

**Revision of the Palearctic species of the
genus *Ochthebius* LEACH
XVI. Additional notes on the *metallescens* group
(Coleoptera: Hydraenidae)**

M.A. JÄCH

Abstract

The *Ochthebius metallescens* ROSENHAUER species group (Coleoptera: Hydraenidae) is reviewed. Ten new species and one new subspecies are described: *O. anaxagoras* sp.n., *O. aristoteles* sp.n., *O. diazi* sp.n., *O. empedocles* sp.n., *O. insidiosus* sp.n., *O. kieneri* sp.n., *O. pretneri* sp.n., *O. schoedli* sp.n., *O. schuberti* sp.n., *O. trapezuntinus* sp.n., and *O. metallescens plato* ssp.n. Three species are removed from synonymy: *O. latinorum* (IENISTEA), *O. morettii* PIRISINU, *O. viganoi* PIRISINU. Two subspecies are elevated to specific rank: *O. metallescens kurdistanicus* JÄCH and *O. metallescens levantinus* JÄCH. One replacement name is proposed: *O. maxfischeri* nom.n. for *O. fischeri* JÄCH (nec DEANE). Several new distributional records are provided.

Key words: Coleoptera, Hydraenidae, *Ochthebius metallescens* group, taxonomy.

Introduction

Ten years ago I have revised the *Ochthebius metallescens* species group (JÄCH 1989). Since that time I have seen numerous additional specimens enabling clarification of several taxonomic problems I could not solve ten years earlier.

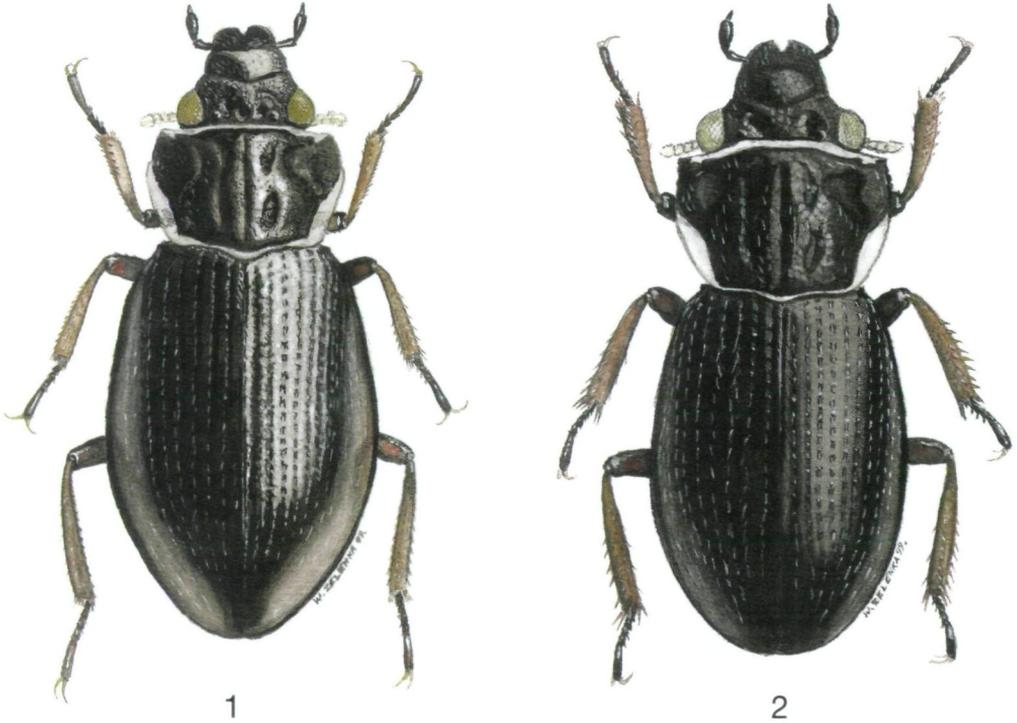
In this article, ten new species and one new subspecies are described, three species are removed from synonymy, two subspecies are elevated to specific rank, and one replacement name is proposed.

Acronyms:

- | | |
|-----|--|
| CFL | Coll. Ferro, Lancenigo |
| CK | Coll. Kiener (depository not known exactly at present) |
| CPL | Coll. Pretner, Ljubljana (deposited in Slovene Museum of Natural History, Ljubljana) |
| DEI | Deutsches Entomologisches Institut, Eberswalde |
| ISB | Ienistea collection, Institute of Speleology, Bucuresti |
| NMP | Národní Museum v Praze |
| NMW | Naturhistorisches Museum, Wien |
| DSA | Dorsal Subapical Angle of aedeagal main piece |
| PL | Projected Length of aedeagus (sensu JÄCH 1998) |

***Ochthebius dalmatinus* GANGLBAUER**

Specimens from "Croatia: Mustajbeg, Rjeka" published by JÄCH (1989) are in fact from Yugoslavia, Crna Gora (see also below, under *O. insidiosus*).



Figs. 1 - 2: Habitus of 1) *Ochthebius metallescens*, Austria, 2) *O. aristoteles*, Greece, Skyros.

The record of *O. dalmatinus* from Greece by d'ORCHYMONT (1942) has been regarded as questionable by JÄCH (1989). Meanwhile, I have been able to confirm the occurrence of *O. dalmatinus* in Greece: Peloponnese (Achaia, three localities in Vouraikós Valley, between 30 and 500 m a.s.l., IX.1994, leg. Jäch (NMW); Taygetos Mts., 8 km S Langada Pass, ca. 1000 a.s.l., IX.1994, leg. Schönmann (NMW)) and Crete (Samaria Gorge, IV.1985, leg. Kiener (NMW, CK)).

Ochthebius decianus d'ORCHYMONT

New record: Turkey, Kahraman Maras Province, Elbistan, V./VI.1965, leg. F. Schubert (NMW).

This species was so far known only from Lycia, SW Turkey.

Aedeagus: see Fig. 19.

Ochthebius khuzestanicus FERRO

I have been able to examine the holotype male (NMP) and a series of specimens from the type locality in Iran ("Loc. no 286 Exped Nat Mus Praha \ Hoseiniyeh, 28 km NNW Andimeshk 12.-13. 4.1977, 360 m"), not designated as paratypes, deposited in NMP and NMW. The aedeagus of *O. khuzestanicus* (Fig. 20) is longer and more slender than in *O. puberulus* REITTER (see JÄCH 1989: Fig. 20).

***Ochthebius kurdistanicus* JÄCH stat.n.**

Ochthebius metallescens kurdistanicus JÄCH 1989: 365.

This species, described as a subspecies of *Ochthebius metallescens*, is herewith formally elevated to species level because of its external morphology and the peculiar shape of the aedeagus.

***Ochthebius latinorum* (IENISTEA) species propria**

Ochthebius poweri, sensu PIRISINU 1981: 361 ff.

Hymenodes (Parahymenodes) latinorum IENISTEA 1988: 226.

Material examined:

I T A L Y: CALABRIA: Reggio di Calabria, S. Cristina d'Aspromonte [= NE of Delianuova], VI.1958 (CFL);

SICILY: Messina, 26.IV.1943, 1 ♀ (NMW) - assigned erroneously to *O. poweri* RYE by JÄCH (1989); Scala, 10.VII.1929, leg. F. Vitale, 1 ♀ (NMW).

