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TAXONOMICAL, ZOOGEOGRAPHICAL AND PHYLOGENETICAL RELATIONS AMONG INDO-PACIFIC *DICERCA* ESCH. AND *POECILONOTA* ESCH. (COLEOPTERA: BUPRESTIDAE)

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ABSTRACT: The paper gives the taxonomical, zoogeographical and phylogenetical review of East Asian representatives of the genera *Dicerca* Esch. and *Poecilonota* Esch. 16 [incl. one new] subspecies in 12 species have been keyed and described, their distribution mapped and phylogenetic relationships tentatively reconstructed. Besides, several extralimital taxa have been remarked upon, and new name proposed for the preoccupied *Tristria* Hoł.

KEY WORDS: Coleoptera, Buprestidae, Dicercina, new taxa, synonymy, phylogeny, distribution, East Asia, MICSEQ.

CONTENTS

INTRODUCTION

In the frame of my long-term project "A review of the Indo-Pacific **Buprestidae Leach (Coleoptera)**" I (Hołyński, 1999) presented a comprehensive taxonomical, zoogeographical and phylogenetical review of the South- and East-Asian representatives of the "**Psilopterina Lac." [=Dicercina Gistl]** as my doctor's dissertation which, however, has not been published as a whole [the paper on *Ovalisia* Kerr. (Hołyński, 2000), as well as some other descriptive (Hołyński, 2001a,b) and "theoretical" (Hołyński, 2001d,e) contributions, are parts of this]. The aim of the present paper is to recapitulate the current state of knowledge, clarify some hitherto unresolved taxonomic questions, and propose a preliminary outline of hypothetical reconstruction of phylogeny of two closely [contra Volkovitsh, 2001) related genera *Dicerca* Esch. and *Poecilonota* Esch., only marginally entering the Indo-Pacific Region but significantly represented in its border-areas in China and Japan. I also use this occasion to propose a replacement name for the preoccupied *Tristria* Hoł.

The understanding of the taxonomic relations within the **Buprestidae Leach** remains still "*in statu nascendi*"; I follow here the most recent comprehensive, critical reassessment of the suprageneric subdivisions of the family proposed by me (Hołyński, 1993) – Volkovitsh's (2001) classification **of antennal structures** was admittedly not intended as that of the **Buprestidae Leach** in general, while Kolibáč's (2000) as fiercely "promoted" as deplorably "substantiated" (Hołyński, 2002) proposals are difficult to discuss and

seriously consider at all. At the infrasubgeneric levels I apply the concept of "circle" (Hołyński, 1992a), the "morphoevolutionary" criterion of species-status (Hołyński, 1977 and 1992b), and Amadon's (1949) "75% rule" for subspecies.

Phylogenetic reconstructions have been done with a new (Hołyński, 2001c) distance-method, MICSEQ, supplemented by parallel (though – due to some restrictions imposed by the program – applying slightly different coding and weighting of traits [=character-states]) overall-parsimony analysis by Hennig86 [mhennig* bb*]. The results of the two reconstructions markedly differ in several points, the cause being apparently not so much the above-mentioned difference in coding and weighting but rather the two kinds of "bias" shown by the parsimony program. On the one hand, there is a strong tendency towards "pectinate", asymmetrical shape of the cladogram: this appears in "absolute" form in the case of *Poecilonota* Esch., but is quite evident also in that of *Dicerca* Esch. On the other, Hennig86 seems to pair longest terminal branches (most differentiated taxa) together and preferentially place them on the "top" of clades: a striking example of this phenomenon is the position of *Touzalinia* Thy. – *Dicerca nishidai* Tma. pair on the parsimony-cladogram, but suggested relationships within the outgroup-clade (*Ovalisia* Kerr. s.l.) are at least as instructive.

In the systematic part all (except evidently accidental "import", *Dicerca sexualis* Crotch – see below under **General characteristics** of the genus) species known to me as certainly or reportedly occurring in East Asia have been keyed and described (keys for subspecies include all – also extralimital – races of East Asian species); the phylogenetic reconstructions include also some Western Palaearctic and Nearctic taxa (selected from among the representatives of possibly all main morphological tendencies)

Particular statements concerning the respective form have not always been checked against all the "material examined": e.g. identification keys were primarily constructed on the basis of all the accessible representatives of the taxon, but if the process of verification eventually revealed the necessity of making some improvements, the final version may be partly or totally based on only those specimens available to me thereafter; measurements are almost invariably taken from only a part of the determined individuals, and this is especially true of descriptions, made typically with only my own collection and actually borrowed material before me. The measurements given are as a rule based exclusively on specimens measured by myself (with their number in square brackets); if they are exceptionally taken from other sources, then the relevant literature is quoted. Length of the body is measured from the anteriormost point of eyes to the tips of elytra; width measurements were taken always just behind humeral protuberances, even if this was not the widest part of the body. Geographical distribution is presented according to both literature and collections, but maps include exclusively the data from the specimens

examined by me (and from holotypes, which "by definition" surely belong to the taxon in question).

The "ideal" key to East Asian **Dicercina Gistl** should include all (i.e. also those **not** known to occur in the Region) genera, all subgenera of East Asian genera, all species of Indo-Pacific subgenera, and all subspecies of East Asian species; this would enable any representative of an unexpected taxon (like the above-mentioned *Dicerca sexualis* Crotch) to be recognized as such and put aside for special treatment. I usually try to follow this principle whenever extralimital subunits [their names are put in square brackets] are not too numerous; otherwise – as in the case of predominantly Nearctic genera treated in this paper – for obvious practical reasons only the species known or likely to occur in the study area could be included. For the same purpose of minimizing the probability of misinterpretations, I try to avoid characters applying only to the keyed taxa; that is to say, if e.g. the scutellum is characterized as "small, not wider than 2. interstria", this is intended to mean (unless the contrary is explicitly stated) that in all – East Asian and extralimital, included in the key or not – known species of the respective group of taxa scutellum is small.

In the "material examined" – unless specifically stated otherwise – only specimens from the area under study are included, what in case of common but predominantly extralimital species may lead to seemingly contradictory statements (like "*material examined: none*", followed by remarks evidently referring to specimens seen by me).

As in my other recent works, in the enumeration of the type-material the individual labels are cited in quotation mark.

Collection names have been abbreviated as follows:
BMNH= Natural History Museum, London, ENGLAND;
KBIN= Koninklijk Belgisch Instituut voor Natuurwetenschappen, Bruxelles, BELGIUM;
RBH= Roman B. Hołyński, Milanówek, POLAND;
SB= Svatopluk Bílý, Prague, BOHEMIA;
USNM= Smithsonian Institution: National Museum of Natural History, Washington, USA

Besides, the following abbreviations are used in morphological descriptions:
dfp = "dense-and-fine punctulation" or "densely-and-finely punctulate"; refers to the type of sculpture, especially characteristic of representatives of some subtribes (**Chrysochroina Cast.**, **Chalcophorina Lac.**, **Lampropeplina Hoł.**, **Hypoprasina Hoł.**, **Dicercina Gistl**, &c.) of the **Buprestini Leach**, occurring mainly in depressed areas (foveae, sulci), and consisting of fine, dense, regular punctulation on usually distinctly microsculptured background, often covered with dense pubescence and frequently pulverulent.
L = length
W = width
BW = basal width
AW = apical width
MW= maximum width
V = width of vertex between eyes
H = width of head with eyes
i.l. = (in litteris): unpublished (collection-, manuscript-, &c.) name
issp. = infrasubspecific, unavailable name

SQ = "support quotient"; SQ=**x/y** [where **x** is the "corrected distance" (at the relevant stage of analysis, i.e. when the particular pairing is being performed) between the paired taxa, and y – the shortest distance between any of them and any of those remaining "in game"; of course the interpretation of the "quotient" should not be "overmathematized": SQ=1/2 is evidently ***not*** equivalent to 15/30!]
pu. = phenun ("phenetic unit"): unit of distance shown in distance-matrix; 1 pu. = distance between two neighbour traits ["character states"] in transformation chain, if the weight is settled as 1

SYSTEMATIC REVIEW

D i c e r c i n a G i s t l

Dicercaeidae Gistl, 1848b: [cover] 3
= Psilopterites Lacordaire, 1857: 26
= Poecilonotina Jakobson, 1913: 773
= Capnodina Jakobson, 1913: 779

General characteristics:

Large, nearly (except Oceania) cosmopolitan subtribe, variously interpreted by previous authors. In the traditional scheme, proposed by Lacordaire (1857) and accepted with little modifications by virtually all subsequent students, it was divided (on sole grounds of different distribution of antennal sensory pores) as two separate tribes between two subfamilies: the **Chalcophorinae Lac.** ("**Psilopterini Lac.**") and **Buprestinae Leach** ("**Dicercini Kerr.**"); it was Richter (1949, 1952) who pointed out to the untenability of such classification and merged the "**Dicercini Kerr.**" with **Psilopterini Lac.** (and, by the way, **Chalcophorinae Lac.** with **Buprestinae Leach**), but his arguments were totally neglected – the adherence of buprestidologists to the traditional arrangement and to the single-feature VIC [Very Important Character]-taxonomy was too strong. Almost half a century later Tôyama (1987) removed *Pseudoperotis* Obb. to newly erected **Pseudoperotini Tma.**, and I (Hołyński 1993) – in the framework of general rearrangement of buprestid classification – ranked the above-mentioned "tribes" and "subfamilies" as subtribes of the large tribe **Buprestini Leach**, confirmed the merger of the "**Dicercini Kerr.**" into, and removal of the **Pseudoperotina Tma.** (to which I added also *Chalcopoecila* Ths.) from, the "**Psilopterina Lac.**", and separated some other groups (**Phrixiina Cob.**, **Haplotrinchina Hoł.**) traditionally included (at least in part) in this group. At last Bílý (1997) has shown, that *Pagdeniella* Thy., considered hitherto as a close relative of *Philanthaxia* Deyr. (**Anthaxiini C.G.**: **Bubastina Obb.**), is in fact inseparable from *Ovalisia* Kerr. So understood, the **Dicercina Gistl** [according to Bellamy (2003) the family-level name based on *Dicerca* Esch. has been first proposed by Gistl (1848b) rather than – as traditionally quoted – by Kerremans (1893a), and so has priority over **Psilopterides Lacordaire 1857**; I have been unable to check Gistl's publication personally, but see no reason to disbelieve my colleague's conclusion] include some 600 or 700 species in ca. 15 genera, of which

9 (*Cyphonota* Dej., *Capnodis* Esch., *Dicercomorpha* Deyr., *Zoolrecordia* n.n., *Touzalinia* Thy., *Psiloptera* Dej., *Dicerca* Esch., *Poecilonota* Esch. and *Ovalisia* Kerr.), with ca. 100 species, occur in the Indo-Pacific Region or its vicinities.

Key to Palaearctic and Indo-Pacific genera of the subtribe Dicercina Gistl

1 (2) Body very short: L:W<2.25.....***Cyphonota* Dej.**

2 (1) Body [except in some extralimital *Psiloptera* Dej. (*Polybothris* Spin.)] more elongated: L:W>2.35

3 (4) Body totally glabrous, even ventral side without pubescence *Capnodis* Esch.

4 (3) At least some parts of underside pubescent

5 (6) Inner surface of femora deeply longitudinally furrowed (to receive tibiae in repose) between pair of smooth carinae extending from tip to near base ....***Dicercomorpha* Deyr.**

6 (5) Femora without distinct furrows, at most with slight poorly delimited depression on apical half

7 (12) Medial parts of prosternal process separated from lateral rims by deep striae; scutellum small, not wider than 2. interstria, or elytra with 13 striae

8 (9) Elytra with 13 striae; 1., 3., 6., 9., and 12 interstria elevated as costae. Pronotum regularly narrowly sulcate along midline .....***Zoolrecordia* n.n.**

9 (8) Elytra with 10 striae (scutellar not counted); all interstriae equally elevated and/or pronotum without median sulcus

10 (11) 11. interstria smooth, clearly delimited from epipleura, so elytral margin not crenulate .....***Psiloptera* Dej.**

11 (10) 11. interstria interrupted – like others – by coarse foveolate punctures and not clearly delimited from epipleura, so elytral margin (especially in apical part) distinctly crenulate .....***Touzalinia* Thy.**

12 (7) Prosternal process without lateral striae and/or scutellum rather large, much (usually two times or more) wider than 2. interstria; elytra with 10 striae

13 (14) Scutellum small, about as long as wide, not wider than 2. interstria (fig. 1) ....***Dicerca* Esch.**

14 (13) Scutellum large and/or much wider than long and than 2. interstria (fig. 2)

15 (16) Body black or dark-brown with more metallic (cupreous or greenish) dfp depressions. Pronotum with very conspicuous, elevated, lustrous median carina. Elytra in Indopacific species distinctly caudate [in extralimital races of *P. variolosa* (Pk.) not or but inconspicuously so, but then width of body above 6 mm.]. .....***Poecilonota* Esch.**

16 (15) Body bright green to cupreous; or – if black or dark-brown – width of body less than 4.5 mm., elytra not caudate, and median line of pronotum undifferentiated or with not elevated, mat, dark spot[-s] .....***Ovalisia* Kerr.**

***Zoolrecordia* nom. nov.**
Tristria Hołyński, 2001a: 132-133 nec Stål 1873: 40 (Orthoptera)
[type-sp.: *Dicercomorpha cupreomaculata* Saunders, 1867]

Remarks:
Dr. John K. Page, Production Manager of the Zoological Record, has kindly drawn my attention to the homonymy between the name *Tristria* Hoł. proposed by me (Hołyński, 2001a) some years ago for *Dicercomorpha cupreomaculata* Snd., and *Tristria* Stål, 1873 applied to the simultaneously described Chinese orthopteran *Tristria lacerta* Stål, 1873. I have the great pleasure to substitute my preoccupied name with *Zoolrecordia* n.n., in recognition of the formidable work of the compilers of Zoological Record and their invaluable service for all biologists in general and zoological taxonomists in particular.

***Dicerca* Esch.**
Dicerea [err.] Eschscholtz, 1829: 9 [type-sp.: *Buprestis aenea* Linnaeus, 1761]

General characteristics:
Large genus, widely distributed (**map 1**) throughout northern Eurasia (16 spp.) and N-America (27 spp. – Nelson, 1975); 9 species have been reported from the area under study [in USNM I saw also a specimen of Nearctic *D. sexualis* Crotch collected in Japan, 23 VIII 1968; the label-remark "*in aircraft*", and the fact that this species has – to my knowledge – never been reported from Asia, make it justified to disregard it herein]. A combination of bronzed to black colouration, small scutellum, "caudate" elytra with more or less clearly developed rows of small smooth elevated "mirrors" on densely punctured background, longitudinally depressed prosternal process without marginal stria, &c., make the genus rather distinctive. The systematic relations are poorly understood; in Eurasia three subgenera have been described, of which only the nominotypic *Dicerca* Esch. s.str. certainly occurs within the study area: "sg. *Argante* Gistl" was traditionally considered to contain two very rare, relict species in Europe (one of which has been once recorded from China: prov. Shantung), but recently extended by Nelson (1998) to include his Nearctic "*tenebrosa*-group", and only in radically extended interpretation (see **Phylogenetic relations** below) includes undoubtedly East-Asian taxa; the distribution of the monotypic "sg. *Hemidicerca* Richt." is restricted to areas around the southern end of the Caspian Sea. Beyond serious doubt, these groupings as hitherto defined – based on evident overestimation of the importance of few characters in few species of somewhat aberrant morphology – do ***not*** warrant taxonomic recognition: the "diagnostic" (mostly sexual, so notoriously irreliable as evidence of evolutionary relationship – see Hołyński, 1999 and [in press] for discussion of the point) features of *Argante* Gistl or *Hemidicerca* Richt. are but extremal "states" of highly variable characters, whose development in particular species shows no apparent

correlation either to one another or to anything else. Recently Hattori (2004) separated *D. nishidai* Tma. into a new genus *Tokaranodicerca* Hri.; the species evidently shows some distinctive characteristics which, however, do not seem sufficient to warrant the generic or probably even subgeneric rank, so I tentatively treat that species as the sole representative of a monotypic circle within the nominotypical subgenus – but the question remains unsolved until examination of actual specimens.

Phylogenetic relations:

[I have never seen either *D. latouchei* Frm. or *D. nishidai* Tma. in nature, and *D. kurosawai* H.A. was also not available to me at the time of the analysis, so the features attributed to these species in the phylogenetic reconstruction have been quoted partly (*D. kurosawai* H.A.) or exclusively from the literature]

As mentioned in the INTRODUCTION, results of reconstruction with Hennig86 (**fig. 3**) markedly differ from those done with MICSEQ (**fig. 4**), what I attribute mainly to the former's bias towards producing "pectinate" cladograms and placing the most distinctive taxa on top of clades rather than at their bottom (a manifestation of the "long branch effect"?). Neither of these tendencies seems easily derivable from known evolutionary mechanisms, and this – besides my general disbelief towards the "overall parsimony" (see Hołyński, 2001c for justification) – is one of the reasons of my greater trust in more "directly cladistic" algorithm of MICSEQ, which is also more flexible (and, consequently, allows more precision) in coding and weighting (linear, branching, circular transformation-series are equally admissible, as well as differential weighting of various "steps" within them).

In case of *Dicerca* Esch. the difference in "symmetry" of the cladograms is less apparent, but the appearance of the *Touzalinia* Thy. – *Dicerca nishidai* Tma. pair as the uppermost twig of one of the two major clades is not easily explainable without adducing "long branch attraction" or similar effect. *Touzalinia* Thy. is probably relict genus, markedly different from *Dicerca* Esch., containing two or three subspecies in one or two species known from five widely scattered localities in southern China, Burma and Siam; very distinctive – Hattori (2004) proposed to separate it into a monotypic genus – and apparently relictuous (restricted to one small islet) *Dicerca nishidai* Tma. shows indeed some similarities to *Touzalinia* Thy. and their phylogenetic affinity (suggested also by MICSEQ) may be true, but the position of the resulting clade near the root of the MICSEQ-cladogram – as the "sister" to all the remaining *Dicerca* Esch. – looks much more plausible than as the "youngest twin-daughters" (or, rather, great-granddaughters...) of the "family" consisting of such, widely distributed over three continents but nevertheless much less differentiated, common species as Nearctic *Dicerca lurida* (F.) and *D. pugionata* (Grm.), mainly or exclusively European *D. alni* (F.-W.), *D. berolinensis*

(Hbst.) and *D. aenea* (L.), followed by morphologically somewhat discrepant and geographically more restricted (around southern parts of Caspian Sea) *D. fritillum* Mén. and then again very distinctive Formosan endemic *D. unokichii* Hri.; apparently in the analysis by Hennig86 some inversion of polarity has occurred.

The group traditionally distinguished as a genus or subgenus *Argante* Gistl has not been recovered either in its original [Palaearctic *D. moesta* (F.) + *D. herbsti* (Ksw.)] or extended by Nelson (1998) [+ Nearctic *Tenebrosa*-circle] shape, but appears on both cladograms as including East Asian *D. tibialis* Lew., *D. corrugata* Frm. and *D. kurosawai* H.A.; the most striking difference is that Hennig86 places two quite unexpected species, American *D. horni* Crotch and Palaearctic *D. amphibia* Mars., in midst of the clade [near its top: as consecutive sister-taxa of the *D. moesta* (F.) – *D. sexualis* Crotch – *D. punctulata* (Schh.) group], while the *D. herbsti* (Ksw.) – *D. tenebrosa* (Kby.) sister-pair, apparently the most "typical" representatives of the group, make the basalmost branch – here also the arrangement suggested by MICSEQ looks much more natural and closer to the truth.

Already my previous (Hołyński, 1999) analysis indicated that "*the leitmotiv of the distributional evolution of Dicerca Esch. seems to be the recurrent cycle of separation and reunion between Palaearctic and Nearctic part of its vast area*", and the present reconstruction fully confirmed this conclusion: not only the genus as a whole but all its major – and several minor – clades contain both Palaearctic and Nearctic taxa; moreover, its morphoevolutionary history – most traits appearing convergently here and there on distant branches of the cladogram – looks equally complex. If we accept – and I do – that *D. nishidai* Tma. represents the basal (as in MICSEQ) rather than terminal (suggested by Hennig86) branch, and that *Touzalinia* Thy. is the sister-group of either *D. nishidai* Tma. (as in both cladograms) or – what I consider more probable – of the whole *Dicerca* Esch., then the genus should have evolved in East Asia; if, however, its closest relative is (as traditionally believed and reflected in most classifications) *Poecilonota* Esch., then North American origin seems more likely. The general picture of further history is rather obscure: the species seem to have dispersed chaotically from East to West and from West to East, with no clear pattern discernible; this lack of clarity may, however, be partly due to the fact, that I concentrated on Asian species and included in the analysis only relatively few of numerous American representatives of the genus; as Palaearctic/Oriental species make a highly polyphyletic assemblage, such bias must have negatively influenced the clarity of the obtained results, and the clarification of the dispersal history of *Dicerca* Esch. must wait until all (or at least the majority of) representatives of this predominantly Nearctic group are included in the analysis.

Sg. *Dicerca* Esch. s. str.

Dicerea [erratim] Eschscholtz, 1829: 9 [type-sp.: *Buprestis aenea* Linnaeus, 1761]
= *Argante* Gistl, 1834: 10 [type-sp.: *Buprestis moesta* Fabricius, 1792]
= *Stenuris* Kirby, 1837: 154-156 [type-sp.: *Buprestis lurida* Fabricius, 1775]
= *Hemidicerca* Richter, 1952: 132-133 [type-sp.: *Dicerca fritillum* Ménétriés, 1832]
= *Tokaranodicerca* Hattori, 2004: 140-144 [type-sp.: *Dicerca nishidai* Tôyama, 1986]

Remarks:

Until the status of *Tokaranodicerca* Hri. has been fully clarified, I tentatively consider *Dicerca* Esch. as consisting of the nominotypical subgenus only; also its subdivision into circles is but provisionally proposed herein, pending more extensive study of extralimital taxa.

Key to the Indo-Pacific species of the subgenus *Dicerca* Esch. s. str.

1 (18) Elytra glabrous

2 (7) Outer denticle on elytral apex totally obliterated (**fig. 5**)

3 (4) Pronotum cordiform: at deepest prebasal sinuation narrower or at least subequal to ca. 0.90 of maximum width. Apex of anal sternite in female simply rounded; male mesotibiae simple (**fig. 7**) ..... ***D.* (s.str.) *moesta* (F.)**

4 (3) Pronotal sides subparallel (nowhere less than 0.95 of maximum width) in basal half. Anal sternite in female with two deep apical notches (**fig. 10**) or broadly, more or less bisinuately truncated; male mesotibiae with long inwardly directed spine at proximal third

5 (6) Body slender (L:W>2.9). Front almost flat. Punctures in elytral striae fine, much narrower than interstriae ..... ***D.* (s.str.) *furcata* (Thb.)**

6 (5) Body broad (L:W<2.7). Anterior part of front rather deeply depressed. Punctures in striae coarse, subequal in width to interstriae ..... ***D.* (s.str.) *amphibia* Mars.**

7 (2) Elytral apex distinctly emarginate and bidenticulate (**fig. 6**)

8 (15) Pronotum with 4 or 5 smooth stripes or elevated carinae; elytra costate

9 (14) Pronotum glabrous

10 (13) Median line of pronotum carinate; posterior angles acute

11 (12) Each side of sternites 2.-4. with deep foveola densely covered with white toment. Male mesotibiae unarmed ..... ***D.* (s.str.) *kurosawai* H.A.**

12 (11) Sternites without distinct foveolae on sides. Male mesotibiae with long "spur" (**fig. 9**) ..... ***D.* (s.str.) *corrugata* Frm.**

13 (10) Median line of pronotum sulcate without carina; basal angles right .... ***D.* (s.str.) *latouchei* Frm.**

14 (9) Pronotum with long erect pubescence ..... ***D.* (s.str.) *tibialis* Lew.**

15 (8) Pronotum without smooth stripes or carinae; elytral interstriae equally elevated

16 (17) Body slender (L:W>2.9). Elytral interstriae distinctly convex, reliefs ("mirrors") elevated .....***D.* (s.str.) *unokichii* Hri.**

17 (16) Body robust (L:W<2.8). Elytral interstriae, including "mirrors", flat ....***D.* (s.str.) *aenea* (L.)**

18 (1) Elytra with sparse and irregular but distinct, erect pubescence ....***D.* (s.str.) *nishidai* Tma.**

Nishidai-circle

Dicerca (s.str.) *nishidai* Tma.

Dicerca nishidai Tôyama, 1986: 18-19

Material examined:

None

Characters:

"Body relatively large and robust, strongly attenuate posteriorly; head and pronotum black distinctly tinged aeneo-aureous; elytra black, very sparsely and not uniformly inlaid with inconspicuous aeneo-aureous spots, each with two aeneo-aureous markings, the small one near the side at the anterior third, and the large and transverse one between the fourth costa and the side at the posterior third; ventral surface entirely black with aeneo-aureous tinge; antennae and legs black.

Head distinctly narrower than the base of pronotum; frons distinctly narrowed by antennal cavities anteriorly, coarsely and strongly rugose, sparsely clothed with long, inconspicuous, silver-whitish hairs; eyes with the internal rims arcuately produced, and distinctly converging above in frontal aspect; clypeal suture absent; clypeus with the internal and ventral margin arcuately emarginate; antennal cavities large and subtriangular, with the internal and ventral margins distinctly raised; antennae slender, lax, eleven-segmented and serrate from the fourth segment, with the first segment the stoutest and about twice as long as the second, which is globular, the third less stout, slightly shorter than the second, the fourth subtriangular, about as long as the first.

Pronotum transverse, about 1.5 times as wide as long, widest at base; sides arcuately expanded from anterior to posterior margin, but they are very slightly sinuate near all the angles; anterior margin broadly and arcuately emarginate, about 1.5 times as wide as the posterior; posterior margin bisinuate, with median lobe arcuately produced; anterior angles subrectangular and produced in dorsal aspect; posterior angles slightly acute in dorsal aspect; marginal carinae absent; disc convex, with three, very shallow and longitudinal depressions at middle, two small and profound pores just before scutellum; surface rather densely punctate in the depressions, sparsely punctate in the areas along depressions, densely and coarsely

punctate in the broad areas along the sides. Scutellum very small, elliptical, slightly depressed at middle.

Elytra about 2.2 times as long as wide, about 4.0 times as long as pronotum, widest just behind humeri; sides expanded behind humeri, very slightly convergent to the middle, then sinuously and strongly convergent to the tips; apices slightly separated, each with an arcuate emargination between short spines; basal margins broadly and arcuately produced at middle; suturel margin slightly elevated in posterior two thirds; lateral margin unarmed and broadly trisinuate in lateral aspect; disc densely, strongly and longitudinally punctate, the punctures becoming denser towards the sides, and forming nine distinct longitudinal rows, longitudinally costate between the rows, the costae becoming more inconspicuous towards the sides, very sparsely clothed with fine silver-whitish hairs.

Ventral surface evenly and coarsely punctate, and rather sparsely clothed with fine, silver-whitish hairs. Prosternum convex, with the anterior margin arcuately emarginate throughout; prosternal process constricted between anterior coxal cavities, roundly expanded just behind anterior coxal cavities, then emarginately attenuate to the tip, which is rounded, longitudinally depressed at middle. Metasternum with a distinct median groove. Abdomen with the first visible ventral segment shallowly depressed at middle, the anal one roundly emarginate at apex.

Legs punctate, and clothed with fine silver-whitish hairs; middle tibia with a distinct tooth at the basal third; posterior tarsi with the first segment about as long as the second.

Length: 21.0 mm; width: 7.5 mm.

Holotype: ♂, Kusuki, Nakanoshima Is., Tokara, Kagoshima Pref., 24. VII. 1986, N. Nishida lgt.

Remarks. *The present species is easily distinguished from the other congeners by the remarkable elytral markings. The holotype is deposited in the National Science Museum (Nat. Hist.), Tokyo.*" (Tôyama 1986).

Geographical distribution (map 2):

Known only from the holotype and two specimens (♂ and ♀) collected by T. Hattori in the type-locality. Develops probably on *Morus* sp. (Hattori, 2004).

Remarks:

The species is remarkable by its pilose elytra with two golden-cupreous markings on each; Hattori (2004) emphasizes also the maximum height of body at the elytral base, flat tetragonal distal (6.–10.) antennal joints with more scattered sensory pores, lack of laterobasal depressions on pronotum, flat and smooth prosternal process with lateral groove, wider tarsal pads, and differences in wing venation.

***Unokichii*-circle**

***Dicerca* (s.str.) *unokichii* Hri.**

Dicerca unokichii Hattori, 1991: 57-60

Material examined:

Paratypes: „Kukuang (1300 m), Taichung-hsien, TAIWAN, 7 V 1990, leg. Luo Chinchi" „PARATYPE" „*Dicerca unokichii* T. Hattori, 1991, Det. T. Hattori, 1992" [1 ♂ (SB)]; "Kukuang (1300 m.), Taichung-hsuen, (TAIWAN), 9. Sep. 1989., T. Hattori leg." "*Dicerca unokichii* Hattori, 1991, Det. K. Akiyama, 1993" "PARATYPE" [1 ♂ (RBH: BPfik)]

Additional material: 1 ♂, 1 ♀

Characters:

Male [3] 15.5×5.5–19×7, female [1] 15.5×5.5 mm. [13.8–19.0×5.0–7.0 and 16.0–19.0×5.7–7.0 respectively according to Hattori (1991)]. Body very slender, brownish- or greenish-black on reliefed parts, brassy-green (dorsally) or cupreous (on head and underside) in punctures. White soft, semierect to erect pubescence appreciable only on ventral side. Front flat or very shallowly depressed from side to side, covered with reticulate jumble of dense ocellate punctures and narrow anastomosing reliefs separating them; vertex occupying more than half of total width of head, with traces of median sulcus; eyes very prominent. Pronotum as wide at middle as at sharply acute hind angles, sides deeply sinuate in basal half and roundedly narrowed to distinctly bisinuate apex; pronotal punctures very coarse: on disc sparse and elongated, laterally very dense, confluent into groups, with network of irregular ridges between them; oblique laterobasal depression very irregular but rather deep and distinct; two dense rows of coarse elongated punctures, representing pair of perimedian sulci and separating traces of smooth median relief from pair of broad but very indistinct and irregular longitudinal discal ridges, merge at basal (prescutellar fovea) and apical third; prescutellar pits well developed, narrowly separated; lateral carina, except at basal fifth, totally obliterated by coarse and dense puncturation. Six discal striae on elytra very coarse and prominent, lateral ones barely traceable; interstriae evenly convex; interstrial smooth "mirrors" less distinct medially (due to coarser and sparser surrounding puncturation) than on sides (where punctures are finer but very dense); costa separating disk from epipleura sparsely interrupted by very distinct dfp foveae, which makes lateral margin (especially on apical half) prominently denticulate; apices distinctly caudate, tips emarginate between two denticles. Anterior margin of prosternum straight or very shallowly emarginate; prosternal process at middle coarsely and densely punctured, lateral rims wide, impunctate; proepisterna covered with coarse ocellate punctures within network of narrow smooth ridges; prosternum, metasternum and (in male) 1. sternite deeply sulcate along midline; metacoxal dent almost rectangled but blunt, separated by deep incision from more medial part; median parts of metasternum finely and

sparsely punctulated, punctures of abdomen coarse and much denser, sides covered with very densely arranged dfp foveolae encircled by anastomosing network of narrow elevated ridges; sternites with very irregular smooth lateral reliefs; anal segment in male broadly and deeply emarginate, in female bi-notched at apex. Male mesotibia (**fig. 8**) with obtuse dentiform protuberance at basal 2/5.

Geographical distribution (map 2):

D. unokichii Hri. is an inhabitant of Formosa; both specimens seen by me, as well as all those mentioned in the original description, have been collected in the same locality. Hattori (1991) suggests *Carpinus* as host-plant.

Remarks:

Narrow (narrower than in any other species of *Dicerca* Esch. known to me) body with slightly caudate elytra, very coarse (but in quite different way than in e.g. *D. corrugata* Frm.) sculpture, brassy-green colouration, &c. make *D. unokichii* Hri. one of the most distinctive representatives of the genus. Phylogenetically it seems to be an offshoot of the lineage that eventually gave rise to the Palaearctic *D. alni* (F.-W.) – group, but morphologically it does not closely resemble any Eurasian species.

***Aenea*-circle**

***Dicerca* (s.str.) *aenea* (L.)**

Buprestis aenea Linnaeus, 1761: 213

This species – characterized by evenly sculptured (without distinct longitudinal bands or sulci) pronotum, short but distinctly caudate elytra, flat interstriae with but very inconspicuous "mirrors" &c. – is besides *D. furcata* (Thb.) the widest distributed representative of the genus, reaching from Morocco and Portugal to the Sea of Japan (apparently with disjunction in Middle Siberia – **map 3**). On this vast area it shows some geographic variability: four subspecies of rather doubtful validity (none of the distinguishing characters quoted in the literature seems really diagnostic even at the subspecies – 75% – level) have been distinguished.

Key to subspecies of *D.* (s.str.) *aenea* (L.)

a (d) Metacoxal denticle rather sharp but definitely obtuse. Abdomen very sparsely and inconspicuously pubescent

b (c) Pronotum relatively narrow (W:L<1.45). Colouration bright cupreous ....**[*D.* (s.str.) *a. bella* Ab.]**

c (b) Pronotum wider (W:L>1.55). Colouration dull brown or brownish-black ....**[*D.* (s.str.) *aenea* (L.) s.str.]**

d (a) Metacoxal denticle nearly rectangled but rounded at tip. Abdomen very distinctly and rather densely pubescent

e (f) Pronotum narrower (W:L<1.65) .....**[*D.* (s.str.) *a. validiuscula* Sem.]**

f (e) Pronotum wider (W:L>1.65) .....***D.* (s.str.) *a. chinensis* Obb.**

[*Dicerca* (s. str.) *aenea bella* Ab.]
Dicerca aenea bella Abeille de Perrin, 1891: 259

Poorly known race occupying a restricted area in Syria and South Turkey.

[*Dicerca* (s. str.) *aenea* (L.) s.str.]
Buprestis aenea Linnaeus, 1761:213
Mordella cuprea Scopoli, 1763: 62
Buprestis austriaca Schrank, 1781: 195
Buprestis oxyptera Pallas, 1781: 70
Buprestis reticulata Fabricius, 1794: 451
Buprestis subrugosa Payküll, 1799: 218
Buprestis carniolica Fabricius, 1801: 189
Dicerca scabrosa Mannerheim, 1837: 54
Dicerca aenea ab. *Santanellae* Obenberger, 1917: 38 [issp.]

Western Palaearctic subspecies, distributed from Morocco to Altai.

[*Dicerca* (s. str.) *aenea validiuscula* Sem.]
Dicerca validiuscula Semenov, 1895: 319
Dicerca validiuscula var. *Žicharevi* Obenberger, 1928: 17-18

Middle-Asian subspecies, occurring from Georgia and Armenia through North Persia, Turkmenia and Usbekistan, to Kirghizia.

***Dicerca* (s. str.) *aenea chinensis* Obb.**
Dicerca aenea chinensis Obenberger, 1929: 12

Material examined:
2 ♂

Characters:
Female [2] 19×7.5 mm. [length ♂♀ 17-22 mm. (Richter 1952)]. Brown to brownish-black, ventral surface cupreous. White soft pubescence semirecumbent and very conspicuous on head and undersurface, recumbent and shorter but still distinct on pronotum and elytra. Front shallowly and indistinctly depressed along midline, covered with coarse and very dense confluent punctures. Pronotum widest at middle, hind angles sharply acute, sides conspicuously sinuate in basal half and roundedly narrowed to distinctly bisinuate apex; oblique laterobasal depression very broad, deep and distinct; no or slight traces of longitudinal smooth bands or depressed sulci; prescutellar pits transverse, deep, very narrowly separated; pronotal

punctures coarse, moderately dense on disc, very dense and confluent at sides; lateral carina entire but densely punctured and blunt. Elytral striae traceable throughout, but rather indistinct in coarse and dense puncturation of anterolateral parts; interstriae flat, with only a few and hardly discernible smooth "mirrors"; costa separating disk from epipleura totally obliterated, epipleura convex, with dense row of small dfp foveae, making lateroapical margin of elytra serrulate in dorsal aspect; apices distinctly caudate, tips sinuate between two denticles. Anterior margin of prosternum very shallowly, almost inappreciably emarginate; prosternal process coarsely and rather densely punctured at middle, lateral rims impunctate; proepisterna covered with coarse, very irregular, dense ocellate punctures within network of narrow smooth ridges; prosternum, metasternum and 1. sternite deeply sulcate along midline; median parts of metasternum finely, sides very densely and irregularly punctured; metacoxal dent nearly rectangled, but broadly rounded at tip; punctures of 1.–4. abdominal segments coarse, very dense and irregularly confluent on sides, sparser and elongated at middle; anal segment covered with dense, coarse, elongate punctures throughout, apex in male broadly and rather shallowly emarginate, in female truncate with pair of small but deep notches. Male mesotibia with very broad obtuse dent at basal third.

Geographical distribution (map 3):

This race occupies the eastern part (map 3) of the species area: southern part of East Siberia and North China (to the vicinities of Beijing); I have also a specimen collected on Formosa (Pingtung Co.: Kenting Nat. Park) – introduced?

Remarks:

Rather poorly differentiated race of doubtful taxonomic value – but my material is not sufficient to solve the problem.

***Amphibia*-circle**

***Dicerca* (s.str.) *amphibia* Mars.**

Dicerca amphibia Marseul, 1865: 145
= *Dicerca miranda* Reitter, 1904: 23-24
= *Dicerca amphibia* var. *Marseuli* Obenberger, 1940: 44

Material examined:

None

Characters:

Females [2] 17×6.5, 17.5×7 mm. [length ♂♀ 15–20 mm. (Richter, 1952)]. Body broad, rather flat. Dorsally brownish-black, ventrally dull cupreous, bottoms of punctures in both cases cupreous or plumbeous-green. Pubescence on pronotum and elytra practically lacking, on head and ventral side appreciable but short and sparse, erect or (on sides of sternum and abdomen in female) recumbent, white ["*die Rinne beim* ♂

sehr dicht und fein greis tomentiert" ("median sulcus of sternum with very dense and fine greyish pubescence" – Reitter, 1904)]. Front broadly longitudinally depressed, covered with dense, coarse, longitudinally confluent punctures. Pronotum widest at middle, sinuately narrowed to base, roundedly so to apex; apical margin shallowly bisinuate between prominent anterior angles; base bisinuate, prescutellar lobe produced slightly further back than distinctly acute hind angles; median pair of longitudinal ridges entire, broad, coarsely but sparsely punctured; midlateral and especially lateral pair very irregular and inconspicuous; surface otherwise with fine but very dense puncturation approaching "dfp" - condition; oblique laterobasal depression conspicuous; punctiform pits broadly separated, placed on bottom of fine transverse prescutellar sulcus marking anterior margin of impunctate but distinctly microsculptured prescutellar lobe; lateral carina entire, at base sharp and smooth, anteriorly duller and punctured. Elytra markedly but rather shortly caudate, apices somewhat obliquely (inwards) truncated or broadly rounded, lateroapical angle rounded or at least blunt, sutural with sharp but very small denticle; striae distinct coarsely punctured, lateral more or less confused; interstriae narrow, subcarinulate, "mirrors" poorly differentiated, surface otherwise covered with quasi-dfp dense but rather fine puncturation, more extensive towards sides. Anterior margin of prosternum distinctly arcuately emarginate; prosternal process longitudinally depressed, rather coarsely and densely punctured, between narrow smooth lateral rims; proepisterna with dense ocellate sculpture; metasternum deeply sulcate, 1. sternite shallowly depressed along midline; metasternal punctulation fine and sparse medially, coarsely and densely ocellate at sides; abdomen covered with coarse and dense punctures longitudinally confluent on median parts, irregularly reticulate laterally, inermixed with "quasi-dfp" sculpture; anal sternite broadly sub-bisinuately truncated at apex (female). "*Mittelschienen vor der Mitte innen beim ♂ mit einem großen winkeligen Zahne*" ["mesotibiae before middle inside in male with large angular dent" – Reitter, 1904].

Geographical distribution:

Very rare, apparently relict species, known from widely scattered localities between Herzegovina, Ukraine and Belorussia, through Kazakhstan and Siberia, to the Maritime Province.

Remarks:

Rather distinctive species, not particularly similar to any of its Eurasian congeners but deceptively so to – especially eastern Siberian race, ssp. *dicercoides* Rtt., of – *Poecilonota variolosa* (Pk.); perhaps not by mere accident (Müllerian mimicry?) the type-specimen of *D. miranda* Rtt. was collected "*auf einem Espenstämme in Gesellschaft*

von ['on aspen trunk in company of'] Poecilonota variolosa" – Reitter, 1904.

Furcata-circle

Dicerca (s.str.) *furcata* (Thb.)

Buprestis furcata Thunberg, 1787: 52
= *Buprestis acuminata* Pallas, 1781: 69 [nec DeGeer 1774: 133 (*Melanophila*)]
= *Buprestis calcarata* Fabricius, 1801: 188
= *Dicerca furcata* v. *opaca* Schilsky, 1888: 186 [issp.]
= *Dicerca aino* Lewis, 1893: 328

Material examined:

Syn[?]type (of *D. aino* Lew.): "Type" "Japan, G. Lewis, 1910-320" "Yezo, Tujer [?], 1883" "*Dicerca aino* Lewis, Type" [1 ø (BMNH)]
Additional material: 8 ♂, 5 ♀, 1 ø,

Characters:

Males [8] 15.5×5.5–20.5×7, females [5] 17.5×6–19.5×6.5 mm. Body elongated, convex. Elevated reliefs [bluish-]black, dfp areas and bottoms of punctures cupreous. Pubescence in female practically lacking, in male on ventral side appreciable but short and sparse, erect. Front flat, covered with dense, longitudinally confluent punctures. Pronotum widest at middle, slightly sinuately narrowed to base, more abruptly roundedly or almost straightly so to apex; apical margin shallowly arcuately or somewhat bisinuately emarginate between prominent anterior angles, basal bisinuate, prescutellar lobe produced slightly further back than distinctly acute hind angles; three pairs of longitudinal elevations, progressively more disrupted and irregular towards sides, sparsely but coarse punctured; otherwise pronotal puncturation very dense, confluent; oblique laterobasal depression broad, distinct; punctiform pits on bottom of inconspicuous prescutellar fovea rather broadly separated; lateral carina only just at base distinct, otherwise almost totally obliterated. Elytral apices (**fig. 5**) narrow, elongated, strongly "caudate", lateroapical angle broadly rounded; striae distinct though fine in sutural part, becoming very inconspicuous or totally disappear towards sides; all interstriae flat, uniformly and very densely punctured, with rows of dark smooth "mirrors". Anterior margin of prosternum very shallowly but perceptibly arcuately emarginate; prosternal process longitudinally depressed and densely punctured between almost smooth lateral rims; proepisterna with dense ocellate sculpture; metasternum deeply, 1. sternite rather shallowly sulcate along midline; metasternal punctulation fine and sparse medially, coarse and very dense at sides; punctures on median parts of abdomen rather sparse and confluent into longitudinal strigae, laterally very dense and mostly simple; anterior angles of sternites usually with indistinct elevated reliefs, anal segment with pair of smooth carinae bordering shallow median sulcus; apex of anal sternite in both sexes trilobate: in male incisions

separating lobes broad and median lobe wide and short (more than twice shorter than lateral pair), in female (**fig. 10**) incisions narrow and median lobe as long as laterals. Inner margin of male mesotibia at basal third with long, thin spine, almost isodiametric in section, directed obliquely backwards.

Geographical distribution (map 4):

D. furcata (Thb.) is the widest distributed species of *Dicerca* Esch.: its geographical area extends from France to Japan (Hokkaido); in China it reaches as far south as the vicinities of Beijing.

Remarks:

This species is distinctive among the Eurasiatic representatives of the genus [resembling rather the American *D. tenebrica* (Kby.) – group] by its remarkably long, narrow, divergent elytral apices with fully roundedly obliterated external angle. *D. aino* Lew. was described as distinct species, then (Kurosawa, 1946, 1970; Akiyama & Ohmomo, 1997) treated it as subspecies of *D. furcata* (Thb.), but the alleged distinguishing characters (shorter elytra with laterally obliterated striae and less divaricate apices) are well within the range of individual variability of the continental populations, and as I have not been successful in finding any other differences, I consider the two names as synonymous. The status of the "type" examined by me in London is uncertain: I found only one so labelled specimen in the BMNH, but Lewis (1893) mentioned "*two examples from the Ishikari River*"; so I treat it provisionally as a syntype.

***Moesta*-circle**

Dicerca (s.str.) moesta (F.)

Buprestis moesta Fabricius, 1792: 206
= *Buprestis quadrilineata* Herbst, 1801: 104
= *Dicerca moesta* ab. *funeraria* Obenberger, 1921: 91 [issp.]

Material examined:

None

Characters:

Male [1]: 15×6 mm. [length 12-17 mm. (Richter, 1952)]. Dorsally brownish-black with cupreous bottoms of punctures, ventral side cupreous. Front depressed, divided at middle into two parts by very irregular transverse elevation; surface very densely punctured, with pair of small smooth tubercles at vertex. Pronotum widest at middle, sides deeply sinuate towards base, roundedly narrowed to apex; apical margin shallowly bisinuate, anterior angles but slightly produced, base bisinuate, prescutellar lobe produced slightly further back than distinctly acute hind angles; four longitudinal ridges (and sometimes more or less distinct traces of mediaal carina) irregular, smooth, convergent apically; remaining surface very densely, confluently

punctured; oblique laterobasal depression well defined but short; prescutellar pits shallow, widely separated; lateral carina entire but densely punctured throughout. Elytral striae distinct except lateral 3 or 4, which are only apically traceable; interstriae flat, uniformly and very densely punctured, with sparse smooth, elongated, somewhat more convex "mirrors". Anterior margin of prosternum shallowly emarginate; prosternal process densely uniformly punctured; proepisterna with very irregular rugose-reticulate sculpture; sternum and 1. sternite broadly depressed along midline; metasternum rather densely punctured even at middle; metacoxal dent obtuse but distinct; puncturation of abdomen dense on sides, somewhat sparser medially; no distinct smooth reliefs on sternites; apex of anal segment broadly emarginate in male, rounded in female. Mesotibiae simple even in male (**fig. 7**).

Geographical distribution:
Kurosawa (1954) reported to have examined "*a couple of specimens of this species from Laoshan, Shantung, Eastern China, captured by Y. Yano on June 26th, 1937*"; otherwise *D. moesta* (F.) is known to occur only in Middle and Eastern Europe and West Siberia.

Remarks:
To some degree this species resembles a small and short *D. furcata* (Thb.), differing however at glance in basally much more deeply sinuate pronotal sides, more prominent pronotal reliefs, shorter and less divaricate tips of elytra, lack of smooth lateral rims on prosternal process, and external sexual characters: simply rounded apex of anal sternite in female and simple mesotibiae in male.

***Corrugata*-circle**
***Dicerca* (s. str.) *kurosawai* H.A.**
Dicerca kurosawai Hattori et Akiyama, 1999

Material examined:
1 ex.

Characters:
Male [1] 12×4.5 mm. [males 12.5–15.0×4.8–6.0; females 15.6–16.6×6.3–6.6 mm. (Hattori et Akiyama, 1999)]. Dorsally black with dull cupreous bottoms of punctures, ventrally cupreous; pronotum and elytra glabrous, head and undersurface with rather long, erect, white pubescence. Front flat; punctures irregular, coarse and dense; median carina and reliefs on vertex inconspicuous. Pronotum wide; widest at acute basal angles and apical 2/5, sides distinctly sinuate in between, roundedly convergent apically; surface not coarsely but very densely punctured, with 7 smooth longitudinal reliefs: very narrow median carina along basal 2/3, pair of rather broad entire ridges parallel to it, narrow and usually disrupted pair placed at equal distance from

midline and lateral margins, and more or less distinct traces of outermost row of callosities; oblique laterobasal depression rather deep, running from anterior third of lateral margins to base of median pair of ridges; prescutellar pits deep, punctiform, narrowly separated; lateral carina entire but very irregular, densely punctured. Elytra conspicuously "caudate", covered with very dense puncturation and rows of coarse foveolae on intercostal interstriae; costae (especially on sides) disrupted into sections. Anterior margin of prosternum very shallowly emarginated; puncturation of median part of prosternal process coarse and dense, lateral rim rather broad; proepisterna finely but very densely punctured, with densely intermixed elevated tubercles; median line of prosternum, metasternum and 1. sternite broadly and rather deeply longitudinally depressed; no discernible metacoxal dent; smooth median reliefs at base of sternites rather inconspicuous; longitudinal reliefs and median depression of anal sternite also poorly developed; ventral side covered with dense jumble of small callosities and coarse ocellate punctures; anal sternite in female rounded with pair of small but deep notches, in male broadly emarginated between two minute notches inside of lateral angles. Mesotibiae unarmed. Parameres obliquely, somewhat emarginately truncated at apices, with sharp "sutural" angle; penis lanceolate.

Geographical distribution (map 2):
Formosan representative of the superspecies.

Remarks:
Deceptively similar to *D. corrugata* Frm., differing only in male sexual characters (lack of mesotibial spur, lateral notches in apical emargination of anal sternite, structure of genitalia) and in some trifling details of which the most reliable are shorter antennae (esp. 4.–6. joints) and abdominal tomented foveolae.

