

CONTENTS

INTRODUCTION.....	318
GENUS <i>STETHOMEZIUM</i>	318
GENUS <i>MEZIOMORPHUM</i>	324
GENUS <i>LEPIMEDOZIUM</i>	331
OPSOMMING.....	332
ACKNOWLEDGEMENTS.....	333
REFERENCES.....	333

INTRODUCTION

When Bellés (1985) revised the Gibbiinae (Ptinidae) four of the eight genera and seven of the 17 species were found to be endemic to southern Africa. While they are probably not uncommon in South Africa, they are seldom seen or collected. An exception occurs in caves with accumulations of bat guano, where ptinids may be exceptionally numerous, e.g. the 6000 specimens/m² recorded by Marais & Irish (1990) for an undescribed *Mezium* sp. in a Namibian cave. Apparently no South African ptinids are obligate cavernicoles; they reach high population densities in caves because whatever ptinids are present in the area opportunistically exploit the abundant food source represented by bat guano.

The three genera treated below were revised in order to provide identifications for use in an ongoing survey of southern African cave fauna. Besides these three, the genus *Mezium* Curtis also includes cavernicolous species, but the diversity of *Mezium* is sufficient to merit its separate treatment.

Due to the sensitive nature of cave ecosystems, geographical co-ordinates for caves in lists of localities below have been reduced to standard quarter degree references only.

Keys to Gibbiinae genera and generic diagnoses for the genera treated here may be found in Bellés (1985). Institutional abbreviations are as in Arnett & Samuelson (1986).

GENUS *Stethomezium* Hinton

Stethomezium Hinton, 1943: 50.

Falsomezium Pic, 1950: 1.

Examination of the holotype of *S. notiale* confirms Bellés' (1985) action of synonymising *Falsomezium* Pic, based on *S. notiale*, with *Stethomezium* Hinton.

KEY TO THE SPECIES OF *STETHOMEZIUM*

1. Median anterior elytral tuft pair widely separated, each nearer to the first laterad tuft than to each other (fig. 1b); procoxal cavities anteriorly open 2
- Median anterior elytral tuft pair contiguous or almost so, each nearer to the other than to either first laterad tuft (fig. 1a), at most the four mediad tufts subequidistant from each other; procoxal cavities anteriorly closed *S. notiale*
2. Elytra with rows of intercostal punctures *S. squamosum*
- Elytra smooth (beware of internal sculpture, visible through testaceous elytra, giving the impression of punctation: check for surface reflection of light)
..... *S. nooitgedag* sp. nov.

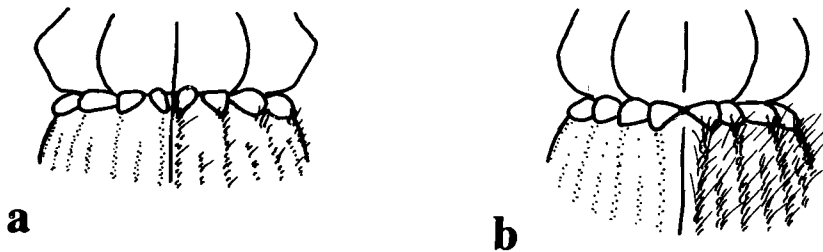


Figure 1: Anterior elytral tufts and surroundings, *Stethomezium* spp.
a. *S. notiale* Pér. b. *S. nooitgedag* sp. nov.

Stethomezium notiale (Péringuey)

Mezium notiale Péringuey 1899: 243; Pic, 1908: 139.

Falsomezium notiale (Péringuey): Pic, 1950: 1.

Stethomezium notiale notiale (Péringuey): Bellés, 1985: 64.

Pronotal callosities anteriorly narrow and relatively low, widening abruptly at half pronotal length into smooth high rounded processes. Callosities separated by waxless areas on anterior half of pronotum, but contiguous on posterior half. Basal elytral pubescent collar consisting of 4+4 rounded, yellow, wax encrusted setal tufts; the median pair contiguous, usually nearer to each other than to each first laterad tuft. Dorsal setal rows situated on very low, indistinct costae; rows well defined up to end of apical declivity. Intercostae each with a single row of large shallow punctures. Similar rows of punctures also between setal rows on lateral declivity, but no traces of costae there. Prosternum with raised anterior collar extending laterally to the pronotal angles, closing procoxal cavities anteriorly. Abdominal sterna 3 and 4 of similar length.

