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RESULTS OF THE VIENNA NATURAL HISTORY MUSEUM ENTOMOLOGICAL
MISSION TO TURKEY, 1987

Part I: *Hydraena* and *Haenydra* (Col., Hydraenidae)

M.A. JÄCH, Vienna

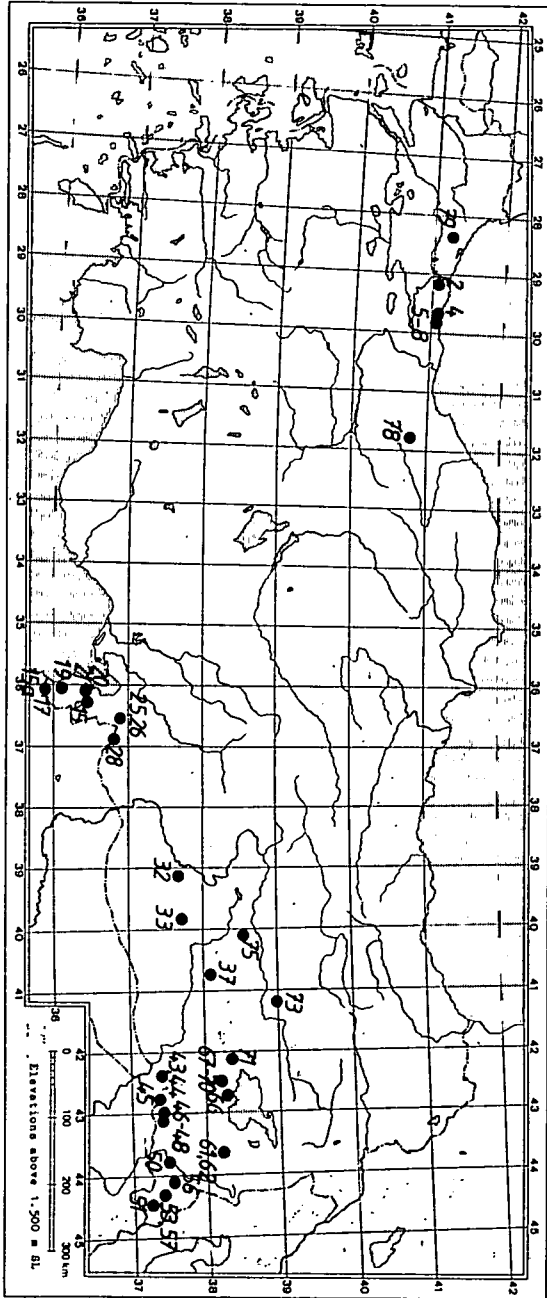
A b s t r a c t : Thirty-nine species of the genus *Hydraena* s.l. have been collected during an expedition of the Vienna Natural History Museum to Turkey (May - June 1987). Twenty-one species are new to science and described herein: *Hydraena abbasigili* sp.nov., *H. amidensis* sp.nov., *H. antiochena* sp.nov., *H. beyarslani* sp.nov., *H. ebriimadli* sp.nov., *H. hainzi* sp.nov., *H. kurdistanica* sp.nov., *H. ligulipes* sp.nov., *H. modili* sp.nov., *H. monscassius* sp.nov., *H. muezziginea* sp.nov., *H. olidipastoris* sp.nov., *H. platycnemis* sp.nov., *H. schilfii* sp.nov., *H. schillhammeri* sp.nov., *H. schoenmanni* sp.nov., *H. serpentina* sp.nov., *Haenydra graciloides* sp.nov., *H. fontiscarsavii* sp.nov., *H. nilguenae* sp.nov., *H. terraevastatae* sp.nov.; *Hydraena carducha* JANSSENS is redescribed. The aedeagi of 23 species are illustrated. Four new synonymies (*H. canakcioglu* JANSSENS = *H. aydini* JANSSENS, *H. phallerata* ORCHYMONT = *H. byzantina* JANSSENS, *H. gracilis* GERMAR = *H. anatolica* JANSSENS and *H. integra* PRETNER = *H. ponticola* JANSSENS) are considered. *Haenydra integra* PRETNER is shown to be a species propria, not synonym with *H. caucasica* KUWERT.

Key words : Coleoptera, Hydraenidae, *Hydraena*, Taxonomy, New Species, Turkey.

Introduction

The latest entomological expedition (17.5.1987 - 15.6.1987) of the Vienna Natural History Museum to Turkey (Kurdistan) yielded - among approximately 10 000 insects (mainly Coleoptera and Hymenoptera) - 1043 specimens

Fig. 1: Map of sampling stations.



of the genus *Hydraena* s.l. (*Hydraena* and *Haenydra*). Sampling was carried out at 80 different selected sites, lying mainly in southeastern parts of Turkey. Specimens of *Hydraena* s.l. were found at 38 of these localities (fig.1):

- stn.2 - 18.5.1987, small streams near Ömerli, between Istanbul and Sile
- stn.4 - 19.5.1987, stream ca. 5 km east of Sile, ca. 3-4 m wide, shaded,
geology: inhomogeneous
- stn.5 - like stn.4, but smaller, a few km further east
- stn.6 - stream east of stn.5, ca. 2 m wide, partly shaded, geology: marble
- stn.8 - Göksu river west of Agva (near Isaköy), ca. 10 m wide, slow
flowing
- stn.15 - 22.5.1987, stream east of the Belen pass, along the old road,
ca. 2 m wide, insolated, geology: volcanic and marble
- stn.15a - 22.5.1987, very small spring near Yayladagi, flowing between
bushes
- stn.17 - 23.5.1987, stream ca. 4 km west of Yayladagi, near the road
to Yediteppe, ca. 2-3 m wide, mostly shaded, geology: sperpentine
and limestone
- stn.19 - 23.5.1987, large river (Karacay), ca. 15-20 m wide, southwest
of Antakya
- stn.20 - 24.5.1987, river, ca. 5 - 10 m wide, ca. 15 km south of Iskenderun,
between Belen and Sogukoluk
- stn.21 - 24.5.1987, small spring near Sogukoluk (south of Iskenderun), pine
forest, ca. 1200 m
- stn.26 - 26.5.1987, stream, unshaded, flowing through a plain, south of
Ishahiye, ca. 100 km north of Antakya, geology: basalt
- stn.28 - small stream (spring), ca. 75 cm wide, unshaded, ca. 40 km west
of Kilis, geology: basalt
- stn.32 - 27.5.1987, river, ca. 5 m wide, unshaded, ca. 50 km northeast
Urfa (few km northeast Hilvan), flowing through pastures
- stn.33 - 28.5.1987, small streams and springs on Karacadag, ca. 1500 m,
geology: basalt (fig.2)
- stn.37 - 29.5.1987, small cristalline stream, flowing between fields, ca.
1 - 2 m wide, ca. 90 km ne Diyarbakir, few km south of Silvan
- stn.43 - 31.5.1987, Kizilsu river, ca. 10 m wide, on the road between
Cizre and Sirnak
- stn.44 - 31.5.1987, small spring, ca. 5 km w Sirnak
- stn.45 - 31.5.1987, stream, ca. 4 m wide, ca. 20 km w Uludere

stn.46 - 31.5.1987, fast flowing stream in ca. 2000 m, ca. 4 m wide, on Danin-danin pass, through pastures (fig.3)



Fig. 2: Stream on Karacadag (stn. 33); type locality of *Hydraena amidensis*

stn.47 - 31.5.1987, river near Beytüssebab, ca. 5 - 15 m wide

stn.48 - 31.5.1987, stream e Beytüssebab, ca. 5 m wide, tributary of main river

stn.50 - 2.6.1987, large karst spring ca. 20 km s Hakkari, ca. 3 m wide, shaded, fast flowing

stn.51 - 3.6.1987, Kurtali river, ca. 5 m wide, ca. 20 km w Semdinli, geology: cristalline (fig.4)

stn.53 - 3.6.1987, small stream, ca. 1,5 m wide, unshaded, in the eastern Yüksekova plain, geology: cristalline

stn.56 - 4.6.1987, spring, s of Yeniköprü, ca. 30 km nw Yüksekova

stn.57 - 4.6.1987, small spring in the southern Yüksekova plain, unshaded, through pastures

stn.61 - 5.6.1987, stream at Güzeldere pass, ca. 2 - 3 m wide, unshaded, ca. 2600 m, north of Baskale, geology: cristalline (fig.5)

stn.62 - small springs at stn. 61

stn.66 - 8.6.1987, stream, ca. 60 km se Tatvan, west of Gevas, ca. 6 m wide, unshaded, through pastures, 2000 m, geology: slate



