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# Two new *Deronectes* SHARP, 1882 (Insecta: Coleoptera: Dytiscidae) and notes on other species of the genus

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**Abstract**

Two new species of *Deronectes* (Insecta: Coleoptera: Dytiscidae) are described: *D. toledoi* sp.n. from north-eastern Turkey and *D. elburs* sp.n. from northern Iran. Modifications to known keys are presented. Several interesting new records are presented, and a few notes on taxonomy, nomenclature, or biology are included. *Deronectes latus* (STEPHENS, 1829) is recorded from Greece for the first time.

**Key words:** Insecta, Coleoptera, Dytiscidae, *Deronectes*, new species, revised keys, new records.

**Zusammenfassung**

Seit dem Erscheinen des zweiten Teils der Revision der Gattung *Deronectes* SHARP, 1882 (FERY & HOSSEINIE 1998) sind den Autoren der vorliegenden Arbeit weitere Exemplare aus der Gattung bekannt geworden. Die Funde, die die Kenntnis über die Verbreitung der jeweiligen Arten gut ergänzen, werden in einem kurzen Abschnitt aufgelistet. So kann *Deronectes latus* (STEPHENS, 1829) zum ersten Mal aus Griechenland gemeldet werden. Auch einige Hinweise von taxonomischem und nomenklatorischem Interesse oder zur Biologie sind aufgenommen worden. Insbesondere jedoch befanden sich in dem untersuchten Material zwei bisher unbekannte Arten, die im Folgenden als neu beschrieben werden: *Deronectes toledoi* sp.n. aus der Nordost-Türkei und zur *D. latus*-Gruppe gehörend sowie *Deronectes elburs* sp.n. aus dem Norden Irans, der in die *D. afghanicus*-Untergruppe zu rechnen ist. Die betroffenen Teile der Bestimmungsschlüssel aus FERY & BRANCUCCI (1997) sowie FERY & HOSSEINIE (1998) werden entsprechend erweitert. Mit den beiden neuen umfasst die Gattung zur Zeit insgesamt 55 Arten.

## Introduction

In autumn 2000 the second author collected males of a *Deronectes* previously known only from females, and which was tentatively assigned to *Deronectes latus* (STEPHENS, 1829) in FERY & BRANCUCCI (1997: 228). These specimens proved to represent a new species of the *D. latus*-group which is described as *Deronectes toledoi* sp.n. Another new species has been found among material collected in the Elburs mountains in the north of Tehran (Iran) in 1976, and which had been overlooked when preparing the second part of the *Deronectes* revision (FERY & HOSSEINIE 1998): *Deronectes elburs* sp.n. belongs to the *D. afghanicus*-subgroup within the *D. parvicollis*-group. With these two new taxa the genus *Deronectes* now contains 55 species.

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The authors take the opportunity to present additional data on several species which have originated from the study of material collected recently or of other material which has become available since the second part of the revision (FERY & HOSSEINIE 1998) was published.

## Material and Acknowledgements

The following acronyms for collections from which we have studied material are used in the text:

| | |
|---|---|
| CBSU | Department of Biology, Shiraz University, Iran (Dr. Sh. Hosseinie) |
| CHF | coll. Dr. H. Fery, Berlin, Germany; property of the NMW |
| CJC | coll. J. Cooter, Hereford, UK |
| CJH | coll. J. Hájek, Praha, Czech Republic |
| CJS | coll. J. Šťastný, Liberec, Czech Republic |
| CKE | coll. Dr. Ö. Köksal Erman, Erzurum, Turkey |
| CLH | coll. L. Hendrich, Berlin, Germany |
| CMT | coll. M. Toledo, Brescia, Italy |
| CPM | coll. Dr. P. Mazzoldi, Brescia, Italy |
| CRP | coll. R. Pettersson, Umeå, Sweden |
| ITZA | Instituut voor Taxonomische Zoölogie, Amsterdam, The Netherlands (B. Brugge) |
| NMW | Naturhistorisches Museum Wien, Austria (Dr. M.A. Jäch) |
| SMNS | Staatliches Museum für Naturkunde Stuttgart, Germany (Dr. W. Schawaller) |

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In the listings of studied material label texts are often cited exactly and given in quotation marks. Comments in square brackets are those of the present authors. In several parts of the text we refer to figures given in part I and part II of the *Deronectes* revision. The following abbreviations are used in the text: **TL** (total length), **MW** (maximum width).