***Dicerca* (s.str.) *corrugata* Frm.**
Dicerca corrugata Fairmaire, 1902: 268

With its heavy sculpture [resembling European *D. herbsti* (Ksw.) or – especially – American *D. tenebrosa* (Kby.)] this species is unmistakable among East-Asian representatives of the genus (except for its allospecies *D. kurosawai* Hri. and perhaps – if indeed specifically distinct – *D. latouchei* Frm.). Inhabiting the extensive area between Tibet and Laos, it is also distinguished geographically, reaching further South than any other *Dicerca* Esch. Two taxa described as separate species are probably but geographic races; also Tibetan population is subspecifically distinct (**map 2**).

Key to subspecies of *D.* (s.str.) *corrugata* Frm.

a (d) Pronotum about as wide at middle as at base

b (c) Median pair of pronotal reliefs less regular, narrower, apically almost linear .... ***D.* (s.str.) *c. thibetana* ssp.n.**

c (b) Median pair of pronotal reliefs rather broad even apically .... ***D.* (s.str.) *corrugata* Frm. s.str.**

d (a) Pronotum distinctly narrower at middle than at base .... ***D.* (s.str.) *c. vitalisi* D.V.**

Dicerca (s. str.) *corrugata thibetana* ssp. n.

Material examined:

Holotype: "Thibet, Nuanatong" "R. Mus. Hist. Nat. Belg. I. G. 12.595" [♂ (KBIN)]
Paratypes: "Thibet, Nuanatong" [1 ♂ (RBH: BPgjc), 1 ♀ (RBH: BPdst)]; "THIBET, Coll. Le Moult" "Le Moult vend., *Dicerca corrugata* Fairm." "R. Mus. Hist. Nat. Belg. I. G. 12.595" [1 ♂, 2 ♀ (KBIN)]
Additional material: 2 ♂, 4 ♀

Characters:

Males [3] 15.5×6–18×7 mm., females [4] 15.5×6–18.5×7. Differs from the nominotypic race in the development of longitudinal smooth ridges on pronotum: the inner (immediately neighbouring the median carina) pair is much narrower and less regular, touching anterior margin at very narrow point; the external (usually disrupted into several fragments, sometimes present only as traces) pair does not reach the anterior margin at all.

Geographical distribution (map 2):

The geographical distribution of this race remains unclear: it inhabits (probably eastern part of) Tibet, but I have not been successful in finding the only specifically named locality (Nuanatong) on maps.

Remarks:

Differences from the nominotypical race are almost, but not quite, absolutely consistent, thence the Tibetan population must be considered a subspecies of widely distributed *D. corrugata* Frm.

Dicerca (s. str.) *corrugata* Frm. s.str.

Dicerca corrugata Fairmaire 1902: 268

Material examined:

21 ♂, 30 ♀, 4 ø

Characters:

Males [20] 15×5.5–20.5×8 mm., females [30] 14.5×5.5–22×8.5. Dorsal side black with dull cupreous bottoms of punctures, ventral

cupreous; pronotum and elytra glabrous, head and undersurface with rather long, erect pubescence. Front irregularly, coarsely and densely punctured, with usually more or less distinct narrow median carina and pair of longitudinal smooth reliefs on vertex. Pronotal sides subparallel, more or less distinctly sinuate in basal half (basal angles acute), roundedly convergent apically; surface overall very densely though not coarsely punctured, with 5 or 7 smooth longitudinal reliefs: very narrow but usually entire median carina, pair of rather broad ridges parallel to it, another narrow and less regular pair placed more externally, and sometimes traces of prehumeral carina visible (if at all) only in basal half; oblique depression deep, running from anterior third of lateral margins to base of median pair of ridges; prescutellar pits deep, punctiform, narrowly separated, placed in broader depression making proximal end of median sulcus; lateral carina entire but very irregular, densely punctured. Elytra definitely "caudate" (**fig. 6**), covered with very dense puncturation similar to that on pronotum and rows of foveolae along elevated fragments of costae; these disrupted into sections (long and close to one another near suture, short and widely spaced on sides); intercostal interstriae flat to very slightly convex, here and there with small anastomosing callosities. Anterior margin of prosternum straight, without any trace of lateral tubercles; puncturation of median part of prosternal process coarse and rather dense, lateral rim broad; proepisterna with dense irregular network of elevated callosities, densely punctured in between; broad and rather deep longitudinal depression runs along median line of prosternum, metasternum and 1. sternite; no trace of metacoxal dent; base of each sternite with smooth relief at middle; anal sternite medially sulcate between pair of indistinct smooth longitudinal elevations; otherwise ventral side covered with dense jumble of small callosities and coarse ocellate punctures; anal sternite rounded with pair of small but deep notches in female, broadly emarginate between two denticles in male. Mesotibiae in male (**fig. 9**) with long spine at upper third, strongly flattened frontocaudally, directed inwards and somewhat upwards. Parameres narrowly rounded at apices; apex of penis prolonged into subuliform spine.

Geographical distribution (map 2):

I have seen specimens from several localities in NW-, E-, SE-, and S-Yunnan; it has been reported also from Szechuan (Descarpentries & Villiers, 1963); the record from Tonkin (Obenberger, 1930) may refer in fact to *D. c. vitalisi* D.V. (if the latter is indeed taxonomically distinguishable). In the collection of S. Bílý I saw a specimen allegedly from Kuei-Chou, determined as *Dicerca vitalisi* D.V. but beyond reasonable doubt also belonging to the nominotypical subspecies (see below).

Remarks:
This is the best-known form, occupying central position between the remaining two races. Reported also from Formosa (Miwa & Chûjô, 1940), but this record was evidently based on misidentification of (by then not yet described) *D. kurosawai* H.A.

***Dicerca* (s. str.) *corrugata vitalisi* D.V.**
Dicerca vitalisi Descarpentries et Villiers, 1963

Material examined:
None

Characters:
"*– Long. 16 mm. – Très proche de précédent [D. corrugata Frm.], en diffère, outre les charactères indiqués au tableau, par sa coloration plus cuivreuse, sa sculpture générale plus effacée, les bandes longitudinales lisses du pronotum moins saillantes, les interstries élytraux non caréniformes, moins grossièrement ponctués, cette sculpture effacée latéralement, les interstries caréniformes interrompus et ne formant, en arrière, que de petits reliefs isolés, les apex plus étroitement et plus profondément échancrés, la dent latérale plus aiguë.*
Laos: Xieng-Khouang (Vitalis), holotype au Muséum de Paris." (Descarpentries & Villiers, 1963).

Geographical distribution (map 2):
Described apparently from unique holotype; Baudon (1966) reports two other specimens, collected also in Laos (Muong Panh) on *Pinus khasya* Royle. Like the remaining races, it occupies mountainous areas: Xieng-Khouang lies at 1000 m., Muong Panh at 1200 m. a.s.l. (Baudon, 1966).

Remarks:
This form is not known to me in nature: my attempts to borrow material from MNHN, or even to arrange my visit to this museum, remained totally unsuccessful, while my very brief notes made years ago (when I had not even planned the present work) from the rather superficial, routine examination of so identified specimen in the collection of S. Bílý ("*16×5.5 mm.; elytra distinctly caudate; lateral margin very coarsely, irregularly crenulated; apices emarginate; dorsal side rather brightly cupreous; head with median carina; pronotum narrower and elytral tips longer [than in Yunnanese specimens of D. corrugata Frm.]*") – though partly (more cupreous colouration, narrower pronotum) in agreement with the original description – are rather inconclusive. Now again I have before me an example borrowed later from S. Bílý and marked as compared by him to type: it is a female of 16×6 mm., showing all the characteristics

mentioned in the quotation above – despite label discrepancies it is probably the same individual [in both cases labels are in Chinese, but in my earlier notes there is the explanation "*SOUTH CHINA: prov. Kuei-Chou, V. 1925, from Pinus*", whereas on what I see now the year is given as 1980 and there is nothing like either V or 1925 – however, the translation has been evidently added later (different ink) and I do not remember from what source, so its reliability is questionable]. Anyway, besides the brighter colouration (what may be an artifact of preservation: all the remaining specimens of *D. corrugata* Frm. examined by me are apparently very old) I am unable to find any character falling out of the range of variability of the Yunnanese beetles – indeed some of the latter approach the description of the Laotian form more closely than does the specimen in question; as the Chinese locality also suggests, it certainly belongs to *D. corrugata* Frm. s.str. Descarpentries & Villiers (1963) distinguish *D. vitalisi* D. V. mainly by the shape of pronotum, but their drawing looks somewhat "idealized", and this character (like colouration and details of sculpture, also mentioned in the original description) is highly variable in both the Yunnanese and Tibetan races of *D. corrugata* Frm., so I prefer to treat the Laotian form as at most another subspecies of the latter.

***Dicerca* (s.str.) *latouchei* Frm.**
Dicerca Latouchei Fairmaire, 1899: 622

Material examined:
None

Characters:
"*Long. 12 mill. – Oblonga, parum convexa, postice attenuata, tota aeneo-metallica, cupreo-mixta, sat nitida, glabra; capite brevi, densissime subtiliter ruguloso-punctulata, cupreo-micans, inter oculos plagulis 2 leviter convexis, minus rugosis et obscuro-aeneis, clypeo profunde et arcuatim emarginata, labro rugoso, cupreo; prothorace transverso, longitudine duplo latiore, antice a medio paulo angustato, fortiter punctato-rugoso, inaequali, medio canaliculato et cupreo, utrinque vitta convexa fusco-metallica, fere polita, lateribus late impressis et plagula polita fusco-metallica signatis, extus magis rugatis, margine postico medio reflexo, polito, utrinque minus, angulis rectis; scutello minuto, rotundato, medio impresso, obscuro; elytris oblongo-ovatis, ad humeros obtusis, postice vix sensim ampliatis, apice angustatis et subproductis, apice ipso truncato, leviter bispinoso, spina interna minutissima, sutura anguste elevata, utrinque costulis aliquot sat irregularibus, 1 fere integra sed post medium obliterata, 2a basi et post medium distincta, ceteris valde interruptis, intervallis valde punctato-rugosis, plagulis leviter virescentibus impressiusculis; subtus cum pedibus cuprea, nitida, rugosa, prosterno lato, cum meso-*

et metasterno medio paulo concavo et virescente, tarsis coeruleis." (Fairmaire, 1899).

Geographical distribution (map 2):
Described from probably unique specimen of unknown sex, collected in south-eastern China: Amoy.

Remarks:
Unknown to me in nature, and difficult to interpret from the description: it can as well be a close relative (or even a subspecies – perhaps identical to *D. c. vitalisi* D.V.) of *D. corrugata* Frm. [in describing the latter, Fairmaire (1902) compared it just to "*D. Delatouchii* F a i r m."] or *D. tibialis* Lew., as a completely different species of no apparent affinities.

***Tibialis*-circle**

***Dicerca* (s.str.) *tibialis* Lew.**

Dicerca tibialis Lewis, 1893: 328-329

Material examined:
Holotype: "Type" "Japan, G.Lewis, 1910-320" "Kashiwagi, 15.VI.-24.VI.81" "*Dicerca tibialis* Lewis Type" [♂ (BMNH)]
Additional material: 1 ♂, 3 ♀

Characters:
Males [2] 12×4.5, 12.5×5, females [3] 12×4.5–14.5×5.5 mm. Body rather short, flattened. Depressed parts cupreous or green, reliefs bronzed-black. Head, pronotum and ventral side with rather sparse but long, erect pubescence; elytra glabrous. Front shallowly depressed along midline, covered with dense, longitudinally confluent punctures. Pronotum as wide at middle as at base, sides distinctly sinuate in basal half, then roundedly narrowed to prominent anterior angles; apical margin rather deeply, basal shallowly bisinuate, prescutellar lobe produced further back than acute hind angles; rather inconspicuous longitudinal median relief, pair of very prominent smooth elevations to both sides of it, pair of interrupted and less regular ridges still further outwards, and traces of yet another pair close to lateral margin, emerge from almost uniformly, coarsely and very densely punctured surface; oblique laterobasal depression deep and broad; prescutellar fovea deep, with pair of punctiform, narrowly separated pits on bottom; lateral carina entire, strongly S-shaped, smooth in basal half but progressively less distinct before middle and almost obliterated anteriorly. Elytral costae smooth, disrupted into long sections, wide and convex suturally, very narrow and sharply carinate on sides; intercostal interstriae broad, flat, covered with coarse and very dense puncturation similar to that on pronotum. Anterior margin of prosternum straight or very shallowly sinuate; puncturation of prosternal process coarse but rather sparse, lateral rim smooth; proepisterna covered with dense ocellate punctures;

prosternum, metasternum and 1. sternite distinctly, rather narrowly sulcate along midline; metacoxae not dentate; median parts of metasternum very finely and sparsely, sides and abdomen coarsely and rather densely punctured; no distinct smooth reliefs on sternites; anal sternite emarginate at apex in male, rounded with minute denticle between pair of equally minute incisions in female. Male mesotibia with long spur at middle.

Geographical distribution (map 2) :

The area of distribution includes Japan (Honshu, Shikoku, Kyushu); the species has also been recorded from "China" (Akiyama & Ohmomo, 1997). Develops on *Abies firma*.

Remarks:

Small size, short and flat form, and long pronotal pilosity, make this species easily distinguishable from its East-Asiatic congeners. Contrasting dorsal sculpture, straight anterior margin of prosternum, and coniferous host-plant suggest the affinity to *D. corrugata* Frm..

***Poecilonota* Esch.**

Poecilonota Eschscholtz, 1829: 9 [type-sp.: *Buprestis conspersa* Gyllenhal, 1808 (= *Buprestis variolosa* Payküll, 1799)]

General characteristics:

Mostly holarctic genus (**map 5**), including eight (Evans, 1957; Bright, 1987) species in North America and two (one of them highly polytypic) in Eurasia – both occurring in the study area. In the general appearance (colouration, sculpture, shape of pronotum and elytra, &c.) the representatives of this genus resemble species of *Dicerca* Esch., differing from them principally in transverse scutellum, well developed smooth median ridge on pronotum, simple median incision of anal sternite in female, and lack of mesotibial modifications in male; from *Ovalisia* Kerr. they can be distinguished by the combination of distinctly caudate elytra, sharply defined smooth median carina on pronotum, very wide scutellum, and – at least in the area of sympatry – colouration (all species of the latter genus occurring North of the Isthmus of Kra are bright green or – rarely – cupreous).

Phylogenetic relations:

In good agreement with current concepts and intuitive assessment, on the cladograms resulting from my previous (Hołyński, 1999) analyses *Poecilonota* Esch. consistently appeared as close relative of *Dicerca* Esch. and *Scintillatrix* Obb. General distribution of the genus is similar to that of *Dicerca* Esch., but history of its dispersal seems different: while various lineages of the latter crossed the Bering Strait several times in both directions, making the picture rather obscure and the sequence of events very difficult to disentangle, the evolution of

Poecilonota Esch. (**fig. 11**) has apparently been centered throughout in Nearctis, with Palaearctic members making only one well defined, holophyletic group of close relatives: a single superspecies. The analysis of the American branches is beyond the scope of this paper, thence only few species representing various morphological tendencies were considered, and I will not discuss this matter any further. There is also not very much to say about the Eurasian lineage: its ancestor [shared, as it seems, with the Nearctic *P. thureura* (Say) – *P. salicis* Chamb. – *cyanipes* (Say) clade] has probably crossed Beringia at the beginning (when the "bridge" was already sufficiently warm but yet subaerial) of the last-but-one interglaciation (Mindel-Riss – the timing is of course only tentative, the more so that according to the present knowledge the "traditional" four glacials and interglacials were in fact further subdivided into up to 30 alternate cold and warm phases), dispersed over East Siberia, and then displaced by advancing glaciation southwards, where it survived in two [Sinotibetan and Mandjurian according to de Lattin's (1967) scheme] refugia and there differentiated into – respectively – *P. semenovi* Obb. and *P. variolosa* (Pk.); the former remained "stationary", but *P. variolosa* (Pk.) used the opportunities of the next interglacial to expand all-over the Eurasian temperate forest zone; the last glacial pushed it again southwards, where the isolated populations further differentiated to become the modern *P. v. populialbae* Rich. (Atlantomediterranean refugium), *P. variolosa* (Pk.) s.str. (Pontomediterranean), *P. v. dicercoides* Rtt. (?Mongolian?), *P. v. chinensis* Thy. (Mandjurian) and *P. v. yanoi* Kur. (Japanese); postglacial dispersal has led to the presently observed distribution.

Sg. *Poecilonota* Esch. s. str.

Poecilonota Eschscholtz, 1829: 9 [type-sp.: *Buprestis conspersa* Gyllenhal, 1808 (= *Buprestis variolosa* Payküll, 1799)]
= *Polydora* Gistl, 1848a: xi [non Bosc, 1801 (teste Leraut, 1983), nec Gistl, 1834] [type-sp.: *Buprestis conspersa* Gyllenhal, 1808 (= *Buprestis variolosa* Payküll, 1799)]
= *Descarpentriesina* Leraut, 1983: 6 [type-sp.: *Buprestis conspersa* Gyllenhal, 1808 (= *Buprestis variolosa* Payküll, 1799)]

Key to the Indo-Pacific species of the subgenus *Poecilonota* Esch.

1 (2) Elytral side margins glabrous or with very short (less than ¼ of width of tibia) pubescence .....***P. variolosa* (Pk.)**

2 (1) Lateral margins of elytra with sparse but rather long (comparable to tibial width), white pilosity .....***P. semenovi* Obb.**

Variolosa-circle

Poecilonota variolosa (Pk.)

Buprestis variolosa Payküll, 1799: 219

Very widely – from Morocco and France, through Europe and Siberia, to Japan and Southern China (**map 6**) – distributed species: five subspecies have been traditionally distinguished, two of them occurring in the area under study.

Key to subspecies of *Poecilonota variolosa* (Pk.)

a (f) Sides of pronotum broadly rounded at middle, roundedly convergent in anterior half. 2. interstria flat or almost so; smooth reliefs in anterior angles of sternites indistinct

b (e) Elytral spots confluent into large patches; elytral apices not or but very inconspicuously caudate

c (d) Apical denticles on elytra longer, sharp; body more lustrous; dorsal dfp areas bright cupreous .....**[*P. v. populialbae* Rich.]**

d (c) Denticles of elytral apex very short, indistinct; body less shining; dfp areas on dorsal side duller, cupreous-bronzed .....**[*P. v. variolosa* (Pk.) s.str.]**

e (b) Elytral dfp spots uniformly distributed, not confluent into patches; elytral apices distincly caudate .....**[*P. v. dicercoides* Rtt.]**

f (a) Sides of pronotum angular, almost straightly or even somewhat sinuately convergent towards apex and towards base. All interstriae strongly convex; abdominal reliefs prominent

g (h) Sides of pronotum sharply angular; basal angles not produced backwards, obtuse. Lateroapical margin of elytra indistinctly serrulate .....***P. v. chinensis* Thy.**

h (g) Inflexion of lateral margin of pronotum rounded; basal angles slightly produced backwards, right or slightly acute. Denticulation of lateroapical elytral margin conspicuous .....***P. v. yanoi* Kur.**

[*Poecilonota variolosa populialbae* Rich.]

Poecilonota Conspersa var. *P. albae* Richard, 1889: 6

African (Morocco, Algeria, Tunisia) race inhabiting also southern Spain (Cobos, 1986).

[*Poecilonota variolosa* (Pk.) s.str.]

Buprestis variolosa Payküll, 1799: 219
= *Buprestis plebeia* Herbst, 1801: 153
= *Buprestis conspersa* Gyllenhal, 1808:441
= *Poecilonota aspersa* Rosenhauer, 1856: 135
= *Poecilonota variolosa* v. *lugdunensis* Rey, 1890: 172
= *Poecilonota variolosa* var. *tremulae* Abeille de Perrin, 1896: 275
= *Poecilonota setulosa* Fleischer, 1896: 31
= *Poecilonota variolosa* ab. *Fagniezi* Schaefer, 1949: 163 [issp.]

The nominotypical race occupies the greatest part of the species area, from northern Spain to East Siberia (Yakoutia).

[*Poecilonota variolosa dicercoides* Rtt.]
Poecilonota dicercoides Reitter, 1888: 426

Material examined:
2 ♀ (one with some characters of *P.v.chinensis* Thy. (see Remarks).

Characters:
Females [2] 15.5×5.5–19×7.5 mm. [length male/female 10.5–17 mm. (Richter, 1952), 18–19 mm. (Reitter, 1888)]. Pronotum widest at middle, almost regularly (stronger in anterior half) rounded; basal angles very slightly produced backwards, nearly right; median carina almost regular, rather broad; sides of disk almost regularly, densely punctured. Internal (1.–3.) interstriae almost flat; elytral apices slightly but distinctly caudate. Otherwise like *P. v. chinensis* Thy.

Geographical distribution (map 6):
Southern part of East Siberia, Manchouria; as a result of poor morphological differentiation from the nominotypic race, western limits of the distribution of this subspecies remain unclear: e.g. Obenberger (1930) includes here all the southern-Siberian and even Transcaucasian populations, while Richter (1952) leaves only those from the easternmost area (Amur distr., southern part of Chabarovsk distr., Maritime Prov.).

Remarks:
Specimen (determined by Richter as *P. v. dicercoides* Rtt. but by Zykov as *P. v. chinensis* Thy.) from southern Maritime Province (Lake Chanka: Kamen Rybolov – coll. S. Bílý] with convex internal interstriae but almost regularly rounded sides of pronotum strongly suggests that "diagnostic" characters are not fully correlated, there exists a gene-flow between these forms, i.e. they are indeed conspecific.

***Poecilonota variolosa chinensis* Thy.**
Poecilonota chinensis Théry, 1926: 155-156

Material examined:
1 ♂

Characters:
Male [1] 13.5×5.5 mm. (male/female 15×6.5 mm. – Théry, 1926). Brownish-black with cupreous punctures and most part of undersurface. Soft whitish pubescence distinct on head and ventral side (very long and dense on median parts of sternum in male), inconspicuous on pronotum and elytra. Front broadly depressed along midline, coarsely and densely punctured, with some small elevated smooth reliefs. Pronotum widest at middle, where straight posterior and anterior sections of lateral margin meet at obtuse (ca 1300) but very well marked angle; apical margin very shallowly emarginate, apical

angles not prominent; base bisinuate, prescutellar lobe produced further back than slightly obtuse hind angles; oblique depression directed from middle of base to anterior third of sides (but not reaching either of them) shallow, inconspicuous; median carina smooth, narrow, somewhat ill-defined; some irregular, slightly elevated and sparser punctured spaces and narrow anastomosing ridges on sides of disc; otherwise puncturation coarse and very dense; lateral carina entire, apical section densely punctured, basal sharp and smooth. Elytral striae rather coarse, distinct throughout; interstriae convex, disrupted with numerous dfp spots which frequently join together to form irregular transverse patches; costa separating disc from epipleura with very small dfp foveae, thence lateroapical margin of elytra finely but appreciably serrulate; apices distinctly caudate, tips truncate with barely discernible sutural and lateral denticles. Anterior margin of prosternum very shallowly emarginate; smooth lateral rims of prosternal process very narrow, separated from coarsely and rather densely punctured middle with distinct stria; proepisterna covered with coarse and dense ocellate punctures; prosternum and metasternum broadly and deeply depressed along midline, depression on 1. sternite only anteriorly marked; puncturation of ventral side rather dense on sides, less so on median parts; metacoxal dent small, obtuse, blunt, inconspicuous; apex of anal segment in male broadly arcuately emarginate, in female "*échancrure du dernier segment abdominal ... faible*" (Théry, 1926).

Geographical distribution (map 6):

Described from "*Nord de Pekin*", is said to occur in N-China, Korea, and "*Far East of Russia*" (Akiyama & Ohmomo, 1997 – but neither Richter, 1952 nor Alexeev, 1989 mention its occurrence in the former Soviet Union).

Remarks:

As noticed by Théry (1926), 3. antennomere (**fig. 12**) in *P. v. chinensis* Thy. is but slightly longer than 2. (and much shorter than 4.), while it is usually ca. twice longer than 2. and subequal to 4. in Eurosiberian races; having but one specimen in the disposition it is difficult to say whether this is stable character of the Chinese subspecies or merely an aspect of individual variability.

***Poecilonota variolosa yanoi* Kur.**

Poecilonota yanoi Kurosawa, 1963: 90
?= *Poecilonota cupreomaculata* Miwa et Chûjô, 1935: 271

Material examined:

1 ♂, 1 ♀

Characters:

Male [1] 13.5×5 mm. (holotype: 12.8×6 mm. – Kurosawa, 1963); female [1] 17.5×6.5. Brownish-black with undersurface and depressed, densely punctured areas on dorsal side bright cupreous. Pubescence whitish, sparse on head, long and very dense on prosternal process, virtually none otherwise. Front shallowly depressed, very densely punctured with some irregular narrow reliefs, vertex with distinct medial carina. 3. antennomere (**fig. 13**) 1.5× longer than 2, slightly shorter than 4. Pronotum widest at middle, sides slightly roundedly convergent to base and almost straightly so to apex; apical margin very shallowly bisinuate, apical angles not prominent; oblique lateromedian depression hardly appreciable; median carina smooth, well defined, slightly widened at middle; sides of disk with some irregular, slightly elevated and sparser punctured spaces; otherwise puncturation coarse and very dense (leaving but very narrow carinulae to separate punctures from one another); lateral carina entire, basally smooth, increasingly punctured towards apex. Elytral striae very coarse, continuous, distinct throughout; interstriae convex, in male [sexual or individual character?) uneven: 2., 4., 6., and 10. very narrow, remaining at least twice wider; dfp spaces developed almost only on wide intervals; lateroapical margin very conspicuously serrulate; apices distinctly caudate, tips shallowly and somewhat obliquely emarginate between obtuse lateral and acute sutural angles. Anterior margin of prosternum straight; prosternal process flat, rather densely punctured; smooth lateral rims narrow, sharply delimited but without distinct bordering stria; proepisterna covered with coarse irregular ocellate punctures; metasternum medially sulcate, 1. sternite regularly convex (male) or narrowly sulcate (female); abdominal puncturation coarse and moderately dense, elongate medially, denser and isodiametric on sides; metacoxa with no appreciable dent; apical emargination of anal segment deeply arcuate (narrower in female).

Geographical distribution (map 6):

Known from SW-Honshu: the type-locality is Mie Pref., both specimens studied by me come from Okayama Pref.; *P. cupreomaculata* M.C. was described from Hokkaido (Sapporo), and then reported from northern Honshu; according to S. Ohmomo (pers. inf. 2005) "*some specimens are collected on the areas between west Honshu and north Honshu such as Fukushima Prefecture, Nagano Prefecture, Aichi Prefecture and so on. These specimens can not be identified as yanoi or cupreomarculata*".

Remarks:

P. yanoi Kur. was described as distinct species, but later (Kurosawa, 1970) considered by its author a subspecies of *P. chinensis* Thy. *P. cupreomaculata* M.C. remains unknown to me; it was described as separate species and then variously treated as a subspecies (Kurosawa,

1970; Akiyama & Ohmomo, 1997) or synonym (Kurosawa, 1963; also A. Descarpentries determined the type-specimen as "*P. chinensis Thery = cupreomaculata Miwa et Chûjô*" – Chûjô & Chûjô, 1998) of *P. v. chinensis* Thy. [traditionally considered by these authors to be specifically different from *P. variolosa* (Pk.)], while S. Ohmomo (pers. inf. 2005) writes: "*I understand yanoi Kurosawa, 1963 should be synonimized under cupreomaculata Miwa et Chujo, 1935*". Having never seen any specimen attributable to *cupreomaculata* M.C., I am of course unable to solve this question.

***Poecilonota semenovi* Obb.**

Poecilonota semenovi Obenberger, 1934: 148

Material examined:

1 ♂, 2 ♀, 2 ø

Characters:

Male [1] 13×5.5 mm.; females [2] 12.5×5, 16.5×5.5, unsexed [2] 11.5×4.5, 14×5.5 mm. Black with cupreous ventral side and bottoms of punctures on dorsal. Pubescence of front, antennae, legs, elytral margins, and ventral side long and semierect; that of pronotum and elytral surface short, inconspicuous, recumbent. Front covered with conspicuous, elevated, mostly longitudinal rugae. Pronotum widest at anterior third, sides angular (straightly convergent towards base and apex) but inflexion rounded; median carina wide, regular, finely furrowed along midline; anterior margin shallowly emarginate, with slightly protruding apical angles; basal angles not produced backwards, sharply rectangled. Scutellum trapezoidal, ca. 2.5× wider than long (**fig. 2**). Elytra strongly caudate; interstriae very convex, cariniform; dfp spots confluent to form large patches; lateral margins adorned with conspicuous, sparse but long, semierect white setulae,serrulation of apical half very fine. Anterior margin of prosternum very shallowly arcuately emarginate between somewhat protruding tubercles; prosternal process flat, coarsely and not very densely punctured between narrow, smooth, sharply delimited lateral rims, white erect pubescence long and dense in female, still more so in male. 3. antennomere, like in *P. v. chinensis* Thy., relatively short (esp. in male). Incision of anal sternite broad semicircular in male, narrower subtriangular in female.

Geographical distribution (map 6) :

P. semenovi Obb. was described from apparently unique holotype collected in southern China (prov. Fukien: Kiulung), and I am not aware of any other published record; all specimens studied by me have been collected in Yunnan (in fact, I am unable to locate "Chiquan", a locality given on two labels [written by the same hand!] once as "Yunnan, Chiquan" and then as "S'ichuan, Chiquan"!).

Remarks:

The most striking character of this species is long pilosity on antennae, legs, and especially on elytral margin – other [sub]species of *Poecilonota* Esch. available to me for study show there at most very short, hardly appreciable setulae.

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APPENDIX

Characters used in phylogenetic analyses

Upper line – codes of character-states; ***[bold italics]*** – terminal automorphies
Lower line – weights (costs of transformation) [0↔1↔2=2: additively equidistant (distance between 0 and 1 the same (=2) as between 1 to 2, that between 0 and 2 = 2+2 = 4); abc↔de=1: equidistant between groups (a↔d=a↔e=b↔d=b↔e=c↔d=c↔e=1); (bcd) = 1: equidistant within group (b↔c = c↔d = b↔d = 1)]

1. Body size – [***0***] <10; [1] 10-15; [2] 15-25; [***3***] >25
   0↔1↔2↔3=1
2. Body proportions (L:W) – [***0***] <2.4; [1] 2.4-2.7; [2] 2.7-3.0; [***3***] >3.0
   0↔1↔2↔3=1
3. Colour (basic dorsal) – [***0***] black; [1] bronzed; [2] cupreous; [***3***] green; [***v***] violet
   0↔1↔2↔3=1; 012↔v=2
4. Colour: spots – [***a***] Scintillatrix-type; [k] Poecilisia-type; [***m***] Palmar-type; [***h***] none; [***x***] Ovalisia-type
   a↔k↔m=2; amx↔h=2;
5. Pubescence: dorsal – [***p***] Erialata-type; [***a***] inconspicuous; [b] front; [c] pronotum; [***d***] elytra; [***x***] long pilosity on el. margins
   p↔a=2; a↔b↔c↔d=1; b↔x=1
6. Labrum shape – [***0***] deeply emarginate, no transverse carina; [1] quadrangular, no transverse carina; [***2***] semicircular, transversely carinate
   0↔1=1; 1↔2=3
7. Epistome shape – [***0***] sides subparallel; [***1***] expanded before antennal grooves
   0↔1=2
8. Front: supraantennal carinae – [***0***] normal, short; [***1***] prolonged upwards
   0↔1=3
9. Front: transverse ridge – [***0***] none; [1] weak, irregular; [***2***] prominent
   0↔1↔2=1
10. Front proportions (BW:AW) – [***0***] 0.5-0.7; [1] 0.7-0.9; [***2***] 0.9-1.1
    0↔1↔2=1
11. Vertex width (V:H) – [***0***] 0.2-0.3; [1] 0.3-0.4; [2] 0.4-0.5; [3] 0.5-0.6; [***4***] 0.6-0.7
    0↔1↔2↔3↔4=1
12. Pronotal proportions (MW:BW): [***0***] 0.85-0.95; (1) 0.95-1.05; [***2***] 1.05-1.15
    0↔1↔2=2
13. Pronotum: sides basally – [***0***] deeply sinuate; [1] shallowly sinuate; [2] straight; [***3***] rounded
    0↔1↔2↔3=1
14. Pronotum: oblique depressions – [***0***] none; [***1***] distinct
    0↔1=2
15. Pronotum: median relief or dark stripe – [***0***] undifferentiated or traces; [1] regular reduced; [***2***] regular entire
    0↔1↔2=2
16. Pronotum: median relief or dark stripe – [***0***] undifferentiated or very narrow; [1] narrow; [2] broad; [***3***] very broad
    0↔1↔2↔3=1
17. Pronotum – midlateral spots/ridges: [***0***] none; [1] reduced; [***2***] prominent
    0↔1↔2=1
18. Number of pronotal additional dark spots/ridges: [***0***] none; [1] 1; [***2***] 2
    0↔1↔2=1
19. Pronotum: lateral carina (sharp to) – [***0***] <<midlength; [1] *ca.* midlength; [***2***] >>midlength
    0↔1↔2=1
20. Pronotum: lateral carina (shape) – [***0***] regularly curved downwards; [***1***] S-shaped: sinuate at or somewhat before base, then curved upwards
    0↔1=2

21. Pronotum: lateral carina (structure anteriorly) – [***0***] punctate; [***1***] crenulate
0↔1=2
22. Scutellum: proportions – [***0***] small; [1] large, slightly transverse; **[*2*]** large, strongly transverse
0↔1↔2=2
23. Elytra: lateroapical margin (shape) – [***0***] rounded; [1] straight; [2] slightly sinuate; [***3***] strongly caudate
0↔1↔2↔3=1
24. Elytra: lateroapical margin (structure) – [***0***] smooth; [1] serrulate; [***2***] denticulate/crenulate
0↔1↔2=1
25. Elytra: apex – [***r***] rounded; [k] multidenticulate; [***b***] bidentate; [***z***] tridentate
r↔k↔b=2; k↔z=2
26. Elytra: striae structure – [***0***] puncture rows; [***1***] continuous
0↔1=1
27. Elytra: punctures in striae – [***0***] none or very fine; [1] fine; [2] moderate; [3] coarse; [***4***] very coarse
0↔1↔2↔3↔4=1
28. Elytra: sculpture – [***0***] [rugoso-]punctate; [***1***] granulate
0↔1=1
29. Elytral interstriae – elevation: [***0***] equal; [1] alternately unequal; [***2***] strikingly disparate
0↔1↔2=2
30. Elytral intercostate interstriae – convexity: [**0**] flat/depressed; [1] slightly convex; [***2***] subcareniform
0↔1↔2=1
31. Elytral dfp – type: [***0***] none; [1] interstrial foveae; [***2***] extensive patches
0↔1↔2=2
32. Epipleura: length – [***0***] reaching to apex; [1] ending far before apex; [***2***] none behind metacoxae
0↔1↔2=1
33. Prosternal apex – [***0***] straight; [1] emarginate; [***2***] bituberculate
0↔1↔2=1
34. Prosternal process: sculpture medially (♀) – [***0***] smooth; [1] sparsely punctured; [***2***] densely punctured
0↔1↔2=2
35. Prosternal process: border structure – [***0***] none; [1] lateral rim; [***2***] stria
0↔1↔2=2
36. Prosternal proces: border position – [***0***] none or marginal; [***1***] sublateral
0↔1=1
37. Proepisterna: sculpture – [***0***] dense punctures; [1] isolated ocelli; [***2***] reticulate
0↔1↔2=1
38. Metasternum: [***0***] flat/depressed; [***1***] sulcate
0↔1=2
39. Metacoxal denticle: [***0***] none; [1] broadly obliterated; [***2***] well marked
0↔1↔2=2
40. 1. sternite – [***0***] regularly convex; [1] flat/inconspicuously depressed; [***2***] sulcate
0↔1↔2=1
41. Abdomen: lateral reliefs – [***0***] none; [***1***] distinct
0↔1=2
42. Mandible – [***0***] laterally rounded; [***1***] laterally blade-like expanded
0↔1=3
43. Antennae: width – [***0***] thin; [1] rather thick; [***2***] strikingly widened
0↔1=1; 1↔2=2
44. Antennae: 3. joint – [***0***] ≈ 2.; [***1***] ≈ 4.
0↔1=1
45. 1. metatarsomere: proportions – [***0***] robust, L:W<3; [***1***] slender, L:W.4
0↔1=1

46. 1. metatarsomere: relative length – [***o***] ≈ 2.; [***1***] ≈ 2.+3.
    0↔1=1
47. Male mesotibia: [***o***] simple; [1] angular protrusion; [***2***] long spine
    0↔1=2
48. Anal sternite: perimedian ridges – [***o***] none; [1] inconspicuous; [2] conspicuous; [***3***] prominent
    0↔1↔2↔3=1
49. Anal sternite (male): apex – [***o***] rounded; [1] truncate; [2] emarginate; [3] bidenticulate; [4] bispinose; [***5***] carinately bispinose
    0↔1↔2↔3↔4↔5=1
50. Anal sternite (female): apex – [***a***] rounded or truncated; [***e***] like in male; [***n***] notched; [***x***] binotched
    anx↔e=1

Initial character-matrix

Bold – taxon codes used in Hennig86 cladograms; CAPITALS – outgroups

		1	2	3	4	5
		12345 67890	12345 67890	12345 67890	12345 67890	12345 67890
ZLR	ZOOLRECORDIA	223aa 00101	21200 01110	0020b 02020	10202 11011	10010 0002a
TZL	TOUZALINIA	313ad 10001	31310 01001	1022b 14001	11212 12122	10010 0023a
Dni	D.nishidai	220ad 10001	31200 01101	1032b 14001	20112 12122	00010 0203a
Dae	D.a.chinensis	210ab 10001	31210 00011	1021b 11000	20121 12121	00000 0113x
Dfr	D.fritillum	210ab 10001	31210 01011	1021b 11001	20021 12112	00010 0212a
Dob	D.obscura	220aa 10000	20310 01021	0021b 02000	20021 12112	10100 0013x
Dlu	D.lurida	220aa 10001	31110 01021	0021b 01000	20021 12112	00000 0013x
Dpg	D.pugionata	220ab 10001	31100 01021	0021b 01000	20021 12112	00000 0013x
Dbe	D.berolinensis	211aa 10001	31110 00011	0021b 01000	20121 12122	00000 0113x
Dal	D.alni	211aa 10001	31110 01011	0021b 10000	20121 12122	00000 0113x
Dun	D.unokichii	220aa 00001	31110 01001	0022b 13001	20021 12122	00010 0113x
Dti	D.tibialis	110ac 10001	31110 02121	0020b 01020	20021 11102	00010 0203x
Dct	D.c.thibetana	210ab 10001	31112 12121	1022b 03020	20021 12102	00000 0213x
Dcc	D.c.corrugata	210ab 10001	31112 12121	1022b 03020	20021 12102	00010 0213x
Dku	D.kurosawai	210ab 10001	31211 12121	1022b 03020	20021 12102	00010 0003x
Dhe	D.herbsti	211aa 10001	32010 02121	1022b 01020	20121 12011	10010 0122x
Dts	D.tenebrosa	210aa 10001	32010 02121	1020b 02020	20121 12111	10010 0113x
Dse	D.sexualis	210aa 10021	32010 02121	0021r 02020	20021 12122	00010 1013a
Dpt	D.punctulata	111aa 10021	31110 02121	0020r 02010	20021 12122	00010 1001e
Dmo	D.moesta	110aa 10011	32010 02121	0021r 02010	20021 12121	00010 1003a
Dam	D.amphibia	210ab 10001	31110 02121	1020r 03002	20121 12101	00010 0212a
Dho	D.horni	210ad 10001	31100 02121	0020r 11010	20021 12112	00110 0212a
Dfu	D.furcata	220aa 10001	31110 01101	1030r 11010	20021 12111	10110 0233x
Ddi	D.divaricata	230ab 10001	31110 00121	1030r 11010	20121 12112	10100 0133x
Dtc	D.tenebrica	230ab 10001	31110 00121	1030r 11010	20021 12102	10000 0133x
Pse	P.semenovi	110ax 01001	32102 21021	0231b 10002	22022 02111	10001 1002n
Pvc	P.v.chinensis	110ab 01000	32212 10021	0221b 10002	22022 02111	10001 1002n
Pvy	P.v.yanoi	210ab 01001	32212 21021	0221b 10002	22022 02112	10011 1002n
Pvd	P.v.dicercoides	210ab 01001	32312 21021	0221b 10001	22012 01112	00011 1002n
Pth	P.thureura	210aa 01001	21202 21021	0221b 10000	22012 01111	10011 1002n
Psa	P.salicis	120aa 01001	21202 20011	0221b 10000	22012 01111	00000 0002n
Pcy	P.cyanipes	120aa 01001	30202 10021	0231b 10000	22012 01112	00001 1002n
Pbr	P.bridwelli	120aa 01001	31212 11021	0220b 10002	22012 01101	10011 0002n
SCI	SCINTILLATRIX	123aa 11001	11212 11010	1201z 10000	02012 10000	00010 1003e
PCL	POECILISIA	131ka 11011	21100 11010	1221z 10000	02222 01011	10010 0003e
CIN	CINYRISIA	221ka 11111	11200 00020	1112z 11000	02210 01000	00000 0005e
MAB	MABOMISIA	222mp 11101	11100 00020	1122z 11000	02112 11000	00000 0003e
Eri	ERIALATA	122mp 11000	01100 02120	1112z 10000	02121 01000	00210 0003e
PAL	PALMAR	123ma 11011	11211 22110	1211k 11000	02012 11000	00110 0003e
ZYK	ZYKOVISIA	022ma 21111	11311 22210	1112r 11100	02010 01000	01000 0004e
OVA	OVALISIA	00vxa 21111	11302 30020	1222r 11100	02110 01001	01000 0003e
PHI	PHILANTHAXIA	013ha 11002	40300 00020	1121r 11000	01020 02000	00001 1000e

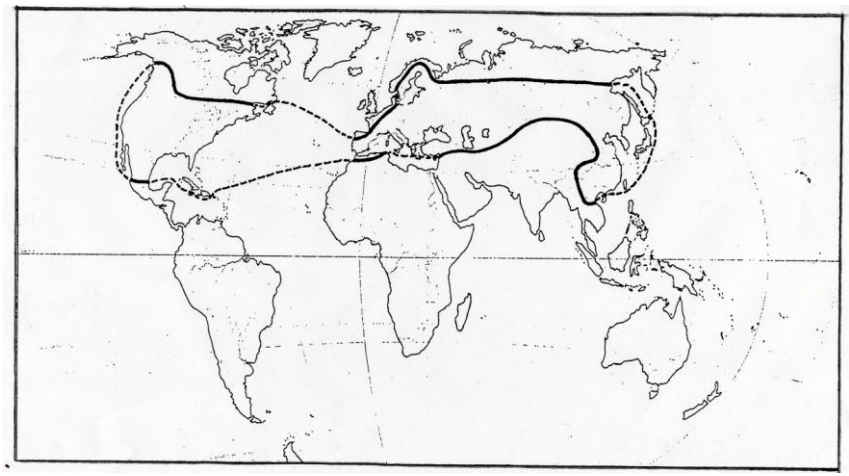
Character-matrix resulting from MICSEQ analysis (outgroups omitted)

Bold underlined italics – apomorphies

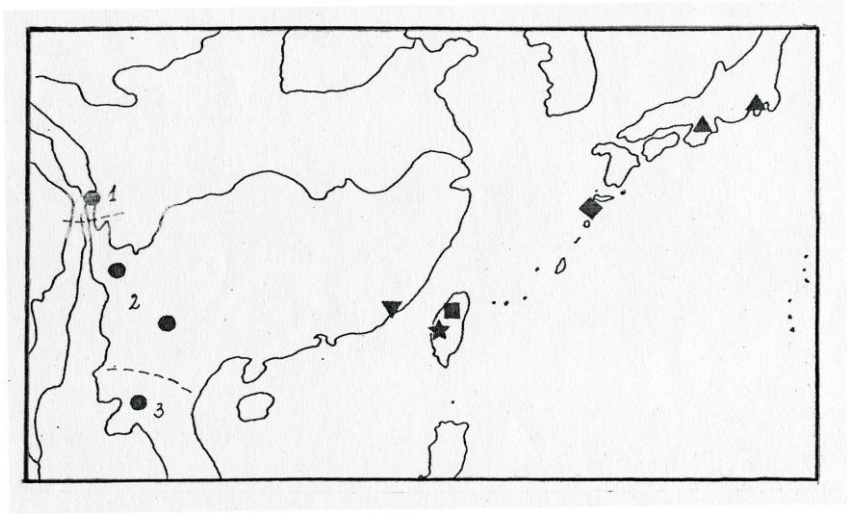
Number after equation mark: phenetic distance [in phenuns] from immediate ancestor

In square brackets: support quotient (SQ)

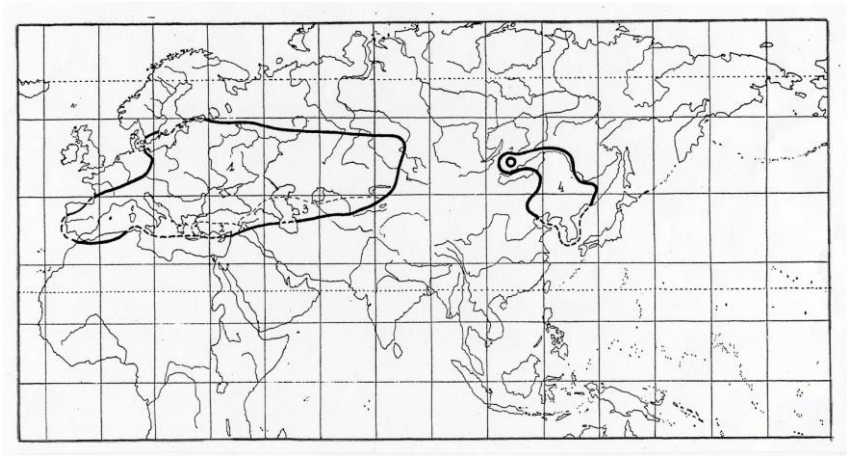
	12345	67890	12345	67890	12345	67890	12345	67890	12345	67890			
TZL	3**1**3ad	10001	31**3**10	01**0**01	1022b	14001	**11**212	12122	**1**0010	00**2**3a	=	16	
Dni	2**2**0ad	10001	312**0**0	01101	10**3**2b	14001	20112	12122	00010	0203a	=	4	
Dfr	210ab	10001	31**2**10	01011	1021b	1**1**001	20021	12112	00010	0212a	=	2	
Dob	220aa	1000**0**	**20**310	01021	0021b	02000	20021	12112	**1**0**1**00	0013x	=	9	
Dlu	220aa	10001	31110	01021	0021b	01000	20021	12112	00000	0013x	=	0	
Dpg	220a**b**	10001	311**0**0	01021	0021b	01000	20021	12112	00000	0013x	=	3	
Dae	210a**b**	10001	31**2**10	00011	**1**021b	11000	20121	1212**1**	00000	0113x	=	5	
Dbe	211aa	10001	31110	00011	0021b	**0**1000	20121	12122	00000	0113x	=	1	
Dal	211aa	10001	31110	0**1**011	0021b	1**0**000	20121	12122	00000	0113x	=	2	
Dun	220aa	**0**0001	31110	010**0**1	0022**b**	1**3**001	20021	121**2**2	00010	0113x	=	6	
Dam	210ab	10001	31110	02121	1020r	**03002**	20121	121**0**1	00010	0212a	=	6	
Dho	210a**d**	10001	311**0**0	02121	**0**020r	11010	20021	12112	00110	0212a	=	6	
Dfu	220aa	10001	31110	011**0**1	1030r	11010	20021	12111	10110	0233x	=	2	
Ddi	230ab	10001	31110	00121	1030r	11010	20121	12112	10100	0133x	=	1	
Dtc	230ab	10001	31110	00121	1030r	11010	20021	121**0**2	10**0**00	0133x	=	3	
Dti	1**1**0a**c**	10001	31110	02121	**0020b**	0**1**020	20021	1**1**102	00010	0203x	=	7	
Dct	210ab	10001	31112	12121	1022b	03020	20021	12102	000**0**0	0213x	=	1	
Dcc	210ab	10001	31112	12121	1022b	03020	20021	12102	00010	0213x	=	0	
Dku	210ab	10001	31211	12121	1022b	03020	20021	12102	00010	00**0**3x	=	2	
Dhe	21**1**aa	10001	32010	02121	1022**b**	0**1**020	20121	12**0**11	10010	01**22**x	=	7	
Dts	210aa	10001	32010	02121	1020**b**	02020	20121	12111	10010	0113x	=	1	
Dse	210aa	10021	32010	02121	0021r	02020	20021	12122	00010	1013a	=	0	
Dpt	11**1**aa	10021	3**11**10	02121	002**0**r	02010	20021	12122	00010	100**1e**	=	7	
Dmo	110aa	100**1**1	32010	02121	0021r	02010	20021	1212**1**	00010	1003a	=	2	
Pse	110a**x**	01001	32**10**2	21021	02**3**1b	10002	22022	02111	10001	1002n	=	6	
Pvc	110ab	0100**0**	32212	**10**021	0221b	10002	22022	02111	10001	1002n	=	3	
Pvy	**2**10ab	01001	32212	21021	0221b	10002	22022	0211**2**	100**1**1	1002n	=	3	
Pvd	**2**10ab	01001	32**3**12	21021	0221b	10001	22012	0111**2**	000**1**1	1002n	=	4	
Pth	**21**0aa	01001	21202	2**1**021	0221b	10000	22012	01111	**1**00**1**1	1002n	=	6	
Psa	120aa	01001	21202	200**1**1	0221b	10000	22012	01111	0000**0**	**0**002n	=	3	
Pcy	120aa	01001	3**0**202	**1**0021	02**3**1b	10000	22012	0111**2**	00001	1002n	=	5	
Pbr	120aa	01001	31212	11021	022**0**b	1000**2**	22012	011**0**1	**1**0011	0002n	=	6	
A	210ab	10001	31**1**1**2**	12121	1022b	03020	20021	12102	00010	02**1**3x	=	4	[1/6]
B	220aa	10001	31110	01021	0021b	01000	20021	12112	00000	0013x	=	0	[3/8]
C	21**1**aa	10001	31110	00011	0021b	11000	20121	12122	00000	0113x	=	1	[3/7]
D	2**3**0a**b**	10001	31110	0**0**121	1030r	11010	20021	1211**2**	101**0**0	0**1**33x	=	6	[4/9]
E	210ab	10001	31**2**1**1**	**1**2121	1022**b**	0**3**020	20021	12102	00010	0203x	=	6	[6/15]
F	**1**10aa	10021	32010	02121	0021r	020**1**0	20021	12122	00010	10**0**3a	=	4	[6/10]
G	210aa	100**2**1	32010	02121	**0**021r	02020	20021	121**2**2	00010	**10**13a	=	8	[5/18]
H	110ab	01001	32212	21021	0221b	10002	22022	02111	10001	1002n	=	0	[6/7]
I	2**1**0aa	10001	31110	0**0**0**1**1	0021b	**1**1000	20**1**21	121**2**2	00000	0**1**13x	=	8	[7/8]
J	110ab	01001	32212	21021	0221b	1000**2**	220**2**2	0**2**111	**1**0001	1002n	=	6	[7/7]
K	210aa	10001	32010	02121	1021b	02020	20**1**21	1211**1**	**1**0010	0113x	=	4	[8/18]
L	2**2**0aa	10001	31110	0**1**121	10**3**0r	11010	20021	1211**1**	**1**0110	02**33x**	=	10	[9/20]
M	220aa	10001	31110	01021	0021b	0**1**000	20021	12112	00000	0013x	=	1	[9/10]
N	120aa	01001	**2**1202	20021	0221b	10000	22012	01111	00001	1002n	=	1	[9/9]
O	120aa	01001	3**1**20**2**	20021	0221b	1000**0**	22012	01111	00001	1002n	=	5	[9/15]
P	1**1**0a**b**	01001	3**2**212	21021	0221b	10001	22012	01111	00001	1002n	=	4	[10/13]
Q	220aa	10001	31110	010**2**1	0021b	**0**200**0**	20021	12112	000**0**0	0**0**13x	=	5	[10/12]
R	2**2**0a**a**	10001	31110	01011	**0**021b	12001	20021	12112	00010	0**1**1**3x**	=	8	[12/14]
S	120aa	01001	31212	**2**1021	0221b	10001	22012	01111	000**0**1	**1**002n	=	3	[13/14]
T	120aa	01001	3121**2**	11021	0**2**21b	1**0**00**1**	22012	01111	00011	0002**n**	=	9	[13/33] **[basal ancestor]**
V	210a**b**	10001	3**11**10	02121	1021b	02020	20021	121**0**2	00010	0**20**3x	=	8	[15/18]
W	210ab	10001	31110	0**1**0**1**1	102**1b**	12001	20021	12112	00010	0212a	=	7	[17/18]
Z	210aa	10001	32010	02121	1021b	02020	20021	12112	00010	0113**x**	=	2	[17/18]
AA	210ab	10001	31110	02121	1020r	1**20**0**1**	20021	12112	00**0**10	0212a	=	7	[17/18]
BB	210a**b**	10001	31110	02121	1020r	11010	20021	12112	00110	021**2**a	=	2	[17/19]
DD	210aa	10001	3**20**10	02121	1021r	**0**20**2**0	20021	12112	00010	0113a	=	6	[18/20]
EE	210a**d**	10001	31210	011**0**1	102**2**b	1**40**0**1**	20112	121**2**2	00010	0203a	=	12	[19/30]
FF	210aa	10001	31110	02121	102**0**r	1**1**010	20021	12112	00**1**10	0**2**13a	=	4	[19/20]
GG	210aa	10001	31**1**10	02**1**21	1021**r**	12010	20**021**	12112	00010	01**1**3a	=	13	[17/26]
LL	2**1**0aa	**1**0001	31210	01111	**1**021b	12010	20112	1**2**11**2**	00010	0**20**3a	=	7	[20/24]
MM	**2**20aa	0**0**001	31210	**0**1**1**11	0**0**21b	1**2**0**1**0	2**0**112	**1**1111	0001**0**	0**1**02**a**	=	17	[17/27]
NN	120aa	01001	31210	11021	0121b	11000	22012	01111	00011	0002e	**[basal ancestor]**		
	-----	-----	-----	---1-	-----	-----	-11--	-----	----0	-----			



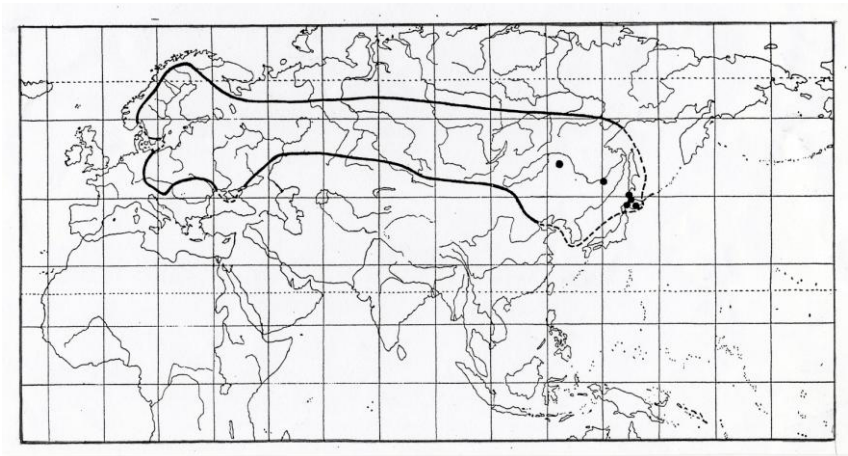
Map 1. Distribution of the genus *Dicerca* Esch.



