

Cozyptila, a new genus of crab spiders (Aranei: Thomisidae: Thomisinae: Coriarachnini) from the western Palaearctic

Cozyptila, новый род пауков-бокоходов (Aranei: Thomisidae: Thomisinae: Coriarachnini) из западной Палеарктики

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KEY WORDS: *Cozyptila*, *Modysticus*, *Ozyptila*, new genus, new species, new combinations, new status, crab spiders, Thomisidae.

КЛЮЧЕВЫЕ СЛОВА: *Cozyptila*, *Modysticus*, *Ozyptila*, новый род, новый вид, новая комбинация, новый статус, пауки-бокоходы, Thomisidae.

ABSTRACT. A new thomisid genus *Cozyptila* Lehtinen & Marusik, gen.n. is described with *Ozyptila blackwalli* Simon, 1875 as its type species. Two new species of this genus are described here from both sexes: *C. guseinovorum* Marusik & Kovblyuk, sp.n., type locality Azerbaijan, but known also from Stavropol Prov. of Russia, Crimea (Ukraine) and Turkey, and *C. thaleri* Marusik & Kovblyuk, sp.n. from Crimea (Ukraine). Generic status is suggested for the Nearctic subgenus *Modysticus* Gertsch, 1953, stat.n. (type species *Ozyptila modesta* Scheffer, 1904), formerly a subgenus of *Ozyptila*. The following new combinations are suggested: *Cozyptila blackwalli* (Simon, 1875) comb.n. ex *Ozyptila*; *Modysticus modestus* (Scheffer, 1904) comb.n., *Modysticus floridanus* (Banks, 1895) comb.n., *Modysticus imitatus* (Gertsch, 1953) comb.n., *Modysticus okefinokensis* (Gertsch, 1934) comb.n. and *Demogenes nipponicus* (Ono, 1975) comb.n., all ex *Ozyptila*. The complex taxonomic history of *Ozyptila* s.lat. and its type species *O. claveata* (Walckenaer, 1837) is discussed.

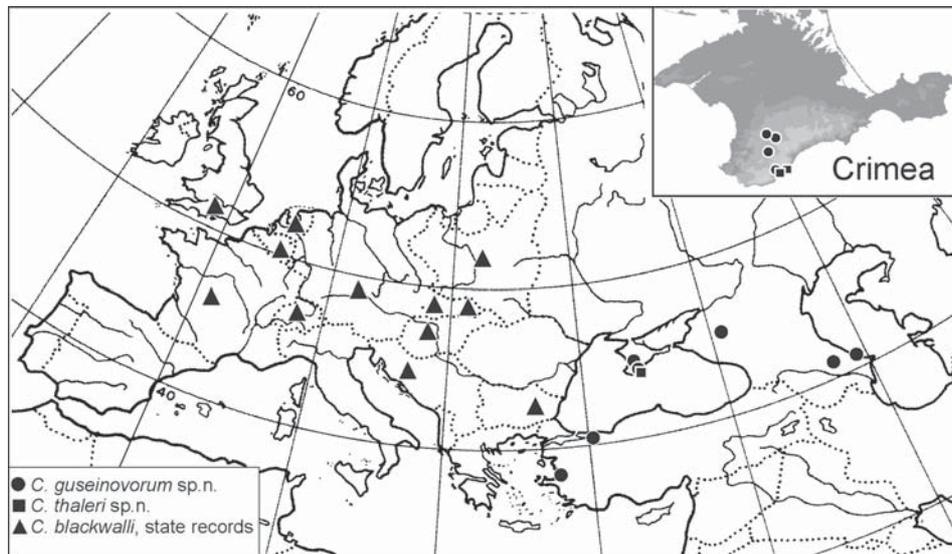
РЕЗЮМЕ. Описан новый род *Cozyptila* Lehtinen & Marusik, gen.n. с типовым видом *Ozyptila blackwalli* Simon, 1875. В состав рода входят также два новых вида *C. guseinovorum* Marusik & Kovblyuk, sp.n. из Азербайджана, Ставропольского Края, Крыма и Турции, и *C. thaleri* Marusik & Kovblyuk, sp.n. из Крыма. Статус неарктического подрода *Modysticus* Gertsch, 1953, stat.n. (типовой вид *Ozyptila modesta* Scheffer, 1904) ранее рассматривавшегося в роде *Ozyptila*, повышен до

родового. Предложено шесть новых комбинаций: *Cozyptila blackwalli* (Simon, 1875) comb.n., *Modysticus modestus* (Scheffer, 1904) comb.n., *Modysticus floridanus* (Banks, 1895) comb.n., *Modysticus imitatus* (Gertsch, 1953) comb.n., *Modysticus okefinokensis* (Gertsch, 1934) comb.n. и *Demogenes nipponicus* (Ono, 1975) comb.n., всех *Ozyptila*. Подробно обсуждается таксономическая история рода *Ozyptila* s.lat. и его типового вида *O. claveata* (Walckenaer, 1837).

Introduction

According to the Platnick's "World Spider Catalog" catalogue [Platnick, 2004] the spider genus *Ozyptila* is, along with the *Xysticus*, *Tmarus*, *Synema*, *Misumenops*, and *Thomisus*, one of the largest thomisid genera. It contains 104 catalogued species distributed mainly in the Holarctic. In number of species *Ozyptila* is exceeded only by *Xysticus* (362 species), *Tmarus* (208), *Synema* (130), *Misumenops* (126) and *Thomisus* (122). Outside of the Holarctic it is listed by Platnick [2004] from Ethiopia, East Africa, Ivory Coast, Senegal, India and New Hebrides. This genus has traditionally been regarded as a group of small ground-living thomisids with clavate hairs related to *Xysticus*. Therefore litter dwelling thomisid species from all over the world have been assigned to this genus or to *Phrynarachne* [Simon, 1903], although the real *Phrynarachne* spp. are neither small nor covered throughout with clavate hairs.

The genus *Ozyptila* was described by Simon [1864] in his first version of a worldwide classification of spiders. The problem of its type species, as well as the



Map 1. Distribution of *Cozyptila* gen.n. species: triangle — state records of *C. blackwalli*, circle — *C. guseinovorum* sp.n., square — *C. thaleri* sp.n.

Карта 1. Распространение видов *Cozyptila* gen.n.: треугольник — *C. blackwalli* показаны только страны обитания, кружок — *C. guseinovorum* sp.n., квадрат — *C. thaleri* sp.n.

orthography of the name (*Ozyptila* or *Oxyptila*), has been widely discussed by Gertsch [1953], Dondale & Redner [1975] and Lehtinen [2002]. However, only the revision of the New World species [Dondale & Redner, 1975] has adequately argued the fixation of the generotype, namely *Thomisus claveatus* Walckenaer, 1837 (= *Ozyptila claveata* = *O. nigrita* (Thorell, 1875)) and the correct spelling. While type of the genus was fixed, Platnick [2004] still lists *O. brevipipes* (Hahn, 1826) as the generotype.

Although Nearctic species were completely revised, the Old World *Ozyptila* were never surveyed in large scale. Phylogenetic relationships of a great majority of species assigned to *Ozyptila* and species grouping have not been much discussed. It is worth mentioning that descriptions of almost all *Ozyptila* species distributed outside Holarctic are rather poor. It is very probable that most of them are not congeneric with the generotype.

Lehtinen [2002] suggested that the evolution of the traditional genus *Ozyptila* Simon, 1864 is parallel to that of *Xysticus* s. lat. and that the nonapophysate groups of *Ozyptila* s. lat. deserve generic status like the nonapophysate groups of *Xysticus* s. lat. (*Bassaniodes* Pocock, 1903, *Psammitis* Menge, 1868, *Spiracme* Menge, 1876, etc.). It is possible that the tegular apophyses in the *Ozyptila*-group have been completely reduced at least in two different lines of evolution. The North American subgenus *Ozyptila* (*Modysticus*) Gertsch, 1953 still has the female epigynal hood, while the tegular apophyses have been lost. In Palearctic only two species without tegular apophyses were known until recently: *Ozyptila blackwalli* Simon, 1875 from Central Europe and *O. nipponica* Ono, 1975 from Japan. The shape of the male palp in the completely New World group *Modysticus* is quite different from that of the nonapophysate Palearctic *blackwalli*-group that has lost both the tegular apo-

physes in the male and the epigynal hood in the female. The large gap in the ranges of these groups is a convincing additional argument to create a supraspecific taxon of its own for the Palearctic nonapophysate group.

Material and Methods

Material treated herein is deposited in the following museums and collections: CSC — Csaba Szinetar's collection, Szombathely, Hungary; MMUM — The Manchester Museum, the University of Manchester, UK; PTLC — Pekka T. Lehtinen's temporary collection, Kaarina, Finland; SMF — Senckenberg Museum, Frankfurt am Main, Germany; TNU — Taurida National University, Simferopol, Ukraine; YMT — Yuri Marusik's temporary collection in ZMUT; ZMMU — Zoological Museum, Moscow University, Russia; ZMUT — Zoological Museum, University of Turku, Finland.

