

## Generic revision of some thomisids related to *Xysticus* C.L.Koch, 1835 and *Ozyptila* Simon, 1864

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### Abstract

The changes in the concepts and reciprocal relationships of *Xysticus* s.l., *Ozyptila* s.lat., and *Coriarachne* are reviewed. *Coriarachne*, *Bassaniana*, *Psammitis*, and *Spiracme* comprise a group of genera and/or subgenera with slightly a variable male palpal structure and more variable epigyna. Different body shapes explain the traditional treatment of this group as several genera. *Bassaniana* is accepted here only as a species group of *Coriarachne*. *Proxysticus* Dalmas, 1922 is removed from *Xysticus* s.lat. and is found to be a junior synonym of *Bassaniodes* Pocock, 1903. This Old World genus has its centres of speciation in the Mediterranean region, Central Asia, and South Africa.

**Key words:** Thomisidae, generic revision, *Xysticus*, *Ozyptila*, *Coriarachne*

### INTRODUCTION

This work forms a part of a worldwide generic revision of Thomisidae. The group discussed here is mostly Holarctic while most other groups of Thomisidae are mainly tropical.

As for most groups of Thomisidae, no modern classification of *Xysticus* s.lat., *Ozyptila* s.lat. and related groups has been generally accepted, although a lot of work has been done at specific level and many nomenclatorally less important species-groups have been suggested (Lockett & Millidge 1951; Gertsch 1953; Schick 1965; Turnbull & al. 1965; Ono 1978 & 1988; Marusik & Logunov 1995; Wunderlich 1987, 1995; Jantscher 2002). The first discussions simply included the important statement that a part of the species have one or two tegular apophyses.

Some type species of genera in this group have never been studied by specialists after the original description. Sometimes the correct placing would have been difficult, as the samples of type specimens happen to be juveniles or represented only

by one sex. Much effort has therefore been directed to possibilities to find adult topotypical material for such species. This has been quite successful for *Pycnaxis* and *Ocyllus*. Parallely, topotypical material of unknown sexes of *Philodamia* and *Demogenes* spp. have facilitated the work. Topotypical material of many other tropical species of this group has been collected by myself.

No specific revisions have been carried out and new synonyms are listed here mainly for supraspecific taxa and their type species.

### MATERIAL AND METHODS

The material studied includes all type material of taxa discussed that is still preserved and available, checked on site or borrowed from different museums for the worldwide generic revision of Thomisidae. These museums are in Stockholm, Paris, Genoa, London, Berlin, New York, Hamburg, Los Baños and Calcutta. Other thomisid material in these museums has also been screened. All thomisid material collected

by myself during numerous expeditions to temperate and tropical areas of the world has been carefully studied. Some unpublished material collected by my colleagues (Yuri Marusik and Dmitri Logunov, Russia, Cor Vink, New Zealand, and Seppo Koponen, Finland) has also been available for this study.

The material has been studied with traditional methods of taxonomy, with strong emphasis laid to the study of male palpi and surface structures of legs, modified hairs of carapace and abdomen.

Acronyms for museums:

IRRI = International Rice Research Institute, Los Baños, Philippines

MCSN = Museo Civico di Storia Naturale 'Giacomo Doria', Genoa, Italy

MNHM = Museum National d'Histoire Naturelle, Paris, France

MZT = Zoological Museum, University of Turku, Turku, Finland

NHRS = Naturhistoriska Riksmuseet, Stockholm, Sweden

ZSI = Zoological Survey of India, Calcutta, India  
Abbreviations for structural details: MOT median ocular triangle, RTA retrolateral tibial apophysis, VTA ventral tibial apophysis.

### TAXONOMIC RESULTS

The concepts and limitation of *Ozyptila*, *Coriarachne*, and *Xysticus* (Figs 1-3) have been widely confused in the past (C.L. Koch, 1838, Thorell, 1872, Menge 1875, Simon, 1864 & 1875, Kroneberg, 1875, Keyserling, 1880, Ono, 1979 & 1988, etc.). It must be emphasized here that all species of *Ozyptila* s.lat. known to Menge (1875) were listed in *Coriarachne*. The status, diagnosis, and limitation of various species groups in *Xysticus* s.str., *Psammitis*, and *Ozyptila* have been widely discussed e.g., by Gertsch (1953), Dondale & Redner (1975) Marusik & Logunov (1991), Wunderlich (1995), Logunov & Marusik (1998), and Jantscher (2002), but these species groups are not further discussed here.

