

Four new species of the genus *Dyschiriodes* from South America and notes about next species from the same region (Coleoptera: Carabidae: Scaritinae)

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Abstract. Four new Neotropical species of the genus *Dyschiriodes* Jeannel, 1941: *D. ecuadorensis* sp. n. from Ecuador, *D. bousqueti* sp. n., *D. baehri* sp. n. and *D. fedorenkoi* sp. n. from Brazil, are described, illustrated and compared with related taxa. The key of *Dyschiriodes* (*Eudyschirius*) *pampicola* species group (sensu Fedorenko, 1999) is completed and refined. New faunistic data about next Neotropical *Dyschiriodes* are quoted. Description of *D. bruchi* (Kult, 1950) and *D. ogloblini* (Kult, 1950), two hardly known species, is corrected and completed and both species are illustrated.

INTRODUCTION

Neotropical species of the genus *Dyschiriodes* are rather rare, mostly known in very limited series. First two species were described by Putzeys (1866), next five by Kult (1950) and remaining six by Fedorenko (1991a,b, 1999). Fedorenko (1999) reviewed all species, except *D. bruchi* and *D. ogloblini*, known in HT only which had been not available for him, and created *D. (Eudyschirius) pampicola* group with 3 subgroups and 12 species. Only one known South American species, *D. (Dyschiriodes) weirauchi* (Kult, 1950), belongs or is allied to very different Holarctic *D. (Dyschiriodes) nitidus* group. The main purpose of this article is to describe and illustrate 4 new species, to refine description of two Kult's species, to complete and refine key to *D. pampicola* group (sensu Fedorenko 1999) and to quote new faunistic data about next species.

MATERIAL AND METHODS

I have seen relatively rich material of South American *Dyschiriodes* (*Eudyschirius*) *pampicola* species group (sensu Fedorenko, 1999) from several institutes and colleagues: Neotropical specimens from Kult's collection (now AD) including HT of *D. bruchi* and *D. ogloblini*, PT of *D. bryanti* (Kult, 1950); HT of *D. selvas* Fedorenko, 1999 (OH); HT of *D. neoteutos* (Fedorenko, 1991) (BMNH) and rich undetermined material from AD, BMNH, CMNH, ERCC, MB, PB, SF, and ZSM. Among these specimens there have been recognised four new species: short series of two species; first from Ecuador, second from Brazil, and two single specimens of other 2 Brazilian species. It has not been necessary to study remaining

HT because Fedorenko (1999) precisely redescribed all of them.

The methods of measurement of total length and proportions of different body parts follow Fedorenko (1996). I have not found any important measurement differences between males and females. Length of body is quoted with accuracy 0.05 mm; length of median lobe of aedeagus with accuracy 0.01 mm. I have used for measurement all available specimens. Male genitalia (aedeagi) were embedded in Canada Balsam (all HT and some PT) or were fixed with watersoluble glue (remaining specimens).

List of used abbreviations:

AD	collection of A. Dostal, Vienna, Austria
BMNH	The Natural History Museum, M. Barclay, R. Booth, London, U.K.
CMNH	Carnegie Museum of Natural History, R. Davidson, Pittsburgh, U.S.A.
DF	collection of D. Fedorenko, Moscow, Russia
ERCC	Eastern Cereal and Oilseed Research Centre, Y. Bousquet, Ottawa, Canada
ISNB	Institute Royal des Sciences Naturelles de Belgique, Bruxelles, Belgium
MB	collection of M. Bähr, Munich, Germany
OH	collection of O. Hovorka, Prague
PB	collection of P. Bulirsch, Prague
SF	collection of S. Facchini, Piacenza, Italy
ZIP	Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia
ZMB	Museum für Naturkunde der Humboldt-Universität zu Berlin, Germany
ZSM	Zoologische Staatssammlung, M. Bähr, Munich, Germany
ASP	apical setiferous puncture(s)
BSP	basal (prescutellar) setiferous puncture(s)
DSP	dorsal setiferous puncture(s)
PASP	preapical setiferous puncture(s)
PHSP	posthumeral setiferous puncture(s)
HT	Holotype(s)
PT	Paratype(s)

RESULTS

In the following text there are described 4 new species, refined descriptions of 2 species described by Kult (1950) and *D. pampicola* group is keyed and listed.

Dyschiriodes (Eudyschirius) ecuadorensis sp. n.

(Figs 1, 1a,b)

Type material: Holotype (♂) labelled: „Ecuador: Manabi, Puerto Lopez, 10 m, 20 February 1993, Giovanni Onore, Luca Bartolozzi /leg.” (CMNH). Paratypes (5 ♂♂, 2 ♀♀): with the same data as HT (CMNH, PB).

Description. Length 3.20-3.60 mm (HT 3.35 mm, mean 3.37 mm). Brown-red, surface and partly episterna with slight metallic lustre; elytra slightly paler on basal slope and apically; legs red, antennae uniformly red or slightly infuscated apically.

Head. Front margin of clypeus between lateral lobes faintly emarginated, clypeofrontal suture transversely straight or slightly arcuated forwards, facial furrows narrow, moderately deep, short, distinctly diverged posteriorly in whole length; distance between them slightly larger than eyes length. Surface even, smooth, with fine and sparse micropunctures. Eyes moderately big, convex. Antennae moniliform.