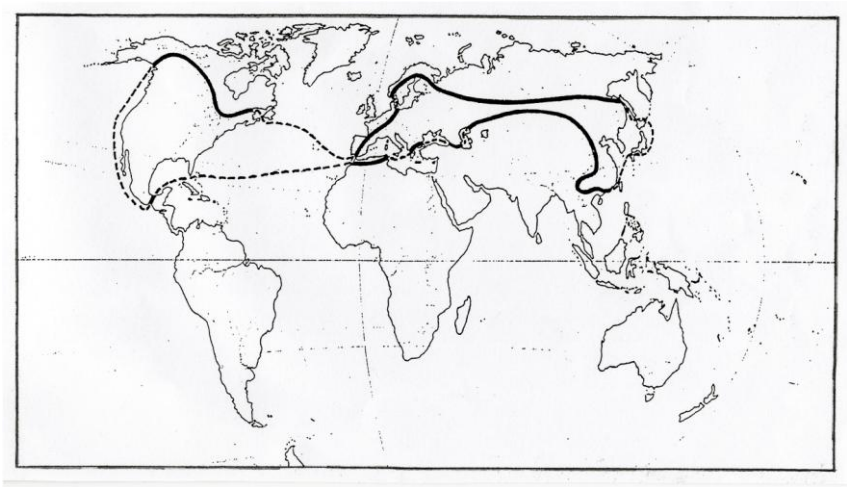
Map 2. Distribution of: ★ *Dicerca kurosawai* H.A.; ● *D. corrugata* Frm. [1 – ssp. *thibetana* ssp.n.; 2 – ssp. *corrugata* s.str.; 3 – ssp. *vitalisi* D.V.]; ▼ *D. latouchei* Frm.; ▲ *D. tibialis* Lew.; ■ *D. unokichii* Hri.; ◆ *D. nishidai* Tma.



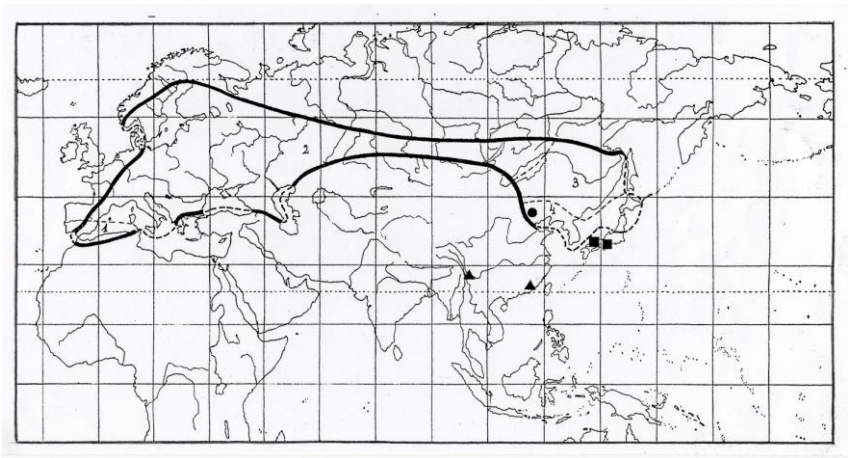
Map 3. Distribution of *Dicerca aenea* (L.) 1 – ssp. *aenea* s.str.; 2 – ssp. *bella* Ab.; 3 – ssp. *validiuscula* Sem.; 4 – ssp. *chinensis* Obb.



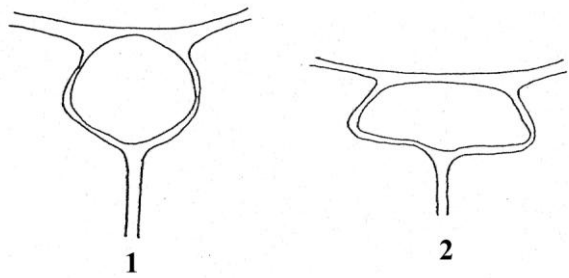
Map 4. Distribution of *Dicerca furcata* (Thb.)



Map 5. Distribution of the genus *Poecilonota* Esch.



Map 6. Distribution of: ● *Poecilonota variolosa* (Pk.) [1 – ssp. *populialbae* Rich.; 2 – ssp. *variolosa* s.str.; 3 – ssp. *dicercoides* Rtt.; 4 – ssp. *chinensis* Thy.]; ▲ *P. semenovi* Obb.; ■ *P. yanoi* Kur.



Figs. 1-2. Shape of scutellum
Fig. 1. *Dicerca corrugata* Frm.; Fig. 2. *Poecilonota semenovi* Obb.

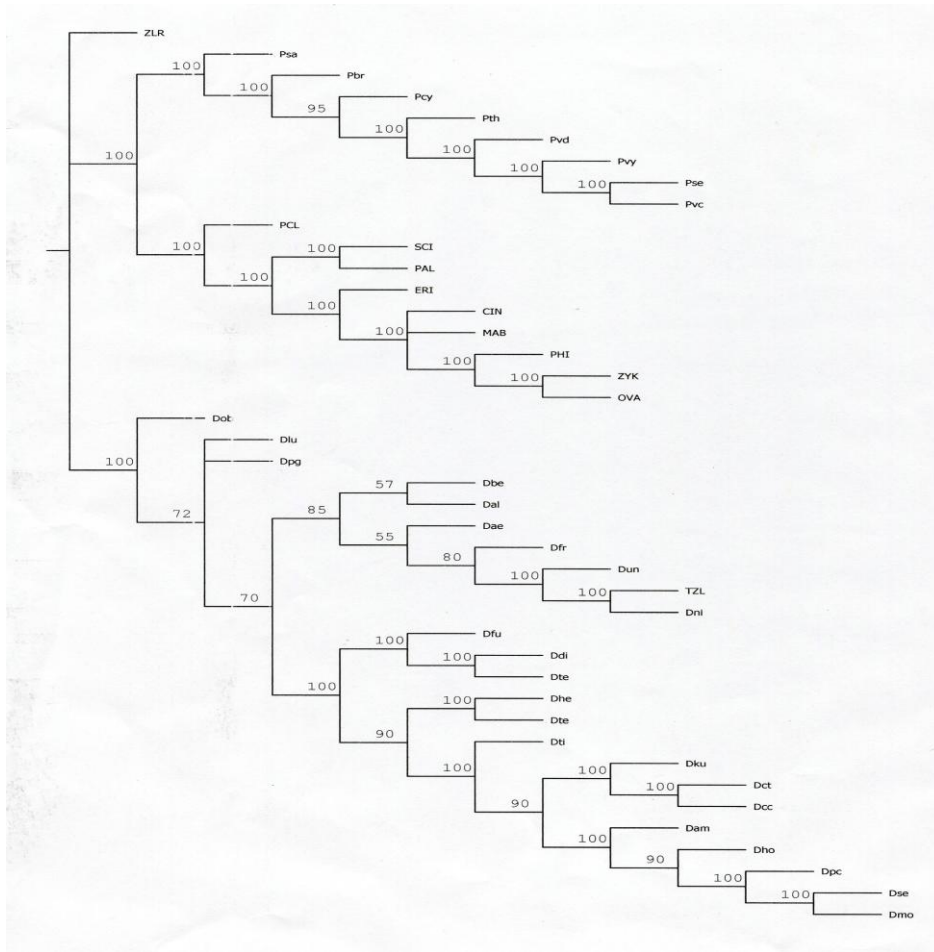


Fig. 3. Cladogram (Hennig86) of *Dicerca* Esch.+*Poecilonota* Esch.

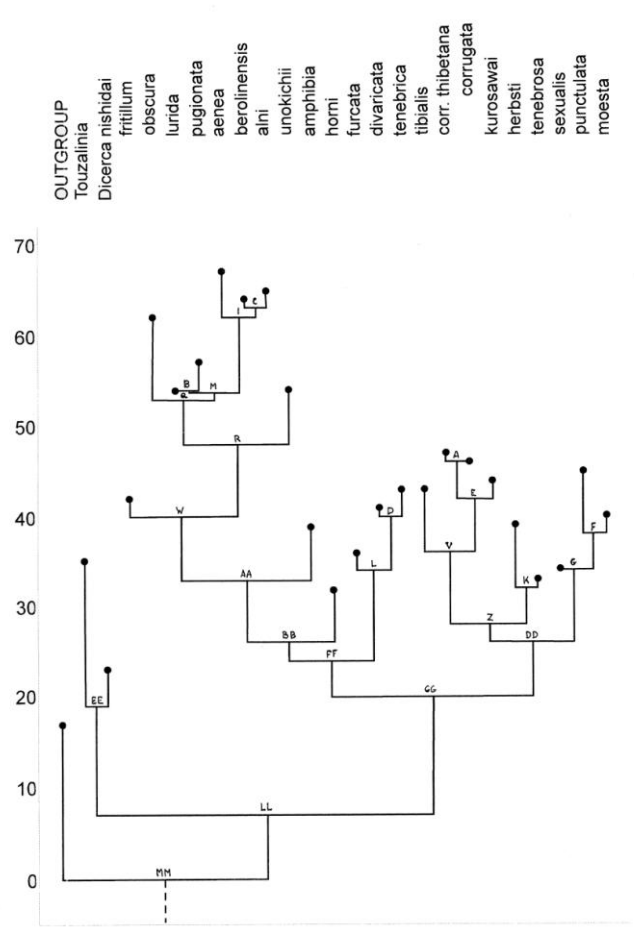
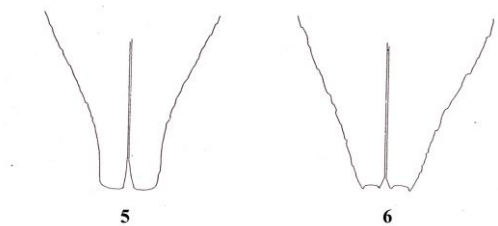
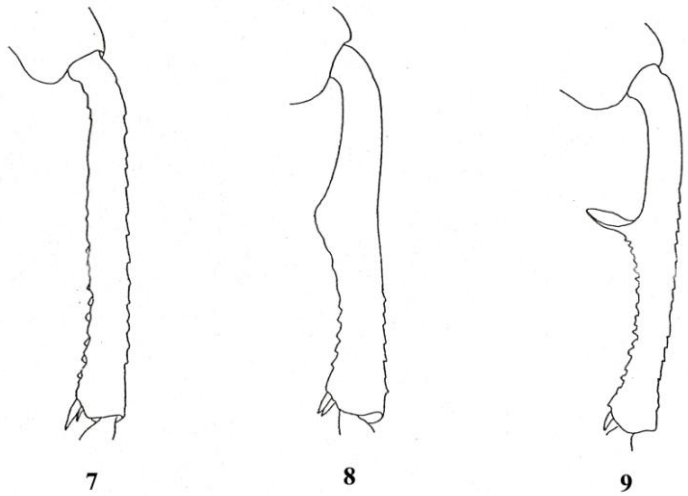


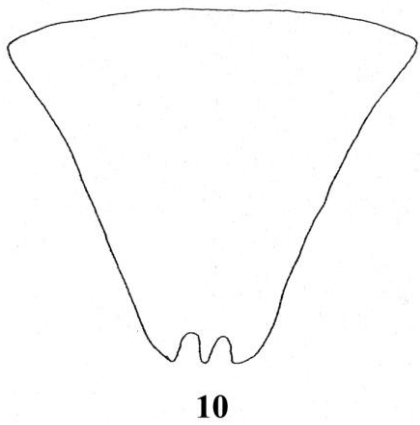
Fig. 4. Cladogram (MICSEQ) of *Dicerca* Esch. [relations among outgroups not shown]



Figs. 5-6. Elytral apices
Fig. 5. *Dicerca furcata* (Thb.);. Fig. 6. *D. corrugata* Frm.



Figs. 7-9. Male mesotibiae
Fig. 7 *Dicerca* (*Argante*) *moesta* (F.); Fig. 8. *Dicerca* (s.str.) *unokichii* Hri.; Fig. 9. *Dicerca corrugata* Frm.



Figs. 10. *Dicerca furcata* (Thb.): female – anal sternite

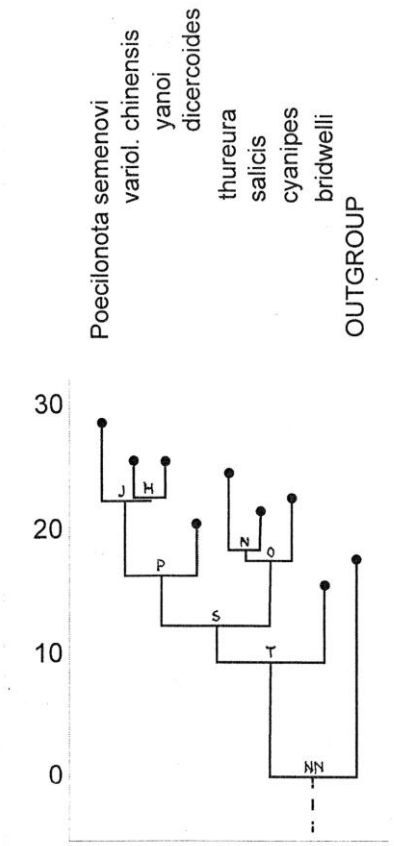
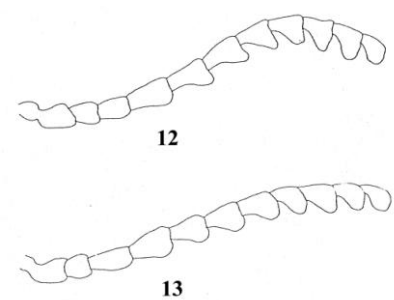


Fig. 11. Cladogram (MICSEQ) of *Poecilonota* Esch. [relations among outgroups not shown]



Figs. 12-13. Antennae
12. *Poecilonota variolosa chinensis* Thy.; 13. *Poecilonota yanoi* Kur.

NECESSARY CHANGES OF NAMES IN HYDRACHNELLAE (ARACHNIDA: ACARI)

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[**Özdikmen, H.** 2006. Necessary changes of names in Hydrachnellae (Arachnida: Acari). Munis Entomology & Zoology, 1 (1): 5154]

ABSTRACT: A junior homonym was detected amongst the Acari, and *Acerbitas* is proposed as a replacement name for *Thyas* Koch, 1835 (Hydrachnellae: Hydryphantidae: Thyadinae). Accordingly, new combinations are proposed for all valid species currently included in the genus *Thyas*. The subfamily name Thyadinae [=Thyasinae] Viets, 1926 is corrected to Euthyasinae Viets, 1931 (Hydryphantidae).

KEYWORDS: *Acerbitas, Thyas*, Euthyasinae, Thyasinae, Hydryphantidae, homonymy, replacement names.

Order Hydrachnellae
Family Hydryphantidae
Subfamily Euthyasinae substitute name
Genus Acerbitas nom. nov., substitute name

The genus *Thyas* was described by Hübner, 1824 with the type species *Thyas honesta* Hübner, 1824 by monotypy in Lepidoptera (Noctuoidea: Noctuidae: Catocalinae) from East India. It is a valid generic name in Lepidoptera and is in widespread use (Poole, 1989). Poole (1989) included 20 species in the genus *Thyas*. Subsequently the genus *Thyas* was proposed by Koch, 1835 with the type species *Thyas venusta* Koch, 1835 by original designation in Acari (Hydrachnellae: Thyasinae). At the moment, it is still used as a valid generic name in Acari as the type genus of the subfamily Thyasinae Viets, 1926 (Özkan & Erman, 1999). Both *Thyas* Hübner, 1824 (Lepidoptera) and *Thyas* Koch, 1835 (Arachnida) are recorded in Nomenclator Zoologicus vol. 4: 483 by Neave. However, the name *Thyas* Koch, 1835 is invalid under the law of homonymy, being a junior homonym of *Thyas* Hübner, 1824. Under the Zoological Code (ICZN, 1999) it must be rejected and replaced. In accordance with article 60 of the International Code of Zoological Nomenclature, fourth edition (1999), I propose to substitute the junior homonym *Thyas* Koch, 1835 for the nomen novum *Acerbitas*. As a result of this action, *Thyas* Koch, 1835 is replaced with *Acerbitas* **nom. nov.** The following new combination is *Acerbitas venusta* (Koch, 1835), **comb. nov.**, along with other new combinations for all valid species currently included in *Thyas* (Acari: Hydrachnellae).

In addition to this, I propose herein the replacement name Euthyasinae Viets, 1931 for the subfamily name Thyasinae because its

type genus *Thyas* Koch, 1835 is invalid and the type genus of a family-group name must be valid.

SYSTEMATIC ACCOUNTS

Ordo Hydrachnellae
Family Hydryphantidae
Subfamily Euthyasinae Viets, 1931 **replacement name**
For Thyasinae Viets, 1926
Type genus: *Acerbitas* **nom. nov.** (= *Thyas* Koch, 1835)
Genus *Acerbitas* **new replacement name**
For *Thyas* Koch, 1835, junior homonym of *Thyas* Hübner, 1824.
Type species: *Thyas venusta* Koch, 1835 by original designation.
Gender: Feminine.
Distribution: in spring waters and marshes of Holarctic Region.

All valid species currently included in the genus *Thyas* (Acari: Hydrachnellae: Hydryphantidae) as follows;

Subfamily Thyadinae Viets, 1926
Genus *Thyas* C.L.Koch, 1835
[= *Urothyas* Thor, 1929] [hypothetical, therefore not available]

Subgenus *Thyas* C.L.Koch, 1835
Species *Thyas barbigera* Viets, 1908 [Redescription, Biesiadka & Cichocka 1990]
[= *Thyas pauciseta* Migot, 1926] [as subspecies of *barbigera*]
Species *Thyas bruzelli* Lundblad, 1926 [Redescription, Biesiadka & Cichocka 1990]
Species *Thyas dirempta* Koenike, 1912 [Redescription, Biesiadka & Cichocka 1990]
Subspecies *Thyas dirempta dirempta* Koenike, 1912
[= *rostrata* Lundblad, 1925] [as subspecies of *dirempta*]
Subspecies *Thyas dirempta bucculenta* Lundblad, 1925
Species *Thyas extendens* George, 1901
Species *Thyas ezoensis* Imamura, 1954
Species *Thyas fastus* Tuzovsky, 1980
Species *Thyas incerta* Lundblad, 1942
Species *Thyas langei* Tuzovsky, 1976
Species *Thyas magadanensis* Tuzovsky, 1999
Species *Thyas pachystoma* Koenike, 1914
Subspecies *Thyas pachystoma pachystoma* Koenike, 1914
[= *vietsi* Koenike, 1914]
Subspecies *Thyas pachystoma inepta* Lundblad, 1925
Subspecies *Thyas pachystoma pannonica* Szalay, 1956
Subspecies *Thyas pachystoma paucispina* Viets, 1920
Species *Thyas palustris* Koenike, 1912
Species *Thyas pigmenta* Habeeb, 1973
Species *Thyas pustulosa* Thor, 1901
Species *Thyas stolli* Koenike, 1895
Species *Thyas tobiquensis* Habeeb, 1954 [as form of *stolli*]
Species *Thyas valvata* Thor, 1899
Species *Thyas venusta* C.L. Koch, 1835 [Type-species]

Subgenus *Todothyas* Cook, 1974
Species *Thyas rivalis* Koenike, 1912 [Redesc., Biesiadka & Cichocka 1990] [Type-species]
Subspecies *Thyas rivalis rivalis* Koenike, 1912
Subspecies *Thyas rivalis colligera* Viets, 1923
Subspecies *Thyas rivalis longiscuta* Lundblad, 1927
[= *longiscutata* Motas & Tanasachi, 1962]
Subspecies *Thyas rivalis musciola* Walter, 1922
Subspecies *Thyas rivalis neartica* Habeeb, 1958

Mandatory new combinations

Family Hydryphantidae
Subfamily Euthyasinae **new replacement name**

Genus *Acerbitas* **new replacement name**
[= *Thyas* C.L.Koch, 1835] **new synonym**
[= *Urothyas* Thor, 1929]

Subgenus *Acerbitas* **new replacement name**
Species *Acerbitas barbigera* (Viets, 1908) **new comb.** from *Thyas*
Species *Acerbitas bruzelli* (Lundblad, 1926) **new comb.** from *Thyas*
Species *Acerbitas dirempta* (Koenike, 1912) **new comb.** from *Thyas*
Subspecies *Acerbitas dirempta dirempta* (Koenike, 1912) **new comb.** from *Thyas*
Subspecies *Acerbitas dirempta bucculenta* (Lundblad, 1925) **new comb.** from *Thyas*
Species *Acerbitas extendens* (George, 1901) **new comb.** from *Thyas*
Species *Acerbitas ezoensis* (Imamura, 1954) **new comb.** from *Thyas*
Species *Acerbitas fastus* (Tuzovsky, 1980) **new comb.** from *Thyas*
Species *Acerbitas incerta* (Lundblad, 1942) **new comb.** from *Thyas*
Species *Acerbitas langei* (Tuzovsky, 1976) **new comb.** from *Thyas*
Species *Acerbitas magadanensis* (Tuzovsky, 1999) **new comb.** from *Thyas*
Species *Acerbitas pachystoma* (Koenike, 1914) **new comb.** from *Thyas*
Subspecies *Acerbitas pachystoma pachystoma* (Koenike, 1914) **new comb.** from *Thyas*
Subspecies *Acerbitas pachystoma inepta* (Lundelad, 1925) **new comb.** from *Thyas*
Subspecies *Acerbitas pachystoma pannonica* (Szalay, 1956) **new comb.** from *Thyas*
Subspecies *Acerbitas pachystoma paucispina* (Viets, 1920) **new comb.** from *Thyas*
Species *Acerbitas palustris* (Koenike, 1912) **new comb.** from *Thyas*
Species *Acerbitas pigmenta* (Habeeb, 1973) **new comb.** from *Thyas*
Species *Acerbitas pustulosa* (Thor, 1901) **new comb.** from *Thyas*
Species *Acerbitas stolli* (Koenike, 1895) **new comb.** from *Thyas*
Species *Acerbitas tobiquensis* (Habeeb, 1954) **new comb.** from *Thyas*
Species *Acerbitas valvata* (Thor, 1899) **new comb.** from *Thyas*
Type Species *Acerbitas venusta* (C.L. Koch, 1835) **new comb.** from *Thyas*

Subgenus *Todothyas* Cook, 1974
Type Species *Acerbitas rivalis* (Koenike, 1912) **new comb.** from *Thyas*
Subspecies *Acerbitas rivalis rivalis* (Koenike, 1912) **new comb.** from *Thyas*
Subspecies *Acerbitas rivalis colligera* (Viets, 1923) **new comb.** from *Thyas*
Subspecies *Acerbitas rivalis longiscuta* (Lundblad, 1927) **new comb.** from *Thyas*
Subspecies *Acerbitas rivalis musciola* (Walter, 1922) **new comb.** from *Thyas*
Subspecies *Acerbitas rivalis neartica* (Habeeb, 1958) **new comb.** from *Thyas*

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SARAWAKA NOM. NOV, A REPLACEMENT NAME FOR PREOCCUPIED GENUS *CLEONICE* THOMSON, 1864 (COLEOPTERA: CERAMBYCIDAE)

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[**Özdikmen, H. & Abang, F.** 2006. *Sarawaka* nom. nov, a replacement name for preoccupied genus *Cleonice* Thomson, 1864 (Coleoptera: Cerambycidae). Munis Entomology & Zoology, 1 (1): 55-56]

ABSTRACT: A replacement name, *Sarawaka* is proposed for the genus name *Cleonice* Thomson, 1864 in the longicorn beetles family Cerambycidae (Coleoptera).

KEY WORDS: *Sarawaka, Cleonice,* homonymy, replacement name, Coleoptera, Cerambycidae.

TAXONOMY

Family Cerambycidae
Subfamily Cerambycinae
Genus *Sarawaka* nom. nov.

Cleonice Thomson, 1864. Syst. Cerambycid., 333. (Coleoptera: Chrysomeloidea: Cerambycidae: Cerambycinae: Claucytini). Preoccupied by *Cleonice* Robineau-Desvoidy, 1863. Hist. nat. Dipt., 1, 1097. (Diptera: Cyclorrapha: Oestroidea: Tachinidae).

Remarks: Thomson (1864) proposed the generic name *Cleonice* from Sarawak, Malaysia in the longicorn beetles family Cerambycidae. Unfortunately, the generic name was already preoccupied by Robineau-Desvoidy (1863), who had described the genus *Cleonice* with the type species *Cleonice nitidiusculata* (Zetterstedt, 1859) in the fly family Tachinidae. Thus, the generic name *Cleonice* Thomson, 1864 is a junior homonym of the generic name *Cleonice* Robineau-Desvoidy, 1863. According to Article 60 of the International Code of Zoological Nomenclature, I propose a new replacement name *Sarawaka* **nom. nov.** for *Cleonice* Thomson, 1864.

Etymology: from Sarawak, Malaysia.

Summary of nomenclatural changes:
Sarawaka **nom. nov.** = *Cleonice* Thomson, 1864 (nec Robineau-Desvoidy, 1863).

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ADDITIONAL NOTES ON GYRINIDAE FAUNA OF TURKEY (COLEOPTERA)

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[**Kıyak, S., Salur, A., Canbulat, S. & Darılmaz, M.** 2006. Additional notes on Gyrinidae fauna of Turkey (Coleoptera). Munis Entomology & Zoology, 1 (1): 57-62]

ABSTRACT: A total of 58 samples were collected in the provinces of Antalya, Aydın, Afyon, Burdur, Denizli, Isparta and Muğla located in southern west Mediterranean region of Turkey by area studies and then identified between 2000-2002. *Gyrinus dejeani* Brullé, 1832, *G.suffriani* Scriba, 1855, *G. caspius* Ménetries, 1832 and *G. distinctus* Aubé, 1836, *Orectochilus villosus* (Müller, 1776), *Aulonogyrus concinnus* (Klug, 1833), *A. striatus* (Fabricius, 1792) were stated as first records for the southern west Mediterranean region of Turkey as the result of the identification. The habitats and the phenologies of these species found in the area and their distribution data were given. Distribution of each species were given in two categories; as in Turkey shown on the map and in the world.

KEY WORDS: Coleoptera, Gyrinidae, New records, southern west, Turkey.

The Gyrinidae is the second largest of the families of aquatic Adephaga with more than 900 described species. The family occurs in all faunal regions, with the majority of species in the tropics. The Holoarctic region is totally dominated by the almost world-wide distributed genus Gyrinus. Only rather few species of the subfamilies Orectochilinae and Enhydrinae, which are dominant in the tropics, occur in the Palearctic and Nearctic's regions (Franciscolo, 1979; Holmen, 1987). The species of Gyrinidae inhabit both fresh and brackish waters. They may be met with near the shores of lakes, in ponds and marshes, and in slowly running streams (Holmen, 1987). Gyrinidae are equally well capable of flight, swimming and diving. They usually occur in groups on the water surface and either swims slowly in zigzag lines or are motionless (Zaitsev, 1972).

Thirteen species of Gyrinidae have been recorded from the Turkey (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972).

METHODS

All samples were collected from southern west Mediterranean region in the years 2000-2002. The samples were collected from spring water area, with a sieve, ladle and net having a 1 mm mesh size. The beetles were killed with 70% alcohol and in the laboratory were cleaned of

clayey and muddy substances on their surfaces with a small paintbrush. The aedeagophore was dissected under the stereo-microscope and left in 10% KOH solution for about 1–2 hours. Materials have been deposited in the Zoological Museum of Gazi University (=ZMGU), Ankara, Turkey.

RESULTS

Family Gyrinidae

Orectochilus villosus (Müller, 1776)

Materials: Antalya: 1 male, 1 female, Alanya (Dim Çayı), 36º 33' N 32º 11' E, 100 m, 11.07.2000; 1 female, Kemer (near the Göynük), 36º 40' N 30º 31' E, 65 m, 04.08.2000.

Phenology: July-August. **Habitat:** Slowly flowing streams; fresh water. **Distribution in Turkey:** Malatya (Sultan) (Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Albania, Algeria, Austria, Belgium, Bosnia Herzegovina, Bulgaria, China, Croatia, Cyprus, Egypt, England, Finland, France, Germany, Hungary, Iran, Israel, Japan, Macedonia, Moldova, Morocco, Norway, Poland, Romania, Russia, Siberia, Slovenia, Spain, Sweden, Switzerland, Syria, Ukraine, Yugoslavia (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Remarks:** *Orectochilus villosus* is new record for the Gyrinidae fauna of the Mediterranean Region.

Gyrinus dejeani Brullé, 1832

Materials: Antalya: 2 males, 3 females, Kemer (near the Göynük), 36º40'N 30º31'E, 65 m, 04.08.2000; 1 male, Alanya (Yeşilöz deresi), 36º22'N 32º11'E, 20 m, 26.05.2001; Muğla: 1 male, Dalaman, (Yanıklar-İnlice), 22.05.2000; 3 males, 4 females, Köyceğiz (Karaböğürtlen village, Fethiye deresi), 37º00'N 28º30'E, 90 m, 18.07.2000; Aydın: 1 male, Bozdoğan, Kemer Dam, 23.05.2000.

Phenology: May, July-August. **Habitat:** Coast of dam lakes and slowly flowing streams; fresh water. **Distribution in Turkey:** Adana (Toros mountains-Suluhan), İzmir, Gaziantep (Ekbaz) (Brinck, 1978; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Albania, Bosnia Herzegovina, Bulgaria, Croatia, Cyprus, France, Greece, Iraq, Israel, Italy, Lebanon, Macedonia, Romania, Spain, Syria (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Remarks:** *Gyrinus dejeani* is new record for the Gyrinidae fauna of the research area.

Gyrinus suffriani Scriba, 1855

Materials: Muğla: 1 male, Köyceğiz (Karaböğürtlen village, Fethiye deresi) 37º00'N 28º30'E, 90 m, 18.07.2000.

Phenology: July. **Habitat:** Slowly flowing streams; fresh water. **Distribution in Turkey:** Localities are not clearly (Brinck, 1978; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Albania, Austria, Bulgaria, Caucasus, Denmark, England, Finland, Germany, Greece, Hungary, Israel, Italy, Lebanon, Macedonia, Norway, Portugal, Romania, Russia, Slovenia, Spain, Sweden,

Switzerland, Syria, Ukraine (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Remarks:** *Gyrinus suffriani* is new record for the Gyrinidae fauna of the research area.

Gyrinus caspius Ménetries, 1832

Materials: Antalya: 1 female, Kalkan (Patara), 36°15'N 29°19'E, 12 m, 27.05.2001; 1 female, between Hisarcandır and Hurma, 36°50'N 30°34'E, 200 m, 25.06.2000; Afyon: 2 males, Başmakçı (Acıgöl, puddle), 37°50'N 29°58'E, 955 m, 22.06.2000; Burdur: 1 male, Karamanlı (near the Kılavuz village), 37°22'N 29°52'E, 1062 m, 23.06.2000

Phenology: May-June. **Habitat:** Puddles and slowly flowing streams; fresh and brackish water. **Distribution in Turkey:** Adana (Suluhan, Toros Mountains), Edirne (Çopköy, Ermenköy), Hatay (İskenderun), Aksaray (Brinck, 1978; Darılmaz, 2005; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Algeria, Armenia, Caucasian, China, Denmark, England, Estonia, France, Germany, Iran, Iraq, Ireland, Israel, Italy, Lebanon, Lithuania, Morocco, the Netherlands, Norway, Poland, Russia, Sweden, Syria (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Remarks:** *Gyrinus caspius* is new record for the Gyrinidae fauna of Aegean Region.

Gyrinus distinctus Aubé, 1836

Materials: Isparta: 1 male, Aksu (Aksu çayı), 37°49'N 31°06'E, 1340 m, 14.07.2000; 1 female, Aksu (Karağı köyü, stream), 1220 m, 14.09.2000; 1 male, Yalvaç (Sücüllü, Yalvaç dam), 38°22'N 31°08'E, 1200 m, 20.06.2001; 1 female, Eğirdir (Aşağı Gökdere crossroads), 37°33'N 30°47'E, 365 m, 21.06.2002; Antalya: 1 female, Manavgat (Kızılot, Karpuzçay), 36°43'N 31°33'E, 10 m, 27.06.2002; 3 males, 1 female, Konyaaltı (Boğaz Çayı), 36°51'N 30°37'E, 15 m, 26.05.2001; 1 male, Alanya (Yeşilöz Deresi), 36°22'N 32°11'E, 20 m, 26.05.2001; Denizli: 1 male, Honaz (Akbaş köyü, stream), 1050 m, 18.07.2000.

Phenology: May-July, September. **Habitat:** Coasts of dam lakes and slowly flowing streams; fresh and brackish water. **Distribution in Turkey:** Adana (Suluhan, Bolkar Mountains), Bursa (Uludağ Mountain, Karacabey), İzmir (Efes), Aksaray (Brinck, 1978; Darılmaz, 2005; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Afghanistan, Armenia, Caucasia, China, Cyprus, Denmark, Egypt, England, Estonia, Finland, Hungary, Iran, Iraq, Israel, Latvia, Lebanon, Lithuania, Mongolia, Norway, Russia, Sudan, Sweden, Syria (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Remarks:** *Gyrinus distinctus* is new record for the Gyrinidae fauna of Aegean Region.

Aulonogyrus concinnus (Klug, 1833)

Materials: Aydın: 5 males, 4 females, Sultanhisar (Akçay, DSİ canal), 37°51'N 28°05'E, 62 m, 19.05.2001; Denizli: 2 males, 1 female, Sarayköy (near the Karakıran, Büyük Menderes river), 37°56'N 28°52'E, 165 m, 22.08.2001.

Phenology: May, August. **Habitat:** Coasts of lakes, watering Canals and slowly flowing streams; fresh and brackish water. **Distribution in Turkey:** Eskişehir, Adana (Toros Mountains), Hakkari (Şemdinli), Aksaray (Brinck, 1978; Darılmaz, 2005; Franciscolo, 1979; Gueorguiev,

1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Afghanistan, Albania, Algeria, Austria, Belgium, Bulgaria, Caucasia, Chine, Cyprus, France, Germany, Greece, Hungary, Iran, Iraq, Italy, Lebanon, Macedonia, Mongolia, the Netherlands, Poland, Romania, Slovenia, Spain, Switzerland, Syria, Tibet, Ukraine (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Remarks:** *Aulonogyrus concinnus* is new record for the Gyrinidae fauna of Aegean Region.

Aulonogyrus striatus (Fabricius, 1792)

Materials: Antalya: 1 male, Serik (East of Kayadibi), 37°19'N 30°52'E, 300 m, 21.06.2001; Muğla: 6 males, 5 females, Milas (between Taşlı and Kızılağaç), 37°18'N 27°39'E, 50 m, 17.04.2000.

Phenology: April, June. **Habitat:** Puddle; fresh water. **Distribution in Turkey:** Adana (Toros Mountains-Suluhan, Ceyhan) (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Albania, Algeria, Austria, Bulgaria, Cyprus, England, France, Greece, Iran, Iraq, Israel, Italy, Lebanon, Macedonia, Morocco, Portugal, Romania, Spain, Syria, Tunisia, Yugoslavia (Brinck, 1978; Darılmaz, 2005; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Remarks:** *Aulonogyrus striatus* is new record for the Gyrinidae fauna of Aegean Region.

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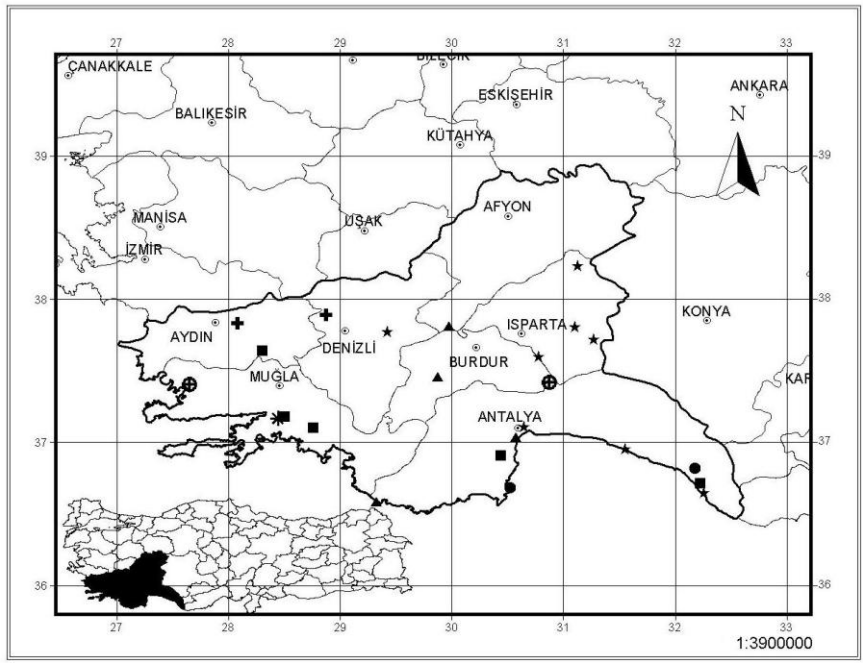

Fig. 1. Distribution map of records in the research area; (●)*Orectochilus villosus* (■)*Gyrinus dejeani* (✳)*Gyrinus suffriani* (▲)*Gyrinus caspius* (★)*Gyrinus distinctus* (✚)*Aulonogyrus concinnus* (⊕)*Aulonogyrus striatus*

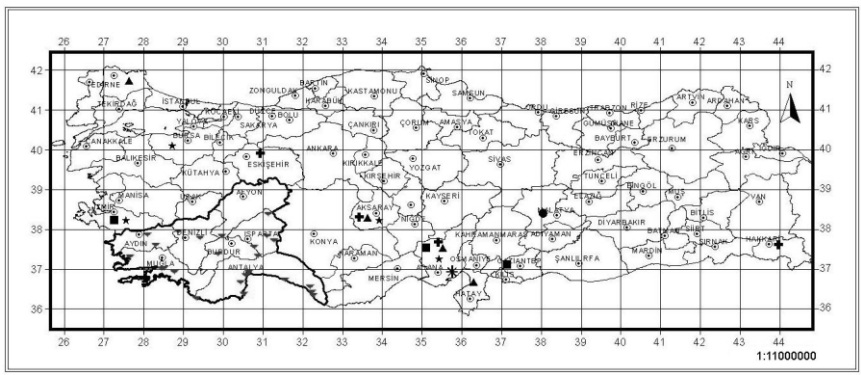

Fig. 2. Distribution map of records in Turkey; (●) *Orectochilus villosus* (■) *Gyrinus dejeani,* (▲) *Gyrinus caspius,* (★) *Gyrinus distinctus* (✚) *Aulonogyrus concinnus* (✳) *Aulonogyrus striatus*

NOMENCLATURAL CHANGES FOR SOME LANIATORES (OPILIONES) GENERA: NEW SUBSTITUTE NAMES AND NEW COMBINATIONS

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[**Özdikmen, H.** 2006. Nomenclatural changes for some Laniatores (Opiliones) genera: New substitute names and new combinations. Munis Entomology & Zoology, 1 (1): 63-68]

ABSTRACT: Six junior homonyms were detected amongst the Opiliones genera and the following replacement names are proposed: *Ceylonositalces* nom. nov. for *Eusitalces* Roewer, 1915 (Podoctidae); *Borneojapetus* nom. nov. for *Japetus* Roewer, 1949 (Podoctidae); *Neoconomma* nom. nov. for *Metaconomma* Kauri, 1985 (Pyramidopidae); *Neoorsa* nom. nov. for *Orsa* Šilhavý, 1979 (Samoidae); *Neoparalus* nom. nov. for *Paralus* Roewer, 1949 (Incertae sedis [Phalangodinae?]); *Kuryella* nom. nov. for *Paranaleptes* Soares & Soares, 1947 (Gonyleptidae). Accordingly, new combinations are herein proposed for the species currently included in these genera: *Ceylonositalces parvulus* (Roewer, 1915) comb. nov. from *Eusitalces parvulus* Roewer, 1915; *Borneojapetus longipes* (Roewer, 1949) comb. nov. from *Japetus longipes* Roewer, 1949; *Neoconomma dentipes* (Kauri, 1985) comb. nov. from *Metaconomma dentipes* Kauri, 1985; *Neoorsa daphne* (Šilhavý, 1979) comb. nov. from *Orsa daphne* Šilhavý, 1979; *Neoparalus granitus* (Roewer, 1949) comb. nov. from *Paralus granitus* Roewer, 1949; *Kuryella xanthoacantha* (Soares & Soares, 1947) comb. nov. from *Paranaleptes xanthoacanthus* Soares & Soares, 1947; *Kuryella melanoacantha* (Soares & Soares, 1947) comb. nov. from *Paranaleptes melanoacanthus* Soares & Soares, 1947.

KEY WORDS: nomenclatural changes, homonymy, replacement names, Opiliones.

In an effort to reduce the number of homonyms in Opiliones, I systematically checked all generic names published. I found six opilionid genera whose names had been previously published for other taxa, making them junior homonyms. In accordance with the International Code of Zoological Nomenclature, I herein propose substitute names for these genera.

SYSTEMATIC ACCOUNTS

Family PODOCTIDAE
Genus *CEYLONOSITALCES* nom. nov., substitute name

Eusitalces Roewer, 1915. Arch. Naturgesch., 81, A3, 50. (Arachnida: Opiliones: Laniatores: Podoctidae). Preoccupied by *Eusitalces* Brunner, 1911. Bull. Ann. Carnegie Mus., 8 (1), 142. (Orthoptera: Acridoidea: Acrididae: Ommatolampinae: Abracrini).

Remarks: Roewer (1915) proposed the genus *Eusitalces* with the type species *Eusitalces parvulus* Roewer, 1915 from Sri Lanka [=Ceylon] in the opilionid family Podoctidae. Unfortunately, the generic name was already preoccupied by Brunner (1911), who had described the genus *Eusitalces* in the orthopteran family Acrididae (Costa & Carvalho,

2002; Costa et al., 2004a,b). Thus, the genus *Eusitalces* Roewer, 1915 is a junior homonym of the generic name *Eusitalces* Brunner, 1911. According to Article 60 of the International Code of Zoological Nomenclature, I propose a new replacement name *Ceylonositalces* **nom. nov.** for *Eusitalces* Roewer, 1915.

Etymology: from Ceylon, traditional name of Sri Lanka + preexisting genus *Sitalces*.

Summary of nomenclatural changes:
Ceylonositalces **nom. nov.** = *Eusitalces* Roewer, 1915 (nec Brunner, 1911).
Ceylonositalces parvulus (Roewer, 1915) **comb. nov.** = *Eusitalces parvulus* Roewer, 1915.

Family PODOCTIDAE
Genus *BORNEOJAPETUS* nom. nov., *substitute name*

Japetus Roewer, 1949. Senckenbergiana, 30, 274. (Arachnida: Opiliones: Laniatores: Podoctidae). Preoccupied by *Japetus* Distant, 1883. Biol. Centr. Amer., Zool., Rhynch. Heteropt., 1, 227. (Heteroptera: Pyrrhocoroidea: Largidae).

Remarks: The genus *Japetus* was erected by Distant, 1883 with the type species *Japetus sphaeroides* Distant, 1883 in the bug family Largidae. Later, the genus *Japetus* was described by Roewer, 1949 with the type species *Japetus longipes* Roewer, 1949 from Borneo. However, the name *Japetus* Roewer, 1949 is invalid under the law of homonymy, being a junior homonym of *Japetus* Distant, 1883. In accordance with the International Code of Zoological Nomenclature, I propose to substitute the junior homonym name *Japetus* Roewer, 1949 for the name *Borneojapetus* **nom. nov.**

Etymology: from Borneo + preexisting genus *Japetus*.