Ochthebius latinorum (type locality: Messina, Sicily, Italy) was synonymized with *O. metallescens* by JÄCH (1989). I have not seen the holotype ♂ of *O. latinorum* (probably deposited in ISB) but according to the illustration of the original description (IENISTEA 1988: Fig. 54) it agrees very well with specimens from Messina assigned to *O. poweri* by PIRISINU (1974: Fig. 11), and it is obviously a distinct species closely related with *O. poweri* and *O. morettii* PIRISINU.

According to IENISTEA (1988: Fig. 54) and PIRISINU (1974: Fig. 11) the aedeagus of *O. latinorum* is characterized by the strongly acuminate apex of the distal lobe. PL: 310 µm. Parameres inserted near basal 0.6.

Externally, the two specimens of *O. latinorum* which I have examined can be distinguished from *O. morettii* by the more strongly impressed and more densely arranged elytral punctures; However, as long as I do not know very much about the variability of *O. latinorum*, this character should be regarded with some reservation; other characters, e.g., shape and structure of pronotum, are probably not significantly different.

Due to the small number of specimens examined I have so far not been able to find a significant character to distinguish *O. latinorum* from *O. poweri* externally.

Distribution: So far known only from southern Italy (Calabria, Sicily).

***Ochthebius levantinus* JÄCH stat.n.**

Ochthebius metallescens levantinus JÄCH 1989: 364.

This species, described as a subspecies of *Ochthebius metallescens*, is herewith formally elevated to species level because of the peculiar and constant shape of the aedeagus.

***Ochthebius maxfischeri* nom.n.**

Ochthebius fischeri JÄCH 1989: 200 (primary junior homonym of *O. fischeri* DEANE, 1931).

Ochthebius maxfischeri nom.n. is here proposed as replacement name for *O. fischeri* JÄCH, 1989.

***Ochthebius metallescens* ROSENHAUER**

The specific concept proposed for *O. metallescens* by JÄCH (1989) has already been amended slightly by JÄCH (1994) by splitting off *O. fischeri* [= *O. maxfischeri*, see above]. However, following study of numerous specimens collected recently, the original concept requires additional changes:

Ochthebius viganoi PIRISINU, synonymized with *O. metallescens* by JÄCH (1989), is here resurrected (see below).

Ochthebius latinorum (IENISTEA), synonymized with *O. metallescens* by JÄCH (1989), is resurrected herein (see below).

Specimens from "Rijeka" listed and illustrated under *O. metallescens* by JÄCH (1989: Fig. 2a) are described as a new species herein (see below, under *O. insidiosus* sp.n.).

A male from "Andros" listed and illustrated under *O. metallescens* by JÄCH (1989: Fig. 2e) in fact belongs to a new species which is described herein (see below, under *O. aristoteles* sp.n.).

A male from "Peloponnesos" listed and illustrated under *O. metallescens* by JÄCH (1989: Fig. 2f) is found to belong to a new subspecies which is described herein (see below, under *O. metallescens plato* ssp.n.).

Ochthebius metallescens levantinus and *O. metallescens kurdistanicus* are herein formally upgraded to species level (see above).

Anatolian material: Comparatively little Anatolian material of *O. metallescens* is available for study in the NMW (1 ♂, Bursa, Uludag, 31. VII.1988, leg. Jäch; 8 exs., Erzincan, SE Refahiye, 10. VI.1989, leg. Jäch; 5 exs., Kahraman Maras, Sariz, 9. VI.1989, leg. H. Hebauer; 1 ♂, Taurus, 10.8.1929, leg. Weirather). The specimens from Bursa (see JÄCH 1989: Fig. 3b), Erzincan and Kahraman Maras closely resemble *O. metallescens plato* (described below) by the shape of the aedeagus; however, the apices of their distal lobes are slightly longer than in *O. m. plato*; they are probably a distinct subspecies or species (more material is needed to solve this question). The specimen labelled "Taurus" externally and genitally (see JÄCH 1989: Fig. 3d) agrees very well with *O. metallescens metallescens* (? label mistake).

Variability: Glabrous part of metasternum varies in extent from a very small spot at posterior margin to a large area covering posterior half of metasternal disc.

Ochthebius metallescens plato ssp.n.

TYPE LOCALITY: Vouraikós River, ca. 6 m wide, ca. 2.5 km S Diakofto [= Diakopto], ca. 30 m a.s.l., Peloponnese, Greece.

TYPE MATERIAL: Holotype ♂ (NMW): "GR - Peloponnes (1) 2,5km S Diakofto 20.9.1994, ca. 30m leg. M. & E. Jäch". Paratypes (NMW, CFL): 30 exs., same label data as holotype; 7 exs.: "GR - Peloponnes (4) 1km S Zachalou [= Zachlorou] 22.9.1994, 500m leg. M. & E. Jäch"; 16 exs.: "GR - Peloponnes (4a) 1km S Zachalou [= Zachlorou] 22.9.1994, 500m leg. H. & R. Schönmann"; 13 exs.: "GR - Peloponnes (8) 15km SW Kalavrita 23.9.1994, 850m leg. M. & E. Jäch"; 15 exs.: "GR - Peloponnes (8a) 15km SW Kalavrita 23.9.1994, 850m leg. H. & R. Schönmann"; 26 exs.: "GR - Peloponnes (9) 40km S Akrata 24.9.1994, 800m leg. M. & E. Jäch"; 23 exs.: "GR - Peloponnes (12) 45km S Akrata 24.9.1994, 900m leg. M. & E. Jäch"; 1 ex.: "GR - Peloponnes (12a) 45km S Akrata 24.9.1994, 900m leg. H. & R. Schönmann"; 8 exs.: "GR - Peloponnes S Kalavrita, 31.7.1997 ca. 5 km S Klitoria leg. Schödl (6)"; 5 exs.: "GR Pelponnes N Achaia Vourakis [sic] Gorge 26.4.94 Heiss"; 1 ex.: "Megaspilio [= Mega Spileo Monastery, Vouraikós Gorge, NW Peloponnes] Griechenland [= Greece]".

DIAGNOSIS: Externally, *O. m. plato* is not significantly different from the nominative subspecies. However, the aedeagus (Figs. 7, 24; see also JÄCH 1989: Fig. 2f) differs quite strongly from Central and West European material (see Fig. 3) and specimens from other parts of Greece (see Fig. 5), mainly in the shape of the distal lobe, which is thinner (especially distally), more strongly curved and hook-like; preapical membranous area not inflated. PL: ca. 300 - 330 µm.

DISCUSSION: *Ochthebius metallescens plato*, as defined here, is so far known only from Achaia (northwestern Peloponnese, Greece). Various specimens from northern Greece (e.g., Chalkidiki Peninsula, see Fig. 6) and Crna Gora (see Fig. 4) are somewhat intermediate in their aedeagal characters and seem to corroborate the subspecific status for the Peloponnese population. So far, I have not seen enough material of *O. metallescens* from the remaining parts of Greece to delimit the distribution of the new subspecies exactly.

ETYMOLOGY: Named for the Greek philosopher Plato (427 - 347 B.C.), teacher of Aristotle.

Thirteenth portrait head on north facade (above Bellaria street) of neoclassicist building of Natural History Museum Vienna.