Pronotum. Rather convex, outline moderately, regularly rounded; very slightly attenuated anteriorly; 0.97-1.03 (HT 1.03, mean 1.00) times as wide as long, 1.19-1.22 times as wide as head (HT 1.19, mean 1.20); widest just below middle. Anterior angles very blunt, slightly rounded, posterior ones very broadly rounded. Font transverse impression impunctate, rather shallow, slightly weakened at middle; median line just recognisable; lateral channel moderately broad, reflexed lateral margin extended slightly beyond posterior setiferous punctures. Surface mirror-like shiny, with very fine micropunctures.

Elytra. Oblong-oval, 1.77-1.90 (HT 1.82, mean 1.83) times as long as wide, 1.19-1.32 (HT 1.24, mean 1.27) times as wide as pronotum; base almost truncate; outline faintly broadened on sides, broadest before middle, more strongly attenuating towards apex than towards rather protruding humeri with distinct humeral tooth; suture not depressed at base. Base with distinct basal border connected with BSP and with small and blunt basal tubercles. Striae rather fine, finely punctate, punctation disappearing in third fourth; striae punctures incomparably smaller than width of intervals; first stria at base not deeper towards BSP; lateral striae shallowed apically; stria 8 finer than stria 7 and much finer than first striae, created from few fine punctures, striae 7-8 very deep just before apex; intervals slightly vaulted in basal part, more or less flattened apically. PHSP: 3, DSP: 0, ASP: 2 (in very deep apical stria).

Protibia. Apical spine short, curved backwards, shorter than apical spur; later almost not curved apically; distal marginal tooth rather small, proximal one indistinct.

Mesothorax. Peduncle with narrow, transverse, vertical slot.

Aedeagus. As in Figs 1a,b; by HT 0.68 mm long, median lobe rather narrow, slightly bent down. Apical lamella as in Fig. 1b; medium sized, triangular, ventrally strongly eccentric.

Differential diagnosis. *D. ecuadorensis* sp. n. belongs to the *D. bryanti* subgroup of the *D. pampicola* group (sensu Fedorenko, 1999). From the most similar *D. macrophthalmus* Fedorenko, 1999 can be distinguished by much smaller eyes, by striae shallowed apically, by 3 PHSP and by bigger, narrower and triangular apex of aedeagal lamella; from *D. amazonicus* (Fedorenko, 1991) and from *D. bryanti* (Kult, 1950) by much finer striae punctures and by almost missing median pronotal line and from *D. peruanus* (Fedorenko, 1991) also by strongly bordered elytral base. All quoted species are keyed below.

Name derivation. Named after state of Ecuador, its type locality.

***Dyschiriodes (Eudyschirius) bousqueti* sp. n.**
(Figs 2, 2a,b)

Type material: Holotype (♂) labelled: „Brazil, PR Riberao, 900 m., 11-15-1970, JM & BA Campbell /leg.” (ERCC).

Description. Length 4.25 mm. Brown-red, surface without metallic lustre; elytra slightly paler on basal slope and apically; legs, antennae uniformly red.

Head. Front margin of clypeus between lateral lobes very faintly convex, clypeofrontal suture transversely, almost straight, very slightly arcuated posteriorly; facial furrows moderately broad, rather deep, moderately long, in first three fourths almost parallel, strongly diverged beyond hind margin of eyes; distance between them slightly larger than eyes length. Surface even, smooth, only with fine micropunctures. Eyes relatively small, moderately convex. Antennae not moniliform, especially antennomeres 2-5 very long; 2-3 two times, 4-5 more than 1.5 times longer than broad, also apical antennomeres distinctly longer than broad.

Pronotum. Strongly convex, almost globose, outline strongly and regularly rounded; slightly attenuated anteriorly; 1.03 times as wide as long, 1.57 times as wide as head, posterior angles very broadly rounded. Font transverse impression impunctate, rather deep; median line rather shallow, especially in middle; reflexed lateral margin shortened, extended slightly beyond anterior setiferous punctures. Surface mirror-like shiny, with very fine micropunctures.

Elytra. Oblong-oval, 1.58 times as long as wide, 1.25 times as wide as pronotum; base moderately strongly sloping, humeri slightly protruding; outline strongly broadened, broadest in about middle, more strongly attenuating towards widely rounded apex than towards humeri; suture not depressed at base. Base without tubercles, with distinct basal border, not connected with large BSP. Striae rather deep, coarsely punctate; intervals 3-4 slightly broader, but intervals 5-6 narrower than striae punctures; first stria complete, at base deeper, connected with BSP; striae 2-6 abruptly vanishing just behind middle; stria 7 much finer, consisting of fine punctures, stria 8 wanting. Intervals rather vaulted in basal half; apical half smooth, very shiny. PHSP: 3, DSP: 0, ASP: 2 (in very deep apical stria).

