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New or interesting Anapidae (Arachnida, Araneae)

by

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with 35 text-figures

Abstract

This paper is a review of the genera of the Anapidae; the generical characters are discussed and diagnoses are proposed for all known genera.

The new genera *Forsteriola*, *Teutoniella* and *Metanapis* are described, together with the new species *Pseudanapis serica*, *Ps. schauenbergi*, *Anapogonia pilupilu*, *Crozetulus rhodesiensis*, *Metanapis mahnerti*, *Teutoniella plaumanni*, *Anapisona platnicki*. *Speleoderces* Lawrence, 1964 is put in synonymy of *Crozetulus* Hickman, 1939; *Zangherella* di Caporiacco, 1949 is revalidated.

Since long I have in study a considerable number of obviously new Anapidae from different parts of the world; I meant initially to limit myself to describe these new species, but, as became evident during the preparation of this paper, the limits between the different genera of the recently revalidated Anapidae (Forster & Platnick 1977) are so confused that most of the new species could have been described simply as *Pseudanapis*, notwithstanding enormous differences in the structure of their genitalia.

I resolved therefore to expand a little this study and to include in it a discussion on the existing nominal genera. Only in a few cases it was possible to me to examine some types; my interpretations of some genera may be therefore faulty.

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INTRODUCTION

PLATNICK & SHADAB (1978) have illustrated the history of the family Anapidae; to their review must be added the descriptions (in other families) of the genera *Conoculus* Komatsu, 1940, *Zangherella* di Caporiacco, 1949, *Gossiblemma* Roewer, 1963 and *Speleoderces* Lawrence, 1964.

Conoculus was attributed to the Symphytognathidae by YAGINUMA (1963); *Zangherella* by LEVI & LEVI (1962): in my paper of 1970 I proposed to put it in synonymy of *Pseudanapis* Simon, 1905, but, as we shall see, I believe now that this name can be used for some Mediterranean species.

The generotype of *Gossiblemma* is identical with *Pseudanapis aloha* Forster, 1959, following SHEAR (1978), whereas *Speleoderces* was transferred to the Anapidae by myself (BRIGNOLI 1978*b*).

PLATNICK & SHADAB *(op. cit.)* noted that most of the characters of the Anapidae are not unique of this group, with the apparent exception of the labral spur, which may justify their status as an independent taxon. Evidently, we need to know more on them and on some possibly related other Araneoidea (*Comaroma*, *Pholcomma* etc.) before affirming that between them and the other families there is a decided gap.

THE GENERA OF THE ANAPIDAE

As I already pointed out, my original purpose was not that of reviding the family (a task on which other arachnologists work), but, for placing correctly the species I had in study, it appeared unavoidable to try to define in some way the existing genera. Most of these have been created independently from each other and it is often difficult to ascertain if, and eventually, by what characters, they can be distinguished from each other.

I could not examine most of the generotypes (in loan to other researchers); my interpretations are therefore based on the literature and on the material I had at hand.

My own evaluation of the possible generical characters is as follows:

i. general morphology: the prosoma can be more or less specialized (e. g. elevated in the ocular region, with punctures, ridges etc.) and the opisthosoma can be roundish, flattened or even conical, sclerotized at a different degree. There are slight differences between most species, often less than those existing between species of other families (e. g. Erigonidae) which have genitalia of the same type. Until we shall know more species it is difficult to appreciate the real value of this character.

ii. Eyes: varying between six or eight, disposed quite conventionally. Surprisingly PLATNICK & SHADAB (1978) seem to attribute, following GERTSCH (1941) a certain

generical value to the position of the eyes, but I do not understand then why they place *Epecthinula* Simon, 1903 in synonymy of *Anapis*, Simon, 1895 ignoring the different position of the eyes of the generotypes (*E. minutissima* Simon, 1903, does not at all correspond to *Anapis* or *Epecthina* in eye relations, as PLATNICK & SHADAB (1978: 3), write, because of the « oculi... quatuor antici marginem frontalem occupantes » [SIMON 1903: 28], which means that this species has the eyes disposed as in *Anapis mexicana* Forster, 1958, but not as in the generotype of *Anapis*, *A. hetschki* (Keyserling, 1886), see PLATNICK & SHADAB (*op. cit.*, figs. 5-6). Such a kind of character is now rarely used in spiders, and only in cases in which there are evident apomorphies.

iii. Legs: I did not study in detail the structure of the legs, but there seem to be little differences between most genera. Trichobothriotaxy is used largely in other families, notwithstanding the mostly slight differences between the genera, the usually unknown range of variability and the largely unknown biological meaning of this character.

iv. Pedipalp of the female: presence or absence of it seems of limited value, as there are apparently related species with normal and with reduced palpi.

v. Chelicerae: the detailed structure of many genera is still unknown; there seem to be few specializations.

vi. Male genitalia: the pedipalp is usually more or less modified; the bulbus is often relatively simple. The basic patterns are not many.

vi. Female genitalia: of the normal, entelegyne type; a true epigyne is usually lacking. The copulatory ducts can be long or short, coiled or straight, often they are preceded by a less sclerotized poach (bursa).

Which of these characters have generical value? As in most animal groups, also in the spiders there are genera based on widely different conceptions of the genus as a taxon; in recent years the genitalia have been more used as characters than in the past, but there are still (and shall always be) differences of opinion between arachnologists.

An accurate study of the genitalia seems to bring always to a multiplication of the nominal genera, at least in a first moment, in which a detailed investigation of the structure of the bulbi is still lacking and in which more emphasis is laid on the differences than on the similarities. In a second moment, some genera disappear and a true "system" is proposed. An example of this situation are the Linyphiidae.

Some other authors seem to disapprove, mostly for practical reasons, this multiplication of names and, from the beginning dwell more on the similarities than on the differences (this is the already classical dispute between lumpers and splitters); I can not abstain from observing that the papers of most modern lumpers are formally far less accurate and detailed than those of most splitters. Through this reason, it is difficult if not impossible, to compare the two points of view and decide which is more correct (a perhaps forever impossible decision) or, at least, to appreciate which of these working methods brings to the least questionable results.

Many authors, for a series of reasons, also technical, rely very little on the female genitalia; this is infortunate as in most Entelegynae there are evident functional correlations between the genitalia of the two sexes.

REVIEW OF ALL NOMINAL GENERA

Anapis Simon, 1895

Amazula Keyserling, 1886, *Spinnen Amerikas. Theridiidae*, 2 (2): 254.
Anapis Simon, 1895, *Hist. nat. des Araignées* 1 (4): 927 (nom. nov. pro *Amazula*, prae-occ. KRAATZ).
A., PLATNICK & SHADAB 1978, *Am. Mus. Novit.*, 2663: 8. Generotype: *Amazula hetschki* Keyserling, 1886 by monotypy.

Remarks: a review of this genus has been recently published by PLATNICK & SHADAB (1978), who have put in synonymy of it *Epecthina* Simon, 1895 and *Epecthinula* Simon, 1903. Following these authors, *Amazula* has been wrongly interpretated by SIMON, who has attributed to it (1895, 1897, 1899) species belonging to other genera. This interpretation follows those of GERTSCH (1941) and FORSTER (1958) and is confirmed by the examination of the generotype. I do not know this genus in nature.

Diagnosis: small or very small Anapids with not very specialized prosoma, sclerified, roundish, flattened or pointed abdomen, palpus of the female present, reduced or absent; palpus of the ♂ with few specializations, femur with no apophyses, patella slightly modified, tibia small, nearly equal to the patella in length, cymbium oval, slightly pointed, embolus of different length, surrounded by a conspicuous ridged conductor; ♀ genitalia: vulva apparently with no bursae, copulation ducts of different length, ending in well visible spermathecae.

Other species: PLATNICK & SHADAB (1978) attribute to this genus most American Anapids, e.g. fifteen new species described by them (from Costa Rica, Colombia, Venezuela, Ecuador and Peru) together with *A. keyserlingi* Gertsch, 1941 (Panama), *A. mexicana* Forster, 1958 (Mexico), *A. discoidalis* (Balogh & Loksa, 1968) (Brazil, described as *Pseudanapis)* and the generotypes of *Epecthina* and *Epecthinula.*

Whereas the known males have a relatively uniform structure and could, also in my opinion, belong to a single genus, I am a little intrigued by some differences in the structure of the vulvae (perhaps due only to incomplete illustrations).

Until now, *Anapis* seems limited to the Americas.

Chasmocephalon O. Pickard Cambridge, 1889

Ch. O. Pickard Cambridge, 1889, *Proc. Zool. Soc. Lond.* (1889): 45.
Ch., SIMON, 1895, *Hist. nat. des Araignées*, 1 (4): 928.
Ch., HICKMAN, 1944, *Pap. Proc. R. Soc. Tasm.* (1943): 180.
Generotype: *Ch. neglectum* O. Pickard Cambridge, 1889 by monotypy.

Remarks: the lack of an adequate description of the generotype leaves open many doubts on the real identity of this genus. For SIMON (1895) it could be distinguished from *Anapis* only by the presence of eigth eyes, instead of six. As no species similar to *Anapis* has been found in the Australian region, *Chasmocephalon* should be congenerical with some of the many species now known from this region. The interpretation of this genus given by HICKMAN (1944) could be right, in any way there is no better one available.

Diagnosis: very small Anapids, with specialized prosoma, sclerified, flattened abdomen, reduced palpus in the ♀; palpus of the ♂ not very specialized: femur with no apo-

physis, patella and tibia of nearly equal length, each with small apophyses, oval cymbium, simple bulbus with a conspicuous, complicated conductor; ♀ genitalia: vulva apparently with no bursae, long copulation ducts, well separated from the spermathecae.

