The *Danacea* of Turkey: a contribution to their knowledge
(Coleoptera, Cleroidea, Dasytidae)

**Riassunto:** Le *Danacea* di Turchia: un contributo alla loro conoscenza (Coleoptera, Cleroidea, Dasytidae).

Il genere *Danacea*, in Turchia, oggi conta 36 specie (più 4 che sono state considerate incerte). Di queste, 5 sono qui descritte come nuove: *D. anemoura*, *D. dumifera*, *D. mersini*, *D. phrygia* e *D. tekirdagi*. Sono proposti due cambi di stato e 4 nuove sinonimie: *D. reitteri* Prochazka, 1894, considerata sinonimo di *D. marginata* (Küster, 1851) viene riabilitata a buona specie; *D. zolotarewi*, considerata sottospecie di *D. nigritarsis* (Küster, 1850) viene elevata a buona specie; *D. conicollis* Schilsky, 1897 e *D. tauricola* Pic, 1904 = *D. cavifrons* Pic, 1895; *D. valida* Heyden, 1878 = *D. olivacea* Baudi, 1873; *D. holtzi* Pic, 1904 = *D. sequensi* Reitter, 1901. Viene proposta una tabella di determinazione che include tutte le 36 specie note, o segnalate, di Turchia. Tutte queste specie sono state descritte e discusse ad eccezione di 9 di esse che, presenti anche nella penisola Balcanica, sono state recentemente incluse in un lavoro precedente (Liberti, 2009). Sono stati aggiunti i disegni di tutti gli edeagi, di numerosi tegmen e altre parti anatomiche, assieme a svariate fotografie dell’intero insetto. Cinque nomi, elencati e discussi separatamente, non sono stati associati ad alcuna specie nota e sono da considerare, per ora, dubbi. Sebbene quasi tutti i tipi siano stati reperiti e studiati, questo lavoro non può essere considerato una revisione ma, piuttosto, un contributo alla conoscenza della *Danacea* di Turchia: infatti molti problemi, sia tassonomici che di distribuzione geografica, non sono stati risolti in modo soddisfacente a causa dei materiali disponibili allo studio, che in diversi casi sono risultati insufficienti.

**Abstract:** Genus *Danacea*, in Turkey, currently include 36 species (plus 4 that are considered uncertain). Out of them, 5 are here described as new: *D. anemoura*, *D. dumifera*, *D. mersini*, *D. phrygia* and *D. tekirdagi*. Two changes of status and four new synonymies are proposed: *D. reitteri* Prochazka, 1894, previously considered a synonym of *D. marginata* (Küster, 1851) has been re-established as a good species; *D. zolotarewi*, previously considered subspecies of *D. nigritarsis* (Küster, 1850) has been raised to good species; *D. conicollis* Schilsky, 1897 and *D. tauricola* Pic, 1904 = *D. cavifrons* Pic, 1895; *D. valida* Heyden, 1878 = *D. olivacea* Baudi, 1873; *D. holtzi* Pic, 1904 = *D. sequensi* Reitter, 1901. A determination key is also proposed, which includes all the 36 species known, or reported, to live in Turkey. All these species have been described and discussed except 9 which, also present in the Balkans, have been recently included in a previous paper (Liberti 2009). Drawings of all median lobes, several tegmens and other dissected parts have been added, together with several photographs of the whole insect. Five names could not be reliably associated with a known species and remained uncertain; they have been separately listed and discussed. This paper cannot be considered a revision (although nearly all types have been retrieved and studied), rather a contribution to the knowledge of the Turkish Danacea: indeed many problems, both taxonomic and distributional, have not been satisfactorily solved due to the amounts of materials available for study, which in several instances result to be insufficient.

**Key words:** Taxonomy, Anatolia, Caucasus, Georgia, Armenia, Azerbaijan, new species.

**INTRODUCTION**

The *Danacea* Laporte de Castelnau, 1838 are small – 3 to 5 mm long – and often (not always) common beetles to be usually observed on flowers while feeding on pollen. The adults appearance season ranges from mid spring to mid summer, depending on altitude and on species. Adults *Danacea* are often easily spotted and can be very common: in Mediterranean areas simply sweeping meadows (chiefly when umbelliferous flowers are at hand) and beating blossoming bushes and trees usually results in the finding of several specimens.

Turkey is a large and diversified country, its fauna is rich and interesting and the Dasytidae are no exception. Unfortunately they are poorly known: except subfamily Chaetomalachiinae (extensively studied by Majer) nearly all the described species found here were published more than one century ago, often with very short (and/or rather meaningless) descriptions and without drawings, so that studying the types - scattered in several European Countries - remains the only practicable way to their understanding.

The writer started, years ago, to look for types of Turkish *Danacea* species, as well as to assemble materials and to study Museum’s and private collections, although rather scarce. A significant part of the materials studied has been personally found by the author in two entomological trips to Turkey (2010 and 2011). Nevertheless it has not been possible, yet, to reach a satisfactory knowledge of this genus in this Country, as extensively discussed here below.

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This work, while solving several problems, raises many (more) questions, as often happens. Studying types and individual specimens (even when types), or even individual populations, is often insufficient to properly understand a morphological species and its variability within its distribution range. Depending indeed on species it is, usually, paramount to see many population samples to correctly identify which characters are prone to variation and which ones, being more constant, bear specific value and are usable for diagnostic purposes. This paper is far from being a revision just because, for many taxa, insufficient amounts of materials have been available for study.

However it has been considered useful to publish the results achieved till now, even if incomplete, because it is certainly better to try establishing a starting point for further studies than to wait for a future, exhaustive and unlikely revision. The writer’s hope being that the availability of this inclusive paper on Turkish Danacea might help to raise interest in collecting and studying such an interesting genus (as well as the whole Dasytidae family) which, at the moment, is often incorrectly felt as awkward and difficult and, as a consequence, may not be very popular among entomologists (not just Turkish), both private and institutional.

The present study should be seen as an addition to the previously published revision of the Balkanic Danacea (Liberti, 2009) and should be read keeping it handy. Several species indeed live both in the Balkanic peninsula (European Turkey included) and in main Turkey and, having been already discussed in depth, are not included here to avoid unnecessary duplications. When relevant, reference will be made to descriptions and drawings previously published.

**Materials and Methods**

This paper is exclusively based on Danacea materials personally studied by the writer, totally not less than 1200-1300 specimens: a number that might be regarded as rather high but proved to be, by far, insufficient to the purpose of a revision. These materials come from several collections, both Institutional and private, here below listed with their abbreviations:

- **CAn** = collection Fernando Angelini, kept at the Natural History Museum, Florence, Zoological Department “La Specola”, Italy.
- **CCo** = collection Robert Constantin, Saint Lô, France.
- **CKo** = collection Andreas Kopetz, Amt Wachsenburg, Germany.
- **CLI** = collection of the author, Uboldo (VA), Italy.
- **CLK** = collection Andreas Link, Linz, Austria.
- **CMA** = collection Adriean Mayor, Gatlinburg, Tennessee, USA
- **CPN** = collection Philippe Ponel, Pourcieux, Aix en Provence, France.
- **CYI** = collection Erol Yildrim, Atatürk University, Agriculture – Plant Protection Dept., Erzurum, Turkey.
- **CZI** = collection Wolfgang Ziegler, Hamburg, Germany.
- **MBA** = Naturhistorisches Museum Basel, Switzerland.
- **MBE** = Museum für Naturkunde der Humboldt Universität, Berlin, Germany.
- **MBP** = Hungarian Natural History Museum, Budapest, Hungary.
- **MER** = Naturkunde Museum, Erfurt, Germany.
- **MGE** = Museo Civico di Storia Naturale “Giacomo Doria”, Genova, Italy.
- **MHE** = Finnish Museum of Natural History, Helsinki, Finland.
- **MLU** = Museum of Zoology, Lund University, Sweden.
- **MMI** = Museo Civico di Storia Naturale, Milano, Italy.
- **MNHN** = Museum National d’Histoire Naturelle, Paris, France.
- **MPR** = Museum of Natural History, Praha, Czech Republik.
- **MTC** = Entomology Collection of the Montana State University, Agriculture Dept., Bozeman, USA.
- **MTO** = Museo Regionale di Scienze Naturali, Torino, Italy.

The territory here considered is primarily Turkey however – also taking into account that the distribution areas of many species is poorly known – it includes the Caucasian region, the near east countries (Syria, Lebanon and Israel) and, marginally, Iran.

All dissections have been carried out working (in water) under a stereomicroscope (at variable magnification, usually from 15 to 30×) with the thinnest micropins found on the market (0.1 mm), suitably hooked at the sharp extremity and fitted with
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a wooden handle at the other. The insects have been softened by immersion in a solution of ethyl-alcohol in water (5-10%) for many hours (not less than 10-12), the abdomen carefully detached without damaging the dorsal setae coverage. Afterwards the abdomen only has been further softened by 1-2 minutes boiling in dilute potassium hydroxyde solution (1-2%), its dorsal integument opened, the whole content (inclusive of both last sternite and tergite) draw out and boiled again 1-2 minutes in the same KOH solution (the empty abdomen has been glued on the insect cardboard). Eventually the sclerotized components – namely median lobe with internal sac, tegmen, spicular fork, pygidium and last sternite – have been separated from each other and mounted in DMHF (see Liberti, 2005 for further details on this procedure) on a small transparent cellulose acetate label pinned under the insect cardboard.

This rather cumbersome procedure is necessary to keep pronotal and elytral setae coverage undamaged and to allow internal sac (of median lobe) to remain unbroken and well visible after mounting. Both setae coverage and internal sac are indeed very fragile and important for anatomic studies.

All drawings have been made with the aid of a grid 10× eyepiece, at variable magnifications (for median lobes mostly 50×).

Photographs have been taken, by the author, by means of a camera mounted on the microscope and – to extend the focusing depth – combined, as usual, with suitable software (Helicon Focus 6).

NOTES TO CHECKLIST

Species are listed in alphabetical order, with their synonyms. An asterisk marks the species previously discussed (Liberti, 2009) because also part of the Balkanic fauna. Under “Distribution”, countries are listed from north to south and from west to east. In brackets are the countries for which the presence of a species is likely but no data is available. Under “Typical localities”; only current, modern names have been used.

NOTES TO DISCUSSION OF THE SPECIES

The species are listed in alphabetical order. For easier reading of descriptions, reference should be made to the sections “Systematics” and “Abbreviations” here below. More information and explanations on Danacea anatomy can be found in Liberti (2009).

All Turkish localities names reported can be found (unless otherwise stated) on the “Euro Atlas Turkey” (Italian edition 1990/1991 released by FMB Bologna) 1:800.000. For Caucasian localities reference has been made to the map “Caucasus” 1:650.000 of the series “International Travel Maps” published by ITMB Publishing Ltd., USA. Efforts have been made, in transliteration of geographical names, to avoid doubts or confusions. In original descriptions many typical localities are reported with their ancient and often obsolete names: when relevant, both modern and old names have been given under the species discussion.

When a label has been transcribed (mainly for typical materials), square brackets enclose explanations or remarks (mostly writer’s comments) that are not part of that label.

Under the heading “Materials studied” are reported, for each species, all the known and reliable collecting localities, together with (in brackets) collector’s name, collecting year and depository. Being one of these three items not available, a question mark “?” has been put instead. A few times such (basic) information has been supplemented, within the same brackets, with relevant data for locality identification and/or with collection day and month when it has been felt useful to provide information on the species phenology. For certain species, known from a few specimens only, the full labelling has been supplied instead.

All specimens found in the old Authors collections, either types or simple (not typical) specimens pinned nearby, are reported under the heading “Type Materials” rather than under “Materials studied”.

Systematics

In descriptions below, the attempt has been made to always follow the same scheme in order to make them comparable with each other and with descriptions previously supplied for the Danacea of the Balkans (Liberti, 2009).

Only a minimum of anatomical information on genus Danacea is here provided together with definitions of several terms used in descriptions. For more details and further information on this genus anatomy please refer to Liberti (2009: 22-28) and Constantin & Liberti (2011: 12-30).

In drawings of anatomical parts, all median lobes have been represented in lateral sight, tegmens and last sternites in sternal sight. However, when dis-
secting, not always the aedeagus orientation appears to be exactly the same: rather it looks like it would be subject to a limited rotation, depending on specimen. Please also refer to Liberti (2009: Fig. 3).

**Head**

Head can be transverse, balanced or elongate (when the ratio l/w <1; ~1; >1 respectively); it can also be “narrower than”, “as wide as” or “wider than” pronotum and “shorter than”, “as long as” or “longer than” pronotum (always compare at maximum width).

Eyes can be: bulging, normally rounded or flattened.

Snout length can be short, median or long (sl/eyl <1.1; between 1.2-1.4; >1.5 respectively).

 Clypeus can be narrow, median or wide (ad/eyl <1.1; between 1.2-1.4; >1.5 respectively).

**Antennae**

Antennae can be long or short but, when they are regular (not noticeably short or long), usually this information is not provided; referring to articles 3-11 only, antenna can conform to one out of three possible schemes: “entirely of the same thickness”, “gradually widened” or “capitate”; a short description is also supplied on articles shape (elongate; balanced, namely as long as wide; transverse).

**Pronotum**

Pronotum can be transverse, balanced or elongate, the ratio PW/PL (or, sometimes, PL/PW) is supplied when different from 1.

Pronotal shape is important: it is expanded on lateral sides and narrowed ahead and behind; may be necked in the fore half, may have anterior angles normal or pointing outwards, lateral sides may be regularly or irregularly rounded.

**Elytra**

Elytra can be parallel (as in Fig. 92) or widened in apical half (as in Fig. 93), convex (as in Fig. 93) or depressed (as in Fig. 85), more or less bordered on lateral sides. Elytral apices can slope down in a regular convexity or can be flattened; they can also be divergent or joint, separately or jointly rounded apically. The apical angle can be rounded (undefined) or well defined (sharp); when it is well defined it can be obtuse, rectangular or acute.

**Abdomen**

The penultimate sternite can be emarginate or straight on posterior edge.

**Setae**

Setae are scale like on all the body surface. Dorsal setae can be dense or sparse (depending on their number per unit surface), thick or thin (depending on their diameter), more or less able to mask the colour of the underneath integuments. The setae colour may change from white to yellow-green. The pronotal discal setae pattern is a very important diagnostic character and can conform to 4 schemes (Schilsky, 1897; Liberti, 2009; see also below under “Determination key - General”) called group 1, group 2, group 3 and group 4.

- **Group 1**: all pronotum discal setae parallel and directed forwards (as, for example, in Fig. 84).
- **Group 2**: all pronotum discal setae directed forwards except in a rather small area, close to anterior side, where setae upturn and point backwards: the contrast between the two zones is, usually, clearly visible (as, for example, in Fig. 90).
- **Group 3**: all pronotum discal setae converge towards a point approximately located in the middle of pronotum (like the spokes of a wheel as, for example, in Figs. 95 and 96); this pattern may look, in certain species, more or less intermediate with group 2 (when the setae close to anterior border run more or less transversally, pointing towards the middle).
- **Group 4**: pronotum setae show a crosswise line on disc which results from the confluence of anterior setae directed backwards and posterior ones directed forwards (as, for example, in Fig. 93).

Characters relating to pronotal setae pattern are meaningful and useful for determination although not very selective and – at times – of difficult application because they may show a rather high variability (often sex dependent); in certain species they may show intermediate, difficult to define patterns.

**Body colour**

Overall dorsal colour results from the overlap of setae over integuments and varies from ashen white (as in D. albella which has white setae hiding the integuments) to blackish (as in D. klapperichi which has no dorsal setae or in D. satanas which has thin, sparse and poorly covering setae). Setae are usually light
coloured: white to yellow ochre with greenish hints; integuments are dark, usually blackish with more or less evident greenish reflexes. Legs and antennae may be pale (yellow) to dark brown.

**Aedeagus**

By aedeagus it is here meant the assembly of three parts.

*Median lobe* which, in *Danacea* (as in many other Dasytidae) approximately takes the form of an L: it bears important diagnostic characters and its profile is here shown in the drawings.

*Internal sac* is the membranous tubular structure placed inside the median lobe. For description purposes it has been arbitrarily split in three parts: basal (the part inside the median lobe apical half, often visible through the integument), intermediate (usually placed inside the median lobe basal part, or slightly exceeding it) and apical (or distal, usually dangling outside the median lobe base). The distal part is very fragile and dissection must be done carefully to prevent damages; at times the internal sac may end with a sclerotized small structure here called *distal spine* which seems to be population variable and possibly important in certain species. Useful internal sac characters are length, granulation, spinules, presence of basal lamellae and/or a distal spine.

*Tegmen* is the part (approximately) elliptical, placed transversally over the median lobe. It may show important characters too, as a basal tooth or an apical tip (bearing the terminal setae) more or less extended.

*Also spicular fork, last sternite and last tergite* (pygidium) may bear useful characters.

More information on the aedeagus of *Danacea* may be found in Liberti (2009: 27, Figs. 2 and 3).

**Size**

Size has been defined as very small (<3 mm), small (3.0-3.7 mm), medium (3.7-4.5 mm), large (4.5-5.5 mm) or very large (>5.5 mm) following the total length of the insect.