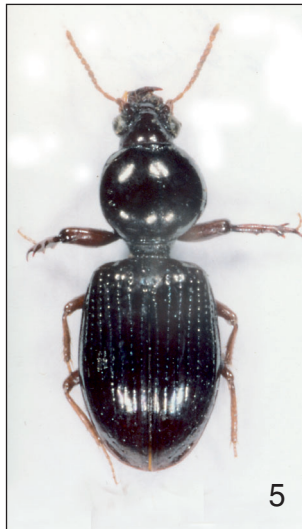
Protibia. Apical spine rather strongly curved backwards and inwards, as long as apical spur; later distinctly curved apically; distal marginal tooth distinct, proximal one small, very blunt.

Mesothorax. Peduncle with narrow, transverse vertical slot.

Aedeagus. As in Figs 2a,b; by HT 0.93 mm long, median lobe robust, moderately arcuated. Apical lamella as in Fig. 2b; very large, broad, ventrally slightly eccentric.

Differential diagnosis. *D. bousqueti* sp. n. belongs to the *D. pampicola* group (sensu Fedorenko, 1999). From the most similar *D. braziliensis* Fedorenko, 1999 can be distinguished by pronotum only slightly attenuated anteriorly; by well marked median line of pronotum; by elytral striae distinct in basal half and by larger body size (4.25 mm versus 3.10 mm). From other species differs at least by absence of DSP or by abbreviated reflexed lateral margin of pronotum. The shape of median lobe and especially very large and broad lamella from apical view is very characteristic as well.

Name derivation. Named in honour of my friend Yves Bousquet (Ottawa, Canada), specialist in Carabidae.



Figs 1-6. Habitus of HT (real length in parentheses behind name). 1: *D. ecuadorensis* sp. n. (3.35 mm); 2: *D. bousqueti* sp. n. (4.25 mm); 3: *D. baehri* sp. n. (3.35 mm); 4: *D. fedorenkoi* sp. n. (2.85 mm); 5: *D. bruchi* (Kult, 1950) (5.70 mm); 6: *D. ogloblini* (Kult, 1950) (4.70 mm).

Dyschiriodes (Eudyschirius) baehri sp. n.

(Figs 3, 3a,b)

Type material: Holotype (♂): labelled „Brasilien, Tapurucuara am Rio Negro/ Amazonas, 7.ii.1963, C. Lindemann /leg.“ (ZSM). Paratypes (2 ♂♂, 1 ♀): with the same data as HT (ZSM, MB, PB).

Description. Length 3.35-3.50 mm (HT 3.35 mm). Rusty-red, surface with very slight metallic lustre; elytra paler apically; legs red, antennae red, infuscated apically from antennomere 4. All specimens more (all PT) or less (HT) immature.

Head. Front margin of clypeus between lateral lobes faintly to moderately emarginated, clypeofrontal suture transversely straight, facial furrows moderately broad and deep, rather long, rather slightly diverged posteriorly; distance between them smaller than eyes length. Surface even and smooth, with fine micropunctures. Eyes very big, convex. Antennae moniliform.

Pronotum. Rather strongly convex, outline slightly rounded; slightly attenuated anteriorly; 0.90-0.93 (HT 0.91) times as wide as long, 1.19-1.23 (HT 1.20) times as wide as head; widest at about second third. Anterior angles from lateral view bent down, blunt, shortly rounded, posterior angles very broadly rounded. Frontal transverse impression impunctate, very shallow, almost vanishing at middle; median line slightly impressed; lateral channel narrow, reflexed lateral margin slightly extended beyond posterior setiferous punctures. Surface mirror-like shiny, with very fine micropunctures.

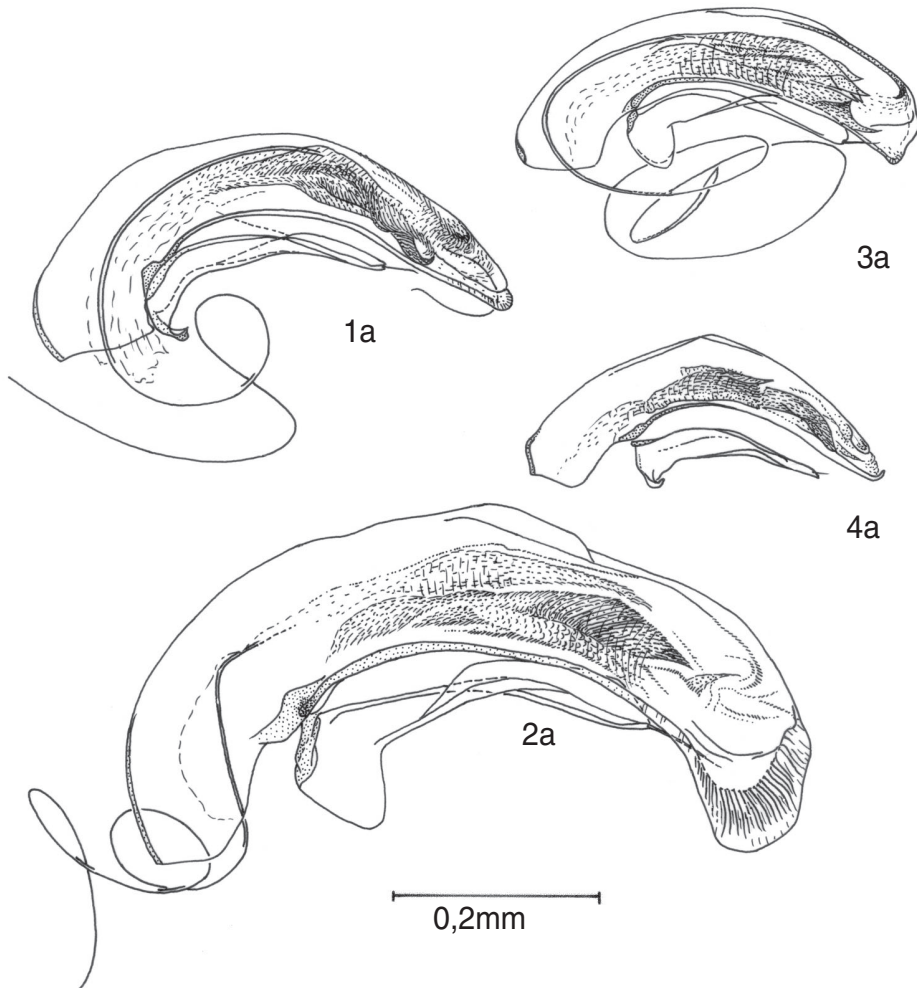
Elytra. Oblong-oval, 1.76-1.82 (HT 1.78) times as long as wide, 1.19-1.25 (HT 1.23) times as wide as pronotum; base faintly sloping, outline faintly broadened on sides, broadest before middle, more strongly attenuating towards widely rounded apex than towards rather protruding humeri without humeral tooth; suture not depressed at base. Base with distinct basal border connected with BSP and with moderately big basal tubercles. Striae rather fine, in apical half very shallow, almost disappearing; striae 7-8 very deep just before apex only; intervals moderately convex, intervals 5-6 slightly narrower than striae. Striae 1-7 rather coarsely punctate, punctation abruptly disappearing at about or just behind middle, stria 8 much finer than stria 7, in basal half consisting of fine punctures. PHSP: 3, DSP: 0, ASP: 2 (in very deep apical stria).

