Russian Entomol. J. 12(4): 369–372

New or little-known *Dyschiriodes* Jeannel, 1941, from Asia (Coleoptera: Carabidae)

Новые и малоизвестные *Dyschiriodes* Jeannel, 1941, из Азии (Coleoptera: Carabidae)

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KEY WORDS: Coleoptera, Carabidae, *Dyschiriodes*, new species, new subspecies.
КЛЮЧЕВЫЕ СЛОВА: Coleoptera, Carabidae, *Dyschiriodes*, новый вид, новый подвид.

ABSTRACT. Two new species, *D.* (*Eudyschirius*) *baeningeri* sp.n. and *D.* (s.str.) *jindrai* sp.n. and two new subspecies, *D.* (s.str.) *fassatii koreanus* ssp.n. and *D.* (s.str.) *arcifer arciferoides* ssp.n. are described. Two little-known species, *D.* (*E.*) *bechynei* (Kult, 1949) and *D.* (s.str.) *girardi* (Kult, 1949) are re-described. The latter species is considered as very close to and probably derived from *D.* (s.str.) *fassatii* (Kult, 1949). *D. fassatii* is first recorded in S-Tuva as well as *D. salinus* (s.str.) *tsaidamensis* (Fedorenko, 1993) from Korea.

РЕЗЮМЕ. *D.* (*Eudyschirius*) *baeningeri* sp.n., *D.* (s.str.) *jindrai* sp.n., *D.* (s.str.) *fassatii koreanus* ssp.n. и *D.* (s.str.) *arcifer arciferoides* ssp.n. описаны как новые для науки. Переописаны малоизвестные *D.* (*E.*) *bechynei* (Kult, 1949) и *D.* (s.str.) *girardi* (Kult, 1949). Последний рассматривается в качестве формы очень близкой к *D. fassatii* (Kult, 1949) и, вероятно, являющейся дериватом последнего вида. *D. fassatii* впервые указан с юга Тувы, *D.* (s.str.) *salinus tsaidamensis* (Fedorenko, 1993) — из Кореи.

Introduction

In spite of the fact that the genus *Dyschiriodes* Jeannel, 1941, has recently (Balkenohl, 2002) been downgraded to a subgenus of the speciose genus *Dyschirius* Bonelli, 1813, I hold on considering both as being of subequal rank. This is due to a great dissimilarity, especially in the structure of male genitalia, between *Dyschirius* sensu stricto and *Dyschiriodes*. Of these taxa, the former seems closer to the genera *Cribrodyschirius* Bruneau de Miré, 1952, *Neodyschirius* Kult, 1954, and *Setodyschirius* Fedorenko, 1996, whereas the latter belongs to a separate lineage or lineages. The opposite point of view immediately requires *Akephorus* LeConte, 1851, and *Clivinopsis* Bedel, 1895, saying nothing about *Torretassoa* Schatzmayr & Koch, 1933, and *Reicheiodes* Ganglbauer, 1892, the latter as an apparent derivative of *Eudyschirius*, to be included in the genus *Dyschirius* as well.

The dyschiriines discussed below are the members of the *orientalis*-group and *minutus*-group of the genus *Dyschiriodes*, subgenera *Eudyschirius* and *Dyschiriodes* (s.str.) respectively. The former group is Paleotropical, mostly Oriental, in distribution while the latter is spread over the Old World, with the bulk of its diversity being placed in the Ancien Meditterranean Region. Some widespread species of this group often display close relationship to separate local forms populating Palearctics' southernmost parts or/and the northernmost parts of the Oriental realm. This implies that the latter forms, species or subspecies, have originated from periferal isolates of the former. Statuses of such a few forms still remain obscure as well their ranges do. This paper is aimed also to supply some of these gaps.

The material used is deposited in the museums and private collections as follows: CB — Collection of Dr. P. Bulirsch, Lovosice, Czech Republic; CD — Collection of Dr. A. Dostal, Wien; CF — Author's reference collection; CMNH — Carnegie Museum of Natural History, Pittsburg, USA; MNHB — Museum für Naturkunde der Humboldt-Universität zu Berlin; ZISP — Zoological Institute, Russian Academy of Sciences, St. Petersburg.