Ochthebius morettii PIRISINU species propria

Ochthebius morettii was synonymized with *O. poweri* by JÄCH (1989) due to the overall external and aedeagal similarity. However, *O. morettii* is a distinct species which can be distinguished from *O. poweri* significantly by the aedeagus (see PIRISINU 1974: Fig. 10, and JÄCH 1989: Fig. 5a): PL: 330 - 350 μm . Parameres inserted near 0.5 of PL.

The aedeagus of *O. morettii* can be distinguished easily from that of *O. metallescens* by the apex of the main piece (lateral view), by the position of the paramere insertion and by the distal lobe being less deeply excised by the dorsal hiatus.

Externally, *O. morettii* is very similar to *O. poweri*. Due to the external variability of both species, I was not able to find significant distinguishing characters. The lateral pronotal tooth mentioned by PIRISINU (1974) is obviously not very constant. Elytral impression usually hardly apparent in *O. morettii*.

Distribution: So far known only from Italy (Friuli Venezia Giulia, Emilia, Umbria). The specimens recorded from "Abruzzi, Isola" by JÄCH (1989) require re-examination.

Ochthebius poweri RYE

Ochthebius morettii, synonymized with *O. poweri* by JÄCH (1989), is resurrected herein (see above).

The synonymy of *O. peyerimhoffi* NORMAND with *O. poweri* by JÄCH (1989) is confirmed here-with following re-examination of the lectotype of *O. peyerimhoffi* and examination of one male from the type locality of *O. peyerimhoffi*: Tunisia, Ain Draham, 18.V.1982, leg. Malicky (NMW).

Elytra usually slightly impressed transversally at anterior 0.3.

Aedeagus (Fig. 10, see also JÄCH 1989: Fig. 5b): PL: 250 - 280 μm . Apex of main piece obliquely truncate; phallobase asymmetrical. Apex of distal lobe knobby; dorsal hiatus more or less V-shaped. Parameres inserted near basal 0.35 of PL.

Note: JÄCH (1989: 368) stated: "I have not found a significant distinguishing character between the aedeagus of *O. poweri* and that of *O. metallescens*". However, although the aedeagi of these two species are very similar, especially with regard to the shape of the distal lobe apex and the position of the paramere insertion, *O. metallescens* can be distinguished easily by the apex of the main piece being more distinctly truncate (DSA distinctly wider than in *O. metallescens*) and by the distal lobe being more deeply excised by the dorsal hiatus (see Figs. 3 - 7, 10, 22 - 24, 26).

Externally, the differences between *O. metallescens* and the species of the *O. poweri* complex are even much more apparent: margins of pronotal ears more rounded in *O. metallescens*, elytral striae with small but distinct tubercle between each puncture in *O. poweri* and its allies.

Variability: DSA varies to some extent; however, it is never nearly as small as in *O. metallescens*.

Distribution: So far, *O. poweri* is known from Ireland, Wales, England, Portugal, Spain, Morocco (1 ♂: "Marocco, leg. Dakki", CFL), Algeria and Tunisia.

***Ochthebius puberulus* REITTER**

Another paralectotype (in addition to those mentioned by JÄCH 1989) is located in the DEI.

***Ochthebius semisericeus* SAINTE-CLAIRE DEVILLE complex**

The taxonomic/nomenclatorial changes required for the *O. semisericeus* species complex (= *O. reyi* sensu JÄCH 1989) are very comprehensive and cannot be treated in detail herein. A revision of the *O. semisericeus* species complex will be published in a forthcoming paper. Preliminary studies prompted that probably all synonyms of *O. reyi* (= *O. alutaceus* REY) listed by JÄCH (1989) should be resurrected: *O. gestroi* GRIDELLI, *O. griotes* FERRO, *O. semisericeus*, *O. semotus* d'ORCHYMONT, and *O. sennius* d'ORCHYMONT. In addition to these, *O. vedovai* FERRO must be regarded as a member of the *O. semisericeus* complex. To these seven described species, about ten new species will have to be added.

***Ochthebius viganoi* PIRISINU species propria**

Material examined:

ITALY: Liguria, Punta Mesco, 23.VI.1975, leg. Gardini (NMW).

FRANCE: CORSE: Vizzavona, VII.1989, leg. Balke & Hendrich (NMW); Val de Restonica, Bergerie de Grotello, 1400 m, 20.VII.1989, leg. Balke & Hendrich (NMW).

Ochthebius viganoi was synonymized with *O. metallescens* by JÄCH (1989). This synonymy was based on a combination of three facts: 1) general external variability of *O. metallescens metallescens*, 2) misinterpretation of a locality label, and 3) inclusion of a third species. Several specimens labelled "Rjeka" (NMW) were supposed to be from Rijeka, NW Croatia. The size of the glabrous area of the metasternum is generally quite variable in *O. metallescens*, and in the "Rijeka" specimens its size is intermediate between *O. viganoi* and *O. metallescens*, which led me to the inference that the variability of *O. metallescens* from northern Italy (incl. neighbouring NW Croatia) was much greater than it in fact is and that *O. viganoi* was within the variability of *O. metallescens*. The similarity of the aedeagi of all three species seemingly supported my previous assumption. In fact, the specimens labelled "Rjeka" are from Yugoslavia (Crna Gora) and represent a new species described herein (see below, under *O. insidiosus* sp.n.). *Ochthebius viganoi* is without doubt a discrete species with several significant external and aedeagal features.

Externally, this species can be distinguished from *O. metallescens* by the elytral disc being rather smooth and glabrous between punctures, by the pronotal "ears" being not gibbose posteriorly, by the deeper postocular emargination (thus anterior pronotal angles more acute), by the elytra being more parallel-sided, and by the middle of the metasternum being almost entirely glabrous.

Variability: The elytral punctures vary from superficially to very deeply impressed.

Aedeagus (Figs. 15, 29; see also JÄCH 1989: Fig. 2b): Phallobase and proximal third of main piece characteristically darker than remaining parts of aedeagus. PL: 360 - 370 μm (*Ochthebius metallescens*: usually 290 - 340 μm , rarely only 270 μm (one - obviously aberrant - specimen from Lower Austria, Kamp River, NMW)). Apex of main piece obliquely truncate, DSA (best examined in left lateral view) wider than in *O. metallescens*; with ca. 7 - 9 micropores near base of distal lobe; with a group of short subapical bristles; phallobase asymmetrical. Parameres inserted near 0.5 (*O. metallescens*: basal 0.3 - 0.4); apices of parameres slightly widened, with a few, rather short setae; right paramere slightly longer than left one. Distal lobe quite distinctive: disc wide, apical branch elongate and rather straight, and - especially in specimens from Corsica - not in same plane as disc (deflexed to left side), apex knob-like.

Ochthebius anaxagoras sp.n.

TYPE LOCALITY: Hygropetric habitat on cliff, ca. 4 km S Kinira, Thasos Island, northern Greece.

TYPE MATERIAL: **Holotype** ♂ (NMW): "GR - Thasos 10.IX. 4 km S Kinira (2) leg.M.Jäch 1991". **Paratypes** (NMW, CFL): 5 exs., same locality data as holotype; 3 exs.: "GR - Thasos (21) Kinira 15.10.80 leg. Malicky"; 1 ex.: "GR - Thasos (7) Kinira 16.6.79 leg. Malicky"; 1 ex.: "GR - Samothrake 1 km W Kremniotisa 15.6.1993 leg. M. Jäch (4)"; 1 ex.: "KERKYRA CAP A. ELIAS 25 iv 1930 d'Orchym. \ A.d'Orchymont det: Ochth.(Hymenodes) Poweri Rye"; 11 exs.: "GR-KRETA 1.5.71 n.Paläochora lg.Malicky (56)".