Summary of nomenclatural changes:
Borneojapetus **nom. nov.** = *Japetus* Roewer, 1949 (nec Distant, 1883).
Borneojapetus longipes (Roewer, 1949) **comb. nov.** = *Japetus longipes* Roewer, 1949.

INCERTAE SEDIS [PYRAMIDOPIDAE?]
Genus *NEOCONOMMA* nom. nov., substitute name

Metaconomma Kauri, 1985. K Mus Midden-Afr Tervuren Belg Ann Zool Wet 245: 87. (Arachnida: Opiliones: Laniatores: Incertae sedis [Pyramydopidae?]). Preoccupied by *Metaconomma* Cambridge, 1905. Biol. Centr. Amer., Zool., Arachn., 2, 576. (Arachnida: Opiliones: Laniatores: Grassatores: Incertae sedis [Phalangodinae?]).

Remarks: The generic name *Metaconomma* Cambridge, 1905 was proposed for a genus of opiliones (with the type species *Metaconomma femorale* Cambridge, 1905 from Mexico). Subsequently, the generic name *Metaconomma* Kauri, 1985 was introduced for a new opilionid

genus (with the type species *Metaconomma dentipes* Kauri, 1985 from Zaire). *Metaconomma* Pickard-Cambridge, 1905: originally in Assamiidae, transferred by Roewer (1912) to Phalangodinae, later removed to Grassatores incertae sedis (Kury, 2003). *Metaconomma* Kauri, 1985: originally in Phalangodinae, transferred to "undescribed new family" by Staręga (1992). Thus, the genus *Metaconomma* Kauri, 1985 is a junior homonym of the generic name *Metaconomma* Cambridge, 1905. According to Article 60 of the International Code of Zoological Nomenclature, I propose for the genus *Metaconomma* Kauri, 1985 the new replacement name *Neoconomma* **nom. nov.**

Etymology: from preexisting genus *Metaconomma*.

Summary of nomenclatural changes:
Neoconomma **nom. nov.** = *Metaconomma* Kauri, 1985 (nec Cambridge, 1905).
Neoconomma dentipes (Kauri, 1985) **comb. nov.** = *Metaconomma dentipes* Kauri, 1985.

Family SAMOIDAE
Genus *NEOORSA* nom. nov., substitute name

Orsa Šilhavý, 1979. Annotationes zool. bot. Bratislava No. 130: 4. (Arachnida: Opiliones: Laniatores: Samoidae: Samoinae). Preoccupied by *Orsa* Walker, 1865. List Specimens Lep. Ins. Brit. Mus., 33, 1112. (Lepidoptera: Noctuoidea: Noctuidae: Calpinae).

Remarks: The name *Orsa* was initially introduced by Walker, 1865 for a genus of the moth family Noctuidae (with the type species *Orsa erythrospila* Walker, 1865). Subsequently, Šilhavý, 1979 described a new opilionid genus of the family Samoidae (with the type species *Orsa daphne* Šilhavý, 1979 from Haiti) under the same generic name. Thus, the genus *Orsa* Šilhavý, 1979 is a junior homonym of the genus *Orsa* Walker, 1865. According to Article 60 of the International Code of Zoological Nomenclature, I propose for the genus *Orsa* Šilhavý, 1979 the new replacement name *Neoorsa* **nom. nov.**

Etymology: from preexisting genus *Orsa*.

Summary of nomenclatural changes:
Neoorsa **nom. nov.** = *Orsa* Šilhavý, 1979 (nec Walker, 1865).
Neoorsa daphne (Šilhavý, 1979) **comb. nov.** = *Orsa daphne* Šilhavý, 1979.

INCERTAE SEDIS [PHALANGODINAE?]
Genus *NEOPARALUS* nom. nov., substitute name

Paralus Roewer, 1949. Senckenbergiana, 30, 42. (Arachnida: Opiliones: Laniatores: incertae sedis [Phalangodinae]). Preoccupied by *Paralus* Rafinesque, 1815. Analyse, 142 [n.n.]. (Mollusca: Gastropoda: Opisthobranchia: Glaucidae).

Remarks: Roewer (1949) proposed the genus name *Paralus* with the type species *Paralus granitus* Roewer, 1949 from Brazil. *Paralus*

Roewer, 1949: originally in Phalangodinae, removed to Grassatores incertae sedis by Kury (2003). Unfortunately, the generic name was already preoccupied by Rafinesque (1815), who had described the genus *Paralus* in the sea slug family Glaucidae. Thus, the genus *Paralus* Roewer, 1949 is a junior homonym of the generic name *Paralus* Rafinesque, 1815. According to Article 60 of the International Code of Zoological Nomenclature, I propose a new replacement name *Neoparalus* **nom. nov.** for *Paralus* Roewer, 1949.

Etymology: from preexisting genus *Paralus*.

Summary of nomenclatural changes:
Neoparalus **nom. nov.** = *Paralus* Roewer, 1949 (nec Rafinesque, 1815).
Neoparalus granitus (Roewer, 1949) **comb. nov.** = *Paralus granitus* Roewer, 1949.

Family GONYLEPTIDAE
Genus *KURYELLA* nom. nov., substitute name

Paranaleptes Soares & Soares, 1947. Pap. Dep. Zool. Sec. Agric. S. Paulo, 8, 225. (Arachnida: Opiliones: Laniatores: Gonyleptidae: Pachylinae). Preoccupied by *Paranaleptes* Breuning, 1937. Novit. ent., 7 Suppl., 263. (Coleoptera: Cerambycidae: Lamiinae).

Remarks: The genus *Paranaleptes* was erected by Breuning, 1937 with the type species *Paranaleptes reticulata* (Thomson, 1877). Later, the genus *Paranaleptes* was described by Soares & Soares, 1947 with the type species *Paranaleptes xanthoacanthus* Soares & Soares, 1947 from Brazil. However, the name *Paranaleptes* Soares & Soares, 1947 is invalid under the law of homonymy, being a junior homonym of *Paranaleptes* Breuning, 1937. In accordance with article 60 of the International Code of Zoological Nomenclature, I propose to substitute the junior homonym name *Paranaleptes* Soares & Soares, 1947 for the nomen novum *Kuryella*.

Etymology: The name dedicated to Prof. Dr. Adriano Brilhante Kury. The name is masculine in gender.

Summary of nomenclatural changes:
Kuryella **nom. nov.** = *Paranaleptes* Soares & Soares, 1947 (nec Breuning, 1937).
Kuryella xanthoacantha (Soares & Soares, 1947) **comb. nov.** = *Paranaleptes xanthoacanthus* Soares & Soares, 1947.
Kuryella melanoacantha (Soares & Soares, 1947) **comb. nov.** = *Paranaleptes melanoacanthus* Soares & Soares, 1947.

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MARTINEZIANA NOM. NOV., A REPLACEMENT NAME FOR THE PREOCCUPIED GENUS NAME *MARTINEZIELLA* CHALUMEAU, 1986 (COLEOPTERA: SCARABAEIDAE)

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[**Chalumeau, F. & Özdikmen, H.** 2006. *Martineziana* nom. nov., a replacement name for the preoccupied genus name *Martineziella* Chalumeau, 1986 (Coleoptera: Scarabaeidae). Munis Entomology & Zoology, 1 (1): 69-70]

ABSTRACT: A replacement name, *Martineziana* nom. nov. is proposed for the preoccupied genus name *Martineziella* Chalumeau, 1986 in the beetles family Scarabaeidae (Coleoptera). Accordingly, new combinations are herein proposed for the species currently included in this genus: *Martineziana argentina* (Harold,1867) comb. nov.; *Martineziana cambeforti* (Chalumeau,1983) comb. nov.; *Martineziana dutertrei* (Chalumeau,1983) comb. nov. and *Martineziana excavaticollis* (Blanchard,1843) comb. nov. from *Martineziella* Chalumeau, 1986.

KEY WORDS: *Martineziana, Martineziella,* homonymy, replacement name, Coleoptera, Scarabaeidae, Aphodiinae.

TAXONOMY

Order COLEOPTERA
Family SCARABAEIDAE
Subfamily APHODIINAE
Genus *MARTINEZIANA* nom. nov., replacement name

Martineziella Chalumeau, 1986. Nouvelle Revue Ent. (N.S.) 3 (3): 386. (Coleoptera: Scarabaeoidea: Scarabaeidae: Aphodiinae). Preoccupied by *Martineziella* Hegner & Hewitt, 1941. J. Parasit., 27, 542. (Eukaryotes: Residua: Amoebae).

Remarks: Chalumeau (1986) proposed as an objective replacement name for the preoccupied genus *Martinezia* Chalumeau, 1983 (nec Bolivar, 1881) in the beetle family Scarabaeidae. *Martineziella* Chalumeau, 1986 includes the species *Martineziella argentina* (Harold,1867); *Martineziella cambeforti* Chalumeau,1983; *Martineziella dutertrei* Chalumeau,1983; *Martineziella excavaticollis* (Blanchard,1843); *Martineziella separata* (Schmidt,1909) and *Martineziella vandykei* (Hinton, 1935). Unfortunately, the generic name was already preoccupied by Hegner & Hewitt (1941), who had proposed the genus name *Martineziella* as an objective replacement name of *Martinezia* Hegner & Hewitt, 1940 in Protozoa (Patterson, 1999; Patterson et al., 2000). Patterson (1999) includes this genus as amoeboid protists in table 3 titled Protista without contemporary identity in page 104 . Namely, *Martineziella* Hegner & Hewitt, 1941 has

been unclassified a genus of protists yet. Thus, the generic name *Martineziella* Chalumeau, 1986 is a junior homonym of the genus name *Martineziella* Hegner & Hewitt, 1941. According to Article 60 of the International Code of Zoological Nomenclature, we propose a new replacement name *Martineziana* **nom. nov.** for *Martineziella* Chalumeau, 1986.

Etymology: from preexisting the genus name *Martinezia*. The name *Martineziana* is given in honour of famous entomologist Antonio Martinez. The name is masculine in gender.

Summary of nomenclatural changes;

Martineziana **nom. nov.** = *Martineziella* Chalumeau, 1986 (nec Hegner & Hewitt, 1941)

Martineziana argentina (Harold,1867) **comb. nov.** = *Martineziella argentina* (Harold,1867).
Martineziana cambeforti (Chalumeau,1983) **comb. nov.** = *Martineziella cambeforti* Chalumeau,1983.
Martineziana dutertrei (Chalumeau,1983) **comb. nov.** = *Martineziella dutertrei* Chalumeau,1983.
Martineziana excavaticollis (Blanchard,1843) **comb. nov.** = *Martineziella excavaticollis* (Blanchard,1843).

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CONTRIBUTION TO THE KNOWLEDGE OF TURKISH LONGICORN BEETLES FAUNA (COLEOPTERA: CERAMBYCIDAE)

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[**Özdikmen, H.** 2006. Contribution to the knowledge of Turkish longicorn beetles fauna (Coleoptera: Cerambycidae). Munis Entomology & Zoology, 1 (1): 71-90]

ABSTRACT: In the present paper were studied specimens of the family Cerambycidae (Coleoptera) collection in personel collection of Dr. Hüseyin Özdikmen (Ankara / Turkey) from Turkey. New faunistic data is presented on Cerambycidae of Turkey. The faunistic data in the present paper on almost all species add to knowledge on their distribution in Turkey. As a result of identification of these specimens seven subspecies were determined and eighty four species of forty nine genera belonging to five subfamilies for Turkey. So, the present paper contributes to the knowledge of the longhorn beetles fauna of Asian Turkey and European Turkey.

KEY WORDS: Prioninae, Lepturinae, Spondylidinae, Cerambycinae, Lamiinae, Cerambycidae, Coleoptera, faunistic data, Turkey.

The longhorn beetles or Cerambycidae are classified together with Chrysomelidae and Bruchidae in the superfamily Chrysomeloidea. But, some authors recognized Cerambycidae as a separate superfamily Cerambycoidea. (Svacha & Danilevsky, 1986). The concept of the subdivision of Cerambycidae into several families has prevailed recently. Cerambycidae sensu stricto is divided into several subfamilies. These are Parandrinae, Prioninae, Lepturinae, Necydalinae, Spondylidinae, Apatophyseinae, Cerambycinae and Lamiinae. Parandrinae are not represented in Turkey.

Cerambycidae is used here in a slightly restricted sense, in that it excludes the relatively small, basal subfamilies Oxypeltinae, Disteniinae, Vesperinae, Philinae and Anoplodermatinae; the first two are recognized as separate families, and the last three form the family Vesperidae (Svacha, Danilevsky, 1997). Within the family, the placements of most Prioninae, Spondylidinae, Cerambycinae and Lamiinae genera do not differ from generally accepted concepts; however the composition of Lepturinae, Apatophyseinae and Necydalinae are based in part on Svacha and Danilevsky (1987, 1988, 1989, 1997). Also, the subfamilies Apatophyseinae, established by Danilevsky, 1980, and Necydalinae are represented with only a few species in Turkey.

Most of the longhorn beetles elongate and cylindrical with long antennae. The eyes are usually strongly notched. The tarsi appear four segmented with the third segment bilobed, but are actually five segmented. The fourth segment is small and concealed in the notch of the third segment. This is often very difficult to see. Both the

Cerambycidae and Chrysomelidae have this type of tarsal structure, and these groups are sometimes diffucult to separate. The Cerambycidae are separated from Chrysomelidae by the presence of apical spines on the tibiae. Also, the Cerambycidae are separated from the closely related Bruchidae by the normally developed last segment of the abdomen. The pygidium is usually hidden under the elytra in Cerambycidae, but it is always large and prominent in Bruchidae.

All the members of longhorn beetles are xylophagous and phytophagous. Larvae of longhorn beetles develop in plant tissues. Most of the beetles are wood-boring in the larval stage and many species are very destructive to shaded areas, forest, fruit trees and to freshly cut logs. They have larval tunnels in the wood (both living and dead plants). Different species attack different types of trees and shrubs. A few will attack living trees, but most species appear to prefer freshly cut logs or weakened and dying trees or branches. Larvae pupate either in host plants or in soil. Adults of the longhorn beetles can be found on flowers, leaves, wood, herbs etc.

METHODS

The material for this study was collected by the author over various years (1980-1984, 1988, 1990-1997, 1999–2005) from different localities in Turkey and deposited in the Gazi University. All of the materials were determined by Hüseyin Özdikmen. In this paper classification and nomenclature of the longhorn beetles suggested by Danilevsky, 2004 and Althoff & Danilevsky, 1997 are followed. Within the subfamilies all genera are listed in the same order as in Danilevsky, 2002 and Althoff & Danilevsky, 1997. Within the genera the species are listed alphabetically. Each name of a species or subspecies is accompained by the author's name and description date.

The data, Material and Remarks under the title for each species is given in present text. The data under the title of Material examined are given according to the following outline:

Ankara(1), Kızılcahamam(2), Güvem(3), 1200 m(4), 14.05.1997(5), 2 specimens(6), leg. H. Özdikmen(7).

(1) Administrative district (Province); (2) Town; (3) Village; (4) Altitude; (5) Collecting date (day/month/year); (6) Number of specimens; (7) The name of collector

Family Cerambycidae
Subfamily Prioninae
Rhaesus serricollis Motschulsky, 1838

Material: İçel: Erdemli, Karahasanlı village, 11.07.2000, 2 specimens, leg. H.Özdikmen.

Remarks: The species is new for İçel province and apparently mostly distributed in West and South Turkey. Usually the name "*Rhesus*" attributed to Motschulsky was used for the genus. But originally

"*Rhesus*" was introduced for *Prionus serricollis* Motschulsky by J. Thomson (1871), non Lesson (1850).

Aegosoma scabricorne (Scopoli, 1763)

Material: Asian Turkey (Anatolia): 1 specimen without label, leg. H. Özdikmen.

Remarks: The species is probably more or less widely distributed in Turkey.

Subfamily Lepturinae

Dinoptera collaris (Linnaeus, 1758)

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1080 m, 02.06.1990, 1 specimen; Ankara: Kızılcahamam, Aköz village, 1150 m, 26.06.1997, 1 specimen, leg. H. Özdikmen.

Remarks: The species is probably more or less widely distributed in Turkey.

Cortodera colchica Reitter, 1890

Material: Aksaray: entry of Nevşehir-Aksaray, 20.05.1997, 7 specimens; Ankara: Kızılcahamam, Yukarı Çanlı, 1540 m, 14.06.1997, 1 specimen, leg. H. Özdikmen.

Remarks: The species is probably more or less widely distributed in Turkey.

Cortodera femorata (Fabricius, 1787)

Material: Aksaray: Central, 20.05.1997, 1 specimen; Ankara: Kızılcahamam, Soğuksu National Park, 1100 m, 07.06.1997, 1 specimen; Ankara: Kızılcahamam, Güvem, 1000 m, 26.06.1997, 7 specimens, leg. H. Özdikmen.

Remarks: The species is new for Ankara province. It has been recorded only from Aksaray province by Özdikmen, 2003 and probably more or less widely distributed in Turkey.

Cortodera flavimana (Waltl, 1838)

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1150 and 1710 m, 21.06.1992, 2 specimens; 1300-1400 m, 03.07.1992, 2 specimens; 1400 m, 04.07.1992, 1 specimen; Ankara: Kızılcahamam, Güvem, 1000-1066 m, 14.05.1997, 2 specimens; Ankara: Kızılcahamam, Yukarı Çanlı, 1250 m, 28.05.1997, 1 specimen; Ankara: Kızılcahamam, Güvem, 1100 m, 28.05.1997, 1 specimen; Aksaray: Sivrihisar, 1720 m, 02.06.1997, 5 specimens; Kayseri: Yahyalı, Derebağı Şelale place, 1281 m, 02.06.1997, 2 specimens; Ankara: Kızılcahamam, Soğuksu National Park, 1350 m, 07.06.1997, 1 specimen; Ankara: Kızılcahamam, Yukarı Çanlı, 1400-1540 m, 14.06.1997, 30 specimens; Aksaray: Ortaköy, Hocaveli village, 1260 m, 22.06.1997, 1 specimen, leg. H. Özdikmen; Ankara: Çubuk, 19.05.2005, 28 specimens, leg. Z. Avcı.

Remarks: The species is widely distributed in Turkey.

Grammoptera ustulata (Schaller, 1783)

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1350 m, 07.06.1997, 1 specimen, leg. H. Özdikmen.

Remarks: The species is only distributed in North Turkey.

Pedostrangalia emmipoda (Mulsant, 1863)

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1400 m, 19.07.1991, 1 specimen; Konya: Kulu, 1230 m, 31.05.1997, 1 specimen; Ankara: Kızılcahamam, Güvem,

1000 m, 11.07.1997, 3 specimens; Ankara: Kızılcahamam, Yenimahalle village, 1150 m, 15.07.1997, 1 specimen, leg. H. Özdikmen.

Remarks: The species is new for Ankara province and probably more or less widely distributed in Turkey.

Stenurella bifasciata (Müller, 1776)

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1650 m, 03.06.1990, 2 specimens; 1300 m, 11.07.1990, 2 specimens; 1100 m, 12.07.1990, 2 specimens; 1650 m, 03.08.1990, 1 specimen; 1400 m, 21.06.1991, 1 specimen; 1200 m, 28.06.1991, 1 specimen; 1350 m, 10.07.1991, 3 specimens; 1500 m, 19.07.1991, 1 specimen; Ankara: Kızılcahamam, 17.05.1992, 4 specimens; Nevşehir: Avanos, 1100 m, 21.07.1993, 1 specimen; Ankara: Kızılcahamam, Işık Mountain, 30.06.1994, 1 specimen; Ankara: Kızılcahamam, S of Dam, 07.07.1994, 1 specimen; Ankara: Kızılcahamam, Işık Mountain, 07.07.1994, 1 specimen; Ankara: Kızılcahamam, Işık Mountain, 01.07.1995 and 02.07.1995, 2 specimens; Adana: Pozantı, entry of Fındıklı, 1200 m, 23.06.1997, 4 specimens; Adana: Pozantı, Tekir plateau, 1300 m, 23.06.1997, 1 specimens; Kayseri: Yahyalı, Derebağı, Şelale place, 1281 m, 25.06.1997, 1 specimen; Ankara: Kızılcahamam, Güvem, 1000 m, 26.06.1997, 12 specimens; Ankara: Kızılcahamam, Yasin village, 1450 m, 11.07.1997, 2 specimens; Ankara: Kızılcahamam, the peak of Bel, 1550 m, 19.08.1997, 6 specimens; Ankara: Kızılcahamam, Yukarı Çanlı, 1400 m, 19.08.1997, 4 specimens; Ankara: Kızılcahamam, the peak of Bel, 1600 m, 21.08.1997, 4 specimens, leg. H. Özdikmen; Ankara: Beypazarı, Dereli village, 02.07.2005, 33 specimens, leg. V. Saiti.

Remarks: The species is new for Ankara province and widely distributed in Turkey. In Turkey there are three distinct subspecies: The nominate *Stenurella bifasciata bifasciata* (Müller, 1776), *Stenurella bifasciata limbiventris* (Reitter, 1898) occurring in North-east Turkey and the other *Stenurella bifasciata nigrosuturalis* (Reitter, 1895) occurring in South-east Turkey.

Stenurella septempunctata (Fabricius, 1792)

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1650 m, 03.06.1990, 1 specimen; 1300 m, 11.07.1990, 1 specimen; 1100 m, 12.07.1990, 1 specimen; 1350 m, 10.07.1991, 1 specimen; 1400 and 1500 m, 19.07.1991, 2 specimens; Ankara: Kızılcahamam, 17.05.1992, 1 specimen; Ankara: Kızılcahamam, Işık Mountain, 02.07.1995, 1 specimen; Ankara: Kızılcahamam, Güvem, 1000 m, 26.06.1997, 3 specimens, leg. H. Özdikmen; Ankara: Beypazarı, Dereli village, 02.07.2005, 21 specimens, leg. V. Saiti.

Remarks: The species is new for Ankara province and apparently widely distributed in North and Central Turkey.

Pachytodes erraticus (Dalman, 1817)

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1300 m, 11.07.1990, 1 specimen; 1100 m, 12.07.1990, 1 specimen; 1500 m, 07.08.1990, 3 specimens; 1200 m, 28.06.1991, 1 specimen; 1500 m, 02.07.1991, 1 specimen; 1350 m, 10.07.1991, 1 specimen; Ankara: Kızılcahamam, Işık Mountain, 24.06.1994, 1 specimen; Ankara: Kızılcahamam, Güvem, 1000 m, 26.06.1997, 6 specimens; Ankara: Kızılcahamam, Yenimahalle village, 1100-1150 m, 05.07.1997, 10 specimens; Ankara: Kızılcahamam, Yasin village, 1400-1450 m, 11.07.1997, 2 specimens; Ankara: Kızılcahamam, Yukarı Çanlı, 1300 m, 11.07.1997, 9 specimens, leg. H. Özdikmen; Ankara: Beypazarı, Dereli village, 02.07.2005, 35 specimens, leg. V. Saiti.

Remarks: The species is widely distributed in Turkey.

Anastrangalia montana (Mulsant et Rey, 1863)

Material: İçel: Mut-Silifke road, exit of Karabağ, 1320 m, 02.06.2001, 1 specimen, leg. H. Özdikmen.

Remarks: The species is distributed only in South Turkey.

Anastrangalia sanguinolenta (Linnaeus, 1761)

Material: Ankara: Kızılcahamam, 17.05.1991, 1 specimen; Ankara: Kızılcahaman, Soğuksu National Park, 1600 m, 02.07.1991, 1 specimen; 1300 m, 03.07.1991, 1 specimen; 1400 m, 19.07.1991, 1 specimen; Ankara: Kızılcahamam, Işık Mountain, 02.07.1994, 1 specimen; Ankara: Kızılcahamam, Güvem, 1000 m, 26.06.1997, 1 specimen, leg. H. Özdikmen.

Remarks: The species is widely distributed only in North Turkey.

Styctoleptura cordigera (Fuesslins, 1775)

Material: Yozgat: Sarıhacılı, 1150 m, 06.07.1982, 1 specimen, leg. V. Kartal; Nevşehir: Avanos, 1100 m, 21.07.1993, 1 specimen; Aksaray: Ortaköy, Hocaveli village, 1260 m, 22.06.1997, 1 specimen, leg. H. Özdikmen; Turkey: Old Kayseri road 13th km, Topçu dam, 1300-1350 m, 14.07.2002, 2 specimens; Ankara: Beypazarı, Dereli village, 02.07.2005, 1 specimen, leg. V. Saiti.

Remarks: The species is new for Yozgat, Nevşehir, Aksaray and Ankara provinces and probably more or less widely distributed in Turkey.

Styctoleptura heydeni (Ganglbauer, 1889)

Material: Adana: Pozantı, Tekir plateau, 1300 m, 23.06.1997, 1 specimen, leg. H. Özdikmen.

Remarks: The species is new for Adana province and distributed only in South Turkey.

Styctoleptura tesserula (Charpentier, 1825)

Material: Ankara: Kızılcahaman, Soğuksu National Park, 1400 m, 19.07.1991, 1 specimen; Ankara: Kızılcahamam, 17.05.1991, 2 specimens, leg. H. Özdikmen.

Remarks: The species is new for Ankara province and mostly distributed in North Turkey.

Vadonia unipunctata (Fabricius, 1787)

Material examined: Nevşehir: Avanos, 950 m, 23.07.1993, 1 specimen; Ankara: Kızılcahamam, Işık Mountain, 30.06.1994, 1 specimen; Ankara: Kızılcahamam, Işık Mountain, 01.07.1995, 1 specimen; Konya: Kulu, 1230 m, 31.05.1997, 1 specimen; Konya: Gölyazı road, 1000 m, 31.05.1997, 1 specimen; Niğde: Altunhisar, Akçaören, 1281 m, 01.06.1997, 1 specimen; Aksaray: Central, entry of Nevşehir, 1040 m, 03.06.1997, 2 specimens; Aksaray: Ortaköy-Aksaray road, 1400 m, 22.06.1997, 1 specimen; Niğde: Ulukışla, 1281 m, 23.06.1997, 1 specimen; Niğde: Ulukışla, 1400 m, 23.06.1997, 1 specimen; Ankara: Kızılcahamam, Aköz village, 1150 m, 26.06.1997, 4 specimens; Ankara: Kızılcahamam, Güvem, 1000 m, 26.06.1997, 1 specimen; Ankara: Kızılcahamam, Aköz village, 1150 m, 26.06.1997, 1 specimen; Niğde: Çiftlik road, Göllü Mountain, 1581 m, 27.06.1997, 1 specimen; Aksaray, Güzelyurt, Selime, 1240 m, 27.06.1997, 1 specimen; Ankara: Kızılcahamam, Yukarıçanlı, 1300 m, 11.07.1997, 2 specimens; Asian Turkey (Anatolia): 9 specimens without label, leg. H. Özdikmen.

Remarks: The species is new for Konya province and widely distributed in Turkey.

Pseudovadonia livida (Fabricius, 1776)

Material: Turkey: Yakıören-Mulan road, 28.06.1995, 3 specimens, leg. Y. Özdemir; Ankara: Kızılcahamam, Güvem, 1000 m, 26.06.1997, 9 specimens; Ankara: Kızılcahamam, Yenimahalle village, 1100-1150 m, 05.07.1997, 2 specimens; Ankara: Kızılcahamam, Güvem, 1081 m, 11.07.1997, 12 specimens; Niğde: Altunhisar-Çiftlik road, entry of Çiftlik, 29.07.1997, 1 specimen; Ankara: Kızılcahamam, the peak of Bel, 1550 m, 19.08.1997, 2 specimens, leg. H. Özdikmen; Ankara: Beypazarı, Dereli village, 02.07.2005, 21 specimens, leg. V. Saiti.

Remarks: The species is new for Niğde province and widely distributed in Turkey.

Subfamily Spondylidinae

Arhopalus rusticus (Linnaeus, 1758)

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1200 m, 12.07.1990, 2 specimens; Ordu: Perşembe, Çaytepe, 300 m, 15.07.1997, 1 specimen, leg. H. Özdikmen.

Remarks: The species is new for Ordu province and more or less widely distributed in Turkey.

Spondylis buprestoides (Linnaeus, 1758)

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1500 m, 19.07.1991, 1 specimen, leg. H. Özdikmen.

Remarks: The species is mostly distributed in North Turkey.

Subfamily Cerambycinae

Trichoferus fasciculatus (Faldermann, 1837)

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1200 m, 03.07.1992, 1 specimen, leg. H. Özdikmen.

Remarks: The species is new for Ankara province and probably more or less widely distributed in Turkey.

Trichoferus holosericeus (Rossi, 1790)

Material: Ordu: Perşembe, Çaytepe, 300 m, 15.07.1997, 1 specimen, leg. H. Özdikmen.

Remarks: The species is new for Ordu province and mostly distributed in North and West Turkey.

Cerambyx cerdo Linnaeus, 1758

Material: Çanakkale: Central, Kordonboyu, 0 m, 27.06.1999, 1 specimen; Sinop: Türkeli, late July, 1999, 1 specimen, leg. H. Özdikmen (as *C. cerdo acuminatus*); Samsun: Çobanlı village env., May-June, 2003, 1 specimen; Osmaniye: Mitisin plateau, 1500 m, 24.08.2003, 1 specimen, leg. C. Gören by light; Turkey: 1 specimen without label.

Remarks: The species is new for Çanakkale, Samsun and Osmaniye provinces and widely distributed in Turkey.

Cerambyx dux (Faldermann, 1837)

Material: Niğde: between Balcı-Aktaş villages, 18.07.1996, 1 specimen, leg. H. Özdikmen.

Remarks: The species is widely distributed in Turkey.

Cerambyx scopolii Fuesslins, 1775

Material: Ankara: Keçiören, 800 m, 16.09.1992, 1 specimen, leg. V. Kartal.

Remarks: The species is new for Ankara province and widely distributed only in North Turkey.

Cerambyx welensii (Küster, 1846)

Material: İstanbul: GATA, Çamlıca, 12.07.2004, 1 specimen, leg. B. Koçak.
Remarks: The species is mostly widely distributed in South Turkey.

Purpuricenus budensis (Goeze, 1783)

Material: Adana: near Pozantı, 1150 m, 27.06.2000, 1 specimen, leg. H. Özdikmen.
Remarks: The species is apparently widely distributed in Turkey.

Purpuricenus dalmatinus Sturm, 1843

Material: Osmaniye: Hasanbeyli, 900 m, 23.06.1982, 1 specimen, leg. V. Kartal; İçel: Erdemli-Güzeloluk road 7th km, 450 m, 30.05.2001, 1 specimen, leg. H. Özdikmen; Asian Turkey (Anatolia): 2 specimens without label.
Remarks: The species is distributed only in South Turkey.

Purpuricenus longevittatus Pic, 1951

Material: Adana: Pozantı, Tekir plateau, 1300 m, 23.06.1997, 3 specimens; Niğde: Niğde-Bor road, Okçu village, 06.07.1997, 1 specimen; İçel: Erdemli-Güzeloluk road 5th km, 200 m, 30.05.2001, 1 specimen; İçel: Mersin-Gözne road, entry of Yeniköy, 940 m, 25.06.2001, 2 specimens, leg. H. Özdikmen.
Remarks: The species is new for Adana and Niğde provinces and distributed only in South Turkey.

Aromia moschata moschata (Linnaeus, 1758)

Material: Turkey: 2 specimens without label.
Remarks: The subspecies is mostly distributed in North and West Turkey.

Aromia moschata ambrosiaca (Steven, 1809)

Material: Balıkesir: Erdek, Kamplar road, 28.06.2005, 1 specimen, leg. M. Ereren.
Remarks: The subspecies is new for Balıkesir province and mostly distributed in South Turkey.

Penichroa fasciata (Stephens, 1831)

Material: Ankara: Ayaş, Başbereket village, 18.07.1997, 1 male; Samsun: Havza, Kocapınar village, 660 m, 09.08.1999, 1 female, leg. H. Özdikmen; Ankara: Etimesgut, 850 m, 26.06.2003, 1 specimen, leg. B. Koçak by light; Ankara: Mamak, Misket quarter, 840 m, 2003, 1 specimen, leg. S. Özavcı.
Remarks: The species is new for Ankara province and mostly distributed in South Turkey.

Stenhomalus bicolor (Kraatz, 1862)

Material: Nevşehir: Uçhisar, 1260 m, 19.05.1997, 1 specimen, leg. H. Özdikmen.
Remarks: The species is new for Nevşehir province and mostly distributed in South Turkey.

Stenopterus rufus geniculatus Kraatz, 1863

Material: Kayseri: Kapuzbaşı, Büyükçayır-Yeşilköy, 610 m, 26.06.1997, 2 specimens, leg. H. Özdikmen; Ankara: Kızılcahamam, Yukarı Çanlı, 1300 m, 11.07.1997, 1 specimen, leg. H. Özdikmen.

Remarks: The subspecies is new for Kayseri and Ankara provinces and widely distributed in Turkey.

Lampropterus femoratus (Germar, 1824)

Material: İçel: Erdemli-Güzeoluk road, 1170 m, 25.06.2001, 1 specimen; İçel: Uzuncaburç env., 845 m, 01.06.2001, 1 specimen, leg. H. Özdikmen.

Remarks: The species is mostly distributed in South and West Turkey.

Certallum ebulinum (Linnaeus, 1767)

Material: Aksaray: Hasan Mountain, Aşağı Dikmen, 1020 m, 17.05.1997, 2 specimens; Nevşehir: Göre, 1260 m, 19.05.1997, 2 specimens; Aksaray: Ağzıkarahan, 1220 m, 20.05.1997, 3 specimens; Aksaray: entry of Nevşehir-Aksaray, 20.05.1997, 17 specimens; Aksaray: exit of Ankara, Ekecik stream, 1000 m, 20.05.1997, 7 specimens; Ankara: Şereflikoçhisar, 1000 m, 20.05.1997, 1 specimen; Ankara: Şereflikoçhisar-Ankara road, 1250 m, 20.05.1997, 1 specimen; Aksaray: entry of Nevşehir, 1040 m, 03.06.1997, 6 specimens; Aksaray: Belisırma, 1281 m, 03.06.1997, 2 specimens; Niğde: Bor-Altunhisar, 07.06.1997, 2 specimens; Niğde: Niğde-Bor road, 17.06.1997, 1 specimen; Niğde: exit of Ulukışla-Adana, 1300 m, 23.06.1997, 1 specimen; Niğde: entry of Kayseri-Niğde, 1420 m, 24.06.1997, 1 specimen; İçel: Mut-Karaman road, Karabağ place, Hatıra Forest, 1140 m, 02.06.2001, 1 specimen; Konya: Ereğli-Ulukışla road, 1071 m, 03.06.2001, 1 specimen, leg. H. Özdikmen; ALİ 4, 1 specimen, leg. Ali Demir; Ankara: Central, Biyologlar Derneği forest, 11.05.2005, 2 specimens, leg. A. Hasbenli; Ankara: Polatlı road 25. km, 15.05.2005, 1 specimen; Ankara: Entry of Temelli, 15.05.2005, 2 specimens; Ankara: Yenikent, Bucuk village, 28.05.2005, 1 specimen; Konya: Polatlı-Yunak, Entry of Odabaşı village, 29.05.2005, 1 specimen, leg. H. Özdikmen.

Remarks: The species is new for Aksaray and Niğde provinces and apparently widely distributed in Turkey.

Hylotrupes bajulus (Linnaeus, 1758)

Material: Ankara: Kızılcahamam, Çileklitepe, 1600 m, 27.07.1988, 1 specimen, leg. H. Özdikmen.

Remarks: The species is apparently widely distributed in Turkey.

Ropalopus clavipes (Fabricius, 1775)

Material: Asian Turkey (Anatolia): 2 specimens without label, leg. H. Özdikmen.

Remarks: The species is widely distributed in Turkey.

Phymatodes testaceus (Linnaeus, 1758)

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1050 m, 03.06.1991, 1 specimen; Ankara: Beypazarı, Dereli, 02-03.07.2005, 2 specimens, leg. H. Özdikmen.

Remarks: The species is probably more or less widely distributed in Turkey.

Neoplagionotus bobelayei (Brulle, 1832)

Material: Asian Turkey (Anatolia): 8 specimens without label, leg. H. Özdikmen.

Remarks: The species is probably more or less widely distributed in Turkey.

Paraplagionotus floralis (Palas, 1773)

Material: Ankara: Kızılcahamam, Işık Mountain, 07.07.1994, 3 specimens; Ankara: Kızılcahamam, Işık Mountain, 02.07.1995, 1 specimen; Niğde: Niğde-Bor road, 17.06.1997, 1 specimen; Adana: Pozantı, entry of Fındıklı, 1200 m, 23.06.1997, 1 specimen; Niğde: near Ulukışla, 1281 m, 23.06.1997, 9 specimens; Niğde: Çamardı, Yelatan village, 1281 m, 23.06.1997, 1 specimen; Niğde: exit of Ulukışla-Adana, 1300 m, 23.06.1997, 1 specimen; Niğde: Çamardı, Bademdere-Elmalı, 1760 m, 24.06.1997, 4 specimens; Niğde: Bor-Altunhisar, 1240 m, 24.06.1997, 9 specimens; Niğde: Çamardı, 1550 m, 24.06.1997, 2 specimens; Niğde: Çamardı, Bulduruş passage, 1730 m, 24.06.1997, 1 specimen; Kayseri: Yahyalı, Senirköy, 1060 m, 25.06.1997, 2 specimens; Kayseri: Güzelöz, Yeşilhisar, 1260 m, 25.06.1997, 15 specimens; Niğde: between Araplı-Höyük, 1360 m, 26.06.1997, 11 specimens; Niğde: Tepeköy, 02.07.1997, 3 specimens; Ankara: Kızılcahamam, Yenimahalle village, 1150 m, 05.07.1997, 4 specimens; Niğde: Niğde-Bor road, Derbent place, 06.07.1997, 2 specimens; Ankara: Kızılcahamam, Yukarı Çanlı, 1300 m, 11.07.1997, 5 specimens; Ankara: Kızılcahamam, Güvem, 1081 m, 11.07.1997, 3 specimens; Ankara: Kızılcahamam, Yasin village, 1400 m, 11.07.1997, 1 specimen; Niğde: Niğde-Bor road, Derbent place, 15.07.1997, 3 specimens; Ankara: Kızılcahamam, the peak of Bel, 1600 m, 21.08.1997, 1 specimen; İçel: between Mut-Karaman, 1140-1430 m, 30.06.2000, 14 specimens; Karaman: Karaman-Ereğli road, entry of Ayrancı, 1066 m, 02.06.2001, 1 specimen; İçel: Mut-Karaman road, Gökçeören pine grove, 1335 m, 02.06.2001, 10 specimens; Karaman: Ayrancı-Ereğli road, 1091 m, 26.06.2001, 1 specimen; İçel: Mut-Karaman road, Değirmenbaşı, 1371 m, 26.06.2001, 1 specimen; Asian Turkey (Anatolia): 4 specimens without label, leg. H. Özdikmen; Samsun: Alaçam, Dürtmen hill, 1670 m, 16.06.2004, 1 specimen.

Remarks: The species is new for İçel, Karaman and Samsun provinces and apparently widely distributed in Turkey.

Isotomus comptus (Mannerheim, 1825)

Material: Turkey: 1 specimen without label.

Remarks: The species is distributed only in North-East Turkey.

Isotomus speciosus (Schneider, 1787)

Material: Samsun: Havza, Kocapınar village, 660 m, 27.07.1999, 1 specimen; Asian Turkey (Anatolia): 1 specimen without label, leg. H. Özdikmen.

Remarks: The species is mostly distributed in North of Central Turkey.

Chlorophorus hungaricus Seidlitz, 1891

Material: Yozgat: Sarıhacılı, 1150 m, 06.07.1982, 3 specimens, leg. V. Kartal; Ankara: Kızılcahamam, Işık Mountain, 02.07.1995, 2 specimens; Adana: Pozantı, entry of Fındıklı, 1200 m, 23.06.1997, 1 specimen; Niğde: Gebere dam, 02.07.1997, 2 specimens; İçel: between Gözne-Mersin, 200 m, 28.06.2000, 6 specimens; İçel: entry of Çukurbağ, 1035 m, 01.06.2001, 1 specimen; İçel: Mut-Karaman road, Değirmenbaşı, 1371-1425 m, 26.06.2001, 6 specimens, leg. H. Özdikmen.

Remarks: The species is new for Yozgat, Ankara and Niğde provinces and probably more or less widely distributed in Turkey.

Chlorophorus sartor (Müler, 1766)

Material: Ankara: Kızılcahamam, 17.05.1992, 2 specimens; Kayseri: Yahyalı, Büyükçayır-Yeşilköy, Kapuzbaşı place, 610 m, 26.06.1997, 2 specimens; Samsun: Havza, Kocapınar village, 660 m, 13.07.1999, 1 specimen; İçel: exit of Fındıkpınarı, 31.05.2001, 1 specimen, leg./det. H. Özdikmen; Ankara: Beypazarı, Dereli village, 02.07.2005, 35 specimens, leg. V. Saiti.

Remarks: The species is new for Kayseri province and more or less widely distributed in Turkey.

Chlorophorus trifasciatus (Fabricius, 1781)

Material: İçel: Mut-Karaman road, Değirmenbaşı env., 1370 m, 26.06.2001, 1 specimen, leg. H. Özdikmen.

Remarks: The species is probably more or less widely distributed in Turkey.

Chlorophorus varius (Müller, 1766)

Material: Niğde: Ulukışla, 1200 m, 09.07.1980, 1 specimen, leg. V. Kartal; Ankara: Çubuk dam, 900 m, 25.07.1982, 1 specimen, leg. V. Kartal; Nevşehir: Avanos, 950-1100 m, 20-23.07.1993, 8 specimens; Niğde: between Bor-Altınova, 1200 m, 17.07.1997, 3 specimens; Niğde: Bor, Balcı village, 17.07.1997, 3 specimens; Adana: Pozantı-İçel road, 950-1050 m, 27.06.2000, 3 specimens; İçel: between Erdemli-Güzeloluk, 220 m, 28.06.2000, 3 specimens; Karaman: Karaman-Mut road, 1200-1430 m, 25.07.2000, 1 specimen; İçel: Erdemli-Güzeloluk road 5th km, 200 m, 30.05.2001, 1 specimen; İçel: exit of Atakent, 0 m, 01.06.2001, 3 specimens; İçel: Mut-Silifke road 10th km, 100 m, 01.06.2001, 2 specimens; İçel: Erdemli-Güzeloluk road 10th km, 350 m, 25.06.2001, 3 specimens; İçel: Mersin-Gözne road, Çukurkeklik, 276 m, 25.06.2001, 1 specimen; İçel: Silifke-Mut road, Göksu bridge, 30 m, 26.06.2001, 1 specimen; Asian Turkey (Anatolia): 3 specimens without label, leg. H. Özdikmen.

Remarks: The species is new for Niğde, Adana, İçel and Karaman provinces and apparently widely distributed in Turkey.

Xylotrechus arvicola (Olivier, 1795)

Material: Niğde: Çaykavak, 1500 m, 09.07.1980, 1 specimen, leg. V. Kartal.

Remarks: The species is new for Niğde province and probably more or less widely distributed in Turkey.

Xylotrechus rusticus (Linnaeus, 1758)

Material: Kayseri: Yeşilhisar, 04.06.2003, 2 specimens; Ankara: Bağlum, 09.06.2003, 1 specimen, leg. S. Toy.

Remarks: The species is new for Kayseri province and probably more or less widely distributed in Turkey.

Clytus arietis (Linnaeus, 1758)

Material: Ankara: Kızılcahamam, Yenimahalle village, 1100 m, 05.07.1997, 1 specimen, leg. H. Özdikmen.

Remarks: The species is new for Ankara province and apparently distributed only in North Turkey.

Clytus ciliciensis Chevrolat, 1863

Material: İçel: Erdemli-Güzeloluk road 17th km, 930 m, 30.05.2001, 1 specimen, leg. H. Özdikmen.

Remarks: The species is apparently distributed only in South Turkey. It is endemic to Turkey.

Clytus rhamni Germar, 1817

Material: Ankara: Kızılcahamam, Güvem, 07.07.1994, 1 specimen; Ankara: Kızılcahamam, S of Dam, 1100 m, 07.07.1994, 1 specimen; Kayseri: Yahyalı, Büyükçayır-Yeşilköy, Kapuzbaşı place, 610 m, 26.06.1997, 1 specimen; Ankara: Kızılcahamam,

Güvem, 1000 m, 26.06.1997, 2 specimens; Ankara: Kızılcahamam, Yukarı Çanlı, 1200 m, 11.07.1997, 1 specimen; Ankara: Kızılcahamam, Yasin village, 1400-1450 m, 11.07.1997, 6 specimens; Ankara: Kızılcahamam, Yukarı Çanlı, 1300 m, 11.07.1997, 1 specimen; Ankara: Kızılcahamam, Yasin village, 1450 m, 11.07.1997, 2 specimens; İçel: Uzuncaburç road, 855 m, 01.06.2001, 2 specimens; İçel: Mersin-Gözne road, entry of Yeniköy, 940 m, 25.06.2001, 3 specimens, leg. H. Özdikmen; Ankara: Beypazarı, Dereli village, 02.07.2005, 2 specimens, leg. V. Saiti.

Remarks: The species is new for Ankara and Kayseri provinces and more or less widely distributed in Turkey. In the world there are three distinct subspecies: The nominate *Clytus rhamni rhamni* Germar, 1817 from North-East Italy to Balkans; *Clytus rhamni bellieri* Gautier, 1862 from Italy, Western Mediterranean and Central Europe and *Clytus rhamni temesiensis* Germar, 1824 from Balkans, Asia Minor, Caucasus and Eastern Mediterranean. For this reason until now, all old records from Turkey must be *Clytus rhamni temesiensis* Germar, 1824.

Clytus taurisiensis (Pic, 1903)

Material: İçel: Uzuncaburç road, 855 m, 01.06.2001, 2 specimens, leg. H. Özdikmen.

Remarks: The species is apparently distributed only in South Turkey. It is endemic to Turkey.

Clytus schurmanni Sama, 1996

Material examined: Ankara: Kızılcahamam, Soğuksu National Park, 1200 m, 11.07.1990, 1 specimen and 1400 m, 03.07.1991, 1 specimen, leg. H. Özdikmen; Çankırı: Eldivan, 04.06.1997, 1 specimen, leg. Y. Özdemir; Ankara: Beypazarı, Dereli village, 02.07.2005, 9 specimens, leg. V. Saiti.

Remarks: There were many records for this species from Turkey before *Clytus schurmanni* was not described by Sama in 1996. For the present, only one (Artvin in Sama, 1982) from these old records belong to *Clytus schneideri*. Most probably the others belong to the species *Clytus schurmanni* Sama, 1996. Because, *Clytus schurmanni* distributes in the middle of North Turkey (to Tokat province) and *Clytus schneideri* distributes only in Nort-East Turkey (Tokat to Artvin) according to Sama, 1996. The species is known to occur only in Turkey.

Subfamily Lamiinae

Batocera rufomaculata (Degeer, 1785)

Material: İçel: Erdemli, 30.07.2000, 1 specimen, leg. H. Özdikmen; Osmaniye: Central, Fakıuşağı village, 125-140 m, 23.08.2003, 12 specimens, leg. C. Gören; Osmaniye: Central, Rahime Hatun, 125 m, 21.08.2003, 1 specimen, leg. C. Gören; Osmaniye: Kanlıgeçit village, 125 m, 23.08.2003, 1 specimen, leg. C. Gören, on *Ficus carica*.

Remarks: The species is apparently distributed only in South Turkey.

Monochamus galloprovincialis pistor

Material: Samsun: O.M.Ü. Campus, 25.04.2005, 1 specimen, leg. A. Y. Okutaner.

Remarks: The subspecies is new for Samsun province and more or less widely distributed in Turkey.

Morinus asper verecundus (Faldermann, 1836)

Material: Sinop: Türkeli, late July, 1999, 2 specimens, leg. H. Özdikmen.

Remarks: The subspecies is new for Sinop province and distributed in North-East Turkey.

Morinus orientalis (Reitter, 1894)

Material: Turkey: 1 specimen without label.
Remarks: The subspecies is distributed in North-West Turkey.

Dorcadion boluense Breuning, 1962

Material: Ankara: Kızılcahamam, Yukarı Çanlı, 1260 m, 14.05.1997, 18 specimens, leg. M. Akçay.
Remarks: The species is only known from Bolu and Ankara provinces in Turkey. It is endemic to Turkey. These specimens in the present study are the subspecies *Dorcadion boluense imitator*.

Dorcadion cinerarium (Fabricius, 1787)

Material: Ankara: Kepekli, 1200 m, 26.05.1990, 1 specimen, leg. H. Özdikmen; Ankara: Yenikent, İlyakut village, 860 m, 13.04.2003, 6 specimens, leg. H. Özdikmen; Ankara: Eğmir Lake, 05.05.2003, 1 specimen, leg. O. Yazıcıoğlu.
Remarks: This species is represented by many subspecies in Turkey. The real status of distributional patterns of these taxa needs to be clarified.

Dorcadion divisum Germar, 1839

Material: Ankara: 1 specimen, leg. H. Özdikmen; Osmaniye: Between Kaypak-Alamanpınarı, 17.05.2003, 1 specimen, leg. A. Demir.
Remarks: This species is represented by three subspecies in Turkey. The real status of distributional patterns of these taxa needs to be clarified. The specimen from Ankara province is the subspecies *Dorcadion divisum subdivisum* Breuning, 1955 and the specimen from Osmaniye province is the subspecies *Dorcadion divisum subatrum* Breuning, 1962. This taxon is new for Osmaniye province.