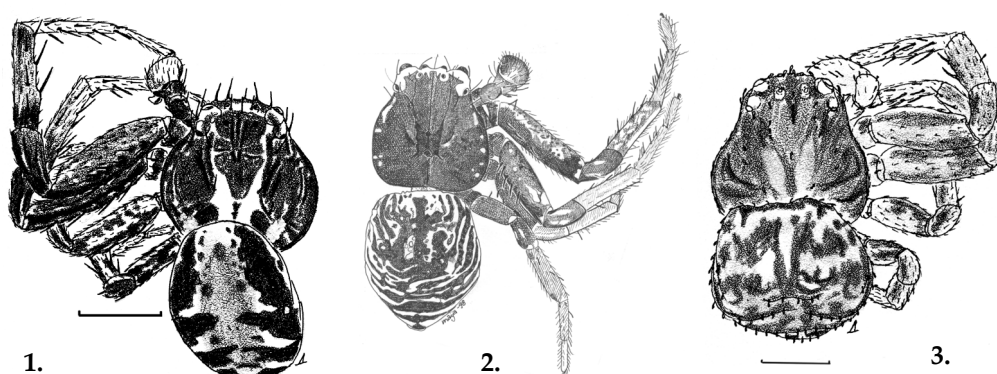
#### Suprageneric taxa

Although *Xysticus* and *Ozyptila* are well known

thomisid groups, the only suprageneric taxon so far based on either of them is the family Xysticidae proposed by Dahl (1907). His classification of crab spiders has not been accepted by later authors. Simon (1895) created the tribe Coriarachneae for two thomisids with flat bodies (*Coriarachne* Thorell, 1870 & *Tharpyina* L. Koch, 1874) and Roewer (1954) added *Firmicus* Simon, 1895, in which some species have flat bodies. The name based on *Coriarachne* has priority and must be used as the name of suprageneric groups including *Coriarachne*, even in the case that the limitation of the newly accepted group is much different from that of Simon. Most authors have simply placed *Xysticus* and *Ozyptila* to Thomisinae in the same group as *Diaea*. Ono (1988) resurrected the tribe Coriarachnini including *Bassaniana*, *Bassaniodes*, *Coriarachne*, *Narcaeus*, *Ocyllus*, *Oxyptila* and *Xysticus*. The general concept of Coriarachnini sensu Ono has been accepted here, although its final delimitation in regard to poorly known genera is waiting for a phylogenetic analysis. Ono (1988) included *Ocyllus* Thorell (1887), but careful comparison of the juvenile holotype of the type species in MCSN has revealed that *Ocyllus* is a synonym of *Cebrenminus* Simon, 1887, a genus never placed in Thomisinae. The other species of *Ocyllus* must be transferred to *Oxytate* L. Koch, 1878. A more detailed discussion of this genus with complex nomenclatorial problems is in preparation, but cannot be included in the limited space here. *Narcaeus* Thorell, 1890 was also included by Ono. I have checked the female holotype of the type species *N. picinus* Thorell, 1890 in MCSN and its inclusion in Coriarachnini s.lat. could be accepted only together with the closely related *Demogenes* Simon, 1895. If so, the concept of Coriarachnini must be greatly expanded, as some other thomisine groups (*Pycnaxis* Simon, 1895, *Lysiteles*-group, and the *Haplotmarus-Philodamia*-group) are at least as close to Coriarachnini (as accepted here) as the *Narcaeus* group. The two latter groups are not further discussed here.

#### The concept of *Xysticus* s.lat.

The generic name *Xysticus* C.L. Koch, 1835 has



**Fig. 1-3.** Main genera of well-known Coriarachnini sensu Ono. **Fig. 1.** *Xysticus audax* (Finland, Korpoo), male dorsally. **Fig. 2.** *Coriarachne depressa* (Russia, Burjatia), female dorsally. **Fig. 3.** *Ozyptila nigrita* (Turkey, Yamanlar Mts.), juvenile female dorsally.

been a waste basket during the long history of thomisid taxonomy. In addition to the contemporaries of C.L. Koch, e.g., Walckenaer (1837), many authors of the 19th century knew only two thomisid genera, *Thomisus* and *Xysticus*. The author of the generic name *Xysticus* himself placed even some *Tmarus* to *Xysticus* (C.L. Koch 1838). Later on, many tropical species from Australia and Melanesia (e.g., L. Koch 1867; Karsch 1878; Roewer 1938), South East Asia (e.g., Simon 1909; Bristowe 1931: *Pycnaxis* spp.), South, Central, and North America (Taczanowski 1872; Emerton 1893: '*Synaema*' sp.), and Africa (Berland 1922; Lawrence 1928, 1936, 1952; Caporiacco 1941; Jézéquel 1966) were originally described as *Xysticus*. Even some green thomisids of Europe were placed in *Xysticus*, e.g., by Simon (1864: *Thomisus*) and Herman (1879: *Runcinia*). The Australian species were later transferred to *Diaea* s.lat., the first ones by the original author (L. Koch 1874). These species actually belong to several undescribed genera, but all of them are here left outside Coriarachnini sensu Ono. Most '*Xysticus*' from tropical Africa are still unrevised.