DIFFERENTIAL DIAGNOSIS: 1.6 - 1.9 mm long. Externally, *O. anaxagoras* can be distinguished easily from *O. moretii* (its closest ally) and all other species of the *O. poweri* complex by the very densely punctate frons and pronotal disc (interstices reduced to very narrow ridges). Elytral striae punctures deeply impressed and densely arranged; elytral tubercles well developed.

Aedeagus (Figs. 9, 27): essentially as in *O. moretii*, although obviously slightly smaller (PL: 310 - 320 µm). Parameres inserted near 0.5 of PL.

DISCUSSION: Although I have not been able to find strongly significant aedeagal characters to distinguish *O. anaxagoras* from *O. moretii* I have decided to establish a specific status for *O. anaxagoras* due to the remarkably devious and geographically most constant external characters.

DISTRIBUTION: So far known from the following Greek islands: Corfu, Thasos, Samothrake, Crete, Samos (see also d'ORCHYMONT 1942: 7). Probably more widely distributed in Greece, and maybe found also in Turkey.

ETYMOLOGY: Named for the Greek philosopher Anaxagoras (492 - 428 B.C.), who regarded earthquakes, solar eclipses, etc. as natural phenomena and was therefore accused of wickedness. First roof balustrade statue (3 m high) of neoclassicist building of Natural History Museum Vienna.

Ochthebius aristoteles sp.n.

TYPE LOCALITY: Small stream, flowing into Milopotamos Bay, Ios Island, Cyclades, Greece.

TYPE MATERIAL: **Holotype** ♂ (NMW): "GR-IOS 12.9.1990 Milopotamos leg. M. Jäch (1)". **Paratypes** (NMW, CFL): 1 ♀, same locality data as holotype; 5 exs.: "GR-Skyros (3) 3km W Skyros 28.IX.1992 Jäch"; 3 ♀♀: "GR-SIFNOS 15.9.90 Poulati leg. M. Jäch (2)"; 8 exs.: "GR-MILOS 19.9.90 1km E. Siderianos leg. M. Jäch (5)"; 1 ex.: "GR-MILOS 21.9.90 Achivadolimni leg. M. Jäch (6)"; 1 ♂: "GR-Andros (41) Varidion 10.3.80 leg. Malicky"; 1 ♀: "GR-EUBŌA 10.10.80 sw.Platanistos lg.Malicky (51)".

DIAGNOSIS: 1.4 - 1.7 mm long. Habitus (Fig. 2). This species is closely related with *O. metallescens*. Colouration black, without metallic reflections (*O. metallescens* with at least very faint metallic reflections). Body form less elongate than in *O. metallescens*. Postocular pronotal emargination and postocular pronotal tooth as variable as in *O. metallescens*. Elytral intervals smooth (not microreticulate, shagreened or rugosely sculptured) but conspicuously matt (always somewhat shining in *O. metallescens*). Metasternal disc glabrous in posterior half; anterior intercoxal metasternal process more prominent than in *O. metallescens*.

Aedeagus (Figs. 8, 25; see also JÄCH 1989: Fig. 2e): PL: 270 - 290 µm long. Apex of main piece obliquely truncate, DSA significantly wider than in *O. metallescens*; with 7 - 10 micropores near base of distal lobe; with a group of short subapical bristles; phallobase asymmetrical. Parameres inserted at basal 0.4; apices of parameres slightly widened, with a few, rather short setae; right paramere slightly longer than left one. Distal lobe large, evenly sickle-shaped; apical branch long, tapering, not knobby, with membranous area narrow.

DISCUSSION: This species - although distributed over a number of islands - is remarkably constant in external and aedeagal characters.

DISTRIBUTION: So far known from the following Greek (Aegean) islands: Evvoia (Euboea), Andros, Skyros, Siphnos, Milos, Ios.

ETYMOLOGY: Named for the famous Greek philosopher and naturalist Aristotle (384 - 322 B.C.), "founder" of zoology, who died on Evvoia (Euboea), one of the islands where this species occurs. Fourth of 34 roof balustrade statues of neoclassicist building of Natural History Museum Vienna.

Ochthebius diazi sp.n.

TYPE LOCALITY: Arroyo del Tiradero [Tiradero River], 5 - 10 m wide, with cascades, big boulders, rather strongly shaded by *Alnus*, ca. 100 m a.s.l., ca. 15 (road-)km W Los Barrios; 36°09'34''N, 5°34'37''W; Cádiz, southern Spain (see JÄCH, DIAZ & GAYOSO 1999: Fig. 9).

TYPE MATERIAL: Holotype ♂ (NMW): "ESPAÑA: Cadiz, 22.10.1998 ca. 15 km W Los Barrios ca. 100m leg. M. Jäch (14)".

DESCRIPTION (male): 1.45 mm long. Black with faint metallic sheen; tibiae and femora paler brown, knees darker. Dorsal surface sparsely covered by short whitish semierect or adpressed hairs.

Anterior margin of labrum deeply excised. Fronto-clypeal suture gently arched. Frons usually densely punctate; ocular grooves deeply impressed; ocelli and eyes well developed; ocelli more close to eyes than to middle of frons. Terminal segment of labial palpi slender, not peg-like, ca. 0.5 times as long as penultimate one.

Pronotum distinctly heart-shaped, wider than long (length/width ratio: 0.65). Anterior margin emarginate behind eyes; postocular tooth distinct. Anterior angles acute. Posterior margin rather evenly arched. Hyaline membrane rather narrow, confined to anterior and posterior margin and postero-lateral emargination. Surface of disc moderately densely punctate, interstices superficially shagreened or glabrous; impressions and lateral parts of pronotum densely punctate or microreticulate, matt. Disc strongly convex in cross section; median groove present, not reaching anterior and posterior margin; discal foveae oval, posterior ones slightly oblique.

Elytra oblong, oval (length/width ratio: 1.3); strongly convex in cross section, dorsally flattened with distinct transverse impression at anterior 0.3. Disc with six rows of punctures between suture and shoulder; rows straight and regular; punctures star-shaped, not very deeply impressed and not very densely arranged; rows separated by approximately one puncture diameter; intervals between rows flat, superficially shagreened or smooth. Lateral margins moderately widely explanate, especially in posterior third.

Hypomer al antennal grooves deep. Metasternal disc entirely pubescent. Ventrites I - V pubescent, ventrites VI and VII glabrous. Legs only moderately long.

Aedeagus (Fig. 11): Main piece rather short (ca. 270 μ m long) and stout, ventrally curved evenly (lateral view); with ca. 7 micropores near base of distal lobe; subapical setae very short and inconspicuous; phallobase asymmetrical (ventral view). Distal lobe elongate, strongly bisinuous ventrally; apical orifice pointed ventrad. Parameres more or less symmetrical, close to main piece, inserted ventrally near basal 0.3 of main piece; apices slightly widened, with moderately long setae.

Female unknown.

DIFFERENTIAL DIAGNOSIS: Externally, this species can be distinguished easily from all other Iberian species of the *Ochthebius metallescens* group by the distinct elytral impression and by the shorter elytral apices. The aedeagus resembles that of *O. albacetinus* FERRO (see JÄCH 1989: Fig. 21) superficially in the shape of the distal lobe.