Dyschiriodes (Eudyschirius) baeningeri Fedorenko, **sp.n.**

Figs 1, 5.

DESCRIPTION. Body length 2.7–3.2 mm. Dorsum dark brown, without metallic lustre; basal slope of elytra and apical 1/3–1/4 elytra along side margins slightly but never contrastingly paler; antennae brown, antennomeres 1, 2 and base(s) of 3(-4) reddish-yellow. Clypeofrontal suture transversely straight and very deep. Pronotum 1.09–1.15 (mean 1.11) times as wide as long, very convex, broadest slightly before posterolateral setigerous pore, slightly attenuating forward, rather faintly rounded on sides between lateral setigerous pores as well as from posterolateral setigerous pore to peduncle, more strongly rounded at front angles;

pronotal side border extended distinctly beyond posterolateral setigerous pore, front transverse depression impunctate, thin but deep; mid-line obliterated on disc, barely traceable on basal slope. Elytra more or less regularly oval, 1.53–1.58 (mean 1.54) times as long as wide, 1.23–1.29 (mean 1.26) times as wide as pronotum, moderately strongly oblique from peduncle to shoulders, rather strongly broadening on sides, a bit more feebly attenuating forward than toward a moderately widely rounded apex; humeri faintly protruding, without denticle. Elytral striae deep, coarsely or very coarsely punctate, obliterated on apical 1/3–2/5 elytra; striae 1 and 2 adjoining prescutellar setigerous pore, stria 8 absent; elytral intervals convex. Dorsal setigerous pores 3, humeral pores 3, apical pores 2 in deep apical (8th) stria. Apical spine of protibia moderately long, curved backward, apical spur not shortened, as long as 1.5–2 basal tarsomeres; distal marginal tooth moderately large, proximal one slightly traceable.

Penis with a fairly large lamella (Fig. 1), flagellum with three basal coils; endophallus as in Fig. 5.

DIAGNOSIS. This species is very similar to *D. orientalis* and *D. bechynei*, differing from both by, on average, the larger body and the impunctate front transverse depression of the pronotum. From the former species it differs in addition by the non-metallic dorsum, not contrasting coloration of the elytra which are shorter, more oval, more strongly rounded on sides and more strongly oblique from the peduncle to humeri, these being less strongly protruding. The differences from the latter species are two: coloration of the body is darker, the apical spur of the protibia is shortened, distinctly shorter than the apical spine.

MATERIAL. Holotype, ♀ (CD), labelled "F.G. Drescher, G. Tangkoeban Prahoe, 4000−5000 voet, Preanger, Java, XII.1933", "№1", "*Dysch.* sp., Andr., 17.6.37", "Type", "*D. Bänningeri* Kt., det K. Kult, 1948", "*Bänningeri* Kt., det K. Kult". Paratypes (CD, CB, CF), 2 ♂♂ and 9 ♀♀, same locality but different dates: 11.III., 3 and 21.IV.1930, 3−15.II.1933, and IV.1937. 4 paratypes also with the label "cultus ex..., gezeefd Oerbosch".

Aedeagus studied in 2 ♂♂.

DISTRIBUTION. Known from the type locality only.

NAME DERIVATION. I can only suppose that this species was named by K. Kult after M. Bänninger, a well-known carabidologist who specialized mainly in the field of nebriine taxonomy. This eponym is conseved here.

Dyschiriodes (Eudyschirius) bechynei (Kult, 1949)
Figs 2, 6.

Kult, 1949: 128 (*Dyschirius*; China or.).