Fig. 3 : Stream on Danin-danin pass (stn. 46)



Fig. 4: Stream near Semdinli (stn. 51); type locality of *Hydraena schilfii*



Fig. 5: Stream on Güzeldere pass (stn. 61); type locality of *Hydraena kurdistanica*, *H. carducha*, *H. olidipastoris*, *H. abbasigili* and *Haenydra terraevastatae*

stn.67 - 8.6.1987, stream near Hizan (se Tatvan), geology: slate

stn.68 - 8.6.1987, cristalline spring between Hizan and Tatvan

stn.70 - 8.6.1987, carst spring s Hizan, shaded, ca. 1 m wide

stn.71 - 11.6.1987, river at Mukti, ca. 10 m wide

stn.73 - 12.6.1987, small stream at Buglan pass (between Mus and Bingöl),
ca. 1 m wide, between pastures, geology: basalt

stn.75 - 12.6.1987, karst river, ca. 10 m wide, ca. 30 km s Genc

stn.78 - 14.6.1987, cristalline streams in Yedigöller National Park, near
Bolu

stn.79 - 15.6.1987, cristalline stream, ca. 5 m wide, near Gümüşpınar,
ca. 80 km w Istanbul

These 1043 specimens represent at least 39 different species, belonging to the genera *Hydraena* KUGELANN and *Haenydra* REY. Only 39 ♀♀ could not be determined. Twenty-one species are new to science and described herein.

All specimens are deposited in the Museum of Natural History, Vienna.

I warmly thank Dr.Y. Cambefort (Muséum National d'Histoire Naturelle, Paris) for the loan of the types of *Haenydra caucasica* KUWERT. My hearty thanks are also due to the 3 other expedition members, Michael Madl, Harald Schillhammer and Dr.Heiner Schönmann for their patience

at localities rich in *Hydraena*. I am obliged to Dr.P. Cate for correcting the manuscript.

Scales next to figures represent 0.1 mm.

Genus *Hydraena* KUGELANN

The species are grouped tentatively in 4 species-groups.

H. pulchella - group

Hydraena kurdistanica sp.nov.

Holotype ♂: "TR 6.5.1987 Van-Baskale 2600 m Güzeldere P. leg. Jäch (61)".

Paratypes: One ♂ and 3 ♀♀ from the same locality.

2.1 - 2.3 mm long. Black, legs and palpi brown, tips of latter darkened. Pronotum usually wide (like in *H. colchica* JANSSENS, *H. avuncula* JÄCH and *H. virginalis* JANSSENS) and strongly cordiform; disc convex, moderately to densely punctured and superficially microreticulated. Elytra with 9 rows of punctures between suture and humerus; punctures not very large, but deeply impressed and somewhat irregularly arranged; apices broadly and separately rounded, more truncate in ♂ and more narrowed in ♀. Mesotibia of ♂ slightly arcuate with very few small spines on inner surface, almost unnoticeably enlarged apically; hind tibia enlarged in distal half, the enlargement being strongest at its beginning.

Aedeagus (fig.6): Proximal lobe blunt, distorted and deflexed distally, with two subapical bristles and 10 setae situated further proximal. Distal lobe larger than in other species of the same group. Left paramere simple, right one strongly sinuate.

Hydraena kurdistanica is very similar to *H. virginalis*, *H. colchica* and *H. avuncula*. It differs from these three by its distinctive secondary sexual characters. Females differ from *H. colchica* by the strongly punctured pronotum and the coarser elytral puncturation; females of *H. virginalis* can be distinguished by two characters: last segment of maxillary palpus slightly asymmetrical and apex of elytra more narrowed, apical declivity well pronounced. Females of *H. avuncula* are still unknown.

D i s t r i b u t i o n - Southeastern Turkey.

***Hydraena virginalis* JANSSENS**

M a t e r i a l : 1 ♂ and 2 ♀♀ from stn.61/62; 1 ♂ and one ♀ from stn.46.

***Hydraena tauricola* JANSSENS**

M a t e r i a l : 4 exs. from stn. 25; 3 exs. from stn. 37; 18 exs. from stn.43; 3 exs. from stn.45; 5 exs. from stn.75.

***Hydraena carducha* JANSSENS**

Hydraena carducha JANSSENS 1980, Acta ent.Mus.Nat.Pragae 40: 335.

M a t e r i a l : 2 ♂♂ and 3 ♀♀ from stn. 61/62.

We spent two days at the type locality of *Hydraena carducha* (stn.61/62), in order to collect a larger series of this species, described by JANSSENS (1980) only after one single female.

Altogether 40 specimens of *Hydraena* s.l. were collected in these two days, representing no less than 10 species, which was quite unexpected. Four of these 10 species are new to science and described herein (*Hydraena abbasigili* sp.nov., *H. kurdistanica* sp. nov., *H. olidipastoris* sp.nov. and *Haenydra terraevastatae* sp.nov.); 3 species are already known (*Hydraena virginalis*, *H. carducha* and *H. gressa*) and 6 ♀♀ represent 3 further species, two of which are probably also new.

Although I have not seen the type of *Hydraena carducha* (it is at present on loan), I have no doubt about the identity of this species, as it is the only one from that locality that resembles *Hydraena jailensis* BREIT (see original description).

Metatibia of male strongly thickened in apical half, with a dense brush of setae.

Aedeagus (fig. 7): Proximal lobe blunt and strong, with two groups of subapical bristles. Distal lobe with a flagellum similar to that of *H. schoenmanni* sp.nov. and *H. tauricola*, indicating a phylogenetic relation. Right paramere long, enlarged in apical half; left paramere very long and spoonlike enlarged apically, a median process is covered with conspicuous minute knoblike tubercules.

Despite the regular elytral striation, *Hydraena carducha* is better placed in the *H. rufipes* - group than in the *H. grandis* - group (due to aedeagal similarities and the narrow intercoxal sternite).

***Hydraena hainzi* sp.nov.**

Holotype ♂: "SO-TÜRKEI 31.5. Beytüşsebab (47) leg. Jäch 1987"

1,9 mm long. Darkbrown to black; legs and palpi brown; tips of palpi darkened. Although a member of the *H. rufipes*-group, its pronotum lacks the typical cordiform appearance of other related Turkish species (*H. virginialis*, *H. colchica*, *H. kurdistanica*). Shape of the pronotum like in *H. helena* ORCHYMONT, disc only sparsely punctured, interspaces rather smooth and shining. Elytra truncate, sides more or less parallel, explanate margin well developed, punctures large, arranged in irregular series. Mesotibia of male slightly arched, with 3 inconspicuous denticules in the middle of inner surface; hind tibia rather straight, with an almost symmetrical lamina, situated slightly before midlength, on inner surface.

Female unknown.

Aedeagus (fig. 8) closely resembles that of *H. avuncula*, *H. carducha* and the following species. Proximal lobe blunt and distorted, with one group of apical and two groups of median bristles. Right paramere short and reduced, left one large and spoonlike. Pühylogenetically, the aedeagus represents a transitive stage, connecting *H. avuncula* with *H. tauricola* and *H. colchica*.

External morphology of this new species is somewhat similar to *H. tauricola*, from which it can be readily distinguished by the more truncate elytra and by the symmetrical lamina of the hind tibia.

D i s t r i b u t i o n - Southeastern Turkey.

Entomology - This and the next species are dedicated to the Austrian mountaineer and entomologist, Heiner Schönmann.

***Hydraena schoenmanni* sp.nov.**

Holotype ♂: "TR 11.6.1987 (71) Mutki w. Tatvan, Jäch". The specimen lacks the head.

Paratypes: One ♀ from the same locality and 5 ♀♀ from stn. 66.