DISTRIBUTION: So far known only from the type locality.

ETYMOLOGY: Named for Juan Angel Díaz Pazos, my congenial partner in "hydraenidology".

***Ochthebius empedocles* sp.n.**

TYPE LOCALITY: 21°13'E 39°00'N, north of Krikellos, Etolia Akarnania Administrative District, western Greece.

TYPE MATERIAL: **Holotype** ♂ (NMW): "GR Etolia Akarnania 21°13E 39°00'N N Krikellos, 22.5. leg. Malicky 1987 (9)". **Paratypes:** 9 exs., same locality data as holotype.

DIAGNOSIS: 2.0 - 2.2 mm long. In general appearance (size, body form, colouration) *O. empedocles* resembles several group members: e.g., *O. semisericeus*, *O. sempronius* d'ORCHYMONT. From these species it probably cannot be distinguished without examination of the aedeagus.

Aedeagus (Figs. 13, 30): somewhat resembles that of *O. metallescens*. PL: 360 - 370. Apex of main piece obliquely truncate, DSA slightly wider than in *O. metallescens*; with ca. 7 - 9 micropores near base of distal lobe; with a group of short subapical bristles; phallobase asymmetrical. Parameres inserted at basal 0.4 - 0.5; apices of parameres slightly widened, with a few, rather short setae; right paramere slightly longer than left one. Disc of distal lobe very wide (strongly enlarged ventrally); apical branch contrastingly thin and long, curved laterad (to right side) in ventral or dorsal view, weakly knob-like apically.

DISTRIBUTION: So far known only from the type locality.

ETYMOLOGY: Named for the Greek philosopher Empedocles (ca. 490 - 430 B.C.) who's theories about the origin of organisms include Darwinistic principles. Second roof balustrade statue of neoclassicist building of Natural History Museum Vienna.

***Ochthebius insidiosus* sp.n.**

TYPE LOCALITY: "Rjeka" [probably Rijeka Crnojevica, between Podgorica (= Titograd) and Cetinje], Crna Gora, Yugoslavia.

TYPE MATERIAL: **Holotype** ♂ (NMW): "Mustajbeg Rjeka \ metallescens". **Paratypes** (NMW, CPL): 14 exs., same locality data as holotype; 1 ♂: "Rjeka Apf. [= Apfelbeck] Montenegro"; 14 exs.: "RIJEKA CRNOJEVICA \ CRNA GORA PRETNER [on underside: '6. VII. 1955']"; 7 exs.: "RijekaCr-nojevica [on underside: '16.IX.1956'] \ Crna Gora leg. E. Pretner".

DIAGNOSIS: Externally, this species can hardly be distinguished from *Ochthebius metallescens*. Both species are rather variable in their general appearance (e.g.: metallic reflections; shagration of head and pronotum; convexity of pronotal disc; size and shape of postocular pronotal emargination; shape of lateral margin of pronotal "ears"; density of elytral punctation; length of elytra). However, pronotal "ears" of *O. metallescens* always characteristically gibbose posteriorly, but more or less flat in *O. insidiosus*; metasternum posteriorly usually more comprehensively glabrous in *O. insidiosus*.

Aedeagus (Figs. 14, 31; see also JÄCH 1989: Fig. 2a): Phallobase and proximal third of main piece characteristically darker than remaining parts of aedeagus (cf. *O. viganoi*). PL: 350 - 370 μ m (*Ochthebius metallescens*: usually 290 - 340 μ m, very rarely only 270 μ m (one specimen from Lower Austria, Kamp River, NMW)). Apex of main piece obliquely truncate, DSA wider than in *O. metallescens*; with 7 - 10 micropores near base of distal lobe; with a group of short subapical bristles; phallobase asymmetrical. Parameres inserted at basal 0.5 - 0.6 (*O. metallescens*: 0.3 - 0.4); apices of parameres slightly widened, with a few, rather short setae; right paramere slightly longer than left one. Apex of distal lobe characteristically knobby, with conspicuous dorsal denticle.

DISTRIBUTION: So far known only from Yugoslavia (Crna Gora).

ETYMOLOGY: insidiosus, 3 (Latin: fraudulent, treacherous); in the revision of the *O. metallescens* group (JÄCH 1989) I had examined a few specimens of *O. insidiosus* which I misidentified as *O. metallescens*, and I had interpreted their provenience erroneously as Rijeka, Croatia, which eventually prompted me to synonymize *O. viganoi* and *O. metallescens*.

***Ochthebius kieneri* sp.n.**

TYPE LOCALITY: Djebel Edough, near Annaba, northeastern Algeria.

TYPE MATERIAL: Holotype ♂ (NMW): "Edough. juin 85". Paratypes (NMW): 3 exs., same label data as holotype; 2 exs.: "L'Edough Algerien".

DIFFERENTIAL DIAGNOSIS: 1.5 - 1.8 mm long. Very closely related with *O. poweri* and allies. The small number of specimens examined and the general morphological variability of the species of the *O. poweri* complex (e.g., *O. poweri*, *O. morettii*, *O. latinorum*) do not permit general distinction of *O. kieneri* externally. However, the six specimens of *O. kieneri* which I have examined differ from *O. poweri*, *O. morettii* and *O. latinorum* by the elytra being more strongly impressed (impression composed of longitudinal impression along anterior third of elytral suture and transverse impression at posterior end of longitudinal impression).

Aedeagus (Figs. 12, 28; see also JÄCH 1989: Fig. 5b: inset): PL: 300 - 320 μ m. Distal lobe very characteristic, very wide, strongly recurved; dorsal hiatus narrow, more or less U-shaped; apex knobby. Parameres inserted near basal 0.4

DISTRIBUTION: So far known only from the type locality.

ETYMOLOGY: Named, in memory, for Swiss coleopterist Severino Kiener-Berger (1955 - 1998).

***Ochthebius pretneri* sp.n.**

TYPE LOCALITY: Skakavac stream near Šavnik, Crna Gora, Yugoslavia.

