based on holotype ♂.

Head: Antenna black; setae black ventrally (some white on scape), white dorsally. Eye:face ratio 1:0,16; eye:lower facial margin ratio 10,2:1. Mystax black and white (mixed). Occipital setae: upper—pale yellow-white (1 black); central—white; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn pale yellow; 3/3 yellow npl; 2/2 black (1 yellow) spal; 1/1 black pal (+ 2 yellow setae); mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 8 black bristles and white setae. Wing:  $6.5 \times 2.1$  mm. Legs: black; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles white (2 black distally), long setae white and black, short setae white.

Abdomen: Red-gold pruinose. T3 with 3 white marginal bristles; setae longish pale yellow-white (laterally) and black (dorsally); S3 with long white setae. Genitalia as in Figs 322-324 (paratype illustrated); epandrium short, bulbous and club-like in



Figs 322-324. Neolophonotus rhopalotus sp. n. paratype male (Augrabies Falls Nat. Park) genitalia. 322. Lateral. 323. Dorsal. 324. Ventral.

dorsal view, well developed, inwardly directed distally; hypandrium relatively poorly developed; gonocoxite well developed, with flange-like distal projections; aedeagus of moderate length, with longish, slender tip.

Paratypes: 438 similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Cape Province: 53 (holotype & paratypes) 89 (paratypes), Augrabies Falls Nat. Park (2820CB), 8.ix.1983, B. Stuckenberg & J. Londt, Rockery & sandy areas in camp (NM). NM Type No. 3910.

Distribution: Known only from the type-locality in the Desert & Poor Steppe climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of variegatus.

# Neolophonotus rudi sp. n.

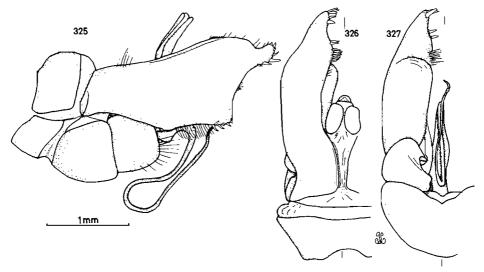
Figs 325-327

Etymology: Named for Rudi Meiswinkel who collected and donated the material to the Natal Museum.

Description: Based on holotype  $\delta$ .

Head: Antenna black; scape with black and white setae dorsally and ventrally, pedicel with setae black ventrally, white dorsally. Eye:face ratio 1:0,21; eye:lower facial margin ratio 11,2:1. Mystax yellow with black laterally. Occipital setae: upper—black (few white); central—fine black; lower—pale yellow-white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn long pale yellow; 2/2 orange-yellow npl; 3/3 orange-yellow spal; 1/1 orange-yellow pal; mane black, shorter silver-white setae bordering. Scutellum



Figs 325-327. Neolophonotus rudi sp. n. holotype male (Haenertsberg) genitalia. 325. Lateral. 326. Dorsal. 327. Ventral.

with 5 black marginal bristles; disc with 7 (6 black 1 yellow) bristles and white setae (few black). Wing:  $8.5 \times 2.9$  mm. Legs: dark red-brown, tibiae orange proximally; cx1 setae white; cx3 with 1 yellow bristle laterally. Hind femur: bristles pale yellow (few black distally), long setae pale yellow, short setae longish yellow.

Abdomen: Silver-gold pruinose. T3 with ca 4 thin yellow marginal bristles; setae longish, yellow (laterally) and few black (dorsally); S3 with long pale yellow-white setae. Genitalia as in Figs 325–327; epandrium well developed, of characteristic shape, equipped with small spine-like setae distally; hypandrium and gonocoxite well developed; aedeagus long and sinuous.

Paratypes: 2♂ similar to holotype. ♀ unknown.

Material examined: SOUTH AFRICA: *Transvaal*: 13 (holotype), Haenertsberg (2329DD), 28.v.1979, R. Meiswinkel, Short grasses (NM). *Cape Province*: 23 (paratypes), Teafontein (3326AA), xii.1894, Miss Leppan (AM). NM Type No. 3911.

Distribution: Recorded from the N Transvaal and the S Cape Coastal climatic regions. This distribution appears peculiar but the  $\delta$  genitalia are very characteristic, so no identification error appears to have been made.

Relationship: A distinctive species. Male genitalia resemble those of hulli.

## Neolophonotus saxatilus sp. n.

Figs 328-330

Etymology: L. saxatilus—found among rocks. Specimens were found resting on rocks.

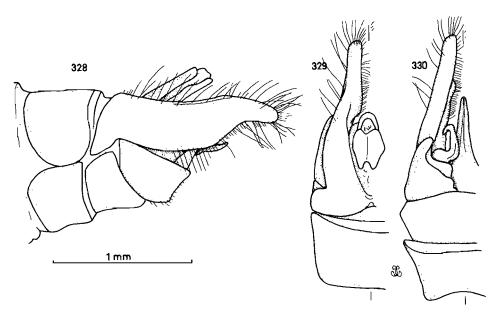
Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black and white, except for ventral pedicel which has black setae only. Eye:face ratio 1:0,18; eye:lower facial margin ratio 13,8:1. Mystax black and white (mixed). Occipital setae: upper—black; central—yellow; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn long white; 3/3 yellow (1 black on left) npl; 2/2 black spal; 1/1 black pal (+ 2 black setae); mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 4 black bristles and black (centrally) and white (laterally) setae. Wing:  $6.8 \times 2.5$  mm. Legs: dark red-brown, tibiae orange-brown dorsoproximally; cx1 setae white; cx3 with 1-2 white bristles laterally. Hind femur: bristles dark red-brown (1-2 yellow), long setae black and white, short setae white (long dark red-brown ventrally).

Abdomen: Fine gold-red pruinose. T3 with ca 5 black marginal bristles; setae short, white (laterally) and black (dorsally); S3 with moderately long black and short white setae. Genitalia as in Figs 328-330 (paratype illustrated); epandrium elongate, gently sinuose in lateral aspect; hypandrium and gonocoxite well developed; aedeagus of moderate length, with slender, tapering tip.

Paratypes: 14♂ 11♀ similar to holotype. ♀ cerci spine-like, forming elements of two-pronged fork-like structure.



Figs 328–330. *Neolophonotus saxatilus* sp. n. paratype male (Isandlwana) genitalia. 328. Lateral. 329. Dorsal. 330. Ventral.

Material examined: SOUTH AFRICA: *Natal*: 43 (holotype & paratypes) 49 (paratypes), Isandlwana (2830DC), 30.v.1982, J. G. H. Londt (NM). *Orange Free State*: 113 79 (paratypes), 2 km SE of Harrismith (2829AC), 29.iii.1982, J. Londt & L. Schoeman, Rocky Hill/Grassland (NM). NM Type No. 3912.

Distribution: The localities lie in the Drakensberg and the Highveld climatic regions.

Relationship: A fairly distinctive species. Male genitalia resemble those of mesotopus and elgon.

## Neolophonotus schofieldi sp. n.

Figs 331-333

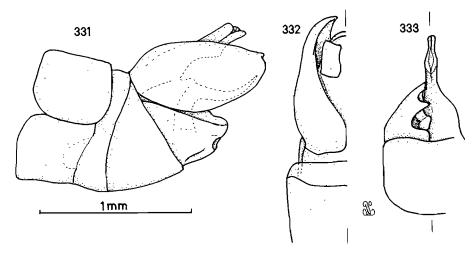
Etymology: Named for the collector, Trevor Schofield.

Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black except for a few white setae dorsally on scape. Eye:face ratio 1:0,22; eye:lower facial margin ratio 8,5:1. Mystax black and white (mixed). Occipital setae: upper—black and white; central—black and white; lower—white.

Thorax: ktg s and mtanepst s pale yellow and white. Mesonotal setae & bristles: acr black; dc black; pprn white (1 black); 3/3 yellow and black npl; 2/2 black spal; 1/1 black pal (+ 1 black seta); mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 4 black bristles and white setae. Wing:  $5.7 \times 2.1$  mm. Legs: black; cx1 setae white; cx3 with 2 black (1 white) bristles laterally. Hind femur: bristles black, long setae black (few white), short setae black and white.

Abdomen: Gold pruinose. T3 with 4 white marginal, 2 white discal bristles; setae longish, white (laterally) and few black (dorsodistally); S3 with 4 white bristles and white setae. Genitalia as in Figs 331–333 (paratype illustrated); epandrium short, moderately well developed; hypandrium and gonocoxite well developed; aedeagus of moderate length, with longish, slender tip.



Figs 331–333. *Neolophonotus schofieldi* sp. n. paratype male (Lehlakeng) genitalia. 331. Lateral. 332. Dorsal. 333. Ventral.

Paratypes: 1♂ similar to holotype. ♀ unknown.

Material examined: BOTSWANA: 13 (holotype), Tzatonie Pan (2322CD), 15.vi.1969, T. Schofield (NM); 13 (paratypes), Lehlakeng (2424BB), 12.vi.1969, T. Schofield (NM). NM Type No. 3913.

Distribution: Both localities are in the Botswana and N Namibia climatic region. Relationship: A fairly distinctive species. Male genitalia resemble those of *milvus* and *angola*.

## Neolophonotus sicarius sp. n.

Figs 334-336

Etymology: L. sicarius—assassin. Refers to predatory behaviour.

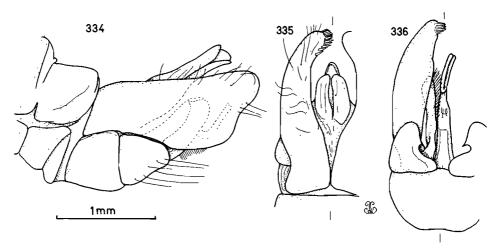
Description: Based on unique holotype ♂.

Head: Antenna (flagella missing) black; setae black. Eye:face ratio 1:0,27; eye:lower facial margin ratio 10,0:1. Mystax black (top half) and pale yellow (lower half). Occipital setae: upper—black; central—yellow; lower—yellow.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr not obvious; dc yellow; pprn long yellow; 2/2 yellow npl; 3/3 yellow spal; 1/1 yellow pal (+ 1 yellow seta); mane black, shorter yellow-white setae bordering. Scutellum with 4 yellow marginal bristles; disc with ca 6 yellow bristles and yellow-white setae. Wing:  $5.3 \times 1.7$  mm. Legs: black, tibiae brown-yellow proximally; cx1 setae

white; cx3 with 1 pale yellow bristle laterally. Hind femur: bristles pale yellow, long setae pale yellow, short setae pale yellow.

Abdomen: Silver-gold pruinose. T3 with 3 pale yellow marginal bristles; setae yellow; S3 with weak yellow bristles and setae. Genitalia as in Figs 334–336; epandrium of moderate length, well developed, equipped with small spine-like setae distally; hypandrium and gonocoxite well developed; aedeagus long, sinuous.



Figs 334-336. Neolophonotus sicarius sp. n. holotype male (Potchfstm) genitalia. 334. Lateral. 335. Dorsal. 336. Ventral.