2,0 - 2,2 mm long. Black, legs and palpi dark brown, tips of latter black. This species is closely related to *H. tauricola* (aedeagal similarities), from which it is readily distinguished by several items: colour of body appendages considerably darker; pronotum slightly wider, elytra larger and less attenuated at the apex; elytral puncturation slightly coarser. The expansion on the hind tibia of the ♂ is blunt and simple, not recurved and spine-

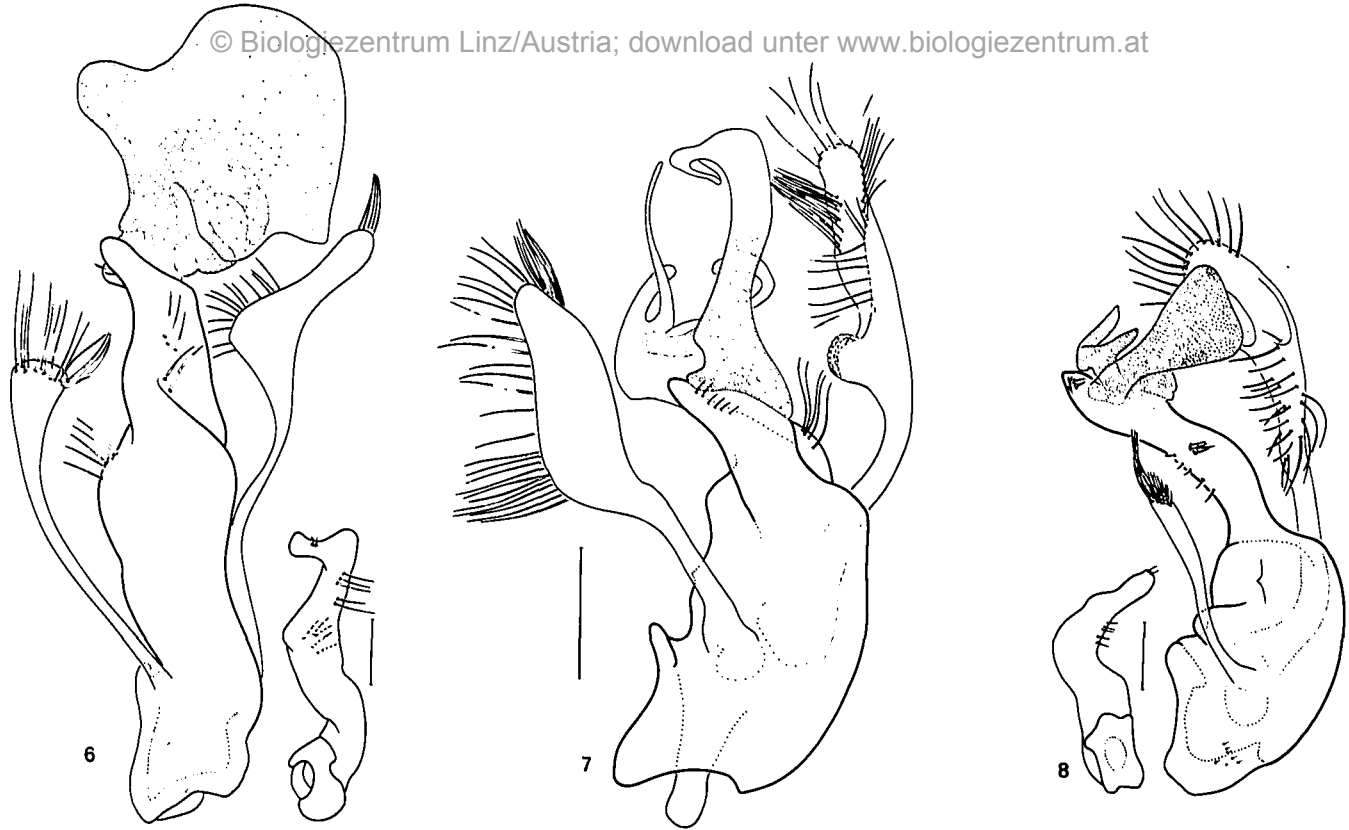


Fig.6-8: Aedeagus, lateral view; 6) *Hydraena kurdistanica* n.sp.; inset: same, in ventral aspect; 7) *H. carducha* JANSSENS; 8) *Hydraena hainzi* n.sp.; inset: same, in ventral aspect.

like as in *H. tauricola*. *Hydraena hainzi* differs by the shorter elytra, paler colour and the metatibia of the ♂. Males of *Hydraena galatica* JANSSENS are easily distinguished by the metatibia, which lacks a lamina. Females can only be distinguished by the slightly longer pronotum. Other characters such as pronotal convexity or elytral puncturation are very variable.

Aedeagus (fig. 9): Very similar to that of *H. tauricola*, but right paramere much longer and distal lobe different.

D i s t r i b u t i o n - Eastern Turkey.

Hydraena amidensis sp.nov.

Holotype ♂: "TR 28.5.1987 (33) Karacadag bei Diyarbakir, Jäch".

Paratypes: 110 exs. from the same locality.

2,0 - 2,2 mm long. Dark brown to black, appendages brown, tips of palpi darker. Pronotum hexagonal or slightly cordiform; disc quite convex and only sparsely punctured; interstices smooth, only rarely and superficially microreticulated. Elytra long and subparallel, puncturation coarse; punctures usually arranged in more or less irregular series. Sexual characters of legs of ♂ hardly developed (cf. *H. galatica*). Mesotibia only slightly arched with 7 inconspicuous denticules, hind tibia straight, with ca. 5 denticules and a few hairs.

Aedeagus (fig. 12): Surprisingly similar to the European species *Hydraena bimagua* JÄCH (see JÄCH 1988, fig. 2), but proximal lobe more strongly curved and longer. Distal lobe originating further proximal.

This new species is closely related to *Hydraena galatica*, from which it can hardly be distinguished without genital dissection. The inner surface of the meso- and metatibia of *H. galatica* is fringed with some hairs, which are missing in *H. amidensis*. The mesotibia of *H. galatica* is more arched. Females of *H. amidensis* seem to differ from *H. galatica* and *H. schoenmanni* by the longer and more narrowed elytral apices.

D i s t r i b u t i o n - Might be endemic on the Karacadag Mountain in southeastern Turkey.

Etymology - Amida was the Latin name for the town of Diyarbakir, in the vicinity of which the species was collected.

Hydraena ligulipes sp.nov.

Holotype ♂: "SO-TÜRKEI 31.5. Beytüşebap (48) leg. Jäch 1987"

Paratypes: 3 ♂♂ and 3 ♀♀ from stn. 47.

2.1 - 2.4 mm long. Females slightly larger than males. Black, appendages brown, tips of palpi darkened. Mesotibia of male with a few denticules in apical half; metatibia very characteristic: enlarged in apical two third and slightly excavated like a tea spoon.

This new species probably is a member of the *H. rufipes*-group (morphology of parameres and setation of the proximal lobe), but in size, body shape and general appearance it resembles *Hydraena gnatella* ORCHY-MONT, from which it differs by the slightly wider pronotum, the flatter elytra and elytral apices and the more shining and smoother elytral intervals.

Aedeagus (fig. 11) phylogenetically isolated and different from any other species. Apex of proximal lobe deeply bifurcate, with 5 small and one or two long setae. Distal lobe consists of a very long coiled flagellum. Right paramere relictary, almost completely reduced; left paramere long, gradually widened towards apex, with conspicuous scale-like structures near middle.

D i s t r i b u t i o n - Southeastern Turkey.

Etymology - Latin, ligula (spoon) and pes (leg). Refers to the spoon-like metatibia of the ♂.

H . g r a n d i s - g r o u p

Hydraena beyarslani sp.nov.

Holotype ♂: "TR 12.6.1987 50 km s. Bingöl leg. Jäch (75)".

Paratypes: 11 exs. from the same locality; 19 exs. from stn. 37; 3 exs. from stn.29 and 5 exs. from stn.28.

1,9 - 2,2 mm long. Dark brown to black, body appendages brown, tips of palpi darkened. Clypeus and frons densely microreticulated and mat; anterior margin and middle of frons sometimes shining. Pronotum hexagonal, densely punctured and microreticulated; interspaces on disc sometimes smooth. Elytra with nine rows of punctures between suture and shoulder; punctures rectangular, deeply impressed and dense; rows sometimes irregu-



Fig.9-11: Aedeagus, lateral view: 9) *Hydraena schoenmanni* n.sp.; 10) *Hydraena amidensis* n.sp.; inset: ventral aspect of apex of same; 11) *Hydraena ligulipes* n.sp.; inset: ventral view of proximal lobe.

lar; intervals narrow; explanate margin moderately developed; elytral apices broad and separately rounded in ♂, more attenuated in female.