All measurements are given in mm. Microphotographs were made with a Jeol JSM-5200 SEM in the Zoological Museum, University of Turku. In body measurements the first figure refers to the specimen in which legs were measured, the following figures in parentheses correspond to variations in length or width. In the description of spination the following abbreviations have been used: a — apical, d — dorsal, p — prolateral, r — retrolateral, v — ventral.

Taxonomy

Ozyptila Simon, 1864

Ozyptila Simon, 1864: 439; Bryant, 1930: 376; Strand, 1934: 273; Gertsch, 1939: 340; Schick, 1965: 173 and most American authors since Dondale & Redner, 1975.

Oxyptila Thorell, 1869: 36 as an emendation of *Ozyptila* Simon; Tullgren, 1944: 73; Gertsch, 1953: 463; most later European authors until recently.

Type species, by original designation, is *Thomisus clavatus* Walckenaer, 1837 from the Pyrenees and Egypt. *T. clavatus* was long regarded as a synonym of *Heriaeus hirtus* Latreille, 1819, referring to Walckenaer's large Egyptian species, previously misidentified by Savigny & Audouin as *Thomisus hirtus*. However, Walckenaer's [1837] original description fits to some small species with clavate hairs. Dondale & Redner [1975] checked several Pyrenean species with clavate hairs and concluded that the description fits only *Xysticus nigrinus* Thorell, 1875 and designated a neotype for *Thomisus clavatus* from Pyrenaean material.

COMMENTS. Simon [1875], the author of *Ozyptila*, proposed a new type designation for *Ozyptila*, *Thomisus brevipes* Hahn, 1826 from Europe. This invalid taxonomic act was later accepted by most specialists [Gertsch, 1953; Schick, 1965; Tikader, 1980; Levy, 1985]. *O. brevipes* was also listed as the type in catalogues by Roewer [1954] and Bonnet [1958], and still by Platnick [2004]. In spite of repeated use of *O. brevipes* as the type species, the result of the neotype designation by Dondale & Redner [1975] is here regarded as the only valid act in this confusing history of *Thomisus clavatus* and the species long known as *O. nigrina* is the only nomenclatorally correct type of *Ozyptila*.

The large, mainly Holarctic genus *Oxyptila* s.lato, judging from the conformation of male palp and epigyne most probably must be split. Species grouping in *Ozyptila* was done only for Nearctic species by Dondale & Redner [1975]. They placed all species in three groups: *brevipes*, *floridana* (=subgenus *Modysticus*) and *rauda*.

The large Holarctic group of species related to *O. trux* (Blackwall, 1846) is distinctly related to the *O. brevipes*-group, while *O. clavata* and related species with nonhomologous tegular apophyses are mainly Mediterranean. The widespread *O. atomaria* (Panzer, 1801) is very deviant in regard to the copulatory organs of both sexes. On the other hand, species of *O. rauda*-group and *O. praticola* (and related species) may have clavate hairs due to parallel adaptation or secondary divergence. The problem is not discussed here in more detail.

Numerous small Mediterranean, European and Asiatic species of Coriarachninae with clavate hairs have been described as "*Oxyptila*", although many of them have an entirely different structure of the copulatory organs of both sexes. A careful revision of *Ozyptila* s.lat. will split the traditional "apophysate" *Ozyptila* into several genera, as the tegular apophyses in different groups do not seem to be homologous with each other.

Modysticus Gertsch, 1953, stat.n.

Ozyptila (*Modysticus*) Gertsch, 1953: 464. Type species: *Oxyptila modesta* Scheffer, 1904 from Kansas.

COMPOSITION. *M. floridanus* (Banks, 1895) comb.n., *M. imitatus* (Gertsch, 1953) comb.n., *M. modestus* (Scheffer, 1904) comb.n. and *M. okefinokensis* (Gertsch, 1934) comb.n.

DIAGNOSIS. From *O. clavata*, the type species of *Ozyptila*, member of this genus differ by lack of tegular apophysis, median (central) position of embolic base, backward directed lateral tibial apophysis and lobed receptacula. From the similar nonapophysate genus *Cozyptila* gen.n. *Modysticus* can be easily separated by modified embolus (embolus proper + membrane), larger tutaculum, presence of epigynal hood, elongate receptaculae, and presence of seminal ducts.

COMMENTS. This taxon (sub-*Ozyptila floridana*-group) was properly revised and diagnosed by Dondale and Redner [1975].

Ozyptila hardyi Gertsch, 1953 was included in the *floridana*-group by Dondale & Redner [1975], obviously due to similar general pattern of vulva, but it is here left as an unplaced species in the *Ozyptila* s.lat. complex, as the male of this species is unknown, the eye pattern is distinctly different from *Modysticus* spp. and the leg armature is not identical with any other known species of *Modysticus*. Gertsch [1953] described its epigynal hood as short and transparent, but according to Figs 45 and 46 in Dondale & Redner [1975] a real hood is lacking. Therefore we leave this species *Ozyptila* s.lato., although it seems that this species represents a supraspecific taxon of its own.

DISTRIBUTION. This genus is known from western part of North America: Kansas and Texas to West Virginia, Michigan to Florida and eastern Mexico (south to 20°N).

Cozyptila Lehtinen & Marusik, gen.n.

Ozyptila Simon, 1875: 231, in part (*blackwalli* only). Type species: *Ozyptila blackwalli* Simon, 1875.

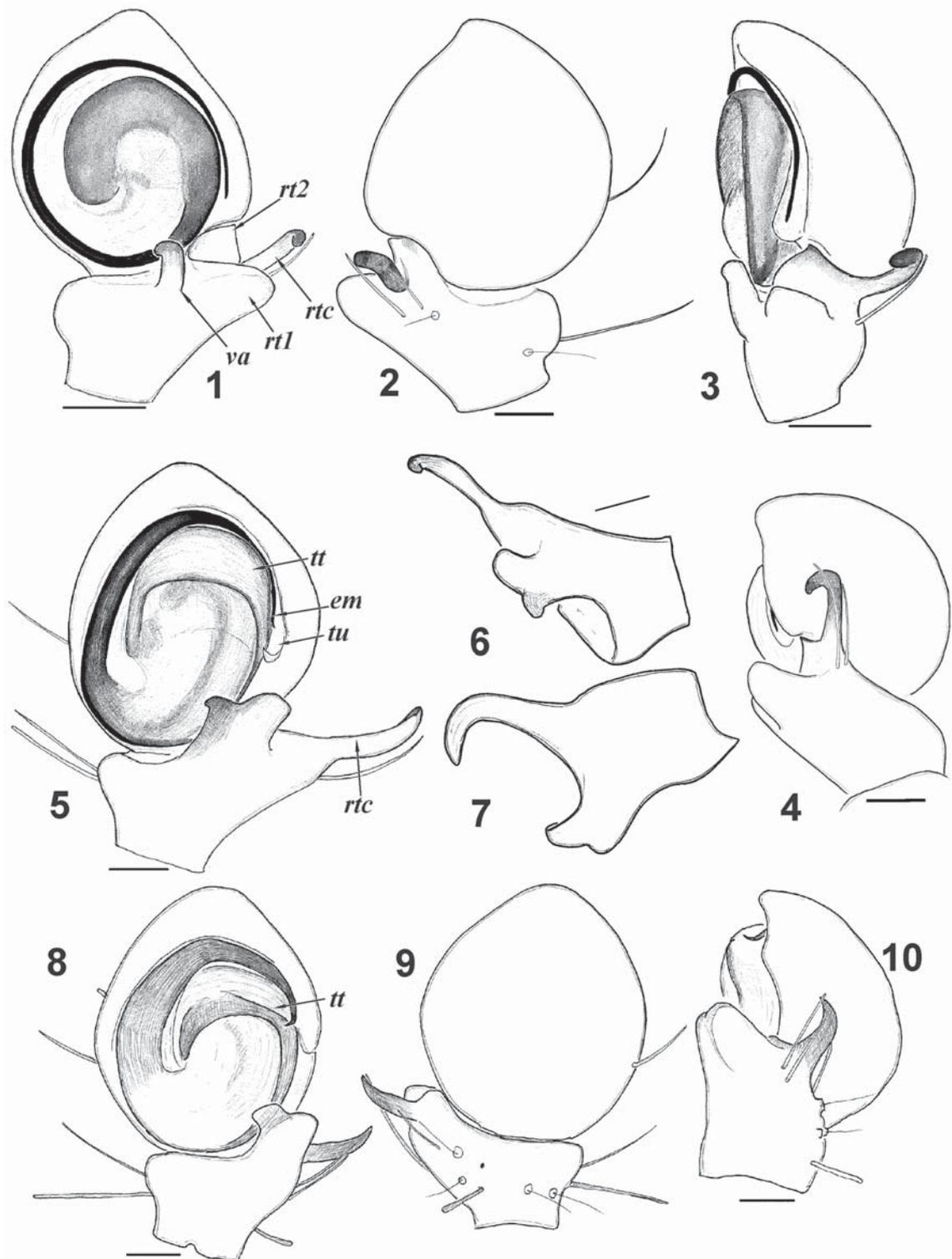
COMPOSITION. *C. blackwalli* (Simon, 1875) comb.n., *C. guseinovorum* sp.n. and *C. thaleri* sp.n.