A concept of *Xysticus*, including both apophysate and nonapophysate species was generally used for almost one hundred years. This concept of *Xysticus* s.lat. is no more generally used in strictly taxonomic papers, although it is still common in faunistic and other non-taxonomic papers. First, several species groups

were proposed (Locket & Millidge 1951; Gertsch 1953; Schick 1965; Turnbull et al. 1965). The splitting of *Xysticus* s.lat. to named taxa has been proposed by many authors (e.g., Menge 1875; Ono 1978; Wunderlich 1987, 1995), and it is quite justified, although many species outside Europe and North America have never properly been placed to some of these genera. Most of the taxonomic papers dealing with a single genus of Thomisidae are discussing *Xysticus* s.lat. Up till now no real revision has been done and generic names other than *Xysticus* have been rather sparingly used.

Menge (1875) erected the genera *Psammitis* (type species *Thomisus sabulosus* Hahn, 1832) and *Spiracme* (type species *S. striata* Menge, 1875 = *Xysticus striatipes* L. Koch, 1870), both from Central Europe. Both names have been used for *Xysticus* spp. without tegular apophyses and sometimes the latter has been regarded as a subgenus of the former (Gertsch 1953; Ono 1978). *Proxysticus* was established by Dalmas (1922). Bonnet (1958) accepted the genus *Psammitis*, but included with the two original ones only one additional species, *P. doriai* Dalmas, 1922 (from Italy). Many westpalaeartic species of non-apophysate *Xysticus* were transferred by Wunderlich (1987, 1992, 1995) out of *Xysticus*. He used first the name *Proxysticus* for all non-apophysate species (Wunderlich, 1987) but later (Wunderlich, 1992, 1995) he used *Psammitis* in the same meaning

(including also many species of *Proxysticus* auct. (now *Bassaniodes*). Jézéquel (1964) used the generic name *Proxysticus* for a species from tropical Africa.

#### Character evolution in the relatives of *Xysticus*

Tegular apophyses in *Xysticus* s.lat. and *Ozyptila* s.lat. as well as tutacular structures and clavate or spatulate dorsal and leg setae are characteristic for many well-known Coriarachnini sensu Ono, but none of them seems to be a synapomorphy.

The presence of one or two tegular apophyses in *Xysticus* s.lat. (Fig. 4) and *Ozyptila* s.lat. (Fig. 5) is problematic. Most of the species groups have no tegular apophysis at all. *Xysticus* and *Ozyptila* are mainly characterized by non-genital characters, including size, type of dorsal setae, shape of MOT and colour patterns.

A membranous apophysis has been found in the subdistal part of tegulum at least in one undescribed tropical genus (aff. *Demogenes*: Fig. 6). The structure and place of this apophysis looks like the median apophysis of some other spider families, where such an apophysis is present in some genera and is lacking in others (e.g., Hahniidae)

Various modifications of the cymbial margin connected to the distal part of embolus are often called tutacular grooves or simply as tutaculum. There are several different types and sites for these tutacular structures. The tutaculum of many *Xysticus* s.str. (Fig. 7) and *Psammitis* (Fig. 8) is a lateral process of cymbium, while quite dissimilar and probably non-homologous types of tutacular structures are present at least in some Misumenini (distal) and Hedanini (basal).

Clavate or spatulate dorsal setae have certainly been developed in many thomisid groups that live in the ground. However, the ground-living tropical genera *Demogenes*, *Narcaeus* (Fig. 9), *Pycnaxis* and '*Phrynarachne*' *clavigera* (Fig. 10) also share a simple palpal pattern and general body shape with *Ozyptila*, in which many of these species were originally described.

#### Confusions within the true relatives of *Xysticus*

Almost all theoretically possible misplacings have been done between *Xysticus* s.lat., *Ozyptila* s.lat. and *Coriarachne* s.lat. The space here does not allow a more detailed discussion of them. The reason is very simple: some authors have regarded the size and habits as the differential character (e.g., Jocqué 1993), some have used the type of dorsal hairs (e.g., Crome 1962), and some the eye pattern (e.g., Locket & Millidge 1951). In this situation it is not surprising that the large relatives of *Ozyptila*, *Bassaniodes* spp. have quite recently been regularly included in *Xysticus*, in spite of epigynal hood and also dorsal setae typical of *Ozyptila*.

A misplacing of other relatives of Coriarachnini in the present sense, especially the partly tropical *Pycnaxis* and *Lysiteles* has also taken place many times. An eight-eyed species *Demogenes* s.lat. has been placed in *Ozyptila*.

