

## On several new or poorly-known Oriental Paradoxosomatidae (Diplopoda: Polydesmida), XI

### О нескольких новых или плохоизученных ориентальных Paradoxosomatidae (Diplopoda: Polydesmida), XI

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КЛЮЧЕВЫЕ СЛОВА: Diplopoda, Paradoxosomatidae, таксономия, новый род, новый вид, новая синонимия, Юннань, Чунцин, Китай.

ABSTRACT. This paper is devoted to descriptions of three new paradoxosomatid species from the mountains of southern China: *Chinomorpha montana* gen.n., sp.n. (tribe Sundaninini), *Enghoffosoma longipes* sp.n. (with *Enghoffosoma* Golovatch, 1993 being formally reallocated to the tribe Paradoxosomatini) and *Cawjeekelia nova* sp.n. (with a key to all ten species of the genus, including *C. propria* (Mikhailjova & Korsós, 2003), comb.n. ex *Koreadesmus* Mikhailjova & Korsós, 2003, the latter genus a new junior subjective synonym of *Cawjeekelia* Golovatch, 1980, syn.n.).

РЕЗЮМЕ. Данное сообщение посвящено описаниям трех новых видов многоножек-парадоксо-соматид из гор Южного Китая: *Chinomorpha montana* gen.n., sp.n. (триба Sundaninini), *Enghoffosoma longipes* sp.n. (при этом род *Enghoffosoma* Golovatch, 1993 формально переведен в состав трибы Paradoxosomatini) и *Cawjeekelia nova* sp.n. (с ключом для всех десяти видов рода, в т.ч. *C. propria* (Mikhailjova & Korsós, 2003), comb.n. ex *Koreadesmus* Mikhailjova & Korsós, 2003, причем последний род — новый младший субъективный синоним *Cawjeekelia* Golovatch, 1980, syn.n.).

The present contribution deals with a taxonomic treatment of a few samples of Paradoxosomatidae deriving from southern China, all currently deposited in the Zoological Museum, Moscow State University, Russia.

#### *Chinomorpha* gen.n.

DESCRIPTION. Rather large-sized (ca 3 cm long) Sundaninini with poorly-developed paraterga. Adeno-

styles on ♂ legs missing. A transverse setose lobe between ♂ coxae 4 present.

Gonopod coxite elongate, only moderately shorter than telopodite, subcylindrical, setose distoventrally. Prefemoral region as usual, densely setose, much shorter than femorite/acropodite. Femorite elongate, modestly curved, devoid of any processes, set off from solenophore by a distinct lateral sulcus lying at base of a long, (sub)flagelliform solenomere. Seminal groove entirely mesal; solenomere free, also entirely mesal, attached to, but neither sheathed nor supported by a completely lateral solenophore; the latter clearly divided by a lateral sulcus into a basal postfemoral portion and a large distal lobe; both solenomere and solenophore directed mesally, subunciform.

Type species: *Chinomorpha montana* sp.n.

DIAGNOSIS. Based on the entirely mesal position of the solenomere, which is only loosely attached to the solenophore, *Chinomorpha* gen.n. definitely belongs in Sundaninini. Differs from probably the most similar *Opisthodolichopus* Verhoeff, 1941, with seven species ranging from Singapore and Sumatra in the west to New Guinea in the east (see review and key in Golovatch & Wytwer [2001]), by the gonopod solenophore showing a clear-cut lateral sulcus dividing it into a smaller, basal, postfemoral (Fig. 7, **pf**) and a large, distal, lobe-shaped portion. Differs from a few genera like *Arthrogonopus* Jeekel, 1963, with six species from Borneo [Golovatch, 1996b], in which a postfemoral gonopod portion is likewise set off by a lateral sulcus, in a less elaborate gonofemorite and, above all, by a large and lobe-shaped distal part of the solenophore.

NAME. To combine China as the terra typica with the suffix *-morpha* so very usual among the generic names in Paradoxosomatidae.

REMARKS. This new genus and species is currently the northernmost representative of the tribe Sundanini which is known to be particularly diverse in the Sunda region [Golovatch, 1995, 1996b], with only a few sundaninines currently reported from Vietnam [Nguyen Duc, 2010]. That *Chinomorpha montana* sp.n. is remarkably high-montane suggests a greater representation of the tribe in southern China, especially at lower elevations.

*Chinomorpha montana* sp.n.

Figs 1–7.

MATERIAL. Holotype ♂, China, N-Yunnan Prov., S of Nixi, 27°55'14"N, 99°31'12"E, near upper timber-line of a humid montane *Abies* forest, ca 4090 m a.s.l., 17.07.2007, leg. I. Belousov & I. Kabak.

Paratypes: 1 ♀, same locality and date, together with holotype; 2 ♂♂, WNW of Zhongdian, 27°52'30"N, 99°34'24"E, 3710 m a.s.l., humid midmontane *Abies* forest with admixture of broad-leaved hardwood species, 12.07.2007, leg. I. Belousov & I. Kabak.

NAME. To emphasize this species being montane.