**Notes on Measurements**

Measuring has always been carried out by means of a micrometer built in the microscope ocular. When measures are supplied as averages ± interval, this has been evaluated by T testing at 95% probability (unless differently stated) at the given number of measures (from 2 to 6, always reported).

When measuring:

- head, snout and eye length, the specimen has been suitably inclined in order to place head horizontally (please also refer to Liberti 2009: 112, Fig. 73);
- total length (TL): from elytral apex to the mandibles with specimen placed horizontally; head being variably inclined (depending on mounting) TL is affected by (minor) incorrectness;
- elytral length (EL): in the middle, from elytral apex to base, scutellum included;
- pronotum width (PW): always the maximum width, usually approximately in the middle;
- elytral width (EW): both elytra together, always the maximum width, approximately at 2/3 of their length. When elytra are slightly apart, the opening width has been subtracted from the measure.

When comparing widths (for example pronotum or elytra), always their maximum width is taken into account.

**Meaning of a few terms**

- balanced = as long as wide
- dense, sparse: when referred to setae, these terms relate to their number per unit surface
- elongate = longer than wide
- sclerotized = hard, not transparent (antonym of membranous)
- thick, thin = when referred to setae, these terms relate to their diameter
- transverse = wider than long

**(N1) Note 1, on three geographical names**

At least 3 Turkish geographical names have been (repeatedly) found in the *Danacea* literature as typical localities of certain species, but their actual location is, today, either doubtful or still subject to discussion. They are:

*Akbes*: the writer believes that the actual geographical position of Akbes (today Akbez) would be close to – namely 6 Km N of – Hassa and about 40 Km NE of Iskenderum. Indeed the Delagrange (1895: XCI) description of Akbes location is clear and leaves no room to doubts.
**Kızıl Dagh:** this name, meaning “reddish mount” (Maurizio Pavesi, personal communication) has not been associated with any definite place. It is a rather common geographical name in Turkey, recurring many times over the Country. In his description of *D. nitidissima* (whose types are labelled Kızıl Dagh) Pic writes “Taurus (Cilicia)” as typical locality for this species. That means southern Turkey, possibly the region more or less north of Tarsus and Adana. In this area the writer found several “Kızıl Dagh” simply looking at a couple of Turkey maps.

**Gjölbani:** also this name has not been reliably associated with a locality. The spelling might correspond to the present “Gölbasi”, which might be a place located near Kas, in the Antalya province (a suggestion put forwards by Soleglad et al., 2009: 2). Problem is that, even accepting the spelling change, there are several other Gölbasi in Turkey and the one indicated by Soleglad et al. (2009) does not appear on any looked up road map.

**(N2) Note 2, on Reitter and Procházka types**

The holotypes and paratypes labellings found on Reitter and Procházka types at MBp – white with a red border and partly handwritten (below abbreviated “wrb”) – are not original and have been added subsequently. These holotype and paratype “designations” have never been published and are deemed to be invalid. In the Reitter and Procházka original descriptions there is no explicit holotype and paratypes designation (as was usual in the years around 1900). It has been here assumed that, whenever relevant, all specimens belonging to Reitter or Procházka typical series are syntypes [a personal communication of O. Merkl (October 2009) fully shared by the writer; see also ICZN (1999: Recommendation 73F)].

**ABBREVIATIONS**

**Geographical**

| Abbr  | Term       |
|-------|------------|
| AB    | Azerbaigian|
| AR    | Armenia    |
| BG    | Bulgaria   |
| BK    | Balkanic Peninsula |
| GG    | Georgia    |
| GR    | Greece     |
| H     | Hungary    |
| I     | Italy      |
| IN    | Iran       |
| IS    | Israel     |
| LE    | Lebanon    |
| RC    | Russian: Caucasian Territories |
| SE    | Serbia     |
| SY    | Syria      |
| TK    | Turkey (European) |
| TR    | Turkey (Asiatic) |

**Other abbreviations**

- **ad** = antennal distance, measured at their insertion
- **coll.** = collection
- **EL** = elytral length
- **EW** = elytral width
- **eyl** = eye length
- **hw.** = handwritten
- **hwr.** = handwritten on red paperboard
- **l** = length
- **loc. typ.** = locus typicus
- **PL** = pronotum length
- **PW** = pronotum width
- **pr.** = printed
- **prov.** = province
- **pr.** = printed on red paperboard
- **sl** = snout length, from anterior edge of eye to mandibles tip
- **TL** = total length
- **up.** = not published (used for certain type specimens to whom a typical label has been added but never published)
- **w** = width
- **wrb.** = a label for types found at MBp, white with a red border, handwritten except “Holotype” (or “Paratype”) which is printed red (please see note printed red: please see Note 2 (N2) here above)
- **/** = line break (only in labels transcriptions)
- **(N1)** = a discussion on this geographical name is supplied in note 1(N1) here above
- **(N2)** = a discussion of the labelling of this type is supplied in note 2 (N2) here above
- **(F)** = females only have been studied
### Checklist

The list here below includes 36 species, or subspecies (totalling 51 names) known, or reported, to live in Turkey, 5 of them being new:

| Species | Distribution | Typical locality |
|---------|--------------|------------------|
| *albella* Reitter, 1900 | TR | Konya (TR) |
| *anemoura* n. sp. | TR | Saimbeyli (TR) |
| atricornez Schilsky, 1897 | TR | Anamur (TR) |
| antennata Küster, 1850 | TR | Akbez(N) (TR) |
| antennata Küster, 1878 | TR | Dzhubga (RC) |
| antennata Küster, 1850 | TR | Aladag (Adana TR) |
| antennata Küster, 1850 | TR | Konya (TR) |
| antennata Küster, 1850 | TR | Isparta (TR) |
| antennata Küster, 1850 | TR | Mersin (TR) |
| antennata Küster, 1850 | TR | Syrian (unspecified) |
| antennata Küster, 1850 | TR | Crimea (unspecified) |

*species already discussed in Liberti (2009).

**an unnecessary replacement name.
A few further names – the 4 (or 5) below listed – remained poorly known to the writer and are considered uncertain either because the relevant types have not been retrieved or, the studied type being a female (or unclear for other reasons), it was not possible to understand it properly:

| Common Name | Reference | Distribution | Typical Locality |
|-------------|-----------|--------------|------------------|
| citrina     | Procházka, 1894: 23, 31 | TR, LE | Lebanon (unspecified) |
| genistae    | Marseul, 1868: 190 | tr, LE | Lebanon (unspecified) |
| = var. berytensis Pic, 1902: 31 (teste Mayor, 2007) | | | |
| peyroni     | Pic, 1902 | LE | Beirut (LE) |
| splendida   | Pic, 1903 | TR | Tokat (TR) |

However the actual number of Turkish Danacea species is higher: the list above reported is far from complete. Several more “new” species (at least 5 to the writers knowledge), only known from 1 or 2 specimens, have not been described and remain outstanding.

**Determination keys**

All determination keys are valid for males only. For easier utilization, similar species have been grouped in sets to be firstly identified in a General Key, than separately keyed for species identification. These sets have been assembled for determination purposes only and should not be regarded as natural groups of related species.

**General Key**

Here below six sets and six individual species (the ones not included in the sets) are keyed jointly. This General Key includes the following:

- anatolica set
- iners set
- marginata set
- olivacea set (namely group 1)
- spinicollis set
- zolotarewi set (namely group 4)
- klapperichi
- nitidissima
- ochroleuca
- particularipennis
- quintilis
- satanas

1 Insect body dorsally nearly naked. Pronotal setae undetectable: their arrangement cannot be assessed. Dorsal setae very thin and sparse, visible only on body sides; overall colour blackish. Only known from the types, from nearby Bolu (TR) .................. klapperichi

- Insect body dorsally covered with scale-like setae. Pronotal setae evident, their arrangement nearly always clearly detectable (exceptions might be, at times, certain D. satanas specimens). Dorsal setae visibly present all over the dorsal surface (Figs. 84 and 85)..........................................................2

2 Pronotum anterior angles modified in a sharp and pointed extension, more or less developed (Figs. 85-87). Size medium to large............spinicollis set

- Pronotum anterior angles simple, rounded (Fig. 84). Size variable..................................................3

3 Pronotal discal setae arranged as in group 1 (all approximately parallel and directed forwards: Figs. 84) ............................................................olivacea set

- Pronotum discal setae arranged differently (as in groups 2, 3 and 4)..................................................4

4 Pronotal discal setae arranged as in group 4 (converging along a median, transverse line visible all over the disc: Fig. 93)......................zolotarewi set

- Pronotum discal setae arranged as in group 2 ( all setae directed forwards except in a small area close to the anterior border where they invert direction and point backwards: Fig. 90), group 3 (converging towards a point in the middle of disc, approximately like the spokes of a weel: Fig. 95) or somewhat intermediate between the two..............5

5 Dorsal integuments bicoloured - greenish-black and reddish - with at least elytral apex reddish. Size small. Pronotal discal setae arranged as in group 3 .................................................................marginalata set

- Dorsal integuments of one colour only (greenish-blackish or, rarely, orange to yellow). Size variable. Pronotal discal setae arranged as in group 2, group 3 or in between.............................................6
6 Pronotal discal setae pattern as in group 3 (or, at times, somewhat intermediate between 3 and 2). Size small .................................................. 7
- Pronotal discal setae pattern as in group 2. Size variable .................................................. 8

7 1st antennal article large, nearly as long as wide, sub-triangular. Anterior side of pronotum shorter than posterior. Bulgaria, European Turkey ................. quinitilis
- 1st antennal article small, clearly longer than wide, sub-conical. Anterior and posterior sides of pronotum more or less equal. South west Turkey (Antalya, Konia, Icel and Adana provinces) .................. nitidissima

8 Head large, elongate (longer than wide), forehead wide, eyes rather small and flattened, snout long to very long .................................. iners set
- Head normal, either elongate, balanced or transverse, forehead normal, eyes normally rounded or bulging, snout variable (short, median or long) .. 9

9 Elytra lateral margin normal: narrow (and, at times, only visible in the fore half) to absent (Fig. 91) .... anatolica set
- Elytra lateral margin wide, its edge slightly raised (Fig. 88) ............................................. 10

10 Size large. Pronotum clearly transverse, nearly as wide as elytral base, its lateral sides flattened and expanded. Elytra more or less parallel, at most moderately widened in apical half. Entirely black, dorsal setae thin and sparse, grey (poorly hiding the integuments beneath), at times pronotal setae hardly visible on disc (detecting their arrangement might be difficult). Altitudinal species: central Turkey, Caucasus ........................................ satanas
- Size medium to small. Pronotum moderately transverse, narrower than elytral base, its lateral sides sloping down regularly. Elytra clearly widened towards apex. Integuments colour yellow, reddish or black, dorsal setae rather thick and dense, green-yellowish to whitish (more or less hiding the integuments), discal setae always visible .............. 11

11 Dorsal integuments, legs and antennae black. Antalya province (TR) ................................... particularipennis
- Dorsal integuments yellow or reddish-yellow; legs and antennae only partially black. Antalya province (TR) .......................................... ochroleuca

Key for anatolica set

Species included: anatolica, anemoura, bleusei, cavifrons, flava, grandiceps, induta, phrygia, tekirdagi.

1 Pronotum shaped nearly as a trapezium (anterior side definitely shorter than posterior), maximum width close to posterior border, lateral sides nearly straight. Southern central Turkey (Kayseri, Adana, Kahraman Maras, Iskenderun provinces) cavifrons
- Pronotum differently shaped, with lateral sides expanded (more or less irregularly) and maximum width approximately in the middle ........................................ 2

2 Legs reddish with femora more or less darkened (at least on the upper side) .................. 3
- Legs entirely pale (yellowish) .................. 4

3 Elytra clearly convex, sloping down gradually at apex, narrowly bordered on lateral sides. Caucasus, Iran (Golestan) ........................................... induta
- Elytra moderately convex and flattened apically, rather widely bordered on lateral sides. Western Caucasus: Georgia, Russia .................................. caucasica

4 Head, with eyes, just wider than pronotum. Pronotum narrow, elongate to balanced. Body shape narrow, parallel ............................................. 5
- Head, with eyes, not wider (usually narrower) than pronotum. Pronotum transverse. Body shape wider, less parallel (often elytra slightly widened towards apex) ............................................. 7

5 Size smaller (2.8-3.4 mm). Elytral apical angle very well defined (rectangular to acute). Dorsal setae colour pale grey. Western Icel province (TR) ........... anemoura
- Size larger (3.5-4.4 mm). Elytral apical angle moderately rounded. Dorsal setae colour yellowish ....... 6

6 Clypeaeus wide. Pronotum balanced (or just transverse) (see couplet 10). A little known species; Adana province (TR) ........................................ anatolica
- Clypeaeus narrow. Pronotum narrower, longer than wide. Rodos (GR), Aegean Turkey (Aydin province) ................. bleusei
7 Antennae gradually and clearly widened from article 2 to apex. Tekirdag province (TK). *tekirdagi*
   - Antennae not (or slightly) widened towards apex, at least articles 5-9 of equal width ..........8

8 Eyes with a few sparse, very short setae (high magnification necessary to detect them: Fig. 90). Penultimate sternite evidently emarginated on rear border. Caucasus (at least Armenia and Georgia), Erzincan province (TR) .........................*flava*
   - Eyes without visible setae. Penultimate sternite straight (or very feebly concave) on rear border...9

9 Smaller size (3.3-4.0 mm). South west Turkey (Mugla province)..........................*grandiceps*
   - Larger size (3.5-5.0 mm)............................10

10 Head narrower than pronotum, with a narrow clypeus. Antennae shorter: articles 9 and 10 balanced. Dorsal setae yellowish. Southern part of central and western Turkey (from Adana to Canakkale provinces) ..............................*phrygia*
   - Head (with eyes) slightly wider than pronotum........2

Key for *inermis* set
   Species included: *inermis inermis*, *inermis purkynei*, *delagrangei*, *thessalonicensis*, *tokatensis*.

1 Head narrower than pronotum. North-east Greece. Probably present in European Turkey ................
   - Head as wide as - or wider than - pronotum ......2

2 Antennae short with articles compressed, transverse (except 2 and 3). Legs, antennae and integuments blackish, setae sparse, pale grey. Pronotum very transverse. Lesvos (GR), Aegean Turkey (Izmir province).........................*delagrangei*
   - Antennae longer with at least articles 4 and 5 longer than wide. Legs and antennae yellowish with last antennal articles, tibiae and tarsi more or less darkened; setae rather dense, yellowish to whitish....3

3 Pronotum shape normal: slightly necked forwards, irregularly widened in the middle and narrowed backwards. Greece, Bulgaria..............*inermis inermis*
   - Pronotum nearly trapezium shaped: wider forwards than backwards and nearly straight on lateral sides. European Turkey (Kirkłareli province)......................*inermis purkynei*

Key for *marginata* set
   Species included: *marginata*, *reitteri*, *apicalis*, *maculipennis*, *mersini*. Being very similar to each other, their determination may require dissection (with a further difficulty of high median lobe variability).

1 Elytra convex with convex apical slope; apical angle rather well defined, acute. Balkan Peninsula, Hungary. Possibly present in European Turkey...... *marginata*
   - Elytra more or less flattened, apical slope rather flat; apical angle rounded, undefined ..........2

2 Elytra shorter and flat, apical angle widely rounded. Turkey (north, center and south-west), Georgia, Russia: Caucasian Territories.......................*reitteri*
   - Elytra longer and moderately more convex, apical angle more slender, rounded ..................3

3 Elytra more convex, apical angle rounded and slender (more than in the following 2 species), median lobe apex clearly bent dorsally. Icel province (TR) ..................*mersini*
   - Elytra more flat, apical angle widely rounded (more than in *D. mersini*), median lobe apically straight . ..................................................4

4 Elytra slightly longer, often (not always) with apparently naked, symmetrical spots, median lobe longer. Israel, Lebanon, Turkey (to be confirmed) ........................................*maculipennis*
   - Elytra slightly shorter, always without apparently naked, symmetrical spots; median lobe shorter. South central Turkey (Adana, Kahraman Maras, Gaziantep, Iskenderun provinces) ..................*apicalis*
Key for *olivacea* set (group 1)

Species included: *lysholmi, olivacea, sequensi, syriaca, micans*.

1 Pronotum anterior angles well defined and fitted with a small, sharp tooth pointing outwards; pronotal setae pattern more or less intermediate between groups 1 and 2. (See also couplet 3 of *spinicollis* set). A little known species. South central Turkey (Mersin and possibly Iskenderun provinces) .........................

- Pronotum anterior angles clearly rounded; pronotal setae more clearly following group 1 pattern....

2 Dorsal setae thick and dense, overall colour greenish-yellowish. Penultimate sternite clearly emarginated on rear border. South east Turkey (Iskenderun, Mardin provinces) ..................*

- Dorsal setae thin and sparse, overall colour greenish-grey. Penultimate sternite straight or slightly emarginated in the middle of rear border.............