Other species: the here published diagnosis is based practically on that of *Ch. minutum* Hickman, 1944 from Tasmania (*Ch. neglectum* came from the Swan River region, Western Australia); of the species described by FORSTER (1951) from New Zealand, two have been removed by the same author (1959) to *Risdonius* and *Pseudanapis* (see later) and are indeed not similar to *Ch. minutum*; *Ch. armatum* Forster, 1951, (= *Ch. australe* Forster, 1951, cfr. FORSTER 1959) on the other side, has a conspicuous two-pronged conductor similar in some way to that of *Ch. minutum*. *Ch. bimaculatum* Simon, 1895 from Southern Africa (if the ♂ illustrated by FAGE 1937, is truly that of this species, described on the ♀), should belong to what I call *Metanapis* (see later). The puzzling *Ch. shantzi* Gertsch, 1960 from California and Oregon has a specialized femur and a very long embolus: it does not fit in any of the genera I know. *Ch. crassifemoralis* Wunderlich, 1976 belongs for me to *Anapogonia* (see later).

Epecthina Simon, 1895

E. Simon, 1895, *Hist. nat. des Araignées*, 1 (4): 928.
Generotype: *E. circinata* Simon, 1895 by original designation.

Remarks: an adequate description of the generotype (♀ only known, from Venezuela) did not exist until that of PLATNICK & SHADAB (1978); by the structure of the female genitalia, this species fits reasonably well in *Anapis*, as limited by the American authors; a synonymy should be therefore justified (still, a more detailed study of the female genitalia could be useful).

Epecthinula Simon, 1903

E. Simon, 1903, *Ann. Soc. ent. Belg.*, 47: 27.
Generotype: *E. minutissima* Simon, 1903 by monotypy.

Remarks: the single known specimen (♀, from Jamaica) has not been found by PLATNICK & SHADAB (1978), who as I already noted, have proposed a synonymy of this genus with *Anapis* because of a similarity in the position of the eyes (true, but not with the generotype of *Anapis*).

Until the type or other material from Jamaica shall be found, the status of this genus is questionable.

Pseudanapis Simon, 1905

Ps. Simon, 1905, *Mitt. naturh. Mus. Hamb.* 20: 64.
Ps., PLATNICK & SHADAB, 1979, *Am. Mus. Novit.*, 2672:1 6. (non *Pseudanapis* sensu BERLAND 1924, KRATOCHVIL 1935, DI CAPORIACCO 1949, BALOGH & LOKSA 1968, BRIGNOLI 1968, 1978*a*, FORSTER 1974; partim *Ps.* sensu FORSTER 1959; non *Chasmocephalon* sensu WUNDERLICH 1976).
Generotype: *Anapis paroculus* Simon, 1899.

Remarks: from what he writes, SIMON (1905) seems to have noticed the reduction of the ♀ pedipalp examining the species he called *Anapogonia lyrata*; this fact brought him to examine again the *Anapis* he had until then described: only in the (Northern) African and Asiatic species the palpus was found lacking; principally for this reason

he instituted the genus *Pseudanapis*, which for the rest, he believed identical to *Anapis*. The generotype has been recently illustrated by PLATNICK & SHADAB (1979) on a couple of individuals seen by SIMON coming from Java; their interpretation is correct, as demonstrated by the examination of the ♀ holotype (from Sumatra).

As in many other similar cases, most authors have abstained to attribute species to the other Anapid genera and have preferred to describe them as *Pseudanapis*, because only of this genus existed an illustration (SIMON 1905).

Pseudanapis has a characteristic vulva, very different from that of the other genera; the pedipalp of the male is structurally similar to that of *Anapisona*.

Diagnosis: small Anapids with specialized prosoma, sclerified, roundish or flattened abdomen, palpus of the ♀ absent or weakly developed; palpus of the ♂ specialized, similar to that of *Anapisona*, femur with strong apophyses, specialized patella, small inconspicuous tibia, oval cymbium, short and strong embolus, apparently more or less fused with a conductor; ♀ genitalia: vulva with no bursae, extremely short copulation ducts.

Other species: it is evident from this diagnosis that few of the described *Pseudanapis* fit into the so limited genus; near to the generotype are *Ps. serica* n. sp. from Hong Kong and *Ps. schauenbergi* n. sp. from Mauritius (see later); the two species I recently described from Nepal (BRIGNOLI, 1978a) belong probably to *Metanapis* (see later).

The two-three Western Palearctic species have a less specialized palpus and a vulva with longer ducti; for them is available the name *Zangherella* (see later).

Somewhat problematic is the placement of three species attributed to this genus by PLATNICK & SHADAB (1979); the African (Zaire) *Ps. benoiti* Platnick & Shadab, 1979 could fit in *Pseudanapis*, but is a little more specialized than the other known species. I am very puzzled by the two American *Ps. gertschi* (Forster, 1958) (transferred from *Anapisona)* and *Ps. domingo* Platnick & Shadab, 1979: these species appear to have a relatively specialized patella, a simple, straight embolus and a vulva with long ducti. In my opinion they could be placed in another — still undescribed — genus.

None of the five African species described by FORSTER (1974) is in any way similar to the generotype by the structure of the genitalia; *Ps. plutella* would belong to *Metanapis*, *Ps. proloba* and probably *Ps. rugosa* to the new genus *Forsteriola*, *Ps. rotunda* probably to *Crozetulus*; *Ps. plumbea* finally is of uncertain position (vulva not completely illustrated).

PLATNICK & SHADAB (1978) have attributed the single known South American species, *Ps. discoidalis* Balogh & Loksa, 1968 to *Anapis*.

A little more specialized than the generotype, but possibly "true" *Pseudanapis*, are, of the many Australian species, only *Ps. wilsoni* Forster, 1959 and *Ps. aloha* Forster, 1959 (= *Gossiblemma yapensis* Roewer, 1963, cfr. SHEAR 1978); *Ps. insolita* Berland, 1924, *Ps. burra* Forster, 1959 and *Ps. darlingtoni* Forster, 1959 should belong to what I call *Anapogonia*; *Ps. octocula* Forster, 1959 could be a *Risdonius* whereas *Ps. spinipes* (Forster, 1951), *Ps. insula* (Forster, 1951) (both described as *Chasmocephalon*) and *Ps. grossa* (Forster, 1959 are of uncertain position.

Anapogonia Simon, 1905

A. Simon, 1905, *Mitt. naturh. Mus. Hamb.* 20: 64.
(= partim *Pseudanapis* sensu BERLAND 1924, FORSTER 1959; *Chasmocephalon* sensu WUNDERLICH 1976).
Generotype: *A. lyrata* Simon, 1905 by monotypy.

Remarks: from the description this genus appears different from *Anapis* and *Pseudanapis* for the less specialized prosoma and the cone-shaped abdomen; the reduced ♀ palpus would allow to distinguish it from *Epecthina*. I have no material from Indonesia which corresponds to the description by SIMON, but from New Caledonia I have seen two species (*Pseudanapis insolita* Berland, 1924 and a new one) which have a conical abdomen and distinctive genitalia which do not correspond to any of the examined genera. Instead of creating a new name, I prefer to attribute them, at least provisionally to *Anapogonia*. My diagnosis of *Anapogonia* is based on these two species and could be evidently wrong.

Diagnosis: small or medium-sized Anapids with not very specialized prosoma (anteriorly elevated, thorax smooth); abdomen leatherish, not sclerified, cone-shaped, similar to that of *Argyrodes*, palpus of the ♀ absent; palpus of the ♂ not very specialized: femur with no apophysis, patella with a small apophysis, tibia not specialized, more or less equal to the patella; cymbium large, somewhat truncated, embolic region of the bulbus complicated, with some laminar apophyses; vulva with no bursae, long spiraled ducti.

Other species: the generotype is known from Java; the other species — if my interpretation is correct, would be *A. insolita* (Berland, 1924) **comb. nov.**, *A. pilupilu* n. sp. from New Caledonia (see later), *A. burra* (Forster, 1959) **comb. nov.**, *A. darlingtoni* (Forster, 1959) **comb. nov.** and *A. crassifemoralis* (Wunderlich, 1976) **comb. nov.** from Australia.

Crozetulus Hickman, 1939

C. Hickman, 1939, *Brit. Austr. New Zeal. Antarct. Res. Exped. Rep.*, (B) 4: 183.
Generotype: *C. minutus* Hickman, 1939 by monotypy.

Remarks: known only on the male (from Possession Island, Crozet Archipelago, Southern Indian Ocean); this genus has never been compared with the others known. See later *(Speleoderces)*.

Diagnosis: small Anapids with high, but not very specialized prosoma; abdomen roundish-flattened, sclerified; palpus of the ♂ not very specialized: femur with no apophyses, very long patella with two small apophyses, very short, unspecialized tibia, cymbium oval, embolus large, strong, curved.

Other species: see later *(Speleoderces)*.

Risdonius Hickman, 1939

R. Hickman, 1938 (1939*a*), *Proc. zool. Soc. Lond.* 108: 655.
Generotype: *R. parvus* Hickman, 1939 by original designation.

Remarks: also this genus has never been compared with the other known. To the generotype (from Tasmania) FORSTER (1951, 1959) has added another species from New Zealand.

Diagnosis: small Anapids with high, but not very specialized prosoma (more or less as in *Crozetulus*); abdomen elevated, conical, sclerified; palpus of the ♂ not very specialized: femur with no apophyses, short patella with an apophysis, short tibia, with an apophysis, oval cymbium, embolic region of the bulbus complicated, with an apparently large, hollow shaped conductor; ♀ genitalia with possibly a bursa,

relatively long, straight ducti and a terminal spermatheca (the illustration by HICKMAN is unclear).

Other species: *R. conicus* (Forster, 1951), described as *Chasmocephalon*, is similar to the generotype by general morphology, but there is no apophysis on the tibia and the embolic region is simpler. To this genus belongs possibly also *R. octoculus* (Forster, 1959) comb. nov. (from *Pseudanapis*).

Conoculus Komatsu, 1940

C. lyugadinus Komatsu, 1940, *Acta arachn., Tokyo* 5: 190 (following PAIK 1971: 6, description of the n. sp. but not of the n. g.).
C. lyugadinus, YAGINUMA, 1963, *Bull. Akiyoshi-dai Sci. Mus.* 2: 53 (notes on the taxonomical position).
C., YAGINUMA, 1968 (1971), *Spiders of Japan*, 125 (diagnosis, Japanese).
Generotype: *C. lyugadinus* Komatsu, 1940 by monotypy.