DESCRIPTION. Length ca 29–32 mm, width of midbody pro- and metazona 2.6–2.9 and 2.9–3.2 mm (♂) or 3.0–3.4 mm (♀), respectively. Holotype ca 30 mm long and 2.6 and 2.9 mm wide on midbody pro- and metazona, respectively. Coloration red-brown to dark chocolate brown, only posterior halves of collum and following metaterga with lighter, reddish-brown, (roundly) subtriangular, axial spots; ozopores often also a little lighter than background, reddish; hypoproct and tip of epiproct light yellowish; genae and lateral parts of clypeolabral region light castaneous brown, partly marbled.

Body with 20 segments. Postcollum constriction virtually missing; in width, head = collum = segments 2–4 < 5=16, thereafter body gradually tapering towards telson. Head densely setose, only near vertex almost bare (Fig. 1). Antennae short, rather slender, slightly clavate (Fig. 1), almost reaching behind the end of somite 2 (♂) or collum (♀) when stretched dorsally. Paraterga very poorly developed (Figs 1 & 2), rather evident and flap-shaped only on segment 2 (Fig. 1), set mostly at about midheight of metazona, low swellings on pore-bearing segments (Fig. 2), completely flat laterally on poreless ones, always demarcated dorsally by a distinct sulcus, often demarcated by a ventral sulcus as well (complete on poreless segments, present only in caudal 1/3<sup>rd</sup> on pore-bearing ones), devoid of lateral indentations. Surface below paraterga 3–17(18) with a few (2–4) additional arcuated sulci/wrinkles (Figs 1 & 2). Caudal corner of paraterga always rounded, slightly projecting behind tergal margin only on segment 2 (Fig. 1). Ozopores lateral in position, evident, lying inside a shallow, ovoid fovea. Tegument generally poorly shining, metaterga mostly finely rugulose, prozona very finely shagreened. Axial line wanting. Metatergal setae short, mostly abraded, pattern traceable as 3+3 in a front transverse row. Segments rather evidently constricted, stricture dividing pro- and metazona moderately deep, relatively narrow, rather

finely striolate dorsally down to paratergal level (Figs 1 & 2). Transverse sulcus poorly developed, visible on metaterga 5–17(18), line-shaped, inconspicuous, far from reaching bases of paraterga. Pleurosternal carinae very prominent (Figs 1 & 2), always bordered and rounded both laterally and caudally, thus mostly outlining an evident excavation, gradually reduced in size to totally decline on segment 19 (♂) or 18 (♀). Epiproct rather long, flattened dorsoventrally, digitiform with scarcely developed terminal and subterminal papillae (Fig. 3). Hypoproct roundly subtriangular, with a pair of well-separated setae at caudal margin (Fig. 4).

Sternites without modifications, densely setose; a low, trapeziform, ventral, setose lamina only between ♂ coxae 4 (Fig. 5). Legs relatively long, midbody ones 1.3–1.4 (♂) or 0.9–1.0 (♀) times as long as body height, slender in both sexes; prefemora not swollen dorsally, femora being longest; adenostyles missing; tarsal brushes present until legs of ♂ segment 13, thereafter gradually thinning out.

Gonopods (Figs 6 & 7) relatively simple. Coxite elongate, only moderately shorter than telopodite, subcylindrical, setose distoventrally. Prefemoral part as usual, densely setose, shorter than 1/2 femorite or 1/4 acropodite. Femorite elongate, modestly curved, devoid of any processes, set off from solenophore by a distinct lateral sulcus lying at base of a long, subflagelliform, simple solenomere. Seminal groove entirely mesal; solenomere free, also entirely mesal, attached to, but neither sheathed nor supported by a completely lateral solenophore; the latter clearly divided by a lateral sulcus into a basal postfemoral portion (**pf**) and a large distal lobe; both solenomere and solenophore directed mesally, subunciform. Solenophore **pf** with a small, but evident mesal tooth (**d**) to support ca 1/3 basal extent of free solenomere.

*Enghoffosoma longipes* sp.n.

Figs 8–17.