REDESCRIPTION. Body length 2.5–2.8 mm. Coloration brownish-red, without metallic lustre. Basal slope, epipleura and the very side margins of elytra red; apical 1/3 elytra yellowish, this paler spot being extended forward along side margins up to the midway of elytra. Appendages reddish-yellow. Clypeofrontal suture transversely straight and very deep. Pronotum 1.10–1.18 times as wide as long, very convex, strongly and regularly rounded on sides, with side border extended distinctly beyond posterolateral setigerous pore; front transverse depression deep, impunctate to distinctly punctured by moderately big punctures; mid-line indistinct or absent on disc, barely traceable on basal slope. Elytra almost regularly oval, approximating to slightly ovate, 1.47–1.54 times as long as wide, 1.17–1.22 times as wide as pronotum, rather strongly oblique from peduncle to faintly protruding shoulders, strongly broadening on sides, broadest slightly before middle, a little more strongly attenuating towards apex than toward shoulders, without humeral denticle. Elytral striae deep, coarsely or very coarsely punctate, inner striae obsolete in apical 1/3 elytra, outer ones in apical 2/5–1/2; stria 8 in basal 1/2 elytra from almost indistinct to represented by a few punctures which are smaller than those in stria 7; stria 1 hardly adjoining nearly isolated prescutellar setigerous pore; elytral intervals convex. Dorsal setigerous pores 3, humeral pores 3, apical pores 2 in deep apical (8th) stria. Apical spine of protibia moderately long, curved backward, distinctly longer than a shortened apical spur, latter as long as 1 basal tarsomere at most; distal marginal tooth small, proximal one almost indistinct.

Flagellum of penis with three basal coils, penial lamella fairly large (Fig. 2); endophallus as in Fig. 6.

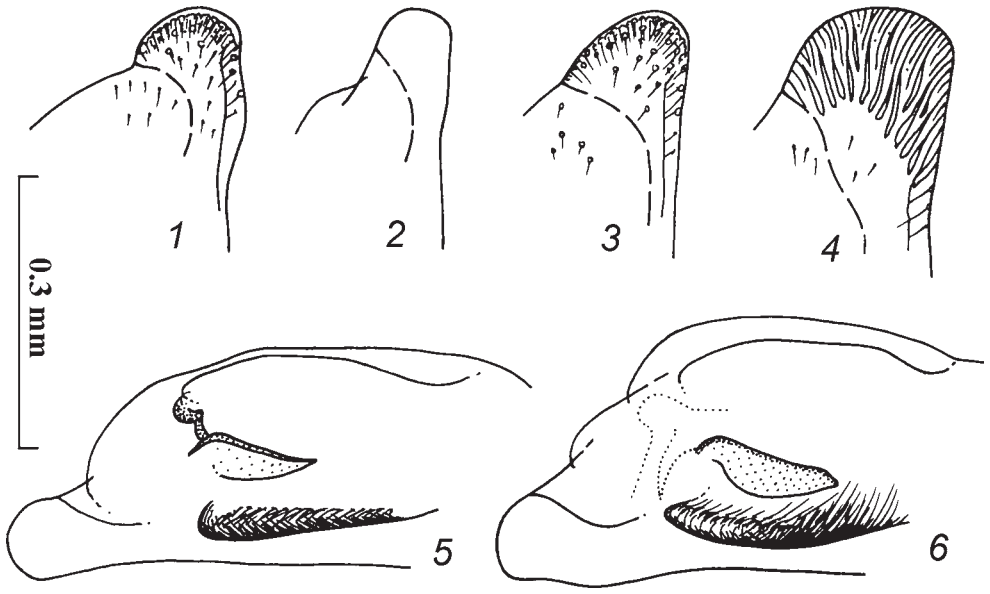
MATERIAL. Holotype ♀ (CD), China or., "Kiang-si, Nanchang", "TYPE", "*D. Bechyněi* Kt., det. K. Kult, 1948"; 2 ♀♀ (MNHB, CF), Formosa, Takao (Sauter S.V.), 12.VI.1907; ♂ (CB), Thailand, Nan prov., Ban Bo Khua env., 13−26.V.2002 (P. Průdek & M. Obořil leg.).

COMMENTS. This very rare species is extremely similar to and hardly separable from some local forms or individuals of *D. orientalis*, the latter species being in contrast very frequent. To a greater extent this concerns paler, mostly immature, specimens of *D. orientalis* which display nearly full character set of *D. bechynei*, and is especially true of some populations of *D. orientalis* from N-Vietnam. In these populations, individuals are frequent with a distinctly shortened apical spur, the latter state being uncharacteristic of the species in general.