Dorcadion infernale Mulsant et Rey, 1863

Material: Ankara: Bayındır dam, 21.06.2003, 1 specimen, leg. Önder Yalçın; Ankara: Ayaş-Polatlı road, Sarıoba env., 17.04.2005, 24 specimens, leg. H. Özdikmen.
Remarks: The species is mostly distributed in Central and West Turkey. It is endemic to Turkey.

Dorcadion pararufipenne Braun, 1976

Materyal: Ankara: Bayındır dam, 21.06.2003, 1 specimen, leg. Ö. Yalçın; Ankara: Ayaş road, Başayaş village env., Ayaş Beli, 17.04.2005, 26 specimens, leg. H. Özdikmen; Ankara: Çubuk, 19.05.2005, 1 specimen, leg. Z. Avcı.
Remarks: This species is endemic to Turkey and distributed only in a local area in North of Central Turkey.

Dorcadion scabricolle Dalman, 1817

Material: Ankara: Kızılcahamam, Yukarı Çanlı, 1260 m, 14.05.1997 and 28.05.1997, 12 specimens; Ankara: Kızılcahamam, Salin village, 1300 m, 14.06.1997, 1 specimen; Ankara: Kızılcahamam, Yenimahalle village, 1150 m, 05.07.1997, 1 specimen; Ankara: Ayaş road, Başayaş village env., Ayaş Beli, 17.04.2005, 10 specimens, leg. H. Özdikmen.

Remarks: The species is widely distributed in Turkey.

Dorcadion subsericatum Pic, 1901

Material: Ankara: Bayındır dam, 21.06.2003, 1 specimen, leg. Önder Yalçın; Ankara: Ayaş road, Başayaş village env., Ayaş Beli, 17.04.2005, 24 specimens, leg. H. Özdikmen; Ankara: Çubuk, 19.05.2005, 1 specimen, leg. Z. Avcı.

Remarks: The species is distributed in Central Turkey and North of Central Turkey.

Acanthocinus aedilis (Linnaeus, 1758)

Material: Asian Turkey (Anatolia): 1 specimen without label, leg. H. Özdikmen.

Remarks: The species is apparently widely distributed in Turkey.

Tetrops praeustus (Linnaeus, 1758)

Material: Ankara: between Sereflikoçhisar-Evren, 1220 m, 21.06.1997, 1 specimen, leg. H. Özdikmen.

Remarks: The species is apparently mostly distributed in North Turkey.

Oberea erythrocephala (Schrank, 1776)

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1100-1200 m, 02-03.06.1991, 2 specimens; Niğde: Tepeköy, 02.07.1997, 2 specimens; Niğde: Niğde-Bor road, Okçu village, 06.07.1997, 2 specimens; Niğde: Altunhisar-Çiftlik road, Tepeköy plateau, 29.07.1997, 2 specimens, leg. H. Özdikmen.

Remarks: The species is new for Ankara and Niğde provinces and more or less widely distributed in Turkey. However, the exact distribution pattern of subspecies in Turkey and the real status of these taxons still need to be clarified.

Oxylia argentata (Menetries, 1832)

Material: Niğde: Bor-Altunhisar, 07.06.1997, 1 specimen; Ankara: Kızılcahamam, Aköz village, 1150 m, 26.06.1997, 1 specimen; Asian Turkey (Anatolia): 5 specimens without label, leg. H. Özdikmen.

Remarks: The species is probably more or less widely distributed in Turkey.

Oxylia duponcheli (Brulle, 1832)

Material: Aksaray: Aksaray-Ulukışla road 8th km, 1391 m, 29.05.2001, 1 specimen; İçel: entry of Fındıkpınarı, 1015 m, 31.05.2001, 1 specimen; İçel: Mut-Karaman road, Gökçeören pine grove, 1335 m, 02.06.2001, 1 specimen; Karaman: Ayrancı-Ereğli road 30th km, 1010 m, 02.06.2001, 1 specimen, leg. H. Özdikmen.

Remarks: The species is new for Aksaray, İçel and Karaman provinces and mostly distributed in South and Central Turkey.

Helladia humeralis (Waltl, 1828)

Material: Ankara: Şereflikoçhisar, 1000 m, 20.05.1997, 1 specimen; Aksaray: exit of Ankara, Ekecik stream, 1000 m, 20.05.1997, 2 specimens; Niğde: between Araplı-Höyük, 1360 m, 26.06.1997, 1 specimen; Ankara: Entry of Temelli, 15.05.2005, 2 specimens; Ankara: Polatlı-Kadınhanı road 8. km, 29.05.2005, 2 specimens; Ankara: Sivrihisar-Polatlı road, Yassıhöyük, 29.05.2005, 3 specimens, leg. H. Özdikmen.

Remarks: The species is new for Niğde and Aksaray provinces and more or less widely distributed in Turkey.

Helladia millefolii (Adams, 1817)

Material: Konya: Sultanhanı, 930 m, 27.06.1997, 1 specimen, leg. H. Özdikmen.
Remarks: The species is new for Konya province and more or less widely distributed in Turkey.

Helladia praetextata

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1350 m, 07.06.1997, 2 specimens, leg. H. Özdikmen.
Remarks: The species is apparently more or less widely distributed in North Turkey. In Turkey there are two distinct subspecies: The nominate *Helladia praetextata praetextata* (Steven, 1817) is distributed around the Black Sea from Bulgaria and Romania to the Caucasus. *Helladia praetextata nigricollis* (Pic, 1902) is distributed only in South Turkey (İçel and Osmaniye provinces).

Neomusaria balcanica (Frivaldsky, 1835)

Material: Ankara: Kızılcahamam, Yenimahalle village, 1150 m, 05.07.1997, 1 specimen, leg. H. Özdikmen.
Remarks: The species is more or less widely distributed in Turkey.

Phytoecia caerulea (Scopoli, 1772)

Material: Aksaray: Hasan Mountain, Aşağı Dikmen village, 1020 m, 17.05.1997, 1 specimen; Niğde: Altunhisar, 1200 m, 18.05.1997, 1 specimen; Nevşehir: Göre, Güvercinlik, Aşlık Mountain, 1320 m, 19.05.1997, 1 specimen; Ankara: Şereflikoçhisar-Ankara road, 1250 m, 20.05.1997, 1 specimen; Aksaray: Ağzıkarahan, 1220 m, 20.05.1997, 1 specimen; Aksaray: entry of Nevşehir-Aksaray, 20.05.1997, 6 specimens; Konya: Kulu, 1230 m, 31.05.1997, 1 specimen; Konya: Cihanbeyli, Central and Karatepe, 1000-1040 m, 31.05.1997, 2 specimens; Konya: Güzelyazı road, 1000 m, 31.05.1997, 1 specimen; Aksaray: Eskil, Eşmekaya, 1040 m, 31.05.1997, 1 specimen; Niğde, Altunhisar, Akçaören, 1281 m, 01.06.1997, 1 specimen; Aksaray: Belisırma, 1281 m, 03.06.1997, 1 specimen; Aksaray: Doğantepe, Yalnızağaç place, 1150 m, 03.06.1997, 1 specimen; Aksaray: entry of Nevşehir, 1040 m, 03.06.1997, 1 specimen; Niğde: Bor, Fesleğen village, 08.06.1997, 1 specimen; Ankara: between Konya Makası-Şereflikoçhisar, 950 m, 21.06.1997, 1 specimen; Niğde: near Ulukışla, 1281 m, 23.06.1997, 1 specimen; Niğde: exit of Ulukışla, 1350 m, 29.05.2001, 1 specimen; İçel: Mut-Karaman road, Gökçeören pine grove, 1335 m, 02.06.2001, 1 specimen; Karaman: Ayrancı-Ereğli road 25th km, 1100 m, 22.06.2001, 1 specimen, leg. H. Özdikmen; Ankara: Central, Biyologlar Derneği forest, 11.05.2005, 2 specimens, leg. A. Hasbenli.
Remarks: The species is new for Aksaray, Niğde, İçel and Karaman provinces and more or less widely distributed in Turkey.

Phytoecia cylindrica (Linnaeus, 1758)

Material: Ankara: Kızılcahamam, Salin village, 1300 m, 14.06.1997, 2 specimens; Ankara: Kızılcahamam, Yukarı Çanlı, 1400 m, 14.06.1997, 2 specimens; Kayseri: Yahyalı, Büyükçayır-Yeşilköy, Kapuzbaşı place, 691 m, 26.06.1997, 1 specimen; Ankara: Kızılcahamam, Yenimahalle village, 1100 m, 05.07.1997, 1 specimen; Niğde: Niğde-Bor, Derbent place, 06.07.1997 and 15.07.1997, 2 specimens, leg. H. Özdikmen.
Remarks: The species is new for Ankara, Kayseri and Niğde provinces and more or less widely distributed in Turkey.

Phytoecia geniculata Mulsant, 1863

Material: Ankara: Gölbaşı, Örencik, 04.05.2003, 1 specimen.

Remarks: The species is new for Ankara province and more or less widely distributed in Turkey.

Phytoecia icterica annulipes Mulsant, 1863

Material: Osmaniye: Zorkun, 900 m, 12.06.1982, 1 specimen, leg. V. Kartal; Aksaray: Güzelyurt, Selime, 1240 m, 27.06.1997, 2 specimens; Ankara: Kızılcahamam, Yenimahalle village, 1150 m, 05.07.1997, 1 specimen, leg. H. Özdikmen.

Remarks: The subspecies is new for Osmaniye, Aksaray and Ankara provinces and more or less widely distributed in Central and South Turkey. In Turkey there is two distinct subspecies; *Phytoecia icterica icterica* (Schaller, 1783) and *Phytoecia icterica annulipes* Mulsant, 1863. However, the exact distribution pattern of the subspecies in Turkey still need to be clarified.

Phytoecia manicata Reiche et Saulcy, 1858

Material: Adana: Pozantı-Mersin road, 701 m, 30.05.2001, 3 specimens; Asian Turkey (Anatolia): 1 specimen without label, leg. H. Özdikmen.

Remarks: The species is more or less widely distributed in Turkey.

Phytoecia pustulata (Schrank, 1776)

Material: Asian Turkey (Anatolia): 1 specimen without label, leg. H. Özdikmen.

Remarks: The species is probably more or less widely distributed in Turkey.

Phytoecia rufipes latior Pic, 1895

Material: Aksaray: Hasan Mountain, Aşağı Dikmen, 1100 m, 01.06.1997, 3 specimens; Niğde: Altunhisar, Akçaören, 1280 m, 01.06.1997, 3 specimens; Adana: Pozantı-Mersin road, Çamlıyayla env., 690 m, 30.05.2001, 2 specimens, leg. H. Özdikmen.

Remarks: The species is new for Aksaray and Niğde provinces and mostly distributed in South Turkey.

Phytoecia virgula (Charpentier, 1825)

Material: Ankara: Kızılcahamam, Işık Mountain, 02.07.1994, 1 specimen; Ankara: Kızılcahamam, Işık Mountain, 01.07.1995, 1 specimen; Aksaray: Eskil, Eşmekaya, 1000 m, 17.05.1997, 1 specimen; Konya: Kulu, Tavşançalı, 1000 m, 17.05.1997, 5 specimens; Konya: Cihanbeyli, Karatepe, 1000-1040 m, 31.05.1997, 3 specimens; Konya: Kulu, Tavşançalı, 1000 m, 31.05.1997, 1 specimen; Aksaray: entry of Nevşehir, 1040 m, 03.06.1997, 1 specimen; Ankara: Şereflikoçhisar, 1000 m, 03.06.1997, 1 specimen; Niğde: Bor-Altunhisar, 07.06.1997, 1 specimen; Konya: Kulu, Konya Makası, 1100 m, 21.06.1997, 1 specimen; Niğde: Çamardı, Bademdere-Elmalı, 1760 m, 24.06.1997, 2 specimens; Niğde: Araplı-Höyük, 1360 m, 26.06.1997, 1 specimen; Konya: Polatlı-Yunak, Entry of Odabaşı village, 29.05.2005, 1 specimen; Asian Turkey (Anatolia): 2 specimens without label, leg. H. Özdikmen.

Remarks: The species is new for Aksaray and Niğde provinces and more or less widely distributed in Turkey.

Opsilia coerulescens (Scopoli, 1763)

Material: Osmaniye: Zorkun, 900 m, 26.06.1982, 2 specimens, leg. V. Kartal; Yozgat: Sarıhacılı, 1150 m, 06.07.1982, 2 specimens, leg. V. Kartal; Ankara: Kızılcahamam, Soğuksu National Park, 1200 m, 28.06.1991, 2 specimens; Nevşehir: Avanos, 1130 m,

21.07.1993, 1 specimen; Ankara: Kızılcahamam, Aköz village, 16.06.1994, 1 specimen; Aksaray: Hasan Mountain, Aşağı Dikmen village, 1020 m, 17.05.1997, 1 specimen; Ankara: Kızılcahamam, Yukarı Çanlı, 1250 m, 28.05.1997, 3 specimens; Ankara: Kızılcahamam, Güvem, 1100 m, 28.05.1997, 2 specimens; Ankara: Kızılcahamam, Aköz village, 1150 m, 28.05.1997, 1 specimen; Konya: Cihanbeyli, Karatepe, 1000 m, 31.05.1997, 7 specimens; Konya: Kulu, 1230 m, 31.05.1997, 1 specimen; Niğde: Ulukışla-Altunhisar road, 1400 m, 01.06.1997, 1 specimen; Aksaray: Hasan Mountain, Aşağı Dikmen village, 1100 m, 01.06.1997, 1 specimen; Kayseri: Yahyalı, İlyaslı, 1140 m, 02.06.1997, 3 specimens; Kayseri: Yahyalı, Derebağı, Şelale place, 1281 m, 02.06.1997, 1 specimen; Aksaray: Doğantepe, Yalnızağaç, 1150 m, 03.06.1997, 1 specimen; Aksaray: Gülağaç, Kızılkaya, Aşıklı Höyük, 1100 m, 03.06.1997, 1 specimen; Niğde: Bor-Altunhisar, 07.06.1997, 6 specimens; Niğde: Bor, Üstünkaya, 07.06.1997, 1 specimen; Niğde: Fertek, 08.06.1997, 1 specimen; Niğde: Sazlıca, 08.06.1997, 1 specimen; Ankara: Kızılcahamam, Yukarı Çanlı, 1400-1540 m, 14.06.1997, 5 specimens; Ankara: Kızılcahamam, Salin village, 1300 m, 14.06.1997, 1 specimen; Ankara: Kızılcahamam, Güvem, 1100 m, 14.06.1997, 1 specimen; Niğde: Niğde-Bor road, 17.06.1997, 2 specimens; Aksaray: Ağaçören, Yeşilşabanlı, Velipınarı, 1340 m, 21.06.1997, 1 specimen; Niğde: near Ulukışla, 1281 m, 23.06.1997, 1 specimen; Niğde: entry of Kayseri-Niğde, 1420 m, 24.06.1997, 1 specimen; Niğde: Çamardı, Bademdere-Elmalı, 1760 m, 24.06.1997, 1 specimen; Niğde: Çamardı, 1550 m, 24.06.1997, 1 specimen; Kayseri: Yahyalı, Senirköy, 1060 m, 25.06.1997, 1 specimen; Ankara: Kızılcahamam, Aköz village, 1150 m, 26.06.1997, 1 specimen; Adana: Pozantı-Mersin road, 1000 m, 27.06.2000, 1 specimen; Niğde: exit of Ulukışla, 1145-1350 m, 29.05.2001, 4 specimens; Aksaray: Aksaray-Ulukışla road, 1135 m, 29.05.2001, 2 specimens; Adana: Pozantı-Mersin road, 1025 m, 29.05.2001, 1 specimen; Adana: Pozantı-Mersin road, 701 m, 30.05.2001, 1 specimen; İçel: Mut-Karaman road, Değirmenbaşı, 1430 m, 02.06.2001, 3 specimens; İçel: Mut-Karaman road, Gökçeören pine grove, 1335 m, 02.06.2001, 2 specimens; Konya: exit of Ereğli 3rd km, 960 m, 03.06.2001, 2 specimens; İçel: Mut-Karaman road, Değirmenbaşı, 1425 m, 26.06.2001, 1 specimen; Asian Turkey (Anatolia): 10 specimens without label, leg. H. Özdikmen; Ankara: Beypazarı, Dereli village, 02.07.2005, 1 specimens, leg. V. Saiti.

Remarks: The species is new for Aksaray and Kayseri provinces and widely distributed in Turkey.

Blepisanis vittipennis (Reiche, 1877)

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1400 m, 21.06.1991, 1 specimen; Konya: Kulu, 1230 m, 31.05.1997, 1 specimen; Niğde: Bor-Altunhisar, 07.06.1997, 2 specimens; Niğde: Bor, Üstünkaya, 07.06.1997, 1 specimen, leg. H. Özdikmen.

Remarks: The species is new for Konya and Niğde provinces and more or less widely distributed in Turkey.

Theophilea cylindricollis Pic, 1895

Material: Asian Turkey (Anatolia): 24 specimens without label, leg. H. Özdikmen.

Remarks: The species is mostly distributed in North Turkey.

Calamobius filum (Rossi, 1790)

Material: Adana: Pozantı-Mersin road, 30.05.2001, 3 specimens; İçel: Fındıkpınarı, 950-1050 m, 31.05.2001, 4 specimens; İçel: Silifke-Uzuncaburç road, 660 m, 01.06.2001, 1 specimen, leg. H. Özdikmen.

Remarks: The species is new for Adana and İçel provinces and more or less widely distributed in Turkey.

Synthapsia kirbyi (Gyllenhal, 1817)

Material: Konya: Ayrancı, Dikenlidere, 1200 m, 15.08.1980, 1 specimen, leg. V. Kartal; Osmaniye: Zorkun, 700 m, 23.05.1981, 1 specimen, leg. V. Kartal; Osmaniye: Zorkun, 900

m, 22.06.1982, 1 specimen, leg. V. Kartal; Aksaray: between Aşağı-Yukarı Dikmen, 1150 m, 22.06.1997, 2 specimens; Niğde: exit of Ulukışla-Pozantı, 1350 m, 26.06.2000, 9 specimens; İçel: Silifke-Kırobası road, 760 m, 28.06.2000, 1 specimen; Adana: Pozantı-Mersin road, 720 m, 30.05.2001, 1 specimen, leg. H. Özdikmen.

Remarks: The species is new for Aksaray province and more or less widely distributed in Turkey.

Agapanthia (s.str.) *cardui* (Linnaeus, 1767)

Material: Sivas: İşhan, 1350 m, 11.07.1982, 1 specimen; Ankara: Kızılcahamam, Güvem, 1100 m, 14.06.1997, 3 specimens; Ankara: Kızılcahamam, Aköz village, 1150 m, 26.06.1997, 1 specimen; Adana: Pozantı-Mersin road, 1050 m, 27.06.2000, 1 specimen; Adana: Pozantı-Mersin road, 701 m, 30.05.2001, 9 specimens; Ankara: Polatlı-Kadınhanı road, exit of Avdanlı village, 29.05.2005, 1 specimen, Asian Turkey (Anatolia): 20 specimens without label, leg. H. Özdikmen.

Remarks: The species is new for Sivas province and more or less widely distributed in Turkey.

Agapanthia (*Agapanthiella*) *asphodeli* (Latreille, 1804)

Material: Ankara: Kızılcahamam, Işık Mountain, Keçikaya hill, 1615 m, 16.06.1988, 1 specimen; Ankara: Kızılcahamam, Işık Mountain, 30.06.1994, 2 specimens; Ankara: Kızılcahamam, Soğuksu National Park, 1250 m, 07.06.1997, 1 specimen; Ankara: Kızılcahamam, Aköz village, 1150 m, 26.06.1997, 2 specimens; Asian Turkey (Anatolia): 1 specimen without label, leg. H. Özdikmen.

Remarks: The species is more or less widely distributed in Turkey.

Agapanthia (*Agapanthiella*) *lateralis* Ganglbauer, 1884

Material: Ankara: Çal Mountain, 1200 m, 17.06.1984, 1 specimen; Ankara: Kızılcahamam, Işık Mountain, 30.06.1994, 3 specimens; Ankara: Şereflikoçhisar, 950 m, 20.05.1997, 3 specimens; Aksaray: entry of Nevşehir-Aksaray, 20.05.1997, 1 specimen; Ankara: Çal Mountain, 1050 m, 28.05.1997, 1 specimen; Konya: Kulu, 1230 m, 31.05.1997, 4 specimens; Aksaray: Eskil, Eşmekaya, 1040 m, 31.05.1997, 1 specimen; Ankara: Kızılcahamam, Güvem, 1100 m, 14.06.1997, 2 specimens; Konya: Kulu, Konya Makası, 1100 m, 21.06.1997, 1 specimen; Ankara: Şereflikoçhisar-Evren road, 1000 m, 21.06.1997, 2 specimens; Niğde: Çamardı, Bademdere-Elmalı, 1760 m, 24.06.1997, 2 specimens; Ankara: Kızılcahamam, Güvem, 1000 m, 26.06.1997, 1 specimen; Ankara: Kızılcahamam, Aköz village, 1150 m, 26.06.1997, 1 specimen; İçel: Silifke-Kırobası road, 710 m, 28.06.2000, 1 specimen; Niğde: exit of Ulukışla, 1350 m, 29.05.2001, 1 specimen; Asian Turkey (Anatolia): 7 specimens without label, leg. H. Özdikmen. Ankara: Kayaş, Bayındır dam, 21.06.2003, 2 specimens, leg. Ö. Yalçın.

Remarks: The species is new for Aksaray province and widely distributed in Turkey.

Agapanthia (*Smaragdula*) *violacea* (Fabricius, 1775)

Material examined: Samsun: 50 m, 30.05.1983, 1 specimen, leg. V. Kartal; Niğde: Bor, Altunova, 1150 m, 18.05.1997, 1 specimen; Kayseri: Yahyalı, Derebağı, Şelale place, 1281 m, 02.06.1997, 2 specimens; Aksaray: Gülağaç, Kızılkaya, Aşıklı Höyük, 1100 m, 03.06.1997, 3 specimens; Niğde: Bor-Altunhisar, 07.06.1997, 8 specimens; Niğde: Bor, Üstünkaya, 07.06.1997, 17 specimens; Konya: Kulu, Konya Makası, 1100 m, 21.06.1997, 1 specimen; Adana: Pozantı, entry of Fındıklı, 1200 m, 23.06.1997, 2 specimens; İçel: Uzuncaburç road, 855 m, 01.06.2001, 2 specimens; İçel: Mut-Karaman road, Değirmenbaşı, 1430 m, 02.06.2001, 2 specimens; Turkey: 1 specimen without label, leg. H. Özdikmen.

Remarks: The species is new for İçel, Samsun and Aksaray provinces and more or less widely distributed in Turkey.

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REPLACEMENT NAME FOR THE PREOCCUPIED GENUS GROUP NAME *ILLIESIELLA* WAGNER, 1985 (DIPTERA: EMPIDIDAE)

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[**Wagner, R. & Özdikmen, H.** 2006. Replacement name for the preoccupied genus group name *Illiesiella* Wagner, 1985 (Diptera: Empididae). Munis Entomology & Zoology, 1 (1): 91-92]

ABSTRACT: A replacement name, *Neoilliesiella* is proposed for the subgenus name *Heleodromia* (*Illiesiella*) Wagner, 1985 in the fly family Empididae (Diptera).

KEY WORDS: *Neoilliesiella, Illiesiella,* homonymy, replacement name, Diptera, Empididae.

TAXONOMY

Family EMPIDIDAE
Subfamily HEMERODROMIINAE
Genus *HELEODROMIA* Haliday, 1833
Subgenus *NEOILLIESIELLA* nom. nov.

Illiesiella Wagner, 1985. Aquatic Insects 7 (1): 35. (Diptera: Brachycera: Empidoidea: Empididae: Ceratomerinae). Preoccupied by *Illiesiella* Besch, 1964. Beitr. neotrop. Fauna 3: 121. (Arachnida: Acari: Acariformes: Actinedida: Parasitengona: Lebertioidea: Sperchontidae: Sperchontinae).

Remarks: Wagner (1985) proposed as a subgenus name *Illiesiella* of the genus *Heleodromia* Haliday, 1833 in the fly family Empididae. Unfortunately, the generic name was already preoccupied by Besch (1964), who had described the genus *Illiesiella* with the type species *Illiesiella circularis* Besch 1964 in the mite family Sperchontidae. *Illiesiella* Besch, 1964 was proposed originally as a subgenus name. Thus, the subgenus *Illiesiella* Wagner, 1985 is a junior homonym of the genus name *Illiesiella* Besch, 1964. According to Article 60 of the International Code of Zoological Nomenclature, we propose a new replacement name *Neoilliesiella* **nom. nov.** for *Illiesiella* Wagner, 1985.

Summary of nomenclatural changes:
Neoilliesiella **nom. nov.** = *Illiesiella* Wagner, 1985 (nec Besch, 1964).

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REPLACEMENT NAMES FOR SOME ASILIDAE GENERA (DIPTERA)

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[**Özdikmen, H.** 2006. Replacement names for some Asilidae genera (Diptera). Munis Entomology & Zoology, 1 (1): 93-96]

ABSTRACT: Four junior homonyms were detected amongst the Asilidae genera and the following replacement names are proposed: *Martinomyia* nom. nov. for *Martinia* Hull, 1962 (nec M'Coy, 1844); *Rhayatus* nom. nov. for *Mecynopus* Engel, 1925 (nec Erichson, 1842); *Oldroydella* nom. nov. for *Oldroydia* Hull, 1956 (nec Dall, 1894); *Prytanomyia* nom. nov. for *Prytania* Oldroyd, 1974 (nec Debauche, 1938). Accordingly, new combinations are herein proposed for the species currently included in these genera: *Martinomyia moloch* (Hull, 1962) comb. nov. from *Martinia moloch* Hull, 1962; *Martinomyia scalaris* (Hermann, 1908) comb. nov. from *Martinia scalaris* (Hermann, 1908); *Rhayatus pulverulentus* (Engel, 1925) comb. nov. from *Mecynopus pulverulentus* Engel, 1925; *Oldroydella hamata* (Hull, 1956) comb. nov. from *Oldroydia hamata* Hull, 1956; *Oldroydella costata* (Joseph & Parui, 1999) comb. nov. from *Oldroydia costata* Joseph & Parui, 1999; *Oldroydella femorata* (Joseph & Parui, 1987) comb. nov. from *Oldroydia femorata* Joseph & Parui, 1987; *Oldroydella josephi* (Parui, 1999) comb. nov. from *Oldroydia josephi* Parui, 1999; *Oldroydella scatophagoides* (Walker, 1854) comb. nov. from *Oldroydia scatophagoides* (Walker, 1854); *Prytanomyia albida* (Oldroyd, 1974) comb. nov. from *Prytania albida* Oldroyd, 1974.

KEY WORDS: nomenclatural changes, homonymy, replacement names, robber flies, Asilidae, new combinations.

In an effort to reduce the number of homonyms in Asilidae, I systematically checked all generic names published. I found four Asilidae genera whose names had been previously published for other taxa, making them junior homonyms. In accordance with the International Code of Zoological Nomenclature, I propose substitute names for these genera.

TAXONOMY

Genus *MARTINOMYIA* nom. nov.

Martinia Hull, 1962. Bull. U.S. natn. Mus. No. 224: 91. (Diptera: Asiloidea: Asilidae: Laphystiinae). Preoccupied by *Martinia* M'Coy, 1844. in Griffith, Syn. Carb. Lst. foss. Ireland, 139. (Brachiopoda: Spiriferida: Martinioidea: Martiniidae: Martiniinae).

Remarks: Hull (1962) proposed the neotropical genus *Martinia* with the type species *Martinia moloch* Hull, 1962 from Bolivia in the family Asilidae. Unfortunately, the generic name was already preoccupied by M'Coy (1844), who had described the fossil genus *Martinia* with the type species *Spirifer glaber* Sowerby, 1820 in the brachiopod family Martiniidae. *Martinia* M'Coy, 1844 is the type genus of the family name Martiniidae. Thus, the genus *Martinia* Hull, 1962 is a junior homonym

of the generic name *Martinia* M'Coy, 1844. According to Article 60 of the International Code of Zoological Nomenclature, I propose a new replacement name *Martinomyia* **nom. nov.** for *Martinia* Hull, 1962.

Etymology: from preexisting genus *Martinia*.

Summary of nomenclatural changes:
Martinomyia **nom. nov.** = *Martinia* Hull, 1962 (nec M'Coy, 1844).
Martinomyia moloch (Hull, 1962) **comb. nov.** = *Martinia moloch* Hull, 1962.
Martinomyia scalaris (Hermann, 1908) **comb. nov.** = *Martinia scalaris* (Hermann, 1908).

Genus *RHAYATUS* nom. nov.

Mecynopus Engel, 1925. Konowia, 4, 192. (Diptera: Asiloidea: Asilidae: Stenopogoninae: Stenopogonini). Preoccupied by *Mecynopus* Erichson, 1842. Arch. Naturgesch., 8 (1), 222. (Coleoptera: Chrysomeloidea: Cerambycidae: Cerambycinae: Molorchini).

Remarks: The genus *Mecynopus* was erected by Erichson, 1842 with the type species *Mecynopus cothurnatus* Erichson, 1842 in the longicorn beetles family Cerambycidae. Later, the palaearctic genus *Mecynopus* was described by Engel, 1925 with the type species *Mecynopus pulverulentus* Engel, 1925 from Russia in the family Asilidae. However, the name *Mecynopus* Engel, 1925 is invalid under the law of homonymy, being a junior homonym of *Mecynopus* Erichson, 1842. In accordance with the International Code of Zoological Nomenclature, I propose to substitute the junior homonym name *Mecynopus* Engel, 1925 for the nomen novum *Rhayatus*.

Etymology: The name is dedicated to my colleagues dipterologist Prof. Dr. Rüstem Hayat. The name is masculine in gender.

Summary of nomenclatural changes:
Rhayatus **nom. nov.** = *Mecynopus* Engel, 1925 (nec Erichson, 1842).
Rhayatus pulverulentus (Engel, 1925) **comb. nov.** = *Mecynopus pulverulentus* Engel, 1925.

Genus *OLDROYDELLA* nom. nov.

Oldroydia Hull, 1956. Ann. Mag. nat. Hist. (12) 9: 398. (Diptera: Asiloidea: Asilidae: Stenopogoninae - Stenopogonini). Preoccupied by *Oldroydia* Dall, 1894. Nautilus, 8, 90. (Mollusca: Polyplacophora: Neoloricata: Leptochitonidae).

Remarks: The generic name *Oldroydia* Dall, 1894 was proposed for a genus of polyplacophoran family Leptochitonidae (with the type species *Oldroydia percrassa* Dall, 1894). Subsequently, the generic name *Oldroydia* Hull, 1956 was introduced for a new oriental flies genus (with the type species *Oldroydia hamata* Hull, 1956 from India) of the family Asilidae. Thus, the genus *Oldroydia* Hull, 1956 is a junior homonym of the generic name *Oldroydia* Dall, 1894. According to

Article 60 of the International Code of Zoological Nomenclature, I propose for the genus *Oldroydia* Hull, 1956 the new replacement name *Oldroydella* **nom. nov.**

Etymology: from preexisting genus *Oldroydia*.

Summary of nomenclatural changes:
Oldroydella **nom. nov.** = *Oldroydia* Hull, 1956 (nec Dall, 1894).
Oldroydella hamata (Hull, 1956) **comb. nov.** = *Oldroydia hamata* Hull, 1956.
Oldroydella costata (Joseph & Parui, 1999) **comb. nov.** = *Oldroydia costata* Joseph & Parui, 1999.
Oldroydella femorata (Joseph & Parui, 1987) **comb. nov.** = *Oldroydia femorata* Joseph & Parui, 1987.
Oldroydella josephi (Parui, 1999) **comb. nov.** = *Oldroydia josephi* Parui, 1999.
Oldroydella scatophagoides (Walker, 1854) **comb. nov.** = *Oldroydia scatophagoides* (Walker, 1854) = *Toremyia scatophagoides* Walker, 1854.

Genus *PRYTANOMYIA* nom. nov.

Prytania Oldroyd, 1974. Ann.Natal Mus. 22: 112. (Diptera: Asiloidea: Asilidae: Laphriinae: Laphriini). Preoccupied by *Prytania* Debauche, 1938. Bull. Mus. Hist. nat. Belg., 14 (9), 3. (Lepidoptera: Noctuoidea: Arctiidae: subfamily unassigned).

Remarks: The name *Prytania* was initially introduced by Debauche, 1938 for a genus of the moth family Arctiidae (with the type species *Prytania straeleni* Debauche, 1938). Subsequently, Oldroyd, 1974 described a new afrotropical flies genus of the family Asilidae (with the type species *Prytania albida* Oldroyd, 1974 from Africa [Namibia, Angola]) under the same generic name. Thus, the genus *Prytania* Oldroyd, 1974 is a junior homonym of the genus *Prytania* Debauche, 1938. According to Article 60 of the International Code of Zoological Nomenclature, I propose for the genus *Prytania* Oldroyd, 1974 the new replacement name *Prytanomyia* **nom. nov.**

Etymology: from preexisting genus *Prytania*.
Summary of nomenclatural changes:
Prytanomyia **nom. nov.** = *Prytania* Oldroyd, 1974 (nec Debauche, 1938).
Prytanomyia albida (Oldroyd, 1974) **comb. nov.** = *Prytania albida* Oldroyd, 1974.

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CONTRIBUTIONS TO THE KNOWLEDGE OF TURKISH AUCHENORRHYNCHA (HOMOPTERA) WITH A NEW RECORD, *PENTASTIRIDIUS NANUS* (IVANOFF, 1885)

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[**Demir, E.** 2006. Contributions to the knowledge of Turkish Auchenorrhyncha (Homoptera) with a new record, *Pentastiridius nanus* (Ivanoff, 1885). Munis Entomology & Zoology, 1 (1): 97-122]

ABSTRACT: In this study, 1690 adult Auchenorrhyncha specimens that are collected during the field studies in Kızılcahamam (Turkey: Ankara) in Central Anatolia during the months May-September of 1997 are examined. 101 species belonging to 11 families are found to be distributed in the region. Among these, 7 species belong to Cixidae, 5 species to Delphacidae, 1 species to Meenoplidae, 10 species to Cercopidae, 2 species to Membracidae, and 59 species to Cicadellidae. Habitat descriptions of all detected species are presented with which plant they are collected from and collection records of distribution in Turkey. 70 of these examined species are new records for Kızılcahamam, 16 are new records for Ankara and *Setapius nanus* Ivanoff, 1885 is a new record for Turkey.

KEY WORDS: Homoptera, Auchenorrhyncha, fauna, Kızılcahamam, Turkey.

The first faunistic records of this order are given by Fahringer (1922), Haupt (1930), Kerville (1939) and Zachvatkin (1937, 1946). However, the first comprehensive study on Auchenorrhynches of Turkey is executed by the Czech scientist, Dlabola in 1957 during a scientific trip to Turkey. Dlabola has given numerous faunistic records and has defined species from Turkey that are new to the scientific world in this study and in his other studies in the following years (1957, 1963, 1971, 1971b, 1974, 1974b, 1977, 1979, 1979b, 1980, 1980b, 1081, 1981b, 1982, 1983, 1984, 1984b, 1985, 1985b, 1995). Linnavuori (1965), Asche (1982), Remane and Hoch (1985), Dworakowska (1969, 1970, 1970b, 1970c, 1971, 1972, 1976, 1982) gave records from Turkey in their studies. Among Turkish scientists, Kalkandelen (1972, 1974, 1974b, 1980, 1985, 1987, 1988, 1989, 1989b, 1990, 1993, 1994, 2000) and Kartal (1978, 1978b, 1980, 1981, 1983, 1985, 1985b, 1986, 1987, 1988) published many studies on this subject. Lodos and Kalkandelen produced a faunistic list of Turkey's Auchenorrhyncha species and published it as 27 papers in a series (1980, 1980b, 1980c, 1981, 1981b, 1981c, 1981d, 1982, 1982b, 1983, 1983b, 1983c, 1984, 1984b, 1984c, 1984d, 1985, 1985b, 1985c, 1986, 1986b, 1986c, 1987, 1987b, 1987c, 1987d, 1988). In the following years, Zeybekoğlu, who is a student of Kartal, and his team (1992, 1994, 1994b, 1997, 1998, 2000, 2001, 2001b), Güçlü and Özbek (1994, 1994b, 1995, 1995b), Başpınar and Uygun (1991, 1991b, 1991c, 1992, 1992b), Meyer-Arndt (1988, 1991),

Boulard (1979, 1993) gave Auchenorrhyncha records from Turkey and identified some new species. Auchenorrhyncha fauna of Turkey is represented by 764 species belonging to 15 families according to the available literature.

Although Auchenorrhyncha is a rich sub-order, the number of Auchenorrhyncha species in Turkey has not yet been determined. The studies mentioned above cover certain parts of Turkey and do not include adequate faunistic records for many regions of this country due to the lack of eloborate studies in those regions. The ample detection of the fauna of Turkey necessitates local studies in detail. Kızılcahamam is particularly important not only for being a transition between steppe and forest vegetations and therefore having an interesting fauna structure, but also for its richness in the number of species. Because of these characteristics and since its fauna is poorly known, Kızılcahamam is chosen as the study site.

MATERIALS AND METHODS

Examined material comprises 1690 adult samples of Auchenorrhyncha that are collected from the county of Kızılcahamam and its surroundings by the author. During the sampling, the site is regularly visited. From May 1997 until the end of September 1997, field studies are held at least once a week in the study site (40° 25', 40° 41' North, 32° 35', 32° 48' East) covering Işıkdağı mountain to the northeast of Kızılcahamam and Soğuksu National Park to the west of the county. Samples are collected specifically from habitats differing in vegetation. The selected habitats were 1065-1740m above sea level. The field studies are held during daytime. Samples are collected by sweeping the atrap over the herbaceous plants. Therefore, it could not be detected which specimen is collected from which plant. Only for trees and shrubs, each specimen collected by atrap is attributed to the plant species. Auchenorrhynches are selected among the specimens of many other groups in the atrap, with the use of an aspirator. The specimens in the aspirator are later killed in jars containing ethyl acetate and placed in envelopes, which are prepared prior to the field trip, by assigning a record id number in the field. The collected specimens are prepared according to the standard methods and classified in collection boxes and are currently in the collection of the author.

Family: CIXIIDAE SPINOLA,1839
Cixius pallipes Fieber,1876

Materials: Güvem, SW Demirciköy, 1250 m, 28.05.1997, 1 female. It has been collected from *Quercus* trees in *Pinus-Quercus* forest.

Distribution in Turkey: Adana, Adıyaman, Afyon, Ankara, Antalya, Artvin, Aydın, Balıkesir, Bartın, Çanakkale, Çankırı, Diyarbakır, Düzce Erzincan, Erzurum, Eskişehir, Gaziantep, Giresun, Gümüşhane, Hakkari, Iğdır, İzmir, Karaman, Kırşehir, Konya, Kütahya, Kahramanmaraş, Malatya, Mardin,

Muğla, Ordu, Sakarya, Samsun, Tokat, Şanlıurfa, Yozgat (Lodos & Kalkandelen, 1980; Dlabola, 1981; Kalkandelen, 1988). **Remarks:** New for Kızılcahamam.

Tachycixius desertorum (Fieber,1876)

Materials: Işıkdağı, Karagöl, 1600 m, 11.07.1997, 1 female. It has been collected from weeds in *Pinus nigra* forest.
Distribution in Turkey: Adıyaman, Ankara, Antalya, Artvin, Diyarbakır, Edirne, Eskişehir, Gaziantep, Hakkari, İçel, İzmir, Kastamonu, Konya, Manisa, Mardin, Muğla, Nevşehir, Sinop, Uşak (Lodos & Kalkandelen, 1980; Kalkandelen, 1988). **Remarks:** New for Kızılcahamam.

Pentastiridius nanus (Ivanoff, 1885)

Materials: Soğuksu, 1300 m, 20.07.1997, 7 males 1 female. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: This species is the first record in Turkey. **Remarks:** New for Turkey.

Reptalus panzeri (Löw,1883)

Materials: Soğuksu, 1300 m, 20.07.1997, 1 female. It has been collected from *Quercus* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Çankırı (Kalkandelen, 1994). **Remarks:** New for Kızılcahamam.

Hyalesthes ponticorum Hoch & Remane, 1985

Materials: Soğuksu, 1100 m, 03.08.1997, 2 males. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Çankırı, Çorum, Erzincan, Konya, Van (Hoch & Remane, 1985; Kalkandelen, 2000). **Remarks:** Known to Kızılcahamam.

Hyalesthes philesakis Hoch & Remane, 1985

Materials: Soğuksu, 1300 m, 20.07.1997 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Kırşehir (Kalkandelen, 2000). **Remarks:** New for Kızılcahamam.

Hyalesthes yozgaticus Hoch & Remane, 1985

Materials: Soğuksu, 1300 m, 20.07.1997, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Yozgat (Hoch & Remane, 1985). **Remarks:** New for Ankara.

Family: DELPHACIDAE LEACH,1815

Stenocranus minutus (Fabricius,1787)

Materials: Güvem, Sey Hamamı, 1080 m, 14.05.1997, 3 females 2 males, Soğuksu, 1100 m, 13.09.1997, 1 male. It has been collected from weeds in orchards and *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Bitlis (Lodos & Kalkandelen, 1980b; Güçlü, 1996). **Remarks:** New for Kızılcahamam.

Eurysa lineata (Perris,1857)

Materials: Soğuksu, 1100 m, 07.06.1997, 1 female. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Kars (Lodos & Kalkandelen, 1980b). **Remarks:** New for Ankara and Middle Anatolia.

Eurybregma nigrolineata Scott,1875

Materials: Sey Hamamı, 1080 m, 14.05.1997, 7 males 10 female. It has been collected from weeds in orchards.
Distribution in Turkey: Konya (Lodos & Kalkandelen, 1980b). **Remarks:** New for Ankara.

Muirodelphax aubei (Perris, 1857)

Materials: Güvem, Belpınar, 1300 m, 05.07.1997, 2 males, Işıkdağı, Yukarı Çanlı, 1400 m, 11.07.1997, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Erzurum, İzmir (Lodos & Kalkandelen, 1980b; Güçlü, 1996). **Remarks:** New for Kızılcahamam.

Javesella dubia (Kirschbaum,1868)

Materials: Soğuksu, 1100 m, 13.09.1997, 1 female. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Erzurum (Lodos & Kalkandelen, 1980b; Güçlü, 1996). **Remarks:** New for Kızılcahamam.

Family: MEENOPLIDAE FIEBER,1872

Meenoplus albosignatus Fieber,1866

Materials: Soğuksu, 1100 m, 03.08.1997, 1 male 1 female, 20.07.1997 1 female. It has been collected from *Quercus* and *Salix* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Adıyaman, Ankara, Bolu, Hakkari, Mardin, Muş (Linnav., 1965; Lodos & Kalkandelen, 1980c). **Remarks:** New for Kızılcahamam.

Family: DERBIDAE SPINOLA,1839

Malenia turanica Anufriev, 1966

Materials: Güvem, Sey Hamamı, 1080 m, 11.07.1997, 2 females. It has been collected from weeds in orchards.
Distribution in Turkey: Ankara, Antalya, Muğla (Lodos & Kalkandelen, 1988). **Remarks:** New for Kızılcahamam.

Family: DICTYOPHARIDAE SPINOLA,1839

Dictyophara multireticulata Mulsat et Rey,1855

Materials: Işıkdağı, Aköz Köyü, 1150 m, 30.08.1997, 1 female. It has been collected from *Populus* trees.
Distribution in Turkey: Denizli, Van (Lodos & Kalkandelen, 1980c). **Remarks:** New for Ankara.

Family: TETTIGOMETRIDAE GERMAR,1821

Tettigometra (*Mitricephalus*) *macrocephalus* (Fieber,1865)

Materials: Güvem, Eyrekkaya Barajı, 1260, m, 14.05.1997, 1 female. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Sakarya, Van (Lodos & Kalkandelen, 1980c). **Remarks:** New for Ankara.

Tettigometra (*Hystrigonia*) *hexaspina* (Kolenati, 1857)

Materials: Güvem, Aköz Köyü, 1150 m, 09.08.1997, 1 female, 30.08.1997, 1 female. It has been collected from weeds and *Populus* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Ağrı, Ankara, Edirne, Gaziantep, Giresun, Isparta, Tekirdağ, Urfa (Dlabola, 1957; Lodos & Kalkandelen, 1980c). **Remarks:** New for Kızılcahamam.

Tettigometra (s.str.) *eremi* Lindberg,1948

Materials: Güvem, Belpınar, 1300, m, 05.07.1997, 1 male 4 females, Yasin Köyü, 1500 m, 11.07.1997, 5 males 4 females, Soğuksu, 1300 m, 20.07.1997, 1 female. It has been collected from weeds and *Quercus* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Aydın, Burdur, Çanakkale, İzmir, Kayseri, Kocaeli, Kütahya, Manisa, Sivas, Uşak (Lodos & Kalkandelen, 1980c(21, 67)). **Remarks:** New for Kızılcahamam.

Tettigometra (s.str.) *obliqua* (Panzer,1799)

Materials: Güvem, Belpınar, 1300 m, 05.07.1997, 4 males 7 females, Salin Köyü, 1300 m, 30.08.1997, 3 females, Yasin Köyü, 1400 m, 11.07.1997, 7 males 4 females. It has been collected from weeds and *Quercus* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Adana, Ankara, Adıyaman, Ağrı, Bilecik, Bolu, Burdur, Çanakkale, Çankırı, Çorum, Diyarbakır, Edirne, Elazığ, İstanbul, İzmir, Mardin, Nevşehir, Sivas, Tekirdağ, Urfa (Dlabola, 1957; Linnavuori, 1965; Lodos & Kalkandelen, 1980c). **Remarks:** New for Kızılcahamam.

Tettigometra (s.str.) *sordida* Fieber,1865

Materials: Güvem, Yenimahalle, 1250 m, 05.07.1997, 1 male, Aköz Köyü, 1150 m, 30.08.1997, 3 females, Salin Köyü, 1300 m, 30.08.1997, 1 male 2 females, Soğuksu, 1510 m, 28.05.1997 1 female. It has been collected from weeds and *Populus* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara (Lodos & Kalkandelen, 1980c). **Remarks:** New for Kızılcahamam.

Tettigometra (s.str.) *sulphurea* Mulsant et Rey,1855

Materials: Soğuksu, 1300 m, 20.07.1997, 1 female. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Adana, Ankara, Artvin, Aydın, Bilecik, Bursa, Diyarbakır, Elazığ, İzmir, Kütahya, Nevşehir, Sakarya, Urfa, Uşak, Van (Dlabola, 1957; Lodos & Kalkandelen, 1980c). **Remarks:** New for Kızılcahamam.

Tettigometra (s.str.) *vitellina* Fieber,1865

Materials: Güvem, Aköz Köyü , 1150 m, 09.08.1997, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Van (Lodos & Kalkandelen, 1980c). **Remarks:** New for Kızılcahamam.

Tettigometra (*Metroplaca*) *baranii* (Signoret,1866)

Materials: Güvem, Belpınar, 1300 m, 05.07.1997, 6 males 11 females, Salin Köyü, 1300 m, 30.08.1997, 2 females, Yasin Köyü, 1400 m, 11.07.1997, 2 males 1 female, Yukarı Çanlı, 1400 m, 11.07.1997, 1 female. It has been collected from weeds and *Quercus* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Mardin (Lodos & Kalkandelen, 1980c). **Remarks:** New for Kızılcahamam.

Tettigometra (*Metroplaca*) *longicornis* (Signoret,1866)

Materials: Güvem, Belpınar, 1300 m, 05.07.1997, 3 females, Yasin Köyü, 1500 m, 11.07.1997, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Sivas (Dlab., 1957, 1981). **Remarks:** New for Kızılcahamam.

Family: ISSIDAE SPINOLA,1839

Mycterodus rostratulus Emeljanov,1964

Materials: Güvem, Salin Köyü, 1300 m, 14.06.1997, 1 male, Yukarı Çanlı, 1400 m, 14.06.1997, 1 male, Güvem, 1100 m, 14.06.1997, 1 female, Soğuksu, 1100 m, 07.06.1997, 1 male 1 female, 1250 m, 28.05.1997, 2 females, 1300 m, 25.05.1995, 1 female, 1510 m, 28.05.1997, 1 female. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Yozgat (Lodos & Kalkandelen, 1981a; Kartal, 1985). **Remarks:** New for Kızılcahamam.

Scorlupella discolor (Germar,1821)

Materials: Güvem, Aköz Köyü, 1150 m, 09.08.1997, 4 females 18 males, 1150 m, 28.05.1997, 2 females 2 males, Belpınar, 1300 m, 05.07.1997, 10 females 10 males, Salin Köyü, 1300 m, 14.06.1997, 11 females 5 males, Yenimahalle, 1250 m, 05.07.1997, 9 females 10 males. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Yozgat (Dlabola, 1957; Kartal, 1985). **Remarks:** New for Kızılcahamam.

Scorlupella montana (Becker,1865)

Materials: Güvem, 1100 m, 14.06.1997, 1 female, Soğuksu, 1300 m, 07.06.1997, 53 females, 20.07.1997, 7 females. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Erzincan, Kars, Yozgat (Lodos & Kalkandelen, 1981a; Kartal, 1985). **Remarks:** New for Kızılcahamam.

Tshurtshurnella peloponica Dlabola,1979

Materials: Güvem, Aköz Köyü, 1150 m, 09.08.1997, 3 males 5 females, 30.08.1997, 1 female, Salin Köyü, 1300 m, 30.08.1997, 5 males 8 females, Soğuksu, 1100 m, 03.08.1997, 1 male, 1300 m, 20.07.1997, 4 males 7 females. It has been collected from weeds and *Quercus* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara (Lodos & Kalkandelen, 1988). **Remarks:** Known to Kızılcahamam.