Sexual dimorphism hardly developed: mesotibia of male with hardly noticeable denticules near distal end; metatibia only very slightly enlarged in apical third.

Aedeagus (fig. 13) closely resembles *H. gnatella* and *H. damascaena* PIC. Left paramere much longer than in *H. gnatella*, longer and thinner than in *H. damascaena*; flagellum shorter than in both mentioned species, but longer than in *H. gnatelloides*.

This new species is closely related to *Hydraena gnatella* and *H. gnatelloides* ORCHYMONT. It differs from *H. gnatella* by the smaller size and the less regular elytral puncturation. Microreticulation more superficial, thus body surface more shining. Metatibial enlargement smaller in the new species. Females differ from *H. damascaena* by the slightly thinner palpi and the coarser elytral puncturation.

D i s t r i b u t i o n - Southern and eastern Turkey.

Etymology - Named for Doz.Dr.Ahmet Beyarslan (Trakya University), famous Turkish Hymenopterist.

***Hydraena platycnemis* sp.nov.**

Holotype ♂: "TR 23.5.1987 Yayladagi leg. Jäch (17)".

Paratypes: 45 exs. from the same locality; 12 exs. from stn. 15a; 17 exs. from stn. 21; 4 exs. from stn. 20 ; 1 ex. from stn. 26.

2,2 - 2,4 mm long. Darkbrown, appendages light brown, tips of palpi darkened. This species is very similar and closely related to *Hydraena damascaena*, with which it agrees in size and general appearance. Males are easily distinguished from *H. damascaena* (and other related species) by their metatibia, which is flattened at about midlength, resembling a piece of laminated metal; mesotibia slightly dilated at distal end. Females differ from *H. damascaena* by the spermatheca (knot smaller, distance between disc and knot longer); other characters, such as body shape, chagration or puncturation are variable and thus not reliable (palpi sometimes slightly thinner in *H. platycnemis*). Females of *H. bromleyae* JÄCH differ by the wider elytra (especially apex), the smooth pronotal disc and the spermatheca (knot larger and strongly assymmetrical in lateral aspect). Females of *H. beyarslani* differ mainly by the slightly coarser elytral

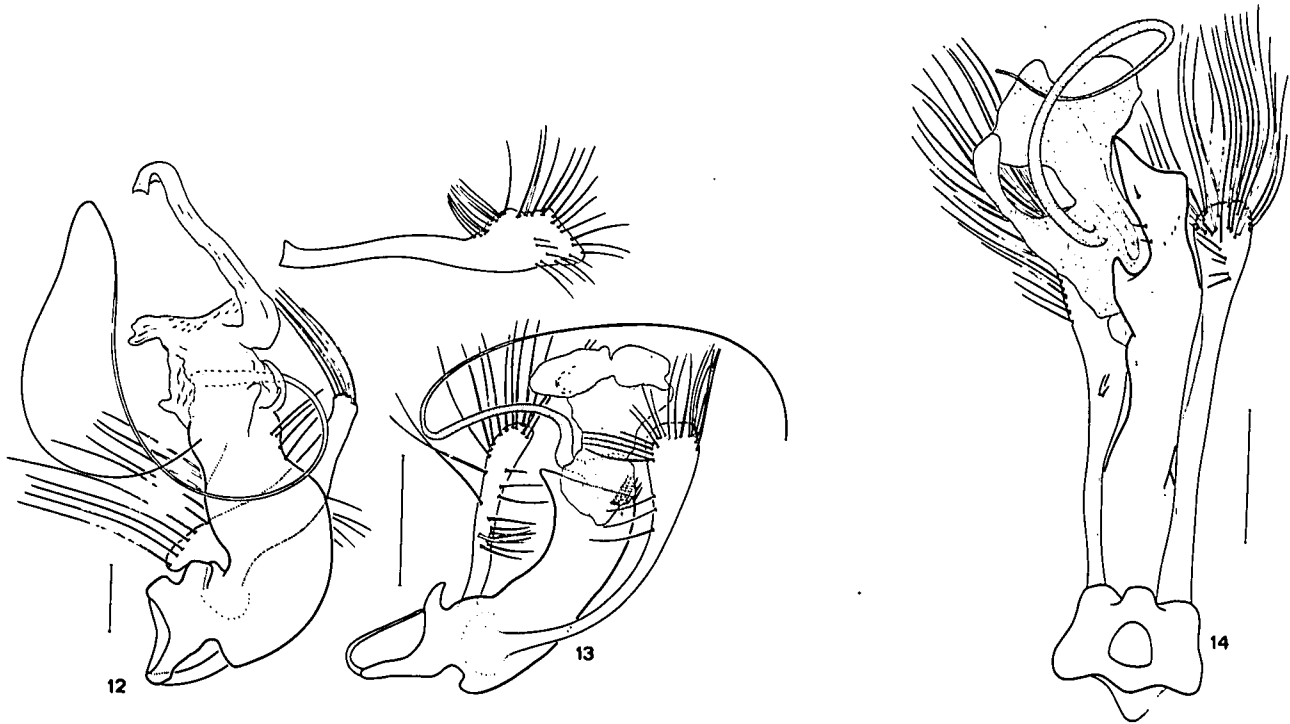


Fig.12-14: Aedeagus: 12) *Hydraena monscassius* n.sp., lateral view; right paramere drawn separately; 13) *Hydraena beyarslani* n.sp., lateral view; 14) *Hydraena abbasigili* n.sp., ventral aspect.

puncturation.

Aedeagus (fig. 15). Very similar to *H. damascaena*, but proximal lobe straight, not curved ventrally; right paramere more enlarged apically.

D i s t r i b u t i o n - Southern Turkey, Amanos (= Nur) and Akra Mountains.

Etymology - Greek, platyno (I enlarge) plus cnemis (tibia). Refers to the flattened metatibia of the male.

***Hydraena monscassius* sp.nov.**

Holotype ♂: "TR 23.5.1987 Yayladagi leg. Jäch (17)".

Paratype: 1 ♀ from the same locality.

2,6 mm long. Dark brown, appendages light brown, tips of palpi darkened. Also related to *H. damascaena* and its allies, but differs by the considerably larger size. Mesotibia of male like in *H. damascaena*, dilation of metatibia situated near midlength. Frons of female only slightly elevated. Females differ from other equally-sized species of the same group as follows: frontal callosity of the very similar *H. berytus* JÄCH stronger; *H. grandis*, *H. subgrandis*, *H. antiochena* and *H. aurita* with pronotum and elytra less wide; *H. platycnemis* with sides of pronotum more rounded.

Aedeagus (fig. 12) larger than in the two species described before. Distal lobe rather amorphous and weakly sclerotized. Border between proximal lobe and distal lobe not well defined. Right paramere short and very wide, left one widened in apical third.

D i s t r i b u t i o n - Southern Turkey, Akra Mountains.

Etymology - Mons Cassius was the Latin name for the Akra Mountains.

***Hydraena eucnemis* JANSSENS**

M a t e r i a l : 3 exs. from stn.67.

***Hydraena grandis* REITTER**

M a t e r i a l : 41 exs. from stn.25; 4 exs. from stn.43; 9 exs. from stn.44; 23 exs. from stn.45; 2 exs. from stn.79.

***Hydraena subgrandis* JÄCH**

M a t e r i a l : 5 exs. from stn.26; 2 exs. from stn.28; 14 exs. from stn.33; 8 exs. from stn.37; 34 exs. from stn.67; 25 exs. from stn.75.

***Hydraena antiochena* sp.nov.**

Holotype ♂ "TR 23.5.1987 Yayladagi leg. Jäch (17)".

Paratypes: 7 exs. from the same locality; 14 exs. from stn. 15; 41 exs. from stn. 28; 10 exs. from stn. 29; 3 exs. from stn. 15a; 11 exs. from stn.20; 54 exs. from stn.19.

2,5 - 2,7 (♂) and 2,4 - 2,5 (♀) mm long. Agrees in all main characters with *Hydraena aurita* from which it differs by the slightly smaller body size. Females of *H. platynemis* are immediately distinguished by the elytra, which are shorter, with larger punctures, steeper declivity and more acuminate apices.