3 Dorsal surface bright with evident metallic lustre. Caucasus (Armenia, Azerbaijan, Russia: Caucasic Territories) ................................................................. *

- Dorsal surface rather dull..................................

4 Large to very large size, head larger and longer with eyes comparatively smaller. North-east Turkey, Caucasus, Iran.......................................................... *

- Medium size, head smaller and shorter with eyes comparatively larger. South central Turkey (Antalya, Konya, Icel provinces) .................................................................

Key for *spinicollis* set

Species included: *albella, spinicollis, lysholmi, dumifera*.

1 Dorsal setae white, short and dense, well hiding the integuments beneath: overall dorsal surface ashen coloured. Southern central Turkey (Konya and Karaman provinces) ........................................

- Dorsal setae yellow or pale grey – if grey, thin and sparse, incompletely covering the blackish integuments underneath ................................

2 Dorsal setae pale grey, thin and sparse (a poorly known species, Isparta province) ...........

- Dorsal setae yellowish, dense ................................

3 Pronotum anterior angles expansions large, triangular. South central Turkey (Adana, Icel, Iskenderun provinces) ..................

- Pronotum anterior angles expansions small, not very evident. (See also couplet 1 of *olivacea* set). A little known species. South central Turkey (Mersin and possibly Iskenderun provinces) ........

.................................................................

Key for *zolotarewi* set (group 4)

Species included: *zolotarewi, oertzeni, nigritarsis antennata*.

1- Size larger (TL=3.2-4.2 mm), setae coverage dense, overall colour greenish yellow, elytra widened in posterior half. Dodecanese Islands (Greece), Aegean Turkey (Aydin and Mugla provinces) ...........

- Pronotum slightly more transverse (PW/PL = 1.17-1.20). Median lobe more slender (Figs. 47-52). Northern Turkey (from Bolu to Erzurum provinces), Georgia, Russia: Caucasic Territories.

.................................................................

2 Pronotum slightly more transverse (PW/PL = 1.17-1.25). Median lobe thicker (Liberti 2009: 114, Fig. 92). European Turkey ..........

- Pronotum slightly less transverse (PW/PL=1.10-1.20). Median lobe more slender (Figs. 47-52). Northern Turkey (from Bolu to Erzurum provinces), Georgia, Russia: Caucasic Territories.

.................................................................

**DISCUSSION OF THE SPECIES**

Twenty-seven species (plus a general comment on the “*D. marginata* group”) have been included in the following catalogue, arranged in alphabetical order. Further 9 species (and subspecies), marked with asterisk (*) in the above checklist, have been recently described and fully discussed (Liberti, 2009): for them, only new distributional information, when available, are supplied here below.

Species belonging to the *D. marginata* group (namely *D. apicalis, D. maculipennis, D. mersini, D. reitteri*) have been preliminary discussed together under the heading “*D. marginata* group” because of their similarity and their peculiar variability.

Further 5 names – *D. citrina, D. genistae, D. genistae var. berytensis, D. peyroni, D. splendidica* – have not been satisfactorily associated with a corresponding species and are considered, for the time being, as uncertain: they are shortly discussed separately.
Danacea albella Reitter, 1900 (Figs. 15, 16, 85)

Danacea albella Reitter, 1900: 86, loc. typ. Konya (TR); Pic 1900: 27; Schilsky 1900: n. 12; Pic 1937: 8; Mayor 2007: 395.

Type Materials: 4 syntypes (♀♂ 2♀♀) are at MBp: 1♀: “Anatolien / Konia 1899 / leg. Korb” hw.; “Holotypus 1900 / Danacea / albella / Reitter” wrb., up.; “coll. Reitter” pr. 1♂: “Anatolien / Konia / 1899 Korb” pr.; “Paratypus 1900 / Danacea / albella / Reitter” wrb., up.; “coll. Reitter” pr. 1♀: “Anatolien / Konia 1899 / leg. Korb” hw ; “Paratypus 1900 / Danacea / albella / Reitter” wrb., up.; “coll. Reitter” pr. 1♂: “Anatolien / Konia 1899 / leg. Korb” hw.; “Paratypus 1900 / Danacea / albella / Reitter” wrb., up.; “coll. Reitter” pr. 1♀: “Anatolien / Konia 1899 / leg. Korb” hw.; “Paratypus 1900 / Danacea / albella / Reitter” wrb., up.; “coll. Reitter” pr.

To all the syntypes a further label has been added: “Syntype/ Danacea/ albella/ Reitter/ vidit Liberti Jan. 2010” prr.

Eleven further syntypes (3♂♂, 8♀♀) are in coll. Pic (boite III), at MNHNp: 1♂: “Anatoliens / Konia / 1899 Korb” pr.; “type” hw. by Pic; “Type” prr.; “albella (Reitt.)” Pic hw. (by Pic ?); remounted and dissected. 1♂: “Anatolien / Konia / 1899 Korb” pr.; “albella (Reitt.)” Pic hw. (by Pic ?). 1♂ and 2♀♀: “Konia / Korb” hw. by Pic; previously pinned together, remounted and – 2♀♀ – re-labelled: “[Manuscript par M. Pic]/ Konia / Korb” pr. 5♀♀: “Anatolien / Konia / 1899 Korb” pr.; “albella (Reitt.)” Pic hw. (by Pic ?). 1♂ and 2♀♀: “Konia / Korb” hw. by Pic; “type” hw. by Pic; “type” prr.

All the MNHNp syntypes have been further labelled: “Syntype/ Danacea/ albella/ Reitter/ vidit Liberti IX.2009” prr.

Pic (1900: 27, dated February 28th, 1900) in his description of D. lysholmi compares this species with D. albella, explicitly reporting, for it, the Reitter’s authorship. The actual Reitter publication date of D. albella is July 1900. The clearly stated recognition by Pic of the Reitter authorship is considered an evident priority disclaimer (ICZN 1999, Art. 8.3).

Description (Fig. 85). Size medium to large: length in mm: ♂♂ 4.0-4.5; ♀♀ 4.3-5.1.

♂. Head large, moderately elongate (l/w=1.1-1.2), longer than and narrower than pronotum (much narrower than anterior edge and slightly narrower than in the middle of pronotum); eyes small and flattened; snout long (sl/ eyl >1.8), clypeus wide (ad/eyl=1.6-1.9). Antennae long, feebly widened apically (articles 8-11); articles 3-5 elongate; 6-10 slightly elongate to balanced.

Pronotum feebly transverse (PW/PL=1.1-1.2); its maximum width on anterior edge; anterior angles very salient, pointing outwards in a kind of sharp tooth; lateral sides expansions nearly absent; laterally rounded; narrowed backwards in a more or less regular bend. Elytra rather short (EL/EW <2) and depressed, widely bordered; apices flattened, divergent; apical angle poorly defined, approximately rectangular (to obtuse). Abdomen penultimate sternite feebly emarginated to straight on posterior edge.

Pronotal discal setae arranged as in group 2 (at times somewhat intermediate to group 1). Dorsal setae densely packed and thick, white coloured, well masking the integument beneath. Dorsal integuments blackish with green reflections, punctured, rather bright. Overall dorsal colour ash grey to whitish (at times with a narrow, pale to yellowish border on elytra, possibly wider near apices). Legs yellow with tarsal articles more or less darkened; antennae reddish-yellow with article 11 often darkened; mouthparts reddish with mandibles apices darkened; palpi black.

Median lobe as in Figs. 15 and 16. Internal sac short or intermediate length, basal lamellar process membranous, hardly visible; very finely granulated, this granulation hardly detectable and, often, more visible in the median part. Tegmen normal with normally rounded apex. Spicular fork branches thin, feebly widened at base.

♀. Head much narrower than in males, with eyes more flattened. Elytra widened in apical half. Elytral apices nearly joint, jointly rounded, apical angle better defined, rectangular.

Notes. Rather close to the D. iners group as general appearance and median lobe, showing a prontal shape modification (widening of anterior half) similar to the one already reported for D. iners purkynei (Liberti 2009: 59) and, in addition, the anterior angles developed and pointing outwards, as in some other Turkish species (here named D. spinicollis group).

Materials studied. Turkey. Turchia [sic] (?, ?, MMi). Karaman prov.: Ermenek (Constantin, 9.V.2003, CCo & CLi).

Danacea anatolica Schilsky, 1897 (Figs. 21 and 22)

Danacea anatolica Schilsky, 1897: n. 58, loc. typ. Saimbeyli; Pic 1937: 7; Mayor 2007: 395.
The Danacea of Turkey: a contribution to their knowledge (Coleoptera, Cleroidea, Dasytidae)

TYPE MATERIALS. Schilsky, in his original description, reports 1 couple, sent by Manissadjan, in coll. Heyden. One syntype, ♀ (not reported by Döbler, 1982), of this species actually is at the Senckenberg Deutsches Entomologisches Institut of Münchenberg, where collection Heyden is kept. It is labelled: “Topak ardxut / Hadjin, Förster” [(Schilsky, in his description, mistakenly writes “Tepek asdutsch…”) a partial translation might be: “hills …. Saimbeyli”]; “[blank]”: a small, unwritten cardboard square, white; “anatolica ♀ / m.” hw by Schilsky; “SYNTYPUS” prr.; “DEI Müncheberg / Col. 07609” pr. pale blue. The second syntype, ♂, dissected by K. Majer, is at MBe, labelled: “Anatolia / Heyden”; “anatolica / Schils” both hw. by Schilsky; “Danacea / anatolica Schilsky / ex coll. J. Schilsky” pr.; “Syntypus / (Liberti 2015)” hw. red. Close to the MBe syntype, a small series of toptypes (3♂♂, 4♀♀) is pinned: 1♀: “Hadjin Dagh / As. minor” pr.; “D. Förster” [but difficult to read]. 1♂ unlabelled 3♂♂ and 2♀♀ labelled “Hadjin / Förster [?]” hw. by Schilsky, All of them bear two further labels: “Danacea / anatolica Schilsky / ex coll. J. Schilsky” pr. and “Topotypus / Danacea / anatolica Schilsky / Liberti, jan. 2015” pr., yellow.

The latter 7 specimens cannot be types because this species was described on 1 couple only. One further specimen, ♀, shows a different elytral apex and might not be a D. anatolica. For this reason it has been taken off the above reported series.

DESCRIPTION. Medium size: TL in mm: ♂♂ 3.7-4.4, ♀♀ 3.9-4.3. ♀. Head large, slightly elongate (l/w=1.0-1.2), longer than – and as wide as (or slightly exceeding) – pronotum; eyes normally rounded; snout long (sl/eyl=1.4-1.5); clypeus wide (ad/eyl=1.4-1.5). Antennae rather long and uniform: articles 4-9 of the same thickness and moderately elongate; article 2 short and rounded; 3 thinner than subsequentes, conical; 10 and 11 elongate, very slightly wider than the previous ones. Pronotum moderately transverse (PW/PL≈1.1); its maximum width in the middle or just behind; lateral sides expansions well visible and rather angular; slightly necked forwards. Elytra rather flat, parallel, feebly bordered in basal half; apices flattened, jointly rounded; apical angle rectangular and visible although slightly rounded. Posterior edge of penultimate sternite straight.

Pronotal discal setae arranged as in group 2 but somewhat intermediate with group 3. Dorsal setae dense, rather long and thin, similar in shape on pronotum and on elytra, moderately covering the integuments which are dark brown to blackish, rather rough on pronotum and punctuated on elytra, the overall colour appears greenish yellow due to the setae coverage; legs and antennae yellow; palpi and mandibles yellow, epistoma dark.

Median lobe as in Fig. 21, apical tip narrow and pointing up. Internal sac apparently very short, not exceeding the median lobe base; in its apical part (namely the part near the median lobe base) it clearly shows a tiny denticulation, from indistinct to granulose; a basal structure (inside the median lobe apical half) is also present, rather indistinct, including two thin, hardly visible lamellae. Tegmen (Fig. 22) elliptical, apically fitted with a thin extension bearing the apical setae. Spicular fork thin, branches feebly widened basally. ♀. As the ♀ but head not as large, clearly narrower than pronotum, eyes moderately smaller, antennal articles 9, 10 and 11 slightly wider than the previous ones, elytra widened in apical half and elytral apical angle very clearly defined, rectangular.

NOTES. A little known species; similar to D. phrygia from which males only can be differentiated by median lobe shape and a few external characters, as shown in Tab. 1.

Tab. 1. Main differences among D. anatolica and D. phrygia.

| Character          | D. anatolica                  | D. phrygia                  |
|--------------------|-------------------------------|-----------------------------|
| Clypeus            | Wide: ad/eyl >1.4             | Rather narrow: ad/eyl <1.2   |
| Antennae           | Longer, articles 9 and 10 elongate | Shorter, articles 9 and 10 approximately balanced |
| Dorsal setae       | Thinner, not very covering    | Thicker, well covering       |
| Elytral apical angle| Better defined, rectangular   | Rounded off, more or less undefined |
MATERIALS STUDIED. Only the above referred syntype and totopotypes.

**Danacea anemoura** n. sp. (Figs. 32, 33, 92)

A small, whitish-green, pronotal setae of group 2, elongated species, TL=2.8-3.4 mm.
Typical locality Anamur (Mersin province).
The name is an arbitrary adjective from “Anemourion”, ancient name of the typical locality.

**TYPE MATERIALS.** Holotype ♂ (MMi), 2 paratypes (2♂♂: CCo and CLi): “Türkei 25.IV.67 / J. & S. Klapperich” pr.; “Montagnes prs / Anamur” hw. by Wittmer. 1 paratype (♂: CCo): “Türkei 24.IV.67 / W. Wittmer” pr.; “Kanlidivane / Erdemli” hw. by Wittmer. All types bear a further label “Holotypus [or Paraty pus] / Danacea / anemoura Lib. / Liberti II.2015” hwr.

**DESCRIPTION (males only)** (Fig. 92). Head regular or just elongate (L/W=1.0-1.1), wider and longer than pronotum (but in the Kanlidivani specimen head and pronotum are approximately equal in length and width); eyes bulging; snout regular (sl/eyl=1.20-1.25); clypeus narrow (ad/eyl≈1). Antennae rather short, moderately and regularly widened from base (article 3) to apex; articles 3-6 more or less triangular; 3 much thinner than 4 and both elongate; 7-10 globular, transverse.

Pronotum regular to slightly elongate; lateral expansions weak and rather angular; maximum width in the middle, moderately narrowed forwards and backwards.

Elytra parallel, rather flattened, narrowly bordered in basal third only; apices fairly flatly bordered, joint or very slightly apart, jointly rounded; apical angle very well defined, rectangular or slightly acute. Abdomen penultimate sternite truncated on posterior border.

Median lobe thin, apically fairly rounded (Fig. 33). Spiculare fork thin with branches only slightly widened basally.
Dimensions in mm: ♂. TL=3.19±0.37, PL=0.65±0.06, EL=2.01±0.23, PW=0.65±0.06, EW=0.96±0.10 (4 specimens, 95% probability).

**NOTES.** A species poorly known, only from the types. Female unknown.

**MATERIALS STUDIED.** Only the types.

**Danacea apicalis** Pic, 1894 (Figs. 61-69, 98)

**Danacea nana** Kiesenwetter, 1863 race **apicalis** Pic 1894b: 135, loc. typ. Akbez(1); Chobaut, 1895: CLV [status change to good species]; Pic 1895a: 53; Pic 1897: 96 [suspected variety of *D. marginata* Küster, 1851]; Pic 1937: 7; Mayor 2007: 395.

= *Danacea abeillei* Chobaut, 1895: CLV [name change for (wrongly) claimed homonymy with *Dasytes apicalis* Gebler, 1859: a name simply included in a list as *Dasytes apicalis* Motschulsky: to be considered nomen nudum].

**TYPE MATERIALS.** 3 syntypes at MNHN, in coll. Pic (boîte VIII), as follows: 1♂ (dissected) labelled: “Akbès / 1894” hw. by Pic; “type” hw. by Pic. 1♂: “Akbès / 1894” hw. by Pic; “type” hw. by Pic. 1♀: “transcription / Akbès / 1894” pr.; “type” hw. by Pic; “type” prr.; “v. apicalis Pic” hw. All syntypes bear a further label “Syntypus / Danacea nana / race apicalis / vidit Liberti IX.2009” prr. They have blackish integuments with reddish elytral apex only.

Two more specimens, 1♂ and 1♀, placed nearby, labelled “Sirie / Akbès / CD [= Charles Delagrange] 1895” cannot be part of the typical series because of the date: they should be considered totopotypes determined by Pic himself. One further specimen, ♀, labelled “Akbès / Hπ Syrie” pr.; “Danacea / apipecennis [an unpublished name] / ab.” hw. by Pic, cannot be a syntype because of the different name and the “ab.”, showing Pic’s doubts on it. This species belongs to the *D. marginata* group (together with *D. maculipennis*, *D. mersini* and *D. reitteri*) and several comparative information on these 5 species, as well as a collective description, can be found below under “*D. marginata* group”.