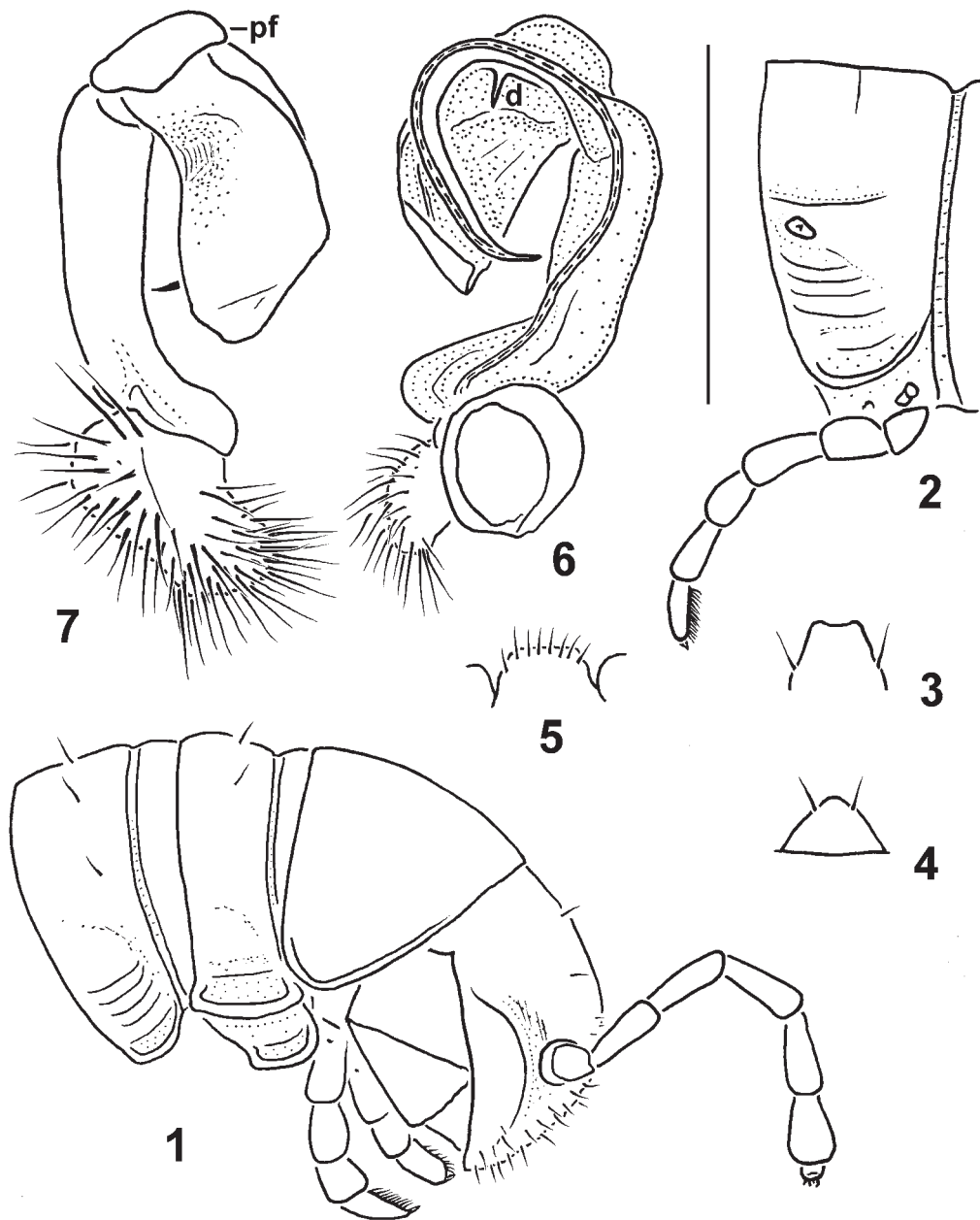
MATERIAL. Holotype ♂, China, N-Yunnan Prov., NW slope of Mt Yulongxueshan, 27°09'26"N, 100°05'48"E, mixed dry subtropical forest, 3150 m a.s.l., 02.07.2007, leg. I. Belousov & I. Kabak.

Paratype: 1 ♀, same locality and date, together with holotype.

NAME. To emphasize the very long legs.

DIAGNOSIS. Differs from *E. spinipleurum* (Carl, 1941), the sole hitherto known congener [Golovatch, 1993], by the paraterga and transverse metatergal sulci virtually missing, coupled with the far less strongly developed pleurosternal carinae and some minor peculiarities of gonopod structure, e.g. a longer and apically bifid solenophore.

DESCRIPTION. Length ca 18 (holotype) and 20 mm (paratype), width of midbody metazona 1.2 and 1.5 mm (holotype) or 1.6 and 1.9 mm (paratype), respectively. Coloration in alcohol uniformly marbled brown, venter and legs (except for slightly infuscate, light brown tibiae and, especially, tarsi) yellowish, genae light yellow-brown (holotype) to marbled brown (paratype).



Figs 1–7. *Chinomorpha montana* sp.n., ♂ holotype: 1 — anterior part of body, lateral view; 2 — metazonum 10, lateral view; 3 — epiproct, dorsal view; 4 — hypoproct, ventral view; 5 — lamina between coxae 4, caudal view, 6 & 7 — right gonopod, submesal and sublateral views, respectively. Scale bar: 1.0 (1–5) and 0.5 mm (6 & 7).

Рис. 1–7. *Chinomorpha montana* sp.n., голотип ♂: 1 — передняя часть тела, сбоку; 2 — метазонит 10, сбоку; 3 — эпипрокт, сверху; 4 — гипопрокт, снизу; 5 — пластинка между тазиками 4, сзади; 6 и 7 — правый гонопод, соответственно почти изнутри и почти сбоку. Масштаб 1,0 (1–5) и 0,5 мм (6 и 7).