Remarks: until recently this genus (described as a Linyphiid) was unknown outside of Japan; it has never been compared with the other genera. My diagnosis is based on the papers by YAGINUMA (1963, 1971) and PAIK (1971).

Diagnosis: medium sized Anapids, with relatively unspecialized prosoma; abdomen oval, elevated, not sclerotized; palpus of the ♂ not very specialized: femur with no apophyses, small patella, somewhat specialized, nearly unspecialized tibia, longer than the patella; oval cymbium, embolic region of the bulbus very simple, with short embolus, apparently attached to a short conductor; ♀ genitalia with no bursae, very short copulation ducts, well separated from the spermathecae; ♀ pedipalpus apparently present.

Other species: PAIK (1971) has described from Korea *C. simboggulensis*; the genus is apparently limited to Japan and Korea.

Zangherella di Caporiacco, 1949

Z. di Caporiacco, 1949*a*, *Redia* 34: 259.
Z., LEVI & LEVI, 1962, *Bull. Mus. comp. Zool. Harv.* 127: 32 (taxonomical position).
Z., BRIGNOLI, 1970, *Bull. Mus. natn. Hist. nat. Paris* 41: 1413 (generotype synonym of *Pseudanapis algerica*).
Generotype: *Zangherella minima* di Caporiacco, 1949 by monotypy (= *Anapis algerica* Simon, 1895).

Remarks: this genus, described in the Theridiidae, was transferred to the Symphytognathidae by LEVI & LEVI (1962); the discovery of the synonymy of the generotype with *Pseudanapis algerica* prompted me to propose a synonymy with *Pseudanapis*. The Mediterranean *Pseudanapis* have indeed little in common with the "true" *Pseudanapis* and the name *Zangherella* can be therefore used for them. For illustrations of the different species, see KRATOCHVIL (1935) and BRIGNOLI (1968).

Diagnosis: small Anapidae with relatively unspecialized prosoma; roundish or flattened, sclerotized abdomen; ♂ palpus relatively specialized with long trochanter, femur with a short apophysis, long patella, with a short apophysis, short tibia (more or less equal to the patella), partially fused with the cymbium; embolic region of the bulbus very simple, embolus relatively short and stumpy, no evident conductor; ♀ genitalia: vulva with no bursae, relatively long ducti, well separated from the spermathecae; ♀ pedipalpus absent.

Other species: not considering the generotype, *Z. algerica* (Simon, 1895) **comb. nov.**, the only other sure species is *Z. relicta* (Kratochvil, 1935) **comb. nov.**, a probable synonym of which is *Z. apuliae* (di Caporiacco, 1949) **comb. nov.** The genus is apparently limited to the Mediterranean.

Anapisona Gertsch, 1941

A. Gertsch, 1941, *Am. Mus. Novit.* 1146: 4.
A., Forster 1958, *Am. Mus. Novit.* 1885: 11 (partim).
A., Platnick & Shadab 1979, *Am. Mus. Novit.* 2672: 6.
Generotype: *A. simoni* Gertsch, 1941 by original designation.

Remarks: to this very specialized genus belong some American species described by Gertsch (1941), Forster (1958) and Platnick & Shadab (1979); for Simon (1897) these were the "true" *Anapis*.

Diagnosis: small or medium sized Anapids, with more or less specialized prosoma; roundish abdomen, more or less sclerotized; ♀ pedipalp present; palpus of the ♂ very specialized: femur with a strong apophysis, patella modified, often elongated, reduced tibia, transformed in a pointed apophysis, oval cymbium (Gertsch 1941, writes of a "paracymbium" supporting the embolus), simple bulbus, with a more or less long coiled free embolus; ♀ genitalia in some cases with an initial bursa and spermathecae not sharply separated from the copulation ducti, in other species the ducti are very evident, long and coiled.

Other species: to this genus belong also *A. furtiva* Gertsch, 1941, *A. kartabo* Forster, 1958, *A. platnicki* n. sp. and six American species described by Platnick & Shadab (1979); *A. gertschi* Forster, 1958 has been transferred to *Pseudanapis* by Platnick & Shadab *(op. cit.)*.

Gossiblemma Roewer, 1963

G. Roewer, 1963, *Insects of Micronesia*, 3 (4): 129.
G., Shear 1978, *Am. Mus. Novit.* 2650: 8 (synonymy with *Pseudanapis*).
Generotype: *G. yapensis* Roewer, 1963, by monotypy (= *Pseudanapis aloha* Forster, 1959).

Remarks: genus described as belonging to the Hadrotarsidae; judging from the illustrations of *Ps. aloha* by Forster (1959) and Suman (1967) there is little doubt that this species belongs to *Pseudanapis* as defined here. There is therefore no need of the name *Gossiblemma*.

Speleoderces Lawrence, 1964

S. Lawrence, 1964, *Ann. S. Afr. Mus.* 48: 62.
S., Brignoli 1978*b*, *Revue suisse Zool.* 85: 113 (transferred to the Anapidae).
Generotype: *S. scutatus* Lawrence, 1964 by original designation.

Remarks: genus described as belonging to the Leptonetidae Ochyroceratinae. I do not know in nature the male of this species; the female is a typical Anapid with developed palpi, a characteristic vulva, with long and slender ducti, well separated from the spermathecae, which are double; I know also a species from Rhodesia with, as a whole, similar genitalia, but with simple spermathecae and reduced palpi. No other Anapid genus has a structure of the genitalia of this kind (somewhat similar are *Zangherella* and possibly

Risdonius). The male of *Speleoderces scutatus* has a little specialized palpus, with no apophyses on the femur, a long patella with two apophyses, a short unspecialized tibia; the embolus is large, strong and curved. From this it is evident that:

Crozetulus Hickman, 1939 = *Speleoderces* Lawrence, 1964 **Syn. nova**

The diagnosis of *Crozetulus* (see above) must be therefore widened to include the ♀.

To *Crozetulus* belong therefore also *C. scutatus* (Lawrence, 1964) **comb. nov.**, *C. rhodesiensis* n. sp. (see later) and probably *C. rotundus* (Forster, 1974) **comb. nov.**

Forsteriola n. gen.

Generotype: *Pseudanapis proloba* Forster, 1974.

Remarks: in my African material I had a few specimen of this species (of which I have seen the type, s. later). The male genitalia are extremely specialized and also the vulva is of a type which can not be compared with those of the other genera.

Diagnosis: small Anapidae with relatively unspecialized prosoma (the curious ocular protuberance of the generotype is apparently peculiar to this species), roundish-flattened, sclerotized abdomen; ♂ palpus highly specialized: small femur, with no apophyses; patella and tibia of nearly equal length, practically fused together (a small apophysis on the patella); cymbium oval, pointed; embolus short and wide; ♀ genitalia with initial bursae from which depart long ducti ending in small spermathecae.

Other species: even if the illustration is somewhat unclear, I would attribute to this genus also *F. rugosa* (Forster, 1974) **comb. nov.**

Derivatio nominis: this genus is dedicated to Dr. R. R. Forster (Dunedin) as an acknowledgement to his important contributions to the knowledge of the Anapidae.

Metanapis n. gen.

Generotype: *Metanapis mahnerti* n. sp. (see later).

Remarks: a third phyletic line (after those of *Crozetulus* and *Forsteriola*) can be identified between the African Anapidae; this line is possibly represented also in the Oriental region.

Diagnosis: small Anapidae with relatively unspecialized prosoma, roundish, not very sclerotized abdomen; ♂ relatively specialized: normal femur, with no apophyses, elongated patella, with a single apophysis; short tibia (shorter than the patella), partially fused with the cymbium; cymbium very elongated; bulbus elongated, embolus large, more or less coiled; ♀ genitalia (diagnosis based on the species from Nepal) with initial bursae, short copulation ducts, well separated from the spermathecae; ♀ pedipalpus reduced.

Other species: to this genus should belong also *M. plutella* (Forster, 1974) **comb. nov.**, *M. bimaculata* (Simon, 1895) **comb. nov.** (sensu Fage 1937) and probably *M. montisemodi* (Brignoli, 1978) **comb. nov.** and *M. tectimundi* (Brignoli, 1978) **comb. nov.**

Teutoniella n. gen.

Generotype: *Teutoniella plaumanni* n. sp. (see later).

Remarks: I institute this genus for a species with ♂ genitalia superficially similar to those of *Anapis*, but with a different terminal part of the bulbus and different chelicerae; the eyes of the generotype are markedly reduced (adaptation to subterranean life?).

Diagnosis: small Anapids with unspecialized prosoma; opisthosoma not strongly sclerotized; ♀ pedipalpus present; ♂ pedipalpus similar to that of *Anapis*, but embolus short, blade-like, not surrounded by a conductor; chelicerae with no "comb"; vulva with short copulation ducts, no bursae.

RELATIONSHIPS BETWEEN THE DIFFERENT GENERA

The Mediterranean and African (or Afro-Asiatic) genera *Zangherella*, *Crozetulus* and *Metanapis* have all in common a relatively simple bulbus, with a strongly developed embolus, a relatively unspecialized ♂ palpus, with a more or less lengthened patella and a vulva with long copulation ducts; insufficient knowledge on the detailed structure of the bulbus and of the vulva prevents us to understand if these three genera are truly related with *Chasmocephalon* and *Risdonius*, which seem structurally similar.

Also *Forsteriola* could belong to this group of genera and could be seen as an extreme development of, for instance, *Zangherella*.

Pseudanapis and *Conoculus* have in common the structure of the vulva, with very short ducts, but, by the structure of the pedipalpus *Conoculus* could seem very near to *Zangherella*.

Anapisona has a very specialized ♂ palpus, which, as whole, can recall that of *Pseudanapis*.

Anapis and *Teutoniella* should be strictly related; the relative simplicity of their palpi could recall the group *Zangherella-Crozetulus-Metanapis*.