Paratypes: None. 9 unknown.

Material examined: SOUTH AFRICA: Transvaal: 13 (holotype), Potchfstm [Potchefstroom—2627CA], [no date], T. Ayres (SAM). SAM Type No. 5318. Distribution: Known only from the type-locality in the Highveld climatic region.

Relationship: A distinctive species. Male genitalia resemble those of *natalensis* and *annae*.

# Neolophonotus similis (Ricardo, 1920) Figs 337–339

Dysmachus similis Ricardo, 1920:435. Neolophonotus (Lophopeltis) similis; Engel 1927:148; Hull, 1962:533. Lophopeltis similis; Curran, 1934:11. Neolophonotus similis; Oldroyd, 1981:141.

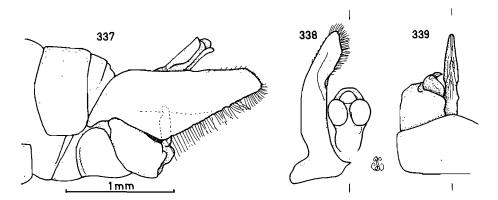
Redescription: Based on lectotype  $\delta$ .

Head: Antenna black; setae black ventrally, yellow dorsally. Eye:face ratio 1:0,18; eye:lower facial margin ratio 8,9:1. Mystax black and white (mixed). Occipital setae: upper—black and yellow; central—yellow; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn yellow; 3/3 yellow npl; 3/3 black and yellow spal; 2/2 yellow pal; mane black, shorter white setae bordering. Scutellum with 5 (3 black and 2 yellow) marginal bristles; disc with 12 black bristles and white (laterally) and black (centrally) setae. Wing:  $10.2 \times 2.0$  mm. Legs: dark red-brown, tibiae orange-

brown dorsoproximally; cx1 setae white; cx3 with 2 yellow bristles laterally. Hind femur: bristles yellow (few black distally), long setae black and white, short setae yellow.

Abdomen: Red-gold pruinose. T3 with 4 white-yellow marginal bristles; setae short, yellow (laterally) and black (dorsally); S3 with 4-6 weak yellowish bristles and longish white setae. Genitalia as in Figs 337-339; epandrium moderately long, tapering distally in lateral view, equipped with small spine-like setae distally; hypandrium and gonocoxite well developed; aedeagus of moderate length, with slender tip.



Figs 337-339. Neolophonotus similis (Ricardo, 1920) lectotype male (Nr. Johannesburg) genitalia. 337. Lateral. 338. Dorsal. 339. Ventral.

Type material: Ricardo lists  $13^\circ 29^\circ$  specimens. In the BM are  $13^\circ 19^\circ$  which I consider to be cotypes; I here designate the  $3^\circ$  as lectotype and the  $9^\circ$  as paralectotype. The  $9^\circ$  from Barberton, apparently in the 'Cape Coll.' (? SAM) has not been located.

Female: Similar to  $\delta$ .  $\mathfrak{P}$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: *Transvaal*: 1δ (lectotype), Nr Johannesburg (2628AA), 1906, A. J. Cholmley (BM); 1δ (paralectotype), Bloksberg [Boksberg—2628AB] Johannesburg, C. H. Pead, 1907–250 (BM); 11δ 25 \(\text{Q}\), Johannesburg Linksfield Ridge (2628AA), 16.v.1982, R. Elferink (NM); 7δ 10 \(\text{Q}\), same data but 11.vii.1982 (NM); 3δ 6 \(\text{Q}\), Johannesburg Mondeor (2628AA), 14.iii.1982, Elferink (NM); 1δ, Johannesburg The Wilds (2628AA), 7.iii.1982, Elferink (NM); 1δ 6 \(\text{Q}\), Quellerina Roodepoort (2627BB), 4.iii.1982, Elferink (NM); 4δ 1 \(\text{Q}\), Suikerbosrand Natr. Res. Heidelberg (2628AD), 12.iv.1982, Elferink (NM). *Cape Province*: 1δ, Capland, Willowmore (3323AD), Dr Brauns (NM).

Distribution: A species commonly encountered in the Johannesburg area in the Highveld climatic region. The  $\eth$  from Willowmore is correctly identified but as this locality is far removed from the others the specimen may be mislabelled.

Relationship: A distinctive species. Male genitalia do not resemble those of any other species in the group.

## Neolophonotus sinis sp. n.

Figs 340-342

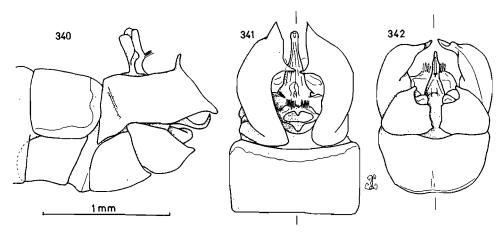
Etymology: Gr. sinis—destroyer. Refers to the predatory behaviour of the Asilidae.

Description: Based on holotype 3.

Head: Antenna black; setae black ventrally (a few pale yellow-white on scape), white dorsally. Eye:face ratio 1:0,19; eye:lower facial margin ratio 10,5:1. Mystax black and white (mixed). Occipital setae: upper—black (few white); central—white; lower—pale yellow-white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn yellow-white; 3/3 yellow npl; 2/2 yellow (1 black on right) spal; 2/2 yellow pal; mane black, shorter yellow-white setae bordering. Scutellum with 4 black marginal bristles; disc with 8 black bristles and yellow-white setae. Wing:  $6.8 \times 2.3$  mm. Legs: dark red-brown; cx1 setae white; cx3 with 4 yellow-white bristles laterally. Hind femur: bristles black and yellow-white, long setae black and white, short setae pale yellow-white.

Abdomen: Fine gold pruinose. T3 with 5-6 yellow-white marginal, 2-3 yellow-white discal bristles; setae short, pale yellow-white; S3 with 6 yellow-white bristles and white setae. Genitalia as in Figs 340-342 (paratype illustrated); epandrium short, with 2 small processes distally; subanal lamellae with small spine-like setae; hypandrium and gonocoxite well developed; aedeagus fairly short, stout, slightly sinuous, rapidly tapering to slender tip.



Figs 340-342. *Neolophonotus sinus* sp. n. paratype male (25 km W Windhoek) genitalia. 340. Lateral. 341. Dorsal. 342. Ventral.

Paratypes:  $13 \stackrel{?}{\circ} 16 \stackrel{?}{\circ}$  similar to holotype.  $\stackrel{?}{\circ}$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: NAMIBIA: 7♂ (holotype & paratypes) 9♀ (paratypes), 25 km W of Windhoek (2216DB), 22.iv.1983, Londt & Stuckenberg, Thornveld (NM); 1♂ 2♀ (paratypes), 13 km S of Windhoek (2217CA), 18.iv.1983, Stuckenberg &

Londt, Rocky slopes Mixed Thornveld (NM); 58 49 (paratypes), 48 km W of Windhoek (2216DA), 22.iv.1983, Stuckenberg & Londt, Thornveld in dry river valley (NM); 18 (paratype), Windhoek SE2217CA, vi.1972, H8974 (SMW); 18 (paratypes), 60 km S Windhoek (2317AA), 6.v.1978, Whitehead (SAM). NM Type No. 3914, SMW Type No. T706, SAM Type No. 5319.

Distribution: The localities are in the Desert & Poor Steppe climatic region. Relationship: A distinctive species. Male genitalia resemble those of *notius*.

#### Neolophonotus spinosus sp. n.

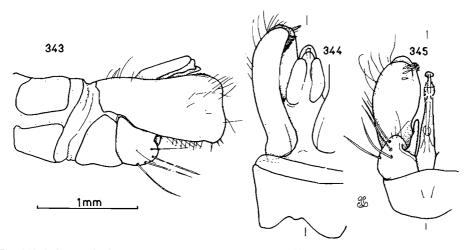
Figs 343-345

Etymology: L. spinosus—thorny. Refers to setae on ventral side of epandrium. Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black ventrally, yellow dorsally except for few black setae dorsally on scape. Eye:face ratio 1:0,20; eye:lower facial margin ratio 19,3:1. Mystax black and white (mixed). Occipital setae: upper—black (1 yellow); central—black and yellow; lower—white.

Thorax: ktg s orange and black; mtanepst s orange. Mesonotal setae & bristles: acr black; dc black; pprn long white; 2/2 orange npl; 2/2 black spal; 1/1 black pal; mane shortish black. Scutellum with 4 black marginal bristles; disc with ca 10 thin black bristles and black and white setae. Wing:  $6.7 \times 2.2$  mm. Legs: dark red-brown, tibiae orange-brown dorsoproximally; cx1 setae white; cx3 with 1 yellow bristle laterally. Hind femur: bristles orange (few black distally), long setae white (few black), short setae longish white (shorter black dorsally).

Abdomen: Silver-gold pruinose. T3 with 2 (black & orange) marginal, ca 5 long thin orange discal bristles; setae long, yellowish (laterally) and short black (dorsally); S3 with long white setae. Genitalia as in Figs 343–345; epandrium of moderate length, well developed, equipped with small spine-like setae distally;



Figs 343-345. Neolophonotus spinosus sp. n. holotype male (Cacudu River) genitalia. 343. Lateral. 344. Dorsal. 345. Ventral.

hypandrium and gonocoxite well developed; aedeagus of moderate length, subapically serrate.

Paratypes:  $5\mbox{\ensuremath{\ensuremath{\mathcal{C}}}}$  3 \mathcal{\ensuremath{\ensuremath{\mathcal{C}}}} similar to holotype.  $\mbox{\ensuremath{\ensuremath{\mathcal{C}}}}$  ovipositor laterally compressed, cerci without spine-like appearance.

Material examined: TRANSKEI: 3& (holotype & paratypes), Cacadu River nr. Lady Frere (2127CA), 27.x.1978, J. Londt & R. Miller, river bank (NM). SOUTH AFRICA: Natal: 1& 1& (paratypes), Pietermaritzburg, Town Bush (2930CB), 14.xi.1979, J. G. H. Londt (NM); 1& (paratype), Tramere, Franklyn [? = Franklin —3029AD], 9.x.1979, ACB [Butler]; 1& (paratype), Ramsgate S. Natal Coast (3030CD), 11.xi.1979, E. Pinhey (NMZ). NM Type No. 3915.

Distribution: Recorded for the Drakensberg and Subtropical climatic regions.

Relationship: A fairly distinctive species. Male genitalia resemble those of dysmicus.

## Neolophonotus tribulosus sp. n.

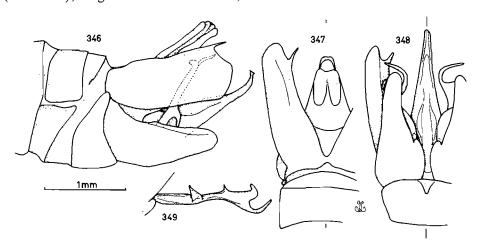
Figs 346-349

Etymology: L. tribulosus—thorny. Refers to thorn-like process of style.