Body with 20 segments, subcylindrical, somewhat moniliform. In width, collum  $\geq$  head = segments 5–15  $>$  2  $>$  3 = 4, segments 16–19 gradually tapering towards telson. Clypeolabral region densely setose, remaining head glabrous. Antennae very slender, long, extending behind until midway of segment 5 (holotype) or 4 (paratype) when stretched dorsally. Paraterga virtually

absent (Figs 8 & 9), barely traceable as inconspicuous oblong swellings in rear halves of bore-bearing metaterga alone. Ozopores lateral, evident. Body surface smooth, slightly shining almost throughout, microsculpture very finely microalveolate and vermiculate, metazona longitudinally rugulose to rugose only above pleurosternal carinae, often rugulose also mid-dorsally

in caudal third. Neither axial line nor metatergal sulci. Tergal setae medium-sized, simple, mostly broken off, pattern traceable as 2+2 in a transverse row lying close to stricture. Segments rather evidently constricted, stricture narrow, extremely finely striolate. Pleurosternal carinae rather strongly developed, delimited by an arcuated dorsal sulcus, rounded, without caudal teeth (Figs 8 & 9), gradually reduced towards telson, still traceable on segment 16 (holotype) or 15 (paratype). Epiproct rather long, rather narrowly rounded, subapical papillae wanting (Fig. 10). Hypoproct semi-circular, caudal margin regularly rounded, with a pair of small, well separated, setigerous, paramedian knobs at caudal margin (Fig. 11).

Sterna very densely setose, mostly with an evident cone caudally near coxa, rear cones being a bit better developed than front ones (Fig. 12); a rather low, subtrapeziform, densely setose lamina between ♂ coxae 4 (Fig. 13). Legs (Fig. 14) very long, growing increasingly long and slender towards segment 19; ♂ legs 6 ca 2 times (Fig. 14), midbody ones ca 3 (♂) or 2 times (♀), ♂ caudalmost ones ca 5 times, as long as midbody height; each prefemur with a lateral bulge growing gradually reduced toward caudal legs, these bulges being especially strongly developed in ♂; femora longest; ventral setation dense, gradually reduced towards telson, with ventral brushes on ♂ prefemora traceable until segment 16 and on ♂ tarsi until segment 13.

Gonopods (Figs 15–17) rather simple. Coxite long, subcylindrical, supplied with a long seta distoventrally, only slightly shorter than telopodite. Prefemoral (= densely setose) part moderately long. Femorite slender, elongate, about as long as acropodite, somewhat enlarged both basally and distally, with a shelf-like and rounded expansion apicoventrally (**b**); seminal groove running entirely on mesal face of femorite, then passing onto a thick, long and coiled solenomere supplied with a short, stout and spiniform process (**e**) at base, a spinigerous lobule (**t**) in distal third, and a bifid tip.

REMARKS. The genus *Enghoffosoma* Golovatch, 1993 has hitherto been known to comprise only one species: *E. spinipleurum* (Carl, 1941), from the Chin Hills, Chin State, northwestern Myanmar [Carl, 1941; Golovatch, 1993].

Both Jeekel [1968] and Golovatch [1993] assigned this species/genus to the tribe Sulciferini, close to both *Tylopus* Jeekel, 1968 and *Oxidus* Cook, 1911, grossly misinterpreting its affinities by largely following Carl's [1941] drawing of a gonopod which shows a flagelliform solenomere supported and sheathed by a long, thick and coiled solenophore. However, the solenomere in *E. spinipleurum* seems to actually be thick and devoid of a solenophore, just as depicted from the lectotype by Golovatch [1993]. This becomes particularly evident when comparing the gonopods of both *E. spinipleurum* and *E. longipes* sp.n., since both share the same basic traits: a long femorite bearing an apicoventral shelf **b** (surmounted by a distinct spine in *E. spinipleurum*, but not in *E. longipes* sp.n.), as well

as a prominent process (**e**) at the base of a thick, long and coiled solenomere (carrying a spinigerous lobule **t** in distal third only in *E. longipes* sp.n.) poorly (*E. spinipleurum*) or evidently (*E. longipes* sp.n.) bifid at tip. This also implies the formal transfer of *Enghoffosoma* to the tribe Paradoxosomatini (= Strongylosomatini) so far represented, in addition to five genera in the Mediterranean region, by the genera *Substrongylosoma* Golovatch, 1984 (five species ranging from the Himalayas of Nepal and India in the northwest to southern Thailand in the southeast) and *Haplogonomorpha* Mršić, 1996 (a single species in the central Malay Peninsula within both Malaysia and Thailand) in the Oriental realm [Golovatch, 1993; Mršić, 1996].

Superficially, based on the usually well-developed pleurosternal carinae, often spinigerous sterna and poorly developed to missing paraterga, as well as frequently remarkably and increasingly long legs, *E. longipes* sp.n. strongly resembles several species of *Anoplodesmus* Pocock, 1895, a large Oriental genus ranging from India and Sri Lanka in the west to Taiwan in the east [e.g. Golovatch, 1993]. This impression, however, is false, while these traits are certainly convergent, because *Anoplodesmus* is an unquestioned genus of Sulciferini.

#### *Cawjeekelia nova* sp.n.

Figs 18–28.

MATERIAL. Holotype ♂, China, Chongqing Province, Dabashan Mt Range, NE of Heyu, 31°55'17"N, 109°04'37"E, ca 2110 m a.s.l., *Betula* forest, 15.05.2010, leg. I. Belousov, I. Kabak & A. Korolev.