The main differences of *D. bechynei* from *D. orientalis* are as follows: the dorsum of the body is non-metallic and, on average, paler, the apical paler spot on the elytra is less contrastingly paler than elytral disc, both the clypeofrontal suture and interocular sulci are a bit deeper, the elytra are more strongly broadening on sides and more strongly oblique from the peduncle to humeri, the latter being less strongly protruding, the apical spur on protibia is always short, much shorter than the apical spine.

Dyschiriodes (s.str.) *jindrai* Fedorenko, **sp.n.**
Fig. 3.

DESCRIPTION. Body length 3.3 mm. Dorsum almost black, with slight greenish-bronzed lustre; basal slope of elytra and apical 1/3 elytra along side margins indistinctly paler; appendages red, fore legs and antennae except 3.5 basal joints slightly infuscate. Clypeus convex, extended upon frons into a moderately long longitudinal carina (keel); anterior margin of clypeus straight, clypeofrontal suture V-shaped acutangular and deep; frons slightly uneven, head with a deep U-shaped furrow across vertex and, on each side behind it, with a group of numerous dense punctures. Pronotum 1.03 times as wide as long, faintly attenuating forward, regularly rounded on sides, a bit more strongly rounded at front angles; pronotal side border extended backward slightly beyond posterolateral setigerous pore; front transverse depression moderately deep, uninterrupted, with traces of cross-striation; mid-line thin superficial but distinct. Elytra oblong-oval, 1.7 times as long as wide, 1.25 times as wide as pronotum, not strongly oblique from peduncle to slightly protruding shoulders, a little broadening on sides, broadest before middle, a bit more feebly attenuating forward than toward a moderately widely rounded apex, without humeral denticle. Elytral striae moderately deep, moderately coarsely punctate, weakened toward apex, especially so in apical 1/3; stria 8 almost indistinct as being composed of a few isolated microscopical punctures only; elytral intervals scarcely con-



Figs 1–6. Lamella of penis (1–4) and distal part of endophallus (5, 6) of *Dyschiriodes*: *D.* (*Eudyschirius*) *baeningeri* sp.n. (1, 5), *D.* (*E.*) *bechynei* (2, 6), *D.* (s.str.) *jindrai* sp.n. (3), *D.* (s.str.) *girardi* (4)

Рис. 1–6. Ламелла пениса (1–4) и дистальный отдел эндофаллуса (5, 6) *Dyschiriodes*: *D.* (*Eudyschirius*) *baeningeri* sp.n. (1, 5), *D.* (*E.*) *bechynei* (2, 6), *D.* (s.str.) *jindrai* sp.n. (3), *D.* (s.str.) *girardi* (4)

vex in basal half. Dorsal setigerous pores 3 in the midd le of interval 3, humeral pores 3, apical pores 2 in apical (8th) stria, prescutellar pore absent. Apical spine of protibia moderately long, subequally curved backward and inward at tip, equal to almost straight apical spur in length; distal marginal tooth moderately large, proximal one as a small tubercle.

Flagellum of penis long, with a wide basal coil, penial lamella more or less triangular, widely rounded apically (Fig. 3), of the same shape as in *D. aeneus* (Dejean, 1825), especially *D. a. ovicollis* (Putzeys, 1873). Distal part of endophallus with a sclerotized plate bearing a small dorsal tooth; in dorsal view, this tooth starts from the plate itself at an acute angle. While being characteristic of almost all members of the *minutus*-group, the plate is especially similar in shape to that of *D. aeneus*.

DIAGNOSIS. Due to great similarity in many characters, including particulars of the penial structure, with *D. aeneus* and some its close allies such as, e.g. *D. pauxillus* (Wollaston, 1864), the new species seems to be a derivative of *D. aeneus*. It differs well from from *D. aeneus* by the lack of the prescutellar setigerous pores on the elytron, while a bit longer elytra is its main difference from *D. pauxillus*.