Material examined:

Holotype male, labelled: *Mezium notiale*, Typ., Py.; Type [red]; [male sign]; Type SAM/Ent 3853 [red] (SAMC).

A specimen in SAMC, collected in 1949, is labelled as the allotype of *Mezium notiale* in the late Dr. H. Andreae's handwriting. Andreae's designation was never published therefore this 'type' has no status. A number of SAMC specimens of *S. notiale* are also labelled as types of an unpublished Andreae species, some included in an unpublished Andreae genus. I find no grounds for separating these specimens from *S. notiale*; these types also have no status.

Additional material: 768 exx.; 556 (TMSA); 156 (SMWN); 25 (UPSA); 18 (SAMC); 10 (BMSA); 3 (ZMHB).

Distribution (fig. 2) and habitat: Common under coastal dune hummock vegetation along the west coast of southern Africa, probably attracted by the accumulations of detritus usually found under these hummocks, with a few inland records.

Literature localities. Péringuey 1899: Cape Colony, exact locality unknown; Bellés 1985: Port Nolloth.

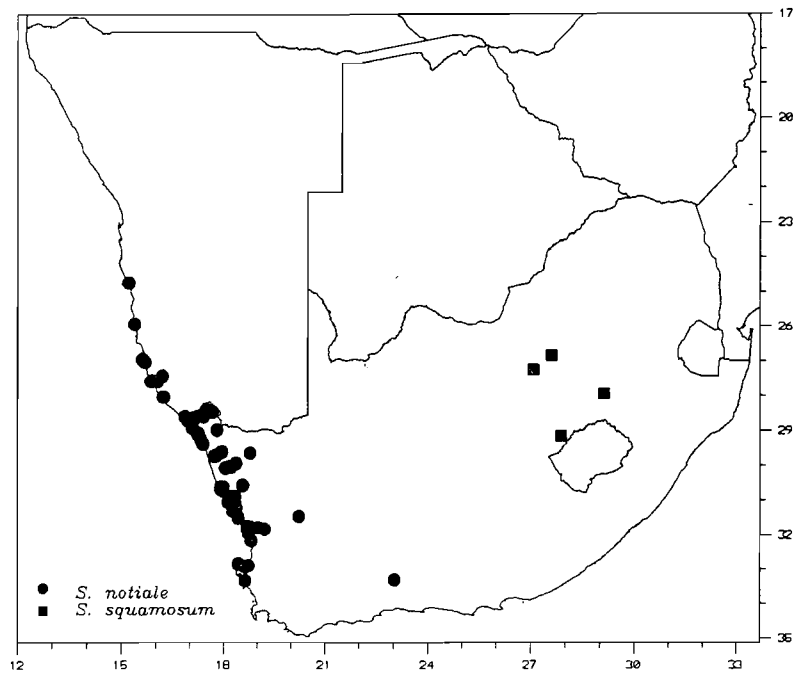


Figure 2: Distribution of *S. notiale* and *S. squamosum* (latter southern Africa only).

Localities of present material:

NAMIBIA. HARDAP REGION. MALTAHÖHE DISTRICT: Fischersbrunn, 24°37'S 14°44'E. KARAS REGION. LÜDERITZ DISTRICT: Saddle Hill North Fountain, 25°48'S 14°54'E; Atlas Bay, 26°49'S 15°08'E; Elisabethbucht, 26°54'S 15°12'E; Bogenfels, 27°27'S 15°23'E; Bogenfels turnoff, 27°28'S 15°33'E; Klinghardt Mts. at 27°18'S 15°42'E; Chameis, 27°54'S 15°43'E; 10 km N Oranjemund, 28°28'E 16°22'E; Oranjemund, 28°33'S 16°27'E; Orange River, 6 km from mouth, N Bank, 28°34'S 16°28'E.