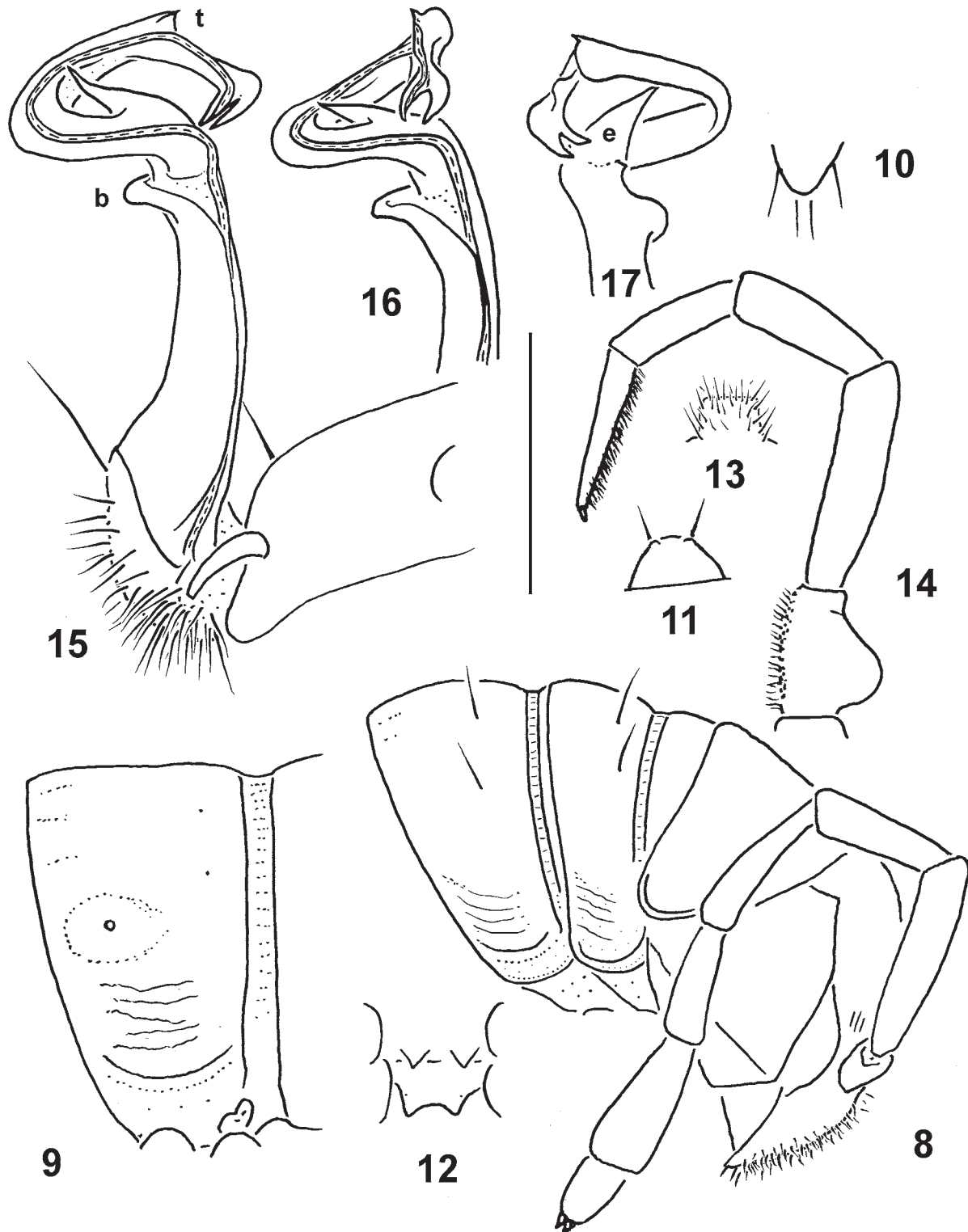
NAME. To emphasize the first, new congener to be found in inland China.

DIAGNOSIS. Differs from congeners mainly in gonopod conformation (see also Key below).

DESCRIPTION. Length ca 29 mm, width of midbody pro- and metazona 2.0 and 2.6 mm, respectively. Coloration in alcohol uniformly dark red-brown; basal halves of antennae and legs, as well as head, venter and epiproct lighter, yellow-brown; antennae and legs infuscate (brown) distad.

Body with 20 segments. In width, head < collum = segments 3 & 4 < 2 < 5=16, thereafter body gradually tapering toward telson. Clypeolabral region densely setose, remaining head surface glabrous. Antennae rather short, slightly clavate, extending behind until mid-way of segment 3 when stretched dorsally. Paraterga moderately strong, set low (mostly at about 1/3 to 1/2 midbody height), distinctly bordered/outlined by a sulcus only dorsally, thicker on pore-bearing segments than on poreless ones (Figs 18–20); front shoulders wanting; caudal corner nearly always rounded and usually either barely or not extended behind rear tergal margin, evidently surpassing it only in segments 3 and 17–19, spiniform only in segment 19. Ozopores lateral, evident, lying in front of a poorly developed incision. Body surface rather smooth, moderately shining; rear





Figs 8–17. *Enghoffosoma longipes* sp.n., ♂ holotype: 8 — anterior part of body, lateral view; 9 — metazonum 10, lateral view; 10 — epiproct, dorsal view; 11 — hypoproct, ventral view; 12 — midbody sterna, ventral view (setae removed); 13 — lamina between coxae 4, caudal view; 14 — leg 6, lateral view; 15–17 — right gonopod, mesal, dorsomesal and lateral views, respectively. Scale bar: 1.0 (8–14) and 0.5 mm (15–17).