*Xysticus* C.L. Koch, 1835

*Araneus* Clerck, 1757: 136, in part

*Aranea* Linné, 1758: 623, in part; Schrank, 1803: 235, in part

*Thomisus* Audouin, 1826, in part: 398; Hahn, 1831: 1, in part, et auct. seq. until Lebert, 1877: 260 & 268

*Thomisus* (*Pachyptile*) Simon, 1864: 433, in part (*luctans* only)

*Coriarachne* Menge, 1875: 424 (*fusca*, misidentified)

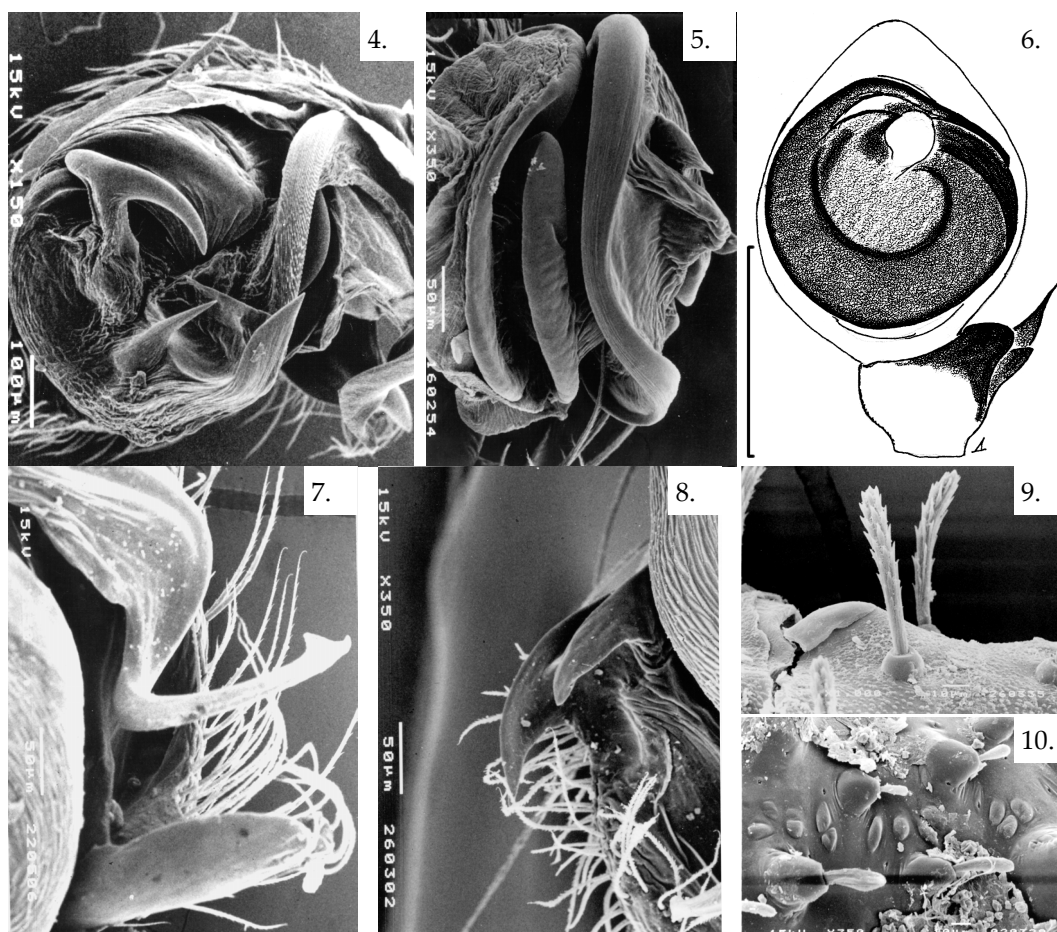
*Oxyptila* Emerton, 1893: 366, in part; Sørensen, 1898: 230, et auct. seq. until Caporiacco, 1935: 188 (*xysticiformis*)

*Synema* Keyserling, 1880: 64; Keyserling, 1884: 667; Dahl, 1907: 379 et auct. seq. until Kaston, 1948: 417

*Xysticus* (*Pellysticus*) Schick, 1965: 146

*Xysticus* (*Lassycticus*) Schick, 1965: 161

Type species by original designation *Aranea audax* Schrank, 1803 from Central Europe. *Xysticus* s.str. is the most speciose group of *Xysticus* s.lat., but more restricted to the temperate regions than both *Psammitis* and especially *Bassaniodes*. *Pachyptile* Simon, 1864 is a senior synonym of



**Fig. 4-10.** Diagnostic characters of Coriarachnini sensu Ono. **Fig. 4.** *Xysticus cristatus* (Switzerland, Ospizio) male palp with tegular apophysis. **Fig. 5.** *Ozyptila praticola* (Finland, Korppoo; male palp with tegular apophysis). **Fig. 6.** *Demogenes* aff. n. sp. (Malaysia, Cameron Highlands) male palp with "median" apophysis. **Fig. 7.** *Xysticus cristatus* (Finland, Naantali) male palpal tutaculum. **Fig. 8.** *Psammitis sabulosus* (Finland, Utsjoki) male tutaculum. **Fig. 9.** *Narcaeus* n. sp. (Malaysia, Kalimantan Timur, Samarinda Ulu) tibial clavate setae. **Fig. 10.** "*Phrynarachne*" *clavigera* (Madagascar) femoral clavate setae.