## Systematics

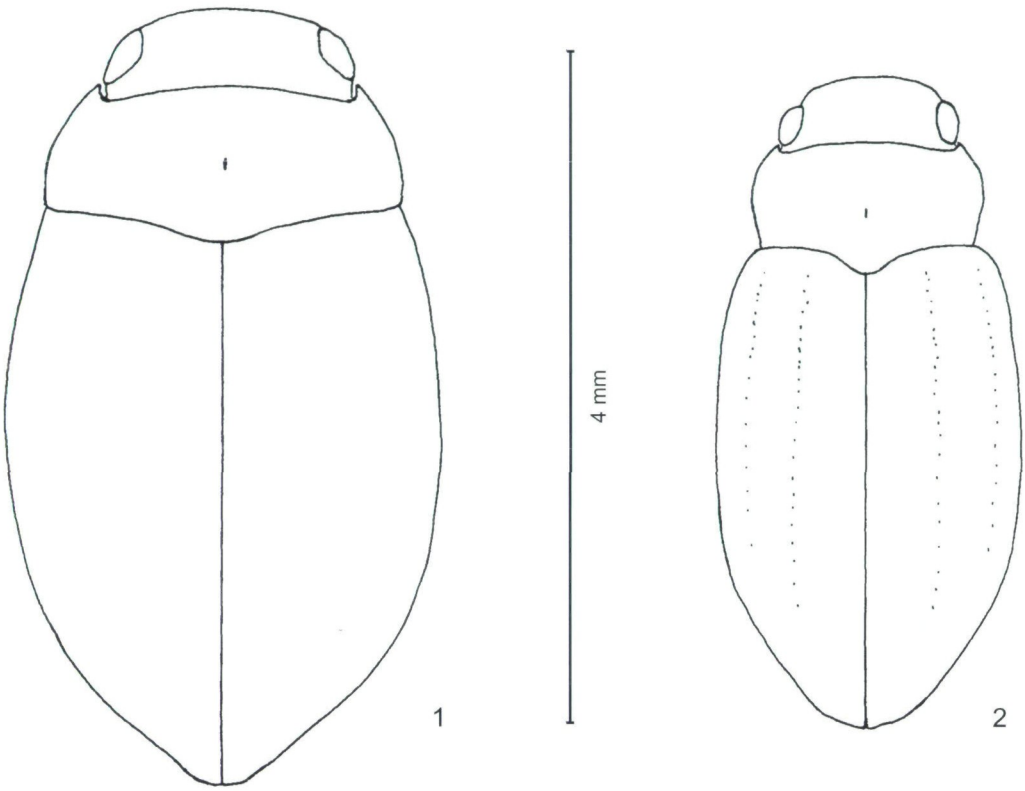
In the descriptions of new species we do not provide all characteristics of the respective groups. For these the reader is referred to FERY & BRANCUCCI (1997) and FERY & HOSSEINIE (1998).

### *Deronectes toledoi* sp.n.

*Deronectes latus* (STEPHENS, 1829): FERY & BRANCUCCI 1997: 228.

**Type locality:** Turkey, Erzurum province, Toprakkale Köyü [= village], between Erzurum and İspir.

**Holotype** (♂): "13.10.2000 (TR) prov. Erzurum, Toprakkale Köyü, near Ovacik", "Erzurum-İspir road, ca. 80 km NW Erzurum, Ö.K. Erman leg.", "Holotype, Deronectes toledoi sp.n., Fery, Erman & Hosseinie det. 2001" [red] (NMW). **Paratypes:** 2 ♂♂, 3 ♀♀, same data as the holotype (CKE, CHF). 2 ♂♂, 2 ♀♀, idem, but "28.6.2001" (CKE, CHF). 2 ♂♂, 15 ♀♀, idem, but "23.7.2001" (CKE, CHF). 2 ♀♀, "Turkey, Erzurum, 19.VII.1992, I. Mazzoldi P.", "Stream on road Tortum - Erzurum, m 1800 - 1900" (CPM). 1 ♀, "Turkey-Erzurum, Tortum, 17.VII.1992, Toledo leg.", "Strada Tortum-Erzurum, Torrente a m 1830" (CMT). All paratypes with the respective red label.