Somewhat isolated is *Anapogonia*, which has more complicated male genitalia than the other genera.

The general distribution of the Anapidae is typical of the so-called "Gondwanian elements"; the group, as a whole, is poorly represented in the Northern Hemisphere and could be of Southern origin. It is highly verisimile that we know actually only a small part of the existing species; any conclusion on the relationships between the currently accepted genera has therefore only a limited value.

EXAMINED MATERIAL

Zangherella algerica (Simon, 1895)

Italy—Tuscany—Province of Firenze—Polcanto; Mearino (Reggello, Vallombrosa); Vetta alle Croci; Donnini; Pratolino, 19.XII.71, 18.XI.72, 7.I.73, 23.IV.73, 9.II.74, F. Magini leg. (by sieving detritus), 2 ♂♂, 9 ♀♀, 1 ○ (CBL; ♂♂ in April and December, ♀♀ in January, February, April, juv. in November).

Tunisia—Jendouba Province—Ain Draham, 1.X.72, V. Cottarelli leg., 1 ♀ (CBL).

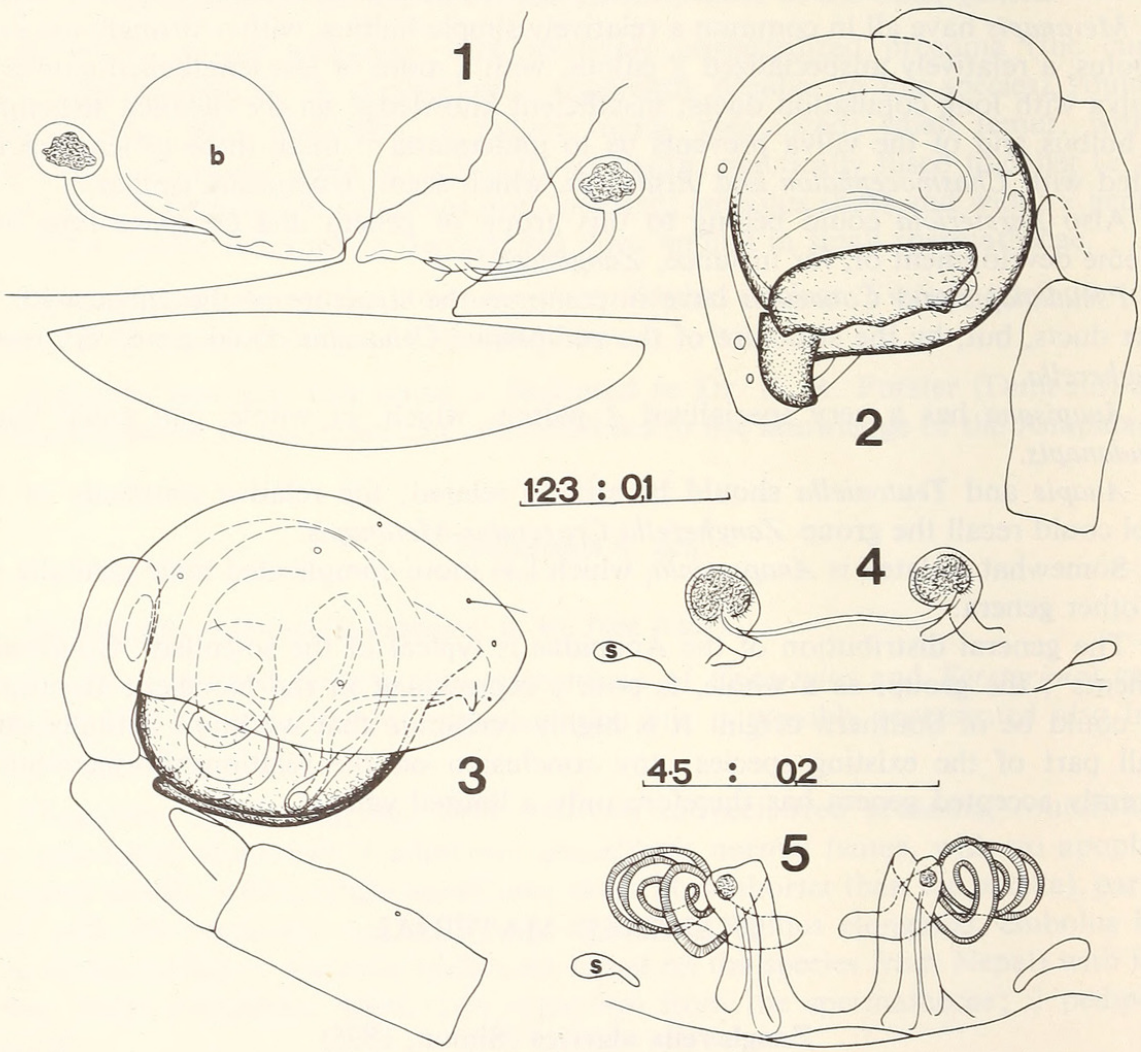
Remarks: in Italy known already from the Romagna and Lazio regions, apparently common in Central Italy; new for Tunisia. Probably common in a large part of the Western Mediterranean, but overlooked.

My illustrations of the vulva of this species and of *Z. apuliae* were faulty (BRIGNOLI 1968); through insufficient clearing, I mistook the anterior stigma for the opening of the copulatory ducts; I publish here illustrations of these two species (Figs. 4, 5) which show a vulva evidently different from that of *Pseudanapis*, but of a type non uncommon in the family.

Metanapis mahnerti n. sp.

Kenya: Lac Naivasha, a 5 km du Fisherman's Camp, sous pierres, 5.XI.74, V. Mahnert-J. L. Perret leg., (Kenya-74/07), 1 ♂ (Holotypus MHNG).

Description—♂ (♀ unknown): prosoma and sclerified parts of the opisthosoma reddish, unsclerified parts greyish, legs yellowish; cephalic region elevated, thorax with



FIGS. 1-5.

Forsteriola proloba (Forster, 1974).

1: Vulva (scutum broken in two; "b" = bursa); 2-3: male pedipalp, internally and externally. *Zangherella algerica* (Simon, 1895); 4: vulva ("s" = stigma). *Zangherella apuliae* (di Caporiacco, 1949); 5: vulva ("s" = stigma). Scales in mm.

some ridges; 8 eyes, AME smaller than the rest (1/2), in two lines, as in *Crozetulus rhodesiensis* n. sp. (see later); straight clypeus, higher than the chelicerae; ♂ pedipalpus, s. Figs. 6, 7. Opisthosoma roundish-flattened, dorsally leatherish, with a not completely developed scutum; a small scutum around the pedicel; well developed colulus.

Dimensions (in mm): prosoma 0,50 long, 0,48 wide; opisthosoma, 0,65 long. Total length: 1,15.

Legs	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0,50	0,19	0,39	0,21	0,37	1,66
II	0,45	0,17	0,28	0,19	0,33	1,42
III	0,29	0,13	0,21	0,14	0,29	1,06
IV	0,40	0,14	0,29	0,16	0,30	1,29

Derivatio nominis: this species is dedicated to one of its collectors Dr. V. Mahnert (Genève).

Discussion: this species is evidently related to *M. plutella* (Forster, 1974) from Zaire (Kivu) from which it can be distinguished by the structure of the ♂ palpus, which has a longer and more coiled embolus. FORSTER *(op. cit.)* compared *M. plutella* with *Anapogonia darlingtoni* (Forster, 1959) which has a completely different structure of the bulbus, with a very complicated embolic region.

Similar to the new species is also *M. bimaculata* (Simon, 1895) from the Cape Province (FAGE 1937); the palpus of this last species has a slightly different patellar apophysis and a shorter (?) embolus.

The two *Metanapis* I described from Nepal (BRIGNOLI 1978*a*) should have (both?) a distal and not proximal patellar apophysis and a longer embolus (only the ♀ of *M. montisemodi* is known).

Crozetulus scutatus (Lawrence, 1964)

South Africa—Cape Province—Boomslang cave, Muizenberg, 2.VIII.75, P. Strinati leg., 1 ♀ (MHNG).

Remarks: as LAWRENCE (1964) described the ♂ of his species from the Wynberg Caves and the ♀ of the Bats Cave, it is neither certain that his specimens were conspecific, nor that the ♀ collected by Dr. Strinati belongs to this species. Still, this specimen corresponds well to the description by LAWRENCE, and my identification may be correct.