Aedeagus (fig. 16): Very similar to *Hydraena aurita* (parameres identical). Proximal lobe more slender, its globular apex with tooth-like structures; border between proximal lobe and distal lobe not well defined.

D i s t r i b u t i o n - Southern Turkey, Amanos and Akra Mountains.

Etymology - Antiochia was the Latin name for the town Antakya, in the vicinity of which the species occurs abundantly.

***Hydraena olidipastoris* sp.nov.**

Holotype ♂: "TR 5.6.1987 Van-Baskale 2600 m Güzeldere P. leg. Jäch (62)".

Paratypes: 1 ♀ from stn. 61; 2 ♂♂ and 4 ♀♀ from stn.71.

♂: 2,8 - 2,9 mm and ♀: 2,5 - 2,6 mm long. Almost identical with *H. platynaspis* JÄCH, from which it differs only by the slightly smaller size (shorter elytra).

Aedeagus (fig. 17): Very similar to *H. platynaspis*. Proximal lobe less wide at apex (lateral aspect), subapical setae longer; distal lobe hyalin and largely amorphous like in *H. platynaspis*, but larger. Parameres identical with *H. platynaspis*.

D i s t r i b u t i o n - Eastern Turkey.

***Hydraena gressa* ORCHYMONT**

Hydraena gressa ORCHYMONT 1944 - Bull.Mus.v.Hist.nat.Belg.20 (5): 18.

M a t e r i a l : 2 exs. from stn.61; 11 exs. from stn.62.

Finding this species 1200 km east of its locus classicus is quite unexpected. Although I did not see the holotype, I have little doubt, that the 13 spe-

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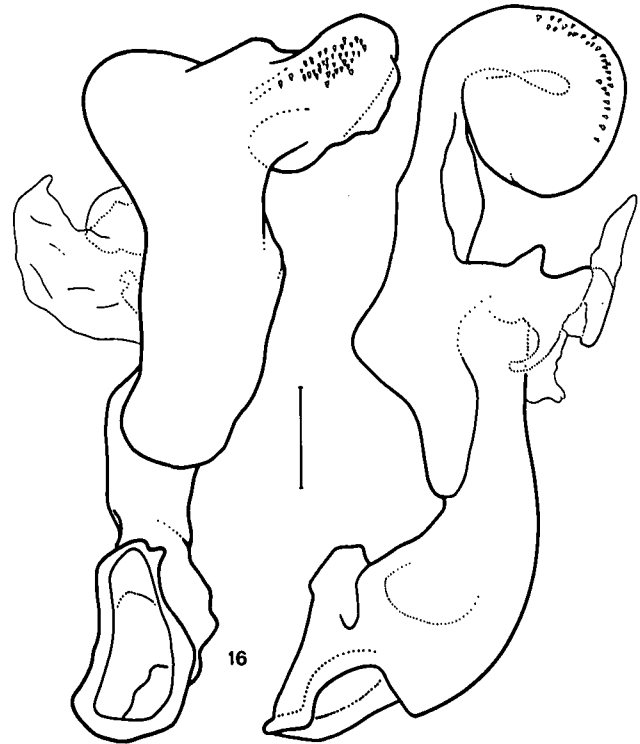
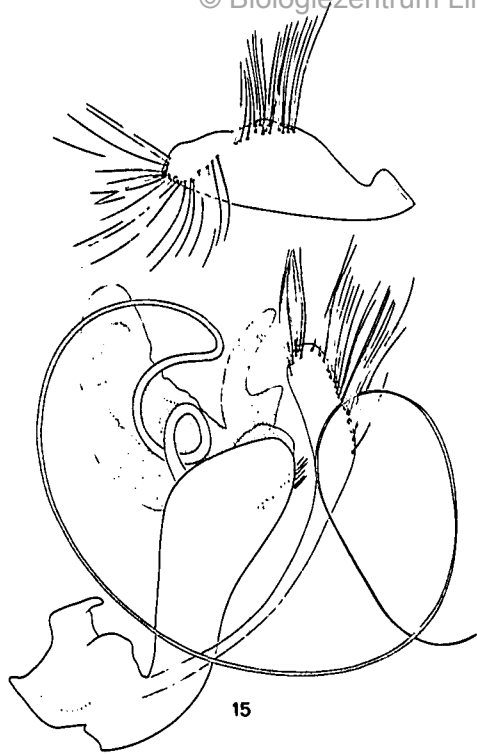


Fig.15-16: Aedeagus: 15) *Hydraena platycnemis* n.sp., lateral view; left paramere drawn separately; 16) *Hydraena antiochena* n.sp., ventral and lateral view; parameres not illustrated.

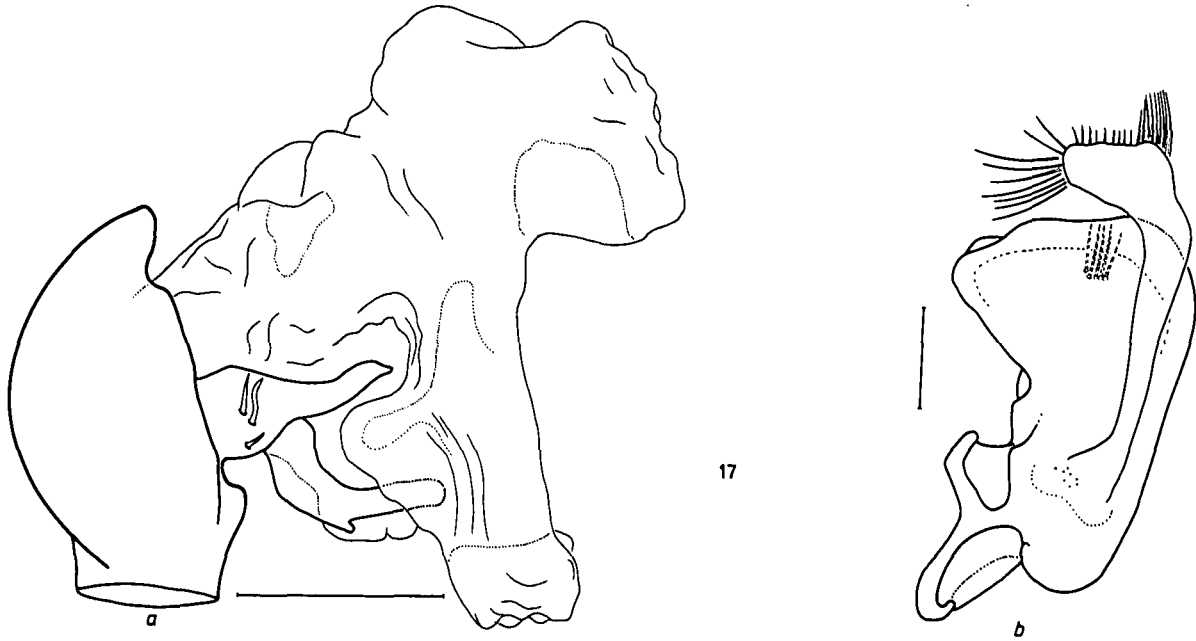


Fig.17: Aedeagus of *Hydraena olidipastoris* n.sp., dorsal view of apex (a); lateral view of proximal lobe and right paramere (b); left paramere not illustrated.



Fig.18-19: Aedeagus, lateral view: 18) *Hydraena gressa* ORCHYMONT; inset: same, ventral aspect; 19) *Hydraena muezziginea* n.sp.

cimens from the Güzeldere pass belong to *H. gressa*, as the aedeagus is very characteristic. The presence of small spines near the apex of the male metatibia was not mentioned in the original description.

The aedeagus (fig. 20) ist characterized by the lack of the left paramere. Its morphology indicates relationship with *H. taxila* JANSSENS and *H. orientalis* BREIT, which raises some doubts about its correct placement.

H. riparia - group

Hydraena speciosa ORCHYMONT

M a t e r i a l : 5 exs. from stn.4.

Hydraena helena ORCHYMONT

M a t e r i a l : 3 exs. from stn.15; 2 exs. from stn. 15a; 21 exs. from stn.17; 3 exs. from stn.37; 26 exs. from stn.66; 2 exs. from stn.68; 9 exs. from stn.71.

Hydraena morio KIESENWETTER

M a t e r i a l : 1 exs. from stn.5.

Hydraena riparia KUGELANN

M a t e r i a l : 4 exs. from stn.79.

Hydraena abbasigili sp.nov.