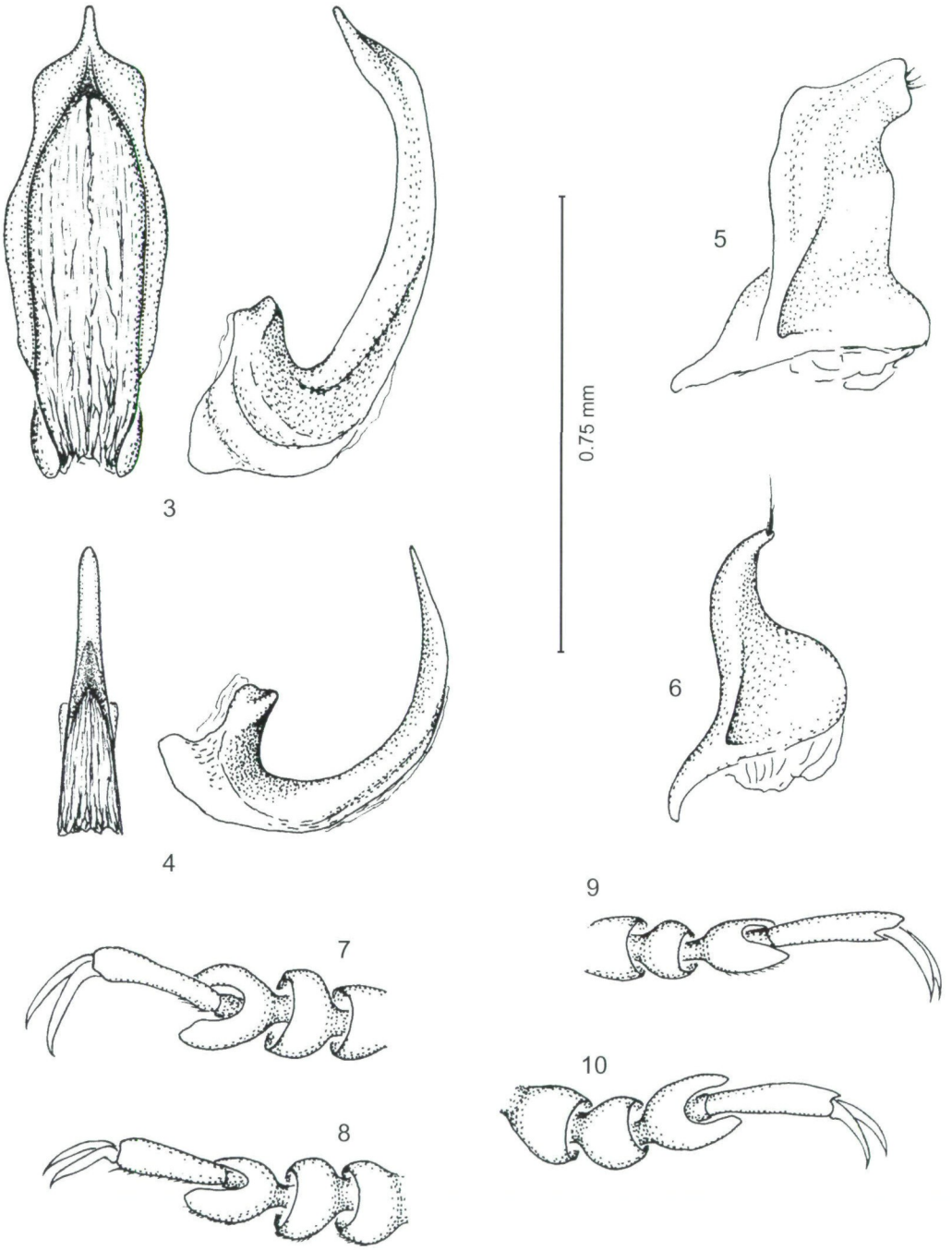



Figs. 1 - 2: Habitus of (1) *Deronectes toledoi* sp.n., (2) *D. elburs* sp.n.

**Diagnosis:** Habitus oval (Fig. 1), surface matt, reddish brown with parts of head, sides of pronotum posteriorly, and base of elytra paler; in some specimens disk of pronotum also paler. Pronotum with an impression near posterior angles, which is extended in most of the males over almost the whole base. As in all species of the *D. latus*-group the pronotum lacks longitudinal impressions beside the margins. Posterior angles of pronotum not truncate in all specimens studied. Two slight longitudinal swellings on disc of each elytron and another stronger swelling in their posterior half near margin. Punctation of pronotum and elytra coarse, puncture lines on elytra not recognisable.

Major parts of ventral surface dark brown to black; head, prosternum, and epipleura reddish; metacoxae, first abdominal segment and apex of the last brownish. Legs reddish brown, antennae also, articles not darkened. Prosternal apophysis carinate, sides broadened and with setae. Metasternum, metacoxae and first abdominal segment with coarse punctures. Last visible abdominal segment with a distinct notch as in *D. latus* (FERY & BRANCUCCI 1997: figs. 4, 5).

♂♂: Median lobe (Fig. 3) with apex in lateral and dorsal view thinner; paramere Fig. 5. Protarsal claws (Fig. 7) distinctly longer than half of protarsomere; in *D. latus* (Fig. 8), claws at most as long as half of protarsomere. Mesotarsal claws also longer than in *D. latus* (compare Figs. 9, 10). Anterior protarsal claw straightened, slightly curved, but inner




Figs. 3 - 10: (3 - 4): Median lobe of aedeagus in dorsal and lateral view of (3) *Deronectes toledoi* sp.n., (4) *D. elburs* sp.n.; (5 - 6) Paramere of (5) *D. toledoi* sp.n., (6) *D. elburs* sp.n.; (7 - 8): Right protarsus of (7) *D. toledoi* sp.n. (♂), (8) *D. latus* (♂); (9 - 10): Right mesotarsus of (9) *D. toledoi* sp.n. (♂), (10) *D. latus* (♂).

margin not sinuate as is often observed in *D. latus*. Metacoxal lines carinate, anteriorly parallel or even converging; carinae with a short elevation which is situated distinctly behind their middle, more or less as in *D. angelinii* FERY & BRANCUCCI (1997: fig. 7).

♀♀: Longitudinal swelling near margin of posterior half of each elytron as in all other species of the *D. latus*-group with an unpunctured and often shining longitudinal area. Margins of last visible abdominal segment with a sinuation before apex as in *D. latus* (FERY & BRANCUCCI 1997: fig. 5). Posterior angles of pronotum in most females more rounded than those of males. Metacoxal lines less carinate, without distinct elevation.