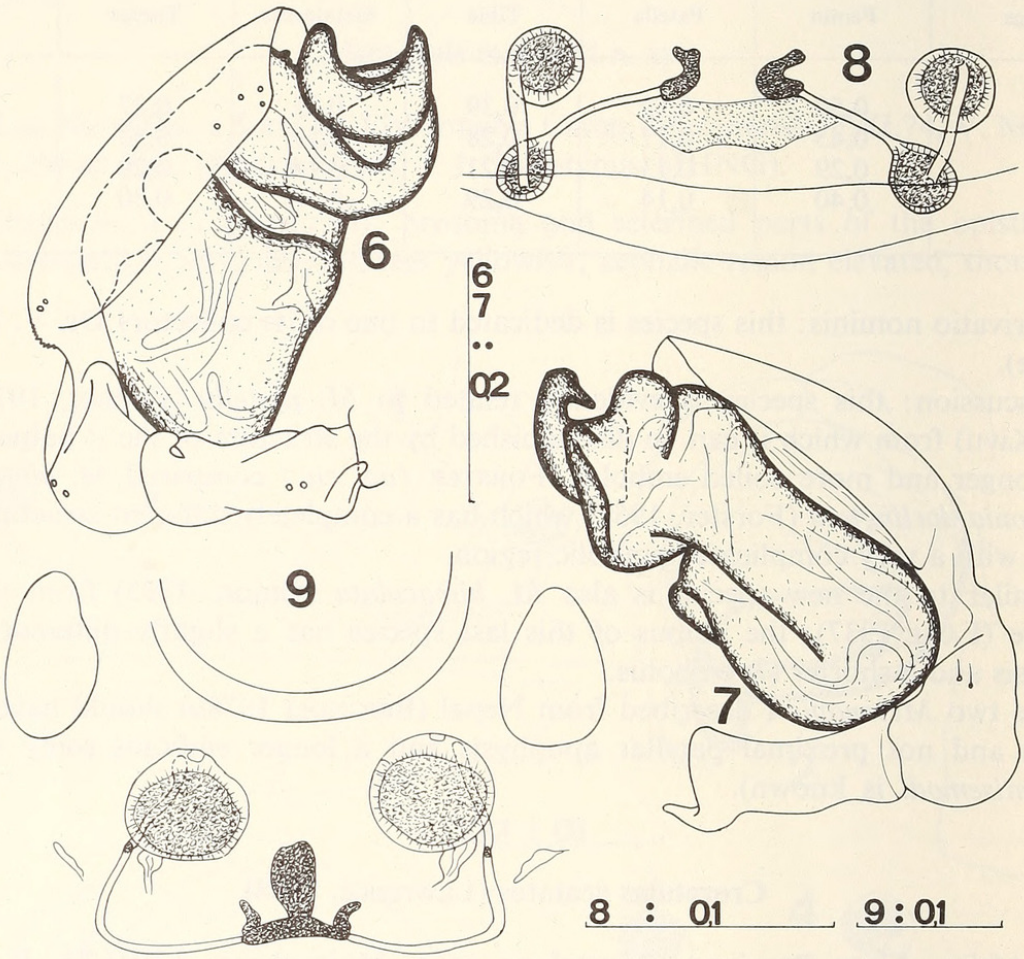
The vulva of this species (Fig. 8) is very characteristic; by general appearance this species is similar to a *Zangherella*. *C. scutatus* can be distinguished from *C. minutus* Hickman, 1939 by the poorly developed eyes and by the shorter embolus.

Crozetulus rhodesiensis n. sp.

Rhodesia: Melsetter, 1 700 m, II.69, R. Mussard leg, 1 ♀ (Holotypus MHNG).

Description—♀ (♂ unknown): prosoma and legs brownish, opisthosoma a little lighter coloured; cephalic region elevated, smooth, thorax with radial ridges; 8 eyes, AME smaller than the rest (1/2) in two straight lines, AME neared to the PME, distances

between the PME and the PLE and between the AME and the ALE equal to 3/2 the diameter of the lateral eyes; clypeus straight, lower than the chelicerae; pedipalpi absent; labium small, wider than long; sternum wrinkled, blackish, heartshaped; legs with many hairs, some of which longer than the rest. Opisthosoma without scuta; vulva, s. Figure 9; colulus well developed; no posterior stigma.



FIGS. 6-9.

Metanapis mahnerti n. g. n. sp.
6-7: male pedipalp, externally and internally. *Crozetulus scutatus* (Lawrence, 1964).
8: vulva. *Crozetulus rhodesiensis* n. sp.; 9: vulva. Scales in mm.

Dimensions (in mm): prosoma 0,50 long, 0,40 wide; opisthosoma 0,61 long. Total length: 1,11.

Legs	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0,45	0,15	0,34	0,17	0,30	1,41
II	0,36	0,14	0,29	0,15	0,29	1,23
III	0,25	0,12	0,20	0,12	0,22	0,91
IV	0,35	0,12	0,29	0,12	0,27	1,15

Derivatio nominis: the name of this species derives from that of the region in which it was found.

Discussion: as a whole, the vulva of this species is of the same type of that of *C. scutatus* (Lawrence, 1964), but in this last species there are two spermathecae. *C. rhodesiensis* n. sp. could therefore perhaps not belong to *Crozetulus*, but to *Metanapis* (by the incomplete illustration by FORSTER, 1974, *M. plutella* could have a similar vulva). Until a male shall be found, the status of *Ch. rhodesiensis* shall be uncertain.

Forsteriola proloba (Forster, 1974)

Urundi (= Burundi), Bururi, 1 000 m, 16.VII.51, N. Leleup leg., 1 ♂ (Holotype, MRAC 92707).

Rwanda: Kayove, 2 100 m, tamisage, 23.IV.73, P. Werner leg., (Rwa-73/4), 1 ♂, 1 ♀ (MHNG).

Remarks: species described only on the ♂; the ♀ is very similar to the ♂: it has a normal, not modified ocular region and has well developed abdominal scuta; vulva, s. Figure 1. The palpus (Figs. 2, 3) has a more "normal" structure than could be understood from the original illustrations.

Pseudanapis paroculus (Simon, 1899)

Indonesia, Sumatra, Weyers leg., 1 ♀ (Holotypus, MHNP 21298).

Malaysia: Etat Selangor, Gombak (13 miles de Kuala Lumpur), 29.VIII.72, prélèvement de terre (extraction par appareil Berlese à Genève), Th. Jaccoud leg., (Mal-72/2), 1 ♀ (MHNG).

Indonesia, Sumatra, Mt. Bandahara, Serbolangit Range, ca. 3° 43′ N 97′ 41′ E, m 810, 25.VI.-5.VII.72, J. Krikken leg. (in lowland evergreen multistratal forest), 1 ♂ (RNHL).

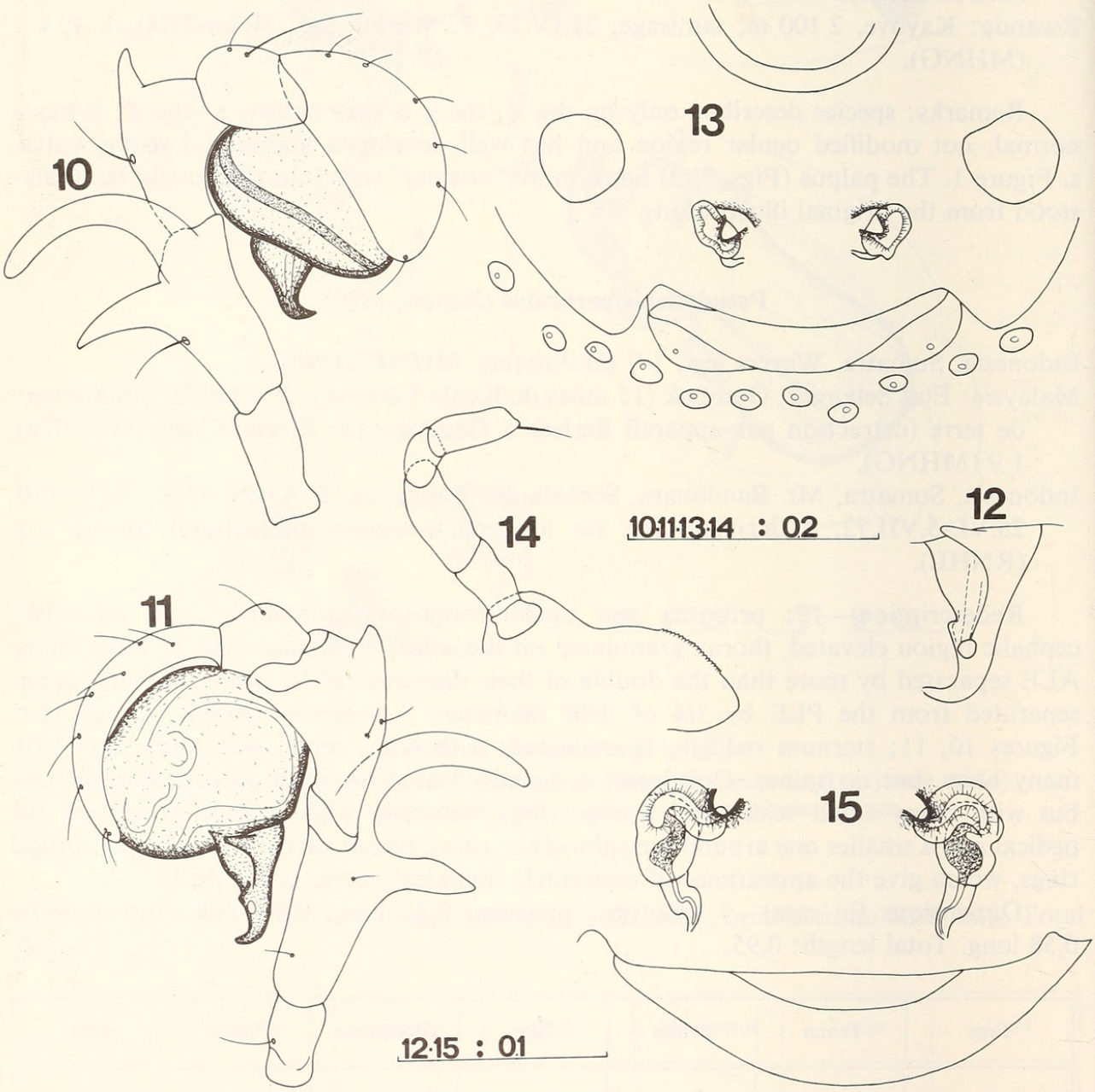
Redescription—♂♀: prosoma and opisthosoma orange-reddish, legs yellowish; cephalic region elevated, thorax granulated on the sides; 6 adequal eyes, in three diads, ALE separated by more than the double of their diameter, PME neared to each other, separated from the PLE by 3/4 of their diameter; ♀ pedipalpi absent, ♂ palpus s. Figures 10, 11; sternum reddish, heartshaped, with many small punctures; legs with many hairs, but no spines. Opisthosoma dorsally leatherish, with no complete scutum, but with many small sclerotized orange rings, ventrally with a scutum around the pedical and a smaller one around the spinnerets; non covered parts by regularly arranged rings, which give the appearance of concentric wrinkles; vulva, s. Figure 13.

Dimensions (in mm)—♀ holotype: prosoma 0,37 long, 0,41 wide; opisthosoma 0,58 long. Total length: 0,95.

Legs	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0,34	0,14	0,26	0,19	0,21	1,14
II	0,29	0,14	0,20	0,15	0,21	0,99
III	0,25	0,12	0,19	0,14	0,19	0,89
IV	0,32	0,15	0,26	0,15	0,20	1,08

Dimensions (in mm)—♂: prosoma 0,40 long, 0,40 wide; opisthosoma 0,46 long. Total length: 0,86.