MATERIAL. Holotype,♂ (CB), China, Yunnan prov., Dali old tower env., 22–27.07.1998, Zd. Jindra lgt.

Dyschiriodes (s.str.) *girardi* (Kult, 1949)
Fig. 4.

Kult, 1949: 130 (*Dyschirius*; Taiwan).

REDESCRIPTION. Body length 2.7–3.1 mm. Nearly black, without metallic lustre; elytra slightly paler apically; legs and antennae brownish-red, antennomeres 1, 2 and bases of 3rd and 4th reddish-yellow. Anterior margin of clypeus straight or slightly convex, clypeofrontal suture V-shaped obtusangular, deep and uninterrupted; dorsal surface of head even and smooth, without punctures behind eyes. Pronotum 1.06–1.07 times as wide as long, distinctly attenuating forward, strongly rounded on sides in basal half and less strongly rounded in anterior half, especially so at front angles; pronotal side border slightly surpassing posterolateral setigerous pore, front transverse depression deep and impunctate; mid-line very fine, slightly deeper on basal slope but very weak or obliterated on disc. Elytra oval, 1.61–1.63 times as long as wide, 1.22–1.25 times as wide as pronotum, faintly oblique from peduncle to shoulders, moderately strongly broadening on sides, broadest at about middle, a bit more feebly attenuating forward than toward a moderately widely rounded apex, without or with a minute humeral denticle each. Elytral striae fine, outer ones as rows of punctures only, all obliterated at base and on apical 1/3 elytra; punctures in striae moderately coarse, disappearing slightly before back dorsal setigerous pore; stria 1 not deepened on basal slope but extended upon it, stria 8 reduced to a few microscopical punctures; elytral intervals flat. Dorsal setigerous pores 3 in the midd le of interval 3, humeral pores 3, apical pores 2 in apical (8th) stria, prescutellar pore absent. Apical spine of protibia moderately long, subequally curved backward and inward at tip, slightly longer than almost straight apical spur; distal marginal tooth moderately large, proximal one small but very distinct.

Penis as in *D. fassatii*, i.e., with flagellum short, only slightly protruding from basal orifice, lamella very large and supplied with longitudinal internal channels (Fig. 4). Differences are almost no, except as follows: when the penis is in dorsal view, the small dorsal tooth of the sclerotized endophallic plate starts from it at an acute angle, not right angle as in *D. fassatii*.

DIAGNOSIS. Very similar to *D. fassatii* from which it is different in the absence of the prescutellar setigerous pore on the elytron and in the above very slight differences of the penial structure.

COMMENTS. Almost all structural particulars, especially the endophallic structure point to a close relationship between this species and *D. fassatii*. Along with *D. jindrai* being a probable derivative of *D. aeneus*, *D. girardi* seems to be a derivative of *D. fassatii*.

MATERIAL. Holotype,♂ (CD), "Formosa: Tainan, H. Müller", "*D. girardi* Kt., det K. Kult, 1948", "*girardi* Kt., det. K.Kult", "Type"; 1 ♀ (MNHB), "Formosa, Anping, VI.07., H. Sauter S.V.".

DISTRIBUTION. Known to-date from Taiwan only.

Dyschiriodes (s.str.) *fassatii koreanus* Fedorenko, **ssp.n.**

DIAGNOSIS. It is different from the nominate subspecies in more regular shape and sculpture of the elytra. In *D. fassatii fassatii* (Kult, 1949), the elytra are mostly ovate or almost so, broadest before the middle and much less strongly attenuating forward than towards apex; the elytral strae are deep and coarsely or very coarsely punctate in basal half but strongly shallowed to obliterated and impunctate in apical 1/3; stria 8 usually is wanting, stria 7 is obsolete behind the middle. As compared to the nominate form, the new subspecies displays the elytra more oval in shape, broadest at about middle and subequally attenuating forward and backward, the elytral striae slightly less coarsely punctate in basal half but a bit deeper behind the middle, traceable up to apex, with punctures minute but well-visible up to the level of back dorsal setigerous pore, stria 7 traceable behind the middle, stria 8 as a row of very minute but distinct punctures.