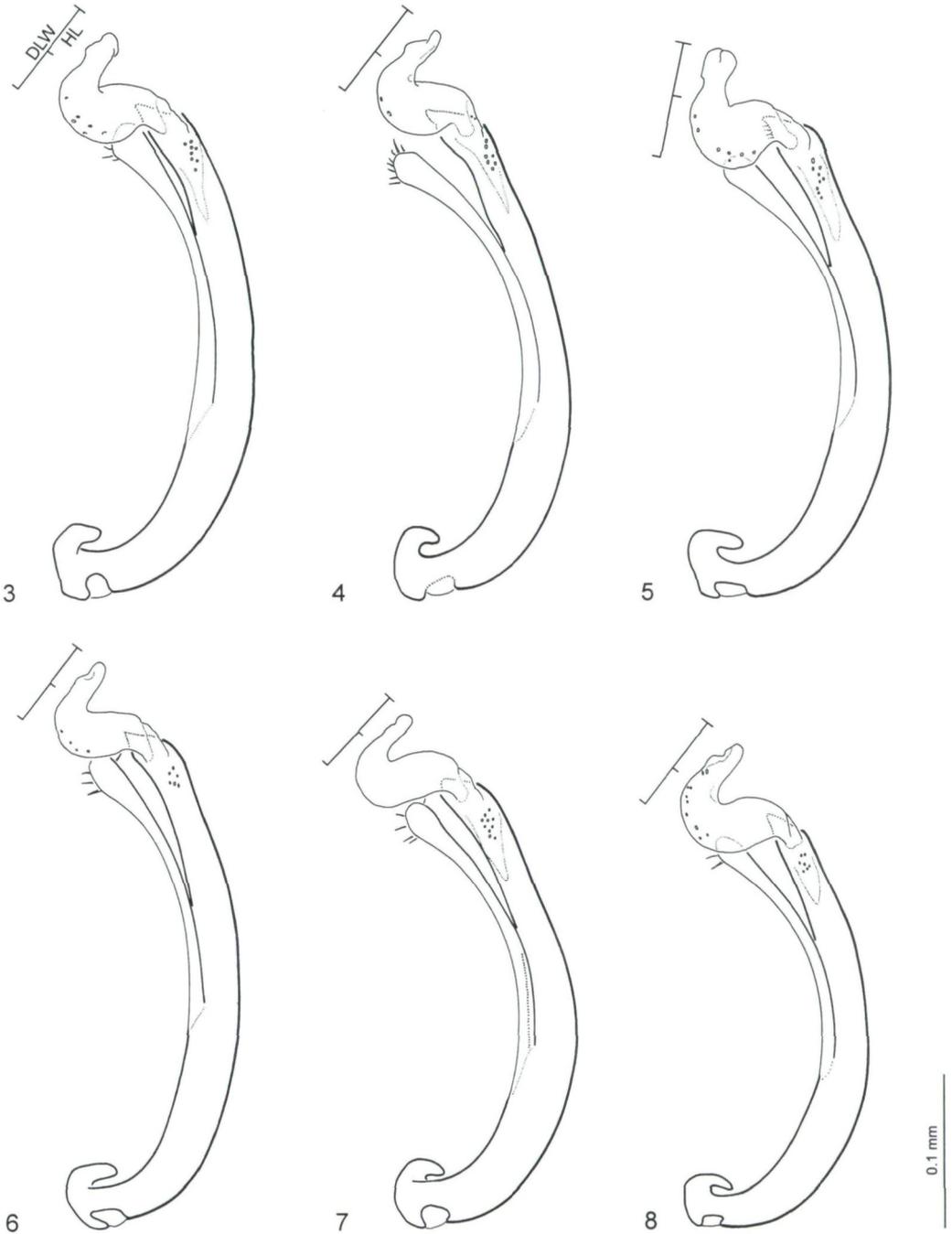
TYPE MATERIAL: Holotype ♂ (CPL): "Crna Gora Pretner \ Šavnik Skakavac [on underside: '1. VII. 1958']". Paratypes (NMW, CPL): 2 ♀♀, same locality data as holotype.

DIAGNOSIS: 2.0 mm long. Externally, this species is very similar to *O. metallescens* (with which it was found to live consociate) and with *O. insidiosus*. Pronotal ears very rugosely punctate, not gibbose posteriorly; postocular tooth prominent; postocular emargination deeper, thus anterior pronotal angles more acute; metasternal disc glabrous in posterior half; anterior intercoxal metasternal process distinctly prominent.

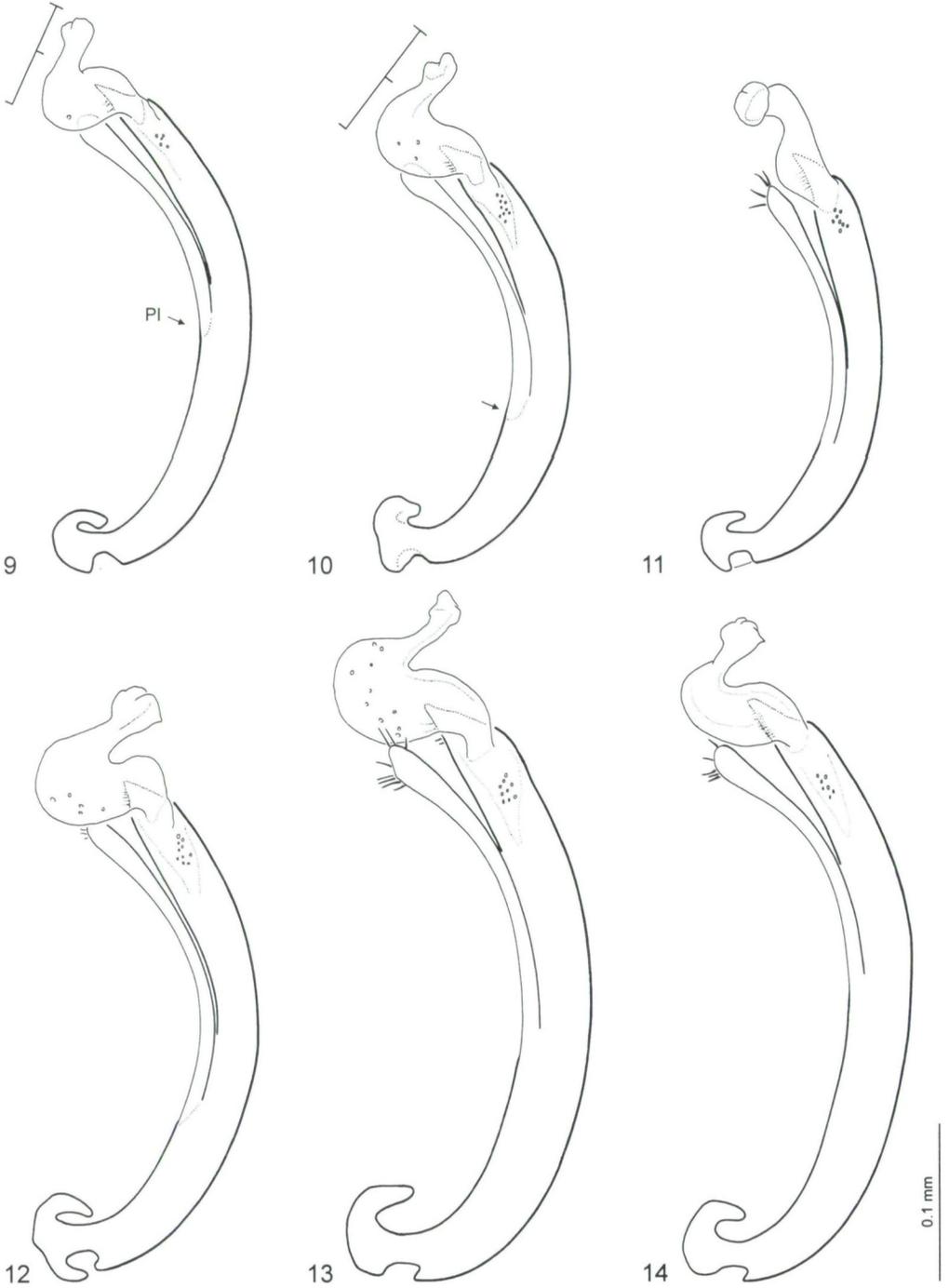
Aedeagus (Fig. 16): Despite the remarkable external similarity between *O. metallescens* and *O. insidiosus* the aedeagus is entirely different; its distal lobe is in fact not even similar to any other species of the *O. metallescens* group known to me. Main piece ca. 370 μ m long; apex of main piece rounded dorsally (lateral view), not obliquely truncate; with 9 micropores near base of distal lobe; with a group of short subapical bristles; phallobase asymmetrical. Parameres inserted at basal 0.43; apices of parameres slightly widened, with a few, rather short setae; right paramere slightly longer than left one. Distal lobe elongate, subcylindrical, with two conspicuous ventral flattened expansions.