Legs	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0,34	0,12	0,25	0,12	0,24	1,07
II	0,27	0,12	0,22	0,12	0,22	0,95
III	0,22	0,10	0,18	0,10	0,19	0,89
IV	0,31	0,11	0,22	0,12	0,22	0,98



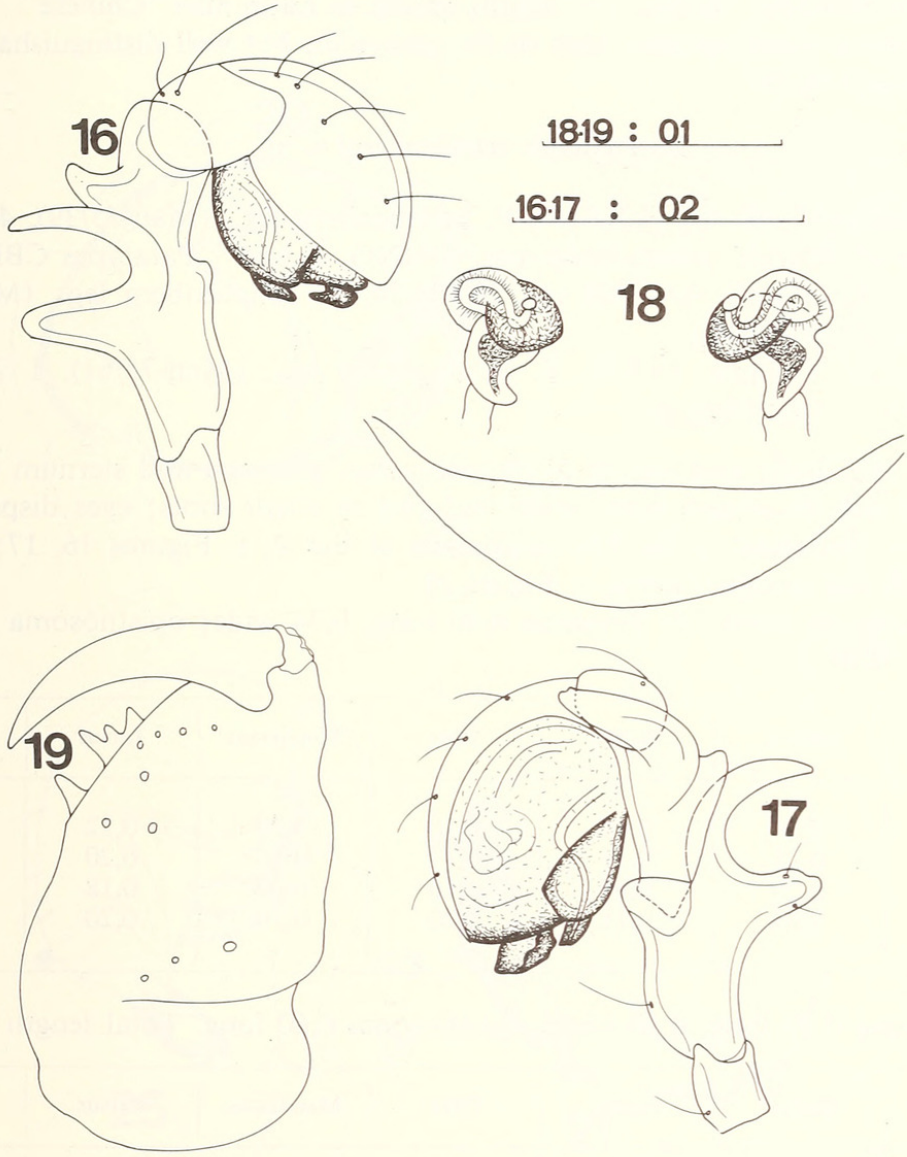
FIGS. 10-15.

Pseudanapis paroculus (Simon, 1899).

10-11: male pedipalp, externally and internally; 12: embolus; 13: vulva.
Pseudanapis serica n. sp.; 14: pedipalp of the female; 15: vulva. Scales in mm.

Pseudanapis serica n. sp.

Hong-Kong: University Campus (Chung Chi College), Shatin, N.T., Humusprobe (Auslese durch Berlese-Apparat in Genf), III.72, Tai-din Chan leg., (Ho-72/2), 1 ♀ (Holotypus MHNG).



FIGS. 16-19.

Pseudanapis schauenbergi n. sp.

16-17: male pedipalp, externally and internally; 18: vulva; 19: chelicera. Scales in mm.

Description—♀ (♂ unknown): similar, in all points, to *Ps. paroculus*, but lighter coloured; with small, but well visible pedipalpi (s. Fig. 14); vulva, s. Figure 15.

Dimensions (in mm): prosoma 0,40 long, 0,36 wide; opisthosoma 0,52 long. Total length: 0,92.

Legs	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0,25	0,12	0,20	0,12	0,21	0,90
II	0,22	0,11	0,20	0,12	0,19	0,84
III	0,21	0,10	0,16	0,12	0,19	0,78
IV	0,28	0,13	0,22	0,12	0,22	0,97

Derivatio nominis: "serica" (= silken) means in Latin also "Chinese".

Discussion: a small species, near to *Ps. paroculus*, but well distinguishable by the vulva with longer ducts.

Pseudanapis schauenbergi n. sp.

Maurice: Chamarel, 360 m, 22.XII.74, P. Schauenberg leg., (Mau-75/39), 4 ♂♂, 2 ♀♀ (♂ entire Holotypus, others Paratypes, MHNG, 1 ♂, 1 ♀ Paratypes CBL).

Maurice: Mt. Le Pouce, env. 700 m., 20.XII.74, P. Schauenberg leg., (Mau-75/35), 1 ♀ Paratype (MHNG).

La Réunion: St. Philippe, 15.I.75, P. Schauenberg leg., (Mau-75/61), 1 ♀ Paratype (MHNG).

Description—♂♀: body and legs as in *Ps. paroculus*; prosoma and sternum with many punctures; 6 well developed eyes, AME reduced to small spots; eyes disposed as in *Ps. paroculus*; chelicerae, s. fig. 19; pedipalpus of the ♂, s. Figures 16, 17; pedipalpi of the ♀ small, but present; vulva, s. Figure 18.

Dimensions (in mm)—♂: prosoma 0,40 long, 0,34 wide; opisthosoma 0,50 long. Total length: 0,90.

Legs	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0,30	0,11	0,20	0,10	0,22	0,93
II	0,25	0,11	0,19	0,10	0,20	0,85
III	0,20	0,08	0,16	0,09	0,18	0,71
IV	0,27	0,11	0,20	0,10	0,20	0,88

♀: prosoma 0,42 long, 0,38 wide; opisthosoma 0,60 long. Total length: 1,02.

Legs	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0,31	0,12	0,20	0,10	0,21	0,94
II	0,25	0,11	0,19	0,10	0,20	0,85
III	0,21	0,10	0,15	0,09	0,19	0,74
IV	0,28	0,12	0,21	0,10	0,21	0,92

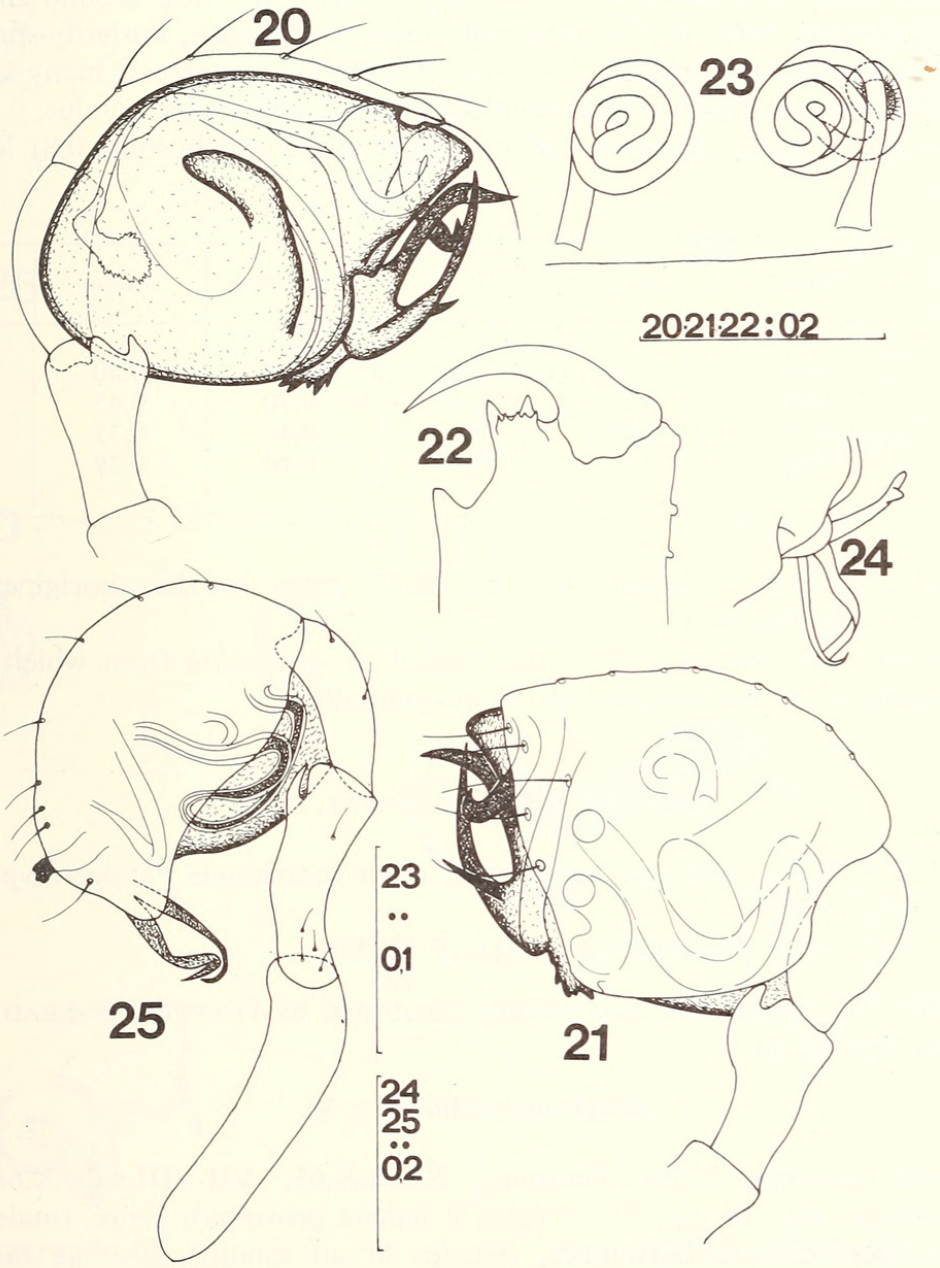
Derivatio nominis: this species is dedicated to its collector, Dr. P. Schauenberg (Genève).