COMMENTS. The new form is only described from the individuals of a local peripheral population of *D. fassatii* while almost entire species' range is populated by the nominate subspecies. The westernmost record of this species is in S-Tuva: 25 km N of Erzin, N shore of the lake Tore-Khol, 3.VI.1999 (B. Kataev), 1 ex. (ZISP), yet its occurrence seems plausible in more western parts of Mongolia.

Like the nominate form, the new subspecies is also halophilous. It has been captured together with two specimens *D.* (s.str.) *salinus tsaidamensis* (Fedorenko, 1993). For the latter species this is the easternmost record.

MATERIAL. Holotype (ZISP) and paratype, ♂ (CF), "Korea, Chungkong-bukdo Prov., Dang-jin City, Suk-moon seamall, 30.V.2000, B. Korotyaev", "100 km SW of Suwon, lake shore with *Salicornia*".

Dyschiriodes (s.str.) *arcifer arciferoides* **ssp.n.**

DESCRIPTION. Body length 3.3 mm. Dorsum dark brown, with bronzed lustre; the very apex of elytra slightly paler; underside of the body, basal slope of elytra and legs brownish-red, mouthparts and antennae reddish-yellow. Anterior margin of clypeus truncate, clypeofrontal suture V-shaped acutangular and deep; frons behind it with a pair of rather shallow depressions starting from interocular sulcus, vertex without U-shaped furrow but with short oblique striations starting from interocular sulcus. Pronotum large, 1.07 times as wide as long, distinctly attenuating forward, strongly and regularly rounded on sides; pronotal side border extended beyond posterolateral setigerous pore; front transverse depression deep, impunctate, nearing to anterior margin of pronotum; mid-line very fine, almost indistinct on disc, only slightly deeper on basal slope. Mesothorax in lateral view with a vertical slot. Elytra oval, 1.65 times as long as wide, 1.19 times as wide as pronotum, faintly oblique from peduncle to protruding shoulders, faintly broadening on sides, broadest before middle, subequally attenuating forward and toward a widely rounded apex, each with an almost indistinct trace of humeral denticle, suture shortly deepened on basal slope. Elytral striae not deep, very coarsely punctate, obliterated at base and in apical 1/3 elytra; punctation disappearing at the level of back dorsal setigerous pore; stria 8 only traceable in basal half as a row of punctures, latter being smaller than in stria 7; elytral intervals slightly convex in basal half. Dorsal setigerous pores 3 in the middle of interval 3, humeral pores 3, apical pores 2 in apical (8th) stria, prescutellar pore absent. Apical spine of protibia very long, subequally curved backward and inward at tip, much longer than apical spur, latter almost straight and very short, equal in length tarsomere 1; distal marginal tooth fairly small, proximal one nearly distinct.

DIAGNOSIS. Differences from the nominate subspecies are as follows: the elytra are shorter and wider, 1.65 times as long as wide (versus 1.68–1.77 in *D. arcifer arcifer* (Znojko, 1928)), the U-shaped furrow across the vertex is absent, the front transverse depression of the pronotum is deep, impunctate and nearing to the anterior margin of pronotum. Because all the remaining structural particulars are the same as in *D. a. arcifer*, the new form is provisionally described as subspecies. Moreover, separate individuals of *D. a. arcifer* are distinctive among the others in having either an impunctate front transverse depression of pronotum or no the U-shaped furrow across the vertex. This evidence implies that the new subspecies could only be a local form of *D. arcifer*. To solve this question additional material is necessary.

MATERIAL. Holotype, ♀ (CMNH), "Janakpur, Nepal, April 1971, Coll. R. Davidson", "Davidson collection, donated 1987".

ACKNOWLEDGEMENTS. I express my deep gratitude to all museum curators and individuals for material on loan: Dr. B. Korotyaev and Dr. B. Kataev (ZISP), Dr. F. Hieke and Dr. M. Uhlig (MNHB), Dr. A. Dostal, and, especially, my friend, Dr. P. Bulirsch.

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