Description: Based on holotype ♂.

Head: Antenna black; setae black ventrally (except for a few white on scape), white dorsally. Eye:face ratio 1:0,18; eye:lower facial margin ratio 10,3:1. Mystax black and white (mixed). Occipital setae: upper—black (few white); central—white and black; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn white; 3/3 yellow npl; 2/2 black (1 yellow on right) spal; 2/2 (1 yellow 1 black) pal; mane black shorter white setae bordering. Scutellum with 5 black marginal bristles; disc with 8 black bristles and white setae. Wing:  $6.7 \times 2.1$  mm. Legs: black; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles white (few black), long setae black and white, short setae white.



Figs 346-349. Neolophonotus tribulosus sp. n. holotype male (15 km E Karasburg) genitalia. 346. Lateral. 347. Dorsal. 348. Ventral. 349. Gonostylus (left, ventral).

Abdomen: Silver pruinose. T3 with 4 white marginal, 5–8 white discal bristles; setae short, white and black (laterally) and black (dorsally); S3 with 6 white bristles and white setae. Genitalia as in Figs 346–349; epandrium well developed, with dorsodistal finger-like projection; hypandrium narrow and relatively poorly developed; gonocoxite well developed, jutting out distally; gonostyle with complicated structure involving spine-like processes; aedeagus of moderate length, with longish, tapering tip.

Paratypes:  $3\cdot{\circ}2\cdot$  similar to holotype.  $\cdot$  cerci spine-like, forming elements of short two-pronged fork-like structure.

Material examined: NAMIBIA: 13 (holotype) 19 (paratype), 15 km E of Karasburg (2818BB), 27.viii.1983, J. Londt & B. Stuckenberg, Arid roadside vegetation (NM); 13 19 (paratypes), Onze Rust 192, Rehoboth SE 2418AD, 16–18.v.1973, H12977 (SMW). SOUTH AFRICA: Cape Province: 13 (paratype), Verneuk Pan (3021AA) Karoo Region, iii.1956, Brown (NCI); 13 (paratype), 60 km W Hopetown (2924CA), 8.iv.1961, Brown (NCI). NM Type No. 3916, SMW Type No. T707.

Distribution: Known only from four localities in the Desert & Poor Steppe climatic region.

Relationship: A distinctive species. Male genitalia resemble those of circus.

Prey record: Lepidoptera—Lycaenidae 1 (NCI).

## Neolophonotus uncinus sp.n.

Figs 350-352

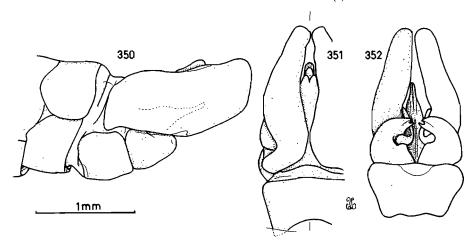
Etymology: L. *uncinus*—hooked. Refers to shape of gonocoxite in ventral view. Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black (scape with few white setae). Eye:face ratio 1:0,22; eye:lower facial margin ratio 8,8:1. Mystax black and white (mixed). Occipital setae: upper—black; central—white; lower—white.

Thorax: ktg s and mtanepst s white-yellow. Mesonotal setae & bristles: acr black; dc black; pprn yellow-white; 3/3 yellow-white and black npl; 2/2 black spal; 1/1 black pal (+ 1 black seta); mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with ca 12 black bristles and black and white setae. Wing:  $6.1 \times 2.1$  mm. Legs: black, tibiae orange-brown dorsoproximally; cx1 setae white (black laterally); cx3 with 2-3 black and yellow-white bristles laterally. Hind femur: bristles black and yellow-brown, long setae dark red-brown, short setae white (dark red-brown ventrally).

Abdomen: Silver-red pruinose. T3 with thin black marginal and discal bristles; setae black, few white laterally; S3 with long black bristles and setae (few short white). Genitalia as in Figs 350–352 (paratype illustrated); epandrium of moderate length, equipped with small spine-like setae on mesial surface of distal end; hypandrium and gonocoxite well developed; aedeagus shortish, tapering to pointed tip.

Paratypes: 203 139 similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.



Figs 350-352. Neolophonotus uncinus sp. n. paratype male (Cold Bokkeveld) genitalia. 350. Lateral. 351. Dorsal. 352. Ventral.

Material examined: SOUTH AFRICA: Cape Province: 2δ (holotype & paratype) 2♀ (paratypes), Malmesbury (3318BC), 25.ix.1926, Dr Brauns (NM); 1δ 1♀ (paratypes), same data (ZSM); 1δ (paratype), Ysterfontein (3218BA), ix.1960, SAM (SAM); 2δ (paratypes), Stellenbosch (3318DD), 16.ix.1964, P. L. Swart (NM); 2δ (paratypes), Stellenbosch, 9 & 24.x.1928, Ac.Us (NM); 3δ 2♀ (paratypes), Cold Bokkeveld (3319AB), 30.viii.1981, Londt, Schoeman & Stuckenberg, Macchia—Rocky slope (NM); 4δ 3♀ (paratypes), Cold Bokkeveld, Ceres Dist., 15–30.x.1934, Versfeld (SAM); 5δ 2♀ (paratypes), 3 km S Tulbach (3319AC), 30.viii.1981, Londt Schoeman & Stuckenberg, Macchia & old lands (NM); 2δ 3♀ (paratypes), 10 km SE Tulbach (3319AC), 30.viii.1981, Londt Schoeman & Stuckenberg, Macchia near stream (NM); 1δ 1♀ (paratypes), Somerset West (3418BB), viii–ix.1927, Hesse (SAM); 3δ 1♀ (paratypes), Pearly Beach, Bredasdorp (3420CA), 9.59 (= ix.1959), SAM (SAM). NM Type No. 3917, SAM Type No. 5320.

Distribution: All localities are in the Mediterranean climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of annae.

#### Neolophonotus variegatus sp. n.

Figs 353-356

Etymology: L. variegatus—of different sorts. The species shows some variation in male genital form.

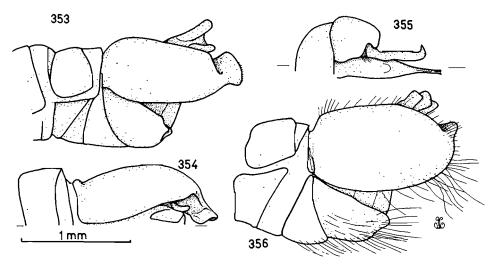
Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black, except for some white setae dorsally on scape. Eye:face ratio 1:0,18; eye:lower facial margin ratio 8,3:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black; lower—white.

Thorax: ktg s and mtanepst s black and white. Mesonotal setae & bristles: acr black; dc black; pprn black and white; 2/2 black npl; 2/2 black spal; 1/1 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal

bristles; disc with 9 black bristles and white setae. Wing:  $6.1 \times 1.7$  mm. Legs: black; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles black, long setae black and white, short setae white.

Abdomen: Silver pruinose. T3 with 2 black marginal bristles; setae short, white (laterally) and black (dorsally); S3 with 3 black bristles, long black setae and shorter white setae. Genitalia as in Figs 353–356 (paratypes illustrated); epandrium typically short and broad in lateral view, well developed, inwardly directed distally; hypandrium and gonocoxite moderately well developed; aedeagus longish, with long slender tip.



Figs 353-356. Neolophonotus variegatus sp. n. paratype male genitalia. 353-355. 14 km N Springbok & . 353. Lateral. 354. Dorsal. 355. Ventral. 356. Knersvlakte & (lateral).

Paratypes: 86359 similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Cape Province: 9& (holotype & paratypes) 4\$\paratypes\$ (paratypes), 10 km E Garies (3017DB), 3.ix.1981, J. Londt L. Schoeman & B. Stuckenberg, Succulent Karoo (NM); 4& 1\$\paratypes\$ (paratypes) 1?, Namaqualand, Bowesdorp [Kamieskroon—3017BB], ix.1941, Mus Staff (SAM); 1& (paratype) 1?, 14mi N Springbok (2917BD), 6.ix.1972, Irwin, 2459ft, open hillside (NM); 1& (paratype), 13.5mi SSW Springbok nr. Neweputs Farm (2917DD), 7.ix.1972, Irwin, 2600ft (NM); 15& 10\$\paratypes\$ (paratypes), Knersvlakte (3118BC), 2.ix.1981, Londt & Stuckenberg, Rocky hillside veget Succulent Karoo (NM); 2& 2\$\paratypes\$ (paratypes), Knersvlakte North of Van Rhynsdorp, 6-9.x.1964, Stuckenberg (NM); 2& 2\$\paratypes\$ (paratypes), Knersvlakte, ix.1941, Mus Staff (SAM); 1& (paratype), 5m S of Van Rhyns Pass (3119AC), viii.1961, SAM (SAM); 2& 7\$\paratypes\$ (paratypes), 45km N Vanrhynsdorp (3118BA), 4.ix.1981, Londt Schoeman & Stuckenberg, Succulent Karoo (NM); 12& 11\$\paratypes\$ 2? (6& 4\$\paratypes\$), Nieuwoudtville, Brandkop (3119AC), ix.1941, Mus Staff (SAM); 2& 3\$\paratypes\$ (paratypes), 25 km N Kamieskroon (2917DD),

5.ix.1983, Stuckenberg & Londt, Rocky hillside veget (NM);  $10\ \delta\ \circ$  (paratypes), 20 km NE of Springbok (2918CA), 7.ix.1983, Londt & Stuckenberg, Rocky hillside & dry watercourse veget. (NM);  $7\ \delta\ 4\ \circ$  (paratypes), Aninaus Pass 15 km W of Steinkopf (2917BA), 4.ix.1983, Londt & Stuckenberg, Rocky hillside & dry river (NM);  $5\ \delta\ 3\ \circ$  (paratypes), 10 km E of Garies (3018CA), 6.ix.1983, Stuckenberg & Londt, Rocky slopes/Bushes (NM);  $19\ \delta\ 10\ \circ\ 1$ ? ( $4\ \delta\ 4\ \circ\ paratypes$ ), 7m S of Loeriesfontein (3019CD), ix.1961, SAM (SAM);  $2\ \delta\ 3\ \circ\ (paratypes)$ , 17 km S Loeriesfontein, ix.1961, SAM (SAM). NM Type No. 3918, SAM Type No. 5321.

Distribution: South-western parts of the Desert & Poor Steppe climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of raptor and jubatus.

## Neolophonotus vermiculatus sp. n.

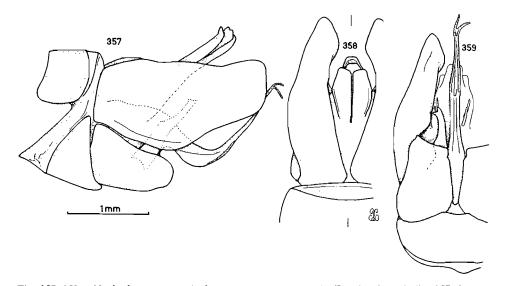
Figs 357-359

Etymology: L. vermiculatus—like worms. Elements of aedeagal bifurcation are worm-like.