*Heriaeus* Simon, 1875, but also a junior homonym. Type species of *Pellysticus* by original designation *Xysticus pallax* O. Pickard-Cambridge, 1894 from Central America and of *Lassysticus* by original designation *Xysticus lassanus* Chamberlin, 1925 from Texas.

**Differential diagnosis of *Xysticus* s.str.:** Males are very easily differentiated from other genera of *Xysticus* s.lat. by the presence of tegular apophyses (usually two, sometimes bifurcate).

Close relatives of the type species have paired epigynal fovea, while the epigyne of other species groups is variable. There is usually a central ridge, if the fovea is unpaired. The subgenera *Pellysticus* and *Lassysticus* were characterized by Schick (1965) by minor details in the structure of the male genital organs, including also the type of tutaculum. Their status is not further discussed here. However, their subgeneric status is not disputed, as they might represent valid taxa. There are no confirmed cases of clavate setae on

the body or legs, as in many species of *Bassaniodes*, but most of the poorly known species have not been checked for this character.

Males are differentiated from the apophysate species of *Ozyptila* by wider than long MOT, often also by a smaller size and lack of clavate setae. The tegular apophyses in *Ozyptila* are often single and, if double, of entirely different structure (Figs. 4-5). Females lack the epigynal hood, typical of practically all species of *Ozyptila*, although the structure homologous to the hood may be widely modified in the *O. rauda*-group and some solitary species outside this group.

#### Anapophysate 'Xysticus'

*Coriarachne* is traditionally regarded as an independent genus by all authors using *Xysticus* s. lat. instead of *Xysticus* s.str. However, the strongly flattened body is just an adaptation to life under bark. The copulatory organs are close to those of *Psammitis* and *Spiracme*. Some large Asiatic species with a very simple colour pattern have sometimes been listed in *Ozyptila*, sometimes in *Xysticus*. Actually the pattern of their copulatory organs does not fit to *Ozyptila* at all and it will be necessary to create a new supraspecific taxon for this well-defined Asiatic group with at least five species.

This complex could be taxonomically treated in several different ways, depending on the emphasis laid on somatic and genital characters. When genital characters are regarded as most significant, even a classification with a single, somatically very variable genus, *Coriarachne*, could be chosen. This would necessarily provide the use of at least three subgenera, *Psammitis*, *Coriarachne* and a new subgenus for the *X. lugubris* group. Special evolution of the genital organs would probably necessitate the revalidation of the subgenus *Spiracme*, as well as a named supraspecific group for the *X. labradoriensis* group, at least. Even in this kind of classification the group *Bassaniodes* would fall in synonymy with *Coriarachne* or with *Psammitis*. *Spiracme* could be regarded as a subgenus of either *Coriarachne* or *Psammitis*.

*Proxysticus* auct. (= *Bassaniodes*) is finally excluded here from *Xysticus* s.lat., as its anapophysate condition is shared by a majority of thomisids and no other essential characters than a fairly large size are similar to *Xysticus*.

*Psammitis* Menge, 1875

*Thomisus* Hahn, 1831: 28, in part

*Xysticus* C.L. Koch, 1838: 26, in part et auct. seq.

*Psammitis* Menge, 1875: 449; Wunderlich, 1995: 751 (note), in part (*abramovi*, *ovadan*, *pseudoluctuosus*, *luctuosus*, *turkmenicus*, *tyshchenkoi*, *embriki*, *xysticiformis*, *zonshteini*, *lindbergi*) 762, in part only (*kempeleni*, *bicolor*), non Wunderlich, 1987.

*Xysticus* (*Spiracme*) Gertsch, 1953: 450

*Xysticus* (*Proxysticus*) Schick, 1965: 162, misidentification

Type species by original designation *Thomisus sabulosus* Hahn, 1832 from Central Europe. Numerous species from Europe, North Africa, Asia, and North America. *Psammitis* represents the most speciose group of the anapophysate *Xysticus* s.lat. No attempt has been made to transfer poorly known species to this genus. The concept of the anapophysate *Xysticus* by Wunderlich (1987, 1992, 1995) has changed without any explanation (cf. Platnick, 2001 under *Xysticus*). There are no true *Psammitis* in the Canary Islands, although Wunderlich (1987) listed four species. They all belong to *Bassaniodes*.