Kervillea parvissima (Dlabola,1957)

Materials: Soğuksu, 1300 m, 07.06.1997, 1 female, Güvem, Aköz Köyü, 1150 m, 28.05.1997, 5 females 9 males, Belpınar, 1300 m, 05.07.1997, 4 females 5 males, Salin Köyü, 1300 m, 14.06.1997, 1 female 4 male, Yenimahalle, 1250 m, 05.07.1997, 1 female 1 male, Yukarı Çanlı, 1400 m, 14.06.1997, 2 males, SW Demirciköy, 1250 m, 28.05.1997, 3 females, Yasin Köyü, 1500 m, 11.07.1997, 2 females, Yukarı Çanlı, 1540 m, 14.06.1997, 10 females 9 males. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara (Lodos & Kalkandelen, 1981a). **Remarks:** New for Kızılcahamam and endemic to Turkey.

Family: CICADIDAE LEACH,1815

Cicadetta tibialis (Panzer,1788)

Materials: Güvem, Belpınar, 1300 m, 05.07.1997, 4 males 2 females. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Artvin, Çorum (Lodos & Kalkandelen, 1981b). **Remarks:** New for Kızılcahamam.

Family: CERCOPIDAE LEACH,1815

Cercopis intermedia Kirschbaum,1868

Material: Güvem, Belpınar, 1300 m, 05.07.1997, 1 female, Sey Hamamı, 1080 m, 11.07.1997, 1 female, Yukarı Çanlı, 1540 m, 14.06.1997, 1 female, Yasin Köyü, 1500 m, 11.07.1997, 1 male, Güvem, 1100 m, 14.05.1997, 1 male 1 female, 28.05.1997, 1 male 3 females, Soğuksu, 1100 m, 07.06.1997, 1 male, 1150 m, 25.05.1997, 5 females 6 males, 1300 m, 25.05.1997, 3 males 1 female. It has been collected from weeds in *Pinus-Quercus* forest.

Distribution in Turkey: Adıyaman, Amasya, Ankara, Artvin, Bitlis, Çanakkale, Diyarbakır, Elazığ, Eskişehir, Gaziantep, Giresun, Hakkari, Hatay, Isparta, İzmir, Kayseri, Konya, Kütahya, Kastamonu, Maraş, Mardin, Niğde, Rize, Samsun, Sinop, Trabzon, Urfa, Uşak (Lodos & Kalkandelen , 1981c; Kartal et. al., 1994). **Remarks:** New for Kızılcahamam.

Lepyronia coleoptrata (Linnaeus,1758)

Materials: Güvem, Aköz Köyü, 1150 m, 09.08.1997, 1 female 1 male, Belpınar, 1300 m, 05.07.1997, 1 male, Salin Köyü, 1300 m, 14.06.1997, 1 female 5 males, Sey Hamamı, 1080 m, 11.07.1997, 3 females 2 males, Aköz Köyü, 1150 m, 30.08.1997, 1 female, Güvem, 1100 m, 14.06.1997, 1 male, Soğuksu, 1100 m, 13.09.1997, 2 males. It has been collected from weeds in *Pinus-Quercus* forest.

Distribution in Turkey: Afyon, Ankara, Artvin, Aydın, Bilecik, Bursa, Çanakkale, Çankırı, Çorum, Diyarbakır, Edirne, Erzincan, Gümüşhane, İzmir, Kars, Kütahya, Manisa, Mardin, Muğla, Muş, Sakarya, Samsun, Sinop, Tokat (Lodos & Kalkandelen, 1981c; Kartal et. al., 1994; Demir, 2004). **Remarks:** New for Kızılcahamam.

Neophilaenus albipennis (Fabricius,1798)

Materials: Işıkdağı, Salin Köyü, 1300 m, 30.08.1997, 1 male 1 female. It has been collected from weeds in *Pinus-Quercus* forest.

Distribution in Turkey: Kırklareli (Lodos & Kalkandelen, 1981c). **Remarks:** New for Ankara and Middle Anatolia.

Neophilaenus campestris (Fallen,1805)

Materials: Soğuksu, 1100 m, 03.08.1997, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.

Distribution in Turkey: Adana, Adıyaman, Ankara, Artvin, Bitlis, Bursa, Çanakkale, Eskişehir, Giresun, Hatay, İzmir, Kırklareli, Kütahya, Manisa, Muğla, Nevşehir, Samsun, Siirt, Sinop, Trabzon, Van (Linnvuori, 1965; Lodos & Kalkandelen, 1981c). **Remarks:** New for Kızılcahamam.

Neophilaenus lineatus (Linnaeus,1758)

Materials: Güvem, Sey Hamamı, 1080 m, 11.07.1997, 2 females, Aköz Köyü, 1150 m, 30.08.1997, 2 females, Karagöl, 1600 m, 11.07.1997, 1 male, Soğuksu, 1100 m, 03.08.1997, 1 female, 13.09.1997, 1 female. It has been collected from weeds in *Pinus-Quercus* forest.

Distribution in Turkey: Afyon, Ankara, Erzincan, İzmir, Nevşehir, Van (Lodos & Kalkandelen, 1981c; Demir, 2004). **Remarks:** New for Kızılcahamam.

Neophilaenus minor (Kirschbaum,1868)

Materials: Işıkdağı, Salin Köyü, 1300 m, 30.08.1997, 1 male, Soğuksu, 1100 m, 07.06.1997, 1 male, 1300 m, 20.07.1997, 3 females 2 males. It has been collected from weeds and *Quercus* trees in *Pinus-Quercus* forest.

Distribution in Turkey: Ankara, Konya (Dlabola, 1957; Demir, 2004). **Remarks:** New for Kızılcahamam.

Aphrophora alni (Fallen,1805)

Materials: Güvem, Aköz Köyü, 1150 m, 09.08.1997, 1 male, Sey Hamamı, 1080 m, 11.07.1997, 9 males 7 females, Yenimahalle, 1250 m, 09.08.1997, 3 males 2 females, Aköz Köyü, 1150 m, 20.08.1997, 5 males 3 females, 30.08.1997, 1 male, Soğuksu, 1100 m, 03.08.1997, 5 males 5 females, 20.07.1997, 2 males, 13.09.1997, 1 male. It has been collected from weeds and *Salix* trees in *Pinus-Quercus* forest.

Distribution in Turkey: Afyon, Ankara, Artvin, Aydın, Balıkesir, Bitlis, Bolu, Çanakkale, Çorum, Diyarbakır, Erzincan, Erzurum, Giresun, İstanbul, İzmir, Kayseri, Kırklareli, Konya, Kütahya, Mardin, Muğla, Manisa, Ordu, Rize, Samsun, Sinop, Tekirdağ, Trabzon, Yozgat (Linnvuori, 1965; Lodos & Kalkandelen, 1981c; Kartal et. al., 1994; Demir, 2004). **Remarks:** New for Kızılcahamam.

Aphrophora corticea Germar,1821

Materials: Soğuksu, 1100 m, 03.08.1997, 1 male 1 female. It has been collected from *Pinus nigra* trees in *Pinus-Quercus* forest.

Distribution in Turkey: Afyon, Aydın, Bilecik, Çanakkale, Isparta, Kütahya, Muğla, Tokat (Lodos & Kalkandelen, 1981c). **Remarks:** New for Ankara.

Aphrophora salicina (Goeze,1778)

Materials: Güvem, Aköz Köyü, 1150 m, 09.08.1997, 1 male 2 females. Sey Hamamı, 1080 m, 11.07.1997, 6 males 13 females. Yenimahalle, 1250 m, 09.08.1997, 4 males 3 females, Aköz Köyü, 1150 m, 30.08.1997, 1 female, Soğuksu, 1100 m, 03.08.1997, 10 males 12 females, 20.07.1997, 1 female. It has been collected from weeds and *Salix* trees in *Pinus-Quercus* forest.

Distribution in Turkey: Ankara, Balıkesir, Çanakkale, Giresun, Gümüşhane, Kırklareli, Kütahya (Lodos & Kalkandelen, 1981c; Demir, 2004). **Remarks:** New for Kızılcahamam.

Philaenus spumarius (Linnaeus,1758)

Materials: Güvem, Aköz Köyü, 1150 m, 09.08.1997, 1 male 2 females, Sey Hamamı, 1080 m, 11.07.1997, 6 males 13 females, Yenimahalle, 1250 m, 09.08.1997, 4 males 3 females, Aköz Köyü, 1150 m, 30.08.1997, 1 female, Soğuksu, 1100 m, 03.08.1997, 10 males 12 females, 20.07.1997, 1 female. It has been collected from weeds and *Salix* trees in *Pinus-Quercus* forest.

Distribution in Turkey: Ağrı, Amasya, Ankara, Artvin, Aydın, Balıkesir, Bilecik, Bitlis, Bolu, Bursa, Çanakkale, Elazığ, Erzincan, Erzurum, Giresun, Gümüşhane, Hakkari, İzmir, Kars, Kırklareli, Kocaeli, Kütahya, Malatya, Manisa, Mardin, Muğla, Ordu, Rize, Samsun, Siirt, Sinop, Tekirdağ, Trabzon, Tokat, Van (Linnvuori, 1965; Lodos & Kalkandelen, 1981c; Kartal et. al., 1994; Demir, 2004). **Remarks:** New for Kızılcahamam.

Family: MEMBRACIDAE RAFINESQUE,1815

Gargara genistae (Fabricius,1775)

Materials. Işıkdağı, Salin Köyü, 1300 m, 30.08.1997, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.

Distribution in Turkey: Ankara, Aydın, Balıkesir, Çorum, Erzurum, İzmir, Muğla (Lodos & Kalkandelen, 1981c). **Remarks:** New for Kızılcahamam.

Centrotus cornutus (Linnaeus,1758)

Materials: Soğuksu, 1100 m, 06.06.1998, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Artvin, Aydın, Bilecik, Bursa, Çorum, Denizli, Erzincan, Edirne, Giresun, İzmir, Kocaeli, Kütahya, Kırklareli, Ordu, Sakarya, Tekirdağ (Lodos & Kalkandelen, 1981c). **Remarks:** New for Ankara.

Family: CICADELLIDAE LATREILLE,1825

Utecha trivia (Germar,1821)

Materials: Güvem, Belpınar, 1300 m, 05.07.1997, 1 female 1 male, Aköz Köyü, 1150 m, 30.08.1997, 2 females, Soğuksu, 1300 m, 20.07.1997, 1 female 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ağrı, Ankara, Bilecik, Çanakkale, Çorum, Denizli, Elazığ, Gümüşhane, İzmir, Kastamonu, Manisa, Mardin, Muğla, Rize, Sinop, Sivas, Urfa (Lodos & Kalkandelen, 1981d). **Remarks:** Known to Kızılcahamam.

Macropsis cerea (Germar,1837)

Materials: Soğuksu, 1100 m, 03.08.1997, 1 female. It has been collected from *Salix* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Erzurum, Gümüşhane (Lodos & Kalkandelen, 1981d). **Remarks:** New for Ankara and Middle Anatolia.

Macropsis graminea (Fabricius,1798)

Materials: Güvem, Aköz Köyü, 1150 m, 09.08.1997, 1 male 2 females, 30.08.1997, 2 females, Salin Köyü, 1300 m, 30.08.1997, 1 female, Soğuksu, 1100 m, 03.08.1997, 10 males 61 females, 20.07.1997, 2 females. It has been collected from *Salix* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Adıyaman, Ağrı, Ankara, Bitlis, Çanakkale, Diyarbakır, Edirne, Elazığ, Eskişehir, Gümüşhane, Kırklareli, Konya, Kütahya, Manisa, Tokat, Trabzon, Tunceli, Van (Lodos & Kalkandelen, 1981d). **Remarks:** New for Kızılcahamam.

Macropsis megerlei (Fieber,1868)

Materials: Soğuksu, 1100 m, 03.08.1997, 1 female. It has been collected from *Salix* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Bolu, Çankırı (Lodos & Kalkandelen, 1981d). **Remarks:** New for Ankara.

Hephathus nanus (Herrich-Schäffer,1835)

Materials: Güvem, Belpınar, 1300 m, 05.07.1997, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Çankırı, Çorum, Kırklareli, Kütahya (Lodos & Kalkandelen, 1981d). **Remarks:** New for Ankara.

Anaceratagallia ribauti Ossionnilsson,1938

Materials: Güvem, Aköz Köyü, 1150 m, 09.08.1997, 1 female, Belpınar, 1300 m, 05.07.1997, 11 females 1 male, Sey Hamamı, 1080 m, 11.07.1997, 1 male, Yenimahalle, 1250 m, 09.08.1997, 1 female, Yasin Köyü, 1500 m, 11.07.1997, 1 female, Yukarı Çanlı, 1400 m, 11.07.1997, 2 males. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Balıkesir, Çankırı, Malatya, Mardin, Samsun (Lodos & Kalkandelen, 1981d). **Remarks:** New for Kızılcahamam.

Dryodurgades anatolicus Dlabola,1957

Materials: Işıkdağı, Salin Köyü, 1300 m, 30.08.1997, 1 female, Soğuksu, 1100 m, 13.09.1997, 1 male 4 females, 1300 m, 07.06.1997, 1 male, 25.05.1997, 1 male 1 female. It has been collected from weeds and *Juniperus* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Adana, Ankara (Dlabola, 1957; Demir, 2004a). **Remarks:** New for Kızılcahamam.

Rhytidodus boluicus Dlabola, 1970

Materials: Güvem, Sey Hamamı, 1080 m, 11.07.1997, 1 male. It has been collected from weeds under *Populus* trees.
Distribution in Turkey: Adana, Ankara, Çankırı, Diyarbakır, Erzurum, İzmir, Kayseri, Manisa (Lodos & Kalkandelen, 1982a; Güçlü & Özbek, 1994a). **Remarks:** New for Kızılcahamam.

Idiocerus lituratus (Fallen,1806)

Materials: Soğuksu, 1100 m, 03.08.1997, 1 female. It has been collected from *Salix caprea* in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara (Dlabola, 1957). **Remarks:** New for Kızılcahamam.

Idiocerus stigmaticalis Lewis,1834

Materials: Işıkdağı, Aköz Köyü, 1150 m, 30.08.1997, 7 females 2 males, Soğuksu, 1100 m, 03.08.1997, 2 females, 20.07.1997, 1 female. It has been collected from *Salix* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Ağrı, Trabzon (Lodos & Kalkandelen, 1982a). **Remarks:** New for Ankara and Middle Anatolia.

Tremulicerus mesopyrrhus (Kirschbaum, 1868)

Materials: Işıkdağı, Aköz Köyü, 1150 m, 30.08.1997, 1 male. It has been collected from *Populus* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Adana, Ankara, Bitlis, Çankırı, Erzurum, Gümüşhane, İzmir, Konya, Manisa, Van (Lodos & Kalkandelen, 1982a; Güçlü & Özbek, 1994a). **Remarks:** New for Kızılcahamam.

Populicerus populi (Linnaeus,1761)

Materials: Işıkdağı, Yasin Köyü, 1500 m, 11.07.1997, 1 male 1 female. It has been collected from *Populus tremula* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Rize (Lodos & Kalkandelen, 1982a; Demir, 2004). **Remarks:** New for Kızılcahamam.

Batracomorphus irroratus Lewis,1834

Materials: Güvem, Belpınar, 1300 m, 05.07.1997, 14 females 2 males, Işıkdağı, Yasin Köyü, 1500 m, 11.07.1997, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Adıyaman, Ankara, Burdur, Diyarbakır, Kayseri, Nevşehir, Tekirdağ, Van (Lodos & Kalkandelen, 1982b; Demir, 2004). **Remarks:** New for Kızılcahamam.

Penthimia nigra (Goeze,1778)

Materials: Güvem, Aköz Köyü, 1150 m, 28.05.1997, 2 females, Soğuksu, 1100 m, 03.08.1997, 1 female. It has been collected from *Rosa canina* and *Populus* trees in *Pinus-Quercus* forest.

Distribution in Turkey: Ankara, Antalya, Bilecik, Isparta, İzmir, Kırşehir, Nevşehir, Tekirdağ, Trabzon (Lodos & Kalkandelen, 1982b). **Remarks:** New for Kızılcahamam.

Paradorydium paradoxum (Herrich-Schäffer,1837)

Materials: Soğuksu, 1300 m, 07.06.1997, 4 females, 20.07.1997, 2 males. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Antalya, Diyarbakır (Lodos & Kalkandelen, 1982b; Demir, 2005). **Remarks:** New for Kızılcahamam.

Eupelix cuspidata (Fabricius,1775)

Materials: Güvem, Belpınar, 1300 m, 05.07.1997, 2 males 1 female, Sey Hamamı, 1080 m, 11.07.1997, 1 male 1 female, Yenimahalle, 1250 m, 05.07.1997 , 2 males, Karagöl, 1600 m, 11.07.1997, 1 male, Yasin Köyü, 1500 m, 11.07.1997, 1 female, Yukarı Çanlı, 1400 m, 11.07.1997, 8 males. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Adıyaman, Afyon Ankara, Artvin, Çanakkale, Diyarbakır, Konya, Malatya, Mardin, Niğde, Urfa (Lodos & Kalkandelen, 1982b). **Remarks:** New for Kızılcahamam.

Aphrodes angulaticeps Emeljanov,1964

Materials: Güvem, Belpınar, 1300 m, 05.07.1997, 2 males, Işıkdağı, Aköz Köyü, 1150 m, 30.08.1997, 1 female. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Elazığ, Kütahya (Lodos & Kalkandelen, 1982b). **Remarks:** New for Ankara.

Aphrodes makarovi Zachvatkin, 1948

Materials: Güvem, Aköz Köyü, 1150 m, 09.08.1997, 1 male 3 females, Sey Hamamı, 1080 m, 11.07.1997, 4 males, Yenimahalle, 1250 m, 05.07.1997, 1 male 2 females, Yasin Köyü, 1500 m, 11.07.1997, 2 males, Soğuksu, 1100 m, 13.09.1997, 3 females, 1300 m, 20.07.1997, 1 female. It has been collected from weeds and *Quercus* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Adana (Başpınar & Uygun, 1991). **Remarks:** New for Ankara.

Alebra albostriella (Fallen,1826)

Materials: Işıkdağı, Salin Köyü, 1300 m, 30.08.1997, 4 females 1 male, Soğuksu, 1100 m, 13.09.1997, 1 female. It has been collected from *Quercus* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Artvin, Bolu, Çorum, Hatay, İzmir, Kayseri, Kırşehir, Ordu (Linnavuori, 1965; Lodos & Kalkandelen, 1983b). **Remarks:** New for Kızılcahamam.

Micantulina stigmatipennis (Mulsant et Rey,1855)

Materials: Güvem, 1100 m, 28.05.1997, 1 female. It has been collected from *Verbascum* in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Burdur, Isparta, İstanbul, İzmir, Manisa (Lodos & Kalkandelen, 1983b). **Remarks:** New for Kızılcahamam.

Kybos candelabricus Dlabola, 1958

Materials: Güvem, Aköz Köyü, 1150 m, 09.08.1997, 1 female, 30.08.1997, 9 females 7 males, Yenimahalle, 1250 m, 09.08.1997, 1 female, Soğuksu, 1100 m, 03.08.1997, 10 females 3 males, 13.09.1997, 2 females, 20.07.1997, 2 females 1 male. It has been collected from *Salix* trees in *Pinus-Quercus* forest.

Distribution in Turkey: Ankara, Erzincan, Kırşehir, Nevşehir, Van, Yozgat (Linnavuori, 1965; Lodos & Kalkandelen, 1983c). **Remarks:** Known to Kızılcahamam.

Linnavuoriana sexmaculata (Hardy,1850)

Materials: Soğuksu, 1100 m, 03.08.1997, 1 male. It has been collected from *Salix* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Erzincan, Konya (Linnavuori, 1965; Lodos & Kalkandelen, 1984). **Remarks:** Known to Kızılcahamam.

Ribautiana alces (Ribaut,1931)

Materials: Işıkdağı, Aköz Köyü, 1150 m, 30.08.1997, 1 female, Salin Köyü, 1300 m, 30.08.1997, 1 male 2 females. It has been collected from *Quercus* and *Salix* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Kütahya (Dlabola, 1981). **Remarks:** New for Ankara.

Eupteryx gyaurdagicus Dlabola, 1957

Materials: Güvem, Yenimahalle, 1250 m, 09.08.1997, female, Aköz Köyü, 1150 m, 30.08.1997, 1 female, Soğuksu, 1100 m, 13.09.1997, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Adana, Ankara, Bolu, Isparta, İzmir, Manisa, Nevşehir, Sinop (Dlabola, 1957; Lodos & Kalkandelen, 1984b; Kartal, 1983). **Remarks:** New for Kızılcahamam.

Eupteryx taborskyi Dlabola,1957

Materials: Güvem, Yenimahalle, 1250 m, 09.08.1997, 3 females, Soğuksu, 1100 m, 03.08.1997, 1 female 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Erzincan, Konya, Nevşehir, Sinop, Van, Yozgat (Lodos & Kalkandelen, 1984b). **Remarks:** New for Kızılcahamam.

Kropka unipunctata (Dlabola,1957)

Materials: Soğuksu, 1100 m, 06.06.1998, 1 female. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Çorum, Gümüşhane, Kayseri, Sivas (Lodos & Kalkandelen, 1984c). **Remarks:** New for Kızılcahamam.

Goniagnathus brevis (Herrich-Schäffer,1835)

Materials: Güvem, Eyrekkaya barajı, 1260 m, 14.05.1997, 1 male, Işıkdağı, Salin Köyü, 1300 m, 30.08.1997, 2 females 1 male, Soğuksu, 1150 m, 25.05.1997, 1 female. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Amasya, Ankara, Antalya, Burdur, Diyarbakır, Manisa, Mardin, Niğde, Samsun, Sinop, Tokat (Kalkandelen, 1974; Lodos & Kalkandelen, 1985; Kartal & Zeybekoğlu, 1991; Zeybekoğlu, 1998; Demir, 2004b). **Remarks:** New for Kızılcahamam.

Neoaliturus fenestratus (Herrich-Schäffer,1834)

Materials: Güvem, Yukarı Çanlı, 1400 m, 14.06.1997, 1 female. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ağrı, Amasya, Ankara, Çorum, Diyarbakır, Erzurum, Giresun, İçel, İzmir, Mardin, Nevşehir, Ordu, Samsun, Sinop, Tokat,

Urfa, Van (Kalkandelen, 1974; Lodos & Kalkandelen, 1985; Kartal & Zeybekoğlu, 1991; Zeybekoğlu, 1998). **Remarks:** Known to Kızılcahamam.

Neoaliturus guttulatus (Kirschbaum,1868)

Materials: Güvem, Sey Hamamı, 1080 m, 14.05.1997, 1 female. It has been collected from weeds in *Pinus-Quercus* forest.

Distribution in Turkey: Ankara, Diyarbakır, İzmir, Konya, Nevşehir, Tokat, Urfa (Kalkandelen, 1974; Lodos & Kalkandelen, 1985). **Remarks:** New for Kızılcahamam.

Balclutha punctata (Fabricius,1775)

Materials: Güvem, Aköz Köyü, 1150 m, 28.05.1997, 1 female 1 male, SW Demirciköy, 1250 m, 28.05.1997, 1 female, Salin Köyü, 1300 m, 14.06.1997, 1 female, Sey Hamamı, 1080 m, 11.07.1997, 4 females 1 male, 14.05.1997, 1 male, Karagöl, 1600 m, 11.07.1997, 2 females 1male; Kızılcahamam Güvem 1100m. 14.06.1997 1female; Soğuksu 1100m. 07.06.1997 1 female, Soğuksu, 1150 m, 25.05.1997, 1 female 3 males, Güvem, 1100 m, 28.05.1997, 3 females. It has been collected from weeds in *Pinus-Quercus* forest.

Distribution in Turkey: Adıyaman, Amasya, Ankara, Artvin, Bitlis, Bolu, Diyarbakır, Erzincan, Erzurum, Giresun, Hakkari, Isparta, Ordu, Rize, Samsun, Sinop, Trabzon (Lodos & Kalkandelen, 1985b; Kartal & Zeybekoğlu, 1991; Zeybekoğlu, 1998; Kartal & Zeybekoğlu-Dur, 2001). **Remarks:** New for Kızılcahamam.

Macrosteles laevis (Ribaut,1927)

Materials: Güvem, 1100 m, 28.05.1997, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.

Distribution in Turkey: Amasya, Ankara, Artvin, Burdur, Giresun, Hakkari, Konya, Nevşehir, Ordu, Rize, Samsun, Sinop, Tokat, Trabzon (Kalkandelen, 1974; Kartal & Zeybekoğlu, 1991; Zeybekoğlu, 1993; Kartal & Zeybekoğlu-Dur, 2001; Zeybekoğlu, 1998). **Remarks:** New for Kızılcahamam.

Macrosteles sexnotatus (Fallen,1806)

Materials: Güvem, Yenimahalle, 1250 m, 09.08.1997, 2 females, Güvem, 1100 m, 28.05.1997 34 females 27 males. It has been collected from *weeds* in *Pinus-Quercus* forest.

Distribution in Turkey: Adıyaman, Ağrı, Amasya, Ankara, Artvin, Bolu, Çankırı, Diyarbakır, Düzce, Erzurum, Giresun, Hakkari, İzmir, Konya, Nevşehir, Ordu, Rize, Samsun, Sinop, Tokat, Trabzon, Van (Kalkandelen, 1974; Lodos & Kalkandelen, 1985b; Zeybekoğlu, 1993; Kartal & Zeybekoğlu-Dur, 2001; Zeybekoğlu, 1998). **Remarks:** New for Kızılcahamam.

Doratura stylata (Boheman,1847)

Materials: Güvem, Sey Hamamı, 1080 m, 11.07.1997, 1 female 3 males, Karagöl, 1600 m, 11.07.1997, 1 male, Yukarı Çanlı, 1400 m, 11.07.1997, 1 male, Soğuksu, 1300 m, 20.07.1997, 12 females 17 males. It has been collected from weeds in *Pinus-Quercus* forest.

Distribution in Turkey: Amasya, Ankara, Gümüşhane, Kars, Ordu, Samsun, Sinop, Tokat, Van (Kalkandelen, 1974; Lodos & Kalkandelen, 1985c; Kartal & Zeybekoğlu, 1991; Zeybekoğlu, 1998; Demir, 2004). **Remarks:** New for Kızılcahamam.

Fieberiella septentrionalis Wagner, 1963

Materials: Işıkdağı, Aköz Köyü, 1150 m, 30.08.1997, 1 male, Salin Köyü, 1300 m, 30.08.1997, 1 male, Soğuksu, 1100 m, 13.09.1997, 1 male 1 female. It has been collected from *Quercus*, *Populus* and *Juniperus* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Antalya, Artvin, Bursa, Malatya, Sakarya (Lodos & Kalkandelen, 1986). **Remarks:** New for Ankara.

Platymetopius henribauti Dlabola,1961

Materials: Güvem, Aköz Köyü, 1150 m, 09.08.1997, 1 male, Soğuksu, 1300 m, 20.07.1997, 1 male. It has been collected from weeds and *Quercus* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Konya (Kalkandelen, 1974; Lodos & Kalkandelen, 1986b). **Remarks:** New for Kızılcahamam.

Anoplotettix fuscovenosus (Ferrari,1882)

Materials: Güvem, Belpınar, 1300 m, 05.07.1997, 3 females 1 male, Işıkdağı, Yasin Köyü, 1500 m, 11.07.1997, 2 males, Soğuksu, 1300 m, 20.07.1997, 1 female. It has been collected from weeds and *Quercus* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Bursa, Çorum, Edirne, İzmir, Kırklareli, Manisa, Rize, Sakarya, Samsun, Sinop, Tokat (Lodos & Kalkandelen, 1986b; Kartal & Zeybekoğlu, 1991; Zeybekoğlu, 1998). **Remarks:** New for Kızılcahamam.

Allygus mixtus (Fabricius,1794)

Materials: Güvem, Belpınar, 1300 m, 05.07.1997, 1 male 1 female, Yukarı Çanlı, 1400 m, 11.07.1997, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Adana, Ankara, Konya (Kartal, 1981; Lodos & Kalkandelen, 1986c). **Remarks:** Known to Kızılcahamam.

Allygidius ecbatanicus Logvinenko,1979

Materials: Güvem, Sey Hamamı, 1080 m, 11.07.1997, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Karaman, Konya (Kartal & Zeybekoğlu, 1994b). **Remarks:** New for Kızılcahamam.

Phlepsius intricatus (Herrich-Schaffer,1838)

Materials: Işıkdağı, Salin Köyü, 1300 m, 30.08.1997, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Amasya, Bolu, Çanakkale, Diyarbakır, Isparta, İzmir, Kars, Kırşehir, Malatya, Mardin, Muğla, Nevşehir, Samsun, Trabzon (Linnavuori, 1965; Kalkandelen, 1974; Lodos & Kalkandelen, 1986c; Kartal & Zeybekoğlu, 1991; Zeybekoğlu, 1998). **Remarks:** New for Kızılcahamam.

Selenocephalus obsoletus (Germar,1817)

Materials: Güvem, Aköz Köyü, 1150 m, 09.08.1997, 1 male 1 female, Belpınar, 1300 m, 05.07.1997, 6 males 3 females, Sey Hamamı, 1080 m, 11.07.1997, 3 males 2 females, Işıkdağı, Salin Köyü, 1300 m, 30.08.1997, 4 females, Yasin Köyü, 1500 m, 11.07.1997, 7 males 4 females, Yukarı Çanlı, 1400 m, 11.07.1997, 1 male, Soğuksu, 1100 m, 13.09.1997, 3 females, 1300 m, 20.07.1997, 1 male 1 female. It has been collected from weeds and *Quercus* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Amasya, Ankara, Balıkesir, Bilecik, Bolu, Bursa, Çanakkale, Çankırı, Edirne, Eskişehir, Giresun, Kırklareli, Kocaeli, Malatya, Ordu, Rize, Samsun, Sinop, Sivas, Tekirdağ, Tokat, Trabzon, Zonguldak

(Linnavuori, 1965; Lodos & Kalkandelen, 1986c; Kartal & Zeybekoğlu, 1991; Zeybekoğlu, 2000). **Remarks:** Known to Kızılcahamam.

Selenocephalus stenopterus Signoret, 1880

Materials: Güvem, Aköz Köyü, 1150 m, 09.08.1997, 1 male, Soğuksu, 1100 m, 03.08.1997, 2 males. It has been collected from weeds and *Quercus* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Adana, Ankara, Antalya, Aydın, Bolu, Burdur, Bursa, Çanakkale, Çankırı, Çorum, Denizli, Isparta, İzmir, Kayseri, Kırşehir, Konya, Manisa, Samsun, Sinop, Tokat, Yozgat (Linnavuori, 1965; Kalkandelen, 1974; Lodos & Kalkandelen, 1986c; Kartal & Zeybekoğlu, 1991). **Remarks:** Known to Kızılcahamam.

Hardya anatolica Zachvatkin,1946

Materials: Güvem, Belpınar, 1300 m, 05.07.1997, 2 males, Eyrekkaya Barajı, 1260 m, 14.05.1997, 1 female, Keçikaya-Işıkdağı, 1200 m, 14.05.1997, 1 female, Sey Hamamı, 1080 m, 11.07.1997, 7 females 4 males, Yenimahalle, 1250 m, 05.07.1997, 1 male, Işıkdağı, Aköz Köyü, 1150 m, 30.08.1997, 2 males, Salin Köyü, 1300 m, 30.08.1997, 3 males, Yasin Köyü, 1500 m, 11.07.1997, 1 male 5 females, Yukarı Çanlı, 1400 m, 11.07.1997, 3 males 1 female, Soğuksu, 1100 m, 13.09.1997, 7 males 7 females, 1150 m, 25.05.1997, 2 females 1 male, 1250 m, 25.05.1997, 1 female, 1300 m, 07.06.1997, 2 females 7 males, 20.07.1997, 3 males 1 female, 1510 m, 28.05.1997, 1 male 2 females, 1740 m, 28.05.1997, 2 females 1 male. It has been collected from weeds, *Quercus*, *Populus* and *Juniperus* trees in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Adıyaman, Antalya, Bolu, Elazığ, Erzincan, Isparta, İzmir, Karaman, Kayseri, Kırşehir, Nevşehir, Ordu (Zachvatkin, 1946; Linnavuori, 1965; Kalkandelen, 1974; Lodos & Kalkandelen, 1987; Demir, 2004). **Remarks:** Known to Kızılcahamam.

Eohardya fraudulenta (Horvath,1903)

Materials: Işıkdağı, Aköz Köyü, 1150 m, 30.08.1997, 1 male, Salin Köyü, 1300 m, 30.08.1997, 1 male 1 female. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, İstanbul (Zachvatkin, 1946; Kalkandelen, 1974; Lodos & Kalkandelen, 1987). **Remarks:** New for Kızılcahamam.

Stenometopiellus angorensis Zachvatkin,1946

Materials: Soğuksu, 1100 m, 07.06.1997, 3 females 3 males. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ağrı, Ankara, Bitlis, Diyarbakır, Erzincan, Erzurum, Hakkari, Iğdır, Kars, Konya, Malatya, Nevşehir, Urfa, Van (Zachvatkin, 1946; Kalkandelen, 1974; Lodos & Kalkandelen, 1987; Kartal, Zeybekoğlu & Dursun, 2001). **Remarks:** New for Kızılcahamam.

Rhopalopyx vitripennis lalahani (Kalkandelen, 1972)

Materials: Işıkdağı, Karagöl, 1600 m, 11.07.1997, 3 females, Yasin Köyü, 1500 m, 11.07.1997, 1 female, Güvem, 1100 m, 14.06.1997, 2 females 2 males, Soğuksu, 1300 m, 07.06.1997, 7 females 10 males, 20.07.1997, 1 female. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Konya (Kalkandelen, 1974; Lodos & Kalkandelen, 1987). **Remarks:** New for Kızılcahamam.

Mocydia aegea Abdul-Nour, 1988

Materials: Güvem, Sey Hamamı, 1080 m, 14.05.1997, 1 female, Salin Köyü, 1300 m, 30.08.1997, 1 female 2 male, Soğuksu, 1100 m, 07.06.1997, 2 female. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Sinop (Kalkandelen, 1974; Abdu-Nour, 1988). **Remarks:** New for Kızılcahamam.

Mocydiopsis parvicauda Ribaut,1939

Materials: Güvem, Sey Hamamı, 1080 m, 14.05.1997, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Isparta, Nevşehir, Samsun (Kalkandelen, 1974, Lodos & Kalkandelen, 1987 designated as *monticola*; Kartal & Zeybekoğlu, 1991). **Remarks:** New for Kızılcahamam.

Handianus procerus (Herrich-Schäffer,1835)

Materials: Güvem, Aköz Köyü, 1150 m, 09.08.1997, 1 male, Belpınar, 1300 m, 05.07.1997, 44 males 26 females, Sey Hamamı, 1080 m, 11.07.1997, 1 female, Yenimahalle, 1250 m, 05.07.1997, 2 females, Salin Köyü, 1300 m, 30.08.1997, 2 males 4 females, Yasin Köyü, 1500 m, 11.07.1997, 14 males 23 females. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Afyon, Ağrı, Ankara, Antalya, Bitlis, Erzurum, Isparta, İzmir, Kırıkkale, Konya, Malatya, Nevşehir, Niğde, Urfa, Van, Zonguldak (Kalkandelen, 1974; Lodos & Kalkandelen, 1987b). **Remarks:** New for Kızılcahamam.

Conosanus obsoletus (Kirschbaum,1858)

Materials: Güvem, Sey Hamamı, 1080 m, 11.07.1997, 1 female 2 males, Aköz Köyü, 1150 m, 30.08.1997, 1 female 1 male, 20.08.1997, 8 females, Salin Köyü, 1300 m, 30.08.1997, 1 female, Soğuksu, 1100 m, 13.09.1997, 1 male, 1300 m, 20.07.1997, 1 female. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Adana, Ankara, Aydın, Balıkesir, Bolu, Düzce, İzmir, Kırşehir, Niğde (Gedau de Kerville, 1939; Kalkandelen, 1974; Lodos & Kalkandelen, 1987b; Demir, 2004). **Remarks:** New for Kızılcahamam.

Euscelis incisus (Kirschbaum,1858)

Materials: Güvem, Sey Hamamı, 1080 m, 11.07.1997, 1 male, 14.05.1997, 14 females 3 males, Yenimahalle, 1250 m, 05.07.1997, 1 male, Aköz Köyü, 1150 m, 30.08.1997, 4 females 2 males, Yukarı Çanlı, 1400 m, 11.07.1997, 1 male, Güvem, 1100 m, 14.05.1997, 3 females, 28.05.1997, 1 female. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Burdur, Eskişehir, Isparta, Kayseri, Kocaeli (Kalkandelen, 1974; Demir, 2004). **Remarks:** New for Kızılcahamam.

Artianus manderstjernii (Kirschbaum,1868)

Materials: Güvem, Aköz Köyü, 1150 m, 09.08.1997, 1 male 5 females, Belpınar, 1300 m, 05.07.1997, 12 males 5 females, Sey Hamamı, 1080 m, 11.07.1997, 6 males 5 females, Yenimahalle, 1250 m, 05.07.1997, 30 males 15 females, Aköz Köyü, 1150 m, 30.08.1997, 1 male, Salin Köyü, 1300 m, 30.08.1997, 2 males 2 females, Yukarı Çanlı, 1400 m, 11.07.1997, 11 males 8 females, Soğuksu, 1300 m, 20.07.1997, 7 males 6 females, Yasin Köyü, 1500 m, 11.07.1997, 1 male 2 females. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ağrı, Ankara, Balıkesir, Çankırı, Diyarbakır, Gaziantep, İzmir, Kırklareli, Urfa, Van, Zonguldak (Kalkandelen, 1974; Lodos & Kalkandelen, 1987b; Demir, 2004). **Remarks:** Known to Kızılcahamam.

Arocephalus longiceps (Kirschbaum,1868)

Materials: Güvem, Aköz Köyü, 1150 m, 28.05.1997, 1 female 1 male, SW Demirciköy, 1250 m, 28.05.1997, 1 male, Sey Hamamı, 1080 m, 14.05.1997, 1 male, Yukarı Çanlı, 1540 m, 14.06.1997, 1 female, Salin Köyü, 1300 m, 30.08.1997, 1 female, Soğuksu, 1100 m, 07.06.1997, 2 females 4 males, 25.05.1997, 2 females 2 males, 1150 m, 25.05.1997, 3 females 4 males, 1200 m, 25.05.1997, 4 females 5 males, 1300 m, 07.06.1997, 2 females, 25.05.1997, 1 female 1 male, 1510 m, 28.05.1997, 1 male, 1740 m, 28.05.1997, 5 females 2 males. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Bolu, Erzincan, Hakkari, İzmir, Konya (Lodos & Kalkandelen, 1987c; Kartal & Zeybekoğlu-Dur, 2001). **Remarks:** New for Kızılcahamam.

Psammotettix alienus (Dahlbom,1850)

Materials: Güvem, Sey Hamamı, 1080 m, 11.07.1997, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Adana, Amasya, Ankara, Balıkesir, Bursa, Diyarbakır, Erzincan, Hakkari, Iğdır, Kastamonu, Konya, Mardin, Muş, Nevşehir, Sakarya, Samsun, Siirt, Sinop, Uşak, Van, Yozgat (Kalkandelen, 1974; Lodos & Kalkandelen, 1987c; Kartal & Zeybekoğlu, 1991; Kartal & Zeybekoğlu-Dur, 2001; Demir, 2004). **Remarks:** Known to Kızılcahamam.

Psammotettix cephalotes (Herrich-Schäffer,1834)

Materials: Güvem, Demirciköy SW, 1250 m, 28.05.1997, 1 male, Işıkdağı, Aköz Köyü, 1150 m, 30.08.1997, 2 males, Güvem, 1100 m, 28.05.1997, 4 males. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Isparta, Konya, Erzincan, Van (Kalkandelen, 1974; Lodos & Kalkandelen, 1987c; Demir, 2004). **Remarks:** New for Kızılcahamam.

Psammotettix provincialis (Ribaut,1925)

Materials: Güvem, Demirciköy SW, 1250 m, 28.05.1997, 1 male, Sey Hamamı, 1080 m, 11.07.1997, 2 males, Işıkdağı, Karagöl, 1600 m, 11.07.1997, 1 male, Güvem, 1100 m, 28.05.1997, 1 male, Soğuksu, 1150 m, 25.05.1997, 1 male, 1740 m, 28.05.1997, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Adana, Ankara, Antalya, Bolu, Çankırı, Diyarbakır, Erzurum, İstanbul, İzmir, Kayseri, Konya, Nevşehir, Sakarya, Samsun, Van (Kalkandelen, 1974; Lodos & Kalkandelen, 1987c; Kartal & Zeybekoğlu, 1991). **Remarks:** New for Kızılcahamam.

Ebarrius cognatus (Fieber,1869)

Materials: Güvem, Keçikaya-Işıkdağı, 1200 m, 14.05.1997, 7 females 1 male, Soğuksu, 1200 m, 25.05.1997, 1 female, 1300 m, 07.06.1997, 2 females, 25.05.1997, 1 female 1 male, 1510 m, 28.05.1997, 1 female, 1740 m, 28.05.1997, 1 female 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Bolu, Çankırı, Erzincan, Kars, Niğde, Van (Kalkandelen, 1974; Lodos & Kalkandelen, 1987d). **Remarks:** Known to Kızılcahamam.

Diplocolenus bekiri Kalkandelen,1974

Materials: Güvem, Sey Hamamı, 1080 m, 11.07.1997, 12 females 17 males, Yenimahalle, 1250 m, 05.07.1997, 2 females 1 male, Yukarı Çanlı, 1400 m, 14.06.1997, 1 female, Aköz Köyü, 1150 m, 30.08.1997, 1 male, Yukarı Çanlı, 1400 m, 11.07.1997, 2 females, Güvem,

1100 m, 14.06.1997, 2 females 3 males, Soğuksu, 1300 m, 07.06.1997, 1 male. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Samsun (Kalkandelen, 1974; Lodos & Kalkandelen, 1987d; Kartal & Zeybekoğlu, 1991; Demir, 2004). **Remarks:** New for Kızılcahamam and endemic to Turkey.

Rhoananus hypochlorus (Fieber,1869)

Materials: Güvem, Aköz Köyü, 1150 m, 09.08.1997, 8 females. Belpınar, 1300 m, 05.07.1997, 3 females 1 male, Işıkdağı, Karagöl, 1600 m, 11.07.1997, 2 males, Yasin Köyü, 1400 m, 11.07.1997, 1 male, Yukarı Çanlı, 1400 m, 11.07.1997, 1 male, Soğuksu, 1300 m, 20.07.1997, 6 females. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Bitlis, Erzurum, Eskişehir, Iğdır, Kars, Van (Kalkandelen, 1974; Lodos & Kalkandelen, 1987d; Demir, 2004). **Remarks:** New for Kızılcahamam.

Mocuellus foxi Kalkandelen, 1972

Materials: Soğuksu, 1300 m, 20.07.1997, 1 female. It has been collected from weeds in *Pinus-Quercus* forest.
Distribution in Turkey: Ankara, Yozgat (Kalkandelen, 1974; Lodos & Kalkandelen, 1987d). **Remarks:** New for Kızılcahamam and endemic to Turkey.

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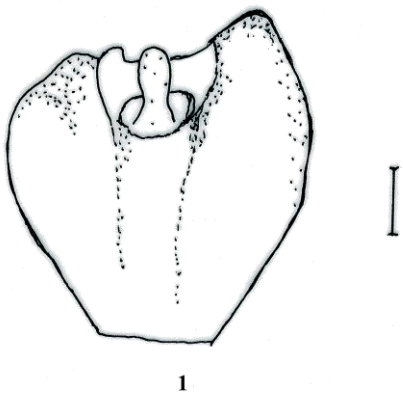

Fig. 1. Anal tube of male genitalia of *Pentastiridius nanus*. (Scale: 0.1 mm).

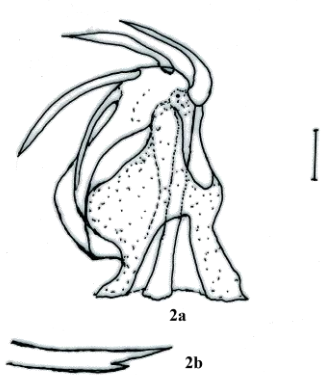

Fig. 2. Male genitalia of *Pentastiridius nanus*. 2a. Aedeagus latero-ventral view. 2b. Apex of flagellum. (Scale: 0.1 mm).

OBJECTIVE REPLACEMENT NAMES FOR *ERIOCERA* GUENÉE, 1852, *LOBOCHEILOS* HAMPSON, 1891 AND *HIMELLA* GROTE, 1874 (LEPIDOPTERA: NOCTUIDAE)

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ABSTRACT: Three junior homonyms were detected amongst the Lepidoptera and the following replacement names are proposed: *Neoeriocera* nom. nov. for *Eriocera* Guenée, 1852 (Noctuidae: Calpinae), *Latiphea* nom. nov. for *Lobocheilos* Hampson, 1891 (Noctuidae: Acontiinae) and *Kocakina* nom. nov. for *Himella* Grote, 1874 (Noctuidae: Hadeninae). Accordingly, new combinations are herein proposed for the species currently included in these genera: *Neoeriocera mitrula* (Guenée, 1852) comb. nov. for *Eriocera mitrula* Guenée, 1852; *Latiphea berresoides* (Hampson, 1893) comb. nov. for *Lobocheilos berresoides* Hampson, 1893; *Latiphea plana* (Swinhoe, 1890) comb. nov. for *Lobocheilos illattioides* Hampson, 1891 and *Kocakina fidelis* (Grote, 1874) comb. nov. for *Himella fidelis* Grote, 1874.

KEY WORDS: *Neoeriocera, Latiphea, Kocakina, Lobocheilos, Himella,* homonymy, replacement name.

The purpose of the present paper is to bring the taxonomy of noctuid moths into accordance with the requirements of the International Code of Zoological Nomenclature (1999). It considers homonymous genus group names of noctuid moths introduced from 1758 to 2004. In an effort to reduce the number of homonyms in Noctuidae (Lepidoptera), we systematically checked all generic names published. We found three moths genera whose names had been previously published for other taxa, making them junior homonyms. In accordance with the International Code of Zoological Nomenclature, we propose substitute names for these generic names.

Neoeriocera nom. nov., replacement name

Eriocera Guenée, 1852. Hist. nat. Ins., Spec. gén. Lép., 6, 401. (Lepidoptera: Noctuoidea: Noctuidae: Calpinae). Preoccupied by *Eriocera* Macquart, 1838. Mém. Soc. R. Sci. Lille, 1838 (2), 78. (Diptera: Nematocera: Tipulidae: Limoniinae: Limnophilini).

The generic name *Eriocera* Macquart, 1838 was proposed for a genus of the family Tipulidae (with the type species *Limnobia nigra* Wiedemann, 1828 by monotypy). It is still used as a valid generic name in Diptera. For the present, *Eriocera* Macquart, 1838 is a subgenus of the genus *Hexatoma* Latreille, 1809. It has five species from Australia and Indonesia (Oosterbroek, 1989, 2004). Later, the generic name

Eriocera Guenée, 1852 was introduced for a new moth genus (with the type species *Eriocera mitrula* Guenée, 1852 by monotypy) of the family Noctuidae. Also it is still used as a valid generic name in Lepidoptera (Poole, 1989; Pitkin & Jenkins, 2004). Thus, the genus *Eriocera* Guenée, 1852 is a junior homonym of the generic name *Eriocera* Macquart, 1838. According to Article 60 of the International Code of Zoological Nomenclature, we propose for the genus *Eriocera* Guenée, 1852 the new replacement name *Neoeriocera* **nom. nov.**

SYSTEMATIC ACCOUNTS

Order Lepidoptera
Superfamily Noctuoidea
Family Noctuidae
Subfamily Calpinae
Genus *Neoeriocera* **new replacement name**
For *Eriocera* Guenée, 1852, junior homonym of *Eriocera* Macquart, 1838.
Type species: *Eriocera mitrula* Guenée, 1852

Mandatory new combination:
Neoeriocera mitrula (Guenée, 1852) **comb. nov.** from *Eriocera*. Type locality unknown.

Eriocera Macquart, 1838 (Diptera) and *Eriocera* Guenée, 1852 (Lepidoptera) are recorded in Nomenclator Zoologicus vol. 2: 284 by Neave (1939).

Latiphea nom. nov., replacement name

Lobocheilos Hampson, 1891. Ill. Lep. Heteroc. Brit. Mus., 8, 98. (Lepidoptera: Noctuoidea: Noctuidae: Acontiinae). Preoccupied by *Lobocheilos* Bleeker, 1853. Natuurk. Tijdschr. Nederl. Ind., 5, 520. (Pisces: Actinopterygii: Cypriniformes: Cyprinidae).