SOUTH AFRICA. NORTHERN CAPE PROVINCE. NAMAQUALAND DISTRICT: Noemeesberg, 28°17'S 16°59'E; Annisfontein, 28°25'S 16°53'E; 9 km W Kuboos, 28°28'S 16°54'E; Brandkaros, at 28°28'S 16°39'E and 28°19'S 16°41'E; Farm Grootderm, 28°31'S 16°38'E; Rietfontein coast, 28°48'S 16°35'E; 2 km N Holgatriviermond, 28°51'S 16°43'E; Holgat Mouth, 28°58'S 16°43'E; Holgat River at 28°57'S 16°45'E; Paradysberge, 28°18'S 17°05'E; Claim Peak, 28°20'S 17°10'E; 5 km SE Stinkfontein, 28°51'S 17°18'E; Cliff Point, 29°06'S 16°49'E; Port Nolloth, 29°45'S 16°51'E; Buffelsrivier valley at 29°33'S 17°27'E; Buffelsrivier valley at 29°35'S 17°17'E; Buffelsrivier valley at 29°36'S 17°14'E; Mesklip, 29°49'S 17°52'E; Buffelsrivier at 29°55'S 17°39'E; Koringhuis Farm, 29°55'S 17°43'E; Wildepaarde Hoek, 29°57'S 17°33'E; 50 km E Springbok, 29°31'S 18°18'E; Gemsbokvlakte farm, 30°30'S 17°25'E; Gemsbokvlakte farm, 30°30'S 17°29'E; Strandfontein farm, 30°33'S 17°22'E; Bitterrivier mouth, 30°36'S 17°28'E; Dermbergdraai farm, 30°47'S 17°43'E; Rondawel farm, 30°47'S 17°50'E; 4 km S Island Point, 30°56'S 17°38'E; Kotzesrus, 30°57'S 17°50'E; Stallberg Pass, 30°27'S 18°04'E; Waterval Farm, 31°03'S 17°46'E; Rooidam Farm, 31°04'S 17°48'E; CALVINIA DISTRICT: Groot Toren, 39km NW Calvinia, 31°21'S 19°45'E; WESTERN CAPE PROVINCE. VANRHYNSDORP DISTRICT: Rooivlei farm, 31°05'S 17°52'E; Katdoringvlei, 31°07'S 17°52'E; Wiedou farm, 31°43'S 18°43'E; VREDENDAL DISTRICT: Tietiesbaai, 31°10'S 17°46'E; 15 km N Soutpan, 31°11'S 17°46'E; Hoekbaai, 31°11'S 17°47'E; 2 km ENE Hoekbaai, 31°11'S 17°47' E; Soutpan dunes, 31°15'S 17°52'E; 2.5 km NW Skulpbaai, 31°23'S 17°56'E; Papendorp dunes, 31°38'S 18°12'E; 20 km W Vredendal, 31°40'S 18°31'E; Near mouth of Olifant's River, 31°42'S 18°13'E; Doringbaai, 31°49'S 18°15'E; Seweputs coast, 31°59'S 18°17'E; CLANWILLIAM DISTRICT: Nortier farm, 32°03'S 18°19'E; PIKETBERG DISTRICT: 3 km E Velddrif, 32°46'S 18°14'E; VREDENBURG DISTRICT: Coast at Duiker Island, 32°43'S 17°56'E; 3 km S Velddrif, 32°48'S 18°08'E; HOPEFIELD DISTRICT: Geelbek Forestry, 33°12'S 18°08'E; PRINCE ALBERT DISTRICT: Zwartskraal farm, 33°10'S 22°32'E (The presence of the species at the latter isolated locality is based on a single specimen, and needs to be verified by additional sampling).

Stethomezium squamosum Hinton

Stethomezium squamosum Hinton, 1943: 51.

Stethomezium notiale squamosum (Hinton): Bellés, 1985: 66.

Pronotal callosities low and relatively narrow throughout, not forming prominent posteriad processes. Callosities separated by waxless areas on anterior half of pronotum, but

contiguous on posterior half. Basal elytral pubescent collar of 4+4 ill-defined tufts, not wax encrusted; median tuft pair widely separated, nearer to each laterad tuft than to each other. Dorsal setal rows situated on very low, indistinct costae; setal rows become diffuse and ill defined on apical declivity. Intercostae each with a single row of large shallow punctures. Similar rows of punctures also between setal rows on lateral declivity, but no traces of costae there. Prosternum with raised anterior collar not extending laterally, so procoxal cavities open anteriorly. Abdominal sternum 4 about half length of 3.

Bellés (1985) reduced *S. squamosum* to a subspecies of *S. notiale* after examining very few specimens of the latter. In the more abundant material treated here, I found these two and the third species described below to occupy discrete distribution ranges, with no evidence of intermediacy in characters at the distribution interfaces. *S. squamosum* is therefore restored to full species status.

Material examined:

Paratypes, 9 exx., labelled: From roots of *Maerua pedunculosa* from S.Africa.; GREAT BRITAIN: London, ii.1943, Brit. Mus. Nat. Hist., B.M.1950-324.; PARATYPE *Stethomezium squamosum*.Hntn.; Exchange ex B.M.[N.H.] (SAMC).