**Measurements** (mean values in brackets): TL 4.50 - 4.75 mm (4.65 mm), MW 2.50 - 2.60 mm (2.53 mm), ratio of TL/MW 1.80 - 1.91 (1.84). (In comparison values for *D. latus*: TL 4.00 - 4.90 mm (4.44 mm), MW 2.20 - 2.60 mm (2.44 mm), ratio of TL/MW 1.76 - 1.89 (1.82)).

**Distribution:** Turkey, Erzurum province, so far known only from two localities, one in the north-west, the other in the north-east of Erzurum. **Notes:** The record of *D. latus* from Turkey in FERY & BRANCUCCI (1997: 228) is seen to refer to this new species. *Deronectes latus* appears to reach its eastern limits in Bulgaria.

**Derivatio nominis:** We name the new species for our colleague and friend Mario Toledo, Brescia, Italy, who has found – together with Paolo Mazzoldi – some of the paratypes and thus firstly drew our attention to this new species.

**Notes on biology:** Most of the specimens of the new species have been found in a brook running parallel to the Erzurum-İspir road. This brook is 2 - 3 m broad and has a depth of 1.0 - 1.5 m. The water current is extremely slow; the ground is neither formed by rocks nor gravel, the brook, however, is provided with dense vegetation between which the specimens have been collected. All specimens studied are mature.

## Key to the species of the *Deronectes latus*-group
(modified after FERY & BRANCUCCI 1997: 224)

1. Habitus more rounded. Known distribution: central to eastern Europe and north-eastern Turkey respectively. ..... 2
- Habitus more oblong. Known distribution: Apennines in Italy and northern Spain respectively. ..... 3
2. Surface more shining, with punctation less dense and prominent. Males with protarsal claws at most as long as half of the protarsomere, inner margin of anterior claw often slightly sinuate (Fig. 8). Median lobe as in FERY & BRANCUCCI (1997: fig. 52). Known distribution: French Pyrenees to Russia; in Italy only north of the Apennines. ..... *D. **latus***
- Surface less shining, with punctation denser and more prominent. Males with protarsal claws distinctly longer than half of the protarsomere; inner margin of anterior claw slightly curved, but not sinuate (Fig. 7). Median lobe as in Fig. 3. Known distribution: north-eastern Turkey. ..... *D. **toledoi*** **sp.n.**
3. Longitudinal swellings on elytra less prominent; median lobe as in FERY & BRANCUCCI (1997: fig. 53). Known distribution: Italy (Apennines). ..... *D. **angelinii***
- Longitudinal swellings on elytra more prominent; median lobe as in FERY & BRANCUCCI (1997: fig. 54). Known distribution: northern Spain. ..... *D. **angusi***

### *Deronectes elburs* sp.n.

**Type locality:** Iran, Sadeghyeh, 20 km NE Tehran.

**Holotype** (♂): "10.6.1976 Iran, Tehran prov., Sadeghyeh, road to Damavand, 20 km NE Tehran, #387, Elmi leg.", "Deronectes sp., det. K. Elmi. 1991", "Holotype, Deronectes elburs sp.n., Fery, Erman & Hosseinie det. 2001" [red] (NMW). **Notes:** The locus typicus has been destroyed by urban development. The holotype lacks both hind tarsi, parts of both mid tarsi, of the right protarsus and of the left antenna; the left protarsus is separated from the tibia.

**Diagnosis:** *Deronectes nilssoni* FERY & WEWALKA, 1992 is most similar to the new species. Its habitus is elongate, rather flat, with the sides of elytra weakly rounded (Fig. 2), and is very similar to that of *D. nilssoni* (FERY & HOSSEINIE 1998: fig. 22). Both species are less parallel-sided and depressed than the other species of the *D. afghanicus*-subgroup. Surface dark brown, with vertex and disk of pronotum indistinctly paler, some diffusely limited areas on elytra also. Pronotum with sides straightly converging backwards, not sinuate before the posterior angles, which are obtuse (ca. 100°); before base with two strongly punctured and depressed areas beside the middle which are more extended than in *D. nilssoni*, but not as strongly depressed as in *D. afghanicus*. Border of pronotum narrow, in posterior half more distinct and shiny. Each elytron with a depressed area behind the base and here provided with some coarser punctures. Puncture lines on elytra distinct, secondary punctation between these lines very sparse and almost imperceptible. Sides of pronotum and parts of elytra provided with short yellowish setae.

Ventral surface dark brown, with mouthparts, epipleura and legs lighter brown. Prosternal apophysis with a flat longitudinal carina, with small transverse carinae and setae at sides. Metacoxal plates and metasternum without coarse punctures. Metacoxal lines slightly converging forwards, becoming indistinct anteriorly. Last abdominal segment with a small, but sharply delimited notch (FERY & HOSSEINIE 1998: figs. 131 - 134). Protarsal claws simple. Antennae pale brown, articles weakly darkened distally.