**Differential diagnosis.** Males of *Psammitis* can be separated from *Coriarachne* by normal body form and basally thinner embolus, and from *Spiracme* by non-screwed embolus. There are also differences in the average type of tutaculum and detailed pattern of the tibial apophyses. Females of *Psammitis* are characterized by an unpaired central epigynal cavity. *Coriarachne* spp. have paired epigynal pits, while *Spiracme* spp. have a distal pit on long central scape. The variation of dorsal pattern overlaps between most taxa of *Xysticus* s.lat., especially between *Xysticus* s.str. and *Psammitis*.

*Spiracme* Menge, 1875

*Xysticus* L. Koch, 1870: 31, in part (*striatipes* only)

*Spiracme* Menge, 1875: 447

*Psammitis* (*Spiracme*) Ono, 1978: 285, non *Xysticus* (*Spiracme*) Gertsch, 1953

Type species of *Spiracme* by original designation *S. striata* Menge, 1875 = *Xysticus striatipes* L. Koch, 1870 from Central Europe (male and female from Burjatia, Siberia & female from Mongolia, coll. Y. Marusik examined). Some Central Asian samples may belong to another, related species.

**Diagnosis.** Embolus shorter and thicker than in *Psammitis*. The distally screwed embolus is easily differentiated also from that of *Coriarachne*. Origination of the ejaculatory duct is subcentral and subdistal and the duct itself is thicker than in the three related taxa. The tutacular apophysis is very distinct, triangle-shaped. VTA of male palp is simple, distally slightly hooked, while RTA has a distinct distal hook. The male abdomen is elongated, but the colour pattern is that of *Xysticus* s.str. The median septum of the epigyne ends in a pit. The pattern of the female abdomen is very simple.

*Spiracme* could be treated as a subgenus of *Coriarachne* or *Psammitis*. The latter alternative has been favoured by Ono (1978).

#### The concept of *Coriarachne*

When originally described by Thorell (1869), the flattened body was emphasized as the most important diagnostic character. This adaptive character was even used to characterize a thomisid tribe by Simon (1895: 1013) and Roewer (1954), although included genera with similar parallel adaptation had widely different genital structures. Gertsch (1953: 456) stated that 'the character used by Simon to isolate these groups has little validity' and emphasized the obvious relationship of *Coriarachne* to *Xysticus*. Actually, *Coriarachne* seems to be a sister group of *Psammitis* and more distantly related to *Xysticus* s.str. With some standards *Psammitis* and the other anophysate groups of *Xysticus* s.lat. except *Proxysticus* could be simply treated as subgenera of *Coriarachne*.

*Coriarachne* Thorell, 1869

The complex synonymic history of *Coriarachne* and *Bassaniana* was reviewed by Bowling & Sauer (1975) and Platnick (2001).

Type species of *Coriarachne* by original monotypy *Xysticus depressus* C.L. Koch, 1837 from Central Europe. Type species of *Bassaniana* by original designation and monotypy *B. aemula* O. Pickard-Cambridge, 1898 from Mexico. This species has later been regarded as junior synonym of *Coriarachne versicolor* Keyserling, 1880 from North America (Bowling & Sauer 1975). No material labelled as *B. aemula* has been studied by myself, but the detailed drawings by Gertsch (1953: figs. 60-61, 64, 67-68) depict two clearly different species. Type species of *Platyxysticus* Gertsch, 1932 by original designation *C. versicolor* Keyserling, 1880 from E. United States.

*Coriarachne* is traditionally regarded as an independent genus by all authors using *Xysticus* s.lat. instead of *Xysticus* s.str. However, the strongly flattened body is just an adaptation to life under bark on tree trunks. The genital organs are close to those of *Spiracme* and *Psammitis*. Ono (1985) stressed the body shape as a generic character and even treated *Bassaniana* with weaker flattening as a genus of its own. This act was accepted by Platnick (2001), although *Bassaniana* had been treated as a synonym of *Coriarachne* by Gertsch (1953) and Bowling & Sauer (1975). Here the taxon *Bassaniana* is regarded lower than subgenus.

#### The *Ozyptila*-problem

Parallel to *Xysticus* s.lat., the traditional genus *Ozyptila* also includes apophysate and non-apophysate groups. The North American species have been well treated by Gertsch (1953) and Dondale & Redner (1975), while a modern treatment of the European *Ozyptila* is lacking. The non-apophysate *floridana*-group in southern North America has been named *Modysticus* by Gertsch (1953). Gertsch used the lack of tegular apophysis and the wide MOT as the most important subgeneric characters. The European non-apophysate species have a much different type of copulatory organs.