Description: Based on holotype ♂.

Head: Antenna black; setae black. Eye:face ratio 1:0,18; eye:lower facial margin ratio 8,1:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black; lower—white.

Thorax: ktg s and mtanepst s black and white. Mesonotal setae & bristles: acr black; dc black; pprn black (1 white); 3/3 black npl; 2/2 black spal; 2/2 black pal; mane black, shorter white setae bordering. Scutellum with 6 black marginal bristles; disc with ca 14 black bristles and white and black setae. Wing:



Figs 357-359. Neolophonotus vermiculatus sp. n. paratype male (Bambata) genitalia. 357. Lateral. 358. Dorsal. 359. Ventral.

 $7.2 \times 2.5$  mm. Legs: black; cx1 setae white; cx3 with 1 black bristle laterally. Hind femur: bristles black, long setae black and white, short setae black (few white ventrally).

Abdomen: Red-silver pruinose. T3 with 3 (2 black 1 white) marginal bristles; setae black and white; S3 with 2 short white bristles and long white (few black) setae. Genitalia as in Figs 357–359 (paratype illustrated); epandrium moderately well developed; subanal lamellae with few spine-like setae; hypandrium and gonocoxite well developed; aedeagus of moderate length, with longish, slender bifurcate tip (each element of which is worm-like).

Paratypes: 2♂ similar to holotype. ♀ unknown.

Material examined: ZIMBABWE: 13 (holotype), Siloswe Matopo Bulawayo (2028BA), 13–15.v.1967, E. Pinhey, Nat Museum S. R. (NMZ); 13 (paratype), Mtshabezi Valley (2028DB) Matopos Bulawayo, 18.v.1967, E. Pinhey, Nat Museum S. R. (NM); 13 (paratype), Bambata (2028AD), viii.1939, Nat Museum S. Rhodesia (NMZ), NM Type No. 3919.

Distribution: Known only from Zimbabwe.

Relationship: A distinctive species. Male genitalia do not resemble those of any other species in the group.

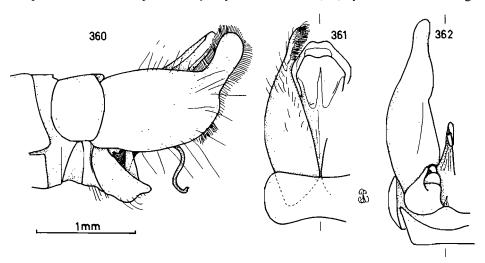
### Neolophonotus vincenti sp.n.

Figs 360-362

Etymology: Named for Vincent Whitehead, South African Museum, in thanks for the assistance he has rendered.

Description: Based on holotype 3.

Head: Antennal scape & pedicel yellow-brown, rest dark red-brown; setae black except for white on scape dorsally. Eye:face ratio 1:0,20; eye:lower facial margin



Figs 360-362. Neolophonotus vincenti sp. n. holotype male (Stellenbosch) genitalia. 360. Lateral. 361. Dorsal. 362. Ventral.

ratio 9,0:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black; lower—white.

Thorax: ktg s and mtanepst s black (small setae white). Mesonotal setae & bristles: acr black; dc black; pprn white (few black); 2/3 black npl; 2/2 black spal; 1/1 black pal; mane black, shorter white setae bordering. Scutellum with 2 black marginal bristles; disc with ca 12 black bristles and white setae. Wing:  $5.8 \times 1.9$  mm. Legs: dark red-brown, tibiae yellow-brown dorsoproximally; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles dark red-brown, long setae black and white, short setae white.

Abdomen: Fine gold-silver pruinose. T3 with 1-2 white marginal bristles; setae short, white (laterally) and black (dorsally); S3 with black and white bristles and setae. Genitalia as in Figs 360-362; epandrium with prominent dorsodistal lobe, well developed; hypandrium and gonocoxite relatively poorly developed; aedeagus of moderate length, with longish, slender, sinuous tip.

Paratypes: 2♂ similar to holotype. ♀ unknown.

Material examined: SOUTH AFRICA: Cape Province: 13 (holotype), Stellenbosch (3318DD), 25.viii.1937, Ac. US (NM); 13 (paratype), 12mi. N of Citrusdal (3219CA), 1.v.1958, E. S. Ross & R. E. Leech, 110m (CAS); 13 (paratype), Koue Bokkeveld, 18.iv.1976, R. Jamieson (SAM). NM Type No. 3920.

Distribution: Known from three localities in the Mediterranean climatic region.

Relationship: A very distinctive species. Male genitalia resemble those of acrolophus.

#### Neolophonotus walkeri sp. n.

Figs 363-365

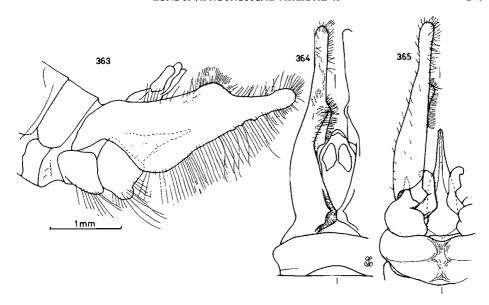
Etymology: Named after Francis Walker who contributed to our knowledge of African Asilidae.

Description: Based on holotype  $\delta$ .

Head: Antenna black; setae orange and black ventrally, yellow dorsally. Eye:face ratio 1:0,15; eye:lower facial margin ratio 9,5:1. Mystax white yellow and black. Occipital setae: upper—orange and black; central—yellow; lower—white.

Thorax: ktg s and mtanepst s orange. Mesonotal setae & bristles: acr black; dc black; pprn orange (bristles) and yellow (setae); 4/4 orange (1 black) npl; 2/3 black spal; 2/2 orange pal; mane black, shorter yellow setae bordering. Scutellum with 4 black 1 orange marginal bristles; disc with 7 black 2 orange bristles and white (1-2 black) setae. Wing:  $8.9 \times 3.2 \text{ mm}$ . Legs: dark red-brown, tibiae yellow-brown dorsoproximally; cx1 setae white; cx3 with 2 orange bristles laterally. Hind femur: bristles yellow (few black), long setae white (few black), short setae white (longer black ventrally).

Abdomen: Silver-red pruinose. T3 lacks obvious bristles; setae longish white (laterally), black (dorsally); S3 with long white setae. Genitalia as in Figs 363-365 (paratype illustrated); epandrium attenuate, well developed; hypandrium and gonocoxite moderately well developed; aedeagus of moderate length, with longish, slender tip.



Figs 363-365. Neolophonotus walkeri sp. n. paratype male (12 km E Barberton) genitalia. 363. Lateral. 364. Dorsal. 365. Ventral.

Paratypes:  $6 \delta 1$  similar to holotype. 9 cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: *Transvaal*: 7♂ (holotype & paratypes) 1♀ (paratype), 12 km E of Barberton on Saddleback Pass (SE2531CC), 7.iv.1985, J. G. H. Londt, Grassland (NM). NM Type No. 3921.

Distribution: Known only from the type-locality in the Lowveld climatic region.

Relationship: A fairly distinctive species. Male genitalia resemble those of meiswinkeli and leucodiadema.

Prey record: Coleoptera (? family 1).

#### Neolophonotus wiedemanni sp. n.

Figs 366-368

Etymology: Named after C. R. W. Wiedemann, one of the earliest workers on Afrotropical Asilidae.

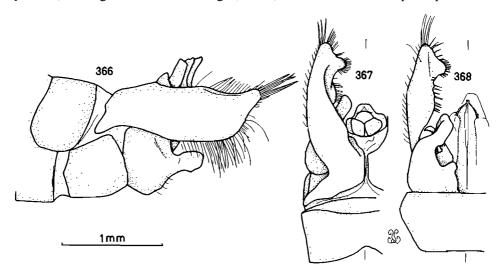
Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black except for white dorsally on scape. Eye:face ratio 1:0,22; eye:lower facial margin ratio 6,1:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black and yellow; lower—white.

Thorax: ktg s and mtanepst s orange. Mesonotal setae & bristles: acr black; dc black; pprn yellow (1 black); 3/3 black (1 orange) npl; 3/3 black spal; 3/3 black pal; mane black, shorter yellow setae bordering. Scutellum with 7 black marginal bristles; disc with ca 10 black bristles and black and white setae. Wing:  $6.8 \times 2.4$  mm. Legs: black; cx1 setae white; cx3 with 1 yellow bristle laterally. Hind

femur: bristles black (few orange), long setae black and white, short setae white (long black ventrally).

Abdomen: Red-gold pruinose. T3 lacks obvious bristles; setae short, yellow (laterally) and black (dorsally); S3 with long black and shorter yellow setae. Genitalia as in Figs 366–368; epandrium moderately long, well developed; hypandrium well developed; gonocoxite well developed with projecting distal process; aedeagus of moderate length, stout, with arrow-head shaped tip.



Figs 366-368. Neolophonotus wiedemanni sp. n. holotype male (Hantamsberg) genitalia. 366. Lateral. 367. Dorsal. 368. Ventral.

Paratypes: 29 similar to holotype. Ovipositor laterally compressed, cerci not spine-like.

Material examined: SOUTH AFRICA: Cape Province: 1& (holotype) 2\( \paratypes \), Hantamsberg N of Calvinia (3119BC), 15.ix.1982, L. E. Schoeman (NM). NM Type No. 3922.

Distribution: Known only from the type-locality in the Desert & Poor Steppe climatic region.

Relationship: A distinctive species. Male genitalia resemble those of loganius.

## Neolophonotus wroughtoni (Ricardo, 1920) Figs 369–371

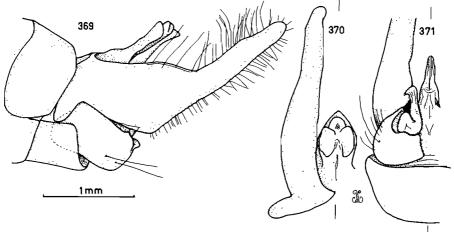
Dysmachus wroughtoni Ricardo, 1920:392. Neolophonotus (Lophopeltis) wroughtoni; Engel, 1927:180; Hull, 1962:533. Lophopeltis wroughtoni; Curran, 1934:11; Cuthbertson, 1937:18. Neolophonotus wroughtoni; Oldroyd, 1981:341.

Redescription: Based on lectotype 3.