ETYMOLOGY. The generic name refers to Crimea and the related genus *Ozyptila*.

DIAGNOSIS. Members of this genus are differentiated from all Palaearctic true *Ozyptila* by lack of tegular apophyses in male and lack of epigynal hood in female. The male palpal cymbium has also a well developed tutaculum groove for the apex of embolus. Embolus is narrow in comparison with all true *Ozyptila* and the tip of embolus is either simple (2 species) or with a distal opening surrounded inside by a ring of globular extensions. The male abdomen of all species has a weakly limited scutum. Females of this genus have massive outgrowth of the epigynal plate, and vulva has no ducts. From another nonapophysate Nearctic genus *Modysticus* (see above) females of the new genus can be easily separated by having no lobate receptacula.

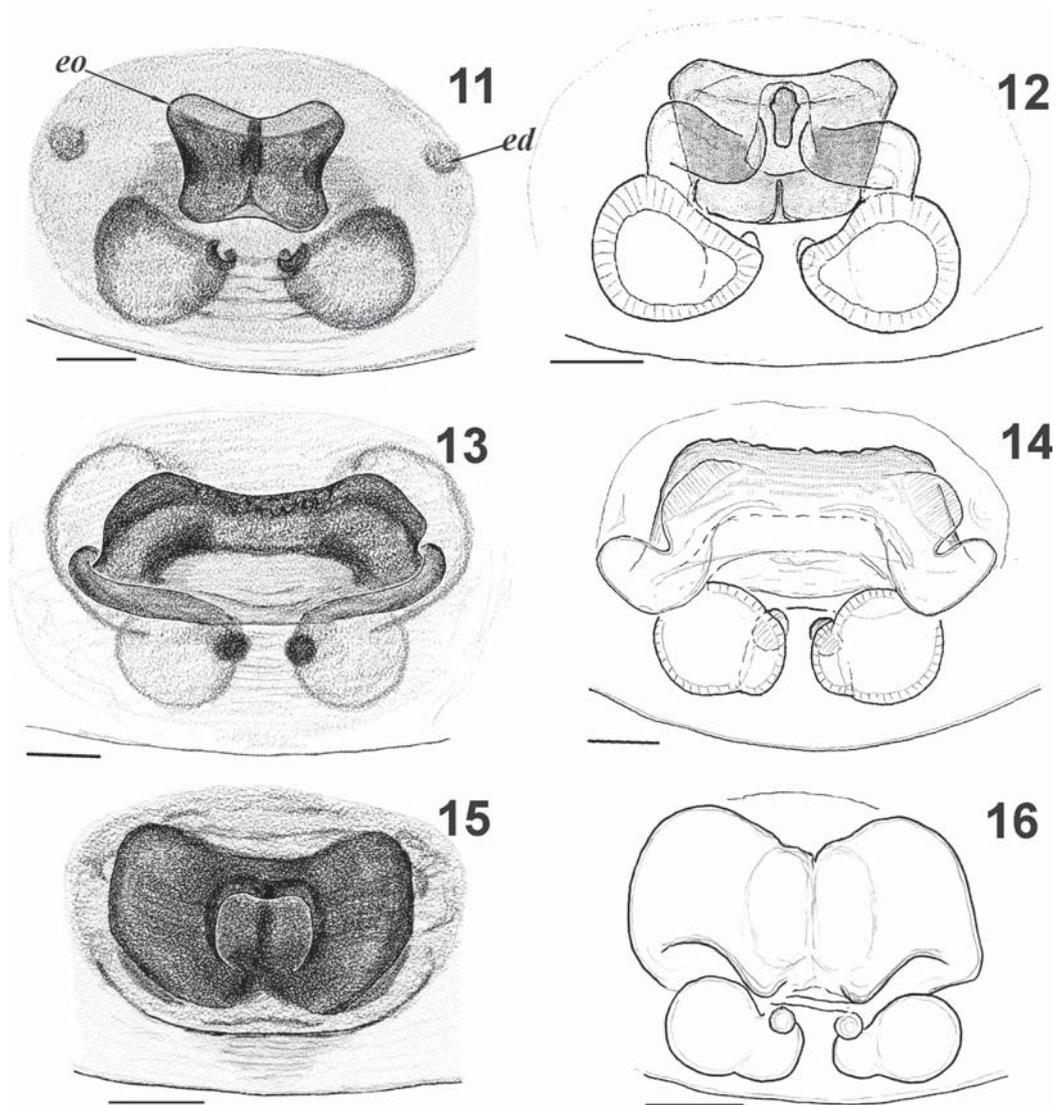
DESCRIPTION. Small thomisids with body length 2.5–4, carapace 1.5–1.8 long, 1.3–1.7 wide; carapace slightly longer than wide, abdomen usually wider than long. General coloration brown. Carapace with wide median band and often with light V-spot (cf. Figs 19, 20, 22, 25) in posterior third, sides may have sublateral light bands (Fig. 19) or series of spots (Fig. 20). Abdomen with pattern formed by round spots and longitudinal dark stripes. In males abdomen with scutum (Fig. 24) covering 2/3 of dorsum. Sometimes scutum is poorly distinct. Femora brown, distal parts of leg joints often with whitish rings. Body covered with clavate hairs. Femur I with 3 (sometimes 2 or 1) prolateral clavate setae (Figs 18–20). Tibia I–II with 2 pairs of ventral spines, metatarsi with I–II with 3 pairs of ventral spines and often with 1 pro- and 1 retrolateral spine. Legs III–IV without spines. Chelicerae without teeth.

Male palp. Tibia with two apophyses: retroventral (*va*) and lateral (*rtc*). Retroventral apophysis simple (Figs 1, 3, 33, 34), longer than wide, or flattened and subdivided on the tip (Figs 5, 7, 8, 31, 35). Lateral apophysis long, curved into hook or claw (*rtc*) and stretching outside of bulbus. In *C. thaleri* sp.n. lateral apophysis subdivided into 3 parts (Figs 1–4, 33): main hook-like (*rtc*) and two accessory: swollen (*rt1*) and keel like (*rt2*). Tibia with several (3 or more) long macrosetae. Bulbus without apophyses. Tegular thickening (*tt*, =tegular ridge, sensu Dondale & Redner [1975] vary in width, from short and thin to wide and long (cf. Figs 43, 45). Embolus long (Figs 31,



Figs 1–10. Male palp of *Cozyptila guseinovorum* sp.n. (1–4), *C. blackwalli* (5–7) and *C. thaleri* sp.n. (8–10): 1, 5, 8 — ventrally; 2, 9 — dorsally; 3, 4, 10 — retrolaterally; 6, 7 — ventrally and laterally, respectively. Scale 0.1 mm. Abbreviations: *em* — embolus; *rt1* — accessorial retrolateral apophysis # 1; *rt2* — accessorial retrolateral tibial apophysis # 2; *rtc* — retrolateral tibial claw-like apophysis; *tt* — tegular thickening; *tu* — tutaculum; *va* — ventral tibial apophysis.

Рис. 1–10. Пальпа самца *Cozyptila guseinovorum* sp.n. (1–4), *C. blackwalli* (5–7) и *C. thaleri* sp.n. (8–10): 1, 5, 8 — снизу; 2, 9 — сверху; 3, 4, 10 — сбоку; 6, 7 — снизу и сбоку, соответственно. Масштаб 0,1 мм. Сокращения: *em* — эмболюс; *rt1* — дополнительный отросток голени № 1; *rt2* — дополнительный отросток голени № 2; *rtc* — retrolateral claw like apophysis; *tt* — утолщение тегулюма; *tu* — тутакулум; *va* — ventral apophysis.



Figs 11–16. Epigyne of *Cozyptila blackwalli* (11, 12), *C. guseinovorum* sp.n. (13, 14) and *C. thaleri* sp.n. (15, 16): 11, 13, 15 — ventrally; 12, 14, 16 — dorsally. Scale 0.1 mm. Abbreviations: *ed* — epigynal depression; *eo* — outgrowth of epigynal plate.

Рис. 11–16. Эпигина *Cozyptila blackwalli* (11, 12), *C. guseinovorum* sp.n. (13, 14) и *C. thaleri* sp.n. (15, 16): 11, 13, 15 — снизу; 12, 14, 16 — сверху. Масштаб 0,1 мм. Сокращения: *ed* — углубления эпигины; *eo* — вырост пластинки эпигины.

33, 35), unmodified (Figs 37, 38), tip of embolus resting on tutaculum or stay nearby (Figs 33, 34, 37, 43, 45).