♂♂: Median lobe of aedeagus (Fig. 4) in lateral view more evenly curved than in *D. nilssoni*; in dorsal view with apical half less parallel-sided, slightly converging to the apex. Paramere Fig. 6.

♀♀: So far unknown.

**Measurements:** TL 3.9 mm, MW 1.8 mm; ratio of TL/MW 2.17.

**Distribution:** Iran, Elburs mountain range, Tehran province; so far known only from the type locality.

**Derivatio nominis:** We name this species for the Elburs mountain range, south of the Caspian Sea, north of Tehran.

### Key to the species of the *Deronectes afghanicus*-subgroup
(modified after FERY & HOSSEINIE 1998: 238)

1. Pronotum distinctly cordiform (PMW/PBW 1.12 - 1.24); smallest species of the genus (TL 3.50 - 4.25 mm); major parts of elytra and pronotum strongly depressed; coloration: light to darker brown. Known distribution: south-western Iran. ..... *D. **youngi***

\- Pronotum less cordiform (PMW/PBW 1.04 - 1.15); elytra depressed, but less than in *D. youngi* sp.n.; larger species (TL 3.90 - 4.60 mm); coloration: darker brown or black.

Known distribution: northern and north-eastern Iran, Turkmenistan, Afghanistan and Pakistan. ..... 2

2. Pronotum near the posterior angles very coarsely punctured and strongly depressed in most specimens; males and females with protibiae strongly curved and broadened distally FERY & HOSSEINIE (1998: fig. 5). ..... *D.* ***afghanicus***

\- Pronotum near the posterior angles not strongly depressed; protibiae normal. ..... 3

3. Known distribution: northern Pakistan and Afghanistan. ..... 4

\- Known distribution: Turkmenistan and Iran. ..... 6

4. Known distribution: Pakistan; known at present from a single female, with a gonocoxosternum as in FERY & HOSSEINIE (1998: fig. 92). ..... *D.* ***bameuli***

\- Known distribution: Afghanistan. ..... 5

5. Median lobe of aedeagus as in FERY & HOSSEINIE (1998: fig. 50). ..... *D.* ***roberti***

\- Median lobe of aedeagus as in FERY & HOSSEINIE (1998: fig. 49). ..... *D.* ***danielssoni***

6. Known distribution: Elburs mountain range in northern Iran; median lobe of aedeagus as in Fig. 4. ..... *D.* ***elburs*** **sp.n.**

\- Known distribution: north-eastern Iran and Turkmenistan. ..... 7

7. Known distribution: Turkmenistan and one locality in north-eastern Iran; median lobe of aedeagus as in FERY & HOSSEINIE (1998: fig. 51). ..... *D.* ***nilssoni***

\- Known distribution: northern Khorassan province (Iran); median lobe of aedeagus as in FERY & HOSSEINIE (1998: fig. 52). ..... *D.* ***biltoni***

## *Deronectes* sp.

We have studied a very teneral male *Deronectes* which has been made available to us through Dr. G. Wewalka (Vienna) with the following label text: "südl. [= south of] Tatvan, Asm. [= Asia minor], 700 - 2000 m, or. [= oriental]" (NMW) (Tatvan is situated at the western side of Lake Van in eastern Turkey). The specimen's median lobe is weakly sclerotised, thus a correct determination is impossible. It seems either to be *Deronectes schuberti* WEWALKA (1970: 138) or a closely related unknown species.

## Notes on other species

Below we present in alphabetic order new records of several species, in some cases, however, we also give notes on taxonomy, nomenclature, or biology. In order to keep these notes short, we avoid giving more than those references which are of special importance. For more thorough reference lists the reader is referred to FERY & BRANCUCCI (1997) and FERY & HOSSEINIE (1998).

### *Deronectes abnormicollis* SEMENOW, 1900

We can give further records from central Asia (see FERY & HOSSEINIE 1998: 225): **Kazakhstan:** 2 ♀♀, 9.6.1999, Chimkent Region, Aksu-Dzhabagly State Nature Reserve, Dzhabagly River, ca. 6 km E Dzhabagly village, 1350 m, J. Cooter leg. (CJC). **Uzbekistan:** 9 exs., 21.5.1996, Nuratau mountain range, Nuratinski reserve, 800 m, river, Dolin leg. (NMW).

## *Deronectes delarouzei* (JACQUELIN DU VAL, 1857)

In FERY & BRANCUCCI (1997: 239) two specimens of *Deronectes delarouzei* are listed which have labels with the following texts: "Auvergne", "Coll. D. v d. Hoop" (ITZA). Our colleague F. Bameul (Bordeaux, France) kindly has communicated that to his opinion the Auvergne (France) should be a possible region for *Deronectes aubei sanfilippoi*, but on no account for *D. delarouzei* which is a species from the Pyrenees. We agree with him and have examined the two specimens in question again, but found them to be undoubtedly *D. delarouzei*. At present we can not give a satisfactory explanation, except if it is assumed that these specimens are mislabelled.

## *Deronectes doriae* SHARP, 1882

We can add a further record from north-eastern **Turkey** to those given in FERY & BRANCUCCI (1997: 275): 1 ♂, 1 ♀, "30.6.1999 (TR) prov. Erzurum, Moryayla Köyü, ca. 15 km, NNW İspir, Ö.K. Erman leg." (CKE).