Head: Antenna black; setae black ventrally, yellow dorsally. Eye:face ratio 1:0,21; eye:lower facial margin ratio 8,6:1. Mystax black and yellow-white (mixed). Occipital setae: upper—black and yellow; central—yellow; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr black; dc black; pprn yellow; 3/3 yellow npl; 2/2 black spal; 2/2 yellow pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 6 black bristles and white setae. Wing: 7,3 × 2,6 mm. Legs: black, tibiae orange-brown dorsoproximally; cx1 setae yellow; cx3 with 2 yellow bristles laterally. Hind femur: bristles black and yellow, long setae black and yellow, short setae yellow. Abdomen: Red-gold pruinose. T3 with 3 yellow marginal bristles; setae short, white (laterally) and black (dorsally): S3 with 4 yellow bristles and long yellow-

Abdomen: Red-gold pruinose. 13 with 3 yellow marginal bristles; setae short, white (laterally) and black (dorsally); S3 with 4 yellow bristles and long yellow-white setae. Genitalia as in Figs 369–371; epandrium attenuate, well developed; hypandrium and gonocoxite well developed; aedeagus of moderate length, with tapering, slender tip.



Figs 369-371. Neolophonotus wroughtoni (Ricardo, 1920) lectotype male (Willow Grange) genitalia. 369. Lateral. 370. Dorsal. 371. Ventral.

Type material: Ricardo does not give precise information concerning how many specimens she studied. I have seen several specimens in the BM and consider those from Willowgrange to be cotypes. I hereby designate one of the  $\delta$  specimens as lectotype and the other material paralectotypes.

Female: Similar to  $\delta$ .  $\varphi$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: SOUTH AFRICA: Natal: 2& (lectotype & paralectotype) 2? (paralectotypes), Willow Grange [Willowgrange—2929BB], 15.iv.1914, R. C. Wroughton, Will Brook (BM); 1&, Willow Grange, 17.iv.1914, Wroughton (ZSM); 1& 1&, On sand Umlalazi R. Eshowe (2831CD), 6.vi.1937, B. De M. (BM); 3& 4&, Royal Natal Nat. Park (2828DB), 5.x.1981, Londt (NM); 1&, Mahai R. 5000ft, 20.v.1931, HWBM (NM); 2& 1&, Giants Castle Res. (2929AD), 1.xi.1972, Irwin, 5800ft (NM); 1&, Giants Castle Res., 18-23.ix.1961, Stuckenberg, 5800ft (NM); 2& 1&, Giants Castle G. Res. (2929AD), 22.xi.1982, Miller, 19-2200m (NM); 2&, Giants Castle (2929AB), 23.xi.1982, Barraclough, grassland (NM); 2&, Cathedral Peak Forestry Reserve (2829CC), iii.1959, Stuckenberg,

Organ Pipes Pass at summit, Erica consocies 9600ft (NM); 19, same data but Fire Lookout Grassland on steep slopes 7500-7700ft (NM); 2♂ 1♀, same data but Indumeni River headwaters 8500-9200ft (NM); 43 29, Drakensberg Garden area (2929CA), 13-14.x.1984, Londt (NM); 3♂ 1♀, Midmar dam area (2930AC), 30.iv.1978, Londt (NM); 2♂ 1♀, Pietermaritzburg Montrose (2930CB), 23.vii, 30.vii & 16.ix.1978, Londt (NM); 12, same data but 20.vi.1977 (NM); 13, same data but 1.viii.1981 (NM); 12, same data but 18.vi.1981 (NM); 13 12, same data but 10.vii.1985 (NM); 1♂, same data but 17.vii.1984 (NM); 2♂ 2♀, Pietermaritzburg, 26.vii.1981, Elferink (NM); 13, PMB, x.1957, Crees (NM); 13, Pietermaritzburg, 27.iv, 1950, Phillips (NM); 28, Pietermaritzburg, v & vii. 1977, Miller, Townbush Valley Malaise (NM); 19, Swartkop Location, Pietermaritzburg, vii.1959, Stuckenberg (NM); 13, Karkloof Range near Mt Alida (2930AB), 17.vi.1974, Irwin, temp. forest assoc, near pond (NM); 13, Karkloof, iv.1935, Bevis (DM); 1&, Oribi (3030CA), 23.ix.1952, Cackett (NM); 1& 1\, Vryheid (2730DD), 29 & 31.v.1983, Youthed (NM); 13 19, Kamberg Nat. Reserve (2929BC), 1-6.x.1978, Londt, riverside/open road (NM); 17♂ 4♀, Loteni Nature Res. (2929BC), 28.iii.-2.iv.1986, Londt, Campsite/Grassveld (NM); 13, Loteni Nat. Park (2929BC), 6.iv.1972, Irwin (NM); 4& 10\, Bushmans Nek (2929CC), 19.xi.1981, Londt, slopes above hotel (NM); 13, Bushmans Nek (2929CC), 19.iv.1987, Meakin, 10000', 3.30pm Rocks, grass, shrubs (NM); 29, Dargle Dist. Nhluzane (2929DB), 15.x.1983, Freidberg (NM); 18, Inhluzane Mtn summit, 2.x.1956, Dickson (NMZ); 10♂ 3♀, Mhlopeni Nat Reserve (2930AB) 10 km S Muden, 11.vi.1984, Londt, mixed thornveld (NM); 13, Harold Johnson Reserve (2931AB), 23.vi.1984, in kloof-like coastal bush, grassveld patch (NM); 19, Shongweni [Ntshongweni] Dam (2930DC), 22.vii.1982, Elferink (NM); 1& 19, Ntshongweni Dam (2930DC), 22.vii.1982, Londt, open hillside grass (NM); 28 19, Ashburton 15 km SE Pietermaritzburg (2930CB), 22.vii.1982, Londt (NM); 18, Durban (2931CC), viii.1903, Burn (NM). Transvaal: 28, Johannesburg (2628AA) Jokeskei R., 31.iii.1932, J. Ogilvie (BM); 13, Barberton (2531CC), 28.v.1927, J. S. Taylor (BM); 13, Lydenburg Distr. (2530AB), 1896, Krantz (NM); 43, Suikerbosrand Natr. Res. Heidelberg (2628AB), 12.iv.1982, Elferink (NM); 53.79, same data but 8.v.1983 (NM); 53.49, same data but 17.iv.1983 (NM); 1?, Woodb. Vill. [Woodbush Forest Res.—2330CC], iv.1915, Swierstra (NM). Cape Province: 28 129, Naudesnek Summit ca 15 km E Rhodes (3028CC), 8-9.i.1979, Londt & Stuckenberg, Grassland & stream edges (NM); 23, Rhodes area (3027DD), 9-10.i.1979, Londt & Stuckenberg, Banks of river & hill near town (NM). TRANSKEI: 18 19, Dangerhoek on Telle River 35 km E Sterkspruit (3027DA), 10.i.1979, Londt & Stuckenberg (NM); 1♀, Lundene's Nek (3027DA), 10.i.1979, Londt & Stuckenberg, summit of pass, open grass & roadside veg. (NM); 1♀, Banks of Luzi River (3028CB), 11.i.1979, Londt & Stuckenberg, rocky hill & grassveld (NM). LESOTHO: 18, Bushmans Pass Maloti Mountains Maseru District (2927BD), 8-14.i.1963, Stuckenberg, 2125-2250m (NM); 1♂ 1♀, Mamalapi Mnt (2928AC), 27.xii.1948, Jacot-Guillarmod (AM). ZIMBABWE: 13, Vumba (1932BB), Umtali District, 20.ix.1931, Sheppard (NM). MOZAMBIQUE: 13, Catuane (2632CD), 5.v.1980, Feijen (NM). Unknown locality: 13, Sandvlakte, 27.vi.1925, P. Albert (NM).

Distribution: Widely distributed. Recorded from the Drakensberg, Subtropical, Highveld, Lowveld, Botswana & N Namibia climatic regions of southern Africa as well as from Zimbabwe and Mozambique (Fig. 383).

Relationship: A fairly distinctive species. Male genitalia resemble those of aphellas and genitalis.

Prey records: Previously published information (Cuthbertson 1937) is imprecise. Cuthbertson states 'Widely distributed in northern and eastern Mashonaland, and common from August till October. The flies rest on the ground on bare patches among long grass, and dart at small homopterous bugs, such as jassids.'

My own records include Diptera (Tephritidae 1, Asilidae *Damalis* sp. 1, Bombyliidae 1, Muscidae 2, Calliphoridae 1); Hymenoptera (Formicidae 1).

## Neolophonotus xanthodasus sp.n.

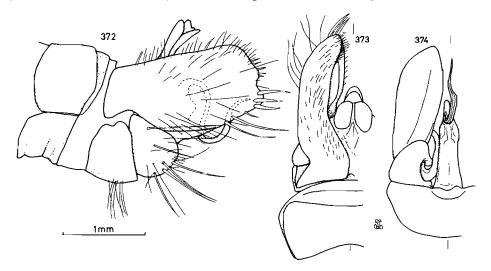
Figs 372-374

Etymology: Gr. xanthos—yellow; dasus—thicket. Refers to the numerous yellow scutellar setae.

Description: Based on holotype 3.

Head: Antenna black; scape with black and fine white setae dorsally and ventrally, pedicel with all setae black. Eye:face ratio 1:0,28; eye:lower facial margin ratio 5,8:1. Mystax pale yellow, bordered by black. Occipital setae: upper—black (1 yellow); central—long black and yellow; lower—white.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae & bristles: acr not clearly differentiated; dc black (few yellow posteriorly); pprn black and yellow; 3/3 yellow npl; 3/3 black and yellow spal; 7/5 yellow and black pal; mane black, few yellow in posterior part. Scutellum with 12 yellow marginal bristles; disc with many long yellow bristles and setae (1 black). Wing:  $9.2 \times 2.9$  mm. Legs: black; cx1 setae



Figs 372-374. Neolophonotus xanthodasus sp. n. paratype male (Sutherland) genitalia. 372. Lateral. 373. Dorsal. 374. Ventral.

white; cx3 with 2 white bristles laterally. Hind femur: bristles pale yellow and black, long setae white, short setae longish white (long black ventrally).

Abdomen: Silver pruinose. T3 with 2-3 yellow marginal bristles; setae long, yellow (laterally), shorter black (dorsally); S3 with longish white setae. Genitalia as in Figs 372-374 (paratype illustrated); epandrium relatively short, well developed; hypandrium and gonocoxite well developed; aedeagus longish, thick-set basally, thin and sinuose distally.

Paratypes: 2349 similar to holotype. 9 ovipositor laterally compressed, cerci not spine-like.

Material examined: SOUTH AFRICA: Cape Province: 23 (holotype & paratype) 39 (paratypes), Vredehoek Sutherland (3220BC), 18.x.1981, L. E. Schoeman (NM); 13 19 (paratypes), Sutherland Observatory (3220BD), 22.x.1986, L. E. Schoeman (NM). NM Type No. 3923.

Distribution: Known only from the Sutherland area at the southern limits of the Desert & Poor Steppe climatic region.

Relationship: A distinctive species. Male genitalia resemble those of fumosus and quickelbergei.

## Neolophonotus xiphichaetus Hull, 1967

Figs 375-377

Neolophonotus (Lophopeltis) xiphichaetus Hull, 1967:273. Neolophonotus xiphichaetus; Oldroyd, 1981:341.

Redescription: Based on holotype 3.