Рис. 8–17. *Enghoffosoma longipes* sp.n., голотип ♂: 8 — передняя часть тела, сбоку; 9 — метазонит 10, сбоку; 10 — эпипрокт, сверху; 11 — гипопрокт, снизу; 12 — среднетуловищные стерниты, снизу (щетинки не показаны); 13 — пластинка между тазиками 4, сзади; 14 — нога 6, сбоку; 15–17 — правый гонопод, соответственно изнутри, изнутри и сверху, а также сбоку. Масштаб 1,0 (8–14) и 0,5 мм (15–17).

halves of metaterga rugulose to rugose, microgranulate only below paraterga. Axial line present only in rear halves of most of metaterga (Fig. 20). Transverse metatergal sulci line-shaped, far from reaching bases of paraterga, present on segments 5–18. Tergal setae rather long, simple, mostly abraded, pattern as 2+2 in a front row (Figs 18–20). Segments rather strongly constricted, stricture dividing pro- and metazona deep, well-expressed, very finely striolate dorsally and laterally. Pleurosternal carinae increasingly well-expressed, rimmed and rather coarsely granulate on segments 2–7, with a flap-shaped, rounded, caudal corner visible on segments 5–7, thereafter suddenly replaced by inconspicuous swellings. Epiproct long, digitiform, somewhat flattened dorsoventrally, rather narrowly subtruncate; pre-apical papillae nearly wanting (Fig. 21). Hypoproct subtrapeziform, rounded caudally; setigerous paramedian knobs at caudal margin well-separated (Fig. 22).

Sterna strongly setose, unmodified except for usual, roundly subtrapeziform, setose lamina directed anteroventrally between coxae 4 (Fig. 23). Legs (Fig. 24) rather long, probably incrassate compared to ♀, ca 1.8–2.0 times as long as midbody height, densely setose ventrally; prefemora moderately bulged laterally, each with a brush of long setae; brushes of shorter setae present on all tarsi and most of tibiae.

Gonopods (Figs 25–28) complex. Coxite rather short, stout, densely setose distoventrally. Prefemoral (= densely setose) part prominent, nearly as long as femorite, the latter with a distinct mesal excavation/groove supporting a fully mesal seminal groove at bottom. Solenophore elongate, coiled laterad, about as long as both prefemoral part and femorite combined, also about as long as a free, flagelliform solenomere; the latter mostly sheathed by a relatively poorly developed lamina medialis and a hypertrophied lamina lateralis, remaining exposed only (para)basally and distally. Basal half of solenophore forming a large, lateral, dentate-denticulate plate (**d**), distal half evidently twisted, terminating in a subflagelliform lobule (**c**).

REMARKS. The genus *Cawjeekelia* Golovatch, 1980 has hitherto been known to contain the following species: *C. koreana* (Golovatch, 1980), from Korea and the Russian Far East; *C. gloriosa* Golovatch, 1980 (the type species), *C. pyongana* Mikhailjova & Kim, 1993 and *C. iksana* Mikhailjova & Lim, 2000, all three from Korea alone; *C. nordenskiöldi* (Attems, 1909) and *C. fimbriata* (Attems, 1944), both from Japan; *C. pallida* Golovatch, 1996, from Hong Kong; and *C. kanoi* (Takakuwa, 1943), from Taiwan [Golovatch, 1980, 1995, 1996a; Mikhailjova & Kim, 1993; Mikhailjova & Lim, 2000; Mikhailjova 2004; Chen et al., 2006]. In addition, Mikhailjova & Korsós [2003] created the genus *Koreadesmus* Mikhailjova & Korsós, 2003, monotypic, with *K. proprius* Mikhailjova & Korsós, 2003 from Korea, which actually fails to differ considerably enough from *Cawjeekelia*. The differences between *Cawjeekelia* and *Koreadesmus* were stated to lie only

in the shape and armament of the solenophore, in particular the presence in the latter genus of a parabasal lobe and two processes [Mikhailjova & Korsós, 2003]. These distinctions, however, seem to be far too weak to warrant the recognition of a separate genus, the more so as the shape and armament of the solenophore vary likewise very considerably between the other *Cawjeekelia* species.

Hence the following new synonymy and transfer are advanced: *Cawjeekelia* Golovatch, 1980 = *Koreadesmus* Mikhailjova & Korsós, 2003, syn.n., and *C. propria* (Mikhailjova & Korsós, 2003), comb.n. ex *Koreadesmus* Mikhailjova & Korsós, 2003.

A new, slightly amended diagnosis of *Cawjeekelia* would read as follows [cf. Mikhailjova, 2004].