Holotype ♂: "TR 5.6.1987 Van-Baskale 2600 m Güzeldere P. leg. Jäch (61)".

Paratypes: 1 ♀ from stn.61; 1 ♂ and 1 ♀ from stn.57; 1 ♂ from stn.53.

2,1 - 2,3 mm long. Very dark species, body black, legs and palpi dark brown to black, darker than in other species of that group. This new species is closely related to *Hydraena pontica* from which it differs mainly by the darker colour and the coarser puncturation of pronotum and elytra. Meso- and metatibia of male like in *H. pontica* JANSSENS. Last segment of male palpi more or less symmetrical (paratypes) like in female or inner surface less convex than outer surface (holotype).

Aedeagus (fig.14) differs from *H. pontica* by the conspicuous apex of the proximal lobe (seen in ventral view) and by the shorter flagellum.

D i s t r i b u t i o n - Eastern Turkey.

Etymology - Named for A. Namik Abbasigil (Forst Department, Beytüşse-bap), who accompanied us during our trips through Hakkari Province and helped us catch insects and other animals.

P . p u l c h e l l a - g r o u p***Hydraena canakcioglu* JANSSENS**

Hydraena canakcioglu JANSSENS 1965. - Bull. Ann. Soc. R. Ent. Belg. 101: 83.

? *Hydraena aydini* JANSSENS 1968 - Bull. Ann. Soc. R. Ent. Belg. 104: 67. ?syn. nov.

M a t e r i a l : 7 exs. from stn.4; 1 ex. from stn.6; 4 exs. from stn.8; 14 exs. from stn.51; (1 ♀ from stn.79).

Widely distributed and variable species. Populations from northwestern Turkey (stns.4,6,8) differ morphologically from specimens of southeastern Turkey (stn.51): specimens from stn.51 with 1) stronger palpi (in ♂♂ usually stronger than in ♀♀) with inner side sometimes more arcuate than outer side; 2) colouration generally darker (blackened area of pronotum usually confined to disc in western specimens), pronotum - except a narrow anterior and posterior margin - black; 3) sides of pronotum more strongly convergent to posterior than to anterior margin, thus anterior margin conspicuously wider than posterior margin (only slightly wider in the western population).

Although I have not seen the types of *Hydraena aydini* JANSSENS, I am quite certain that it does belong to the same taxon, as the aedeagus (see JANSSENS 1968b, fig. 4) seems identical. The differences indicated in the original description could justify a subspecific status. More material has to be examined to solve this question.

***Hydraena phallerata* ORCHYMONT**

Hydraena phallerata ORCHYMONT 1944 - Bull. Mus. r. Hist. nat. Belg. 20(20): 5.

?*Hydraena byzantina* JANSSENS 1965. - Mém. Acad. r. Belg. Cl. Sci. 16(4): 46. ?syn. nov.

M a t e r i a l : 1 ♂ from stn.6; 1 ♀ from stn.4

Although I have not examined the type of *H. byzantina* there is little doubt that the latter is a synonym of *H. phallerata*.

Females differ from the western population of *H. canakcioglu* by the slightly stronger maxillary palpi and by the pronotum, which is much darker, wider (only slightly convergent to anterior margin) and less convex from left to right, giving it a flatter appearance. Elytra usually more ovoid in *H. canakcioglu*.

***Hydraena cappadocica* JÄCH**

M a t e r i a l : 1 ♂ from stn.51 and 1 ♂ from stn.71.

***Hydraena ebriomadli* sp.nov.**

Holotype ♂: "SO-TÜRKEI 31.5. Beytüssebap (47) leg. Jäch 1987".

Paratype: 1 ♀ from the same locality.

1,65 mm (♂) and 1,75 mm (♀) long. Brown, head and pronotum (except anterior and posterior margin) black; tips of palpi only very slightly darkened. This new species generally agrees with several other species of this group (*H. canakcioglu*, *H. phallerata*, *H. pulchella* GERMAR) in size, shape, colouration and secondary sexual characters. As all mentioned species are somewhat variable in these characters it is quite difficult to find general distinguishing features. Tips of elytra of male rather broadly and separately rounded, less acuminate than in the mentioned species. The female paratype differs from ♀♀ of *H. canakcioglu* by the elytra being more parallel, less ovoid and less acuminate at the apex; declivity steeper.

Aedeagus (fig. 21): Phallobasis more or less symmetrical and simple; proximal lobe bisinuate, with numerous apical setae and a group of ca. 10 setae situated further proximal on the dorsal side; distal lobe simple and only moderately sclerotized. Parameres simple and almost equal.

D i s t r i b u t i o n - Southeastern Turkey.

Etymology - This and the following 2 species are named for Michael M. Madl (Frauenkirchen, Burgenland), Hymenopterist.

***Hydraena modili* sp.nov.**

Holotype ♂: "TR 23.5.1987 Yayladagi leg. Jäch (17)".

Paratypes: 5 ♂♂ and 3 ♀♀ from the same locality.

1,6 - 1,85 mm long; ♀♀ slightly larger than ♂♂. Closely related to *H. ebriomadli* (aedeagal similarities) and other Turkish species (*H. muezziginea*, *H. phallerata*, *H. canakcioglu*). Males differ from all mentioned

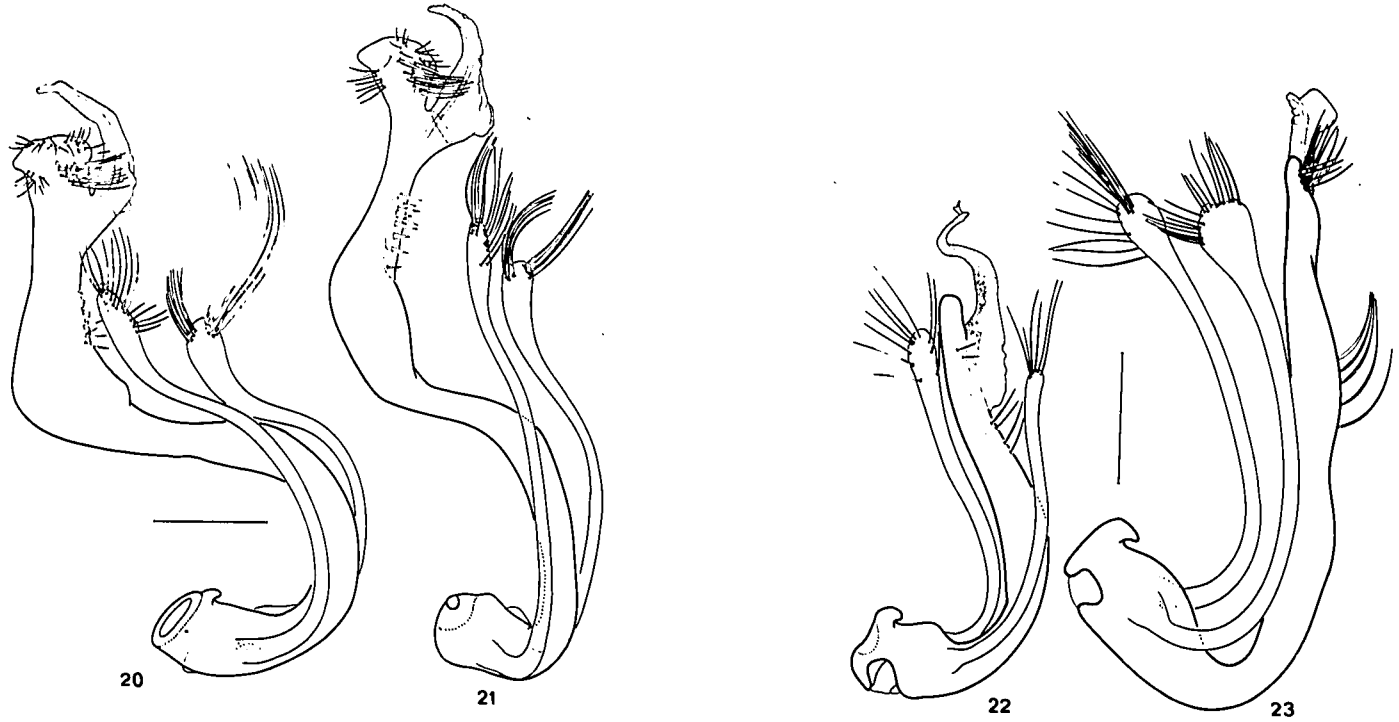


Fig.20-23: Aedeagus, lateral view: 20) *Hydraena modili* n.sp.; 21) *Hydraena ebrimadli* n.sp.; 22) *Hydraena schilfii* n.sp.; 23) *Hydraena schillhammeri* n.sp.

species by the long and slender elytra, which are slightly produced apically. Females are immediately recognized by the characteristically modified elytral apices: each elytron is slightly produced and excised apically; excision semicircular, terminated by the protruding spine-like suture and elytral margin.