**COMPARATIVE DESCRIPTION.** ♂. Head moderately transverse (w/l=1.1-1.2), as long as (or slightly shorter than) – and as wide as (or slightly narrower than) –
pronotum; eyes moderately bulging. Elytra rather long: EL/EW=2.0-2.2, EL/PL=3.0-3.2. Median lobe fairly variable, depending on population, as in Figg. 61-63 (same population), 66, 68. Internal sac very long, with membranous (or weakly sclerotized) basal structures well visible inside the median lobe; median part membranous, apical part with a very tiny granulation and fitted with a sclerotized and elongate distal spine which appears to be variable depending on population (Figs. 64, 67, 69). Tegmen long, sub-rectangular, shortly truncated apically and narrowed basally (Fig. 65). Spicular fork branches thin, slightly widened basally.

NOTES. A taxon close to *D. marginata* and to *D. reitteri*, differentiated for median lobe and elytral length (from the former also by elytral apex). Very similar to *D. mersini* and *D. maculipennis* (differentiated by the median lobe shape).

This taxon (better not to name it “species”!) has been used, in this paper, as a box where 5 or 6 population samples, rather different from each other, have been put. Indeed these show a rather strong variability in median lobe shape (drawings are reported for 3 population samples in Figs. 62-63, 66 and 68, to be compared with Fig. 61 of a syntype) together with a moderate variability in distal spine structure (reported for the same 3 population samples in Figs. 64, 67 and 69). On the other hand, worth noting is the apparent stability of both median lobe and distal spine within populations. The writer’s feeling being of having studied 2 or 3 different forms.

In one instance two population samples have been abundantly collected, by the writer, right in the same biotope near Saimbeyli but in different “niches”: the former (named “F” in the table below: Figs. 62-64) common on composite flowers near the ground, the latter (“L”: Figs. 66 and 67) only present, in numbers, on a small blossoming *Fraxinus* sp. The differences between the two are summarized in Tab. 2.

Such a strictly “sympatric” occurrence of two, rather contrasting, forms suggests they might be different species or, more likely, “ecological subspecies” (if true, this one might be taken as an example of a sympatric speciation process in its early stage). It must be added however that other populations, not really far away, show even more variations than the two compared above (see for example Figs. 68 and 69 of a population from Göksun, less than 50 Km from Saimbeyli). No doubts this taxon requires further studies and definitely more materials to be properly understood.

MATERIALS STUDIED. Turkey. Amasya prov.: Amasya (Korb, 1888, Mbp). Karaman Maras prov.: Göksun 1378 m (Liberti, 2011, CLI). Adana prov.: Hasanbeyli 900 m (Liberti, 2011, CLI)*; Saimbeyli 1275 m (Liberti, 2011, CLI)**. Gaziantep prov.: Fevzipasa 1060 m (Liberti, 2011, CLI)*.

* Hasanbeyli and Fevzipasa are both on the northern edge of Nur Daglari, abt. 30 Km north of the typical locality Akbez.
** In the same biotope two rather different populations (ecological subspecies ?) have been observed (see text and table below).

*Danaceae caucasica* Schilsky, 1897 (Fig. 7a)
*Danaceae olivacea* Procházka, 1894: 10 (nec Baudi a Selve, 1873); Schilsky 1896: 365; *Danaceae caucasica* Schilsky, 1897: 32, loc. typ. Djubgar [Dzhubga, RC]; Pic 1937: 8; Mayor 2007: 395.

TYPE MATERIALS. In Schilsky collection, at MBe, no types of this species have been found. At MBp one syntype, ♀, has been retrieved, labelled accordingly to original description: “Cauc. occid. / Djubga / 17.VI.1871” hw; “100” hw; “leg. Starck” hw; “Paratypus 1897 / Danaceae / caucasica / Schilsky” wrb.

| Tab. 2. Differences among *D. apicalis “F”* and “L”. |
|-----------------------------------------------|
| **Character** | **D. apicalis “F”** | **D. apicalis “L”** |
| Colour | Integuments blackish all over except the reddish elytral apex | Pronotum reddish with a darker discal spot; elytral apex reddish |
| Median lobe | As in Figs. 62 and 63 | As in Fig. 66 |
| Distal spine | As in Fig. 64 | As in Fig. 67 |
It is a badly mounted and worn specimen [certainly studied by Schilsky (1897: 32a), as detailed in his description where also the ♂ is mentioned] which, in agreement with expectations, has group 2 pattern of pronotal discal setae, elytra bordered and rather flat in apical half; antennae rather short and thick; legs brownish.

Until the finding of the ♂ syntype (or of a ♂ Topotype), this taxon is subject to doubts. However, thanks to the courtesy of W. Ziegler, it has been possible to study 3♂♂ specimens (at CLI, CZi, MMi) which conform, to a good extent, to original description and to the ♀ syntype general appearance and characters (size, antennae, elytral shape, pronotal setae), labelled: “GG, Swanetien, 1700 m / Hatsvali sü Mestia / W. Ziegler, 29 VI 2015”

Mestia is 350 Km far from Dzhubga. However, and for the time being, they are assumed to belong to the same species of the ♀ syntype and are below described.

**Description.** ♂. Size medium to large, TL 4.1-4.8 mm.

Head moderately elongate (l/w≈1.1), more or less as wide as pronotum and clearly longer; eyes normal, snout length regular to long (sl/eyl=1.3-1.5); clypeus regular (ad/eyl=1.3-1.4). Antennae rather short, slightly widened from article 3 to apex; articles 3, 4 conical, narrow; 5 to 8 similar to each other and slightly wider (than the previous ones); 9, 10 larger, nearly globular; 5 to 10 approximately as long as wide.

Pronotum moderately transverse (PW/PL≈1.1), well expanded and irregularly rounded on lateral sides, maximum width in the middle, necked forwards and narrowed backwards with anterior border longer than posterior one.

Elytra parallel, flattened, length regular (EL/EW=1.9-2.0; EL/PL=3.3-3.5), bordered on sides on the whole length (except near humeral callous), apically flattened, apices divergent and separately rounded, apical angle rounded (and acute).

Penultimate sternite of abdomen more or less straight on posterior edge, possibly showing a tiny, rounded, hardly visible notch in the middle.

Pronotal setae on disc clearly arranged as in group 2. Dorsal setae rather thin and sparse, underneath integuments visible, black with greenish reflections, dull on pronotum, brighter on elytra. Overall colour yellow green rather dark. Legs reddish-yellow with all femora blackish on upper side and tarsal articles darkened apically. Antennae blackish with articles 2-6 more or less reddish basally.

Median lobe as in Fig. 7a. Internal sac not very long, showing on the whole length a tiny granulation, basally fitted with a membranous structure. Tegmen sub-elliptical, rather sharp apically. Spicular fork branches regularly rounded and moderately widened basally.

**Notes.** A doubtful (because the ♀ syntype match with the Mestia ♂♂ is not fully sure), little known taxon, possibly limited to the western Caucasic region. Its actual presence in Turkey should be confirmed.

**Materials studied.** The above referred specimens: one syntype and 3 males.

*Danacea cavifrons* Pic, 1895 (Figs. 2-5, 97)

*Danacea cavifrons* Pic, 1895b: 122, loc. typ. Akbez[n1]; Pic 1897: 96; Pic 1937: 8; Mayor 2007: 395.

= *Danacea conicicollis* Schilsky, 1897: 26, loc. typ. Akbez[n1] (syn. n.); Pic 1897: 96; Pic 1937: 8; Mayor 2007: 396.

= *Danacea tauricola* Pic, 1904b: 73, loc. typ. Kizil Dag[n1] (syn. n.); Pic 1937: 19; Mayor 2007: 399.

**Type materials.** 3 syntypes (1♂, 2♀♀) of *D. cavifrons* are in collection Pic (box VIII, MNHNp): 1♂: “Syrie / Akbes / C.D. [= Charles Delagrange] 1891” pr.; “Danacea / cavifrons Pic” hw.; “type” hw. by Pic; “type” prr. 1♀: “Syrie / Akbes / C.D. 1891” pr.; “Danacea / cavifrons Pic” hw.; “type” hw. by Pic; “type” prr. 1♀: “Syrie / Akbes / C.D. 1891” pr.; “type” hw. by Pic. 1♂: “Syrie / Akbes / C.D. 1891” pr.; “Danacea / cavifrons Pic” hw. and bearing a green dot.

The three syntypes have been further labelled: “Syn- typus / Danacea / cavifrons Pic / vidit Liberti, V.2010”.

Two syntypes, ♀♀, of *D. conicicollis* are at MBe, labelled: 1♂: “Syria / Staedgr. [Staudinger]” hw. by Schilsky; “Akbes” hw. by Schilsky; “♀”. 1♂: “Akbes / Reitter” hw. by Schilsky.

Although females *Danacea* may not be always determined with certainty, the peculiar body shape of this species (together with the same typical locality) leaves no doubts on this synonymy. Also Pic suspected it: a label “cavifrons Pic”/? conicicollis Schils”, handwritten by him, is indeed on the box floor under the *D. cavifrons* syntypes in Pic collection.
Eleven syntypes of *Danacea tauricola* have been found in coll. Pic (box VIII, MNHN): 3♀♀, mounted on the same card: “Kizil Daghe [sic !] / (Taurus)” hw. by Pic; “forme plus allongée / peu moins rétrécie / en avant” hw. by Pic; “n. sp. prés / cavifrons Pic” hw. by Pic; “D. tauricola” hw. by Pic; “Type” prr. 2♂♂ and 1♀, originally on the same pin (2 on the same card) and now separately pinned: the ♀: “Kizil Daghe [sic !]” hw. by Pic; the 2♂♂: “transcription / Kizil Dagh / Taurus” hw. by Liberti. 1♀: “Kizil Daghe [sic !] / taurus 1904” hw. by Pic, “type” hw. by Pic.

All the syntypes also bear the further label “Syntypus / *Danacea tauricola* Pic / vidit Liberti 2008” prr.

All these specimens, apparently belonging to the same species, have been considered syntypes although Pic, in his description, reports “6 specimens”. Unfortunately, no way has been devised to recognize them. No doubts they belong to the species already named *D. cavifrons* by Pic, a (tiny) difference noticed being the size which appears to be slightly smaller (the smaller specimen is 3.1 mm long). The adeagus (Figs. 2 and 3) is deemed to be within the variability range of the species.

**DESCRIPTION.** Medium size: TL=3.5-4.5 mm. ♀. Head rather small, elongate (l/w=1.05-1.15), wider than pronotum front side (and equal to pronotum base), as long as (or slightly longer than) pronotum; eyes moderately flattened to normally rounded; snout regular to long (sl/eyl=1.3-1.5); clypeus rather narrow (ad/eyl=1.1-1.2). Antennae rather short, gradually widened from base (article 3) to apex; articles 3-5 narrow and elongate; 6-7 slightly elongate; 8-10 approximately globular.

Pronotum as long as wide, nearly trapezium shaped (a peculiar character), front side narrower than base, lateral sides approximately straight, with reduced or nearly absent expansions, clearly narrower than elytral base. Elytra rather long (EL/PL=3.3-3.5), convex, approximately parallel in basal third, than moderately widened in the middle and gradually narrowed apically; with a thin border in basal half; apices rather long, divergent; apical angle well defined, acute to rectangular; apical slope moderately flattened. Abdomen penultimate sternite well emarginated on posterior border.

Pronotal setae arranged as in group 2; dorsal setae thin, dense, rather covering, from whitish-green to deep yellow-green (a variable character). Dorsal integuments blackish with greenish reflexes, punctured, dull on pronotum, brighter on elytra; resulting dorsal colour is however close to setae colour. Legs yellow with only tarsal tips darkened; antennae bicoloured with articles 1-3 yellow, 4-6 increasingly darkened and 7-11 blackish; palpi blackish.

Median lobe showing a peculiar shape, as in Figs. 2 and 4. Internal sac rather short, with a tiny granulation all over its median and apical parts (visible both on the tract exceeding the median lobe base and inside it). Tegmen approximately elliptical, apically extended in a thin process bearing the terminal setae (Figs. 3 and 5). Spicular fork branches long and thin, basally widened. ♀. As the ♂ but antennae slightly shorter, elytra more widened in the middle, so that the overall insect shape becomes more elliptical; elytral apical angle sharp, acute. Slightly larger: TL=4.0-4.5 mm.

**NOTES.** This species seems to be rather common in the region north-east of Adana. For example, it has been observed by the writer, in numbers, on Nurdagı Gecidi (5 Km W of Fevzipasa, on a steep ground between the road and an oak wood), at 1060 m, on the small flowers of *Asperula cymulosa* (Post) Post (determination due to the courtesy of G. Galasso). It belong to a group of species characterized by the penultimate sternite of abdomen well emarginated on posterior border and tegmen apically extended in a thin, short process bearing the terminal setae; such group also includes, at least, *D. flava* and *D. syriaca*.

**MATERIALS STUDIED.** **Turkey.** Adana prov.: Saimbeyli (Liberti, 2011, CLI); Feka (Liberti, 2011, CLI). Gaziantep prov.: Fevzipasa 1060 m (Liberti, 2011, CLI); Sakçagoz (Angelini, 2011, CAn). Kayseri prov.: Yesilköy (Angelini, 2011, CAn).

**Danacea dumifera** n. sp. (Figs. 17, 87)

A large (TL in mm: ♂♂ 4.7-5.0; ♀♀ 4.5-5.7), rather dark species, pronotal setae of group 2 and pronotal anterior angles expanded in a well visible spine. Typical locality Isparta.
The name, an adjective, originates from two Latin words: *dumus* (a noun meaning “spine”) and *fero* (a verb meaning “carry”), with reference to the pronotal spines.

**Type Materials.** Holotype, ♂ (MMi), allotype, ♀ (MMi), 10 paratypes (♂♂ 4♀, ♂♂ 1♀: MMi; 1♂, 1♀: CLi), all labelled: “Isparta, Asm. m. / V.1934 Neubert” pr.; “Holotypus / Danacea / dumifera n. sp. / Liberti, II.2016” pr. [or “Allotypus”, or “Paratypus” where applicable].

**Description.** ♀. Head elongate (l/w=1.1-1.2), much narrower – and longer – than pronotum. Eyes normally rounded, snout very long (sl/eyl=1.7-2.0); clypeus narrow (ad/eyl=1.0-1.2). Antennae narrow and rather short, with articles 4-11 approximately of the same width; all articles elongate; 7 and 8 just shorter than all others.

Pronotum transverse (PW/PL=1.15-1.35); lateral sides widely depressed, sinuous and finely crenulated; anterior angles expanded in a sharp tooth; on anterior side as wide as in the middle, narrowed behind. Elytra long and wide (EL/EW=1.7-1.9; EL/PL=3.2-3.4), depressed, widely bordered and moderately widened posteriorly; apical slope flattened, apices feebly divergent and more or less jointly rounded (but a variable character); apical angle acute.

Posterior edge of abdomen penultimate sternite straight. Pronotal discal setae as in group 2 but somewhat intermediate with 3. Dorsal setae yellowish-grey, thin and sparse, incompletely covering the underneath integuments which are dull blackish; the overall colour being dark olive green. Legs dark, of the same dorsal colour; antennae dark with basal articles more or less reddish.

Median lobe as in Fig. 17. Internal sac short with hardly visible, membranous basal structures inside. A tiny granulation may be present in the median tract but, being inside the median lobe, cannot be seen clearly. Tegmen apex rounded and rather long. Spicular fork branches widened basally.

♀. Very similar to ♂, at times difficult to recognize. Eyes slightly flattened (not always); antennae shorter and particularly so articles 9-11. Pronotal lateral spines on anterior side somewhat smaller. Elytra more widened, with a wider border, in apical half.

Dimensions: ♂. TL=4.98±0.21, PL=0.98±0.08, EL=3.25±0.16, PW=1.25±0.10, EW=1.80±0.13 (95% probability, 6 specimens). ♀. TL=4.98±0.43, PL=0.98±0.10, EL=3.23±0.26, PW=1.28±0.10, EW=1.96±0.16 (95% probability, 6 specimens).

**Notes.** A little known species, collected in a small series more than 80 years ago and never found afterwards. Very well differentiated from the other species of the *spinicollis* group.

**Materials studied.** Only the types.

**Danacea flava** Procházka, 1894 (Figs. 6, 7, 89, 90)

*Danacea flava* Kiesw. i litt. [sic !] Procházka, 1894: 23, 31, Fig. 12, loc. typ. Caucasus (Araxesthal, Armen Geb., Meskisch Geb.)*; Pic 1894a: 102 [attributed to Kiesenwetter]; Schilsky 1897: 31; Pic 1937: 9; Mayor 2007: 396.

* present names of these localities are: Aras River Valley (along the borders of five countries: Georgia, Turkey, Armenia, Azerbaijan, Iran), Mounts of Armenia, Meskheti Range in Georgia.

**Type Materials.** 14 syntypes(82) of this species are kept at MBp, as follows: 1 syntype, ♂: “Kaukas. / Leder”; “flava / Kiesw. - Ca / type”; “coll. Reitter” pr.; “Holotypus 1895 / Danacea / flava / Prochákza” wrb., up. 8 syntypes, 1♂, 7♀♀: “Caucasus / Araxesthal / Leder Reitter” pr.; “coll. Reitter” pr.; “Paratypos 1895 / Danacea / flava / Prochákza” wrb., up. 1 syntype, ♀: “Caucasus / Leder” pr.; “coll. Reitter” pr.; “Paratypos 1895 / Danacea / flava / Prochákza” wrb., up. 4 syntypes, ♀♀♀: “Caucasus / Armen. Geb. / Leder Reitter” pr.; “coll. Reitter” pr.