The most deviating European non-apophysate species is *Ozyptila blackwalli* Simon, 1875, which should probably have status as a separate genus. Females of the Holarctic *rauda*-group also have lost their epigynal hood, while there is a large central cavity and an anterior fingerlike process, most probably homologous with the hood of other taxa of *Ozyptila* s.lat. (cf. Hippa et al. 1986). The group most probably deserves a new named taxon.

Dondale & Redner (1975) included all North American species outside *Modysticus* in a single *brevipes*-group, but according to the European species, it seems that a splitting to *trux*-, *atomaria*- and *praticola*-groups would, at least, reflect more naturally the relationships. Inclusion of the Mediterranean and Asiatic species will yield more groups and finally the creation of named taxa after careful phylogenetic analysis might be the most informative solution.

#### *Ozyptila* Simon, 1864

*Thomisus* Walckenaer, 1826: 79; Walckenaer, 1837: 510

*Ozyptila* Simon, 1864: 439; Bryant, 1930: 376; Strand, 1934: 273; Schick, 1965: and most later American authors, dominating since Platnick, 1993

*Ozyptila* Thorell, 1869: 36 as an emendation of *Ozyptila* Simon; Gertsch, 1953: 463; most later European authors until recently

*Xysticus* Thorell, 1872: 256, in part (*scabricula* & *pusio* = *simplex*); Thorell, 1875: 93 (*pullatus*)

*Coriarachne*, Menge, 1875: 423

Type species by original designation *Thomisus claveatus* Walckenaer, 1837 from the Pyrenees and Egypt. This species was long regarded as a synonym of *Heriaeus hirtus* Latreille, 1819, referring to Walckenaer's large Egyptian species, previously misidentified by Savigny & Audouin (1825) as *Thomisus hirtus*. However, Walckenaer's original description fits to some small species with clavate hairs. Dondale & Redner (1975) checked all known Pyrenean species with clavate hairs. They concluded that the description only fits to *Xysticus nigrinus* Thorell, 1875 and designated a neotype for *Thomisus*

*claveatus* from Pyrenean material. Blackwall (1861) misidentified *Ozyptila blackwalli* Simon, 1875 as *Thomisus claveatus* and Menge (1875) used the name *Coriarachne claveata* for *Thomisus* [*Ozyptila*] *scabriculus* Westring, 1851. The original author of *Ozyptila* later (Simon 1875) proposed a new type designation for *Ozyptila*, *Thomisus brevipes* Hahn, 1826 from Europe. This invalid taxonomic act was later accepted by many specialists (Gertsch, 1953; Schick, 1965, and still by Levy, 1985). *O. brevipes* was also listed as the type in catalogues by Roewer (1954) and Bonnet (1958). The large, mainly Holarctic genus *Ozyptila* s.lat. must, most probably, be split. The Holarctic *O. trux* group is distinctly related to the *O. brevipes*-group, while the *O. nigrita*-group is mainly Mediterranean (cf. Levy, 1985). On the other hand, species of *O. rauda*-group and *O. praticola*-group may have clavate hairs due to parallel adaptation. These groups are not discussed here in more detail.

#### *Bassaniodes* Pocock, 1903

*Thomisus* Savigny & Audouin, 1825: 165, in part

*Xysticus* C.L. Koch, 1838: 61, in part; Levy, 1985: 105, in part, et auct. seq.

*Ozyptila* Simon, 1875: 218, in part (*blitea*, *albimana* & *bufo*); Berland, 1927: 13 (*albimana*)

*Bassaniodes* Pocock, 1903: 198, type species *B. socotrensis*, Pocock, 1903

*Proxysticus* Dalmas, 1922: 91, type species *Thomisus lalandii* Savigny & Audouin, 1825 from North Africa, syn.n., non *Xysticus* (*Proxysticus*) Schick, 1965 or Wunderlich, 1987

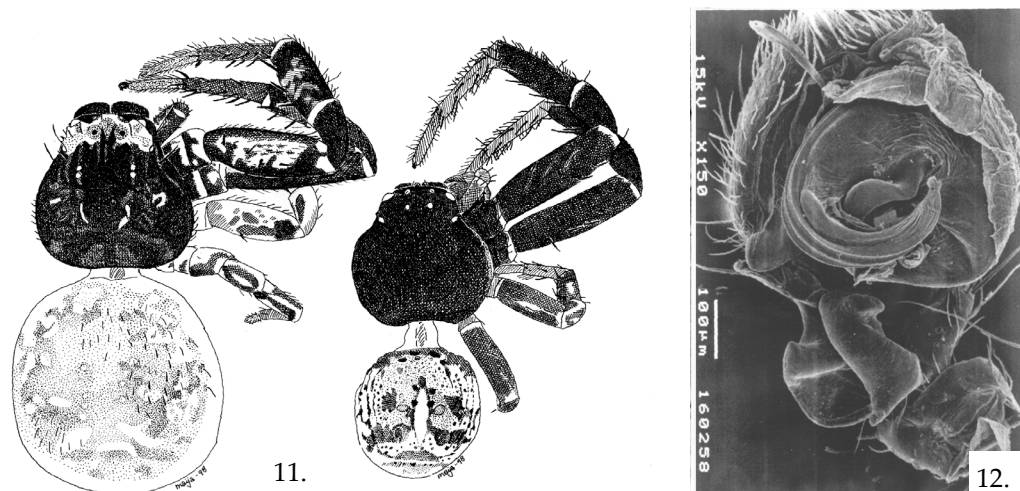
*Xysticus* (*Spiracme*) Gertsch, 1953: 450, in part (no American spp.)