The name *Lobocheilos* was initially introduced by Bleeker (1853) for a genus of the fish family Cyprinidae (with the type species *Labeo falcifer* Valenciennes, 1842). Genus and species appeared first as *Lobocheilus falcifer*, name only, in van Hasselt, 1823. For this reason, they are not available, both genus and species are nomina nuda. It was validly described by Bleeker, 1853 as *Lobocheilos*. Type designated by Bleeker, 1863. It is still used as a valid generic name in Cyprinidae. For the present, it has twenty two species (Eschmeyer, 2004). Subsequently, Hampson (1891) described a moth genus of the family Noctuidae (with the type species *Lobocheilos illattioides* Hampson, 1891 by monotypy) under the same generic name. Also it is still used as a valid generic name in Lepidoptera (Nye, 1975; Poole, 1989; Pitkin & Jenkins, 2004). Nye (1975) stated *Lobocheilos illattioides* is a junior subjective synonym of *Apphadana plana* Swinhoe, 1890. Poole (1989) included two species in the genus *Lobocheilos* Hampson, 1891. Thus, the genus *Lobocheilos* Hampson, 1891 is a junior homonym of the genus *Lobocheilos* Bleeker, 1853 (Pisces). According to Article 60 of the

International Code of Zoological Nomenclature, we propose for the genus *Lobocheilos* Hampson, 1891 the new replacement name *Latiphea* **nom. nov.**

SYSTEMATIC ACCOUNTS

Order Lepidoptera
Superfamily Noctuoidea
Family Noctuidae
Subfamily Acontiinae
Genus *Latiphea* **new replacement name**
For *Lobocheilos* Hampson, 1891, junior homonym of *Lobocheilos* Bleeker, 1853.
Type species: *Lobocheilos illattioides* Hampson, 1891
Gender: Feminine.
Etymology: The name is dedicated to Latife Özdikmen.

Mandatory new combinations:
Latiphea berresoides (Hampson, 1893) **comb. nov.** from *Lobocheilos*. Type from Ceylon: Pundaloya.
Latiphea plana (Swinhoe, 1890) **comb. nov.** from *Lobocheilos*. Type from Burma: Bassein.
[syn. ***illattioides*** Hampson, 1891]. Type from India: Nilgiri district.

Lobocheilos Bleeker, 1853 (Pisces) and *Lobocheilos* Hampson, 1891 (Lepidoptera) are recorded in Nomenclator Zoologicus vol. 2: 981 by Neave (1939).

Kocakina nom. nov., replacement name

Himella Grote, 1874. Proc. Acad. nat. Sci. Philadelphia, 1874, 200. (Lepidoptera: Noctuoidea: Noctuidae: Hadeninae). Preoccupied by *Himella* Dallas, 1852. List Specimens Hem. Ins. Coll. Brit. Mus., 2, 379, 414. (Hemiptera: Heteroptera: Coreoidea: Coreidae: Nematopodini) and *Himella* Adams, 1860. Proc. zool. Soc. London, 28, 203. (Mollusca: Bivalvia: Eulasiellibranchia: Myacea: Corbulidae).

The name *Himella* was first introduced by Dallas (1852) for bugs of the family Coreidae. It is still used as a valid generic name in Heteroptera (Brailovsky & Barrera, 1986). Later, Adams (1860) erected a bivalve genus of the family Corbulidae under the same generic name. It is not used as a valid name in Corbulidae. Since *Himella* Adams, 1860 is a junior homonym of *Himella* Dallas, 1852. For this reason, *Ostomya* Conrad, 1874 is used as a valid name over *Himella* Adams, 1860. For the present, *Himella* Adams, 1860; *Anticorbula* Dall, 1898; *Guianadesma* Morrison, 1943 and *Osttomya* Salisbury, 1948 are the junior names of *Ostomya* Conrad, 1874 (Vokes, 1980; Vaught, 1989). Subsequently, Grote (1874) described a genus of the moth family Noctuidae (with the type species *Himella fidelis* Grote, 1874 by original designation) under the same generic name. It is still used as a valid generic name in Lepidoptera (Poole, 1989; Pitkin & Jenkins, 2004). Poole (1989) included only one species in the genus *Himella* Grote, 1874 and he gave also *Taeniocampa intractata* Morrison, 1875 as a new

synomym of *Himella fidelis* Grote, 1874. Thus, the genus *Himella* Grote, 1874 is also a junior homonym of the genus *Himella* Dallas, 1852 (Heteroptera). According to Article 60 of the International Code of Zoological Nomenclature, we propose for the genus *Himella* Grote, 1874 the new replacement name *Kocakina* **nom. nov.**

SYSTEMATIC ACCOUNTS

Order Lepidoptera
Superfamily Noctuoidea
Family Noctuidae
Subfamily Hadeninae
Genus *Kocakina* **new replacement name**
For *Himella* Grote, 1874, junior homonym of *Himella* Dallas, 1852.
Type species: *Himella fidelis* Grote, 1874
Gender: Masculine.
Etymology: The name is dedicated to famous Turkish lepidopterologist Prof. Dr. Ahmet Ömer Koçak.

Mandatory new combination:
Kocakina fidelis (Grote, 1874) **comb. nov.** from *Himella*. Type from USA: New York, Albany.
[syn. ***intractata*** Morrison, 1875]. Type from USA: Missouri.

Himella Dallas, 1852 (Hemiptera), *Himella* Adams, 1860 (Mollusca) and *Himella* Grote, 1874 (Lepidoptera) are recorded in Nomenclator Zoologicus vol. 2: 658 by Neave (1939).

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A CONTRIBUTION TO THE KNOWLEDGE OF THE TURKISH WATER BEETLES FAUNA (COLEOPTERA)

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[**Darılmaz, M. & Kıyak, S.** 2006. A contribution to the knowledge of the Turkish water beetles fauna (Coleoptera). Munis Entomology & Zoology, 1 (1): 129-144]

ABSTRACT: A total of 28 species of water beetles were collected from 11 sampling stations in the semiarid central Turkey (Aksaray, Kırşehir and Konya provinces) between 2004 and 2005. They belong to the following families (species numbers in parentheses): Gyrinidae (4), Haliplidae (2), Noteridae (1), Dytiscidae (9), Helophoridae (4) and Hydrophilidae (8). One species of Dytiscidae [*Oreodytes septentrionalis* (Gyllenhal, 1826)] and two species of Hydrophilidae [*Enochrus* (*Enochrus*) *melanocephalus* (Olivier, 1792), *Enochrus* (*Lumetus*) *fuscipennis* (Thomson, 1884)] are reported from Turkey for the second time. Also ten new records are added for the Coleoptera fauna of the Central Anatolia region with this study. For some remarkable species phenologies, habitats and additional distributional notes are given.

KEY WORDS: Coleoptera, Gyrinidae, Haliplidae, Noteridae, Dytiscidae, Helophoridae, Hydrophilidae, contribution, Turkey.

Aquatic beetle fauna of Aksaray province and its surroundings are almost completely unkown. Only Gueorguiev (1981), Angus (1988), İncekara et al. (2003a), Schödl (1998) and Mart et al. (2001) published aquatic beetle data, altogether 7 species mentioned from this territory.

The aim of this study was to make a contribution to Turkish aquatic beetle fauna. In accordance literature data the list of Turkey aquatic Coleoptera contains 13 species of Gyrinidae, 18 species of Haliplidae, 3 species of Noteridae, 143 species of Dytiscidae, 50 species of Helophoridae and 63 species of Hydrophilidae (Franciscolo, 1979; Nilsson, 2003; Lenistea, 1978; Zaitsev, 1972; Bertrand, 1928; Zimmermann, 1920; Gueorguiev, 1968, 1981; Balfour - Browne, 1963; Nilsson & Holmen 1995; Shaverdo, 2002; Holmen, 1987; Brinck, 1978; Van Vondel, 991, 1992; Angus, 1984, 1985, 1988; Schödl, 1997; Gentili & Chiesa, 1975; Gentili, 1979, 2000; Nardi, 2001; Fery et al., 2001; Erman & Fery, 2000; Erman & Erman, 2002, 2004; İncekara et al., 2002, 2003a, 2003b, 2004a, 2004b, 2005a, 2005b, 2005c; Mart&Erman, 2001; Mart et al., 2003; Hebauer, 1994).

MATERIAL AND METHOD

This study is based on 152 specimens of aquatic beetles collected from Aksaray, Konya and Kırşehir provinces between 2004 and 2005. Specimens were collected from spring water area, with a sieve, ladle and net having a 1 mm mesh size. The beetles were killed with 70 % alcohol and in the laboratory were cleaned of clayey and muddy

substances on their surfaces with a small paintbrush. Aedeagophore was dissected under the stereomicroscope and left in 10 % KOH solution for about 1–2 hours. Materials have been deposited in the Gazi University Zoological Museum (=ZMGU), Ankara, Turkey. The examined materials of this study were identificated and collected by Ms. Sci. Biolog Mustafa Darılmaz.

Family Gyrinidae

Gyrinus distinctus Aubé, 1836

Materials: Aksaray: 3 males, 2 females, Sarıyahşi (Sarıbük Lake), 38°58'N 33°49'E, 1014 m, 27.06.2004; 1 female, Near the organized Industry region (Tekke-Acısu spring) 38°15'N 34°01'E, 970 m, 05.08.2004; Konya: 7 males, 8 females, Derbent (Dereağzı Lake) 38°01'N 32°01'E, 1521 m, 01.07.2004.

Phenology: June-August. **Habitat:** Coasts of lakes and slowly flowing streams; fresh and brackish water. **Distribution in Turkey:** Adana (Suluhan, Bolkar Mountains), Bursa (Uludağ Mountain, Karacabey), İzmir (Efes) (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Afghanistan, Armenia, Caucasia, China, Cyprus, Denmark, Egypt, England, Estonia, Finland, Hungary, Iran, Iraq, Israel, Latvia, Lebanon, Lithuania, Mongolia, Norway, Russia, Sudan, Sweden, Syria (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Remarks:** This species is new record for the Gyrinidae fauna of Central Anatolia Region.

Gyrinus suffriani Scriba, 1855

Materials: Konya: 6 males, 5 females, Derbent (Dereağzı Lake) 38°01'N 32°01'E, 1521 m, 01.07.2004.

Phenology: July. **Habitat**: Coast of lakes; fresh water. **Distribution in Turkey:** Localities are not clear (Brinck, 1978; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Albania, Austria, Bulgaria, Caucasus, Denmark, England, Finland, Germany, Greece, Hungary, Israel, Italy, Lebanon, Macedonia, Norway, Portugal, Romania, Russia, Slovenia, Spain, Sweden, Switzerland, Syria, Ukraine (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Remarks:** This species is new record for the Gyrinidae fauna of the Central Anatolia Region.

Gyrinus caspius Ménétriés, 1832

Materials: Aksaray: 1 male, 2 females, Near the organized industry region (Tekke-Acısu spring), 38°15'N 34°01'E, 970 m, 05.08.2004.

Phenology: August. **Habitat:** Slowly flowing streams; brackish water. **Distribution in Turkey:** Adana (Suluhan, Toros Mountains), Edirne (Çopköy, Ermenköy), Hatay (İskenderun) (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Algeria, Armenia, Caucasian, China, Denmark, England, Estonia, France, Germany, Iran, Iraq, Ireland, Israel, Italy, Lebanon, Latvia, Lithuania, Morocco, Netherlands, Norway, Poland, Russia, Sweden, Syria (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981;

Holmen, 1987; Zaitsev, 1972). **Remarks:** This species is new record for the Gyrinidae fauna of the Central Anatolia Region.

Aulonogyrus concinnus (Klug, 1834)

Materials: Aksaray: 2 males, 1 female, Near the organized industry region (Tekke-Acısu spring), 38º.15'N 34º.01'E, 970 m, 05.08.2004.
Phenology: August. **Habitat:** Slowly flowing streams; brackish water. **Distribution in Turkey:** Eskişehir, Adana (Toros Mountains), Hakkari (Şemdinli) (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Afghanistan, Albania, Algeria, Austria, Belgium, Bulgaria, China, Cyprus, France, Germany, Greece, Hungary, Iran, Iraq, Italy, Lebanon, Macedonia, Mongolia, Netherlands, Poland, Romania, Slovenia, Spain, Switzerland, Syria, Tibet, Ukraine (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Remarks:** This species is new record for the Gyrinidae fauna of the research area.

Family Haliplidae

Peltodytes caesus (Duftschmid, 1805)

Materials: Aksaray: 1 female, Uluırmak Regülâtörü, 38º.23'N 34º.03'E, 1038 m, 06.09.2004.
Phenology: September. **Habitat:** Puddles; fresh water. **Distribution in Turkey:** Adana (Ceyhan, Toros mountains), Afyon (Isaklı, Sivrihisar, Sultan dağ-Çay), Aydın, Balıkesir (Ayvalık), Bolu (Gerede), Isparta (Eğridir), İzmir (Selçuk), Konya (Beyşehir lake) (Franciscolo, 1979; Gueorguiev, 1968, 1981; Holmen, 1987; Van Vondel, 1992; Lenistea, 1978). **Distribution in the world:** Afghanistan, Belarus, Denmark, England, France, Germany, Greece, Hungary, Iran, Iraq, Israel, Italy, Kazakhstan, Lithuania, Morocco, Poland, Portugal, Russia, Spain, Sweden, Syria, Netherlands, Ukraine (Franciscolo, 1979; Zaitsev, 1972; Gueorguiev, 1968, 1981; Holmen, 1987; Van Vondel, 1992; Ribera et.al., 2003; Lenistea, 1978; Lundberg & Gustafsson, 1995). **Remarks:** This species is new record for the Haliplidae fauna of the research area.

Haliplus variegatus Sturm, 1834

Materials: Konya: 1 male, 1 female, Cihanbeyli (Karaküllük village-Acıgöl Lake), 38º31'N 33º12'E, 932 m, 01.07.2004.
Phenology: July. **Habitat:** Shallow water pools with gravel bottoms and sparse vegetation; brackish water. **Distribution in Turkey:** Adana (Ceyhan, Toros Mountains), Bilecik, Bolu, Isparta (Eğridir), Sakarya (Karasu) (Holmen, 1987; Franciscola, 1979; Lenistea, 1978; Gueorguiev, 1981; Van Vondel, 1991). **Distribution in the world:** Afghanistan, Algeria, Belarus, Cyprus, Denmark, England, Estonia, Finland, France, Germany, Greece, Hungary, Iran, Iraq, Ireland, Israel, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Russia, Spain, Sweden, Syria (Holmen, 1987; Franciscola, 1979; Lenistea, 1978; Gueorguiev, 1981; Van Vondel, 1991). **Remarks:** This species is new record for the Haliplidae fauna of the Central Anatolia Region.

Family Noteridae

Noterus clavicornis (De Geer, 1774)

Materials: Aksaray: 1 male, Bağlı village (Near at the water pump), 38º.16'.30"N 34º.03'.62"E, 968 m, 20.06.2004; 4 males, 5 females, Gülağaç (Gülyurt small town-Kayı lake), 38º.24'.26"N 34º.22'.63"E, 1193 m, 19.06.2005.

Phenology: June. **Habitat:** Coasts of lakes with vegetation; fresh water. **Distribution in Turkey:** Ankara (Mogan lake), Balıkesir (Ayvalık), Bilecik, Bolu (Gerede, Abant lake), Isparta (Gölçuk-Bozdağ, Eğridir), İzmir (Menemen, Selçuk, Efes), Kayseri (Erciyes Mountain), Konya (Beyşehir lake), Manisa (Manisa mountain-Marmara lake) (Gueorguiev, 1968, 1981; Balfour - Browne, 1963; Holmen, 1987; Nilsson, 2003; Lenistea, 1978; Zaitsev, 1972). **Distribution in the world:** Albania, Armenia, Austria, Azerbaijan, Belgium, Bosnia Herzegovina, Bulgaria, Belarus, China (Heilongjiang, Shaanxi, Xinjiang), Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Georgia, Great Britain, Greece, Hungary, Iran, Iraq, Ireland, Israel, Italy, Jordan, Kashmir, Kazakhstan, Latvia, Lebanon, Liechtenstein, Lithuania, Luxembourg, Macedonia, Moldavia, Mongolia, Netherlands, Norway, Poland, Portugal, Russia (Central European Territory, East Siberia, South European Territory, West Siberia), Slovakia, Slovenia, Spain, Sweden, Switzerland, Syria, Turkmenistan, Ukraine, Yugoslavia (Gueorguiev, 1968, 1981; Balfour - Browne, 1963; Holmen, 1987; Nilsson, 2003; Lenistea, 1978; Zaitsev, 1972; Toledo, 2004; Zimmermann, 1920). **Remarks:** This species is new record for the Noteridae fauna of the research area.

Family Dytiscidae

Hydroglyphus geminus (Fabricius, 1792)

Materials: Aksaray: 4 males, 1 female, Uluırmak Regulator, 38º.23'N 34º.03'E, 1038 m, 06.09.2004.

Phenology: September. **Habitat:** Puddles; fresh water. **Distribution in Turkey:** Adana (Toros Mountains-Yeniköy, Ceyhan), Ankara (Mogan Lake), Antalya (Finike), Aydın, Balıkesir (Ayvalık), Bolu (Gerede), Bursa (İnegöl), Edirne, Gümüşhane (Kelkit), İçel (Erdemli), İzmir (Menemen), Kastamonu (Tosya), Kayseri (Kızılören), Kilis, Konya (Beyşehir Lake, Sivrihisar, Eğridir), Manisa (Manisa Mountain-Marmara Lake), Nevşehir (Acı Göl), Tuz Gölü, Trabzon (Akçaabat), (Franciscolo, 1979; Nilsson, 2003; Gueorguiev, 1981; Nilsson & Holmen, 1995). **Distribution in the world:** Afghanistan, Albania, Algeria, Armenia, Austria, Azerbaijan, Belgium, Bosnia Herzegovina, Belarus, Bulgaria, China, Croatia, Cyprus, Denmark, Egypt, Estonia, Finland, France, Georgia, Germany, Great Britain, Greece, Hungary, Iran, Iraq, Israel, Italy, Kazakhstan, Kirghizistan, Korea, Latvia, Lebanon, Libya, Liechtenstein, Lithuania, Luxembourg, Macedonia, Moldavia, Mongolia, Morocco, Netherlands, Norway, Pakistan, Poland, Portugal, Rumania, Russia, Saudi Arabia, Slovakia, Slovenia, Spain, Sudan, Sweden, Switzerland, Syria, Tajikistan, Tunisia, Turkmenistan, Ukraine, Uzbekistan, Yugoslavia (Franciscolo, 1979; Nilsson, 2003;

Gueorguiev, 1981; Nilsson & Holmen, 1995; Zaitsev, 1972; Zimmermann, 1920; Telnov & Kalniņš, 2003; Lundberg & Gustafsson, 1995).

Hydroporus pubescens Gyllenhal, 1808

Materials: Aksaray: 8 males, 1 female, Bağlı village (Near at the water pump), 38º.16'.30"N 34º.03'.62"E, 968 m, 23.05.2004.

Phenology: May. **Habitat:** Slowly flowing water canals with vegetation; fresh water. **Distribution in Turkey:** Adana (Bolkar mountains), Antalya (Baba Dağ, Bozburun Dağ), Bilecik (Karaköy), Bursa, Erzincan (Keşiş mountains), İzmir (Adatepe, Efes), Manisa (Manisa Dağ), Niğde (Ulukışla), Ordu (Akkuş), Sakarya (Ormanköy), Trabzon (Manastır) (Franciscolo, 1979; Nilsson, 2003; Lenistea, 1978; Bertrand, 1928; Nilsson et al., 1995). **Distribution in the world:** Albania, Algeria, Austria, Azerbaijan, Belarus, Belgium, Bosnia Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Georgia, Germany, Great Britain, Greece, Hungary, Iran, Ireland, Israel, Italy, Jordan, Latvia, Lebanon, Luxembourg, Macedonia, Moldavia, Morocco, Netherlands, Norway, Poland, Portugal, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Syria, Tunisia, Ukraine, Yugoslavia (Franciscolo, 1979; Nilsson, 2003; Lenistea, 1978; Bertrand, 1928; Nilsson et al., 1995; Zimmermann, 1920). **Remarks:** This species is a new record for the Dytiscidae fauna of the research area.

Oreodytes septentrionalis (Gyllenhal, 1826)

Materials: Konya: 1 female, Cihanbeyli (Karaküllük Village-Acıgöl Lake), 38º31'N 33º12'E, 932 m, 01.07.2004.

Phenology: July. **Habitat:** Shallow water pools with gravel bottoms and sparse vegetation; brackish water. **Distribution in Turkey:** Erzurum (Teke Brook) (Erman et al., 2002). **Distribution in the world:** Austria, Czech Republic, England, Finland, France, Germany, Ireland, Italy, Mongolia, Netherlands, Norway, Poland, Portugal, Russia, Siberia, Slovenia, Spain, Sweden, Switzerland (Zaitsev, 1972; Franciscolo, 1979; Nilsson, 2003; Lenistea, 1978; Erman et al., 2002). **Remarks:** The first record of *Oreodytes septentrionalis* was given by Erman et al. (2002) in Turkey. In this study the second record is given for Turkey. Also this species is new record for the Dytiscidae fauna of the Central Anatolia Region.

Scarodytes halensis halensis (Fabricus, 1787)

Materials: Aksaray: 1 male, Uluırmak (At the Regulator exit to 2 km), 38º.22'N 34º.03'E, 1004 m, 17.05.2004; 3 males Uluırmak Regulator, 38º.23'N 34º.03'E, 1038 m, 06.09.2004.

Phenology: May, september. **Habitat**: Slowly flowing streams and puddles; fresh water. **Distribution in Turkey:** Afyon (Başköy), Ankara (Bala), Bursa (İnegöl), Eskişehir (Sivrihisar), Gümüşhane (Köse), Isparta (Eğridir), İçel, İzmir, Kayseri (Erciyes mountain), Van

(Van Gölü), Yozgat (Akdağmadeni) (Gueorguiev, 1968, 1981; Franciscolo, 1979; Lenistea, 1978; Nilsson & Holmen, 1995). **Distribution in the world:** Albania, Algeria, Armenia, Austria, Belgium, Bosnia Herzegovina, Bulgaria, Belarus, China, Croatia, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Georgia, Germany, Great Britain, Greece, Hungary, Iran, Israel, Italy, Latvia, Lebanon, Lithuania, Luxembourg, Macedonia, Moldavia, Morocco, Netherlands, Norway, Poland, Portugal, Rumania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Syria, Tunisia, Ukraine, Yugoslavia (Gueorguiev, 1968, 1981; Franciscolo, 1979; Lenistea, 1978; Nilsson & Holmen, 1995; Nilsson, 2003; Zaitsev, 1972; Zimmermann, 1920; Telnov & Kalniņš, 2003).

Agabus biguttatus (Oliver, 1795)

Materials: Aksaray: 3 males, 1 female, Uluırmak Regulator, 38º.23'N 34º.03'E, 1038 m, 12.07.2004; 1 female, same locality, 06.09.2004.

Phenology: July, September. **Habitat:** Puddles; fresh water. **Distribution in Turkey:** Adana (Bolkar mountains, Toros Mountains, Bürücek, Yeniköy, Külek Boğazı), Ankara (Beynam), Bilecik (Karaköy), Bursa, Çankırı, Elazığ (Karaboğa mountain), Gaziantep (Nurdağ), Isparta (Salur), İzmir (Yamanlar Mountain, Efes), Kastamonu, Sakarya (Sapanca), Trabzon (Horos Mountains), Yozgat (Gueorguiev, 1968, 1981; Franciscolo, 1979; Nilsson, 2003; Lenistea, 1978; Bertrand, 1928; Zimmermann, 1920). **Distribution in the world:** Afghanistan, Albania, Algeria, Armenia, Austria, Azerbaijan, Belgium, Bosnia Herzegovina, Bulgaria, Belarus, China, Croatia, Czech Republic, Egypt, France, Georgia, Germany, Great Britain, Greece, Hungary, Iran, Iraq, Ireland, Israel, Italy, Jordan, Kirghizistan, Lebanon, Libya, Liechtenstein, Luxembourg, Macedonia, Morocco, Netherlands, Pakistan, Poland, Portugal, Rumania, Russia, Saudi Arabia, Slovakia, Slovenia, Spain, Switzerland, Syria, Tunisia, Turkmenistan, Ukraine, Uzbekistan, Yugoslavia (Gueorguiev, 1968, 1981; Franciscolo, 1979; Nilsson, 2003; Lenistea, 1978; Zimmermann, 1920). **Remarks:** This species is a new record for the Dytiscidae fauna of the research area.

Colymbetes fuscus (Linnaeus, 1758)

Materials: Aksaray: 1 female, Near at the organized industry region (Tekke-Acısu spring), 38º.15'N 34º.01'E, 970 m, 20.06.2004.

Phenology: June. **Habitat:** Slowly flowing streams; brackish water. **Distribution in Turkey:** Afyon (Çay, Başköy), Erzurum (Ilıca), İzmir (Ödemiş-Bozdağ), Nevşehir (Acıgöl) (Franciscolo, 1979; Nilsson, 2003; Zaitsev, 1972; Bertrand, 1928; Zimmermann, 1920; Gueorguiev, 1981; Nilsson & Holmen, 1995). **Distribution in the world:** Algeria, Armenia, Austria, Belgium, Bosnia Herzegovina, Bulgaria, Belarus, China, Croatia, Cyprus, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Iran, Ireland, Israel, Italy, Kazakhstan, Latvia, Lebanon, Liechtenstein,

Lithuania, Luxembourg, Macedonia, Malta, Morocco, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Syria, Tunisia, Ukraine, Yugoslavia (Franciscolo, 1979; Nilsson, 2003; Zaitsev, 1972; Bertrand, 1928; Zimmermann, 1920; Gueorguiev, 1981; Nilsson & Holmen, 1995; Lundberg & Gustafsson, 1995).

Rhantus suturalis (MacLeay, 1825)

Materials: Aksaray: 6 males, 5 females, Uluırmak Regulator, 38º.23'N 34º.03'E, 1038 m, 12.07.2004; 3 males 1 female, same locality, 06.09.2004.

Phenology: July, september. **Habitat:** Puddles; fresh water. **Distribution in Turkey:** Konya, Manisa (Manisa Dağ-Marmara gölü), Trabzon (Nilsson, 2003; Gueorguiev, 1981; Nilsson & Holmen, 1995). **Distribution in the world:** Afghanistan, Albania, Algeria, Armenia, Austria, Azerbaijan, Belgium, Bosnia Herzegovina, Bulgaria, Belarus, China, Croatia, Cyprus, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Georgia, Germany, Great Britain, Greece, Hungary, Iran, Iraq, Ireland, Israel, Italy, Japon, Jordan, Kirghizistan, Korea, Kuwait, Latvia, Lebanon, Liechtenstein, Lithuania, Luxembourg, Macedonia, Madagascar, Malta, Mongolia, Morocco, Nepal, Netherlands, New Zealand, Norway, Pakistan, Poland, Portugal, Russia, Saudi Arabia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, Tunisia, Turkmenistan, Ukraine, Uzbekistan, Yugoslavia (Franciscolo, 1979; Nilsson, 2003; Lenistea, 1978; Zaitsev, 1972; Zimmermann, 1920; Nilsson & Holmen, 1995; Lundberg & Gustafsson, 1995). **Remarks:** This species is a new record for the Dytiscidae fauna of the research area.

Laccophilus hyalinus (DeGeer, 1774)

Materials: Kırşehir: 1 female, Kızılırmak (Kesikköprü), 38º.57'N 34º.10'E, 872 m, 27.06.2004.

Phenology: June. **Habitat:** Standing and slow running water with rich vegetation; fresh water. **Distribution in Turkey:** Adana (Toros Mountains-Suluhan, Bolkar Mountains), Afyon (Başköy), Aydın, Bolu (Abant Lake), Isparta (Eğridir), İzmir, Kilis, Manisa (Boz Mountain-Gölçuk, Manisa Mountain-Marmara lake), Sakarya (Karasu) (Zaitsev, 1972; Franciscolo, 1979; Nilsson, 2003; Lenistea, 1978; Zimmermann, 1920; Gueorguiev, 1981; Nilsson & Holmen, 1995). **Distribution in the world:** Algeria, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia Herzegovina, Bulgaria, Cyprus, Czech Republic, Denmark, England, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iran, Iraq, Israel, Italy, Jordan, Latvia, Lebanon, Lithuania, Luxembourg, Macedonia, Malta, Moldova, Morocco, Netherlands, Norway, Poland, Portugal, Russia, Slovakia, Slovenia, Syria, Sweden, Switzerland, Tunisia, Turkmenistan, Ukraine, Yugoslavia (Zaitsev, 1972; Franciscolo, 1979; Nilsson, 2003; Lenistea, 1978; Zimmermann, 1920; Gueorguiev, 1981; Nilsson & Holmen, 1995). **Remarks:** This

species is a new record for the Dytiscidae fauna of the Central Anatolia Region.

Laccophilus minutus (Linnaeus, 1758)

Materials: Aksaray: 1 male, Uluırmak Regulator, 38º.23'N 34º.03'E, 1038 m, 06.09.2004.

Phenology: September. **Habitat:** Puddles; fresh water. **Distribution in Turkey:** Adana (Toros Mountains), Afyon (Isakli), Ankara (Mogan Lake), Aydın, Balıkesir (Ayvalık), Bolu (Gerede), Bursa (İnegöl), Isparta (Eğridir), İzmir (Menemen), Kayseri (Kızılören), Manisa (Bozdağ-Gülçul, Manisa Dağ-Marmara Lake), Sinop (Burun), Sivas, Trabzon (Akçaabat) (Franciscolo, 1979; Nilsson, 2003; Lenistea, 1978; Zaitsev, 1972; Gueorguiev, 1981; Nilsson & Holmen, 1995). **Distribution in the world:** Algeria, Armenia, Austria, Azerbaijan, Belgium, Bosnia Herzegovina, Bulgaria, Belarus, China, Croatia, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Georgia, Germany, Great Britain, Greece, Hungary, Iran, Iraq, Ireland, Israel, Italy, Japon, Jordan, Kazakhstan, Kirghizistan, Latvia, Libya, Lithuania, Luxembourg, Macedonia, Malta, Moldova, Mongolia, Morocco, Netherlands, Norway, Pakistan, Poland, Portugal, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Syria, Tunisia, Turkmenistan, Ukraine, Yugoslavia (Franciscolo, 1979; Nilsson, 2003; Lenistea, 1978; Zaitsev, 1972; Gueorguiev, 1981; Nilsson & Holmen, 1995). **Remarks:** This species is a new record for the Dytiscidae fauna of the research area.

Family Helophoridae

Helophorus aquaticus (Linnaeus, 1758)

Materials: Aksaray: 1 male, Uluırmak (At the Regulator exit to 2 km), 38º.22'N 34º.03'E, 1004 m, 17.05.2004; 1 male, Near at the organized industry region (Tekke-Acısu spring), 38º.15'N 34º.01'E, 970 m, 23.05.2004.

Phenology: May. **Habitat:** Slowly flowing streams; fresh and brackish water. **Distribution in Turkey:** Ankara (Soğuksu National Park), Bingöl, Bitlis, Bolu (Yeniçağ), Bursa, Diyarbakır (Karacadağ), Erzurum (Tortum), Eskişehir, Hakkâri (Şemdinli), Isparta (Eğridir), İstanbul (Belgrat Forests, Kilyos), İzmir, Kars (Karakurt, Digor), Kastamonu (Ağlı), Kırklareli (Demirköy), Mardin (Derik, Mardin Mountains), Muş, Sinop, Şırnak, Van (Başkale, Güzeldere, Tatvan) (Lenistea, 1978; Hansen, 1987; Angus, 1988, 1992; Mart et al., 2001). **Distribution in the world:** Denmark, England, Estonia, Finland, France, Germany, Hungary, Iran, Israel, Italy, Latvia, Lithuania, Netherlands, Norway, Russia, Spain, Switzerland (Lenistea, 1978; Ribera et al., 2003; Hansen, 1987; Angus, 1992; Mart et al., 2001; Angus, 1988; Csabai, 2000; Lundberg & Gustafsson, 1995). **Remarks:** This species is a new record for the Helophoridae fauna of the research area.

Helophorus micans Falderman, 1835

Materials: Aksaray: 1 female, Bağlı village (Near at the water pump), 38º.16'N 34º.03'E, 968 m, 23.05.2004.

Phenology: May. **Habitat:** Coasts of pond with vegetation; fresh water. **Distribution in Turkey:** Balıkesir (Ayvalık), Burdur (Çerçin), Diyarbakır (Karacadağ), Hatay (Islahiye), İzmir, Tuz Gölü, Van Gölü (Angus, 1988, 1992; Mart et al., 2001). **Distribution in the world:** Afghanistan, Austria, Bulgaria, Cyprus, Hungary, Iran, Israel, Pakistan, Russia, Uzbekistan, Tajikistan, Syria (Lenistea, 1978; Hebauer, 1994; Angus, 1988, 1992; Mart et al., 2001; Csabai, 2000).

Helophorus brevipalipis Bedel, 1881

Materials: Aksaray: 1 male, Near at the organized industry region (Tekke-Acısu spring), 38º.15'N 34º.01'E, 970 m, 23.05.2004; 1 male, 2 females, Bağlı village (Kanlıca location, pond) 38º.16'N 34 º.03'E, 975 m, 23.05.2004; 1 female, Gülağaç (between Aksaray and Gülağaç, pond) 38º.23'N 34º.07'E, 1171 m, 26.06.2004.

Phenology: May, June. **Habitat:** Coasts of pond with vegetation; fresh and brackish water. **Distribution in Turkey:** Ankara (Mogan Lake), Antalya (Topraktepe), Artvin (Fındıklı), Bursa (Kaynarca), Diyarbakır (Karacadağ), İstanbul (Altınşehir, Halkalı, Emirgan, Kilyos, Ömerli, Şile-Ağva), İzmir (Bergama), Kahramanmaraş, Kırklareli (Demirköy), Muğla (Marmaris), Niğde (Ulukışla), Samsun (Çarşamba), Sinop, Tuz Gölü, Van (Van Gölü, Başkale, Güzeldere) (Hansen, 1987; Hebauer, 1994; Angus, 1985, 1992; Mart et al., 2001; İncekara et al., 2005a). **Distribution in the world:** America, Austria, Azerbaijan, Belarus, Bulgaria, Cyprus, Denmark, England, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iran, Iraq, Ireland, Israel, Italy, Latvia, Lebanon, Lithuania, Mongolia, Morocco, Netherlands, Norway, Poland, Russia, Spain, Sweden, Switzerland, Syria, Tunisia, Yugoslavia (Ribera et al., 2003; Hansen, 1987; Hebauer, 1994; Angus, 1988, 1992; Mart et al., 2001; Smetana, 1985; İncekara et al., 2005a; Csabai, 2000; Telnov & Kalniņš, 2003; Lundberg & Gustafsson, 1995).

Helophorus longitarsis Wollaston, 1864

Materials: Aksaray: 2 males, 1 female, Mamasun Dam, 38º.24'N 34º.07'E, 1099 m, 20.06.2004.

Phenology: June. **Habitat:** Coast of dam lakes; fresh water. **Distribution in Turkey:** Ankara (Mogan lake), Burdur, Erzincan (Lenistea, 1978; Mart et al., 2001; İncekara et al., 2004a; Angus, 1988). **Distribution in the world:** Austria, Canary Islands, England, France, Germany, Greece, Hungary, Israel, Italy, Kazakhstan, Morocco, Netherlands, Poland, Russia, Spain, Syria, Tunisia, Ukraine, Yugoslavia (Lenistea, 1978; Mart et al., 2001; İncekara et al., 2004a; Angus, 1988, 1992; Ribera et al., 2003; Hansen, 1987; Hebauer, 1994; Csabai, 2000). **Remarks:** This species is a new record for the Helophoridae fauna of the research area.

Family Hydrophilidae

Laccobius simulatrix d'Orchymont, 1932

Materials: Aksaray: 1 male, 1 female, Bağlı village (Near at the water pump), 38º.16'N 34º.03'E, 968 m, 23.05.2004;1 male, Near at the organized industry region (Tekke-Acısu spring) 38º.15'N 34º.01'E, 970 m, 05.08.2004; Kırşehir: 2 males, 1 female, Kızılırmak (Kesikköprü), 38º.57'N 34º.10'E, 872 m, 27.06.2004.

Phenology: May-August. **Habitat:** Coasts of ponds and standing water with rich vegetation; fresh and brackish water. **Distribution in Turkey:** Ağrı (Doğubeyazıt), Ankara (Kızılcahamam), Antalya (Finike, Toros Mountains, Gazipaşa), Artvin (Şavşat, Borçka), Aydın, Balıkesir (Ayvalık), Bayburt, Bitlis (Hizan-Tatvan), Bolu (Abant Lake, Mudurnu), Bursa (Çanak), Çanakkale (Sarımsaklı, Ezine, Truva), Çorum (Sungurlu, Delice, Boğazköy), Denizli (Dalaman, Acıpayam), Edirne (Keşan), Erzincan (Sakaltutan pass), Erzurum (Aşkale, Çoruh river), Hakkâri (Yüksekova), Isparta (Eğridir), İçel (Anamur), İstanbul (Kâğıthane), İzmir (Bozdağ, Menemen, Zeytindağ, Midilli, Armutlu, Seferihisar), Kahramanmaraş (Elbistan), Kars (Aras-Kağızman, Digor, Horasan, Tuzluca), Kayseri (Kızılören), Kırklareli, Manisa (Alaşehir, Marmara Göl, Çerkes), Muğla (Karaçulha, Zine), Niğde, Osmaniye, Samsun (Vezirköprü), Sivas (Akdağmadeni), Trabzon, Van (Süphan Dağ), (İncekara et al., 2003a; Gentili, 2000; Gentili & Chiesa, 1975). **Distribution in the world:** Afghanistan, Albania, Austria, Azerbaijan, Bosnia Herzegovina, Bulgaria, Czech Republic, England, France, Greece, Hungary, Iran, Italy, Poland, Romania, Russia, Yugoslavia (Lenistea, 1978; Ribera et al., 2003; Gentili & Chiesa, 1975.; Gentili, 1979; Csabai, 2000). **Remarks:** This species is a new record for the Helophoridae fauna of the research area.

Laccobius syriacus Guillebeau, 1896

Materials: Aksaray: 1 female, Gülağaç (Gülyurt small town-Kayı lake), 38º.24'N 34º.22'E, 1193 m, 19.06.2005.

Phenology: June. **Habitat:** Coast of lakes with rich vegetation; fresh water. **Distribution in Turkey:** Adana (Ceyhan), Afyon (Dazkırı), Ankara (Gölbaşı), Antalya (Toros Mountains, Manavgat), Artvin (Karagöl), Aydın (Köşk), Bayburt, Bitlis (Tatvan), Bolu (Abant Lake, Gerede), Burdur (Burdur Lake), Çorum (Boğazkale), Denizli (Dalaman pass, Acıpayam), Diyarbakır (Bismil, Karacadağ), Edirne, Erzincan (Sakaltutan pass), Erzurum (Tortum lake, Oltu, Palandöken mountains, Pazaryolu), Gaziantep (Kilis, Fevzipaşa), Gümüşhane, Hatay (Islahiye, Kırıkhan), Isparta (Eğridir Lake), İçel (Erdemli, Anamur, Silifke), İzmir (Bozdağ), Kars (Digor, Horasan, Kağızman), Kastamonu (İnebolu), Kayseri (Kızılören, İncesu), Konya (Karahasan pass, Ermenek-Hadim), Maraş (Ekinözü, Elbistan), Mardin, Muğla (Kayra, Babadağ), Ordu (Harçbeli pass, Mesudiye), Osmaniye, Rize (Ayder, Çamlıhemşin), Samsun (Çarşamba, Vezirköprü), Sinop (Helaldı, Dıranaz), Trabzon (Sürmene), Tuz Gölü, Urfa (Kaynak), Van (Başkale, Gevaş, Van Gölü, Yüksekova) (Lenistea, 1978; İncekara et al., 2003a; Mart et al., 2003; Gentili, 1979, 2000; Gentili & Chiesa, 1975). **Distribution in the**

world: Afghanistan, Austria, Azerbaijan, Bosnia Herzegovina, Bulgaria, Czech Republic, Egypt, Greece, Hungary, India, Iraq, Iran, Israel, Kazakhstan, Lebanon, Romania, Russia, Syria, Tajikistan, Turkmenistan, Uzbekistan, Yugoslavia (Lenistea, 1978; Gentili, 1979, 2000; Hebauer, 1994; Gentili & Chiesa, 1975; Shatrovskiy, 1984; Csabai, 2000).

Berosus spinosus (Steven, 1808)

Materials: Aksaray: 1 male, Sarıyahşi (Boğazköy lake), 38º.56'N 33 º.52'E, 973 m, 21.05.2004; 3 males, 2 females, Evren (Hirfanlı dam), 39º.02'N 33º.48'E, 1002 m, 27.06.2004; Kırşehir: 5 males, 7 females, Kızılırmak (Kesikköprü), 38º.57'N 34º.10'E, 872 m, 27.06.2004.

Phenology: May-June. **Habitat:** Coast of lakes with rich vegetation and standing wate; fresh water. **Distribution in Turkey:** Adana, Afyon, Ankara, Antalya, Aydın, Edirne, Elazığ, İçel (Erdemli), Kars, Malatya, Van (İncekara et al., 2003a; Cuppen et al., 1998). **Distribution in the world:** Afghanistan, Albania, Austria, Azerbaijan, Bulgaria, China, Croatia, Denmark, Estonia, Finland, Georgia, Germany, Greece, Hungary, Iran, Italy, Kazakhstan, Kirghizistan, Macedonia, Mongolia, Netherlands, Norway, Poland, Romania, Russia, Slovakia, Sweden, Syria, Tajikistan, Turkmenistan, Ukraine, Uzbekistan (Ribera et al., 2003; Hansen, 1987; Cuppen & Van Maanen, 1998; Hebauer, 1994; Csabai, 2000). **Remarks:** This species is a new record for the Hydrophilidae fauna of the research area.

Enochrus melanocephalus (Olivier, 1792)

Materials: Aksaray: 1 female, Gülağaç (Gülyurt village-Kayı Lake), 38º24'N 34º22E, 1193 m, 19.06.2005.

Phenology: June. **Habitat:** Coast of lakes with rich vegtation; fresh water. **Distribution in Turkey:** Erzincan (Mollaköy) (İncekara et al., 2005c). **Distribution in the world:** Algeria, Austria, Belarus, Bosnia Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, England, Estonia, Finland, France, Germany, Hungary, Ireland, Israel, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal, Russia, Spain, Sweden, Switzerland, Yugoslavia (Lenistea, 1978; Ribera et al., 2003; Hansen, 1987; İncekara et al., 2005c; Hebauer, 1994; Csabai, 2000; Telnov & Kalniņš, 2003; Lundberg & Gustafsson, 1995). **Remarks:** The first record of *Enochrus melanocephalus* was given by İncekara et al. (2005c) in Turkey. In this study the second record is given for Turkey. Also this species is a new record for the Hydrophilidae fauna of the Central Anatolia Region.

Enochrus bicolor (Fabricius, 1792)

Materials: Kırşehir: 1 male, 1 female, Kızılırmak (Kesikköprü), 38º.57'N 34º.10'E, 872 m, 27.06.2004; Aksaray: 4 males, 4 females, Gülağaç (Gülyurt small town-Kayı lake), 38º.24'N 34º.22'E, 1193 m, 19.06.2005.

Phenology: June. **Habitat:** Coast of lakes with rich vegetation and standing water; fresh water. **Distribution in Turkey:** Ankara (Mogan lake), Antalya (Side-Manavgat), Erzincan, İçel (Çamlıyayla), Kars

(Kuyucuk lake), Van (Van Gölü) (Lenistea, 1978; Hansen, 1987; İncekara et al., 2003a; Schödl, 1998). **Distribution in the world:** Algeria, Austria, Azerbaijan, Belarus, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Egypt, England, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Kazakhstan, Latvia, Lithuania, Mexico, Malta, Mongolia, Morocco, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovenia, Spain, Sweden, Tunisia, Turkmenistan, Ukraine, Uzbekistan, Yugoslavia (Lenistea, 1978; Hansen, 1987; Schödl, 1998; Ribera et al., 2003; Hebauer, 1994; Csabai, 2000; Telnov & Kalniņš, 2003; Lundberg & Gustafsson, 1995). **Remarks:** This species is a new record for the Hydrophilidae fauna of the research area.

Enochrus fuscipennis (Thomson, 1884)

Materials: Aksaray: 1 female, Near at the organized Industry region (Tekke-Acısu spring), 38°15'N 34°01'E, 970 m, 23.05.2004; 4 males, 4 females, Bağlı Village (near the Kanlıca), 38°16'N 34°03'E, 975 m, 23.05.2004.

Phenology: May. **Habitat:** Slowly flowing streams and marshes with high vegetation; fresh and brackish water. **Distribution in Turkey:** Artvin, Erzincan, Erzurum, Rize (İncekara et al., 2005c). **Distribution in the world:** Austria, Azerbaijan, Bosnia Herzegovina, Bulgaria, Denmark, England, Finland, France, Germany, Hungary, Iran, Ireland, Italy, Latvia, Netherlands, Norway, Poland, Portugal, Russia, Slovenia, Spain, Sweden (Ribera et al., 2003; Hansen, 1987; İncekara et al., 2005c; Hebauer, 1994; Csabai, 2000; Lundberg & Gustafsson, 1995). **Remarks:** The first record of *Enochrus fuscipennis* in Turkey was given by İncekara et al. (2005c). In this study the second record is given for Turkey. Also this species is a new record for the Hydrophilidae fauna of the Central Anatolia Region.

Enochrus segmentinotatus (Kuwert, 1888)

Materials: Kırşehir: 1 male, 1 female, Kızılırmak (Kesikköprü), 38°.57'N 34°.10'E, 872 m, 27.06.2004.

Phenology: June. **Habitat:** Standing and slow running water with rich vegetation; fresh water. **Distribution in Turkey:** Adana (Tuzla, Ceyhan), Aydın, Çanakkale, Hakkâri (Yüksekova), İçel (Erdemli, Silifke), İzmir (Selçuk), Konya, Muğla, Tuz Gölü (İncekara et al., 2003a; Schödl, 1998). **Distribution in the world:** Albania, Algeria, Bulgaria, Croatia, Cyprus, Egypt, France, Gambia, Greece, Iran, Iraq, Israel, Italy, Jordan, Kazakhstan, Kuwait, Libya, Mongolia, Morocco, Portugal, Romania, Russia, Saudi Arabia, Slovenia, Spain, Tajikistan, Tunisia, Turkmenistan, Uzbekistan, Yugoslavia (Ribera et al., 2003; Schödl, 1998).

Hydrochara flavipes (Steven, 1808)

Materials: Aksaray: 1 male, Near at the organized Industry region (Tekke-Acısu spring), 38°.15'N 34°.01'E, 970 m, 20.06.2004.

Phenology: June. **Habitat:** Slowly flowing streams; brackish water. **Distribution in Turkey:** Adana, Ankara (İncekara et al., 2003a). **Distribution in the world:** China, France, Germany, Hungary, Italy, Spain (Ribera et al., 2003; Gentili et al., 1995; Csabai, 2000). **Remarks:** This species is a new record for the Hydrophilidae fauna of the research area.

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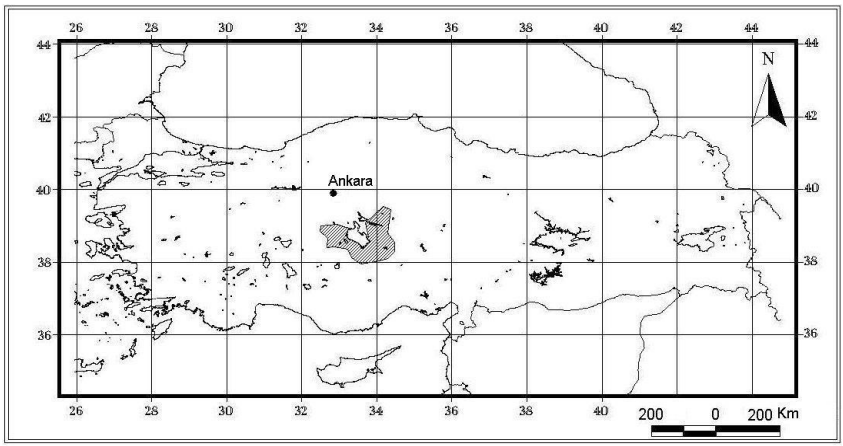

Fig. 1. Map of Turkey and research area (marked)

NOMENCLATURAL CHANGES IN LUCANINAE (COLEOPTERA: LUCANIDAE)

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[**Özdikmen, H. & Turgut, S.** 2006. Nomenclatural changes in Lucaninae (Coleoptera: Lucanidae). Munis Entomology & Zoology, 1 (1): 145-148]

ABSTRACT: One junior homonym was detected amongst the Lucanidae generic names and the following replacement name is proposed: *Pycnosiphorus* (*Neoepipedus*) nom. nov. for *Pycnosiphorus* (*Epipedus*) Solier, 1851. Also it is given a clarification on the validity of the generic name *Aegus* (*Eubussea*) Zacher, 1913. Accordingly, new combinations are herein proposed for the species currently included in these genera.

KEY WORDS: homonymy, replacement names, new synonym, *Neoepipedus, Epipedus, Alcimus,* Lucanidae, Coleoptera.

Order COLEOPTERA
Family LUCANIDAE
Genus *PYCNOSIPHORUS* Solier, 1851
Subgenus *NEOEPIPEDUS* nom. nov.

Epipedus Solier 1851. in Gay, Hist. Chile, Zool., 5, 49. (Coleoptera: Lucanoidea: Lucanidae: Lucaninae: Sclerostomini). Preoccupied by *Epipedus* Spinola, 1837. Ess. Ins. Hémipt., 314. (Hemiptera: Heteroptera: Pentatomoidea: Pentatomidae: Pentatominae: Carpocorini).