Additional material: 53 exx.; 42 (BMSA); 11 (SANC).

Distribution (fig. 2) and habitat: Evidently readily distributed by commerce. South African material is all from the Highveld Grassland Region, but there is no specific habitat data on the specimens.

Literature localities. Hinton, 1943: London, imported from South Africa and/or Egypt; Howe, 1949: 'Transvaal'; Bellés, 1984a: Manchester University; Bellés, 1985: Slough, England.

Localities of present material:

SOUTH AFRICA. NORTHWEST PROVINCE. POTCHEFSTROOM DISTRICT: Potchefstroom, 26°42'S 27°06'E. FREE STATE PROVINCE. BOTHAVILLE DISTRICT: Deelfontein 482, 27°07'S 26°35'E; REITZ DISTRICT: Beginsel 1284, 27°40'S 28°13'E; LADYBRAND DISTRICT: Nova 667.

Stethomezium nooitgedag sp. nov.

Pronotal callosities high and wide throughout, mostly contiguous, with waxless areas reduced to small spots near anterior margin only. Conspicuous dense long slender posteriorly directed setae protruding from wax. Basal elytral pubescent collar of 4+4 large rounded yellow wax encrusted tufts, the median pair separated and nearer to each laterad tuft than to each other. Elytra externally smooth and incostate; internal sculpture resembling the intercostal puncture rows of the other *Stethomezium* spp. often visible through the semi-transparent elytra. Elytral setal rows become diffuse and ill defined on apical declivity. Prosternum without raised anterior collar, procoxal cavities open anteriorly. Abdominal sterna 3 and 4 of similar length.

Etymology: from the Afrikaans 'nooit gedag', meaning 'unexpected', based on the type locality, but treated here as a noun in apposition.

Material examined:

Holotype male, labelled: NAMIBIA, Nooitgedag Cave, KARIBIB DIST., 2154S,1603E [sic!; =2145] // 16 Apr. 1991, J. Irish (BMSA).

Paratypes: 137 exx.; 66 (SMWN); 27 (BMSA); 24 (SANC); 11 (TMSA); 9 (GRSW); labelled:

Same data as holotype (BMSA); 23 exx.

NAMIBIA, KARIBIB DIST., Uhlenhorst Cave, Nooitgedag, 21°45'S,16°04'E // 3 Julie 1993, J. Irish, in dark zone (BMSA); 4 exx.

Märchenhöhle, GROOTFONTEIN DISTR., SE 1917Cb, 30.VIII.1990, E. Marais, In cave (SMWN); 8 exx.

Gifgat 2, NAMIB-NAUKLUFT PARK, SE 2215Da, 19.V.1990, E. Marais, J. Irish, In cave (SMWN); 49 exx.

Arnhem Cave, WINDHOEK DISTRICT 22°42'S, 18°07'E, 14.VIII.1987, J.Irish, E.Marais (SMWN); 1 ex.

South West Africa, Gobabeb, Jan 28, 1979, Wharton. Coll. (GRSW); 8 exx.

South West Africa, Gobabeb, Jan 28, 1979, Wharton. Coll., H38833 (SMWN); 3 exx.

South West Africa, Gobabeb, 10 km E // I-28-1979, Wharton #217 (GRSW); 1 ex.

SOUTH WEST AFRICA, Namib / Naukluft Park, Kuiseb R nr. Gobabeb, 23.34S 15.03E, 18.ii-20.iii.1983, Nat. Col. Kuiseb Survey // unbaited pit trap (SANC); 11 exx.

S.W. Afr.; Komashochl., Us Pass, 42 km Park, 23.04S - 15.55E // 1.9.1975, E-Y: 903, groundtraps 75 days, leg. Endrödy-Younga (TMSA); 5 exx.

S.W.Afr., KhomasHl., Farm Chanquas [sic!, = Changans], 23.04S-15.55E // 7.7.1978, E-Y: 1473, groundtraps, 3 years, leg. Endrödy-Younga (TMSA); 4 exx.

Verloren Cave, SE 2316Ab, 29-30.vi.1993, E. Marais, In Cave (SMWN); 2 exx.

Merkerhöhle, MALTAHÖHE DISTRICT, SE 2416 Ab, 26.V.1990, E.Marais, J. Irish, In cave (SMWN); 3 exx.