Epigyne. Epigyne with thick rectangular, ovoid or ridge-like outgrowth (*eo*), without hood. Vulva with receptacula longer than wide.

Spiders inhabit litter, and occur under stones in forest or forest openings. Most of specimens were collected by pitfall trapping, fewer were taken by aspirator and none by sweeping.

DISTINGUISHING SPECIES. Species of this genus can be easily distinguished from each other by the shape of the male palp and epigyne, namely shape of retrolateral and retroventral tibial apophyses, shape of tegular thickening, length and width of embolus. Epigynes of all three species have different proportion of epigynal outgrowth and different vulva. *Cozyptila* species can be also separated to some extent by the pattern of carapace.

COMMENTS. The male palp of *Ozyptila nipponica* Ono, 1975 has no tegular apophysis like *Cozyptila* gen.n., but the epigyne of this species has a distinct hood, and entirely different (from *Cozyptila* gen.n.) vulva. In addition, in the male of *O. nipponica* carapace proportions are different, the width of its head region being less than half that of its thoracic region (head width/carapace width = 0.42), while in *Cozyptila* gen.n. cephalic part is wider (head width/carapace width = 0.52) (cf. f. 26 in Ono [1985] and Figs 21–26). According to somatic and copulatory organ characters *O. nipponica* is very close to New Guinean-South-East Asian genus *Demogenes* Simon, 1895 sensu lato, an unrevised genus or group of genera with several undescribed taxa belonging to a different tribe. Because of this, *Ozyptila nipponica* Ono, 1975 is here removed from *Ozyptila* s.lat. and placed it *Demogenes*: *D. nipponicus* (Ono, 1975) comb.n.

DISTRIBUTION. This genus has a Euro-Caucasian range and is known from Europe, Turkey, and Azerbaijan.

Cozyptila blackwalli (Simon, 1875), **comb.n.**
Figs 5–7, 11, 12, 17, 18, 23, 24, 27, 28, 31, 32, 37–39.

Ozyptila blackwalli Simon, 1875: 231.

Coriarachne blackwalli O.P.-Cambridge, 1881: 318

Ozyptila blackwalli Becker, 1882; 202 pl 20 fig 2; Chyzer & Kulczyński, 1891: 100 pl 4 fig 7; Bösenberg, 1902: 359, pl. 33, Fig. 529; Simon, 1932: 798, Figs 1177 & 1199; Lockett & Millidge, 1951: 187, Figs 94c & 95d; Roewer, 1954: 875; Tyshchenko, 1971: 117, Fig. 272; Miller, 1971: pl. XIV Figs 15, 16; Braendegaard, 1972: 119, Fig. 64; Roberts, 1985: 104, Fig. 49c; Heimer & Nentwig, 1991: 474, Fig. 1247; Roberts, 1995: 164, f.; Roberts, 1998: 174, f.; Platnick, 2004: list of synonyms & references.

MATERIAL EXAMINED. FRANCE: 1 ♀ (SMF), "Frankreich, 11.04.1992" (P. Jäger); SWITZERLAND: 1 ♂ (PTLC), Uri, Hospental, pitfall trapping of mountain slope 5–7.1968 (P.T. Lehtinen); GERMANY: 1 ♂, 4 ♀♀ (SMF 21726/5), East Germany, Dessau, (leg. & det. H. Wiehle); 2 ♂♂, 2 ♀♀ (ZMUT), Bavaria, Upper Frankonia, Landkreis Forchheim, W of Leutenbach, "Katzenköpfe" reserve area, low xerophilous vegetation near calcareous rocks, 11.08–11.09.2000 (leg. and det. T.Blick); HUNGARY: 1 ♂, 1 ♀ (# RII 1679 — Arachnol. Coll. Roewer, SMF), Simonfornya [?], 1929 (det. Roewer); 3 ♂♂ (CSC), 1 ♀, Hercseg-Will, pitfall traps, 06.06.2003 (leg. C. Szinetar).

DESCRIPTION. Male (n = 6). Total length 3.15 (2.68–3.45). Carapace: 1.60 (1.45–1.60) long, 1.38 (1.38–1.48) wide. Abdomen: 1.58 (1.50–1.70) long, 1.70 (1.55–1.75) wide. Carapace uniformly brown. Abdomen with typical pattern of light round spots and dark longitudinal stripes.

Leg joints:

	Femur	Patella	Tibia	Metatarsus	Tarsus
I	1.10	0.58	0.78	0.75	0.58
II	1.1	0.58	0.75	0.78	0.52
III	0.85	0.45	0.55	0.42	0.38
IV	0.88	0.45	0.55	0.48	0.38

Spination:

	Femur	Tibia	Metatarsus
I	1-1-1 p (clavate)	2-2v	3-3v
II	0	2-2v	3-3v

Palp as in Figs 5–8, 31–38, with very long claw-like lateral apophysis (*rtc*), wide ventral tibial apophysis (*va*). Tegulum distinctly longer than wide. Embolus and tegular thickening (*tt*) wide.

Female (n = 6). Total length 3.12 (2.95–3.88). Carapace: 1.45 (1.45–1.75) long, 1.45 (1.38–1.68) wide. Abdomen: 1.60 (1.58–2.38) long, 1.75 (1.75–2.58) wide. Coloration lighter than in male (Figs 17, 18). Carapace with dark sides and wide median band.

Leg joints:

	Femur	Patella	Tibia	Metatarsus	Tarsus
I	1.00	0.52	0.70	0.62	0.50
II	1.02	0.58	0.70	0.62	0.50
III	0.80	0.45	0.52	0.38	0.38
IV	0.78	0.42	0.55	0.45	0.38

Spination:

	Femur	Tibia	Metatarsus
I	1-1-1p + 6d-p-v	2-2v, 1-1d	1p, 1r, 3-3v
II		2-2v	1p, 1r, 3-3v

Epigyne as in Figs 11, 12, 27, 28, 37–39, with rectangular (trapezoidal) outgrowth of epigynal plate (*eo*). Plate outgrowth with lateral shallow fovea and posterior deep conical depression. Sides of epigyne with shallow depressions (*ed*) well visible by light and SEM microscope.

DIAGNOSIS. This species can be easily distinguished from congeners by the tegulum which is longer than wide, and trapezoidal shape of epigynal plate outgrowth.

DISTRIBUTION. France, southern England, Belgium, Netherlands, Germany, Switzerland, Czech Republic, Slovakia, Hungary, Croatia, Bulgaria, Poland. Records of this species from Crimea refer to *C. guseinovorum* sp.n. and record from the Moscow Area (cf. Charitonov, 1932) seems to be based on misidentification also.

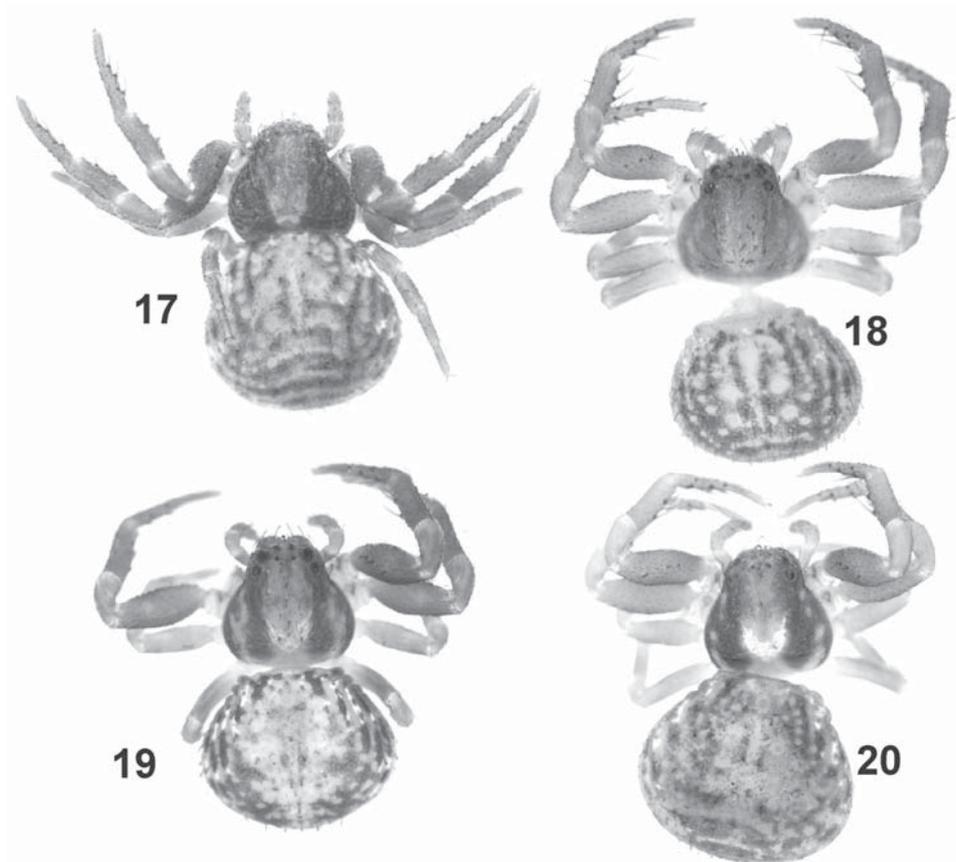
COMMENTS. In taxonomical literature, namely in most important spider catalogues [Roewer, 1954; Bonnet, 1958; Platnick, 2004] there are at least two misconceptions of *C. blackwalli*. They are as follows:

1) According to Bonnet [1958] Blackwall [1861:p.87 pl. IV, Fig. 52] misidentified *Ozyptila blackwalli* Simon, 1875 as *Thomisus claveatus* and this interpretation has been cited later by many authors, but Blackwall's figure of the male undoubtedly refers to an apophysate species, not to *O. blackwalli*.