DISTRIBUTION: So far known only from the type locality.

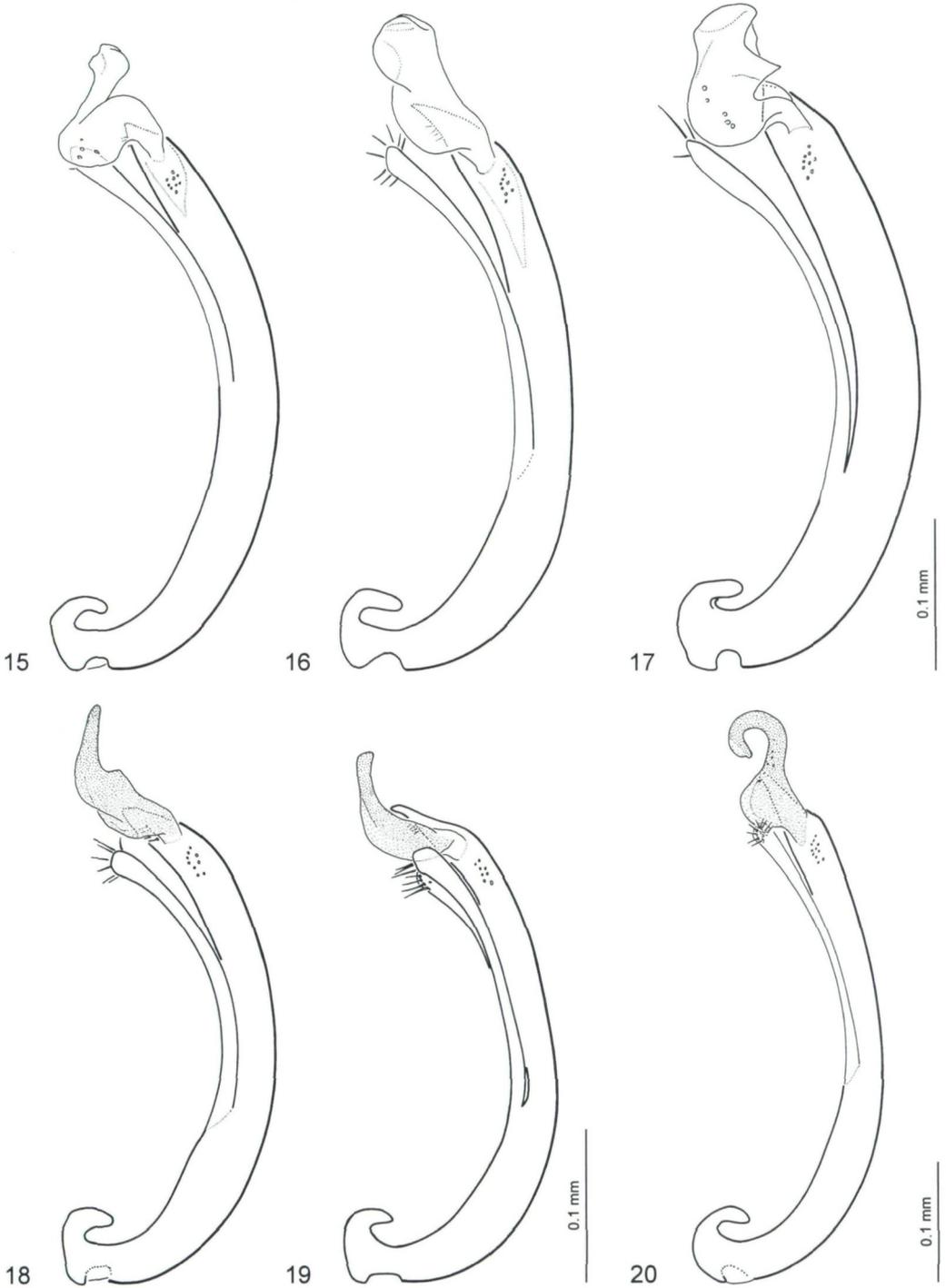
ETYMOLOGY: Named in honour of Egon Pretner (1896 - 1982).



Figs. 3 - 8: Aedeagus, lateral view, 3) *Ochthebius metallescens metallescens*, Austria, Bad Fischau, 4) *O. m. metallescens*, Crna Gora, Šavnik, 5) *O. m. metallescens*, Greece, Parnassos, Graviá, 6) *O. m. metallescens*, Greece, Chalkidiki, Pírgadikia, 7) *O. m. plato*, Greece, Peloponnese, Zachlorou, 8) *O. aristoteles*, holotype. DLW: Distal Lobe Width; HL: Hiatus Length.



Figs. 9 - 14: Aedeagus, lateral view, 9) *Ochthebius anaxagoras*, Crete, 10) *O. poweri*, England, 11) *O. diazi*, holotype, 12) *O. kieneri*, holotype, 13) *O. empedocles*, holotype, 14) *O. insidiosus*, paratype. DLW: Distal Lobe Width; HL: Hiatus Length; PI: Paramere Insertion.



Figs. 15 - 20: Aedeagus, lateral view, 15) *Ochthebius viganoi*, Corse, 16) *O. pretneri*, holotype, 17) *O. trapezuntinus*, holotype, 18) *O. schoedli*, holotype, 19) *O. decianus*, Turkey, Elbistan, 20) *O. khuzestanicus*.