*Xysticus* [*Spiracme*] (*Proxysticus*) Ono, 1978: 268

*Ozyptila* Song & Hubert, 1983: 10, in part (*pseudoblitea*)

*Proxysticus* Wunderlich, 1992: 495 (*canariensis*, *fuerteventurensis*, *grohi*, *lanzarotensis*, ? *madeirensis*, *pinocorticalis*, *squalidus* & *Xysticus asper* Lucas, 1838, nomen dubium) *Coriarachne* Jocque, 1993: 119 (*fienae*), non





**Fig. 11-12.** *Bassaniodes cribratus* (Turkey, Anatolia). **Fig. 11.** Female (left), male (right). **Fig. 12.** male palp.

Thorell, 1870

*Psammitis* Wunderlich, 1987: 255 (*clavulus, cribratus, tristrami*), Mikhailov & Fet, 1994: 515, in part (*turanicus*); Wunderlich, 1995: 758, in part (*bliteus, bufo, tristrami, tenebrosus, graecus, sardiniensis, pseudorectilineus & fienae*), non Menge, 1875, non *Xysticus* (*Psammitis*) Wunderlich, 1987

Type species of *Bassaniodes* by original monotypy *B. socotrensis* Pocock, 1903 from Socotra Island, type preservation unknown; this seems to be a junior synonym of some of the widespread species of the Mediterranean region. *Xysticus fesus* O. Pickard-Cambridge, 1876 is the most probable alternative, but the drawing of the epigyne by Pocock (cf. Pocock's fig. 2 in Pl. 26 to fig. 118 of Levy, 1985) is too schematic for a confirmed synonymy. Cf. also the note by Wunderlich (1995 p. 761). Type species of *Proxysticus* by original designation *Thomisus lalandii* Savigny & Audouin, 1825 from Egypt. Berland & Fage in Simon (1932) erroneously listed [*Xysticus*] *albimanus* Simon, 1870 as the type species. The concept of *Xysticus* (*Proxysticus*) Schick, 1965 is entirely different from the real *Proxysticus*. These species are anaphophysate, but all species of both the *X. montanensis* group and the *X. luctuosus* group belong to *Psammitis* Menge, 1875. Actually, no confirmed records of *Bas-*

*saniodes* are known from the New World. Wunderlich (1995) simply placed all anaphophysate species of *Xysticus* s.lat. to *Psammitis*.

Species of this mainly Mediterranean-West Asian group have, in the past, been listed under *Xysticus* as well as *Oxyptila* and *Coriarachne*, as the eye pattern does not fit to the definition of *Xysticus* s.lat. by many authors, e.g. Lockett & Millidge (1951). A majority of *Xysticus* s.lat. from Central Asia and from dry Mediterranean habitats belong to *Bassaniodes*. The checking of all of them is out of the scope of this paper. All South African species described as *Xysticus* may belong to this genus or they might represent a supraspecific taxon of their own.

**Diagnosis.** General habitus of both sexes of *Xysticus*-type (Fig. 11). MOT often longer than wide, as in *Oxyptila*. Body setae clavate or blunt as in *Oxyptila*, but exceptionally thin and pointed, e.g., in *B. lalandei*. Male palpal tegulum without tegular apophyses (Fig. 12), but origin of the circumtegular ridge strongly sclerotized and a variously shaped tegular ridge is present close to that area (Fig. 12). Three tibial apophyses, VTA very large, often encircling a cavity.

Female epigyne with a posteriorly concave, well sclerotized anterior hood, most probably homologous with the anterior pit or hood of *Oxyptila* s.str. Some species habitually resemble *Oxyptila* spp.

Most species of *Bassaniodes* are as large or even larger than common species of *Xysticus* and therefore they have originally mostly been described as *Xysticus*. However, many genital (epigynal hood, complex tibial apophyses) and some somatic characters (eye pattern, structure of setae) are more similar to *Ozyptila*. Therefore a relationship with *Ozyptila* is suggested here.

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