2) Menge [1876] used the name *Coriarachne scabricula* Westring, 1851 for a male and a female spider, possibly representing different species, and it is certain that it is not *O. blackwalli* auct. as catalogued by Roewer [1954], Bonnet [1958] and also by Platnick [2004]. The details of the palp [Menge, 1876 pl. 72, figs 242a,b] cannot be interpreted with certainty, but the female vulva [Menge, 1876 pl. 72, Fig. 242e] belongs to a species of remaining, unrevised *Ozyptila* with strongly coiled ducts and double small spermathecae. The details of this vulval figure may be partly erroneous due to poor microscope available for Menge, but the typical vulva of *blackwalli* is absolutely excluded from possible alternatives. The vulva of *Ozyptila trux* seems to be variable between different populations [Dondale & Redner, 1975: figs 82, 83], and the female may belong to this species, the male most probably not.

Cozyptila thaleri Marusik & Kovblyuk, **sp.n.**
Figs 8–10, 15, 16, 19, 25, 26, 30, 33, 34, 40, 45.

MATERIAL. Holotype ♂ (ZMMU), UKRAINE, Crimea, Yalta, Massandra Park, *Bambusa* sp. planting near of stream, 16–23.06.2000 (M. Kovblyuk). Paratypes. UKRAINE, Crimea: 1 ♀ (TNU), Yalta Distr., "Martyan Cape" Reserve, Pineto-Quercetum (pubescentis)-juniperoso (excelsae)-brachypodium, pitfall traps, 19.05.–4.06.2001 (M. Kovblyuk); 1 ♂ (TNU), same locality, pitfall traps, 16–29.06.2001 (M. Kovblyuk); 1 ♂ (TNU), same locality, pitfall traps, 29.06.–8.07.2001 (M. Kovblyuk); 1 ♀ (YMT), Yalta Distr., "Martyan Cape" Reserve, Carpineto-Juniperetum (excelsae) ruscocosum nudum, pitfall traps, 1–8.04.2000 (M.Kovblyuk); 1 ♂ (TNU), same locality, pitfall traps, 20–27.05.2000 (M. Kovblyuk); 1 ♀ (YMT), same locality, pitfall traps, 9–16.07.2000 (M. Kovblyuk); 1 ♂ (TNU), same locality, pitfall traps, 8–28.10.2000 (M. Kovblyuk); 1 ♂ (TNU), same locality, pitfall traps, 16–29.06.2001 (M. Kovblyuk); 1 ♂ (TNU), Yalta Distr., "Martyan Cape" Reserve, Arbuteto-Juniperetum (excelsae) cistoso-achnatherosum, pitfall traps, 12–19.02.2000 (M.



Figs 17–20. Female of *Cozyptila blackwalli* (17, 18), *C. thaleri* sp.n. (19) and *C. guseinovorum* sp.n. (20), dorsally: 17 — from Germany; 18 — from Hungary.

Рис. 17–20. Самка *Cozyptila blackwalli* (17, 18), *C. thaleri* sp.n. (19) и *C. guseinovorum* sp.n. (20), сверху: 17 — из Германии; 18 — из Венгрии.

Kovblyuk); 1 ♂ (TNU), same locality, pitfall traps, 17–25.06.2000 (M. Kovblyuk); 1 ♂ (TNU), Yalta, Massandra Park, *Pistacia mutica* silva rara, pitfall traps, 1–9.06.2000 (M. Kovblyuk); ♂ (YMT), same locality, pitfall traps, 9–16.06.2000 (M. Kovblyuk); 1 ♂ (YMT), Yalta, Massandra Park, *Bambusa* sp. near stream, 16–23.06.2000 (M. Kovblyuk); 1 ♂ (TNU), same locality, pitfall traps, 6–16.06.2001 (M. Kovblyuk); 1 ♂ 1 ♀ (YMT), [04] Nikita Vil., Nikitski Botanical Garden, 44°30'N 34°14'E, 5–70 m, 11.03.2002 (Yu.M. Marusik).

ETYMOLOGY. The specific name is a patronym in honour of the prominent Austrian arachnologist Konrad Thaler.

DESCRIPTION. Male (n = 5). Carapace: 1.55 (1.42–1.65) long, 1.46 (1.38–1.60) wide. Abdomen: 1.5 (1.35–1.70) long, 1.60 (1.52–1.80) wide. Leg joints:

	Femur	Patella	Tibia	Metatarsus	Tarsus
I	1.14-1.32 (1.22)	0.60-0.68 (0.63)	0.76-0.90 (0.83)	0.76-0.87 (0.82)	0.50-0.64 (0.57)
II	1.20-1.38 (1.27)	0.57-0.68 (0.63)	0.78-0.94 (0.85)	0.76-0.90 (0.83)	0.54-0.60 (0.56)
III	0.87-0.99 (0.92)	0.46-0.52 (0.50)	0.52-0.60 (0.55)	0.40-0.52 (0.47)	0.30-0.42 (0.38)
IV	0.69-0.94 (0.86)	0.40-0.51 (0.46)	0.48-0.60 (0.55)	0.46-0.57 (0.51)	0.36-0.40 (0.39)

Palp: femur 0.46 (0.45–0.48), patella 0.28 (0.27–0.30), tibia 0.18 (0.16–0.21), cymbium 0.48 (0.46–0.50).

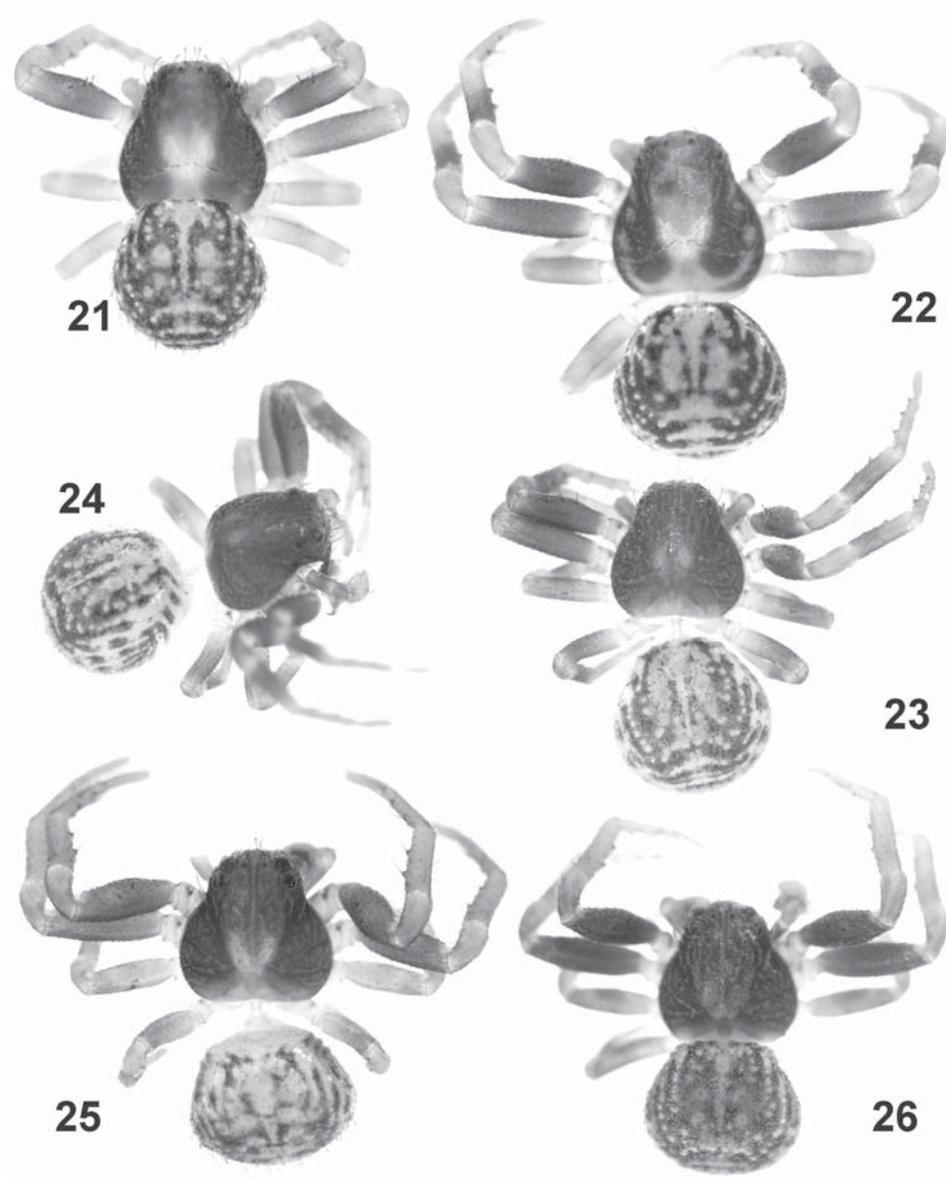
Eye sizes and interdistances: AM 0.06 (0.06–0.08), AL 0.14 (0.10–0.16), PM 0.04 (0.03–0.04), PL 0.09 (0.08–0.10), AM–AM 0.14 (0.10–1.16), AM–AL 0.10 (0.08–0.10), PM–PM 0.14 (0.14–0.15), PM–PL 0.26 (0.18–0.30), AM–PM 0.15 (0.14–0.18), AL–PL 0.16 (0.10–0.18). AM–clypeus margin 0.14 (0.12–0.16), AL–clypeus margin 0.17 (0.15–0.18).