Protibia. Apical spine curved backwards and inwards, not or slightly shorter than apical spur; later rather slightly, regularly curved; distal marginal tooth small, proximal one almost indistinct.

Mesothorax. Peduncle with narrow, transverse, vertical slot.

Aedeagus. As in Figs 3a,b; by HT 0.56 mm long, median lobe robust, short, slightly arcuated. Apical lamella as in Fig. 3b; very small, broad, ventrally rather eccentric.

Differential diagnosis. *D. baehri* sp. n. belongs to the *D. bryanti* subgroup. From the most similar *D. bryanti* can be distinguished by narrower pronotum (ratio 0.90-0.93 versus 0.95-1.00) with finer front transverse impression, by finer, especially lateral, striae, by only moderately curved apical spur of protibia, by distinctly diverged facial furrows (those by *D. bryanti* are only slightly diverged apically) and by different apical part of median lobe of



Figs 1a-4a. Aedeagus of HT from right lateral view. 1a: *D. ecuadorensis* sp. n.; 2a: *D. bousqueti* sp. n.; 3a: *D. baehri* sp. n.; 4a: *D. fedorenkoi* sp. n.

aedeagus. From *D. amazonicus* (Fedorenko, 1991) can be distinguished by larger body size, by fine but, at least laterally, distinct front transverse impression of pronotum, by moderately curved apical spur of protibia and by larger lamella of median lobe of aedeagus. *D. baehri* sp. n. seems to be intermediate between both preceding species.

Name derivation. Named in honour of my friend Martin Bähr (Munich, Germany), specialist in Australian Carabidae.

Dyschiriodes (Eudyschirius) fedorenkoi sp. n.

(Figs 4, 4a,b)

Type material. Holotype (♂) labelled: „Brasilien A 244, Rio Tonantina/ Villa Nova, 29.8.1964, leg. Frittkau” (ZSM).

Description. Length 2.85 mm. Dark brown, surface with slight metallic lustre; elytra paler apically; legs brown-red, antennae red, very slightly infuscated apically from antennomere 4.

Head. Front margin of clypeus between lateral lobes moderately emarginated, clypeofrontal suture transversely straight, deep and broad, facial furrows deep, narrow, very long, very slightly diverged posteriorly; distance between them much smaller than eyes length. Surface even, smooth, with sparse micropunctures. Eyes big, not flattened. Antennae moniliform.

Pronotum. Rather strongly convex, outline slightly, regularly rounded; not attenuated anteriorly; 0.92 times as wide as long 1.15 times as wide as head; widest at about middle. Anterior angles blunt, very shortly rounded, posterior ones very broadly rounded. Font transverse impression impunctate, very shallow, just recognisable; median line slightly impressed; lateral channel narrow, reflexed lateral margin slightly extended beyond posterior setiferous punctures. Surface mirror-like shiny, with very fine micropunctures.

Elytra. Oblong-oval, 1.77 times as long as wide, 1.28 times as wide as pronotum, base very faintly sloping, outline faintly broadened, broadest at about middle, slightly more strongly attenuating towards moderately rounded apex than towards rather protruding humeri without tooth; suture not depressed at base. Base with distinct basal border connected with BSP and with small, blunt basal tubercles. Striae 1-7 rather deep and complete; stria 8 in basal part stria 7 consisting of about ten fine punctures; striae 7-8 very deep just before apex; intervals rather convex, intervals 5-7 distinctly narrower than striae punctures. Striae 1-7 rather coarsely punctate, punctuation disappearing in second third. PHSP: 3, DSP: 0, ASP: 2 (in very deep apical stria).