#### *Cawjeekelia* Golovatch, 1980

= *Orientosoma* Golovatch, 1980

= *Koreadesmus* Mikhailjova & Korsós, 2003, syn.n.

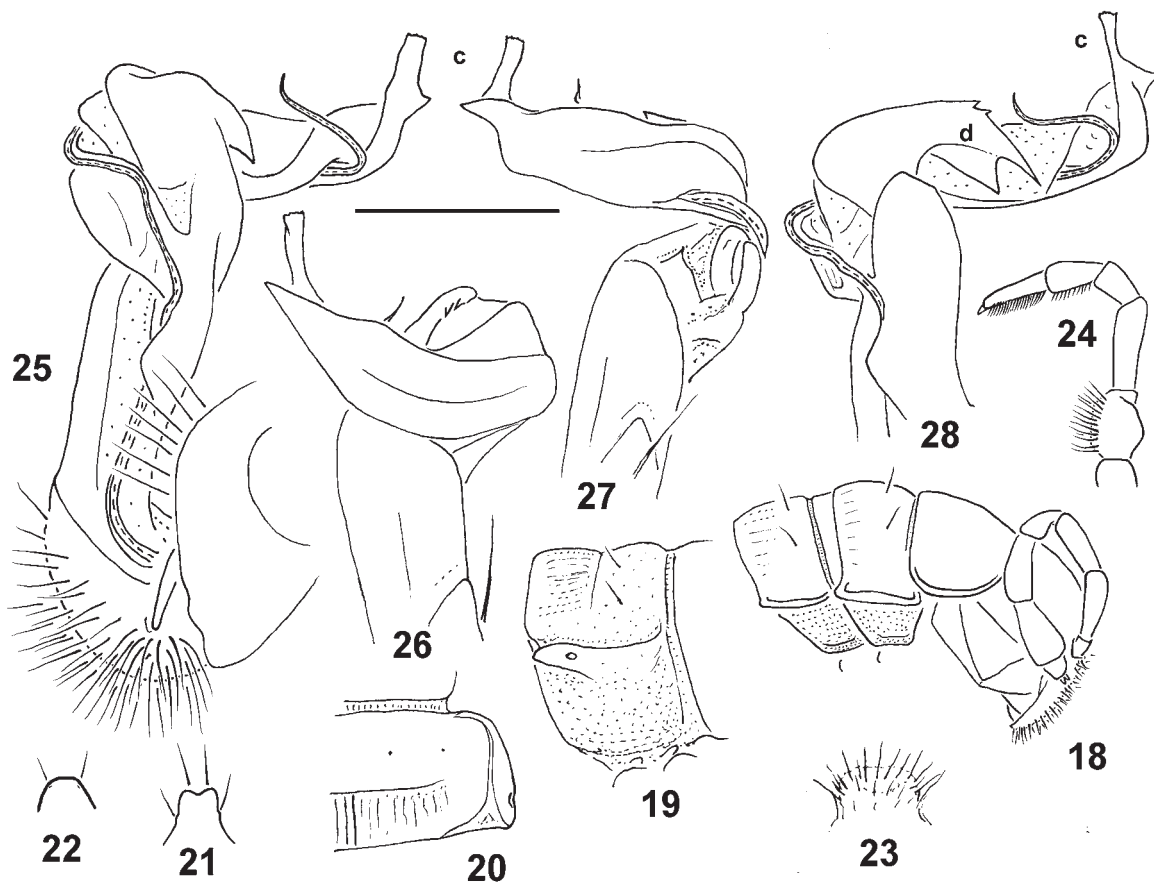
DESCRIPTION. Small to medium-sized (ca 1.5–2.5 cm long) Sulciferini with rather poorly-developed paraterga, set mostly at ½ to ¼ of metasomal height. Adenostyles on ♂ legs missing. A transverse setose lobe between ♂ coxae 4 present.

Gonopod coxite elongate, evidently shorter than telopodite, subcylindrical, often setose distoventrally. Prefemoral region as usual, densely setose, about as long as femorite and 2–3 times shorter than acropodite. Femorite stout, often enlarged distally, devoid of any processes, but with a clear-cut mesal groove, set off from solenophore by a distinct cingulum lying at base of a long, flagelliform solenomere. Seminal groove on femorite entirely mesal; solenomere at base also entirely mesal, sheathed by a large and long solenophore usually supporting a few (para)basal outgrowths or processes (e.g. a mesal basal process/tooth/fold (**b**), a lateral process (**d**), a mesal parabasal process (**m**), lobe or processes etc.) and a complex tip; both solenomere and solenophore directed laterad, more or less strongly coiled; solenophore mostly represented by a hypertrophied lamina lateralis.

Type species: *Cawjeekelia gloriosa* Golovatch, 1980, by original designation.

DIAGNOSIS. Gonopod coxite evidently shorter than telopodite. Femorite stout, about as long as or somewhat shorter than solenophore, without evidence of torsion, with an evident mesal groove. Solenophore largely represented by a hypertrophied lamina lateralis, mostly complex, often with at least one considerable lateral process (**d**) near base, a mesal basal outgrowth or fold (**b**) and sometimes a mesal parabasal process or lobe (**m**), concealing much or most of a long, flagelliform solenomere; both solenophore and solenomere directed laterad and more or less strongly coiled.