## *Deronectes elmii* FERY & HOSSEINIE, 1998

A new record from **Iran** can be presented (compare FERY & HOSSEINIE 1998: 254): 4 ♂♂, 7 ♀♀, "Iran 7.-8.IV.2000, Kerman prov., 1925 m, 5 km NE Deh Bakri, (29°05' N, 57°55'E)", "Iran 2000 Czech Biological Expedition, J. Hájek & M. Mikát leg.", "Deronectes elmii Fery & Hosseinie, Jiři Hájek det. 2000" (CJH, CLH, CHF).

## *Deronectes evelynae* FERY & HOSSEINIE, 1998

This species is much more widely distributed in **Turkey** than assumed in FERY & HOSSEINIE (1998: 254): 5 exs., "TR: Gaziantep, Yeselci [= Yeşilce, ca 20 km W Gazi Antep] 24/5-[19]99, Leg R. Pettersson", "Deronectes evelynae F&H, det AN Nilsson [19]99" (CRP). 25 exs., "20.4.2000 (TR) Adiyaman, ca. 7 km NW Besni, ca. 40 km W Adiyaman, brook, Fery leg." (CHF, CKE). 43 exs., "20.4.2000 (TR) Gazi Antep, Yeşilce, ca. 20 km W Antep, water basin, Fery leg." (CRP, CHF, CKE). 1 ♂, "21.4.2000 (TR) Gazi Antep prov., ca. 15 km W Kilis, brook, Fery leg." (CHF).

## *Deronectes hakkariensis* WEWALKA, 1989

Only one male of this species has been known in the past (WEWALKA, 1989: 96; FERY & BRANCUCCI 1997: 245). According to the locus typicus and the capacity of *Deronectes* to create new species in neighbouring mountain ranges it had been assumed that the species should be restricted to the south-eastern part of Turkey. To our astonishment, however, the species has been found in north-eastern **Turkey** also: 2 ♂♂, 2 ♀♀, "27.7.1999 (TR) prov. Erzurum, Demirdöven Baraji (= dam), running water, ca. 8km NNE Pasinler, Ö.K. Erman leg." (CKE, CHF). 7 ♂♂, 2 ♀♀, "18.9.2000 (TR) prov. Erzurum, Yedigöller, near Uzunkavak, ca. 2500 m", "ca. 20 km E İspir, between İspir and Tortum, Ö.K. Erman leg."; one female and one male teneral; collected together with *Deronectes parvicollis* (CKE, CHF). 3 ♂♂, 3 ♀♀, "7.9.2000 (TR), prov. Erzurum, Serdarlı village, near Bağbaşı, ca 30 km E İspir, between İspir and Tortum, Ö.K. Erman leg." (CKE).

Descriptive notes: The study of the new material gives no reason to change the description in FERY & BRANCUCCI (1997: 245) except some additional remarks:

- Most of the specimens have the pronotum and the elytra covered with a distinct greyish setation.
- Females have been studied for the first time and these show no conspicuous external differences to males.
- The holotype has the sides of the pronotum not rounded behind the middle, almost parallel-sided, therefore resembling at first sight *Deronectes moestus* (FAIRMAIRE, 1858).

Because of this feature FERY & BRANCUCCI (1997: 246) concluded: "Having studied only the holotype we are not absolutely sure about the status of *D. hakkariensis*." Some of the specimens studied now - but not all - have the sides of the pronotum distinctly rounded in the posterior half and equal more to the other members of the *D. platynotus*-group.

- In both sexes the last visible abdominal segment lacks a notch. Together with the preceding observation the placing of *D. hakkariensis* in the *D. platynotus*-group now must be seen as correct.

**Measurements:** TL 3.80 - 4.35 mm (3.99 mm), MW 1.90 - 2.10 mm (2.01 mm), TL/MW 1.96 - 2.22 (2.03). The male holotype has a TL of 4.10 mm and a MW of 2.00 mm.

Collection notes: The species has been found in brooks with slowly running water, either on rocks or gravel and also on sandy ground covered in part with mud. Except one female and one male from Yedigöller all specimens studied are well sclerotized.

## *Deronectes hendrichi* FERY & HOSSEINIE, 1998

This species has been found at two new localities in **Iran** (compare FERY & HOSSEINIE 1998: 253): 1 ♂, 2 ♀♀, 18.3.1977, Kerman, Sirjan to Baft, 75 km E Sirjan, 2200 m, stream, Elmi leg. (#604) (CBSU). 2 ♂♂, 2 ♀♀, "Iran 16.-17.IV.2000, Hormozgan prov., 350 m, 10 km E Dehbarez, (27°27'N, 57°19'E)", "Iran 2000 Czech Biological Expedition, J. Hájek & M. Mikát leg.", "Deronectes hendrichi Fery & Hosseinie, Jiří Hájek det. 2000" (CJH, CHF).