Discussion: a species evidently related to those of Indonesia, but clearly distinguishable by the morphology of the genitalia. Its presence in the Mascarene islands is another interesting example of link with the Oriental region.

Anapogonia insolita (Berland, 1924)

Nouvelle Calédonie, Ignambi, 5.IV.11, Roux & Sarasin leg., 1 ♂ Lectotypus, 1 ♀ Paralectotypus (NMB 965).

Remarks: the description by BERLAND is fairly good; the bulbus (fig. 25) is evidently similar to that of *A. pilupilu* n. sp.; the vulva has long, coiled spermathecae (Fig. 23).



FIGS. 20-25.

Anapogonia pilupilu n. sp.

20-21: male pedipalp, internally and externally; 22: chelicera. *Anapogonia insolita* (Berland, 1924). 23: vulva; 24: terminal apophyses of the bulbus, internally; 25: male pedipalp, externally. Scales in mm.

Anapogonia pilupilu n. sp.

Nouvelle Calédonie, Poya, Grottes d'Adio, 2.IV.77, V. Aellen & P. Strinati leg., 1 ♂ (Holotypus, MHNG).

Description—♂ (♀ unknown): prosoma reddish, elevated and somewhat narrowed in the ocular region, smooth; 6 eyes in three diads; diads separated by more than the diameter of the eyes; small labium, longer than wide; sternum wrinkled, reddish, suboval; clypeus lower than the chelicerae; pedipalpus, s. Figures 20,21. Legs with femura and tibiae I and II with many spines with elevated bases. Opisthosoma elevated, conical, as in many *Argyrodes*, not sclerified; a sclerotized ring around the pedicel; opisthosoma greyish, with, on the posterior slope, a yellowish, butterfly-shaped spot, followed by a smaller one, whitish, immediately over the spinnerets; many small spots concentrical to the sclerotized ring around the pedicel; well visible colulus.

Dimensions (in mm): prosoma 0,60 long, 0,55 wide; opisthosoma 0,81 long. Total length: 1,41.

Legs	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0,69	0,31	0,62	0,22	0,50	2,34
II	0,60	0,25	0,44	0,20	0,45	1,94
III	0,41	0,18	0,32	0,14	0,35	1,40
IV	0,56	0,20	0,44	0,16	0,39	1,75

Derivatio nominis: "pilupilu" was the name given by the aborigines of New Caledonia to a cannibal feast.

Discussion: This species is evidently related to *A. insolita* from which it can be easily distinguished by the morphology of the genitalia.

Anapisona hamigera (Simon, 1897)

St. Vincent, 1 ♂, 7 ♀♀, 1 juv. (♂ Lectotypus, other individuals Paralectotypi; BMNH Coll. 1897.9.18.39).
St. Vincent, 2 ♂♂, 2 ♀♀ (Paralectotypi; MHNP 18933).

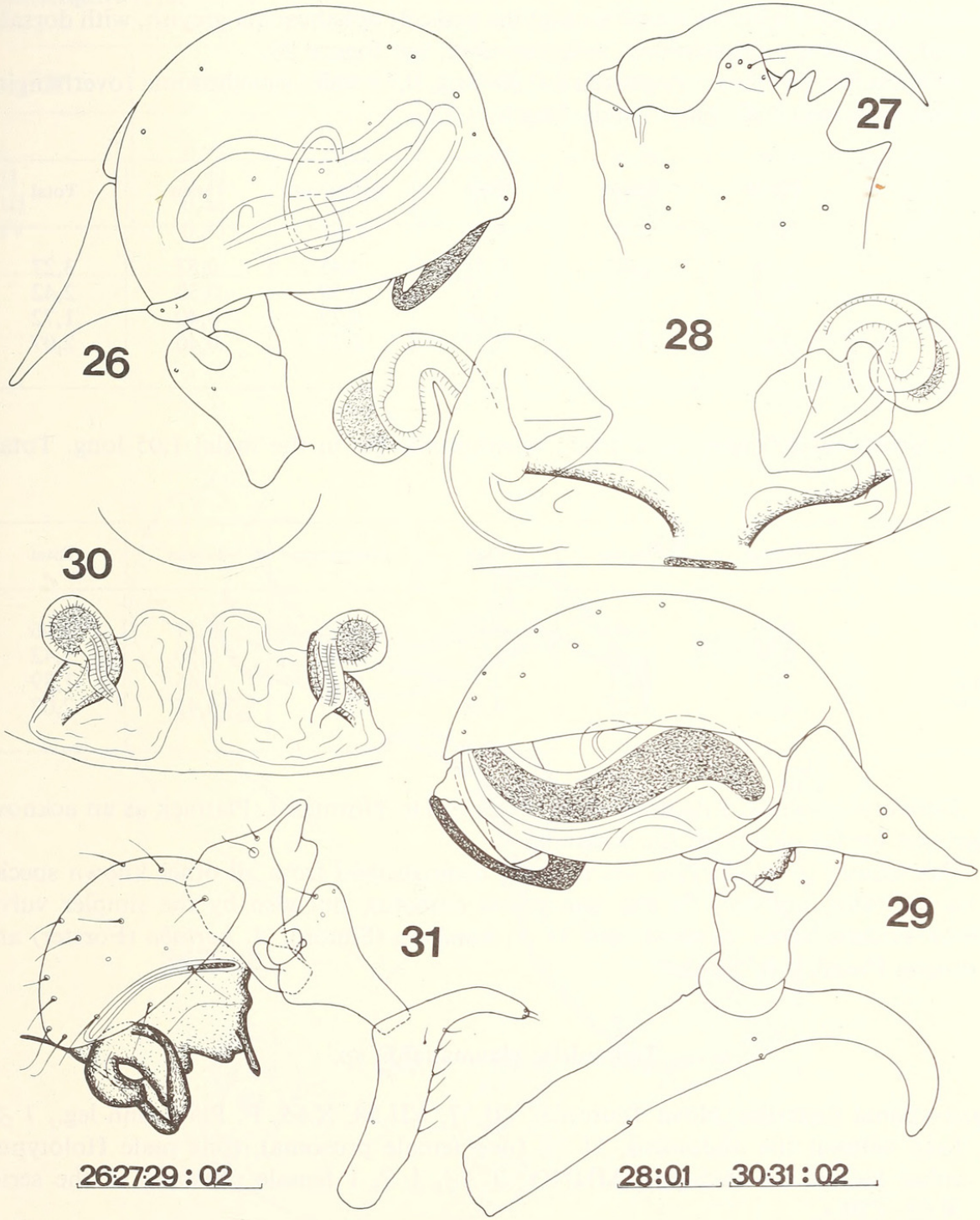
Remarks: this species has been already illustrated by PLATNICK & SHADAB (1979); genitalia, see figs. 30, 31.

Anapisona platnicki n. sp.

Brazil—Santa Catarina, Nova Teutonia, XI.58.X.65, VII-VIII.68, X.68, VII.69, F. Plaumann leg., 14 ♂♂, 21 ♀♀ (plus 2 female prosoma), 1 juv. (males in July, August, October and November, females in all months, juvenile in October; MHNG: 1 ♂ Holotype, 9 ♂♂, 19 ♀♀ Paratypes; CBL: 4 ♂♂, 2 ♀♀ Paratypes).

Description—♂: prosoma dark reddish-brown, cephalic part very elevated, smooth, thoracic part with very fine punctiform impressions and with a few furrows and "wrinkles" near the fovea and around the margin; six adequal eyes in three diads; lateral eyes a little elevated, diads separated by the double of the diameter of the median eyes (PME);

clypeus high, vertical, evidently shorter than the chelicerae; labium fused with the sternum; sternum dark reddish-brown, with many "wrinkles", truncated, evidently separating coxae IV. Chelicerae and pedipalpi, see figures 26, 27, 29; legs yellowish red, femora darkened inferiorly; legs I-II much stronger than the rest; tibia I with two simple clasping



FIGS. 26-31.

Anapisona platnicki n. sp.

26, 29: male pedipalp, externally and internally; 27: chelicera; 28: vulva.
Anapisona hamigera (Simon, 1897). 30: vulva; 31: male pedipalp, externally. Scales in mm.

spines in the distal part; legs with many hairs, but not true spines; femora I and tibia I evidently flattened. Opisthosoma oval, dorsally with a complete brown-yellowish smooth shield, with four punctiform impressions disposed as on the four corners of a trapezium (the two posterior impressions are at the center of two dark roundish dots); a small shield surrounds the pedicel; the not covered parts mauve-grey; spinnerets normal, colulus small. ♀: similar to the ♂, but with less elevated cephalic part; pedipalpi small, but developed; legs I-II not so strong as in the ♂; opisthosoma roundish, without a dorsal shield, but with the shield around the pedicel; opisthosoma greyish, with dorsally the four punctiform impressions; epigyne/vulva, see Figure 28.

Dimensions (in mm)—♂: prosoma 0,90 long, 0,78 wide; opisthosoma (overhanging over the prosoma) 0,82 long. Totale length: 1,72.