Remarks: Solier (1851) proposed as a new neotropical subgenus name *Epipedus* with the type species *Lucanus coelatus* Blanchard, 1842 (Maes, 2004). Unfortunately, the generic name was already preoccupied by Spinola (1837), who had described the genus *Epipedus* with the type species *Epipedus histrio* Spinola, 1837 in the bug family Pentatomidae. Thus, the generic name *Epipedus* Solier, 1851 is a junior homonym of the genus name *Epipedus* Spinola, 1837. According to Article 60 of the International Code of Zoological Nomenclature, we propose a new replacement name *Neoepipedus* **nom. nov.** for *Epipedus* Solier, 1851.

Etymology: from preexisting the subgenus name *Epipedus*.

All current species of the subgenus *Pycnosiphorus* (*Epipedus*) Solier, 1851 as follows:

Family Lucanidae
Subfamily Lucaninae
Tribe Sclerostomini
Genus *Pycnosiphorus* Solier, 1851
= *Godartia* Chenu, 1851
Subgenus *Pycnosiphorus* (*Epipedus*) Solier, 1851

Type-species *Pycnosiphorus* (*Epipedus*) *caelatus* (Blanchard, 1842) [*Lucanus, Sclerognathus*]
= *Lucanus (Dorcus) variolosus* Hope & Westwood, 1845
= *Scortizus vittatus* Burmeister, 1847 (nec Eschscholtz) 1847
= *Pycnosiphorus circumdatus* (Dejean, 1864)
= *Lucanus* (*Dorcus*) *cumingi* Hope & Westwood, 1845
Species *Pycnosiphorus* (*Epipedus*) *franzae* Weinreich, 1958.
Species *Pycnosiphorus* (*Epipedus*) *magnificus* Benesh, 1956
Pycnosiphorus (*Epipedus*) *virgatus* (Nagel, 1928) [*Sclerognathus*]
= *Sclerognathus striatus* Germain, 1911 (nomen nudum)
Species *Pycnosiphorus* (*Epipedus*) *vittatus* (Eschscholtz, 1822) [*Lucanus, Sclerognathus*]
= *Lucanus rubrovittatus* Blanchard, 1842 [*Pycnosiphorus*]
= *Dorcus rouleti* Solier, 1851 [*Sclerognathus*]

Mandatory new combinations

Genus *Pycnosiphorus* Solier, 1851
Subgenus *Pycnosiphorus* (*Neoepipedus*) **objective replacement name**
= *Pycnosiphorus* (*Epipedus*) Solier, 1851 **new synonym**
Type-species *Pycnosiphorus* (*Neoepipedus*) *caelatus* (Blanchard, 1842) **comb. nov.**
Species *Pycnosiphorus* (*Neoepipedus*) *franzae* Weinreich, 1958 **comb. nov.**
Species *Pycnosiphorus* (*Neoepipedus*) *magnificus* Benesh, 1956 **comb. nov.**
Species *Pycnosiphorus* (*Neoepipedus*) *virgatus* (Nagel, 1928) **comb. nov.**
Species *Pycnosiphorus* (*Neoepipedus*) *vittatus* (Eschscholtz, 1822) **comb. nov.**

Order COLEOPTERA
Family LUCANIDAE
Genus *AEGUS* MacLeay, 1819
Subgenus *AEGUS* (*EUBUSSEA*) Zacher, 1913

Alcimus Fairmaire, 1849. Rev. Mag. Zool., (2) 1, 416. (Coleoptera: Lucanoidea: Lucanidae: Lucaninae: Aegini). Preoccupied by *Alcimus* Loew, 1848. Linnaea Entom., 3, 391. (Diptera: Asiloidea: Asilidae: Apocleinae) and *Alcimus* Dallas, 1851. List Specimens Hem. Ins. Coll. Brit. Mus., 1, 218. (Heteroptera: Pentatomoidea: Pentatomidae: Pentatominae: Hoplistoderini).

A clarification on the validity of the generic name *Aegus* (*Eubussea*) Zacher, 1913: The name *Alcimus* was initially introduced by Loew, 1848 as a new genus for the fly family Asilidae. For the present, the genus *Alcimus* Loew, 1848 includes the species *Alcimus aethiopicus* Bigot, 1891; *Alcimus anax* Speiser, 1924; *Alcimus angustipennis* Loew, 1858; *Alcimus brevipennis* Ricardo, 1922; *Alcimus cuthbertson*i Hobby, 1934; *Alcimus limbatus* (Macquart, 1838); *Alcimus longipes* (Macquart, 1838); *Alcimus mimus* (Wiedemann, 1828); *Alcimus nigrescens* Ricardo, 1922; *Alcimus nigropalpus* Hobby, 1934; *Alcimus porrectus* (Walker, 1851); *Alcimus rubicundus* Hobby, 1934; *Alcimus rubiginosus* Gerstaecker, 1871; *Alcimus setifemoratus* Hobby, 1934; *Alcimus stenurus* Loew, 1858; *Alcimus taeniopus* (Rondani, 1873); *Alcimus tigris* Karsch, 1888; *Alcimus tristrigatus* Loew, 1858 (Geller-Grimm & Dikow, 2005). Subsequently, Fairmaire, 1849 described a new genus of the family Lucanidae (with the type species *Alcimus dilatatus* Fairmaire, 1849

from New Guinea) under the same generic name. *Alcimus* Fairmaire, 1849 is a subgenus of the genus *Aegus* MacLeay, 1819. Thus, the subgenus *Aegus* (*Alcimus*) Fairmaire, 1849 is a junior homonym of the genus *Alcimus* Loew, 1848. According to the International Code of Zoological Nomenclature, we propose to use the senior synonym subgeneric name *Eubussea* Zacher, 1913 over *Alcimus* Fairmaire, 1849.

The genus name *Alcimus* has been used also for an bug (Heteroptera: Penatomidae). *Alcimus* Dallas, 1851 (Heteroptera: Pentatomidae) was replaced with the name *Alcimocoris* Bergroth, 1891 that is an objective replacement name for *Alcimus* Dallas, 1851.

All current species of the subgenus *Aegus* (*Alcimus*) Fairmaire, 1849 and mandatory new combinations are as follows:

Family Lucanidae
Subfamily Lucaninae
Tribe Aegini
Genus *Aegus* MacLeay, 1819
= *Xenostomus* Boileau, 1898
Subgenus *Aegus* (*Eubussea*) Zacher, 1913 **comb. nov.**
= *Alcimus* Fairmaire, 1849 **new synonym**
= *Malietoa* Kriesche, 1920
Species *Aegus* (*Eubussea*) *alternatus* (Fairmaire, 1881) [*Alcimus*] **comb. nov.**
Species *Aegus* (*Eubussea*) *barbatus* Nagel, 1928 **comb. nov.**
= *Malietoa bougainvillensis* Nagel, 1941 [*Aegus*]
Species *Aegus* (*Eubussea*) *caledoniae* Boucher, 1991 **comb. nov.**
Type-species *Aegus* (*Eubussea*) *dilatatus* (Fairmaire, 1849) [*Alcimus*] **comb. nov.**
= *Aegus politus* Montrouzier, 1855
= *Aegus chelifer* Montrouzier, 1855 (nec MacLeay)
Species *Aegus* (*Eubussea*) *hindenburgi* (Kriesche, 1920) [*Malietoa, Melietoa*] **comb. nov.**
= *Aegus swalei* Arrow, 1927
Species *Aegus* (*Eubussea*) *tutuilensis* Arrow, 1927 **comb. nov.**
Species *Aegus* (*Eubussea*) *upoluensis* (Arrow, 1927) [*Alcimus*] **comb. nov.**
= *Alcimus dilatatus* Waterhouse, 1875 (nec Fairmaire)
Species *Aegus* (*Eubussea*) *woodfordi* Waterhouse, 1890 **comb. nov.**

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A NEW SUBSPECIES OF *CARABUS (MORPHOCARABUS) ODORATUS* MOTCHULSKY, 1844 (COLEOPTERA, CARABIDAE) FROM EASTERN SIBERIA.

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[**Obydov, D.** 2006. A new subspecies of *Carabus (Morphocarabus) odoratus* Motchulsky, 1844 (Coleoptera: Carabidae) from Eastern Siberia. Munis Entomology & Zoology, 1 (1): 149-154]

ABSTRACT: A new subspecies: *Carabus (Morphocarabus) odoratus divnoensis* ssp. n. is described and figured. Diagnostic data are given.

KEY WORDS: Coleoptera, Carabidae, *Carabus (Morphocarabus) odoratus*, new subspecies, Eastern Siberia.

Carabus odoratus Motchulsky, 1844 is distributed from the Yamal Peninsula, and all around Siberia to the Magadan area and Kamchatka Peninsula; in southern Siberia from Altai up to the Khabarovsk territories. In the south of Far East Russia the species is absent.

The wide area of this species is inhabited by many unequally differing populations. Some of the groups of populations, undoubtedly, must be considered as a subspecies. At the same time, the majority of populations constitutes a continuous sequence of forms slightly different in size, coloration and ratios, but it is hardly possible to consider these forms as subspecies. At present a considerable number of forms of *C. odoratus* are described. The majority of infraspecific names must be treated as synonyms. The species has a large number of subspecies and local forms. In the Siberia and north of Far East Russia the species is represented by 20 subspecies.

In the southern part of the area the species occurs in the mountain tundra and in the scree, at altitudes from 1500 to 2600 m above sea level; in the northern part of the area it usually inhabits plain tundra and forest tundra.

In 1998, in Eastern Siberia, near Divnogorsk City a series of *Carabus odoratus* were collected. The collected specimens are rather peculiar morphologically, externally resembling *Carabus kozhantschikovi* Lutshnik, 1924 and should be considered as a new subspecies. The described subspecies is not similar to any Siberian subspecies of *Carabus odoratus*.

The description of *Carabus (Morphocarabus) odoratus divnoensis* ssp. n. is given below.

DESCRIPTION

Carabus (Morphocarabus) odoratus divnoensis ssp. n.

(Figs 1,2,3)

Holotype: male, Eastern Siberia, Krasnoyarsk Region, Divnogorsk Distr., Shumikha Village environs, 26.VI-10.VII.1998, L. Shumakov leg.

Paratypes: 3 males, 6 females, same data and same locality.

The holotype and the paratypes are preserved in the collection of the State Museum of Biology (Moscow, Russia).

Body length in males is 15.6 - 17.5 mm (including mandibles), width 5.3 - 6.2 mm; body length in females is 16.4 - 18.5 mm, width 6.3 - 7.0 mm.

Head not thickened, ratio width of pronotum/ width of head 1.54; eyes strongly convex; mandibles relatively short, strongly curved and sharply pointed at the apex; surface of mandibles smooth; retinaculum of the right and left mandibles bi-dentate, strongly prominent. Frontal furrows deep and relatively short, inside with sparse coarse punctures or wrinkles. Frons nearly smooth or with dense coarse punctures, vertex and neck coarsely punctured, laterally frons, vertex and neck with a few coarse wrinkles. Labrum wider than clypeus, strongly notched, with two lateral setae. Antenna long, protruding beyond the base of pronotum by four (females) or five (males) apical segments; palpi moderately dilated; penultimate segment of the maxillary palpi longer than the last segment; penultimate segment of the labial palpi with two setae. Mentum tooth obtusely-triangular, slightly shorter than lateral lobes; submentum with two setae.

Prothorax relatively narrow, sometimes nearly cordiform, broadest before the middle, rarely at about the middle; ratio width/length 1.50. Pronotum strongly depressed with dense coarse punctuation and coarse transverse wrinkles, laterally with more coarse sculpture, posteriorly with few longer coarse wrinkles. Median longitudinal line indistinct; basal foveae not deep, inside coarsely-punctured. Sides of pronotum relatively broadly margined, bent upwards; lobes of hind angles relatively short, evenly rounded, slightly bent downwards. Lateral margin with three-four lateral setae.

Elytra oblong-oval, strongly depressed, widest behind the middle; ratio length/width 1.62; ratio width of elytra/width of pronotum 1.46; shoulders evenly rounded; sides of elytra broadly margined, elytral margin coarsely-granular.

Elytral sculpture triploid, homodynamous (all elytral interspaces about equally developed, interrupted into the short links); striae coarsely punctured; primary elytral foveoles indistinct.

Ventral body surface smooth, metepisternum smooth, longer than its width; sides of abdomen slightly wrinkled; last abdominal segment bearing up to 8-12 setae on the apex, fourth and fifth segments without setae; sternal sulci absent.

Legs long; male fore tarsi with four dilated segments bearing hairy pads.

Shape of aedeagus and endophallic structure in general is characteristic for the species. Aedeagus (Fig. 2) strongly curved near the base, in distal part nearly straight, apical lamella relatively narrow, strongly bent downward. Endophallus (Fig.3): basal ventral lobe prominent; ventral apical lobe also prominent; dorsal apical lobe small, slightly convex; dorsal lateral lobes relatively small, convex; median lateral lobes big, strongly convex; right basal lateral lobe small; left basal lateral lobe much bigger convex; ligulum small, slightly prominent; aggonoporius consists of two small symmetric plates.

Coloration of the body bright, strongly constant: pronotum reddish-bronze, elytra green; mandibles, palpi, four basal antenna segments (apically) and legs reddish-brown; ventral body surface brown.

Differential diagnosis. The new subspecies strongly differs from *C. odoratus martjanovianus* Obydov, 1999a, which is distributed in Eastern Siberia (type locality of this subspecies is situated not far from the type locality of *Carabus odoratus divnoensis* ssp. n.) by the following characters: eyes more convex; frontal furrows longer; labrum more strongly notched; retinaculum of the right and left mandibles more prominent; mentum tooth shorter and more obtuse, pronotum narrower, strongly depressed, nearly cordiform (in *C. odoratus martjanovianus* pronotum more convex, broader), pronotal basal foveae less deep; elytra narrower, oblong-oval, strongly depressed with homodynamous sculpture (in *C. odoratus martjanovianus* elytra broader, oval, more convex, sometimes with heterodynamous sculpture); legs of the new subspecies longer. The new subspecies strongly differs from *C. odoratus martjanovianus* by shape of the aedeagus: apical lamella narrower, more bent downward. Coloration of the new subspecies brighter, strongly constant: pronotum reddish-bronze, elytra green; mandibles, palpi, four basal antenna segments and legs reddish-brown; ventral body surface brown (in *C. odoratus martjanovianus* pronotum and elytrae black with bronze, green or blue lustre; margin of elytrae blue or green; primary elytral foveoles bronze or blue; ventral body surface, femurs, clypeus and antennae blackish brown). Body of the new subspecies much shorter.

From other East Siberian subspecies of *C. odoratus* the new subspecies differs by narrower, strongly depressed, nearly cordiform pronotum; narrower, oblong-oval, strongly depressed elytra; longer legs; shape of aedeagus and small body.

Distribution. Up to now, the new subspecies is only known from the type locality (Eastern Siberia, Divnogorsk environs).

Habitat. The type specimens were collected in the scree and stone fields from under the stones.

Etymology. The specific name is derived from the name of Divnogorsk City environs, where the new subspecies was found.

DISCUSSION

The new subspecies is not similar to any Siberian subspecies of *Carabus odoratus* and probably it is the smallest Siberian subspecies. The new subspecies occurs on stony mountains and has the characters of petrophilous specialization (strongly depressed, narrow elytra and pronotum, long legs). Others East Siberian subspecies (for example *C. odoratus baeri* Ménétriés, 1851 and *C. odoratus magadanicus* Obydov, 1999b, which inhabit tundra and forest tundra have relatively convex elytra and pronotum and rather short legs. Externally the new subspecies resembles *Carabus kozhantschikovi* Lutshnik, 1924, which also occur in the scree and stone fields. Probably *C. odoratus divnoensis* ssp. n. is the most ancient subspecies, isolated in the highest tops of a stony mountains soon after the last glaciation, while the moving other East Siberian subspecies of *C. odoratus* in tundra biotopes went gradually after the last glaciation.

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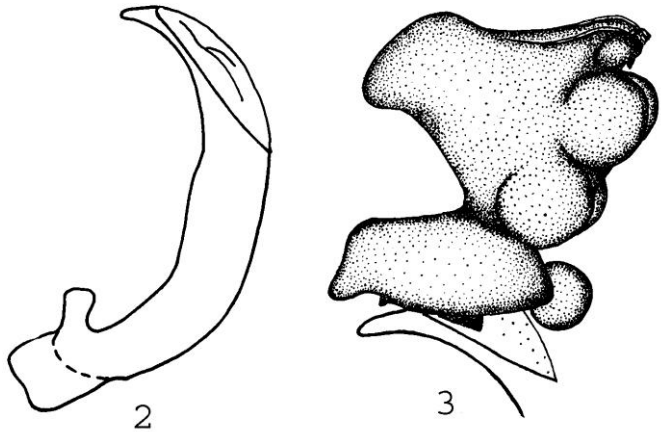
Fig. 1. *Carabus (Morphocarabus) odoratus divnoensis* ssp. n. (holotype, general view).



Figs. 2-3. Male genital structure of *Carabus odoratus divnoensis* ssp. n.: 2. aedeagus (lateral view); 3. endophallus in complete extension (lateral view).

NOMENCLATURAL CHANGES IN CHRYSOMELIDAE (COLEOPTERA)

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[**Özdikmen, H.** 2006. Nomenclatural changes in Chrysomelidae (Coleoptera). Munis Entomology & Zoology, 1 (1): 155-156]

ABSTRACT: A replacement name, *Sezerus* nom. nov. is proposed for the preoccupied subgenus name *Cryptodontus* Burlini, 1969 in the leaf beetles family Chrysomelidae (Coleoptera). Also, a clarification on the validity of the generic name *Dentisterna* Medvedev, 1993 is presented.

KEY WORDS: *Sezerus, Cryptodontus, Cryptocephalus, Horaia, Dentisterna,* homonymy, replacement name, Coleoptera, Chrysomelidae.

Sezerus nom. nov., substitute name

Cryptodontus Burlini, 1969. Memorie Soc.ent.ital. 48: 536. (Coleoptera: Chrysomeloidea: Chrysomelidae: Cryptocephalinae). Preoccupied by *Cryptodontus* Mulsant & Rey, 1865. Hist. nat. Punaises Fr., Scutell, 36; 1866, Ann. Soc. linn. Lyon, 12 (1865), 320. (Heteroptera: Pentatomomorpha: Pentatomoidea: Scutelleridae).

Burlini (1969) proposed, as a subgeneric name, *Cryptodontus* of the genus *Cryptocephalus* Geoffroy, 1762 from South Europe in the leaf beetles family Chrysomelidae. Unfortunately, the generic name was already preoccupied by Mulsant & Rey (1865), who had described as a subgenus *Cryptodontus* of the genus *Psacasta* Germar, 1839 in the bug family Scutelleridae. Thus, the generic name *Cryptodontus* Burlini, 1969 is a junior homonym of the generic name *Cryptodontus* Mulsant & Rey, 1865. According to Article 60 of the International Code of Zoological Nomenclature, I propose a new replacement name *Sezerus* **nom. nov.** for *Cryptodontus* Burlini, 1969. The name is given in honour to my colleague Sezer Özavcı. The name is masculine in gender.

A clarification on the validity of the generic name *Dentisterna* Medvedev, 1993

Horaia Chûjô, 1937. Trans. nat. Hist. Soc. Formosa 27: 55-56. (Coleoptera: Chrysomeloidea: Chrysomelidae: Alticinae). Preoccupied by *Horaia* Tonnoir, 1930. Rec. Ind. Mus., 32, 193. (Diptera: Nematocera: Blephariceromorpha: Blephariceridae).

The genus *Horaia* was erected by Tonnoir (1930) with the type species *Horaia montana* Tonnoir, 1930 in Diptera (Nematocera: Blephariceromorpha: Blephariceridae). It is still used as a valid generic name in Diptera (Zwicki & McLellan 1999). Later, the genus *Horaia* was described by Chûjô (1937) with the type species *Horaia nigra* Chûjô, 1937 by original designation in Coleoptera (Chrysomeloidea:

Chrysomelidae: Alticinae). It is still a valid generic name in Chrysomelidae. For the present, *Dentisterna* Medvedev, 1993: 53 is a junior subjective synonym of *Horaia* Chûjô, 1937 (Konstantinov & Vandenberg 1996). However, the name *Horaia* Chûjô, 1935 is invalid under the law of homonymy, being a junior homonym of *Horaia* Tonnoir, 1930 (Diptera). In accordance with article 60 of the International Code of Zoological Nomenclature, fourth edition (1999), I propose to replace the invalid name *Horaia* Chûjô, 1937 by its junior synonym *Dentisterna* Medvedev, 1993.

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NOTES ON LONGICORN BEETLES FAUNA OF TURKEY (COLEOPTERA: CERAMBYCIDAE)

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[**Özdikmen, H. & Demir, H.** 2006. Notes on longicorn beetles fauna of Turkey (Coleoptera: Cerambycidae). Munis Entomology & Zoology, 1 (1): 157-166]

ABSTRACT: In the present paper specimens of the family Cerambycidae (Coleoptera) collection in the personal collection of Dr. Emine Demir (Ankara / Turkey) from Turkey were studied. New data are presented on Cerambycidae fauna in Turkey. The faunistic data on almost all species in the present paper add to the knowledge on their distribution in Turkey. As a result of the identification of these specimens three subspecies and forty nine species of thirty seven genera belonging to five subfamilies for Turkey, have been determined.

KEY WORDS: Prioninae, Lepturinae, Apatophyseinae, Cerambycinae, Lamiinae, Fauna of Turkey

Especially since the last century, the studies of longicorn beetles fauna of Turkey, were mainly as faunistic and taxonomic works.

In the present paper, the materials were collected by various collectors from different localities in Turkey in 1974, 1978, 1980-1985, 1991, 1993-1998, 2000-2004 and deposited in the personal collection of Dr. Emine Demir / Ankara / Turkey. All of the materials were identified by H. Özdikmen. In this article classification and nomenclature of the longhorn beetles suggested by Danilevsky, 2004 and Althoff & Danilevsky, 1997 are followed. Within the subfamilies all genera are listed mainly in the same order as in Danilevsky, 2004 and Althoff & Danilevsky, 1997. Within the genera the species are listed alphabetically. Each name of a species or subspecies is accompained by the author's name and description date.

The data, Material and Remarks under the title for each species is given in the present text. The data under the title of Material are given according to the following format:

Kahramanmaraş(1): Pazarcık(2), Bağdınısağır(3), 1000 m(4), 14.05.2003(5), 1 specimen(6), leg. H. Özdikmen(7)

(1) Administrative district (Province); (2) Town; (3) Village; (4) Altitude; (5) Collecting date (day/month/year); (6) Number of specimens; (7) The Collector.

Family Cerambycidae
Subfamily Prioninae

Ergates gaillardoti Chevrolat, 1854

Material: Düzce: 1 specimen, leg. A. Acar; Antalya: Manavgat, Demirciler village, 15.08.1996, 1 specimen, leg. E. Demir.
Remarks: The species is new for Western Black Sea Region (Düzce province) and mostly distributed in South Turkey.

Prinobius myardi Mulsant, 1842

Material: Çanakkale: Gökçeada, 220 m, 01.08.2004, 1 specimen, leg. S. Seven.
Remarks: The species is new for Çanakkale province and apparently distributed in North and West Turkey and also the West half of South Turkey.

Aegosoma scabricorne (Scopoli, 1763)

Material: Samsun: Çarşamba, 7-8.1998, 1 specimen; Turkey: 1 specimen without label.
Remarks: The species is new for Samsun province and probably more or less widely distributed in Turkey.

Prionus coriarius (Linnaeus, 1758)

Material: Bolu: Abant, 1200 m, 01.08.1980, 1 specimen, leg. A. Koçak; Kırıkkale: Sulakyurt, Özdere, 1100 m, 07.08.1994, 1 specimen, leg. S. Seven.
Remarks: The species is new for Bolu and Kırıkkale provinces and probably more or less widely distributed in Turkey.

Mesoprionus besicanus (Fairmaire, 1855)

Material: Kırıkkale: Sulakyurt, Özdere, 1100 m, 07.08.1994, 1 specimen, leg. S. Seven; Antalya: Manavgat, Demirciler village, 15-31.07.1996, 2 specimens, leg. E. Demir; Ankara: Kalecik, Yeşildere, 1250 m, 24.05.2002, 1 specimen, leg. E. and. S. Çalışkan.
Remarks: The species is new for Ankara and Kırıkkale provinces and probably more or less widely distributed in Turkey (mostly in West and South-West including Turkey).

Subfamily Lepturinae

Cortodera flavimana (Waltl, 1838)

Material: Bolu: Abant, 1300 m, 28.05.1995, 12 specimens, leg. E. Demir; Ankara: Kızılcahamam, Işık Mountain, 1700 m, 03.06.1995, 10 specimens, leg. E. Demir.
Remarks: The species is widely distributed in Turkey.

Pedostrangalia revestita (Linnaeus, 1767)

Material: Antalya: Alanya, Kargıcak, 17.06.1985, 1 specimen, leg. A. Koçak.
Remarks: In Turkey, It has been reported only two times as Antalya (Manavgat and Alanya) in Demelt & Alkan, 1962 and Gümüşhane (Torul) in Gfeller, 1972.

Rutpela maculata (Poda, 1761)

Material: Adana: Pozantı, Karataş, 1450 m, 08.07.1980, 2 specimens, leg. A. Koçak; Rize: Central, 1000 m, 07.1984, 1 specimen, leg. A. Koçak.
Remarks: The species is new for Adana province and apparently widely distributed in Turkey.

Stenurella septempunctata (Fabricius, 1792)

Material: Ankara: Azapderesi, 1400 m, 07.07.1981, 1 specimen, leg. A. Koçak.
Remarks: The species is new for Ankara province and apparently widely distributed in North and Central Turkey.

Pachytodes erraticus (Dalman, 1817)

Material: Ankara: Kızılcahamam, Işık Mountain, Yukarı Çanlı village, 1400 m, 11.07.1997, 2 specimens, leg. E. Demir.
Remarks: The species is widely distributed in Turkey.

Paracorymbia fulva (Degeer, 1775)

Material: Adana: Pozantı, Karataş, 1450 m, 08.07.1980, 8 specimens, leg. A. Koçak.
Remarks: The species is new for Adana province and apparently mostly distributed in the West half of Turkey.

Subfamily Apatophyseinae

Apatophysis anatolica Heyrovsky, 1938

Material: Konya: Karapınar, 1000 m, 07.09.1980, 1 specimen, leg. A. Koçak.
Remarks: The species is endemic to Turkey. It has been recorded only one time (as Aksaray: Eskil in Adlbauer, 1992) since Heyrovsky, 1938. Apparently mostly distributed in Central Turkey.

Subfamily Cerambycinae

Icosium tomentosum atticum Ganglbauer, 1881

Material: Antalya: Manavgat, Demirciler, 20 m, 15-31.07.1996, 1 specimen, leg. E. Demir.
Remarks: The subspecies is distributed only in South Turkey.

Trichoferus griseus (Fabricius, 1792)

Material: Antalya: Manavgat, 15.08.1995 and 25.08.1995, 2 specimens, leg. E. Demir; Antalya: Manavgat, 50 m, 12.07.1996 and 22.08.1996, 2 specimens, leg. E. Demir; Antalya: Manavgat, Titreyengöl, 31.08.1996, 1 specimen, leg. E. Demir; Antalya: Manavgat, Bucak, Şeyhler village, 18-28.06.1997 and 15-26.08.1997, 3 specimens, leg. E. Demir & L. Özden.
Remarks: The species is apparently mostly distributed in South and South-West Turkey.

Trichoferus preissi Heyden, 1894

Material: Antalya: Manavgat, Sarılar village, 04.08.1996, 1 specimen, leg. E. Demir.
Remarks: The species is apparently distributed only in South Turkey.

Stromatium unicolor (Olivier, 1795)

Material: Antalya: Manavgat, Demirciler village, 15-31.07.1996 and 15.08.1996, 3 specimens, leg. E. Demir; Antalya: Manavgat, Sülek village, 08.08.1996, 1 specimen, leg. E. Demir; Samsun: Çarşamba, 07.08.1998, 2 specimens.
Remarks: The species is apparently widely distributed in Turkey.

Cerambyx (s. str.) *dux* (Faldermann, 1837)

Material: Kırklareli: İğneada, 100 m, 13.07.1993, 1 specimen, leg. A. Koçak.
Remarks: The species is new for Kırklareli province and apparently widely distributed in Turkey.

Cerambyx (s. str.) *miles* Bonelli, 1823

Material: Bitlis: Reşadiye, 2000 m, 18.07.1974, 1 specimen, leg. A. Koçak.
Remarks: The species is new for Bitlis province and apparently mostly distributed in West and South Turkey.

Cerambyx (*Microcerambyx*) *scopolii* Fusslins, 1775

Material: Kırklareli: İğneada, 100 m, 13.07.1993, 1 specimen, leg. A. Koçak.
Remarks: The species is apparently more or less widely distributed in Turkey.

Purpuricenus budensis (Gotz, 1783)

Material: Antalya: Kemer, 20.03.1983 and 20.05.1983, 5 specimens, leg. A. Koçak; Kırıkkale: Sulakyurt, 1100 m, 24.06.1995, 1 specimen, leg. A. Koçak & S. Seven; Antalya: Manavgat, Bucak, Şeyhler village, 45 m, 19.07.2001, 1 specimen, leg. E. Demir & L. Özden.

Remarks: The species is new for Kırıkkale province and apparently widely distributed in Turkey.

Purpuricenus desfontainei inhumeralis Pic, 1891

Material: Antalya: Kemer, 20.03.1983, 3 specimenS, leg. A. Koçak.

Remarks: This subspecies was mentioned only in Adlbauer. All other old records were given as *Purpuricenus desfontainei*. But, this species consist of two subspecies. One of them, *Purpuricenus desfontainei* ssp. *desfontainei* (Fabricius, 1792), distributes only in North Africa and the other, *Purpuricenus desfontainei* ssp. *inhumeralis* Pic, 1891, distributes in Greece, ?Bulgaria, Syria and Turkey. For this reason until now, all old records from Turkey must be *Purpuricenus desfontainei* ssp. *inhumeralis* Pic, 1891. Mostly distributed in South Turkey.

Aromia moschata ambrosiaca (Steven, 1809)

Material: Antalya: Manavgat, 50 m, 17.06.1996, 2 specimens, leg. E. Demir.

Remarks: The subspecies that occurs in Europe, Caucasus, Transcaucasia, Turkey is apparently more or less widely distributed in Turkey. There are two subspecies of *Aromia moschata* in Turkey. The nominate *Aromia moschata moschata* and *Aromia moschata ambrosiaca* (Steven, 1809) (= *thoracica* Fischer, 1824). However, the exact distribution pattern of the subspecies in Turkey and the real status of these taxons still needs to be clarified.

Paraclytus sexguttatus (Adams, 1827)

Material: Kırklareli: Demirköy, Temmuz, 1993, 1 specimen, leg. S. Seven; Bolu: Abant lake, Akçaalan, 1000 m, 13.06.1980, 1 specimen, leg. A. Koçak.

Remarks: The species is apparently distributed only in North Turkey. The species was given by Georgiew, 2003 from Strandzha Mountain in Bulgaria as a new record for Europe. In the present paper, the record of Kırklareli is another record for Europe. In Turkey, it has been reported only two times as Bolu (Abant) in Malmusi & Saltini, 2000 and Artvin (Saçinka) in Alkan, 2000.

Neoplagionotus bobelayei (Brulle, 1842)

Material: Kırıkkale: Kılınçlar, 950 m, 31.05.1995, 1 specimen, leg. S. Seven.

Remarks: The species is new for Kırıkkale province and probably more or less widely distributed in Turkey.

Paraplagionotus floralis (Pallas, 1733)

Material: Ankara: Çal Mountain, 1400 m, 30.06.1980, 1100 m, 24.05.1982, 10.07.1982, 1 specimen, 3 specimens, 1 specimen, leg. A. Koçak; Ankara: Azap Deresi, 1400 m, 07.07.1981, 1 specimen, leg. A. Koçak; Ankara: Kızılcahamam, Güvem, Bel Pınarı, 1300 m, 05.07.1997, 1 specimen, leg. E. Demir; Ankara: Kızılcahamam, Işık Mountain, Yukarı Çanlı, 1400 m, 11.07.1997, 1 specimen, leg. E. Demir.

Remarks: The species is apparently widely distributed in Turkey.

Isotomus comptus (Mannerheim, 1825)

Material: Artvin: Hopa, 14.07.1974, 1 specimen, leg. Z. Hacıömeroğlu.

Remarks: The species is apparently distributed only in North-East Turkey. According to our literature survey, this species is only recorded by Tozlu *et al.*, 2002 from Artvin, Giresun, Gümüşhane, Ordu, Rize and Trabzon.

Chlorophorus sartor (Muller, 1766)

Material: Antalya: Manavgat, Demirciler village, 15-31.07.1996, 1 specimen, leg. E. Demir.
Remarks: The species is apparently widely distributed in Turkey.

Chlorophorus varius (Muller, 1766)

Material: Niğde: Ulukışla, 1200 m, 09.07.1980, 2 specimens; Antalya: Manavgat, 50 m, 12.07.1996, 6 specimens, leg. E. Demir; Antalya: Manavgat, Demirciler village, 15-31.07.1996, 18 specimens, leg. E. Demir.
Remarks: The species is apparently widely distributed in Turkey.

Clytus rhamni Germar, 1817

Material: Ankara: Kızılcahamam, Işık Mountain, Yukarı Çanlı, 1400 m, 11.07.1997, 1 specimen, leg. E. Demir.
Remarks: The species is apparently widely distributed in Turkey.

Clytus schurmanni Sama, 1996

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1100 m, 06.06.1998, 1 specimen, leg. E. Demir; Ankara: Sincan, Mülk, Ayaş Mountain, 1000 m, 17.06.2000, 1 specimen, leg. E. Demir.
Remarks: There were many records for this species from Turkey before *Clytus schurmanni* was not described by Sama in 1996. For the present, only one (Artvin in Sama, 1982) from these old records belong to *Clytus schneideri*. Most probably the others belong to the species *Clytus schurmanni* Sama, 1996. Because, *Clytus schurmanni* distributes in the middle of North Turkey (to Tokat province) and *Clytus schneideri* distributes only in Nort-East Turkey (Tokat to Artvin) according to Sama, 1996. The species is known to occur only in Turkey.

Subfamily Lamiinae

Batocera rufomaculata (Degeer, 1785)

Material: Hatay: Arsus, 11.09.2002, 1 specimen, leg. L. Özden.
Remarks: The species is apparently distributed only in South Turkey.

Morinus orientalis (Reitter, 1894)

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1300 m, 27.06.1998, 1 specimen, leg. L. Özden.
Remarks: The species is apparently distributed only in North-western Turkey.

Dorcadion atritarse Pic, 1931

Materyal: Çanakkale: Çan, 15.04.1991, 19 specimens, leg. A. Koçak.
Remarks: The species is new for Çanakkale province and distributed only in North-west Turkey.

Dorcadion boluense Breuning, 1962

Materyal: Ankara: Çal Mountain, 14.04.1983, 1 specimen, leg. A. Koçak.
Remarks: This species is endemic to Turkey and distributed only in a local area in the North of Central Turkey.

Dorcadion cinerarium (Fabricius, 1787)

Materyal: Ankara: Keçiören, Bağlum, 1200 m, 07.05.1996, 1 specimen, leg. E. Demir; Ankara: Çal Mountain, 14.04.1983, 1 specimen, leg. A. Koçak; Ordu: Perşembe, Çaytepe, 200 m, 06.07.1994, 1 specimen, leg. M. Özdemir.
Remarks: This species is represented by many subspecies in Turkey. The real status of distributional patterns of these taxa needs to be clarified.

Dorcadion pararufipenne Braun, 1976

Materyal: Bolu: Abant, 1300 m, 28.05.1995, 2 specimens, leg. E. Demir.
Remarks: This species is endemic to Turkey and distributed only in a local area in North of Central Turkey.

Dorcadion quadrimaculatum Küster, 1848

Materyal: Çanakkale: Çan, 15.04.1991, 1 specimen, leg. A. Koçak.
Remarks: This species is apparently distributed in Western Anatolia and European Turkey.

Dorcadion scabricolle Dalman, 1817

Materyal: Ankara: Çal Mountain, 14.04.1983, 4 specimens, leg. A. Koçak.
Remarks: The species is apparently more or less widely distributed in Turkey.

Acanthocinus aedilis (Linnaeus, 1758)

Material: Ankara: Demetevler, 03.07.1978, 1 specimen, leg. H. Urlu.
Remarks: The species is apparently widely distributed in Turkey.

Oxylia duponcheli (Brulle, 1832)

Material: Ankara: Çal Mountain, 1100 m, 04.07.1984, 1 specimen, leg. A. Koçak.
Remarks: The species is apparently more or less widely distributed in the West half of Turkey (except North).

Helladia praetextata (Steven, 1817)

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1150 m, 22.05.1997, 1 specimen, leg. E. Demir.
Remarks: The species is apparently more or less widely distributed in North Turkey. In Turkey there are two distinct subspecies: The nominate *Helladia praetextata praetextata* (Steven, 1817) is distributed around the Black Sea from Bulgaria and Romania to the Caucasus. *Helladia praetextata nigricollis* (Pic, 1902) is distributed only in South Turkey (İçel and Osmaniye provinces).

Neomusaria merkli (Ganglbauer, 1894)

Material: Ankara: Çal Mountain, 1400 m, 30.06.1980, 1 specimen, leg. A. Koçak; Ankara: Kızılcahamam, Soğuksu National Park, 1150 m, 22.05.1997, 1 specimen, leg. E. Demir.
Remarks: Apparently mostly distributed in Central and South Turkey. The species is endemic to Turkey and new for Ankara province. Adana: -*inapicalis* Pic, 1915 as a subspecies of *modesta*, it is a synonym of *merkli* (Ex. Sama, 1982).

Phytoecia caerulea (Scopoli, 1772)

Material: Adana: Pozantı, 1200 m, 19.05.1981, 1 specimen, leg. V. Kartal.
Remarks: The species is apparently widely distributed in Turkey.

Phytoecia icterica (Schaller, 1783)

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1150 m, 25.05.1997, 1 specimen, leg. E. Demir.
Remarks: The species is new for Ankara province and apparently more or less widely distributed in Turkey. In Turkey there are two distinct subspecies: The nominate *Phytoecia icterica icterica* (Schaller, 1783) and *Phytoecia icterica annulipes* Mulsant, 1874. However, the exact distribution pattern of the subspecies in Turkey and the real status of these taxons still needs to be clarified.

Phytoecia manicata Reiche et Saulcy, 1858

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1100 m, 07.06.1997 and 14.06.1997, 2 specimens, leg. E. Demir.
Remarks: The species is apparently mostly distributed in West and South Turkey.

Opsilia coerulescens (Scopoli, 1763)

Material: Ankara: Kızılcahamam, Soğuksu National Park, 1150 m, 25.05.1997, 1 specimen, leg. E. Demir; Ankara: Kızılcahamam, Güvem, Salin village, 1300 m, 14.06.1997, 1 specimen, leg. E. Demir; Ankara: Kızılcahamam, Güvem, Yenimahalle, 1250 m, 05.07.1997, 1 specimen, leg. E. Demir.
Remarks: The species is apparently widely distributed in Turkey.

Blepisanis vittipennis (Reiche, 1877)

Material: Ankara: Sincan, Mülk, Ayaş Mountain, 1000 m, 17.06.2000, 1 specimen, leg. E. Demir.
Remarks: The species is apparently more or less widely distributed in Turkey.

Calamobius filum (Rossi, 1790)

Material: Ankara: Kızılcahamam, Güvem, Yenimahalle, 1250 m, 05.07.1997, 3 specimens, leg. E. Demir; Ankara: Kızılcahamam, Güvem, Aköz village, 1150 m, 09.08.1997, 1 specimen, leg. E. Demir.
Remarks: The species is new for Ankara province and apparently mostly distributed in West and South Turkey.

Synthapsia kirbyi (Gyllenhal, 1817)

Material: Adana: Pozantı, 900 m, 10.05.1981, 4 specimens, leg. A. Koçak; Ankara: Çal Mountain, 20.05.1983, 1 specimen, leg. A. Koçak; Ankara: Çal Mountain, 1100 m, 15.06.1984, 1 specimen, leg. A. Koçak.
Remarks: The species is apparently widely distributed in Turkey.

Agapanthia (s.str.) *cardui* (Linnaeus, 1767)

Material: Adana: Pozantı, 1200 m, 19.05.1980, 1 specimen, leg. V. Kartal; Ankara: Sincan, Mülk, Ayaş Mountain, 1000 m, 22.05.2000, 5 specimens, leg. E. Demir.
Remarks: The species is apparently widely distributed in Turkey.

Agapanthia (*Agapanthiella*) *lateralis* Ganglbauer, 1884

Material: Ankara: Çal Mountain, 1200 m, 01.06.1981, 1 specimen, leg. A. Koçak; Antalya: Kemer, 20.03.1983, 1 specimen, leg. A. Koçak; Ankara: Çal Mountain, 1100 m, 10.07.1982, 4 specimens, 15.06.1984, 13 specimens, 04.07.1984, 12 specimens, leg. A. Koçak; Ankara: METU, 1000 m, 15.06.1993, 3 specimens, leg. A. Koçak & S. Seven; Ankara: Beştepe, 25.05.1996, 2 specimens, leg. A. Koçak; Ankara: Kızılcahamam, Soğuksu National Park, 1200 m, 16.06.1996, 3 specimens, leg. E. Demir; Ankara: Kayaş, Bayındır dam env., 21.06.2003, 1 specimen, leg. Ö. Yalçın; Ankara: Beytepe, 10.07.1997, 1 specimen, leg. E. Demir.
Remarks: The species is apparently widely distributed in Turkey.

Agapanthia (*Smaragdula*) *violacea* (Fabricius, 1775)

Material: Adana: Pozantı, 1200 m, 19.05.1981, 2 specimens, leg. V. Kartal.
Remarks: The species is apparently widely distributed in Turkey.

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A REPLACEMENT NAME FOR THE PREOCCUPIED GENUS NAME *ADAMAS* HUBER, 1979 (ACTINOPTERYGII: CYPRINODONTIFORMES)

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ABSTRACT: A replacement name, *Fenerbahce* is proposed for the genus name *Adamas* Huber, 1979 in the fish family Aplocheilidae (Cyprinodontiformes).

KEY WORDS: *Fenerbahce, Adamas,* homonymy, replacement name, Actinopterygii, Cyprinodontiformes, Aplocheilidae.

Class Actinopterygii
Order Cyprinodontiformes
Family Aplocheilidae
Genus *Fenerbahce* nom. nov.

Adamas Huber, 1979. Journal Am. Killifish Ass. 12 (6): 166 and Revue fr. Aquariol. Herpetol. 6 (1): 6. (Actinopterygii: Cyprinodontiformes: Aplocheiloidei: Aplocheilidae: Aplocheilinae). Preoccupied by *Adamas* Malaise, 1945. Opusc. ent., Lund, Suppl. 4, 97. (Hymenoptera: Symphyta: Tenthredinoidea: Tenthredinidae: Allantinae: Adamasini).

The genus name *Adamas* was proposed by Malaise, 1945 as an objective replacement name of the genus *Dinax* Konow, 1897 with the type species *Dinax jakowleffi* Konow, 1897. For the present, the genus *Adamas* Malaise, 1945 includes six species (Wei, 2004). Subsequently, the genus *Adamas* was described by Huber, 1979 with the type species *Adamas formosus* Huber, 1979 by monotypy from in front of Ntokou village near the banks of Likouala-Mossaka River, Congo. The monotypic Central African freshwater fish genus *Adamas* Huber, 1979 is still a valid generic name (Parenti, 1981; Wildekamp et al., 1986; Wildekamp, 1993; Poll & Gosse, 1995; Eschmeyer, 1998; Lazara, 2001; Eschmeyer, 2004). However, the name *Adamas* Huber, 1979 is invalid under the law of homonymy, being a junior homonym of *Adamas* Malaise, 1945. In accordance with article 60 of the International Code of Zoological Nomenclature, fourth edition (1999), we propose to substitute the junior homonym *Adamas* Huber, 1979 for the nomen novum *Fenerbahce*.

As a result of this, *Adamas* Huber, 1979 is **replaced with** *Fenerbahce* **nom. nov.** According to this application, *Adamas* Huber, 1979 is a **syn. nov.** of *Fenerbahce*. The following new combination is *Fenerbahce formosus* (Huber, 1979), **comb. nov.**

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SCIENTIFIC NOTE

A VERY INTERESTING LONGICORN BEETLE, *ANATOLOBRIUM EGGERI* ADLBAUER, 2004, FROM TURKEY (COLEOPTERA: CERAMBYCIDAE)

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[**Özdikmen, H. & Okutaner, A. Y.** 2006. A very interesting longicorn beetle, *Anatolobrium eggeri* Adlbauer, 2004, from Turkey (Coleoptera: Cerambycidae). Munis Entomology & Zoology, 1 (1): 169-170]

Family Cerambycidae
Subfamily Cerambycinae
Tribe Obriini
Genus *Anatolobrium* Adlbauer, 2004
Species *Anatolobrium eggeri* Adlbauer, 2004

We found an interesting longicorn beetle specimen during an investigation on specimens of the family Cerambycidae in the Zoology Museum of Gazi University (ZMGU). This specimen has been collected from Alanya (South Turkey: Antalya province) in 2001 and has not been evaluated yet. As a result of the identification process of this specimen, it was identified by the authors as *Anatolobrium eggeri* Adlbauer, 2004. It was described by Karl Adlbauer as a new genus and species of the tribe Obriini in Koleopterologische Rundschau 74: 419-421 pp. in 2004 from Alanya (Antalya province).

This monotypic genus is endemic to Turkey. Adlbauer (2004) mentioned that *Anatolobrium* gen. n. resembles very much in disposition, size and also colouring of the type Bolivarita Escalera, 1914 from Morocco. Adlbauer (2004) also included that it differs from *Pseudobolivarita* Sama, 2003; *Stenobrium* Kolbe, 1893; *Obrium* Dejean, 1821; *Axinopalpis* Dejean, 1835 and *Lioderina* Redtenbacher, 1845. It is interested that most close genus to this genus distributes in North Africa according to Adlbauer (2004).

The record presented with this study is the first record after original determination of the species. The specimens of type series of this very interesting species attracted to a light trap. Therefore, there is no further data on the biology of this species. According to examined adult specimen in the present study is in the middle of August (12.08.2001) whereas adults of type series are in the second half of July (14-28.07.2001). So, adults of this species are in the middle of July- middle of August.

Material examined: Turkey: Antalya, between Alanya-Çayarası plateau, Sarımut bridge env., 36º 37' N 32º 23' E, 12.08.2001, 1 male, leg. A. Hasbenli. The specimen deposited in Zoology Museum of Gazi University (ZMGU).

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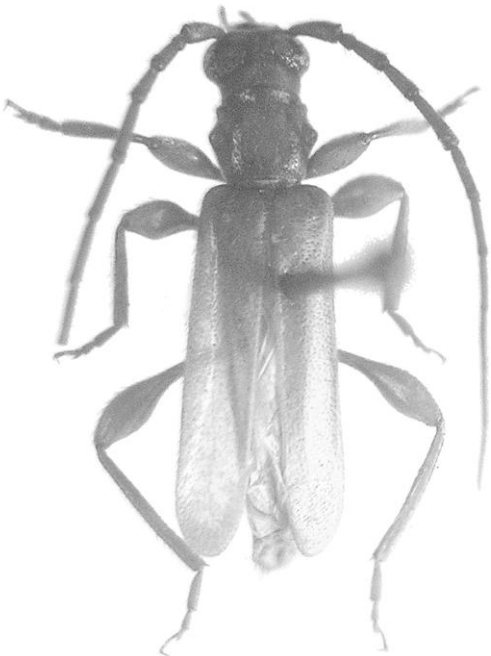

Fig. 1. Habitus of *Anatolobrium eggeri* Adlbauer, 2004.

SCIENTIFIC NOTE

AN INTERESTING DRAGONFLY RECORD, PSEUDAGRION SYRIACUM (SELYS, 1887), FROM TURKEY (ODONATA: COENAGRIONIDAE)

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[**Salur, A. & Kıyak, S.** 2006. An interesting dragonfly record, *Pseudagrion syriacum* (Selys, 1887), from Turkey (Odonata: Coenagrionidae). Munis Entomology & Zoology, 1 (1): 171-172]

As a summary of the present paper, *Pseudagrion syriacum* (Selys, 1887), known previously from only one locality in Turkey is now recorded from a second site.

Scientific expeditions were arranged to determine the odonate fauna of the east Mediterranean region of Turkey between 2002 and 2004. These expeditions were also arranged in Hatay province, which is one of the corridors to the Middle East where species of the Northern Levant region enter Turkey. One of these species is *Pseudagrion syriacum*.

During these surveys imagines of *Pseudagrion syriacum* which had previously been recorded from only one locality, were encountered from new localities during this expedition.

The first record of *Pseudagrion syriacum* from Turkey was given by Schneider (1995). Schneider determined two males which had been collected by Guichard in Hatay / Sariseki in 1960. Dumont (1973) did not observe this species during his expedition to Hatay.

Demirsoy (1982) did not include this species in his book on the Odonata of Turkey, but in his project report (1995), he included a record by reference to Schneider (1995).

No records are mentioned in researches dating from 1960 to 2003. Since this species lives in a very limited area in Turkey it should urgently be included in the Red List of Odonata of Turkey.

Material examined: 1 male, Hatay, İskenderun (Arsuz-Kepirce), small stream, 5 m, 36°29'N 35°59' E, 15.V.2003; 6 males, 1 female, same loc. 19.V.2004 (leg. & det. A. Salur). Examined material was deposited at the Zoological Museum of Gazi University (ZMGU).

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