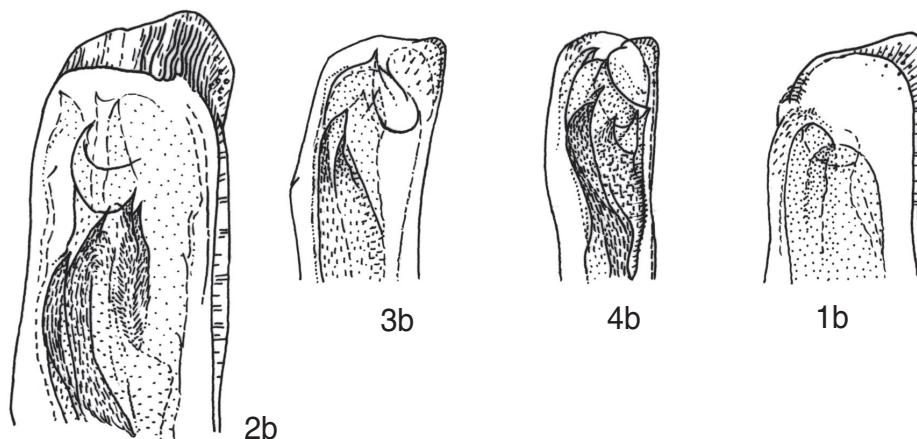
Protibia. Apical spine curved backwards and inwards, as long as apical spur; later rather slightly curved; distal marginal tooth very small, blunt, proximal one indistinct.

Mesothorax. Peduncle with narrow, transverse vertical slot.

Aedeagus. As in Figs 4a,b; by HT 0.51 mm long, median lobe narrow, slightly arcuated. Apical lamella as in Fig. 4b; small, broad, ventrally eccentric.

Differential diagnosis. *D. fedorenkoi* sp. n. belongs to the *D. bryanti* subgroup. From the most similar *D. baehri* sp. n. can be distinguished by smaller size (2.85 mm versus 3.35-3.50 mm), by only slightly diverged facial furrows, by deeper striae, especially in apical part of elytra, by broader head (ratio width of pronotum: width of head 1.15 versus 1.19-1.25) and by much narrower median lobe of aedeagus (Figs 3a versus 4a).

Name derivation. Named in honour of my friend Dmitri N. Fedorenko (Moscow, Russia), specialist in world-wide Dyschiriini who helped me with study of new species.



Figs 1b-4b. Apex of edeagus of HT from ventral view. 1b: *D. ecuadorensis* sp. n.; 2b: *D. bousqueti* sp. n.; 3b: *D. baehri* sp. n.; 4b: *D. fedorenko* sp. n.

Key to *Dyschiriodes (Eudyschirius) pampicola* species group

I have adapted key published in Fedorenko (1999). I have followed his key as closely as possible; especially I have added newly described species and refined data about *D. bruchi* and *D. ogloblini* which were not revised by Fedorenko.

- 1(2) Elytra with 3 DSP and large, yellow apical macula. Reflexed lateral margin of pronotum abbreviated, extended to at most midway between lateral setiferous punctures. Length 3.4-4.1 mm 1. *D. pampicola* (Putzeys, 1866)
- 2(1) Elytra without DSP or with 1 DSP.
- 3(10) Elytra with 1(front) DSP.
- 4(9) Clypeofrontal suture straight and transverse.
- 5(6) Larger, length 5.1-5.7 mm. Front margin of clypeus very strongly protruded as distinct even though blunt tooth. 3. *D. bruchi* (Kult, 1950)
- 6(5) Smaller, length 3.1-4.7 mm. Front margin of clypeus without distinct tooth, not or only faintly protruded.
- 7(8) Elytral striae subequally deep throughout their length, only stria 8 weakened in third fourth. Elytra with large, yellow, apical macula. Front margin of clypeus slightly protruded. Larger, length 4.6 mm .. 2. *D. darwini* (Kult, 1950)
- 8(7) Only striae 1, 7-8 subequally deep throughout or even deeper apically, striae 2-6 shallowed or obliterated apically. Elytra narrowly to rather widely paler apically along lateral margin. Front margin of clypeus straight. Smaller, length 3.1-3.3 mm. 5. *D. neoteutonus* (Fedorenko, 1991)
- 9(4) Clypeofrontal suture V-shaped. Elytral striae obliterated in apical fourth. Length 4.7 mm. 4. *D. ogloblini* (Kult, 1950)
- 3(10) Elytra without DSP.
- 11(30) Elytra with distinct basal border and with two pairs of more or less distinct basal tubercles.
- 12(15) Reflexed lateral margin of pronotum abbreviated, not extended to posterior setiferous punctures. Basal border of elytra very fine, rudimentary. Stria 8 wanting.
- 13(14) Median line of pronotum wanting. Length 3.1 mm 10. *D. brazilienis* Fedorenko, 1999
- 14(13) Median line of pronotum distinct. Length 4.2 mm 14. *D. bousqueti* sp. n.
- 15(12) Reflexed lateral margin of pronotum at least extended to posterior setiferous punctures. Basal border of elytra and basal tubercles distinct.
- 16(17) Clypeofrontal suture V-shaped. Elytra rather short, about 1.5 times as long as wide, striae very deep throughout.