To update the latest key to *Cawjeekelia* species [Golovatch, 1995], the following new one can be proposed for their separation. It holds only for ♂♂.



Figs 18–28. *Cawjeekelia nova* sp.n., ♂ holotype: 18 — anterior body part, lateral view; 19 & 20 — metatergum 10, lateral and dorsal views, respectively; 21 — epiproct, dorsal view; 22 — hypoproct, ventral view; 23 — lamina between coxae 4, caudal view; 24 — leg 9, lateral view; 25–28 — right ronoopod, submesal, lateral, ventrolateral and dorsal views, respectively. Scale bar: 1.25 (18–24) and 0.5 mm (25–28).

Рис. 18–28. *Cawjeekelia nova* sp.n., голотип ♂: 18 — передняя часть тела, сбоку; 19 и 20 — метатергит 10, соответственно сбоку и сверху; 21 — эпипрокт, сверху; 22 — гипопрокт, снизу; 23 — пластинка между тазиками 4, сзади; 24 — нога 9, сбоку; 25–28 — правый гонопод, соответственно почти изнутри, сбоку, снизу и сбоку, а также сверху. Масштаб 1,25 (18–24) и 0,5 мм (25–28).

- |   |                         |  |                      |
|---|-------------------------|--|----------------------|
| 1(2) Larger: body width $\geq 2.9$ mm. Solenophore very slender and rather simple, strongly coiled (terminal part directed dorsomesad), gradually attenuating towards tip ..... | 3                       | 10(9) Pleurosternal carinae without caudal lappets .....   | 17                   |
| 2(1) Smaller: body width $\leq 2.6$ mm. Solenophore more stout and complex, usually only modestly coiled (terminal part still directed more laterad), tip more elaborate ...    | 5                       | 11(12) Body width ca 2.6 mm. Rear halves of metaterga mostly evidently rugulose (Figs 18–20). Solenophore with two evident, lateral, parabasals teeth (Figs 25–28, <b>d</b> ), but with neither <b>b</b> nor <b>m</b> . Chongqing Province, China .....  | <i>C. nova</i> sp.n. |
| 3(4) ♂ tarsal brushes absent. Solenophore only with a rather small, dentiform outgrowth <b>b</b> discernible ventromedially at base. Taiwan .....                               | <i>C. kanoi</i>         | 12(11) Body width $\leq 2.0$ mm. Metaterga virtually smooth. Solenophore with a denticle, fold or lobe <b>b</b> and, especially, a prominent process <b>d</b> present ventrobasally and lateroparabasally, respectively, while a mesal lobe <b>m</b> often present. Korea (one species occurring also in the Russian Far East) ..... | 13                   |
| 4(3) Tarsal brushes present on ♂ legs 1–7. Solenophore with <b>b</b> a long, mesally curved spine. Hong Kong .....  | <i>C. pallida</i>       | 13(14) Transverse metatergal sulcus on segment 5 incomplete, shortened, thereafter fully developed until segment 19. Solenophore with <b>b</b> a rather large lobe, <b>d</b> a long spiniform process, <b>m</b> also a long spine with a denticle near base .....  | <i>C. propria</i>    |
| 5(6) Small pleurosternal carinae present only on segments 2 and 3, thereafter missing. Japan .....  | <i>C. nordenskioldi</i> | 14(13) Transverse metatergal sulci complete on segments 5–18. Solenophore with <b>b</b> a fold or small uncus, <b>d</b> the largest process, <b>m</b> either absent or small and lobe-shaped .....   | 15                   |
| 6(5) Pleurosternal carinae well-developed at least until segment 7 .....  | 7                       | 15(16) Paraterga 19 rounded caudally, not extending behind caudal tergal margin. Sternal lamina between ♂ coxae 4  |                      |
| 7(8) Solenophore evidently barbed distally with bi- or trifid spikes. Japan .....   | <i>C. fimbriata</i>     |  |                      |
| 8(7) Solenophore at most very slightly fimbriate/serrate only (sub)apically, usually not barbed at all .....  | 9                       |  |                      |
| 9(10) Pleurosternal carinae with a caudal lappet visible at least on/until ♂ segment 7 .....  | 11                      |  |                      |

- rounded. Solenophore with **d** a long spine, **b** a small, pointed uncus, **m** virtually missing ..... *C. gloriosa*  
 16(15) Paraterga 19 subspiniform caudally, clearly extending behind caudal tergal margin. Solenophore with **d** a large subquadrate process, **b** a small, straight tooth, while **m** a small lobe ..... *C. koreana*  
 17(18) Sternal lamina between ♂ coxae 4 trapeziform. Solenophore with a very large, nearly spoon-shaped **m**, a small, dentiform **d**, and a conspicuous, ball-shaped **b** ..  
 ..... *C. pyongana*  
 18(17) Sternal lamina between ♂ coxae 4 rounded. Solenophore with **m** a small lobe, **d** large and spiniform, while **b** small and fold-shaped ..... *C. iksana*

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