Spination:

	Femur	Tibia	Metatarsus
I	1-1p or 1-1-1p	2-2v	1pa or 1p-1ap, 1ra or 1r-1ra, 2-2v
II		2-2v	1pa or 1p-1ap, 1ra; 2-2v

Carapace, chelicerae and sternum uniformly brown. In some specimens carapace with light median spot (Fig. 25). Femur, patella and tibia brown with bright white dorso-distal margin. Metatarsus and tarsus uniformly light brown. Abdomen variegated yellow-gray.

Palp as in Figs 1–4, 7, 8. Tibia with four distinct apophyses. Retrolateral apophysis divided into three parts, one hook-like (*rtc*), another swollen (*rt1*) and the third keel-like (*rt2*). Keel-like outgrowth sharply pointed, its tip is close to the end of tutaculum. Swollen apophysis directed outward. Ventral tibial apophysis (*va*) longer than wide. Tegulum



Figs 21–26. Male of *Cozyptila guseinovorum* sp.n. (21, 22), *C. blackwalli* (23, 24), *C. thaleri* sp.n. (25, 26).
 Рис. 21–26. Самец *Cozyptila guseinovorum* sp.n. (21, 22), *C. blackwalli* (23, 24) и *C. thaleri* sp.n. (25, 26).

without apophyses. Tegular thickening (*tt*) thin (thinner than embolus) and short. Embolus (*em*) cylindrical without any turns, it originates from tegulum centre. Ventral side of hook-like tibial apophysis (*rtc*) covered with fine ridges (wrinkles).

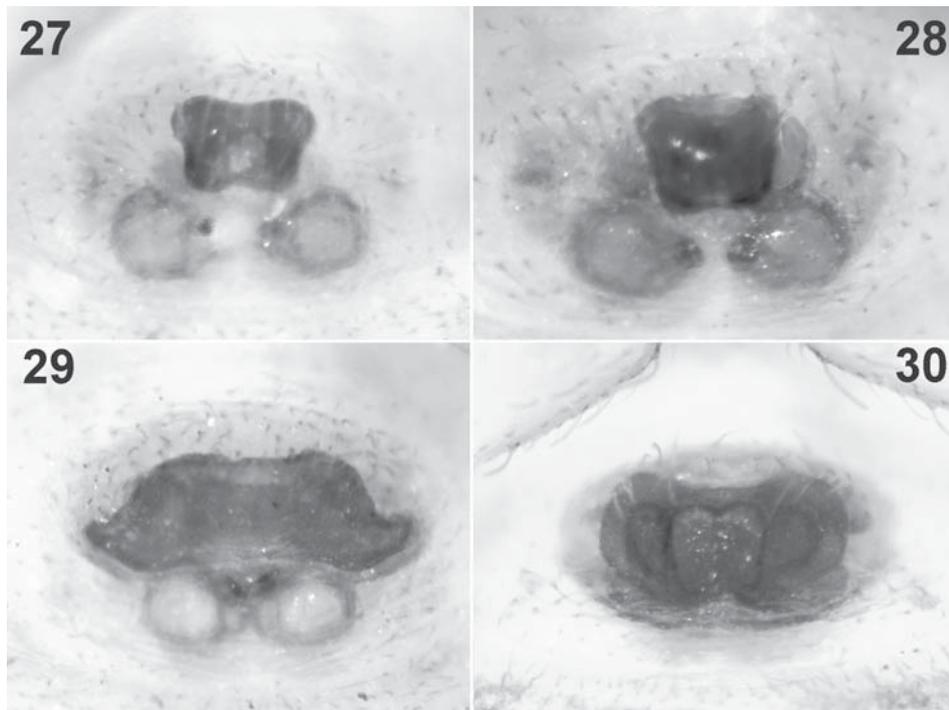
Female (*n* = 1). Carapace: 1.62 long, 1.62 wide. Abdomen: 2.38 long, 2.38 wide.

Leg joints:

	Femur	Patella	Tibia	Metatarsus	Tarsus
I	1.20	0.68	0.80	0.75	0.50
II	1.25	0.70	0.82	0.75	0.50
III	0.90	0.55	0.52	0.48	0.40
IV	0.92	0.50	0.55	0.52	0.38

Palp: femur 0.44, patella 0.32, tibia 0.28, tarsus 0.51. Eye sizes and interdistances: AM 0.04, AL 0.12, PM 0.04, PL 0.08, AM–AM 0.12, AM–AL 0.10. PM–PM 0.15, PM–PL 0.27, AM–PM 0.12, AL–PL 0.18. Clypeus margin–AM 0.16, clypeus margin–AL 0.21. Coloration lighter than in #. Carapace with wide light band, and tow sublateral yellow bands (Fig. 19). Spination:

	Femur	Tibia	Metatarsus
I	1-1-1p	1-1d, 2-2v	1p-1pa, 1r-1ra, 2-2v
II	1d	1-1d, 2-2v	1p-1pa, 1r-1ra; 2-2v
III	1d	1d	0
IV	1d	1d	0



Figs 27–30. Epigyne of *Cozyptila blackwalli* (27, 28), *C. guseinovorum* sp.n. (29) and *C. thaleri* sp.n. (30), ventral view: 27 — from Hungary; 28 — from Germany.

Рис. 27–30. Эпигина *Cozyptila blackwalli* (27, 28), *C. guseinovorum* sp.n. (29) и *C. thaleri* sp.n. (30), снизу: 27 — из Венгрии; 28 — из Германии.

Epigyne as in Figs 15, 16, 30, 40. Central part of epigyne forms massive plate bearing large fovea (width=height). This plate partly embedded into remaining part of epigyne and partly extends remaining part. Surface of epigynal plate and those of epigynal fovea cockled.

DIAGNOSIS. Males of the new species can be easily separated from congeners by hook-like retrolateral tibial apophysis, thin embolus and thin tegular thickening. Females of *C. thaleri* sp.n. can be easily distinguished by wide epigynal plate with distinct fovea, lacking in *C. blackwalli* and *C. guseinovorum* sp.n.

DISTRUBUTION. Found only in south part of Crimean peninsula in environs of Yalta only.

Ozyptila guseinovorum Marusik & Kovblyuk, sp.n.
Figs 1–4, 13, 14, 20–22, 29, 35, 36, 41–44.

Xysticus claveatus non Blackwall: Thorell, 1875: 93 (misidentification).