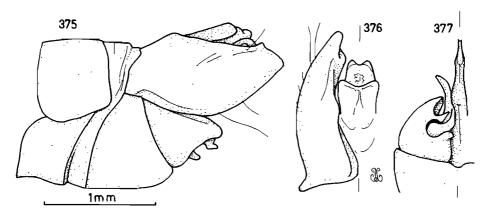
Head: Antenna black; scape with black and white setae, pedicel with all setae black. Eye:face ratio 1:0,21; eye:lower facial margin ratio 7,0:1. Mystax black (along lower facial margin) and white. Occipital setae: upper—black (1 yellow); central—white; lower—white.

Thorax: ktg s and mtanepst s white. Mesonotal setae & bristles: acr black; dc black; pprn white; 3/3 black npl; 2/2 black spal; 2/2 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 5-6 black bristles and white setae. Wing: 10,8×3,8 mm. Legs: black, tibiae orange-brown dorsoproximally; cx1 setae white, few black laterally; cx3 with 2 white (1 black) bristles laterally. Hind femur: bristles black (few white dorsally), long setae black and white, short setae white (black ventrally).

Abdomen: Fine gold and silver pruinose. T3 with 3-4 white marginal, 2-3 white and black discal bristles; setae short, white (laterally) and black (dorsally); S3 with 6 white bristles and long white setae. Genitalia as in Figs 375-377; epandrium shortish, well developed; hypandrium well developed; gonocoxite relatively poorly developed, with ventrodistal processes in lateral aspect; aedeagus of moderate length, with longish, slender tip.

Type material: Hull based his description on a single  $\delta$ .

Female:  $\mathcal{P}$  similar to  $\mathcal{S}$  but mane with pale yellow setae in posterior part (and



Figs 375-377. Neolophonotus xiphichaetus Hull, 1967 holotype male (Kowares) genitalia. 375. Lateral. 376. Dorsal. 377. Ventral.

therefore keys to *chionthrix* species group).  $\mathcal{P}$  cerci spine-like, forming elements of two-pronged fork-like structure.

Material examined: NAMIBIA:  $1\mbox{\ensuremath{\ensuremath{\mathcal{S}}}}$  (holotype), Kaokoveld Kowares 90 miles SE Ohopoho (1914AB), 3.vi.1951, Brink & Rudebeck, Swedish S. Afr. exped 1951–52, No. 323 (ZML);  $1\mbox{\ensuremath{\ensuremath{\mathcal{S}}}}$  (2mi. NW Outjo (2016AA), 14.v.1958, Ross & Leech, 1250m (CAS);  $2\mbox{\ensuremath{\ensuremath{\mathcal{S}}}}$  (2\mathcal{\ensuremath{\ensuremath{\mathcal{S}}}} (2\mathcal{\ensuremath{\ensuremath{\mathcal{S}}}} (2\mathcal{\ensuremath{\ensuremath{\mathcal{S}}}} (2\mathcal{\ensuremath{\ensuremath{\mathcal{S}}}} (2musche Pan Bushmanland, 19°48'S:20°35°E, 9–13.vi.1971, H2171 (SMW);  $2\mbox{\ensuremath{\ensuremath{\mathcal{S}}}}$ , Namuskluft 88 Luderitz SE2716DD, 7–15.x.1970 & 20–22.ix.1973, H11077 & H14598 (SMW).

Distribution: Recorded from the Desert & Poor Steppe and Botswana & N Namibia climatic regions.

Relationship: A distinctive species. Male genitalia resemble those of angola.

## Neolophonotus zigzag sp.n.

Figs 378-380

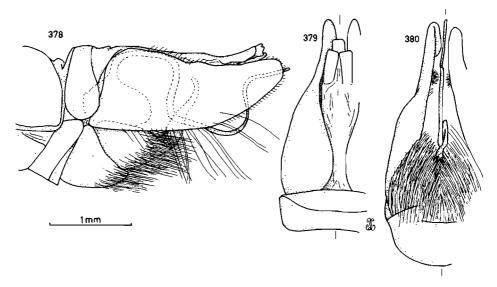
Etymology: F. alternately changing direction by sharp angles. Refers to the shape of the aedeagus.

Description: Based on holotype  $\delta$ .

Head: Antenna black; setae black ventrally, white dorsally. Eye:face ratio 1:0,23; eye:lower facial margin ratio 4,6:1. Mystax black and white (mixed). Occipital setae: upper—black; central—black (few white); lower—white.

Thorax: ktg s and mtanepst s yellow-white. Mesonotal setae & bristles: acr black; dc black; pprn few white; 2/3 black npl; 2/2 black spal; 2/2 black pal; mane black, shorter white setae bordering. Scutellum with 4 black marginal bristles; disc with 10 black bristles and white setae (few black). Wing:  $6.8 \times 2.1$  mm (smallest & paratype measured, holotype with tatty wings). Legs: black; cx1 setae white; cx3 with 1 white bristle laterally. Hind femur: bristles black and white, long setae black and white, short setae white.

Abdomen: Silver pruinose. T3 with 4 short white marginal bristles; setae short, white (laterally) and black (dorsally); S3 with 6 white bristles and short white setae. Genitalia as in Figs 378–380 (paratype illustrated); epandrium of moderate length, well developed; hypandrium and gonocoxite well developed, covered with longish setae (which hide much structural detail); aedeagus long and characteristically shaped.



Figs 378-380. Neolophonotus zigzag sp. n. paratype male (Richtersveld) genitalia. 378. Lateral. 379. Dorsal. 380. Ventral.

Paratypes:  $2\eth 2$ \$\text{similar to holotype.} \$\text{\$\Pi\$ cerci spine-like, forming elements of two-pronged fork-like structure.}

Material examined: SOUTH AFRICA: Cape Province: 3\$\partial\$ (holotype & paratypes) 2\$\partial\$ (paratypes), Richtersveld, 40km S Ochta Mine (2816BD), 2.ix.1983, Londt & Stuckenberg, Mixed Karoo bush with few flowers (NM). NM Type No. 3924.

Distribution: Known only from the type-locality in the Desert and Poor Steppe climatic region.

Relationship: A very distinctive species. Male genitalia resemble those of nisus.

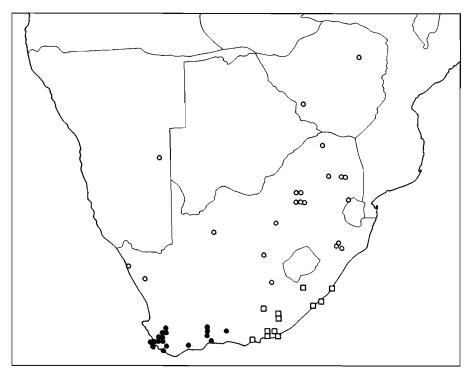


Fig. 381. Distribution of *Neolophonotus* species.  $\bullet = comatus$ .  $\bigcirc = cuthbertsoni$ .  $\square = dichaetus$ .

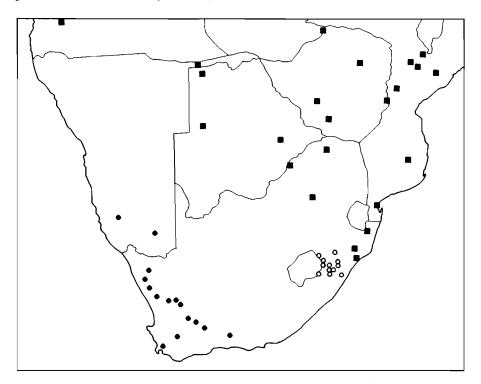


Fig. 382. Distribution of Neolophonotus species.  $\bullet = erythracanthus$ .  $\circ = hirsutus$ .  $\blacksquare = parvus$ .

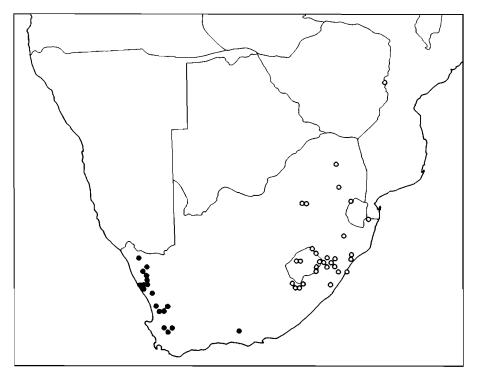


Fig. 383. Distribution of *Neolophonotus* species.  $\bullet = occidualis$ .  $\circ = wroughtoni$ .

#### DISCUSSION OF COMATUS SPECIES-GROUP

As stated in the introduction, the *comatus* species-group, with 117 described species, is the largest of the six groups dealt with in this study. Although it is possible to recognise the existence of some sub-groups and species pairs within the species-group, I do not believe that these can be discussed with any confidence. I have, therefore, decided to say little about the relationships which may exist within this group.

In my (Londt 1986) discussion of the *suillus* species-group I demonstrated that it could be divided into two sub-groups on the basis of female ovipositor morphology (the conditions were illustrated in the paper). There were those placed in sub-group A, which possessed a laterally compressed ovipositor, and there were those in sub-group B, which possessed a more tubular ovipositor characterised by spine-like cerci. The latter condition was less common. Species contained in the *comatus* species-group show a similar division in ovipositor morphology. The predominant form is, however, the tubular one (88% of species for which ovipositor structure is known). As females of no fewer than 30% of species in this group have yet to be discovered, greater use can not be made of this undoubtedly important character.

An analysis of the flight periods of the southern African species within the comatus group is revealing. Using the data presented in Table 1, and ignoring those species found only outside of the southern African subregion (i.e. those under the

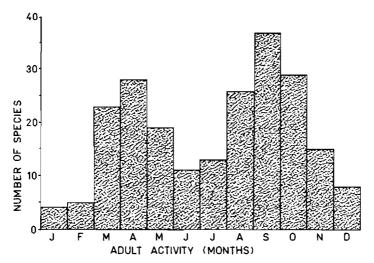


Fig. 384. Histogram showing the relationship between species abundance and adult seasonal incidence.

column headed Z), it is possible to construct a histogram (Fig. 384) in which the relationship between species abundance and the time of year is depicted. Although the two peaks seen in the illustration could merely be the result of poor winter collecting, I would not be satisfied with this explanation. A glance down the April and September columns of Table 1 reveals that most of the species which have been collected in April inhabit the eastern parts of southern Africa while those collected in September are mostly species confined to the western parts. If this observation is valid, and I believe that it is, then we can accept that members of the *comatus* species-group can be placed in two major sections: (1) those that fly in late summer (March-May) and inhabit the eastern, summer rainfall areas of southern Africa and (2) those that are active in early spring (August-October) and inhabit the western, winter rainfall or arid parts of the subcontinent. Members of both groups therefore have at least one thing in common, they are not summer fliers but are adapted for the cooler months of the year when most of the annual rainfall has passed.