- Apical spur of protibia almost straight. Length 4.0 mm 6. *D. minarum* (Putzeys, 1866)
- 17(16) Clypeofrontal suture either transversely straight or indistinct. Elytra longer, more than 1.7 times as long as wide.
- 18(19) Clypeofrontal suture indistinct, clypeus and frons finely rugose, with fine micropunctures; hind part of head with fine but distinct isodiametric microsculpture. Elytral striae very deep throughout, very coarsely punctate in basal half. Apical spur of protibia only slightly curved apically. Length 3.5 mm 12. *D. selvas* Fedorenko, 1999
- 19(18) Clypeofrontal suture straight, transverse; frons and hind part of head more or less smooth, without microsculpture.
- 20(23) Elytral striae finely punctate, elytral intervals more or less flattened. Apical spur of protibia almost straight; 2 or 3 PHSP.
- 21(22) Eyes very big (as in Fedorenko, 1999: Fig. 2). Elytral striae moderately deep throughout. 2 PHSP. Length 3.5 mm. 11. *D. macrophthalmus* Fedorenko, 1999
- 22(21) Eyes moderately big. Elytral striae shallowed apically; 3 PHSP. Length 3.1-3.6 mm. 13. *D. ecuadorensis* sp. n.
- 23(20) Elytral striae coarsely to very coarsely punctate. At least first striae shallowed or obliterated apically; 3 PHSP.
- 24(29) Anterior transverse impression of pronotum superficial to missing, median line very thin, lateral striae weakened to disappeared apically.
- 25(26) Anterior transverse impression of pronotum missing. Apical spur of protibia very slightly arcuated. Length 3.0 mm 9. *D. amazonicus* (Fedorenko, 1991)
- 26(25) Anterior transverse impression of pronotum thin but well visible especially laterally. Apical spur of protibia slightly to moderately arcuated.
- 27(28) Larger, length 3.3-3.5 mm; facial furrows rather strongly diverged, elytral striae distinctly obliterated apically 15. *D. baehri* sp. n.
- 28(27) Smaller, length 2.9 mm; facial furrows rather slightly diverged, elytral striae slightly obliterated apically 16. *D. fedorenkoi* sp. n.
- 29(24) Anterior transverse impression of pronotum distinct, median line moderately deep, lateral striae rather deep in apical half. Length 3.2-3.9 mm 7. *D. bryanti* (Kult, 1950)
- 30(11) Elytral base without basal border and tubercles. First elytral striae coarsely punctate, strongly impressed in second fourth, then abruptly disappeared, striae 7-8 very deep throughout. Reflexed lateral margin of pronotum distinct. Apical spur of protibia almost straight. Length 2.8-3.0 mm 8. *D. peruanus* (Fedorenko, 1991)

List of species of *D. pampicola* group

In following text there have been listed all know species, quoted basic literary data and new findings. By two species, not revised in Fedorenko (1999), descriptions have been refined.

1. *Dyschiriodes (Eudyschirius) pampicola* (Putzeys, 1866)

Literary data:

Putzeys (1866): described from Pampas after single HT.

Fedorenko (1999): quoted 16 specimens from Paraguay, Argentina.

Material examined: 3 single specimens labelled: „Argentina, Prov. Catamarca, W of Salinas Grandes, 30 km E La Guardia, Arg 21-99, 28.-29.xi.1999, leg. P. Zabransky” (AD); „Argentina, ca 100 km NW Cordoba, 2 km N San Carlos, Arg 26-99, 4.xii.1999, leg. P. Zabransky” (PB); „Argentina, Prov. Tucuman, Trancas, Pozo San Francisco, 28.ii.1982, Rgoldbach lgt.” (CMNH).

Distribution: Argentina, Paraguay.

2. *Dyschiriodes (Eudyschirius) darwini* (Kult, 1950)

Literary data:

Kult (1950): described after single HT from Argentina, Santa Fé.

Fedorenko (1999): Holotype labelled: „Santa Fe, Argentina, C. Darwin.”; „Darwin Coll., 1885-119”; „TYPE” and „Dyschirius Darwini Kt., det K. Kult, 1948” (BMNH).

Material examined: 2 single specimens labelled: „Paraguay, Agrofil, x.1990, Pena lgt.” (PB); „Paraguay, Asuncion, Acc No. 2966, July” (CMNH).

Distribution: Argentina, Paraguay.

Comment: Fedorenko (1999) quoted specimen from Agrofil erroneously under *D. pampicola*. In Kult's Collection (now AD) there is specimen labelled: „Argent. Santa Fé”; „Paratype”; „*Dyschirius darwini* Kt., det K. Kult, 1948” and „Paratypus Coll K. Kult, Dostal fecit 1999” but this specimen is not quoted in original description.

3. *Dyschiriodes (Eudyschirius) bruchi* (Kult, 1950)

(Fig. 5)

Literary data:

Kult (1950): described after single HT from Argentina, Prov. Cordoba.

Fedorenko (1999): cited only original Kult's description.