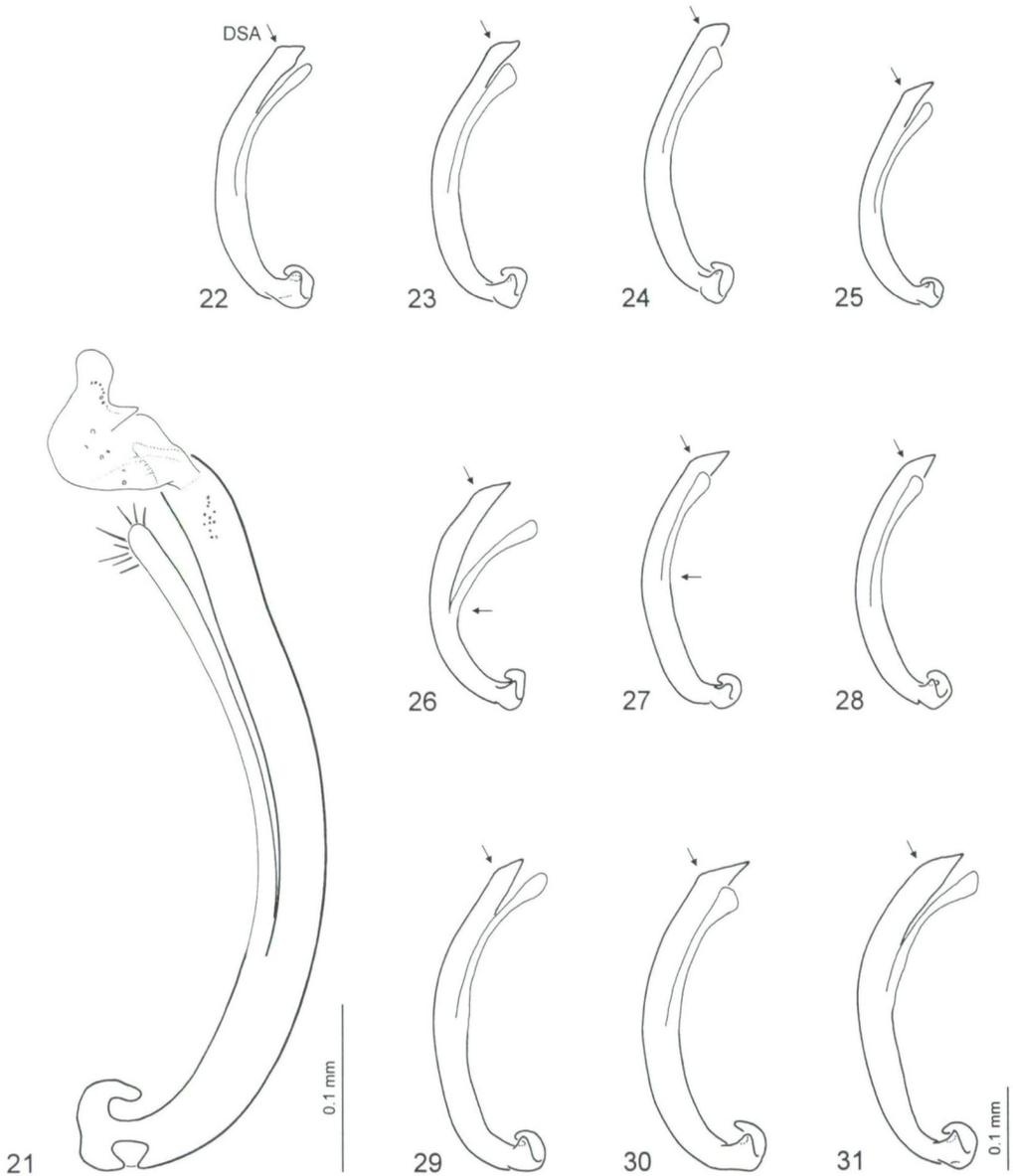


Fig. 21: Aedeagus of *Ochthebius schuberti*, lateral view. Figs. 22 - 31: Aedeagal main piece and right paramere, 22) *Ochthebius metallescens metallescens*, Spain, Yunquera, 23) *O. m. metallescens*, Greece, Parnassos, Graviá, 24) *O. m. plato*, 25) *O. aristoteles*, 26) *O. poweri*, 27) *O. anaxagoras*, 28) *O. kieneri*, 29) *O. viganoi*, Italy, Liguria, 30) *O. empedocles*, 31) *O. insidiosus*. DSA: Dorsal Subapical Angle.

***Ochthebius schoedli* sp.n.**

TYPE LOCALITY: Bozghan Spring, ca. 2000 m a.s.l., ca. 80 km NW of Shiraz, Fars Province, Iran (see BILTON & JÄCH 1998: Figs. 1, 2).

TYPE MATERIAL: **Holotype** ♂ (NMW): "IRAN: Fars, 22.9.1997 80km NW Shiraz Cheshmeh Bozghan (2000m) leg. Schödl (29)". **Paratype** ♂ (NMW): "IRAN: Fars, 22.9.1997 90km NW Shiraz, 2200m 6km N Dalin, Cheshmeh Saran leg. Schödl (30)".

DIAGNOSIS: 1.8 mm long. Very closely related with *O. decianus* from Turkey from which the two specimens of *O. schoedli* cannot be distinguished significantly, except by the aedeagus.

Aedeagus (Fig. 18): Main piece rather slender (ca. 330 μ m long), ventrally curved evenly (lateral view); with ca. 9 micropores near base of distal lobe; subapical setae short; phallobase asymmetrical (ventral view). Distal lobe elongate, crescentic, slender; dorsal margin with subacute prominence. Parameres more or less symmetrical, right one slightly longer than left one, close to main piece, inserted ventrally near basal 0.3 of main piece; apices slightly widened, with moderately long setae.

Female unknown.

DISCUSSION: After *Ochthebius khuzestanicus*, *O. puberulus*, and *O. scitulus* FERRO, *O. schoedli* is the fourth species of the *O. metallescens* group known from Iran.

DISTRIBUTION: So far known only from two localities near Shiraz, Iran.

ETYMOLOGY: Named for Stefan Schödl.

***Ochthebius schuberti* sp.n.**

TYPE LOCALITY: Bitlis, 1800 m a.s.l., Bitlis Province, eastern Turkey.

TYPE MATERIAL: **Holotype** ♂ (NMW): "Bitlis, Asm. or 1800m 28.5.69 leg. F. Schubert".

DIAGNOSIS: 1.9 mm long. Obviously closely related with the Aegean *Ochthebius sempronius* due to shape of pronotum and aedeagal similarities. Externally, *O. schuberti* can be distinguished from *O. sempronius* by the elytral intervals being less rugosely sculptured.

Aedeagus (Fig. 21): Main piece rather elongate and slender (ca. 440 μ m long), ventrally curved (lateral view); with ca. 12 micropores near base of distal lobe; subapical setae short and inconspicuous; phallobase asymmetrical (ventral view). Distal lobe crescentic, wide; dorsal margin with spine-like process. Parameres more or less symmetrical, right one slightly longer than left one, close to main piece, inserted ventrally near basal 0.3 of main piece; apices slightly widened, with moderately long setae.

DISTRIBUTION: So far known only from the type locality.

ETYMOLOGY: Named in honour of the collector.

***Ochthebius trapezuntinus* sp.n.**

TYPE LOCALITY: Hamsiköy, Trabzon, northern Turkey.

TYPE MATERIAL: **Holotype** ♂ (NMW): "Trabzon Hamsiköy \ 7/75 leg. F. Schubert". **Paratype** ♀ (NMW): "TR-Trabzon 30.5. Macka-Sumela leg. Jäch 89 (32)".

DIAGNOSIS: 1.75 mm long. Colouration black (holotype teneral, brownish), without distinct metallic reflections. Externally, this species is characterized by its pronotal shape being intermediate between *Ochthebius decianus* d'ORCHYMONT (or *O. kirschenhoferi* JÄCH) and *O. puberulus* (or *O. hofratvukovitsi* JÄCH); anterior angles only slightly produced, surface of disc

only very superficially shagreened between punctures. Elytral striae as in *O. hofratvukovitsi*, intervals glabrous. Elytral margin narrowly explanate in male, widely explanate (in the middle of the elytra) in female.

Aedeagus (Fig. 17): Main piece elongate (ca. 390 μm long), ventrally curved moderately (lateral view); with ca. 9 micropores near base of distal lobe; subapical setae short and inconspicuous; phallobase asymmetrical (ventral view). Distal lobe rather wide apically, strongly attenuate basally; dorsal margin with spine-like process. Parameres more or less symmetrical, right one slightly longer than left one, close to main piece, inserted ventrally near basal 0.3 of main piece; apices slightly widened, with moderately long setae.

DISTRIBUTION: So far known only from northern Turkey (Trabzon Province).

ETYMOLOGY: trapezuntinus, 3 (Latin: pertaining to Trabzon); named in reference to the type locality.

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