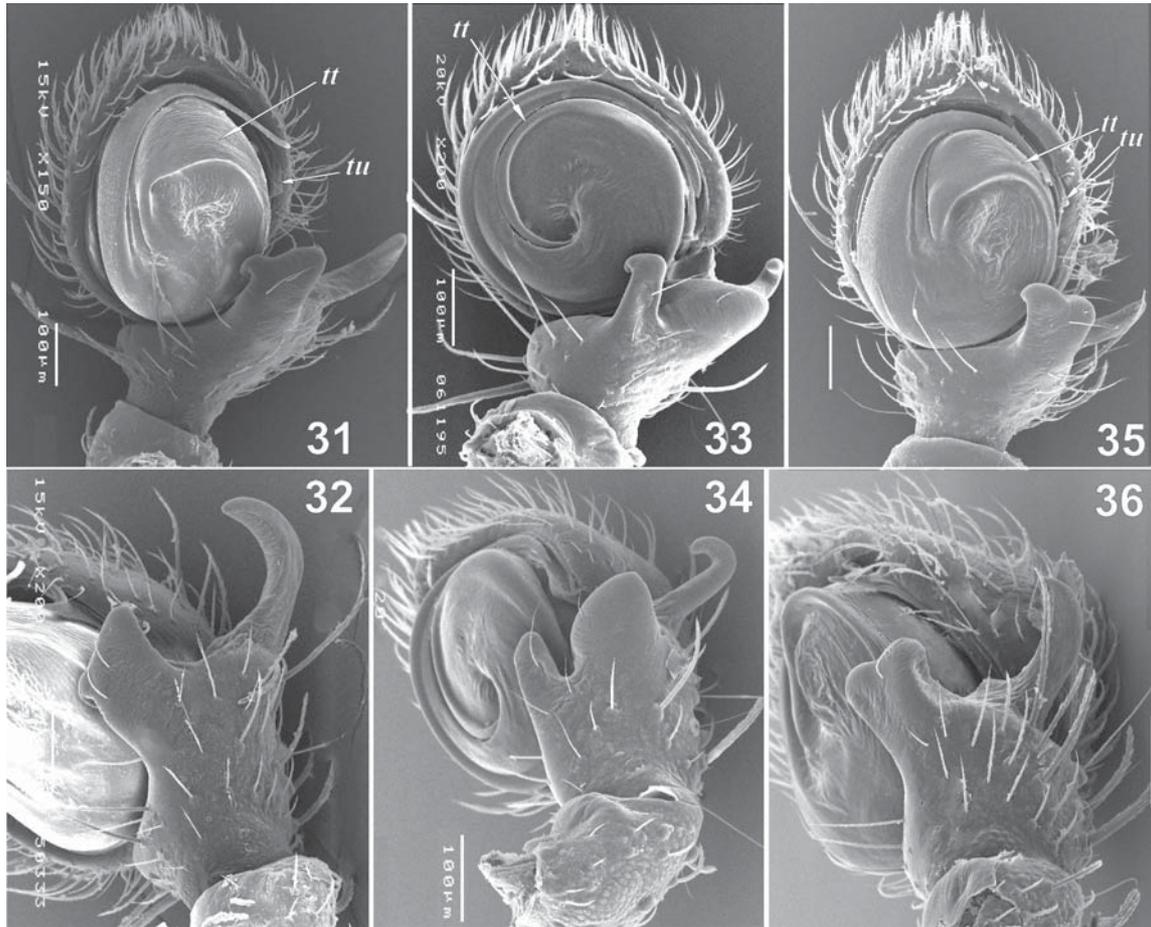
Oxyptila blackwalli non Simon: Spassky, 1927: 75 (misidentification).

Ozyptila blackwalli non Simon: Kovblyuk, 2001: 97; Kovblyuk, 2003: 249 (misidentifications).

Ozyptila sp.: Logunov & Penney, 2004: 5.

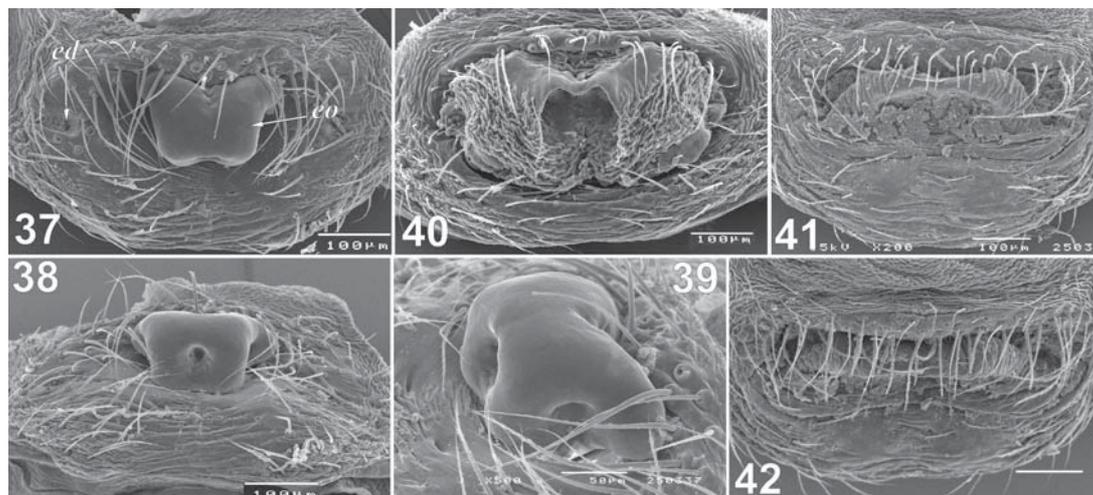
MATERIAL. Holotype ♂ (ZMMU), [04] AZERBAIJAN, ca 70 km N of Baku, Galalty Vil., 40°48'N 49°12'E, ca 1000 m, 19.04.2001 (Yu.M. Marusik). Paratypes: TURKEY: 1 ♀ (PTLC), Adapazari Dist., Hendek-Gumusova, *Quercus-Crataegus* bush, 10.09.1971 (P.T. Lehtinen); 1 ♂, 4 juv. (PTLC), Izmir Dist., Yamanlar Dađı, grassy slope by a mountain brook in forest, 24.5.–30.07.1973 (P.T. Lehtinen & F. Önder); 1 juv. ♀, 1 pull. (PTLC), same locality, in pine litter, 24.5.1973 (P.T. Lehtinen); 1 juv. ♀ (PTLC), same locality, alpine zone, 1100 m, 24.5.–

30.07.1973 (P.T. Lehtinen & F. Önder), 1 juv. ♀ (PTLC), Yamanlar Dađı, Karagöl, in forest litter (*Platanus-Rubus-Crataegus-Quercus-Pinus*), 25.05.1973 (P.T. Lehtinen). UKRAINE, Crimea: 1 ♂ (TNU), Simferopol Distr., near Lozovoe Vill., Kessler Forest, 300–400 m, forest *Quercetum* (pubescentis) *cornoso-physospermum/polygonatosum*, pitfall traps, 18.04.–1.05.2000 (M. Kovblyuk); 1 ♂ (TNU), same locality, pitfall traps, 16–26.07.2000 (M. Kovblyuk); 1 ♂, 1 ♀ (TNU), Simferopol Distr., near Lozovoe Vill., Kessler Forest, 300–400m, forest edge, *Quercetum* (pubescentis) *lithospermum*, pitfall traps, 6–23.06.2000 (M. Kovblyuk); 1 ♂ (TNU), same locality, pitfall traps, 23.06.–16.07.2000 (M. Kovblyuk); 1 ♂ (TNU), same locality, 10 pitfall traps, 26.08.–8.10.2000 (M. Kovblyuk); 3 ♂♂ (TNU), Simferopol Distr., near Lozovoe Vill., Kessler Forest, 300–400 m, grassland, *Brachypodioso-Elytrigiosum pratensis* (*Brachypodium pinnatum*, *Elytrigia maeotica*, *Filipendula vulgaris*), pitfall traps, 6–23.06.2000 (M. Kovblyuk); 1 ♂ (TNU), same locality, pitfall traps, 23.06.–13.07.2000 (M. Kovblyuk); 1 ♂ (TNU), same locality, pitfall traps, 13–26.07.2000 (M. Kovblyuk); 1 ♂ (TNU), same locality, pitfall traps, 26.08.–8.10.2000 (M. Kovblyuk); 1 ♂ (TNU), Simferopol Distr., near Pereval'noye Vill., NE spur of Chatyr-Dagh massive, elfin-wood of *Quercus petraea* and *Cornus mas*, pitfall traps, 21.05.–1.06.2000 (M. Kovblyuk); 1 ♂ (TNU), Crimean State Natural Reserve, near Tar'er Kordon, meadow steppe, in grass, 30.06.2001 (M. Kovblyuk); 3 ♀♀ (TNU), Yalta Distr., Nikitskaya Yaila (Skrinita), about 1000–1200m, *Pinus pallasiana*, *Quercus petraea*, *Carpinus betulus*, *Acer* sp. forest, pitfall traps, 31.03.–12.04.2001 (M. Kovblyuk); 1 ♂ (TNU), same locality, pitfall traps, 4–14.05.2001 (M. Kovblyuk); 1 ♂ (TNU), same locality, pitfall traps, 3–14.07.2001 (M. Kovblyuk); 1 ♂ (TNU), Yalta Distr., Nikitskaya Yaila (Skrinita), about 1000–1200m, *Pinus pallasiana*, *Fagus* sp., *Populus* sp., *Acer* sp. forest, pitfall traps, 4–14.05.2001; 1 ♂ (TNU), same locality, pitfall traps, 25.05.–2.06.2001 (M. Kovblyuk); 2 ♂♂ (TNU), same locality, pitfall traps, 23.06.–3.07.2001 (M. Kovblyuk); 1 ♂