Material examined: Holotype (♀) labelled: „Argentina, Prov. Cordoba, C. Bruch /leg./”; „Type”; „*Akeporus bruchi* Kt., det K. Kult, 1947”; „Collectio Karel Kult, Coll. A. Dostal, 1999” and „Holotypus, Coll K. Kult, Dostal fecit 1999” (AD); 1 specimen labelled: „Argentina SA, Ramos, Salta Prov., vii.-viii./19/33” (PB); 1 specimen labelled: „Argentina, Tucumán, 12. Oct 1929”; „2994” and „Pres. by Imp. Inst. Ent. B.M. 1939-156.” (BMNH).

Distribution: Argentina.

Comment: *D. bruchi* was well described by Kult (1950). Below I have added some characters and refined measurement.

As in Fig. 5. Length 5.70 mm. Head narrow, eyes small; clypeal median tooth very distinct but blunt, facial furrows long, very deep, moderately diverged posteriorly. Pronotum 1.62 times as broad as head (in original description 1.6), 1.14 (in original description 1.05) times as wide as long, slightly attenuated anteriorly, outline strongly rounded, maximum width slightly below middle. Elytra 1.49 (in original description 1.3!) times as long as wide; 1.29 (in original description 1.3) times as wide as pronotum, base slightly oblique, humeri moderately distinct. Striae 7 not deepened apically, stria 8 almost vanishing in basal part, created from 1-3 fine punctures. Protibia with spur distinctly curved backwards, not inwards, spine rather slightly curved apically; lower tooth very large, blunt, upper one small but distinct, sharp. Mesothoracal peduncle with narrow, transverse vertical slot. Next 2 non-type specimens, are smaller (5.05 mm, 5.25 mm), with less developed clypeal median tooth, with pronotum 1.11; 1.17 times as wide as long and elytra 1.51, 1.47 times as long as wide.

4. *Dyschiriodes (Eudyschirius) ogloblini* (Kult, 1950)

(Fig. 6)

Literary data:

Kult (1950): described in single HT from Argentina, Famabalastro.

Fedorenko (1999): cited only original Kult's description.

Material examined: Holotype (♂) labelled: „Argent/ina/, Famabalastro, 10.3./19/22, Weiser /leg./”; „Type” and „*Akeporus ogloblini* Kt., det K. Kult, /19/48” (AD).

Distribution: Argentina.

Comment: *D. ogloblini* was well described by Kult (1950). Below I have added some characters and refined measurement.

As in Fig. 6. Length 4.70 mm. Head rather narrow, with moderately big, slightly flattened eyes. Clypeal margin slightly convex, clypeofrontal suture superficial, very widely V-shaped, almost straight. Pronotum 1.45 times as broad as head (in original description 1.5), 1.05 (in original description 1.0) times as wide as long, slightly attenuated anteriorly, outline strongly rounded, maximum width in second third. Elytra 1.59 (in original description 1.6) times as long as wide; 1.29 (in original description 1.4) times as wide as pronotum, base moderately oblique, humeri moderately distinct. Striae 7 not deepened apically, stria 8 almost vanishing in basal part, created from 1-3 fine punctures. Protibia with spur curved backwards, not inwards, spine rather slightly curved apically; lower tooth very distinct, upper one small, obtuse. Mesothoracal peduncle with narrow, transverse vertical slot.

5. *Dyschiriodes (Eudyschirius) neoteutonus* (Fedorenko, 1991)

Literary data:

Fedorenko (1991b, 1999): Holotype, 1 Paratype (♀♀) labelled: „S. Catharina, Nova Teutonia, 27.Br, 52-53.L, Plaumann”; „für Best. 3.1937 von Plaumann” and „F. Van Emden, Bequest., B.M. 1960-129” (BMNH); Paraguay: Vilarrica; Montes Laut.

Material examined: HT.

Distribution: Brazil, Paraguay.

6. *Dyschiriodes (Eudyschirius) minarum* (Putzeys, 1866)

Literary data:

Putzeys (1866). 2 Syntypes from Brazil, Minas Geraes.

Fedorenko (1999): Holotype labelled: „A. minarum, Min. Geraes, C. Chd.”; „Soc. Ent. Belg., Coll. Putzeys” and „Type” (ISNB).

Distribution: Brazil.

7. *Dyschiriodes (Eudyschirius) bryanti* (Kult, 1950)

Literary data:

Kult (1950): Holotype, 2 Paratypes: Brazil, Santos; 1 specimen: Paraguay, Asuncion, Anisits; 1 specimen: Brazil

Fedorenko (1999): Holotype (♀) labelled: „Type”, „Santos, Brazil., G.E. Bryant., 6.III.1912”, „G. Bryant Coll., 1919-147”, „TYPE” and „Akeporus Bryanti Kt., det. K. Kult, 1948” (BMNH) and 6 specimens from Paraguay, Bolivia.