Aedeagus (fig. 20) like in *H. ebriimadli*, but proximal lobe more slender (especially in apical half), distal lobe slightly shorter.

D i s t r i b u t i o n - Akra Mountains in southern Turkey.

***Hydraena muezziginea* sp.nov.**

Holotype ♂: "TR 8.6.1987 (66) 60 km sö von Tatvan, Jäch".

Paratypes: 6 exs. from the same locality.

1,65 - 1,8 mm long. Colouration like in *H. ebriimadli*, but elytra and pronotal margins more yellowish (like in *H. pulchella*) than brown. Differs from *H. pulchella* by the elytral apices, which are slightly less acuminate. Females differ from *H. canakcoglui* usually by the slightly less acuminate elytral apices (direct comparison) and from *H. ebriimadli* by the less convex elytra (apical declivity flatter).

Aedeagus (fig. 19): Proximal lobe long, slender and bisinuate; setation like in *H. ebriimadli* and *H. modili*; phallobasis simple and more or less symmetrical; distal lobe long and sinuous, only proximally sclerotized.

D i s t r i b u t i o n - Eastern Turkey.

***Hydraena schillhammeri* sp.nov.**

Holotype ♂: "TR 14. 6.1987 Yedigöller bei Bolu, Jäch (78)".

Paratypes: 2 ♀♀ from the same locality.

1,8 mm long. Dark brown, head and pronotum (except anterior and posterior margin) black; tips of plapi darkened. Closely related to *H. phallerata*, from which it generally differs by the large size (1,53 - 1,65 mm in *H. phallerata*) and the elytral striae being more regular; pronotum similar, but appearing slightly wider in *H. phallerata*. Males differ also by the more parallel elytra and the elytral apices, which are not acuminate in the new species; metatibia of male very feebly enlarged near middle. Elytral apices of female acuminate like in *H. phallerata*. *Hydraena turcica* JANSSENS, also described from western Anatolia is smaller, with shorter elytra and a more shining surface.

Aedeagus (fig. 23): Very similar to *H. phallerata* and *H. pulchella*, dif-

fering by the straight apex of the proximal lobe (ventrally deflexed in the two mentioned species); phallobasis symmetrical; distal lobe rather short.

D i s t r i b u t i o n - Northwestern Anatolia.

Etymology - This and the following species are dedicated to Harald Schilhammer (Mistelbach), specialist of Staphylinidae.

***Hydraena schilfii* sp.nov.**

Holotype ♂: "TR 3.6.1987 20 km w Semdinli leg. M. Jäch".

Paratype: 1 ♂ from stn.68.

1,7 mm - 1,8 mm long. Brown, head slightly darker. Pronotum rather wide, sides produced at middle and markedly convergent to anterior and posterior margin; disc with coarse punctures, posterointernal foveolae well developed. The pronotum of the paratype is more convex and less wide than that of the holotype. Elytra with ca. 8 rows of punctures between suture and shoulder; punctures large and coarse, not very deeply impressed, arranged in rather irregular series; lateral declivity of elytra markedly pronounced, forming a ridge; tips of elytra separately rounded; explanate margin only moderately developed. Mesotibia more or less straight, slightly enlarged near apex on inner surface; metatibia only weakly curved and conspicuously enlarged on inner surface in apical third.

Female unknown.

Aedeagus (fig. 22) closely resembles *Hydraena samia* JÄCH, but apex of proximal lobe straight (lateral aspect); dorsal setae shorter; left paramere less wide; phallobasis slightly asymmetrical.

The only other Turkish species with unicoloured brown pronotum, *Hydraena cappadocica* differs by its larger size, shape of pronotum and elytra and the modifications of meta- and mesotibia of male.

D i s t r i b u t i o n - Eastern Turkey.

***Hydraena serpentina* sp.nov.**

Holotype ♂: "TR 26.5.1957 w. Kilis leg. Jäch (28)".

Paratype: 1 ♂ from the same locality.

1,8 mm long. Elytra dark brown, head and pronotum almost black, body appendages paler brown, tips of palpi darkened. Clypeus and side of frons microreticulated and mat; middle of frons densely punctured, but inter-

spaces smooth. Pronotum hexagonal, basis narrower than anterior border; disc densely punctured, shining between punctures. Elytra subparallel, acuminate at apex; tips separately rounded; explanate margin moderately developed; punctures not very large, but deeply impressed and dense, arranged in 9 almost regular striae between suture and shoulder. Intercoxal sternite narrow and long. Secondary sexual characters almost obsolete: mesotibia with minute denticules in apical half.

Aedeagus (fig. 24): Proximal lobe simple and slender, with three pairs of short bristles; distal lobe forming a long winding flagellum; parameres slender, very simple and subequal.

Although *H. serpentina* is quite distinctive from all other members of this species-group, I am inclined to place it here due to aedeagal similarities: simple proximal lobe, simple and slender parameres; aedeagal setation resembles *H. schilfii*; phallobasis simple and slightly asymmetrical. Body shape resembles *Hydraena filum* ORCHYMONT, *H. finita* ORCHYMONT and *H. attaleiae* FERRO, which also seem to belong to the *H. pulchella*-group.

D i s t r i b u t i o n - Southern Turkey.

Etymology - Latin, *serpentinus* (= snake like). Refers to the shape of the aedeagal flagellum.

Genus *Haenydra* REY

Eight species of *Haenydra* have been recorded from Turkey so far: *H. amarantina* JANSSENS, *H. anatolica* JANSSENS, *H. cata* ORCHYMONT, *H. gracilis* GERMAR, *H. lazica* JANSSENS, *H. plastica* ORCHYMONT, *H. ponticola* JANSSENS and *H. scitula* ORCHYMONT. Two of these (*anatolica* and *ponticola*) unfortunately have been described from single females (JANSSENS 1963a,b). Both are probably synonyms.

In the course of the present survey, 8 species have been collected, 4 of which are new to science. One species is new to the Turkish fauna (*H. integra*), which raises the total number of *Haenydra* spp. known from Turkey to 11.

Haenydra gracilis GERMAR

M a t e r i a l : 10 exs. from stn. 2; 11 exs. from stn. 5; 1 exs. from

stn.6; 11 exs. from stn.51; 1 ex. from stn.61 and 15 exs. from stn.71.

Although I have not seen the type of *H. anatolica*, it seems probable, that it is a synonym of *H. gracilis*, as the distinguishing characters mentioned in the original description (chagration of clypeus, density of pronotal puncturation, shape of pronotum and length of maxillary palpus) are usually variable in this genus (even within populations).

***Haenydra graciloides* sp.nov.**

Holotype ♂: "TR 14.6.1987 Yedigöller bei Bolu, Jäch (78)".

Paratypes: 21 exs. from the same locality.

2,3 - 2,5 mm long. Despite the aedeagal similarities with *H. gracilis*, which prompts a close phylogenetic relationship between these two species, the external morphology is quite different. Males differ from *H. gracilis* by the larger size, the wider explanate margin of elytra, which end in a widely explanate and truncate apex. Females resemble *H. excisa* KIESEN-WETTER in having markedly produced and excised elytral tips. *Hydraena anatolica*, described from a locality not far from the type locality of *H. graciloides*, differs, according to the description by the smaller size and the narrower explanate margin of the elytra.

Aedeagus (fig. 25) extremely similar to *H. gracilis*; differs by the proximal lobe, which is shorter and less strongly curved in the proximal half.

D i s t r i b u t i o n - Northwestern Anatolia.

Etymology - Refers to the phylogenetical relation with *H. gracilis*.

***Haenydra plastica* ORCHYMONT**

Eight specimens from stn.78 agree with the description of this species. I have not seen the type.

***Haenydra scitula* ORCHYMONT**

M a t e r i a l : 9 exs. from stn.2; 4 exs. from stn.4; 9 exs. from stn.5;
12 exs. from stn.6.