**Description.** A variably sized, medium to large, species (Fig. 89); TL in mm: ♂ 3.6-5.2; ♀ 4.5. Head balanced or slightly elongate in the larger specimens (w/l <1.1); as wide as (or slightly narrower than) – and a bit shorter than – pronotum; eyes rather flattened with a very few short, un conspicuous setae only visible under magnification (Fig. 90, where setae are just visible on the right eye); snout variable, depending on insect size, but fairly long (sl/eyl=1.33-1.55); clypeus regular (ad/eyl 1.3-1.5). Antennae regular to short, gradually widened from article 3 to apex; all articles elongate; 3-4 conical; 5-6 sub-triangular; 7-10 approximately globular.
Pronotum moderately transverse (PW/PL≅1.1), approximately sub-rectangular; lateral sides smooth (not crenulated) and feebly expanded, maximum width behind the middle; not necked forwards. Elytra regular (EL/PL=3.0-3.2), convex, apical slope moderately flattened, narrowly bordered up to the apical slope; apices more or less separately rounded; apical angle undefined. Rear border of penultimate sternite deeply emarginate. Pronotal discal setae pattern as in group 2 (Fig. 90). Dorsal setae thick and dense, gray-green to yellow-green, well hiding the underneath integuments which are blackish with a greenish lustre. Legs entirely yellowish with tarsi more or less darkened; antennae yellow-brown with basal articles paler. Median lobe as in Fig. 6. Internal sac short, slightly exceeding the median lobe base, showing a more or less visible granulation apically and a hardly visible (through the median lobe integument) membranous base. Tegmen apex extended in a long and thin process bearing the terminal setae (Fig. 7). Spicular fork V shaped with basally (fairly) thin branches.

Notes. This species should be fairly common at least in Armenia where it has been collected in numbers by Prof. M. A. Ivie (see below). Reported for Turkey in Mayor’s catalog (Mayor 2007: 396), its actual presence in this Country is here confirmed. Very close to D. syriaca (group 1 pronotal setae arrangement) which might even turn out to be a subspecies: variability of pronotal setae pattern between groups 1 and 2 has been indeed already observed in other species, as for example D. iners iners (Liberti 2009: 56). D. flava is also similar to D. cavifrons at least for extended tegmen apex and emarginate penultimate sternite.

Materials studied. Turkey. Erzincan province: Üzümlü (Özişik, 1981, CLI). Armenia. Byurakan (Kadlec & Vorisec, 1987, CLI); Garni (Kuban, 1979, CLI); Yerevan 55 Km W, 1226 m (Ivie & Maier, 2008, MTC); Yerevan 22 Km NE, Mt. Aragats, 1149 m (Ivie, 2008, MTC).

Danacea grandiceps Pic, 1927 (Figs. 29-31, 91) Danacea grandiceps Pic 1927: 13, loc. typ. Fethiye (Mugla prov., TR); Pic 1937: 10; Mayor 2007: 396.

Type materials. In his description, Pic states only “(coll. Pic)”, giving no information on Collector and number of specimens; the typical locality reported simply is “Asie-Mineure”. Only one type specimen is known, deemed to be holotype (ICZN 1999, Art. 73.1.2), found in coll. Pic (boîte VIII, MNHN) and labelled: “Asia Minor / Makri [today Fethiye] / coll. F. Hauser” pr.; “05” hw.; “ex Knirsch” hw. by Pic; “? anatolica / Schilsky” hw. by Pic; “grandiceps / n. sp.” hw. by Pic; “TYPE” pr.; “Holotypus / Danacea / grandiceps Pic / vidit Liberti IX.2009” prr.

Description (Fig. 91). This description is based on a population from Mugla which includes specimens nearly identical, on external characters (except elytral apex), to the holotype (see below under “Notes”). Size small to medium: TL in mm: ♂ 3.3-4.0; ♀ 4.0-4.3. Head rather small, balanced to slightly elongate (l/w=1.0-1.2); as wide as (or just wider than) – and as long as (or slightly longer than) – pronotum; eyes normally rounded to slightly flattened, snout length regular (sl/eyl=1.2-1.4), clypeus narrow to regular (ad/eyl=1.0-1.2). Antennae moderately widened from base to apex, articles 3, 4 small, elongate; 5-10 more or less globular, balanced to feebly elongate, gradually increasing their size. Pronotum balanced (*), lateral sides expansions moderate, rounded; maximum width just behind the middle; feebly necked forwards. Elytra normal (l/w=2.1-2.2), rather convex, nearly parallel (only slightly widened in apical third), feebly bordered in basal half, apices sloping down in a regular convexity, joint, often jointly rounded (a variable character), apical angle usually rectangular (but at times slightly obtuse). Penultimate sternite straight on posterior edge. Discal setae pattern clearly arranged as in group 2. Elytral setae rather short and dense, greenish grey to greenish yellow, well covering the underlying blackish integuments, rather bright on elytra and duller on pronotum; overall dorsal colour greenish to yellowish, legs yellow with tarsal tips darkened, antennae yellow at base (articles 1-3), than increasingly darkened towards apex; mouth parts dark brown. Median lobe as in Figs. 29 and 30. Internal sac rather long, basal lamellar process membranous, hardly visible inside the median lobe; apical and median parts very finely granulated. Tegmen sub-elliptical, apically normally rounded, basal tooth reduced (Fig. 31). Spicular fork branches well widened at base.
♀. As the ♂ but slightly larger, eyes flattened, head narrower than pronotum, antennae more widened apically, elytra widened in apical half.

(*) here Pic (1927: 13), in his original description, states “prothorax plus long que large” [pronotum longer than wide]. This kind of error may be easily done: as the writer can witness, simple eye-evaluation of ratios is often deceiving (as Danacea pronotums often may look narrower than they actually are).

NOTES. Fairly similar to D. bleusei but well differentiated for aedeagus, gradually widened antennae and slightly widened elytra.

The Mugla population sample, on which the above description is based, has been collected on small, white umbelliferous flowers growing under a pine wood. This population slightly differs from the holotype for at least two characters: the median lobe shape (compare Figs. 29 and 30) and the elytral apex slope which is somewhat more flattened in the type. Although the writer, at the moment, has no doubts that the Mugla population would actually belong to D. grandiceps, the real meaning of these differences should be understood when more population samples will be available for study.

MATERIALS STUDIED. Turkey, Mugla prov.: Mugla 5 Km E, 610 m (Liberti, 22.V.2010, CLI).

Danacea induta Schilsky, 1897 (Fig. 18)

Danacea induta Schilsky, 1897: 29, loc. typ. Novorossijsk, Talysh area: Länkoran; Pic 1937: 11; Mayor 2007: 396.

= D. induta var. atricornis Pic, 1922: 17* (synonymized by Mayor 2007: 59, here confirmed)
= D. induta var. a simulatrix Schilsky, 1897: 29* [described as a chromatic (pale legs) variation without locality and synonymized by Mayor 2007: 59].
= D. taurica Procházka, 1894 (nec Baudi a Selve, 1873) (synonymized by Schilsky 1897: 29)

* whether these names might be considered either infra-subspecific (unavailable) or subspecific might be seen as a debatable matter, it is indeed unclear to the writer whether, or not, “… the content of the work unambiguously reveals that the name was proposed for an infra-subspecific entity…” (ICZN 1999, Art. 45.6.4) This same comment applies to several other names reported in this paper, rightly or wrongly, as available.

TYPE MATERIALS. 4 syntypes have been found in collection Schilsky (MBE), labelled as follows: 1♂, dissected by K. Majer: “Talysh / Rost” hw. by Schilsky; “induta / * Schils.” hw. by Schilsky. 1♀ “Talysh / Rost” hw. by Schilsky; “♀” hw. 1♂ and 1♀ “Astrabad” hw.[today Gorgan, Golestan, Iran]; “D. Rost” and “induta” both hw. by Schilsky [these 2 specimens may not be syntypes – Astrabad not being mentioned in original description – however the Schilsky handwriting on their labels, the collector (Rost) and their placement in the collection (close to the other syntypes) strongly suggest such possibility].

All syntypes bear a further label “SYNTYPUS / D. induta / Liberti 2015” hwr.

1 syntype, ♀, of D. induta var. atricornis (a chromatic variety: “antennis nigris” is the Pic’s description) is in collection Pic (MNHN), labelled: “Suram / Kaukas.” pr.; “type” hw. by Pic; “TYPE” prr.; “induta var. atricornis Pic” hw. by Pic.

It looks like a normal D. induta with legs and antennae moderately darker than usual.

DESCRIPTION. A rather small species: TL in mm = ♂♂ 3.4-3.6; ♀♀ 3.5-3.8.

♂. Head triangular, moderately transverse with big, rounded eyes, narrower than – and approximately as long as – pronotum; snout short (sl/eyl <1.2); clypeus narrow (ad/eyl <1.2). Antennae rather long, gradually widened from article 3 to 11; article 1 large, triangular, truncated on apical border with a well defined, prominent internal angle; 3 to 11 elongate; 3-5 approximately conical; 6-10 more globular.

Pronotum moderately transverse (PW/PL=1.1-1.2), crenulated and expanded (fairly irregularly) on lateral border; maximum width behind the middle, feebly necked forwards.

Elytra convex, slightly widened in apical half, narrowly but visibly bordered except on apical quarter; apices more or less divergent with apical angle variable, rectangular to obtuse (but, at times, not well defined).

Penultimate sternite straight on posterior edge.

Discal pronotal setae pattern more or less intermediate between groups 2 and 3. Dorsal setae pale grey-green, long, thin and fairly sparse (except on scutellum where they are thick and dense). Integuments blackish, dull on pronotum and with moderate greenish lustre on elytra. Legs brownish with femora more or less darkened, tibiae and tarsi somewhat paler (but in the Iranian pop-
ulation samples legs entirely reddish); antennae brown with basal articles paler. Aedeagus as in Fig. 18, internal sac short, basally showing, through the median lobe integument, a hardly visible membranous structure; apically fitted with a variable granulation. Tegmen apex triangular with a rounded off tip. Spicular fork branches feebly widened basally. 

♀. As the male but eyes slightly smaller, first antennal article smaller with internal angle less defined; elytra more widened in apical half.

NOTES. Probably a rather common species all over the Caucasian region, reported for turkey by Mayor (2007: 396).

MATERIAL STUDIED. Russia: Caucasian Territories: Khamyski (Adygeia; Abramov, 2005, CLI); Novorossijsk (Luther, ?, CLI). Azerbaijan: Aveard* village (Talysh region; ?, 1995, CLI). Iran: Farsian (Azadshahr, Golestan; Sama, 2001, CLI); Gorgan 20 Km S, 1100 m (Golestan; Sama, 2001, CLI). * a locality not found on maps.

Danacea klapperichi Constantin, 1983 (Fig. 20)

Danacea klapperichi Constantin, 1983: 331, loc. typ. Bolu (TR); Mayor 2007: 397.

TYPE MATERIALS. Holotype, ♂, and allotype, ♀ (at MBa, Wittmer collection, as reported in Constantin’s description) have not been seen. However two paratypes, 1♂ and 1♀ (CCo), have been studied. As reported in original description, they are labelled: “pass b. Bolu / 1300 m, W. Turkei” and “9.VI.1966 / J. & S. Klapperich” both pr. (on the ♀ both hw. by Constantin); “Paratype” prr.; ” Danacea / klapperichi mihi / R. Constantin det. 1984“ hw. by Constantin.

DESCRIPTION. Although recently and thoroughly described, a new description is here supplied, based on the 2 paratypes studied, for sake of uniformity with the other species. A medium sized species, very peculiar for the black colour and the apparent absence of scale-like setae on dorsal side. Total length in mm: ♂ 4.1; ♀ 4.1. 

♂. Head rather large, elongate, (l/w=1.2), narrower and longer than pronotum; eyes rather small and slightly flattened, snout long (sl/eyl >1.5); clypeus regular (ad/eyl=1.3-1.4). Antennae rather short, thin, feebly widened from article 3 to apex; 3 and 4 elongate, 5 to 10 balanced. Pronotum transverse (PW/PL about 1.25), lateral sides expansions evident, rounded; pronotal maximum width in the middle, moderately necked forwards and regularly narrowed backwards; anterior edge wider than basal. Elytra rather short (EL/EW=1.7-1.8), widened in apical half, clearly bordered on the whole length, apices rather flattened, joint but separately rounded, apical angle rounded, undefined. Abdomen penultimate sternite very slightly emarginated in the middle of rear edge.

Discal setae pattern on pronotum difficult to understand because of the hardly visible setae (but probably as in group 2); dorsal integuments black with brown-greenish reflections, rough on pronotum, brighter on head and elytra; setae withish-grey, absent (or nearly so) on pronotum and elytral disc and visible, although very sparse, only on body sides. Overall colour (namely integuments colour) black, including legs and antennae (here only articles 3-6 black-brownish); mandibles and epistoma partly brown.

Median lobe as in Fig. 20. Internal sac basal part fitted with a membranous structure more or less visible through the median lobe integument, median part with a tiny granulation, apical part lacking (possibly lost). Tegmen elliptical, apical process short, triangular. 

♀. As the male but eyes flattened; elytra apical half evidently widened, apices more convex, jointly rounded, apical angle better defined, obtuse.

NOTES. A little known (from the typical series only), peculiar species because nearly free from the scale like setae which are typical of genus Danacea.

MATERIALS STUDIED. Only the above referred 2 syntypes.

Danacea lysholmi Pic, 1900 (Figs. 10 and 11)

Danacea lysholmi Pic, 1900: 27, loc. typ. Mersin (TR); Schilsky 1900: n. 11; Pic 1937: 12; Mayor 2007: 397.

= Danacea lysholmi var. subrobusta Pic, 1903: 162, loc. typ. Syria (*) (teste Mayor 2007); Pic 1937: 12; Mayor 2007: 397.

(*) the indication Syria, by Pic, at the beginning of the 20th century, may well refer to the south-east part of Turkey (Iskenderum and nearby provinces).
**Type Materials.** 11 syntypes of *D. lysholmi* have been found in Pic coll. (boite III), at MNHN, as follows: 1♀: “Mersina / Pic 1899” pr.; “type” hw. by Pic; “Type” prr.; “Danacea / lysholmi Pic” hw. 1♂, 1♀: “Mersina / Pic 1899” pr.; “type” hw. by Pic; “Schilsky vidit” hw. by Pic; “Type” prr.; “Danacea / lysholmi Pic” hw. 1♂: “Mersina” hw. by Pic; “type” hw. by Pic; “n. sp.” hw.; “Schilsky vidit” hw. by Pic. 1♂: “Mersina” hw. by Pic. 1♂, 1♀: “Mersina / 9 Mai 99” hw. by Pic; “D. lysholmi Pic” hw. by Pic. 1♂: “Mersina / Pic 1899” pr., “D. lysholmi Pic” hw. by Pic. 2♂♂: previously on the same pin, now split: one labelled “Mersina” hw. by Pic; the other “[Manuscript par M. Pic / Mersina]” prr.

All the syntypes bear the further label “Syntypus / Danacea / lysholmi Pic / vidit Liberti, IX.2009” prr.

Three specimens of *D. lysholmi* var. *subrobusta*, all deemed to be syntypes, have been found in Pic coll. (boite III), as follows: 1♂, labelled: “Danacea / serbeca / Syria” hw.; “…” where the ellipsis means a very difficult to read, hw. by Pic; “v. subrobusta Pic” hw. by Pic; “type” hw. by Pic; “Type” prr. 2♂♂, labelled “Syrie (?) / Bucey [difficult to read]” on the same pin (now split, with one label transcribed by the writer).

The synonymy of var. *subrobusta* with *lysholmi*, proposed by Mayor (2007) is here confirmed, based on types examination.

**Description.** Description based on 2 syntypes, males. Size medium: length in mm: 3.9-4.2.

Head large, balanced, longer and slightly larger than pronotum max width, eyes moderately flattened to normally rounded, snout long (sl/eyl≈1.5), clypeus wide (ad/eyl≈1.5). Antennae rather short, gradually widened from base to apex; article 3 elongate; 5-10 approximately balanced to transverse. Pronotum transverse (PW/PL≈1.25), with anterior angles acute and pointing outwards (although not much developed), lateral sides irregularly expanded, maximum width behind the middle, evidently narrowed backwards. Elytra parallel, bordered (except in apical quarter), apices gently sloping down, divergent, separately rounded; apical angle undefined to obtuse. Abdomen penultimate sternite feebly emarginate on posterior side. Discal setae pattern nearly as in group 1, with (nearly) all setae parallel and pointing forwards except in a small area in the middle of anterior half, where setae are more or less clearly angled towards a median point close to the anterior edge. Dorsal setae yellow to greenish, well masking the underneath blackish integuments. Overall colour yellowish green, legs and antennae yellow but the apices of the tarsal articles and the last antennal articles more or less darkened.