Material examined: 1 PT with same locality data as HT (AD); 1 ♂ labelled: „Brasilia” and „Akeporus Bryanti Kt, det. K. Kult 1948” (AD); 2 specimens labelled: „Brasile (MS), Pantanal, vi./19/86, Rosa /lgt./” (PB, SF); 2 specimens labelled: „Argentina, Prov. Tucuman, Burreyacu, Rio Salas, 12.i.1982” (CMNH, PB); 1 specimen labelled: „Bolivia, Prov. del Sara, Stainbach, Coll. C. M. Acc. 5043” (PB); 1 specimen labelled: „Bolivia, Santa Cruz, Prov. Andres Ibanez, Potrerillo de Guenda, Terebinto, 17°40 20 S, 63°27 25 W, 3.-4.X.1994, P. Bettella leg.” (CMNH); 1 specimen labelled: „Paraguay, Dpto. Concepcion, u-v light, 20.-24.viii.1989, J. Kochalka /leg./ (CMNH); 1 specimen labelled: „Bolivia – Santa Cruz 500 m, Nov.1955, Zischka /leg./”, „Col. Hüdepohl”, „Zool- Staatsslg. München” (ZSM).

Distribution: Brazil, Paraguay, Bolivia, Argentina.

8. *Dyschiriodes (Eudyschirius) peruanus* (Fedorenko, 1991)

Literary data:

Fedorenko (1991a, 1999): Holotype labelled: „Peru, dept. Ukayali, 60 km W of Pukalpa, Ivita station, 8.VII.1986 (A. A. Zakharov)” (ZIP)”; 1 PT with the same data as HT (DF).

Distribution: Peru.

9. *Dyschiriodes (Eudyschirius) amazonicus* (Fedorenko, 1991)

Literary data:

Fedorenko (1991a, 1999): Holotype labelled: „121. Amazonie, Santarem (F.A.O.), Mission de Diamantina, 15-XII-1963, G. Marlier” and „R. I. Sc. N. B., I. G., 23.156” (ISNB).

Distribution: Brazil.

10. *Dyschiriodes (Eudyschirius) braziliensis* Fedorenko, 1999

Literary data:

Fedorenko (1999): Holotype (♂) labelled : „Brazilien, St. Catharina, Theresopolis, Fruhstorfer S.” (ZMB).

Distribution: Brazil.

11. *Dyschiriodes (Eudyschirius) macrophthalmus* Fedorenko, 1999

Literary data:

Fedorenko (1999): Holotype (♂) labelled: „Peru, Maranijon riv., 30 km NW of Nauta, Buen Fin, 7-9.II.1997, leg. A. Petrov” (DF).

Distribution: Peru.

12. *Dyschiriodes (Eudyschirius) selvas* Fedorenko, 1999

Literary data:

Fedorenko (1999): Holotype (♂) labelled: „Brasil, Amazonia, Óbidos, 17-18.VIII.1992, leg. J. Marek (OH)

Material examined: HT; 1 specimen labelled: „Bolivia - Region Chapare - 400 m, XI./19/57”, „spec.50”, „Col. Hüdepohl” and „Zool - Staatsslg. München” (ZSM).

Distribution: Brazil, Bolivia.

Comment. Non type specimen is slightly different from HT by even more strongly punctured basal part of striae and by slightly longer elytra.

13. *Dyschiriodes (Eudyschirius) ecuadorensis* sp. n.

(Figs 1, 1a,b)

Material examined: Holotype (CMNH) and 9 Paratypes (CMNH, PB).

Distribution: Ecuador.

14. *Dyschiriodes (Eudyschirius) bousqueti* sp. n.

(Figs 2, 2a,b)

Material examined: Holotype (ERCC).

Distribution: Brazil.

15. *Dyschiriodes (Eudyschirius) baehri* sp. n.

(Figs 3, 3a,b)

Material examined: Holotype (ZSM) and 3 Paratypes (ZSM, MB, PB).

Distribution: Brazil.

16. *Dyschiriodes (Eudyschirius) fedorenkoi* sp. n.

(Figs 4, 4a,b)

Material examined: Holotype (ZSM).

Distribution: Brazil.

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REFERENCES

- FEDORENKO D. N. 1991a: [New species of the genus *Dyschirius* Bon. (Coleoptera, Carabidae) from South America]. *Zoologicheskij Zhurnal* 70 (7): 138-140 [in Russian].
- FEDORENKO D. N. 1991b: [Two new species of *Dyschiriini* (Coleoptera, Carabidae) from Africa and South America]. *Zoologicheskij Zhurnal* 70 (10): 144-147 [in Russian].
- FEDORENKO D. N. 1996: *Reclassification of world Dyschiriini, with a revision of the Palearctic fauna (Coleoptera, Carabidae)*. Sofia-Moscow-St. Petersburg: Pensoft publishers, 224 pp.
- FEDORENKO D. N. 1999: Description of three new species of the genus *Dyschiriodes* Jeannel, 1941, from South America, with a review of the pampicola-group (Coleoptera Carabidae *Dyschiriini*), pp.139-152. In: ZAMOTAILOV A. & SCIACKY R.: *Advances in Carabidology (Papers Dedicated to the Memory of Prof. Dr. Oleg L. Kryzhanovskij)*. Krasnodar: MUIISO Publishers, 473 pp.
- KULT K. 1950: New Neotropical species of group *Clivinina*. *Časopis Československé Společnosti Entomologické* 47: 129-149.
- PUTZEYS J. 1866. Révision générale des *Clivinides*. *Annales de la Société Entomologique de Belgique* 10: 1-242.