***Haenydra integra* PRETNER**

Hydraena integra PRETNER 1931. - Col.Centr.5 (2/5): 110.

Hydraena integra ORCHYMONT 1935. - Bull.Mus.r.Hist.nat.Belg. 9 (5): 2.

? *Hydraena ponticola* JANSSENS 1968: Bull.Ann.Soc.R.Ent.Belg.104: 70.

? syn.nov.

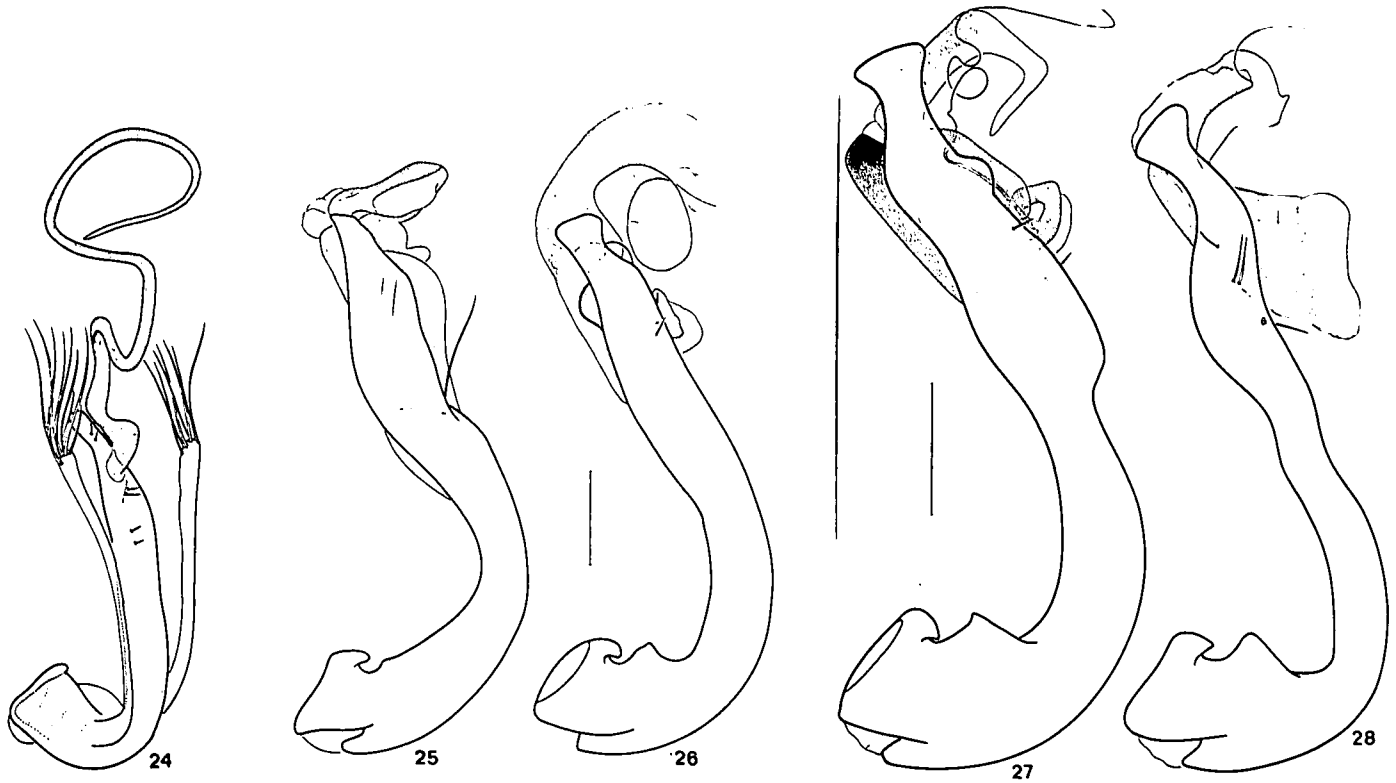


Fig.24-28: Aedeagus, lateral view: 24) *Hydraena serpentina* n.sp.; 25) *Haenydra graciloides* n.sp.; 26) *Haenydra fontis-carsavii* n.sp.; 27) *Haenydra terraevastatae* n.sp.; 28) *Haenydra niiguenae* n.sp.

M a t e r i a l : 8 exs. from stn.2; 46 exs. from stn.4; 22 exs. from stn.6; 2 exs. from stn.8; 1 ♂ from stn.71; 5 exs. from stn.78.

Although I have not seen the type of *Haenydra integra*, there is little doubt that the 84 specimens collected in northwestern and in eastern Anatolia are identical with *H. integra*, described from Achalciche (Georgia), near the Turkish boarder. The aedeagus agrees very well with the illustrations in the original description. The species shows little geographical variation: eastern specimens with wider elytra and stronger aedeagus, but with identical main characters. The females of this species are considerably different from those females which PRETNER (1931) and ORCHYMONT (1935) believed to be females of *H. integra* (and *H. caucasica* KUWERT). Thus the synonymy *H. caucasica* = *H. integra* (proposed by ORCHYMONT 1935) is incorrect. I have seen the female types of *H. caucasica*. The female of *H. integra* is similar to *H. cata* (tips of elytra separately rounded), from which it differs by the slightly narrower elytral margin, whereas *H. caucasica* (tips of elytra conjointly rounded, strongly cordiform pronotum) resembles *H. planata* KIESENWETTER, from which it differs by the less produced elytral apices.

Hydraena ponticola, described from northeastern Turkey might be a synonym of *H. integra*. JANSSENS (1968b) compared it with *H. cata* in the original description. I have not seen the female type.

***Haenydra terraevastatae* sp.nov.**

Holotype ♂: "TR 5.6.1987 Van-Baskale 2600 m Güzeldere P. leg. Jäch (61)".
Paratypes: 2 exs. from the same locality; 5 exs. from stn. 51; 3 exs. from stn.73; 7 exs. from stn.71; 2 exs. from stn.66; 2 exs. from stn.68 and 1 exs. from stn.53.

Males are very similar to *H. gracilis*, but differ by the wider pronotum and the tibial modifications; mesotibia slightly enlarged near apex; metatibia enlarged in apical third. Females are quite similar to *H. cata*, from which they differ by the tips of the elytra, which are conjointly and not separately rounded.

Aedeagus (fig. 27) obviously very similar to *H. khnzoriani* JANSSENS (see JANSSENS, 1968a, fig. 3), but shape of proximal lobe different: longer, dorsal convexity situated further proximal. Proximal lobe with two setae (one on the left and one on the right side); distal lobe with a long and very thin flagellum.

D i s t r i b u t i o n - Eastern Anatolia.

Etymology - Latin, terra (land) and vastatus (devastated). Refers to the precarious environmental situation in eastern Turkey.

***Haenydra fontiscarsavii* sp.nov.**

Holotype ♂: "TR 2.6.1987 Hakkari (50) Karstquelle, Jäch".

Paratypes: 8 exs. from the same locality; 11 exs. from stn.70.

Agrees in shape and size with *H. terraevastatae*, but elytral striae usually more deeply impressed in *H. terraevastatae*, the intervals being sometimes convex. Other characters such as shape of pronotum, acumination of female elytra and chagration of clypeus are somewhat variable and not significantly different from the mentioned species.

Aedeagus (fig. 26) very similar to *H. terraevastatae*, but proximal lobe straighter, distal lobe longer and flagellum much longer.

D i s t r i b u t i o n - Eastern Anatolia.

Etymology - Latin, fons (spring) and carsavius (karst). All species were collected in karst springs.

***Haenydra nilguenae* sp.nov.**

Holotype ♂: "TR 28.5.1987 (32) Karacadag bei Diyarbakir, Jäch".

1,9 mm long. Also closely related to *H. terraevastatae* from which it differs by the smaller size and the tibial modifications, which are almost obsolete.

Female unknown.

Aedeagus (fig. 28): Smaller and thinner than in *H. terraevastatae* and *H. fontiscarsavii*; proximal lobe with 4 setae (one on the right and 3 on the left side); flagellum of distal lobe rather short.

D i s t r i b u t i o n - Southeastern Turkey.

Etymology - Named for Dr.Nilgün Kazancı (Hacettepe University, Ankara), famous Turkish hydroentomologist.

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