## *Deronectes kinzelbachi* FERY & HOSSEINIE, 1998

We can add one new locality from **Turkey** (see FERY & HOSSEINIE 1998: 262): 1 ♂, "22.4.2000 (TR) Hatay, ca. 2 km SE Harbiye, almost dry brook, Fery leg." (CHF).

## *Deronectes lareynii* (FAIRMAIRE, 1858)

We want to denote that in the original description of *Deronectes coarcticollis* REICHE (1862: 293) the name of this taxon is written as "*coarcticolis*", a fact which FERY & BRANCUCCI (1997: 273) have overlooked. We have found no evidence in REICHES's work itself that this might be a lapsus calami and thus "*coarcticolis*" is the correct original spelling and must not be emended (see article 32 of the ICZN).

## *Deronectes latus* (STEPHENS, 1829)

This species is known from large parts of Europe, the most southern records being those from Bosnia, Montenegro and Bulgaria (FERY & BRANCUCCI 1997: 227). Now we can add the **first record from Greece**: 1 ♂, "30.4.2000 (GR) Ioannina, N Ioannina, ESE KIPI, ca. 850 m (26)", "39°51.7'N 20°47.1'E, Schillhammer, Komarek & Schönmann leg." (NMW). 1 ♀, "29.4.2000 (GR) Ioannina, N Metsovo, W Katara-Pass, ca. 1400 m (22)", "39°47.9'N 21°09.6'E, Schillhammer, Komarek & Schönmann leg." (NMW).

## *Deronectes longipes* SHARP, 1882

For this widely distributed and variable species (FERY & HOSSEINIE 1998: 248) we can provide the following records from **Iran:** 1 ♀, 21.8.1994, Fars, Bamoo, Cheshmeh Ghanbari, 1970 m, spring-stream, Elmi leg. (#1413); found together with *D. youngi* (CBSU). 8 exs., 26.11.1998, idem, 1550 m, spring-stream, Elmi leg. (#2182) (CBSU). 1 ♀, 29.4.1999, Fars, Dasht-e-Arjan Rd., Paul-e-Garreh Ghach, 40 km W Shiraz, 1950 m,

Elmi leg. (#2264); found together with *D. persicus* and *D. youngi* (CBSU). 1 ♀, 24.4.1996, Kohkiluyeh & Boyer Ahmad, 21 km NW Yasuj, small brook, Elmi leg. (#1731) (CBSU). 4 exs., 24.3.1999, Kohkiluyeh & Boyer Ahmad, Gachsaran to Behbahan Rd. 16 km N Gachsaran, 730 m, Elmi leg. (#2216); these specimens are rather broad and have been found together with *D. youngi* (CBSU). 1 ♂, 3.7.1997, Lorestan, Aligoudarz to Najafabad, 2 km E Aligoudarz, 2130 m, stream, Elmi leg. (#1972) (CBSU).

## *Deronectes moestus inconspectus* (LEPRIEUR, 1876)

FERY & BRANCUCCI (1997: 259) had not been able to study specimens from **Bulgaria** of this widely distributed subspecies and instead had to refer to records given in GUÉORGUIEV (1987: 85). In the meantime we have been able to study specimens from this country: 2 ♂♂, 2 ♀♀, "Bulgaria mer. occ., Sandanski env., valley of Lebnica riv., J. Hájek leg. 28.5.1998" (CHF, further specimens in CJH). In addition we want to denote some records from **Greece:** 10 exs., 28.4.2000, SW Ioannina, W Dodona, river near Tirio, ca. 370 m, 39°31.1'N 20°41.3'E, Komarek, Schillhammer & Schönmann leg. (NMW). 4 exs., Preveza, ca. 8 km N Thesprotico, ca. 100 m, 39°18.5'N 20°46.6'E, river, Komarek, Schillhammer & Schönmann leg. (NMW). 2 exs. Ioannina, ca. 20 km NNW Thesprotiko, 3 km W Polistafilo, ca. 200 m, 39°21.5'N 20°43.2'E, brook, Komarek, Schillhammer & Schönmann leg. (NMW). 5 exs., "GR: Ins. Kefallonia, 1 km W Poros, 27.IV.1996, Ehrhard & Schmalfuss" (SMNS, CHF).