#### GENERAL DISCUSSION OF NEOLOPHONOTUS

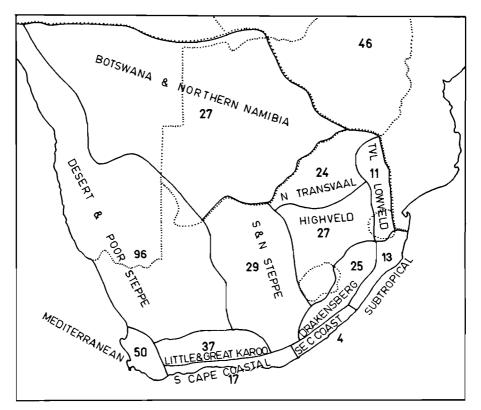
Neolophonotus is an African genus with the vast majority of species being found in southern Africa. While the distribution of each species is summarised in tables published in each part of this series, a summary (Table 2 and Fig. 385) of the information pertaining to the six species-groups may be of value. An inspection of Fig. 385 reveals that the largest number (96) of species is to be found in the Desert & Poor Steppe climatic region of southern Africa. The majority of these species belong to the comatus group. The area with the greatest species density is, however, the Mediterranean climatic region. Fifty species (mostly belonging to the suillus group) have been reported from this relatively small area. There may be many explanations for this situation. This area is topographically, climatically and

TABLE 2

Distribution of *Neolophonotus* species: No. species found in each of the climatic regions.

(For explanation of abbreviations see Table 1)

					(	Climati	c Reg	ions					
Species-group	M	Α	K	W	S	SE	E	D	L	H	NT	В	Z
chionthrix	2	0	2	12	1	0	0	0	0	0	0	2	0
squamosus	1	1	3	3	3	0	0	1	0	0	0	2	0
angustibarbus	2	0	0	4	8	0	3	3	4	4	4	6	4
suillus	20	6	7	17	4	0	3	2	1	3	3	2	17
pellitus	13	7	9	18	6	3	2	4	1	2	6	6	7
comatus	12	3	16	42	7	1	5	15	5	18	11	9	17
Total	50	17	37	96	29	4	13	25	11	27	24	27	46



Figs 385. Map showing the number of *Neolophonotus* species recorded for each of the climatic regions of southern Africa.

floristically diverse, and was, in Pleistocene times, probably subjected to marked climatic change. Examples of other Diptera groups which appear to have responded in a similar way as *Neolophonotus* are *Afroleptomydas* Bequaert (Mydidae) and *Systoechus* Loew (Bombyliidae).

Although *Neolophonotus*, as presently understood, is the largest genus of Asilidae in the world, I believe, for three reasons, that there are still many species

awaiting discovery. 1. Seasonal bias in collecting. Most members of the group are active during the cooler months of the year when most collectors have completed their collecting programmes. 2. Lack of persistent, directed collecting. I have calculated that no fewer than 34 % of the species covered in my four-part series are known from single samples only, and half of these (18 % of all species) have been described on the basis of single specimens. 3. Incomplete coverage of area. Much of our knowledge about this group can be attributable directly to my own collecting activities. While I have, over the last 10 years, made every effort to gather samples from as many places as possible, there are many that I have not been to, and many of those that I have visited have received so little attention that I cannot claim to have spent more than a few hours at them.

Now that I have completed this study some conclusions appear warranted. The decision to abandon all previous efforts to split Neolophonotus up into subgenera was, I believe, correct. The characters which had been used to define subgenera were mostly unreliable. Although my use of a few new and easily observable characters to define six species-groups has served to split the genus into convenient, more manageable, sections, these have not aided greatly in our understanding of the relationships that must exist within the group. Although I am confident that the vast majority of species placed in this genus are valid, they are distinguished from each other almost entirely on morphological characteristics of the male genitalia. This means that an understanding of the relationships that must exist within the group is made difficult. The fact that females exhibit two quite different kinds of ovipositor structure suggests that there are at least two biologically distinctive groups within the genus. Londt & Harris (1987)<sup>1</sup> described the arboreal oviposition of one species (dichaetus) possessing a laterally compressed ovipositor. During my collecting activities I have often observed other species, possessing similar ovipositors, resting on low shrubs and trees. It is therefore quite probable that all such species oviposit on vegetation. Species with cylindrical ovipositors and spinose cerci are almost invariably found resting on or near the ground. I believe that the spinose cerci are an adaptation for oviposition in soil (although I have never actually observed this). There is little doubt that the differences between these two groups will eventually be shown to be sufficient for them to be separated into different taxa. Unfortunately females offer no reliable means by which the species can be distinguished and I have not been able to identify differences in male genitalia to correspond with the two different forms of ovipositor. It appears, therefore, that, at least for the present, identification of species must remain heavily reliant on male genital differences, and that all the species now included in Neolophonotus must, at least until a new assessment of relationships is made, remain there.

Associated with the problem of using male genitalia to identify species has been the very real problem of numbers. While I have not counted the specimens which have been processed during this study, I have examined many. Most male specimens can be reliably identified without dissection and treatment of genitalia in KOH. In many instances I have identified long series of specimens from the same

<sup>&</sup>lt;sup>1</sup> J. ent. Soc. sth. Afr. **50**(2): 427-434.

locality on the basis of clearing a single, hopefully representative, specimen from the series. It is, therefore, quite possible that at least a small proportion of material studied by me could have been incorrectly identified. The identification of female specimens not accompanied by males has in many instances not been done unless I have had good grounds for the identification. Female specimens collected at the same locality together with males have been accepted as belonging to the same species as the males. Where two very similar species are known from the same locality the identification of females may not always have been correct.

## The prey of Neolophonotus species

The Asilidae must surely be the most important family of insect predators. While *Neolophonotus* is without doubt the most important group of robber flies in southern Africa, it is disturbing to note how little biological information exists for any of the species.

I have established a separate project aimed at accumulating information about the prey of Afrotropical Asilidae, and through this the information pertaining to Neolophonotus is easily accessible. Although prey records have been given throughout this revision of the genus, the information is scattered throughout the work and is, in a few cases, already out of date. In an attempt to make this study as complete as possible I here present a summary of my prey records for the genus as a whole (Table 3). A total of 143 prey items have been processed. Eight orders of insects are represented as well as one spider. This would suggest that the genus, as a whole, can be considered as being made up of opportunistic feeders, taking any suitable insects encountered. Of the 143 prey items, 61 (43 %) were Diptera. It is of interest that the best represented family of prey also belonged to the Diptera and was the family Asilidae. While most of these records involved a Neolophonotus feeding on another asilid belonging to another genus or species, there are also a few records of cannibalism. Of note is the fact that two prey items were incapable of flight (salticid spider and termite worker) suggesting that, although prey is usually taken in flight, it is possible for Neolophonotus to capture surface-living prey.

Date received: 8 September 1987.

TABLE 3
Prey of *Neolophonotus* species

	- 3		· F -			
Order	Total	%	Family	No.	%	
Diptera	61	43	Asilidae	17	12	
Dipiera	01		Bombyliidae	14	10	
			Muscidae	8	6	
			Sepsidae	8	6	
			Calliphoridae	3	2	
			Syrphidae	2	1	
			Tabanidae	1	1	
			Bibionidae	1	1	
			Chironomidae	1	1	
			Sarcophagidae	1	1	
			Therevidae	1	1	
			Mydidae	1	1	
			Tachinidae	1	1	
			Tephritidae	ĩ	1	
			?	î	î	
 			<u> </u>			
Hymenoptera	26	18	Apidae	8	6	
			Halictidae	4	3	
			Formicidae	4	3	
			Masaridae	2	1	
			Sphecidae	2	1	
			Pompilidae	2	1	
			Colletidae	1	1	
			Scoliidae	1	1	
			Andrenidae	1	1	
			Anthophoridae	1	1	
			Anthophoridae	т	1	 
Coleoptera	22	15	Scarabaeidae	14	10	
			Curculionidae	5	4	
			Chrysomelidae	2	1	
			Alleculidae	1	1	
 Hemiptera	12		Cicadidae	2	1	
11011117	•-	Ü	Miridae	$\bar{2}$	1	
			Cercopidae	1	i	
				1		
			Coreidae		1	
			Lygaeidae	1	1	
			Pentatomidae	1	1	
 			?	3	2	
Lepidoptera	11	8	Pieridae	3	2	
• •			Lycaenidae	2	1	
			Danaidae	1	1	
			Arctiidae	i	ī	
			Ctenuchidae	i	i	
			?	3	2	
			*			
Isoptera	5	4	Hodotermitidae	4	3	
-			? (worker)	1	1	
Orthoptera	4	3	Acrididae	4	3	
Trichoptera	1	1	?	1	1	
Araneida	1	1	Salticidae	1	1	
Total	143	101				_

## COMPLETE INDEX TO SPECIES OF NEOLOPHONOTUS COVERED IN THIS FOUR PART SERIES

Abbreviations: A—chionthrix species-group.

B—squamosus species-group.

C—angustibarbus species-group.

D—suillus species-group.

E—pellitus species-group.

F—comatus species-group.