Median lobe as in Figs. 10 and 11. Internal sac long; basal lamellar structure membranous; the whole internal sac showing a very tiny, uniform granulation. Spicular fork branches feebly widened at base.

**Notes.** *D. lysholmi* is a little known taxon because only the typical specimens have been studied. Its aedeagal similarity with *D. spinicollis* throws a shade on its full validity (*D. lysholmi* was published before *D. spinicollis*: indeed, when describing the latter, in 1900, Schilsky reported the former). The (few) external differences found – below summarized in Tab. 3 – suggest to retain it as a valid species (at least for the time being).

**Materials Studied.** Only the above referred syntypes.

**Danacea maculipennis** Pic, 1899 (Figs. 53-56, 98)

*Danacea marginata* var. *maculipennis* Pic, 1899: 207, loc. typ. Beirut, Broumana [a village close to Beirut]; Mayor 2007: 59, 397 [synonym of *marginata*]; Liberti 2009: 68 [good species].

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Tab. 3. Few external differences between *D. lysholmi* and *D. spinicollis*.

| Character                  | *D. lysholmi*          | *D. spinicollis*               |
|----------------------------|------------------------|--------------------------------|
| Pronotal anterior angles   | Poorly developed        | Strongly developed (Fig. 86)   |
| Pronotum width             | Narrower               | Wider                          |
| Pronotal setae             | Intermediate between groups 1 and 2 | Clearly group 2                |
| Head size                  | Smaller                | Larger                         |
| Median lobe                | Nearly straight apically (Figs. 12-14) | Moderately sinuous apically (Figs. 10 and 11) |
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- Danacea zahradniki Nigrin, 1986: 359, loc. typ. Haifa (synonymized by Liberti 2009: 68)

**Type Materials.** The types of this species have been already detailed by Liberti (2009: 68) but no description was supplied. It is here included because of the finding, in Turkey (see below under “Materials studied”), of two specimens (♂ and ♀) which apparently belong to it, although all elytral setae are whitish with absence of apparently naked spots.

**Comparative Description.** Head balanced, as wide as – and moderately longer than – pronotum, with eyes moderately bulging. Antennal articles 9-11 reddish.

Elytra fairly long and much longer than pronotum: EL/EW=2.0-2.3, EL/PL=3.3-3.7.

Several among the specimens seen (mainly from the north of Israel) are rather pale: reddish head with posterior part blackish, reddish pronotum with a central blackish band, dark greenish elytra largely reddish apically; elytra fitted with apparently naked, symmetrical spots (actually covered with setae that, being of the same integuments colour, are hardly visible).

Median lobe longer than in the other species of the group (Figs. 53, 54, 56). Internal sac with a basal membranous structure, in the middle a short tract with hardly visible granulation and a distal spine shaped as in Fig. 55.

**Notes.** This species belongs to the D. marginata group (together with D. apicalis, D. mersini and D. reitteri) and several comparative information on these 5 species, as well as a general description, can be found below under “D. marginata group”.

D. maculipennis, to our present knowledge, might appear somewhat less variable than the others of the group. It is certainly common in Lebanon and the north of Israel and its actual presence in Turkey should be confirmed by further findings.

**Materials Studied.** Turkey: Kahraman Maras prov.: Gani Dagi (Wunderle, 2005, MBe). Lebanon: Al Batrun (Wittmer, 1935, MMi); Beirut (Wittmer, 1935, MMi); Zghorta (Frenzel, 2006, MEr). Israel: Har Meron 1110 m (Drees, 2010, MBe); Montfort (Hetzel, 2011, MBe); Haifa: Mount Karmel (Schatzmayr, 1933, MMi).

**Danacea marginata** group (Danacea marginata: Figs. 70-73, 96)

D. marginata (Küster, 1851) has been recently re-described and discussed more than once and, for details and bibliography, please refer to Liberti (1989: 289; 2009: 67). Median lobe, tegmen, last sternite and elytral apex drawings of a topotype, together with a habitus photograph, are here reported for sake of comparison. Apparently this species does not belong to the Asiatic Turkey fauna (it is probably present in the European part of the country, but no record is presently available) where it is replaced by the similar D. reitteri Procházka, here re-established as a good species (not a synonym of D. marginata: see below).

The D. marginata group, in central and eastern Mediterranean Countries, includes 5 species: D. apicalis, D. maculipennis, D. marginata, D. mersini and D. reitteri (also the west Mediterranean Danacea nana Kiesenwetter, 1863 belongs to this same group) They are similar and well characterized by very small to small size, pronotal setae arranged as in group 3, capitate antennae and bi-coloured dorsal integuments: at least elytral apex (but often also pronotum and anterior part of head) is yellowish to reddish.

Based on external characters only (elytral shape), it may be possible to recognise, within the set, three patterns, as reported in Tab. 4 (compare Figs. 95 and 96); based on characters only visible after dissection, D.

**Tab. 4. Differences, among the 5 species, based on external characters only.**

| Character     | D. marginata                      | D. reitteri                                      | D. apicalis, D. mersini, D. maculipennis |
|---------------|-----------------------------------|-------------------------------------------------|------------------------------------------|
| Elytra        | Shorter (EL/EW=1.7-1.9), convex, slightly widened in apical half | Shorter (EL/EW=1.8-2.0), more flat, parallel | Longer (EL/EW=2.0-2.2), feebly convex, parallel |
| Elytral apex  | Sloping down                      | Flattened, wide                                  | Flattened, slender                        |
| Apical angle  | Rather well defined, acute        | Undefined, widely rounded                         | Undefined, more narrowly rounded         |
marginata also differs from the other four species, as follows in Tab. 5.
Danacea marginata occurs in the whole Balkan peninsula (including Crete and the Kiklades, no data available for European Turkey), north up to Hungary, with a marginal transionic presence in Italy [Calabria (Liberti 1989: 290, 2009: 70) and Sicily (1♂ from Lago Quattrocchi, Messina province, collected by F. Angelini in May 2007, at CLi)]. It seems to be rather well differentiated from the others and reasonably constant all over its range. It will not be further discussed in this paper.

The other four species are not known with accuracy, but, as far as we know: D. reitteri can be probably found all over Asiatic Turkey (except the south-east) and in the Caucasus; in this species the distal spine takes strongly different shapes, perhaps following a “long range” geographical pattern (Fig. 98). D. apicalis can be found at least in the provinces of Adana, Iskenderun and Kahraman Maras. This is the species showing the highest variability, which seems to be “very short range” (also given its rather small distribution area), affecting both distal spine and median lobe shape (nearly each population sample, in this “form”, shows peculiar characters). D. mersini has only been found, till now, rather close to Mersin and Tarsus; it also shows some distal spine variability but the median lobe has constant shape (Fig. 98). D. maculipennis occurs in Liban and Israel, with one record in Turkey (Gani Dagi, east of Kahraman Maras) and probably (at least) in coastal Syria (no data available).
It also might be affected by some median lobe variability although it might appear more stable than the others.
In Turkey these 4 species live rather close to each other (Fig. 98). Although their systematics is characterized by great variability, within the same population samples they may often (not always !) be remarkably constant.

Given their similarity, it is convenient to supply here a description, limited to external appearance, common to D. apicalis, D. maculipennis, D. mersini and D. reitteri. Under each species descriptions, only the relevant, comparative characters are given.

Description. Very small: TL in mm: ♂♂ 2.3-3.2; ♀♀ 2.6-3.5.
♂. Head with short snout (sl/eyl=1.1-1.2) and narrow clypeus (ad/eyl=1). Antennae capitate: articles 9-11 clearly larger than 2-8; 3-5 cylindrical; similar to each other, longer than 6-8 (although variable); 6-8 similar to each other, very small, sub-globular.

Pronotum moderately transverse (PW/PL=1.1-1.2), no visible crenulation on lateral sides, these irregular, lateral expansions angular, necked forwards.

Elytra convex, parallel, finely bordered at least in basal half between humeral callous and the middle; apices flattened, slightly divergent and separately rounded; apical angle undefined.

Penultimate abdominal sternite straight or slightly emarginate on posterior edge.

Pronotal setae pattern converging towards a point in the middle (group 3), at times showing a tendency to converge along a short line (approaching group 4). Dorsal setae pale grey-green to whitish or yellowish, rather long, thick and sparse (but rather variable), incompletely covering the underlying integuments which are bi-coloured: mostly blackish with green reflections, dull on pronotum and bright on elytra; with at least anterior part of head, elytral apex and mouthparts reddish-yellow; pronotal variable, depending on populations: either blackish or reddish-yellow

Tab. 5. Differences, among the 5 species, based on characters visible after dissection.

| Character       | D. marginata                           | D. reitteri, D. apicalis, D. mersini, D. maculipennis |
|-----------------|----------------------------------------|-------------------------------------------------------|
| Internal sac    | Long, without visible distal spine     | Long, showing a conspicuous distal spine very variable in shape |
| Tegmen          | Narrow, shaped as a rather regular ellipse (Fig. 71) | Slightly wider, shaped as an ellipse moderately widened in the middle (Fig. 76) |
| Last sternite   | Clearly emarginate on rear border (Fig. 72) | Straight or feebly emarginate on rear border (Fig. 77) |
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(often with a more or less extended dark spot on disc); ventrally brown but anterior part of head and last two sternites (7th and 8th) more or less yellowish (colour variations are possible); legs entirely yellow except tarsal tips darkened; antennae yellow with articles 9-11 more or less darkened.

♀. As the male but eyes smaller, head narrower than pronotum, antennae shorter; elytra more convex, well widened in apical half, apices less divergent and less flattened, separately rounded; apical angle undefined but usually less rounded than in male.

Danacea mersini n. sp. (Figs. 57-60, 98)

A small species of the D. marginata set (bicoloured integuments and pronotal setae pattern of group 3), very close to D. reitteri and D. apicalis from which it differs for median lobe shape. Typical locality Camliyayla (Icel province). The name, a noun, comes from Mersin, older name, but still in use, for Icel.

Type Materials. Holotype, ♂, allotype, ♀ (both MMi), 26 paratypes (3♂♂, 3♀♀; MMi; 3♂♂, 3♀♀; MGe; 3♂♂, 3♀♀; CAn; 4♂♂, 4♀♀; CLI) all labelled: “TR (Mersin prov.) / Camliyayla / 4.VI.2011 / leg. F. Angelini”.

27 paratypes (4♂♂, 23♀♀; CLI): “TR (Mersin prov.) / Tarsus 25 Km N / 37°08.3’n, 34°50.4’E / 540 m, 30.V.2011, Liberti”.

1 paratype (♂: CLI): “TR (Mersin prov.) / Aydinar 5 Km S / 30.V.2011 Angelini”.

11 paratypes (7♂♂, 4♀♀; MBA): “Turkei, Mersin 2-600 m, 22.IV.1967 / leg. W. Wittmer” pr.; “Paratypus / Danacea / mersini n. sp. / Liberti, IL2016” pr.; “Naturhist. / Museum Basel / Coll. W. Wittmer” pr. grey.

Comparative Description. ♂. Head more or less balanced and approximately as long – and as wide – as pronotum; eyes rather big and bulging. Elytra fairly long (EL/EW=2.0-2.2, EL/PL=3.2-3.4), apically being somewhat less flattened than D. maculipennis, D. apicalis and D. reitteri (more or less approaching D. marginata).

Integuments blackish yellow except anterior part of head and elytral apices reddish-yellow. Median lobe as in Fig. 57 and 59. Internal sac very long, basally fitted with a complicated membranous (in part weakly sclerotized) structure which is visible inside the median lobe; median tract with very tiny, hardly visible, granulation; apical part with a coarser granulation and a variable distal spine (Figs. 58 and 60). Tegmen gradually narrowed basally. Pygidium wide and fairly long. Spicular fork branches thin, not widened basally.

Dimensions in mm (95% probability): ♂. TL=2.92±0.14, PL=0.56±0.05, EL=1.92±0.10, PW=0.62±0.03, EW=0.95±0.06 (5 specimens).

♀. TL=3.03±0.27, PL=0.58±0.07, EL=2.08±0.21, PW=0.68±0.09, EW=1.12±0.09 (5 specimens).

Notes. This species belongs to the D. marginata set (together with D. apicalis, D. maculipennis and D. reitteri) and several comparative information on these 5 species, as well as a general description, can be found above under “D. marginata group”.

D. mersini is probably endemic of the Mersin area (Fig. 98). As other species of this group it shows a distal spine variability that requires further investigation.

Materials studied. Only the types.

Danacea micans Procházka, 1894 (Figs. 45 and 46)

Danacea micans Procházka, 1894: 26, 32, loc. typ. Caucasus [sic]; Schildry 1897: 12, 33H; Pic 1937: 13; Mayor 2007: 397.

= Danacea micans var. astrabadensis Pic 1922: 18, loc. typ. Persia [Iran] (unspecified) (listed as synonym by Mayor 2007).

Type Materials. One typical specimen ♂, deemed to be a syntype (Schilsky (1897: 12) writes indeed that the description was based on 3 specimens of Heyden collection, not mentioned by Döbler (1982)), has been found at MBp, dissected by K. Majer and labelled: “Kaukasus / Leder” pr.; “micans m.” hw. by Procházka; “coll. Reitter” pr.; “Holotypus 1895 / Danacea / micans / Procházka” wrb.

Description. A medium size Danacea, TL in mm: ♂♂ 3.5-3.9; ♀♀ 4.0-4.3.

♂. Head triangular, short and transverse (w/l=1.15-1.25), with rather big and bulging eyes; as long – and approximately as wide – as pronotum; snout short (sl/eyl≈1); clypeus narrow (ad/eyl=0.9-1.0). Antennae rather long, feebly and gradually widened from article 3 to 11; articles 3-6 elongate and approximately conical; 7-10 approximately globular; article 6 more...
or less equal to (or just smaller than) 5 and 7; article 8 similar to 7 and moderately smaller than 9.

Pronotum transverse (PW/PL≈1.3) with lateral sides crenulated and rather irregularly expanded, necked forwards and with maximum width behind the middle.

Elytra long (EL/PL=3.3-3.4), convex, moderately widened in apical half, very narrowly bordered in basal half only; regularly sloping down apically (not flattened), apices jointly rounded (but a variable character), apical angle rectangular.

Penultimate sternite straight on rear edge.

Pronotal discal setae all parallel and directed forwards, as in group 1. Setae gray-green, long, thin and fairly sparse all over the dorsal surface (except on scutellum where they are thicker), poorly covering the blackish, bright (greenish shining) integuments. Legs and antennae entirely yellow: only the last antennal article more or less darkened.

Median lobe as in Fig. 45; internal sac long, visibly granulated in its median part, with no visible basal structures. Tegmen apically rounded (Fig. 46). Spicular fork branches thin, only feebly widened basally.

♀. As the ♂ but eyes smaller, head narrower than pronotum, elytra more convex and widened in apical half; antennae entirely yellow: only the last antennal article 6 shorter than 5.

NOTES. An easily recognizable species, with bright integuments and discal pronotal setae all parallel; it looks rather similar to D. ambiguus Mulsant & Rey, 1868 and it is the easternmost known representative of the D. pallipes (Panzer, 1795) group, however well differentiated for median lobe structure. Apparently rather common at least in western Caucasus, it has been reported for Turkey by Mayor (2007: 397).

MATERIALS studied. Armenia: Azachan* (Hladil, 1978, CLi); Azerbaijan: Pirkhli*, Csemacha* 1200 m (Svihla, 1979, CLi); Talysh, Aveard village* (?, 1995, CLi); Russia: Caucasian Territories: Pjatigorsk 800 m (Rybak, 2002, CLi).

Danacea nitidissima Pic, 1904 (Fig. 19)
Danacea nitidissima Pic, 1904b: 73, loc. typ. Kizil Dagh [southern Turkey: region north of Tarsus and Adana]; Pic 1937: 15; Mayor 2007: 398.

Type Materials. 1 syntype, ♀, in good conditions, is in collection Pic (boîte VIII), labelled: “Kizil Daghe [sic!] / (Taurus)” hw. by Pic; “n. sp. prés / cusanesis” hw. by Pic; “probl. moins / arrondi sur les / cotes et aspect / bien plus brillant” hw. by Pic; “D. nitidissima Pic” hw. by Pic; “type” hw. by Pic; “Type” prr.; “Syn- typus / Danacea / nitidissima Pic / Liberti vidit IX.2009” prr.

The second syntype (Pic reports, in his description, 2 specimens) is lost: only two legs remaining, glued to the mounting card; the labels are “Kizil Daghe [sic!] / (Taurus)” hw. by Pic, “Syntypus / Danacea / nitidissima Pic / Liberti vidit IX.2009” prr.

Fourteen further specimens are pinned nearby, apparently belonging to the same species. Out of them 11 are labelled “Hadjin [Saimbeyli, abt. 130 Km NE of Adana] Dagh / Taurus [Zurcher]” hw. by Pic; 3 “Karsanti [Aladag, abt. 65 Km north of Adana., TR] / Taurus” hw. by Pic. 5 specimens (4♂♂ and 1♀), out of the former 11 from Saimbeyli, have been re-mounted and 1 male dissected; they have been further labelled “Danacea / nitidissima Pic / determined par M. Pic / vidit Liberti IX.2009” pr. yellow. These are the specimens used for the description below.