SOUTH AFRICA, OFS, Bloemfontein, 29.07S 26.31E, J. Viljoen // ACP 7656 // *Stethomezium squamosum* Hinton det. J. Viljoen (SANC); 5 exx.

SOUTH AFRICA CP., Graaff Reinet, 32.15S 24.32E, iv.1984, Mrs. Paoloni (SANC); 8 exx.

S. Afr., S.W. Cape, Robertson 15km W, 33.50S - 19.45E // 5.12.1978; E-Y: 1523, groundtraps, 90 days, leg. Endrödy-Younga, groundtraps with meat bait (TMSA); 1 ex.

S.Afr., Cape-Karoo, Farm. Zwartskraal, 33.10S-22.32E // 8.11.1978; E-Y: 1540, groundtraps, 70 days, leg. Endrödy-Younga // groundtraps with ferm. banana bait (TMSA); 1 exx.

Additional material, not designated as types: 72 exx.; 33 (SMWN); 20 (SAMC); 16 (TMSA); 2 (UPSA); 1 (BMSA).

Distribution (fig. 5) and habitat: Widespread in western Southern Africa. Common on bat guano in caves; outside caves recorded from leaf litter.

Localities:

NAMIBIA. OKAVANGO REGION. RUNDU DISTRICT: Rundu, 17°55'S 19°46'E; KUNENE REGION. OPUWO DISTRICT: Orupembe, 18°10'S 12°33'E; Möwebaai, 19°17'S 12°43'E; Hoanib River ca. 4 mi. inland / Hoanib Waterhole, 19°26'S 12°49'E; OTJOZUNDJUPA REGION. GROOTFONTEIN DISTRICT: Märchenhöhle, SE 1917Cb; ERONGO REGION. KARIBIB DISTRICT: Nooitgedag Cave, SE 2116Cc; Nooitgedag Cave 2 / Nooitgedag Uhlenhorst Cave, SE 2116Cc; Nooitgedag Cave 3, SE 2116Cc; Gifgat Cave 2, SE 2215Da, SWAKOPMUND DISTRICT: Omaruru River Mouth, 22°05'S 14°16'E; Gobabeb and vicinity, 23°34'S 15°03'E; 10 km E Gobabeb, 23°34'S 15°08'E; KHOMAS REGION. WINDHOEK DISTRICT: Arnhem Cave, SE 2218Ca; Farm Changans / Us Pass Road at 23°04'S 15°55'E; Verloren Cave, SE 2316Ab; HARDAP REGION. MALTAHÖHE DISTRICT. Merkerhöhle, SE 2416Ab; Naukluft, 24°16'S 16°15'E.

SOUTH AFRICA. NORTHERN CAPE PROVINCE. NAMAQUALAND DISTRICT: Helskloof summit, 28°20'S 16°59'E; FREE STATE PROVINCE. BLOEMFONTEIN DISTRICT. Bloemfontein, 29°07'S 26°14'E; EASTERN CAPE PROVINCE. GRAAFF-REINET DISTRICT. Graaff Reiniet, 32°15'S 24°32'E; WESTERN CAPE PROVINCE. ROBERTSON DISTRICT: 15 km W Robertson, 33°50'S 19°45'E; PRINCE ALBERT DISTRICT, Farm Zwartskraal, 33°10'S 22°32'E. INDETERMINATE: Cape Town, on dried herbs from Laingsberg (?Laingsburg).

GENUS *Meziomorphum* Pic

Meziomorphum Pic 1898: 169; Bellés 1985: 66.

Only one *Meziomorphum* species was previously known. Besides the three new species described below, there are additionally four potentially undescribed species. They are represented by material inadequate for description, but I have included them in the key and briefly discussed them below in the hope of stimulating further collecting.

KEY TO THE SPECIES OF *MEZIOMORPHUM*

1. Integument, especially elytra, brown; pubescence golden yellow 2
- Integument, especially elytra, black; pubescence silvery white 7
2. Only one row of spines originating on humeral angle of elytron (figs. 3a, b) 3
- Two spinal rows originating on humeral angle of elytron (figs. 3c-f) 4
3. Pronotum with a small posteromedian wax process (fig. 3a) *M. echinatum*
- Pronotum lacking a posteromedian wax process (fig. 3b) *Meziomorphum* sp. D
4. Each elytron with three longitudinal rows of spines, running the full length of the elytra (figs. 3c, d) 5
- Each elytron with four longitudinal rows of spines, of which three run the full length of the elytra and the fourth is developed in posterior half only (fig. 3e, f) 6