## *Deronectes parvicollis* (SCHAUM, 1864)

We are able to present further records from Turkey and Iran to those given in FERY & HOSSEINIE (1998: 225): **Turkey:** 1 ex., "Türkei, 6.9.[19]81, Umg. Camardi, leg. M. Jäch T27b", "Kilik. Taurus" (NMW). 1 ♂, 1 ♀, "3.8.1999 (TR) prov. Erzurum, Kuzgun Barajı (= dam), running water near the road", "Erzurum-İspir road, ca. 30km N Ilıca, Ö.K. Erman leg." (CHF, CKE). 1 ♀, 7.6.1999, Güzelyayla village, ca. 25 km NE Erzurum, Erzurum and Tortum road, Ö.K. Erman leg. (CKE). 1 ♀, 6.7.1999, and 1 ♀, 12.7.1999, Teke Deresi, ca. 12 km SW Erzurum, Erzurum-Çat road, Ö.K. Erman leg. (CKE). 1 ♀, 20.6.2000, Ovit Dağı, ca. 20 km NW İspir, Ö.K. Erman leg. (CKE). 2 exs., "18.9.2000 (TR) prov. Erzurum, Yedigöller, near Uzunkavak, ca. 2500 m", "ca. 20 km E İspir, between İspir and Tortum, Ö.K. Erman leg."; collected together with *D. hakkariensis* (CKE). 1 ♀, 24.9.2000, ca. 8 km SE Tortum, Erzurum-Narman road, Ö.K. Erman leg. (CKE). **Iran:** 1 ♂, 12.7.1996, Iran, Zanjan, Zanjan to Bijar road, 45 km S Zanjan, 1660 m, river, Elmi leg. (#1796) (CBSU). 1 ♀, 21.7.1996, Iran, Kordestan, Sanandaj to Ghorveh road, 20 km E Sanandaj, 2130 m, spring, Elmi leg. (#1804) (CBSU).

## *Deronectes persicus* PESCHET, 1914

The list of synonyms in FERY & HOSSEINIE (1998: 236) lacks the following reference: *Deronectes* (*Potamodytes*) *persicus* PESCHET: ZIMMERMANN 1920: 121. This placing in a wrong subgenus was corrected, however, by ZIMMERMANN (1921: 87).

For this formerly almost unknown species can be added the following records from **Iran:** 1 ♂, 11.10.1996, Fars, Chehel Cheshmeh, 51 km W Shiraz, 2000 m, spring, Elmi leg. (#1854) (CBSU). 2 exs., 29.4.1999, Fars, Dasht-e-Arjan Rd., Paul-e-Garreh Ghach, 40 km W Shiraz, 1950 m, Elmi leg. (#2264); found together with *D. youngi* and *D. longipes* (CBSU). 1 ♀, 7.9.1997, Fars, Bon, Sepidan to Yasuj, 20 km N Sepidan, Bilton & Elmi leg. (#2008) (CBSU). 1 ♀, 7.9.1997, Fars, Cheshmeh Saran, 6 km W Sepidan, 2200 m, river, Bilton & Elmi leg. (#2007) (CBSU). 1 ♀, 4.8.1995, Lorestan, 132 km W Khorram Abad, river, 1360 m, Elmi leg. (#1633) (CBSU). 1 ♂, 5.7.1997, Chaharmahal & Bakhtiari, Broujen to Shahreza, 17 km E Broujen, 2350 m, stream, Elmi leg. (#1990) (CBSU).

## *Deronectes platynotus* (GERMAR, 1834)

In FERY & BRANCUCCI (1997: 242) it is stated that "records from southern Bulgaria .... may represent *D. platynotus mazzoldii* ssp.n.". We have now studied specimens from **Bulgaria** and these clearly belong to

the nominotypical subspecies and not to *D. platynotus mazzoldii*: 2 ♂♂, 2 ♀♀, "Bulgaria mer., 1000 m, 3 km W Smoljan, Gerzovica stream valley, J. Hájek leg. 4.7.1999" (CHF, further specimens in CJH). Additionally, for the first time we have had the opportunity to study specimens of the nominotypical subspecies from **Romania:** 1 ♂, "Rumania, Sava Vartop (near Arieseni), 2.VII.1997, M. Boukal leg." (CHF, further specimens in CJS).

## *Deronectes sahlbergi* ZIMMERMANN, 1932

We add the following record from **Turkey** to those presented by FERY & BRANCUCCI (1997: 277): 7 exs., "Türkei 18, 21.5.[19]81, Umg. Mugla, leg. H. Rausch" (NMW).

## *Deronectes youngi* FERY & HOSSEINIE, 1998

For the smallest *Deronectes* (FERY & HOSSEINIE 1998: 240) we can present the following records from **Iran:** 1 ♂, 5.5.1974, Fars, road to Kazerun, 148 km W Shiraz, Elmi leg. (#186) (CBSU). 1 ♂, 1 ♀, 27.1.1975, Fars, Nourabad to Dogonbadan, Massiri, 205 km W Shiraz, Elmi leg. (#239) (CBSU). 40 exs., 29.4.1999, Fars, Dasht-e-Arjan Rd., Paul-e-Garreh Ghach, 40 km W Shiraz, 1950 m, Elmi leg. (#2264); found together with *D. persicus* and *D. longipes* (CBSU). 1 ♀, 21.8.1994, Fars, Bamoo, Cheshmeh Ghanbari, 1970 m, spring-stream, Elmi leg. (#1413); found together with *D. longipes* (CBSU). Ca. 200 exs., 24.3.1999 Kohkiluyeh & Boyer Ahmad, Gachsaran to Behbahan Rd. 16 km N Gachsaran, 730 m, Elmi leg. (#2216); found together with *D. longipes* (CBSU). 1 ex., 25.3.1999, Khuzestan, Behbahan to Ramhormoz Rd., 29 km N Behbahan, 250 m, Elmi leg. (#2221) (CBSU).

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