DESCRIPTION. A bright, very small species: length in mm: ♂ 2.6-3.0; ♀ 2.9-3.1.

♂. Head rather small and short, transverse (l/w <0.9); as long - and as wide - as pronotum (in its max width, namely in the middle); eyes rather big and bulging; snout short (sl/eyl <1), clypeus narrow (ad/eyl≈1). Antennae long and thin, nearly of the same thickness (just a small width increase from 3 to 11); all articles thin and elongate.

Pronotum moderately transverse (PW/PL≈1.1), lateral side expansions rounded, max width in the middle, necked forwards and regularly narrowed backwards. Elytra convex, not bordered (or very weakly bordered near base), slightly widened in apical half; apices sloping down in a regular convexity, joint but separately rounded, apical angle undefined to obtuse. Abdomen penultimate sternite straight or slightly emarginated on posterior edge.

Discal setae pattern on pronotum as in group 3 (but somewhat intermediate to group 2), with setae in the fore third of pronotum well oblique (nearly transversal). Dorsal integuments blackish-brown with green lustre, duller on pronotum and bright on elytra. Dorsal setae long and thin, sparse, pale grey to whitish, poorly
masking the integuments. Overall colour grey to olive green, rather bright; mouthparts, legs and antennae yellow.

Median lobe as in Fig. 19. Internal sac rather long, fitted at base with a membranous, hardly visible (through the median lobe integument) lamellar structure; median and apical parts showing a dense, black, very evident granulation which tends to become sparser towards apex. Tegmen apically extended in a short, small and triangular process bearing the terminal setae. Spicular fork branches thin, moderately widened at base.

♀. As the male but eyes smaller, elytra more widened in apical half, apical angle better defined.

Notes. Another rather poorly known species, possibly of late appearance (end of June to July), well characterized, also, by the black, visible granulation of internal sac.

Materials studied. Turkey Adana prov. (01): Adana (Klapperich, 28.VI.1966, CCo); Aladag (? , ?, MNHNp); Saimbeyli (Zurcher, ?, MNHNp). Antalya prov. (07): Demirtas (Kopetz, 26.V.2006, MEr)

Danacea ochroleuca Schilsky, 1897 (Figs. 27, 28, 88)

Danacea ochroleuca Schilsky, 1897: 20, loc. typ. “Klein-Asien, Gjölbani”(NNI); Pic 1937: 15; Mayor 2007: 398.

Type Materials. This species has been described from 1 ♂ only, that should be kept at the Wien Museum and has not been seen. Its typical locality is uncertain (see note 1 (N1) under “Materials and Methods”). However, due to its unusual yellow-orange integuments colour, it should be easily recognizable.

Thanks to the courtesy of Robert Constantin, it has been possible to study 1 ♂ specimen from Hisarcandir (see below under “Materials studied”) which correspond to the Schilsky description (taking sex differences into account), at least for the very peculiar colour and body structure.

Description (Fig. 88). This description is based on 1 male specimen, collected at Hisarcandir (Antalya province) and below detailed.

A peculiar species, medium sized, immediately recognizable for the yellow-orange colour and the body structure: head and pronotum much narrower than elytra; elytra short and rather flat, widened from base to ¾ of their length, strongly bordered.

Head long and narrow, elongate (l/w >1.4), longer and narrower than pronotum, eyes flattened, snout very long (sl/eyl=2), clypeus narrow (ad/eyl <1.1). Antennae short and thin: articles 3-8 thin, of similar width; 3 and 4 elongate; 5 to 8 shorter, approximately balanced; 9 to 11 slightly wider than the previous ones. Pronotum feebly transverse (PW/PL=1.0-1.1), smooth (not crenulated) on lateral sides, lateral expansions rounded, its maximum width just behind the middle, narrowed forwards (moderately necked) and backwards, clearly narrower than elytral base.

Elytra wide and short (EL/EW=1.35), flat, broadly bordered with external edge slightly raised, regularly widened from base to ¼ of their length; apices very wide, flattened, joint and nearly jointly rounded, apical angle obtuse.

Posterior edge of abdomen penultimate sternite straight.

Pronotal setae discal pattern as in group 2. Dorsal setae short, rather thin, pale yellowish, poorly covering the underlying integuments which are orange-yellow, moderately bright and rather smooth. Overall insect colour orange-yellowish; apical half of tibiae, tarsi, palpi and last antennal articles blackish.

Median lobe as in Fig. 27. Internal sac showing a membranous basal lamellar process, hardly visible through the median lobe integument; median and apical parts possibly free from granulation (but a character undetectable in the available specimen). Tegmen sub-elliptical, rather short, extended apically in a thin and short process bearing the terminal setae (Fig. 28). Dimensions of the specimen studied (in mm):

♂: TL=4.1, PL=0.80; EL=2.3; PW=0.85; EW=1.7.

Notes. A species close to D. particularipennis for general body shape but well differentiated for median lobe and overall body colour.

As often happens, things might not be as simple as that. A second ♂ specimen is known, pale yellow coloured and also fitting the Schilsky description (but size smaller than the Hisarcandir specimen: TL=3.1 mm). This specimen, of a different species, was curiously found in Sweeden in a road Service Area (see below under “Materials studied”). Assuming that no
labelling mistake was made and that no *Danacea* species would live in the north of Europe, it should have been carried (by car or truck) from somewhere and its place of origin actually is completely unknown. Strong doubts obviously remain on *D. ochroleuca* too.

**MATERIALS STUDIED.** 1♂ labelled: “Antalya, Bey Daglari, near Hisarcandir, 800-1200 m, 36°47’48"N 30°29’28"E, 31.V.2002 legit A. Weigel” (CCo). 1♂ labelled: “S [= Sweden]: Öl Isgärde grustag, RN 629179-154542, 20.VIII.2005 havn ruderatm, leg. Sven Lennartsson” (CCo).

*Danacea oertzeni* Schilsky (Fig. 93)

A species already discussed in Liberti (2009), which appears to be rather common in the Aegean Turkey. It is here included, with a photograph of its *habitus*, to update the localities list.

Update to “MATERIALS STUDIED”

Aydin prov.: Priene (Klapperich, 1967, CCo).
Mugla prov.: Marmaris (Werner, 1993, Mbe); Yaylasögüt (Liberti, 2010, CLi).

*Danacea olivacea* Baudi a Selve, 1873 (Figs. 42-44, 84, 97)

“[*Dasytes*] olivaceus Fald.[ermann] Persia occid. et Tauria = *Dan. olivacea* (n. sp.?)” Baudi a Selve 1873: 311, loc. typ. western Iran and “Tauria”*; Pic 1894a: 103; Pic 1894b: 135; Pic 1937: 15; Mayor 2007: 398.

= *Danacea valida* Heyden, 1878: 215, loc. typ. Mikwena on rion* and Katharinenfeld* (syn. n.); Procházka 1894: 25, Fig. 9; Pic 1894a: 99; Schilsky 1896: 34; Schilsky 1897: 6; Obenberger 1917: 33; Pic 1937: 19; Mayer 1987: 741, Fig. 398 [wings structure]; Mayor 2007: 399.

= *Danacea valida* var. *fuscata* Schilsky, 1897: 6 (listed as a synonym of *D. valida* by Mayer 2007: 399); Pic 1937: 19.

= *Danacea robusta* Procházka, 1894: 27, 33, loc. typ. Somchetien*, Georgia ( synonymized by Schilsky 1896: 364).

* Tauria: The name should refer to the Crimea peninsula. Please note that one out of the two syntypes is the only specimen known recorded from there (and, in the writer’s opinion, would need confirmation).

Mikwena: this name - not found on any map - probably refers to a locality placed in the high basin of river Rioni, north of Kutaisi. Katharinenfeld is the old name of Boltissi (or Bolnisi), in Georgia. Somchetien is an old name of the region about 70 Km SW of Tbilisi, in Georgia, which includes Boltissi.

**TYPE MATERIALS.** The two syntypes referred by Baudi, ♀♀, have been found at MTo in collection Di Breme (where a part of collection Dejean was included). They are labelled: 1♀: “olivaceus / faldermann / persia occ.” hw. by Dejean [a good sample of Dejean writing can be found in Cambefort (2006: 153)]; “Danacea / olivacea / Baudi Persia” hw. probably by Baudi; “Danacea olivacea / Baudi 1873 /♀ SYNTYPUS” hwr. (by Liberti). 1♀: “tauriam” hw. by Dejean; “Danacea olivacea / Baudi 1873 /♀ SYNTYPUS” hwr. (by Liberti).

One syntype, ♀, of *Danacea valida* is at the Senckenberg Deutsches Entomologisches Institut in Münchenberg, Germany (as reported by Döbler 1982), labelled: “Kaukas / Leder” pr.; “140” hw.; “…[blank]” an unwritten small square cardboard, pale pink (possibly red in origin); “SYNTYPUS” prr.; “DEI coll. / von Heyden” pr. white; “DEI Münchenberg / Col. 07606” pr. pale blue. Two further ♀♀ are pinned (on the same pin) close to the syntype, labelled:

“…[blank]” an unwritten small cardboard square, blue coloured; “Caucasus / Staudgr.” hw.; “488” hw.; “… [blank]” an unwritten small cardboard square, pale pink (possibly red in origin); “DEI coll. / von Heyden” pr. white; “DEI Münchenberg / Col. 07607” [double: the second bears the number 07608] pr. pale blue.

The synonymy, although based on females only, appears doubtless to the writer.

**DESCRIPTION.** A large to very large group 1 species: TL in mm: ♀♀ 5.1-5.6; ♀♀ 5.2-5.6; dark coloured, body – and particularly elytral – shape rather variable (Fig. 84). ♀♀ Head balanced or very slightly elongate; as wide as (or just narrower then) – and longer than – pronotum; eyes small, rather flat, snout long (sl/eyl >1.5); clypeus wide (ad/eyl >1.5). Antennae rather long, articles 4-11 approximately of same width; article 3 thinner; all articles more or less triangular, elongate, internal angles better defined than external ones. Pronotum transverse (PW/PL=1.1-1.2), convex, weakly crenulated on lateral sides, lateral expansions moderate; posterior edge clearly shorter than anterior one.
Elytra rather convex and wide (EL/EW=1.7-2.0), parallel, bordered on lateral sides, apices more or less flattened, joint or divergent, rounded either jointly or separately, apical angle undefined to rectangular (elytral apices very variable). Penultimate sternite very slightly emarginated on posterior edge.

Pronotal setae all parallel and directed forwards, as in group 1. Dorsal setae long and thin, greenish grey, similar on pronotum and on elytra, poorly covering the underlying integuments which are black, rather bright and with greenish reflections. Overall colour olive green to dark greenish grey. Legs usually reddish but, in a few specimens, femora dark and tibiae paler. Antenna entirely dark to reddish with apical articles darkened. Mouth parts reddish to dark brown.

Median lobe as in Figs. 42 and 43. Internal sac membranous, with median and apical parts bearing a very fine, hardly detectable granulation. Tegmen apically sharp (Fig. 44). Spicular fork branches well widened basally.

♀. As the male but size larger, eyes smaller, head clearly narrower than pronotum, antennae thinner, elytra widened in apical half.

NOTES. A large species probably widespread in the whole Caucasian region and and rather common in north-east Turkey; often found beating blossoming hawthorn (F. Angelini, personal communication).

A few doubts remain on this taxon because of the locality “tauria” of one baudi syntype.

MATERIALS STUDIED. Turkey: Artvin prov.: Artvin (Kment, 2005, MPr)F; Cam Gecidi 2600 m (Podlussany & Rozner; 1996, MBp)F. Erzurum prov.: Tortum (Alrozu, 1979, CYi); Pazaryolu (Gültekin, 1997, CYi)F; Erzurum (Yildirim, 1996, CYi). Giresun prov.: Selinkarahisar (Angelini, 2009, CLi); Dogankent (Angelini, 2009, CLi). Gümüşhane prov.: Köseedagi Gecidi (Sama, 1998, CLi); Vaudagi Gecidi (Angelini, 2009, CAN)F. Kars prov.: Karakurt (Kadlec, 1992, MPr). Armenia: Meghri pass near Kharajan (Biscaccianti, 2005, CLi); Dilizan (Kuban, 1979, CLi); Covagijuch: Lake Sevan (Hladil, 1978, CLi); Vedi (Ivie, 2008, MTC). Georgia: Achalciche (Pfeffer, 1966, MP). Azerbaijan: Avarand, Talysh (?; 1995, CLi). Russia: Caucasian Territories: Dumaly river (Kabardino Balkaria; Blait, 2001, CLi)F. Iran: Mount Tales near Halhal (37°51’N, 48°38’E, Ardabil; Saltini, 1999, CLi).

Danacea phrygia n. sp. (Figs. 23-26)

A medium to large species (TL in mm: ♂ 3.8-5.0; ♀ 4.0-5.2), very variable in size, pronotal shape and dorsal setae colour, with pronotal setae pattern of group 2.

Typical locality Karatepe (Adana province).

The name (an adjective) derives from Phrygia, an ancient kingdom of central Anatolia.

TYPE MATERIALS. This species shows, even more than others, an important population variability, as detailed in the description below. That is why the type series, for sake of homogeneity, has been limited to the two following population samples:

Holotype, ♂, allotype, ♀ (both MMi), 46 paratypes (19♂♂, 25♀♀: MMi; 2♂♂: CLi) labelled: “Turchia, Karatepe / (Adana) 29.VI.1965 / leg. Pierotti & / Persessinotto” pr.; “Holotypus [or Allotypus, or Paratypus where applicable] / Danacea phrygia / Liberti, II.2016” prr. 1 paratype (♂: CLi) labelled: “TR (Adana prov.) / Osmaniye 15 Km NE / 37°09.7N 36°22.9E / 196 m, 25.V.2011, Liberti” pr; “Paratypus / Danacea phrygia / Liberti, II.2016” prr.

DESCRIPTION. ♂. Head transverse (smaller specimens) to balanced (w/l=1.0-1.2); more or less as wide – and as long – as pronotum (but, in the Antalya population, head narrower – and longer – than pronotum); eyes rounded and rather big (but in the Antalya population, head being larger, eyes are apparently smaller; in the Yenice population eyes are flattened and smaller).

Snout short (sl/eyl=0.8-1.1, but in the Yenice and Antalya populations snout is regular to long: sl/eyl=1.4-1.5); clypeus narrow (ad/eyl=1.0-1.2). Antennal length median (but, in the Antalya population, antennae are shorter); regularly widened from article 2 to apex; article 3 conical; 4 to 10 approximately triangular and slightly longer than wide (but in the Antalya population approximately balanced).

Pronotum very variable: from balanced and nearly straight on lateral sides to transverse (PW/PL=1.15), fairly expanded laterally and feebly necked both forwards and backwards (in the Antalya population pronotum is transverse – PW/PL=1.25 – with maximum width in the middle, feebly necked forwards and strongly narrowed backwards so that the rear border is much shorter than the anterior one).

Elytra convex, narrowly bordered in basal half, regularly sloping down apically; more or less jointly
rounded with apical angle rather defined, more or less rectangular.

Penultimate sternite straight, or feebly concave, on rear edge.

Pronotal discal setae pattern as in group 2; dorsal setae fairly thin and long (but somewhat thicker in the Antalya population), dense or very dense, grey-green to yellow-green; the underlaying integuments difficult to see because of the setae coverage, blackish, dull on pronotum and with a feebly greenish lustre on elytra.

Legs and antennae entirely yellowish (only the tips of both last antennal article and tarsal segments, at times, more or less darkened).

Median lobe as in Figs. 23 and 24 (the Yenice population shows, in a few specimens, a rather surprising variability in aedeagus shape, which more or less goes along with reduced size and narrowed pronotum; the Antalya population has a slightly different median lobe apex which is bent downwards). Internal sac of regular length, clearly granulated (with rather dark granules) in the middle, without any evident membranous structure basally. Tegmen apex shortly extended and apically truncated (Fig. 25). Spicular fork branches sinuous and feebly widened basally (Fig. 26).

♀. As the male but eyes smaller, head narrower than pronotum, antennae shorter; elytra more convex and widened in apical half (in the Antalya population the pronotal shape is the same as in ♂).

Dimensions: ♂. tL=4.28±0.54, PL=0.89±0.12, EL=2.68±0.28, PW=0.99±0.17, EW=1.37±0.18 (95% probability, 5 specimens). ♀. tL=4.65±0.49, PL=0.91±0.16, EL=2.98±0.21, PW=1.01±0.23, EW=1.56±0.20 (95% probability, 5 specimens).

NOTES. An apparently common, widespread and variable species found in the south of Turkey, from Çağakale to Adana provinces.

The variability shown by different, and rather far away populations, as detailed in description, brings about the possibility of dealing with subspecies; however no decision is possible, at the moment, on their actual value. More materials would be required indeed from in-between localities.