Species 55	•	,	e e	Group Рап	e.
Species 5	,	ran	Page	Gro	Page
abuntius (Walker, 1849) E			88	carorum Londt, 1986 D 2	531
acrolophus Londt, 1988 F			12	chaineyi Londt, 1986 D 2	532
acrophilia Londt, 1988 F			13	chalcogaster Wiedemann, 1819 (= suillus)	
acuminatus Londt, 1985 A			56	chionthrix Hull, 1967 A 1	62
agrestis Londt, 1985			57	chrysopylus Londt, 1988 F 4	39
aktites Londt, 1985 A			58	chubbii Bromley, 1947 D 2	533
albion Curran, 1934 (= angola)			30	circus Londt, 1988	40
albocuneatus Hull, 1967 E		3 3	92	clavulus Londt, 1988 F 4	42
albofasciatus (Ricardo, 1900) E			93	coetzeei Londt, 1985	63
albopilosus (Ricardo, 1920) C			90	colubris Londt, 1988 F 4	43
albovittatus (Schiner, 1867) E			90 97	comatus (Wiedemann, 1821) F 4	44
albus (Loew, 1858) F			14	congoensis (Ricardo, 1920) D 2	534
algidus Londt, 1988 F			16	coronatus Londt, 1987 E 3	403
amazaenes Walker, 1849 (= abuntin		•	10	costatus Londt, 1988 F 4	46
americanus Macquart, 1846 (= suill	,			crassicolis Londt, 1985 A 1	64
amplus Londt, 1985 A	,	1 (	60	crassifemoralis Londt, 1986 D 2	536
anatolicus Londt, 1988 F			17	crenulatus Londt, 1985 A 1	65
angola (Curran, 1934) F			18	crinitus Londt, 1986 D 2	537
anguicolis Londt, 1985 A			61	cristatus Londt, 1988 F 4	47
angustibarbus (Loew, 1858) C			92	culinarius Londt, 1985	93
annae Londt, 1988 F			20	cupreus Loew, 1858 (= flavibarbis)	75
annettae Londt, 1988 F			21	currani Londt, 1988 F 4	48
anomalus Londt, 1986			19	cuthbertsoni (Curran, 1934) F 4	49
antidasophrys Londt, 1986 D			20	cymbius Londt, 1988 F 4	51
aphellas (Walker, 1849) F			22	cynthiae Londt, 1988 F 4	53
arboreus Londt, 1988 F			24	declivicauda Londt, 1988 F 4	54
argyphus Londt, 1988 F			25	depilis Londt, 1986 D 2	538
arno Curran, 1934 (= parvus)				destructor Londt, 1988 F 4	55
atopus Londt, 1986 D	:	2 5	21	diana Londt, 1988 F 4	56
atrox Londt, 1988 F			27	dichaetus Hull, 1967 F 4	58
attenuatus Hull, 1967 F		4 :	28	dispar Engel, 1927 (= abuntius)	
aureolocus Londt, 1988 F		4 :	29	dolabratus Londt, 1988 F 4	59
auribarbis Macquart, 1838 (= suillu	s)			dondoensis Londt, 1986 D 2	540
ausensis Londt, 1985 B		1 '	76	dysmicus Londt, 1988 F 4	60
avus Londt, 1988 F		4 :	30	efflatouni Londt, 1987 E 3	404
baeoura Londt, 1988 F	4	4 ;	31	elachipterus Loew, 1858 (= brevipennis)	
bamptoni Londt, 1987 E		3 39	98	elgon Oldroyd, 1939 F 4	62
bezzii Londt, 1986 D	- 2	2 53	22	ellenbergeri Londt, 1988 F 4	63
bicuspis Londt, 1985 B		1 ′	77	engeli Londt, 1988 F 4	64
bigoti Londt, 1988 F	4	4 :	32	ensiculus Londt, 1987 E 3	405
bimaculatus Londt, 1986 D		2 53	23	erythracanthus (Hermann, 1907) F 4	66
boa Londt, 1988 F		4 :	33	expandocolis Londt, 1985 A 1	66
botswana Londt, 1988 F	4	4 :	35	feijeni Londt, 1988 F 4	67
braunsi Londt, 1986 D		2 52	29	fimbriatus Hull, 1967 C 1	94
brendani Londt, 1988 F	4	1 :	36	flavibarbis (Macquart, 1838) D 2	541
brevicauda Londt, 1985 B		1 ′	78	floccus Londt, 1987 E 3	407
brevipennis (Macquart, 1838) E		3 39	99	forcipatus (Macquart, 1838) D 2	543
bromleyi Londt, 1987 E		3 40	01	fumosus Londt, 1988 F 4	68
brunales Londt, 1988 F		4 :	37	gemsbock Bromley, 1936 E 3	408
carnifex Londt, 1988 F		4 (	38	genitalis (Ricardo, 1925) F 4	70

# COMPLETE INDEX TO SPECIES OF NEOLOPHONOTUS COVERED IN THIS FOUR PART SERIES (cont)

Abbreviations: A — chionthrix species-group.

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	Group	7-	26	Group Рап	se
Species	Š	Part	Page	Grou	Page
gertrudae Londt, 1985	Ċ	1	95	mafingaensis Londt, 1988 F 4	97
gilvipilosus Londt, 1988	F	4	71	malawi Londt, 1988 F 4	98
gorongoza Londt, 1988	F	4	72	mamathesiana Bromley, 1947 (= spiniver	
gravicauda Londt, 1988	F	4	73	manselli Londt, 1986 D 2	564
grossus Bromley, 1936	Ď	2	544	margaracta Londt, 1988 F 4	99
haplotherates Londt, 1987	E	3	411	marshalli Hobby, 1934 E 3	417
hara Londt, 1986	D	2	545	mediolocus Londt, 1988 F 4	100
hessei Londt, 1986	Ď	2	547	megaphallus Londt, 1987 E 3	419
heteronevrus (Macquart, 1838)	Ē	3	412	meiswinkeli Londt, 1988 F 4	101
hilaryae Londt, 1988	F	4	74	melanolophus (Loew, 1858) F 4	102
hirsutus (Ricardo, 1920)	F	4	75	melanoura Londt, 1988 F 4	104
hirtipes (Ricardo, 1920)	Ď	2	548	melinus Londt, 1987 E 3	420
hobbyi Londt, 1988	F	4	77	membrana Londt, 1987 E 3	421
holmi Londt, 1988	F	4	79	membraneus Londt, 1988 F 4	105
holoxanthus Engel, 1927	D	2	549	mesotopus Londt, 1988 F 4	106
horridans Hull, 1967 (= suillus)				micropterus (Macquart, 1838) E 3	423
hulli Londt, 1988	F	4	80	microspinosus Hull, 1967 (= robustus)	
hymenotelus Londt, 1988	F	4	81	midas Londt, 1988 F 4	107
incisuralis Macquart, 1838 (= co	matu	ıs)		milleri Londt, 1985 A 1	69
io Londt, 1986	D	2	551	milvus Londt, 1988	108
iota Londt, 1988	F	4	82	minutus Hull, 1967 E 3	425
irwini Londt, 1986	D	2	552	molestus Londt, 1988 F 4	110
isse (Walker, 1849)	E	3	414	molitor (Wiedemann, 1828) E 3	426
jubatus Londt, 1988	F	4	83	montanus (Ricardo, 1920) F 4	111
junodi Londt, 1985	C	1	97	munroi Londt, 1987 E 3	428
kalahari Londt, 1985	C	1	98	namaqua Londt, 1985 A 1	70
karooensis Londt, 1987	E	3	415	namibiensis Londt, 1985 A 1	71
kerteszi Londt, 1988	F	4	84	nanus (Bezzi, 1906) F 4	112
kolochaetes Londt, 1986	D	2	553	natalensis (Ricardo, 1920) F 4	113
ktenistus Londt, 1986	D	2	554	necator Londt, 1988 F 4	114
labeonis Londt, 1988	F	4	86	nero Londt, 1988 F 4	115
lacustrinus Londt, 1988	F	4	87	nigricans Ricardo, 1920 (= albofasciatus)	
lasius Londt, 1988	F	4	88	nigripes (Ricardo, 1920) C 1	99
lawrencei Londt, 1985	В	1	79	nigriseta Londt, 1985 B 1	80
leechi Londt, 1988	F	4	89	nisus Londt, 1988 F 4	116
leoninus (Schiner, 1867)	D	2	556	niveus Londt, 1987 E 3	429
leptostylus Londt, 1988	F	4	90	noas Walker, 1849 (= aphellas)	
leucodiadema Londt, 1988	F	4	91	nodus Londt, 1988 F 4	118
leucopygus Engel, 1927	D	2	557	notius Londt, 1988 F 4	119
leucothrix Londt, 1985	Α	1	67	obtectocolis Londt, 1985 A 1	72
lightfooti Londt, 1986	D	2	559	obtusus Hull, 1967 (= robustus)	
lindneri Londt, 1988	F	4	93	occesilitus Londt, 1987 E 3	430
loewi Londt, 1988	F	4	94	occidualis Londt, 1988 F 4	120
loganius Londt, 1988	F	4	95	ochrochaetus Hull, 1967 E 3	431
longicauda Londt, 1988	F	4	96	oldroydi Londt, 1988 F 4	121
louisi Londt, 1986	D	2	560	orientalis (Ricardo, 1920) D 2	565
macquarti Londt, 1986	D	2	561	pachystylus Londt, 1988 F 4	123
macrocercus Londt, 1985	Α	1	68	parvus (Ricardo, 1920) F 4	124
macromystax Londt, 1986	D	2	562	pellitus (Wiedemann, 1819) E 3	433
maculipennis (Lindner, 1955)	E	3	416	penrithae Londt, 1988 F 4	126

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<b>6 .</b>	Group	Part	Page		Group	Part	Page
Species	_						
percus Londt, 1988	F	4	127	1	F	4	141
phoeax Walker, 1849 (= suillus)				spoliator Londt, 1987	E	3	447
pilosus Londt, 1986	D	2	566	squamosus Londt, 1985	В	1	83
pinheyi Londt, 1986	D	2	567	stannus (Ricardo, 1925)	D	2	580
pollex Londt, 1987	E	3	435	stevensoni Londt, 1985	В	1	84
porcellus (Speiser, 1910)	D	2	569	struthaulon Londt, 1987	E	3	449
pulcher Loew, 1858 (= micropter	rus)			stuckenbergi Londt, 1986	D	2	581
pusillus Londt, 1988	F	4	128	suillus (Fabricius, 1805)	D	2	583
quickelbergei Londt, 1988	F	4	129	swaensis Londt, 1985	C	1	105
ramus Londt, 1988	F	4	131	tanymedus Londt, 1986	D	2	586
raptor Londt, 1988	F	4	132	theroni Londt, 1985	В	1	85
raymondi Londt, 1987	E	3	436	tibialis (Macquart, 1838)	D	2	588
rapax (Ricardo, 1920)	C	1	101	. 1	С	1	106
rhodesiensis Hobby, 1933 (= rap				transvaalensis Ricardo, 1920 (= al	lbofa	ascia	tus)
rhodesii (Ricardo, 1920)	D	2	570		F	4	142
rhopalotus Londt, 1988	F	4	133		С	1	107
robertsoni Londt, 1985	Α	1	73	, <del>-</del>	В	1	86
robustus (Ricardo, 1922)	D	2	572	•	Ē	3	450
rolandi Londt, 1985	С	1	102	*	F	4	143
rossi Londt, 1986	D	2	575	,,,,,	Ē	3	451
rudi Londt, 1988	F	4	134	ursinus Schiner, 1867 (= leoninus)	_	,	131
rufulus Oldroyd, 1981 (= microp	terus	· .		ustulatus Loew, 1858 (= pellitus)	,		
rufus (Macquart, 1838)	D	2	576		E	3	452
rufus Hull, 1967 (= micropterus)		_		2 .	Ď	2	589
salina Londt, 1987	E	3	437	· · · · · · · · · · · · · · · · · · ·	F	4	144
sanchorus Londt, 1987	E	3	438		F	4	146
satanus Londt, 1987	E	3	439	,	F	4	147
saxatilus Londt, 1988	F	4	135		D	2	592
schalki Londt, 1985	В	1	81	5 .	F	4	148
schoemani Londt, 1985	č	1	103	· · · · · · · · · · · · · · · · · · ·	F	4	149
schofieldi Londt, 1988	F	4	136	•	г F	4	
setiventris (Loew, 1858)	E	3	442		_	-	150
seymourae Londt, 1986	Ď	2	577	•	F	4	153
sicarius Londt, 1988	F	4	137		F	4	154
similis (Ricardo, 1920)	F	4	138		D	2	593
sinis Londt, 1988	F	4	140		F	4	155
sinuvena Londt, 1987	E	3	443		С	1	109
soutpanensis Londt, 1986	D	2	579	<b>_</b>	D	2	594
spinicaudata Londt, 1985	В	1	82	<b>F</b>	D	2	595
spiniventris (Loew, 1858)	E	3	445	zulu Londt, 1985	С	1	110

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