Legs	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1,05	0,42	0,78	0,45	0,57	3,27
II	0,72	0,35	0,55	0,30	0,50	2,42
III	0,45	0,20	0,40	0,27	0,40	1,72
IV	0,65	0,20	0,47	0,35	0,40	2,07

♀: prosoma 0,95 long, 0,72 wide; opisthosoma (as in the male) 1,05 long. Totale length: 2,00.

Legs	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0,92	0,40	0,72	0,45	0,57	3,06
II	0,75	0,25	0,52	0,40	0,50	2,42
III	0,57	0,25	0,35	0,27	0,45	1,89
IV	0,62	0,25	0,48	0,27	0,45	2,07

Derivatio nominis: I dedicate this species to Dr. Norman I. Platnick as an acknowledgement for his papers on the Anapidae.

Discussion: *A. platnicki* n. sp. is easily distinguished from all other known species by its genitalia; not only by the non coiled embolus, but also by the simpler vulva, with an evident bursa, it seems near to *A. hamigera* (Simon), *A. kartabo* (Forster) and *A. aragua* Platnick & Shadab.

Teutoniella plaumanni n. sp.

Brazil—Santa Catarina, Nova Teutonia, VII.57, VII.58, X.65, F. Plaumann leg., 7 ♂♂ (one without the abdomen), 11 ♀♀ (one female prosoma), (one male Holotypus, other individuals Paratypi; MHNG; 3 ♂♂, 1 ♀, 1 female prosoma of the series X.65, CBL).

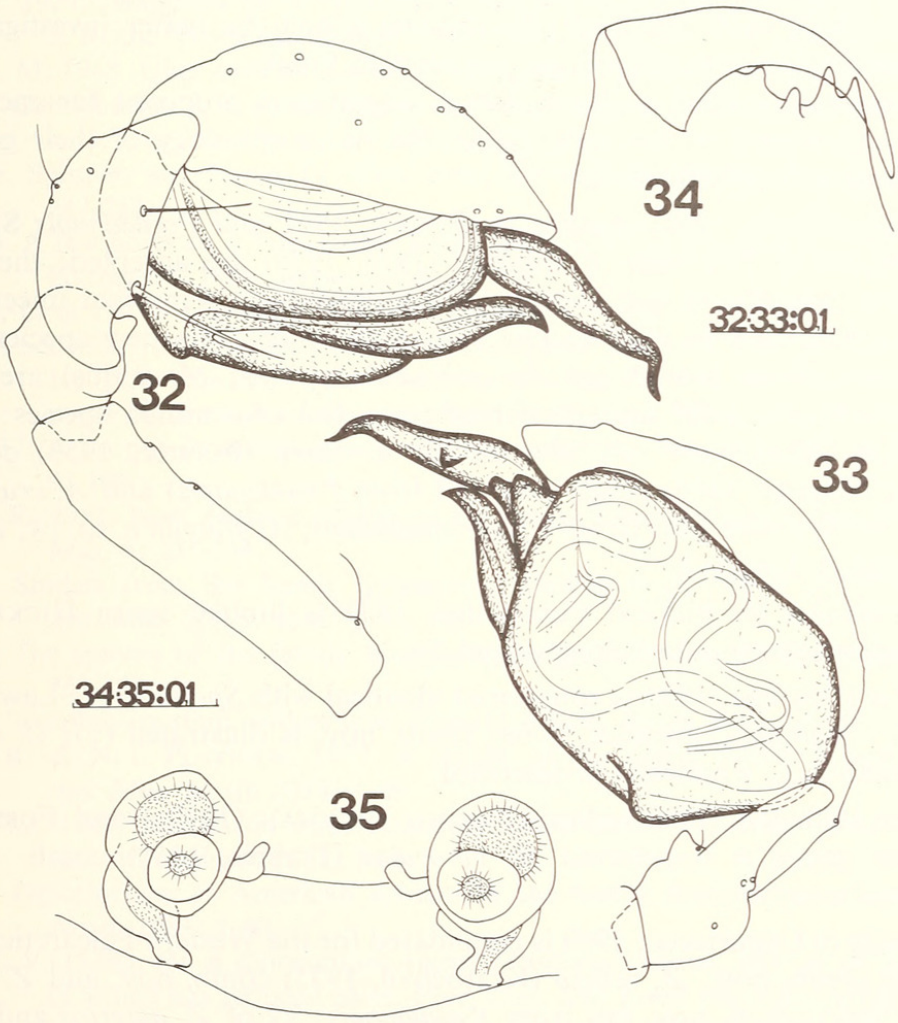
Description—♂♀: prosoma and sclerified parts of the abdomen reddish, unsclerified parts greyish, legs yellowish; prosoma not elevated, anteriorly truncated, with many punctures; 6 very small eyes in three diads; diads separated by more than the diameter of the eyes; labium wider than long; sternum wrinkled, heartshaped; clypeus straight,

not higher than the chelicerae; chelicerae, see Figure 34; pedipalp of the ♂, see Figures 32, 33; pedipalp of the ♀ well developed, without a claw.

Legs relatively feeble, with many hairs; coxae I elongated, II-IV roundish. Opisthosoma leatherish, without scuta (only a few sclerotized points); a sclerotized ring around the pedicel; small colulus; vulva, s. Figure 35.

Dimensions (in mm)—♂: prosoma long 0,52, 0,50 wide; opisthosoma 0,60 long. Total length: 1,12.

Legs	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0,75	0,22	0,62	0,25	0,48	2,32
II	0,58	0,20	0,48	0,22	0,44	1,94
III	0,44	0,15	0,36	0,19	0,33	1,47
IV	0,55	0,16	0,48	0,28	0,35	1,82



FIGS. 32-35.

Teutoniella plaumanni n. g. n. sp.
32-33: male pedipalp, externally and internally; 34: chelicera;
35: vulva. Scales in mm.

♀: prosoma 0,54 long, 0,60 wide; opisthosoma 0,92 long. Total length: 1,46.

Legs	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0,69	0,22	0,58	0,25	0,40	2,14
II	0,58	0,20	0,45	0,25	0,38	1,76
III	0,41	0,12	0,33	0,18	0,35	1,39
IV	0,59	0,15	0,48	0,20	0,39	1,71

Derivatio nominis: this species is dedicated to its collector, Mr. F. Plaumann (Nova Teutonia).

Discussion: see the description of *Teutoniella* n. sp.

Summary

The taxonomically relevant characters of the Anapidae, with special stress on the genitalia, are briefly discussed; the group, as currently limited, appears homogeneous, but its relationships with the other Araneoidea should be better investigated before accepting definitively to consider it an independent family.

The genera are passed in review and a diagnosis is proposed for each of them. Only the species similar to the generotypes by the morphology of their genitalia are considered congenerical with them.

For *Anapis* Simon, 1895, *Anapisona* Gertsch, 1941 and *Pseudanapis* Simon, 1905 the interpretations of Platnick & Shadab (1978, 1979) are accepted; the synonymy between *Anapis* and *Epecthinula* Simon, 1903 is considered somewhat uncertain. Most of the species described as *Pseudanapis* belong elsewhere; the new species *Ps. serica* (♀, ♂ unknown; Hong Kong) and *Ps. schauenbergi* (♂♀; Mauritius) are described. To *Anapogonia* Simon, 1905 are transferred some Indo-Australian species: *A. insolita* (Berland, 1924) comb. nov. (♂♀ illustrated), *A. burra* (Forster, 1959) comb. nov., *A. darlingtoni* (Forster, 1959) comb. nov. (all from *Pseudanapis*) and *A. crassifemoralis* (Wunderlich, 1976) comb. nov. (from *Chasmocephalon*); *A. pilupilu* n. sp. (♂, ♀ unknown; New Caledonia) is described.

Chasmocephalon O. Pickard Cambridge, 1889 is limited sensu Hickman, 1944; most described species should belong elsewhere.

Crozetulus Hickman, 1939 is considered identical with *Speleoderces* Lawrence, 1964 (syn. nov.); *C. scutatus* (Lawrence, 1964) comb. nov. is illustrated (♀); *C. rhodesiensis* n. sp. (♀, ♂ unknown; Rhodesia) is described.

Risdonius Hickman, 1939 is limited sensu Hickman (1939a) and Forster (1951, 1959); to this genus is transferred *R. octoculus* (Forster, 1959) comb. nov. (from *Pseudanapis*).

Zangherella di Caporiacco, 1949 is revalidated for the Western Palearctic *Z. algerica* (Simon, 1895) comb. nov., *Z. relicta* (Kratochvil, 1935) comb. nov. and *Z. apuliae* (di Caporiacco, 1949) comb. nov. (all from *Pseudanapis*; ♀♀ of *Z. algerica* and *Z. apuliae* illustrated).

The new genus *Forsteriola* is described (generotype: *Pseudanapis proloba* Forster, 1974; ♂♀ illustrated); to this genus is transferred also *F. rugosa* (Forster, 1974) comb. nov. (from *Pseudanapis*).

Metanapis n. gen. is described (generotype: *M. mahnerti* n. sp., ♂, ♀ unknown; Kenya); to this genus are transferred: *M. plutella* (Forster, 1974) comb. nov., *M. montisemodi* (Brignoli, 1978) comb. nov. *M. tectimundi* (Brignoli, 1978) comb. nov. (from *Pseudanapis*) and *M. bimaculata* (Simon, 1895) comb. nov. (from *Chasmocephalon*).

Teutoniella n. gen. is described (generotype: *T. plaumanni* n. sp., ♂♀; Brazil, Santa Catarina).

Anapisona hamigera (Simon, 1897) and *Pseudanapis paroculus* (Simon, 1899) are illustrated (♂♀); *Anapisona platnicki* n. sp. (♂♀; Brazil, Santa Catarina) is described.

Valid and belonging to this group is also *Conoculus* Komatsu, 1940, whereas *Gossiblemma* Roewer, 1963 and *Epecthina* Simon, 1895 are respectively synonyms of *Pseudanapis* and *Anapis*.

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