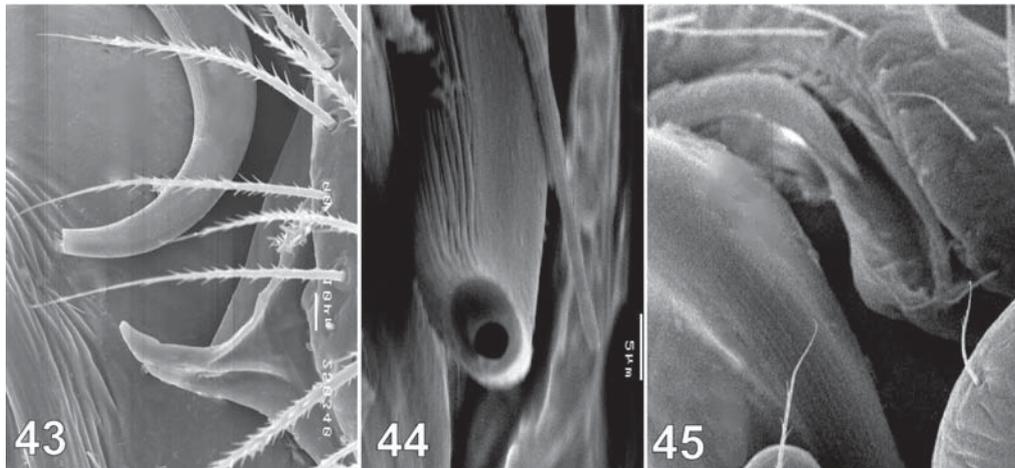
Figs 31–36. Male palp of *Cozyptila blackwalli* (31, 32), *C. thaleri* sp.n. (33, 34) and *C. guseinovorum* sp.n. (35, 36). 31, 33, 35 — ventrally; 32, 34, 36 — laterally view. Abbreviations: *tt* — tegular thickening; *tu* — tutaculum.

Рис. 31–36. Пальпа самца *Cozyptila blackwalli* (31, 32), *C. thaleri* sp.n. (33, 34) и *C. guseinovorum* sp.n. (35, 36). 31, 33, 35 — снизу; 32, 34, 36 — сбоку. Сокращения: *tt* — утолщение тегулюма; *tu* — тутакуюлом.



Figs 37–42. Epigyne of *Cozyptila blackwalli* (37–39), *C. thaleri* sp.n. (40) and *C. guseinovorum* sp.n. (41, 42): 37, 40, 41 — ventrally; 38 — view from behind; 39 — lateral view; 42 — apically. Abbreviations: *ed* — epigynal depression; *eo* — outgrowth of epigynal plate.

Рис. 37–42. Эпигина *Cozyptila blackwalli* (37–39), *C. thaleri* sp.n. (40) и *C. guseinovorum* sp.n. (41, 42): 37, 40, 41 — снизу; 38 — сзади; 39 — сбоку; 42 — спереди. Сокращения: *ed* — углубления эпигины; *eo* — вырост пластинки эпигины.



Figs 43–45. Tutaculum and embolus of *Cozyptila guseinovorum* sp.n. (43, 44) and *C. thaleri* sp.n. (45): 43 — tutaculum and tip of embolus, lateral; 44 — embolus tip, frontal; 45 — tip of embolus and tutaculum.

Рис. 43–45. Тутакулюм и эмболюс *Cozyptila guseinovorum* sp.n. (43, 44) и *C. thaleri* sp.n. (45): 43 — тутакулюм и эмболюс; 44 — вершина эмболюса; 45 — вершина эмболюса и тутакулюм.

(TNU), same locality, pitfall traps, 3–16.07.2001 (M. Kovblyuk); 1 ♀ (TNU), same locality, pitfall traps, 27.10.–10.11.2001 (M. Kovblyuk). RUSSIA: 1 ♀ (MMUM), Stavropol Prov., Beshpagir Vill., ca 35 km NNE of Stavropol, pine plantation with sparse oaks, in litter, 12–21.08.2003 (D.V. Logunov & D. Penney). AZERBAIJAN: 1 ♂, 1 ♀ [No. 922] (ZMMU), Turianchanski Reserve, 2.10.1998 (Kh. Aliev & N. Snegovaya).

ETYMOLOGY. The specific name is a patronym in honour of the Guseinov family (Fizuli, Minna, Elchin & Emin) from Mardakyan, Baku.

DESCRIPTION. Male (n = 2) (Crimean specimens). Total length: 2.80 (2.80–2.82). Carapace: 1.50 (1.50–1.55) long, 1.40 (1.40–1.42) wide. Abdomen: 1.32 (1.32–1.45) long, 1.65 (1.50–1.65) wide.

Leg joints in Azerbaijan specimens (♂/♀):

	Femur	Patella	Tibia	Metatarsus	Tarsus
I	1.15/1.35	0.57/0.75	0.60/0.9	0.78/0.58	0.60/0.62
II	1.25/1.4	0.60/0.75	0.95/1.0	0.8/0.8	0.58/0.62
III	0.93/1.0	0.50/0.6	0.64/0.73	0.46/0.5	0.43/0.45
IV	1.0/1.08	0.46/0.6	0.50/0.73	0.46/0.5	0.43/0.43

Leg joints in Crimean specimens (♂/♀):

	Femur	Patella	Tibia	Metatarsus	Tarsus
I	1.00/1.25	0.55/0.58	0.75/0.78	0.75/0.75	0.60/0.60
II	1.05/1.30	0.55/0.68	0.80/0.88	0.75/0.80	0.55/0.50
III	0.82/0.95	0.42/0.55	0.50/0.58	0.45/0.45	0.38/0.42
IV	0.82/0.98	0.42/0.52	0.52/0.60	0.50/0.52	0.42/0.50

Coloration as in Figs 21, 22. Carapace with uniformly dark sides or with broken sublateral bands. Spination of legs variable, in #: I — femur 3p or 2p, tibia 2–2v, metatarsus 3–3v (apical spines turned to lateral side) and 1p or 0p; II — femur without spines, tibia and metatarsus as in leg I; III–IV — femur 1d or 0d, patella 1d or 0d, tibia 1d or 0d; spination in ♀ almost same: but metatarsus I — 3–3v or 4–3v + 1p, metatarsus II — 3–3v + 1p, tibia I–IV with 1d. Clypeus with 6 macrosetae.

Palp as in Figs 8–10, 35–38. Retroventral apophysis subdivided, wider than long, lateral apophysis relatively short. Embolus thick (~width of retroventral apophysis) and short. Tegular thickening (*tt*) massive.

Female (n = 2). Total length 4.05 (4.05–4.15). Carapace: 1.88 (1.70–1.88) long 1.68 wide. Abdomen: 2.20 (2.20–2.38) long, 2.48 (1.48–2.85) wide. Coloration lighter than in ♂. Spination as in ♂. Epigyne as in Figs 13, 14, 29, 41, 42, with wide darkly colored plate surrounded in the base by kind of “lips”. Receptaculæ almost round.

DIAGNOSIS. Males of *C. guseinovorum* sp.n. can be easily separated from other congeners by wide embolus (as wide as retroventral tibial apophysis), relatively short and only slightly curved lateral apophysis. Females of new species have widest epigynal plate.

DISTRIBUTION. This species is known from Azerbaijan, northern Caucasus, Turkey and Crimea.

Remaining groups of *Ozyptila* s. lat.

A middle-Asian group of several medium-sized species of Coriarachnini has long been recognized by specialists of Thomisidae, although no name has been published so far. Simon already labelled samples of this group in MNHN with a different generic name. Because of their rather large size the members of this *lugubris*-group have been alternatively listed as *Xysticus* or *Ozyptila*. Actually it is more closely related to the nonapophysate genus *Psammitis* Menge, 1876 than to *Xysticus* s.lat. complex or any taxa of the *Ozyptila* s.lat. complex.

Dondale & Redner [1975] placed all North American species outside the subgenus *Modysticus* in two species groups only: *brevipes* and *rauda*, although we think that in Nearctic *brevipes*-group have to be rearranged.

The status of various *Ozyptila* s.lat., especially outside of Holarctic, is extremely unclear, but a revisional work for the whole genus has now been initiated. European authors have widely used the concept of the *rauda*-group [Hippa & al, 1986; Thaler, 1987; Marusik & Chevrizov, 1990; Ono et al., 1990; Logunov & Marusik, 1994; Marusik & Logunov, 2002] and actually this group, with no real epigynal hood but only an anterior process obviously homologous to the epigy-

nal hood, is another distinct and well-limited group worthy of a supraspecific status of its own. On the other hand, numerous species grouped around the well known *O. trux*, *O. atomaria*, *O. praticola*, and the type species *O. claveata* are well defined species groups, at least. The group of species related to *trux* is Holarctic, and includes numerous species in Europe, East Asia, and North America.

Besides the species complexes listed above, there are several more groups in Asia and Mediterranean. Judging from the original descriptions, most or all of species described outside the Holarctic are distantly related to *O. claveata* and may belong to different tribes.

ACKNOWLEDGEMENTS. We wish to thank all colleagues who supplied us with material treated herein, namely: Theo Blick, Elchin Guseinov, Peter Jäger, Dmitri Logunov, Csaba Szinetár. Special thanks are to Seppo Koponen for arranging grant for YM stay in Turku. English was kindly checked by Donald Buckle.

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