MATERIALS STUDIED. As stated above, the variability shown by different populations suggested to limit the type series to two population samples from localities close to each other. All other materials studied are here below reported. Turkey. Çağakale prov.: Yenice (Liberti, 2010, CL). Adana prov.: Boztahta (Fikacek, 2001, MP); Adana (Fikacek, 2001, MP); Yarpuz (Ivie, 2006, MTC). Antalya prov.: Alanya (Weigel & Kopetz, 2006, MEr); Antalya (Neubert, 1934, MMi); Termessos (Kadlec, 1992, MP); Mahmutlar (Kopetz, 2006; Skale, 2006, both MEr); Gündoğmus (Weigel, 2006, MEr); Demirtas (Kopetz, 2006, MEr); Avsallar (Pütz, 1995, CCo). Mersin prov.: Guzeloluk (Jannson, 2005, CCo). Konya prov.: Aksehir (Bodemeyer, *o, MP).
It has been felt useful to designate a lectotype for two reasons (ICZN 1999, Art. 74.7.3); the typical series include two different species and the complex systematics of \textit{D. reitteri} requires a name bearing type, as below explained under “Notes”.

The Procházka description fits well to it [apart from the long temples which appear not different from those of \textit{D. marginata}, as Schilsky correctly pointed out (1897: 47)]. This species belongs to the \textit{D. marginata} group (together with \textit{D. apicalis}, \textit{D. maculipennis} and \textit{D. mersini}) and several comparative information on these 5 species, as well as a general description, can be found above under the heading “\textit{D. marginata group}”.

**Comparative description.** ♀. Head balanced, more or less as wide as – and moderately longer than – pronotum, eyes moderately bulging to normally rounded. Elytra slightly shorter: EL/EW=1.8-2.0, EL/PL=3.1-3.3. Median lobe as in Fig. 74 and 79, similar to, but somewhat thinner than, the \textit{D. marginata} one. Internal sac very long, showing a basal membranous structure, a tiny granulation in the middle and fitted with a distal spine (a difference from \textit{D. marginata}, see discussion below) variably shaped. Tegmen approximately elliptical and slightly widened in the middle (Fig. 76). Sper- ular fork with sinuous branches. Last sternite simply rounded (not emarginated) on rear border (Fig. 77).

**Notes.** All records of \textit{D. marginata} (erroneously) reported by Liberti (2009: 71) for Russia, Turkey and Cyprus, are to be re-assigned to \textit{D. reitteri}. It is a common species, at times found in numbers, which occurs (nearly) all over Turkey. It appears variable mostly in the shape of distal spine for which several different structures have been observed, as shown in Figs 75, 80-83. This character appears to be dependent on geographical distribution, as shown in Fig. 97. Just for sake of graphical representation a capital letter has been used, in drawings, to mark each distal spine shape, as follows: A (Fig. 83), E (Fig. 75), I (Fig. 82), T (Fig. 80) and U (Fig. 81).

Letter O (distal spine shaped like a simple hook) has not been included in the drawings because it is known from only one specimen. The distal spine of the lectotype (Fig. 83/1) more or less fits type A (however looking more parallel and thinner) but the specimen is old and a distal spine shape, when evaluated on one specimen only, may not be fully reliable (unfortunately the ♀ paralectotype could not be studied because of the missing abdomen). Whether all the observed shape variations of distal spine should be named as subspecies may be regarded as a matter of opinions. It has been chosen, here, to simply mark these shapes with a letter because, at the moment, the whole picture is complex and insufficiently known. It has been deemed useless indeed, for the time being, to encumber taxonomy with several subspecific names whose real meaning would be doubtful and whose geographical distribution would only be a guess.

**Materials studied.** Please note that not all the below reported localities appear in the distributions of Fig. 97. Indeed the distal spine shape was not always observed in materials returned to owners before 2014. Turkey: Amasya prov.: Tasova (Angelini, 2009, CLI). Antalya prov.: İrmasan Geçidi (Angelini, 2011, Can & CLI); Kemer (Wunderle, 2002, MBe); Yarpuz (Angelini, 2011, Can); Belpınar Geçidi (Angelini, 2011, Can). Bolu prov.: Abant Gölü (Saltini, 2003; Angelini, 2009, both CLI). Burdur prov.: Celtikci Geçidi (Schülke, 2011, MBe)². Giresun prov.: Dogankent (Angelini, 2009, CLI). Isparta prov.: Sütçüler (Assing, 2009, MBe)³. Mersin prov.: Güzeloğlu (Angelini, 2011, Can; Liberti, 2011, CLI); İzmir prov.: Beiköz (Birö, 1925, MBp). Kastamonu prov.: Abana (Angelini, 2009, Can). Ordu prov.: Gürgentepede (Angelini, 2009, CLI)³. Rize prov.: Camlıhemsin (Kment, 2005, MPr)². Samsun prov.: Ladik (Angelini, 2009, CLI). Sinop prov.: Erfelek (Assing, 2009, MBe)³; Çangal Dagi (Wunderle, 2009, MBe). Zonguldak prov.: Ahmetusta Geçidi (Angelini, 2009, Can)³; Bartın (Angelini, 2009, CLI); Devrek (Angelini, 2009, CLI). Georgia: Borzomi (Pfeffer, 1966, MPr); Mcheta (Pfeffer, 1966, MPr); Rustavi (Pfeffer, 1966, MPr). Russia: Caucasian Territories; Piatigorsk (Rybek, 2002, CLI); Novorossijsk (Luthe, ?, MHe); Teberda (Zolotarew, ?, MPr).

**\textit{Danacea satanas} Procházka, 1894 (Figs. 37 and 38)**

\textit{Danacea satanas} Procházka, 1894: 25, 34, loc. typ. Armenia; Schilsky 1897: 21; Pic 1937: 18; Mayor 2007: 399.

**Type materials.** Seven syntypes[]{ref}², 2♂♀ and 5♀♀,
of this species are in collection Reitter, at MBp. They are all labelled: “Caucasus / Armen Geb. / Leder Reitter” pr.; “Holotypus [or Paratypus] 1895 / Danacea / satanas / Prochaska [sic]” wrb.; “coll. Reitter” pr.; “Syntypus / Danacea satanas / Procházka, 1894 / (Liberti 2016)” prr. 1♂ (marked holotype wrb.) and 1♀ have been dissected by K. Majer.

DESCRIPTION. Based on a rather small population sample (10 specimens) from Ercyes Dagl, in central Turkey. A large species, TL in mm: ♂♂ 4.5-5.7;♀♀ 5.0-5.5. ♂. Head small, approximately balanced, much narrower than pronotal anterior edge and moderately longer than pronotum; eyes rather small, snout median (sl/eyl=1.3-1.4); clypeus regular (ad/eyl=1.2-1.4). Antennae rather long, articles 3-11 elongate, slightly and gradually widened towards apex, internal angles more prominent than external ones. Pronotum clearly transverse (PW/PL=1.4-1.5); variably bordered on lateral sides: anterior angles approximately rectangular, at times moderately raised; feebly expanded in the middle and narrowed behind. Fore edge of pronotum moderately narrower – and posterior edge clearly narrower – than middle width. Elytra flat, wide, widely bordered, parallel; spines flattened, divergent, apical angle well defined, acute. Abdomen penultimate sternite slightly concave on posterior edge. Pronotal discal setae arranged as in group 2; dorsal setae thin, long and sparse, pale greenish-gray; in a small area, in the pronotum middle (where setae are oblique and directed towards the centre of the disc), setae may change colour and become black, hardly visible. This character, already reported by Procházka (1894: 25, 34) with a slightly different pattern (and not always present on his typical series), might be subject to geographical variations.

♀. As the male but head narrower, eyes more flattened, antennae shorter and narrower, pronotum more transverse, elytra more flat and widened in apical half.

* it is worth noting that also in D. vitticolis Schilsky, 1897, a Greek species living in the Kyklades Archipelago, the setae coverage shows dorsal zones apparently naked (actually covered by black, hardly visible setae) which form patterns typical of each Island.

NOTES. A large, altitudinal (the Ercies Dagl specimens have been collected at about 3000 m) species, probably widespread both in Turkey and in the Caucasian region.

MATERIALS STUDIED. Turkey: Erzurum prov.: Ilica (Hajek, 2003, MPr). Kayseri prov.: Ercies Dagl 2800-3300 m (?; 1947, MPr; Brustel, 2007, CLi).

Danacea sequensi Reitter, 1901 (Figs. 39-41, 97) Danacea sequensi Reitter, 1901: 100, loc. typ. Konya (TR); Pic 1937: 18; Mayor 2007: 399.

= Danacea holtzi Pic, 1904a: 3, loc. typ. Adana province (TR) (syn. n.); Pic 1937: 10; Mayor 2007: 396.

= Danacea ciliciensis Zurcher, 1911: 255, loc. typ. Hadjin Dagh [Mounts around Saimbeyli] (listed as a synonym of D. holtzi by Pic 1937: 10).

TYPE MATERIALS. One syntype♂ (♀) of D. sequensi is at MBp, labelled as follows: “Anatolien / Konia / 1899 Korb” pr.; “Danacea / Sequensi / m. 1901” hw. by Reitter; “coll. Reitter” pr.; “Holotypus 1901 / Danacea / Sequensi / Reitter” wrb. This specimen has been dissected and re-mounted by K. Majer. Three syntypes (2♂♂, 1♀) of D. holtzi are in coll. Pic (boite III), labelled: 1♀: “type” hw. by Pic; “Taurus / Cilicien” hw. by Pic; “511” pr.; “reçu de Holtz” hw. by Pic; “Danacaea n. sp.” hw. by Pic. 1♂, dissected: “Taurus / Cilicien” hw. by Pic; “504” pr.; “reçu de Holtz” hw. by Pic; “Danacaea n. sp.” hw. by Pic; “Dan. holtzi Pic” hw. by Pic. 1♂: “Taurus / Cilicien” hw. by Pic; “506” pr.; “type” hw. by Pic; “Holtzi Pic” hw. by Pic. The 3 syntypes also bear the further label: “Syntypus / Danacea / holtzi Pic / vidit Liberti IX.2009” prr.

1 syntype (♀) of D. ciliciensis is in coll. Pic (boite III), pinned close to D. holtzi, labelled: “Hadjin Dagh” hw. by Pic; “ex Zurcher” hw. by Pic; “D. ciliciensis” hw. by Pic; “Syntypus de / Danacea ciliciensis / Zurcher” hw. by R. Constantin. No doubts they all belong to the species formerly named D. sequensi by Reitter.

[Notes added for non-commercial use only]
**DESCRIPTION.** Size medium: length in mm: ♂ 4.2-4.7; ♀ 4.4-5.1.

♂. Head balanced (or slightly elongate: l/w=1.0-1.1), equal to (or slightly wider than) - and longer than - pronotum; eyes from normally rounded (mainly populations from Antalya province) to slightly flattened (mainly populations from Mersin province); snout long (sl/eyl=1.4-1.6), clypeus regular to wide (ad/eyl=1.3-1.6). Antennae long, gradually and moderately widened from article 3 to apex; articles 3-10 triangular; 3-8 elongate, 9-10 balanced; internal angles more prominent than external ones.

Pronotum convex, rather cylindrical, slightly transverse (PW/PL=1.05-1.15), necked forward; maximum width slightly behind the middle; lateral expansions moderate, rounded; anterior edge only marginally shorter than maximum width.

Elytra rather flat, slightly but clearly widened in apical half, evidently bordered: narrowly near base and widely in apical half; apices flattened, widely rounded and moderately divergent although jointly rounded; apical angle well defined, more or less rectangular.

Abdomen penultimate sternite depressed and emarginated in the middle of rear edge.

Pronotal setae pattern on disc as in group 1, however, on anterior edge, setae may become transversal converging towards a point located in the middle of it. Dorsal setae rather thick and short, pale greenish. Integuments dark olive-green, bright. Overall colour olive-green; legs entirely yellow but tarsal tips darkened. Antennae reddish with articles 5-11 increasingly darkened; often articles 1-7 more or less darkened and articles 8-11 entirely dark reddish-brown. Mouth parts dark reddish.

Median lobe as in Figs. 39 and 40. Internal sac rather long, fitted in the basal part with a membranous, hardly visible lamellar structure, median and apical parts non granulated (or with a very tiny granulation just detectable through the median lobe integument). Tegmen elliptical, apically simply rounded and not extended (Fig. 41). Spicular fork branches normally widened at base.

♀. As the male but head narrower, with smaller eyes, slightly narrower than pronotum; antennae shorter and thinner, elytra more widened in apical half; apices less flattened and less divergent; apical angle rectangular to acute.

**NOTES.** A common and widespread species in southern central Turkey (Fig. 97), often found on blossoming hawthorne. Easily recognized by group 1 pronotal setae and elytral shape, flat and widened in apical half.

**MATERIALS STUDIED.** Turkey: Isparta prov.: Candir (Podlussany, 1990, MBp)(*). Antalya prov.: Akseki (Gillerfors, 1992, MLu & CLi); Cakilli Gecidi (Angelini e Saltini, 2011, CLi); Demirtas (Weigel and Kopetz, 2006, MEr); Dikmen (Ziegler, 2001, CZi & CLi); Göynük (Hula, 2004, MP); Irmasan Gecidi (Saltini, 2011, CLi; Angelini, 2011, CLi & CAn); Kemer (Weigel, 1993, CKo); Kumluca (Weigel, 1993, CKo); Manavgat (Ziegler, 2001, CZi); Yarpuz (Angelini, 2011, CAn). Mersin prov.: Guzeloluk (Kadlec, 1991, MP); Jannson, 2005, CCo; Angelini, 2011, CAn; Libert (Angelini, 2011, CLi); Güneyyurt (Angelini, 2011, CAn; Libert, 2011, CLi); Damlama (Liberti, 2011, CLi). Konya prov.: Fasikan Gecidi (Angelini, 2011, CAn); Güneyyurt (Angelini, 2011, CAn); Adiller (Angelini, 2011, CAn); Tepebasi (Angelini, 2011, CAn); Igdören (Angelini, 2011, CAn).

(*) A labelling mistake is here assumed, the label spelling being indeed “Isparta: Canair”.

**Danacea spinicollis** Schilsky, 1900 (Figs. 12-14, 86)

Danacea spinicollis Schilsky, 1900: 10, loc. typ. Akbez(n1); Pic 1937: 18.

= Danacea dentatithorax Pic, 1907: 153, loc. typ. Karsanti (today Aladag, abt. 65 Km North of Adana, TR) (syn. n.); Pic 1937: 9; Mayor 2007: 396.

= Danacea dentatithorax var. simplicithorax Pic, 1909: 113, loc. typ. Taurus (teste Mayor 2007 = dentatithorax); Pic 1937: 9; Mayor 2007: 396.

**TYPE MATERIALS.** 3 syntypes (2♂ and 1♀) of *D. spinicollis* are at MB, as follows: 1♂, dissected by K. Majer: “Akbes / Staudgr [Staudinger]” hw. by Schilsky; “spinicollis / * Schils.” hw. by Schilsky. 1♀: “Akbes / Staudgr [Staudinger]” hw. by Schilsky; “var. a” hw. by Schilsky. 1♀ unlabelled. To the 3 specimens a further label has been added: “Syntypus / D. spinicollis / Libert 2015” hw.

Twenty-four syntypes of *D. dentatithorax* have been found in the Pic coll. (boite III), all labelled: “Karsanti / Taurus” either hw. by Pic or transcribed: “[Manuscript par M. Pic] / Karsanti / Taurus” pr.; “Syntypus / Danacea / dentatithorax Pic / vidit Liberti IX.2009”.

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One ♂ also bears three more labels: “type” hw. by Pic; “dentatithorax Pic” hw. by Pic; “Type” prr.

Four syntypes (3 ♂♂: 1 dissected, 1 ♀) have been re-mounted.

No type of *D. dentatithorax* var. *simplicithorax* has been retrieved. However, in coll. Pic (boite III), a ♂ specimen has been found, determined by Pic, which conforms to the short and rather meaningless description supplied. It is labelled:

“Karsanti / Taurus” hw. by Pic; “D. dentatithorax / v. simplicithorax Pic / determiné par M. Pic / vidit Liberti IX.2009” pr.

This specimen is very similar to the *D. dentatithorax* syntypes and has been considered as belonging to the same species.

**DESCRIPTION (Fig. 86)**

Size medium to large: length in mm: ♂ 4.1-5.2; ♀ 4.3-5.4.

♂. Head large. Approximately balanced, slightly narrower than (or as wide as) pronotum front side (but often wider than in the middle) and longer than pronotum; eyes regular to flattened; snout long (sl/eyl >1.5); clypaeus wide (ad/eyl >1.5). Antennae rather short, very slightly widened towards apex; article 3 thin, conical, elongate; 4 intermediate, 5-10 more or less triangular with anterior angles increasingly well defined, balanced to moderately elongate.

Pronotum showing a peculiar shape (Fig. 86): very transverse (PW/PL=1.4-1.5); its max width on the anterior side because the anterior angles are expanded, pointing outwards in a kind of large tooth; such expansion is connected backwards (towards the middle) with the lateral pronotal expansions typical of genus *Danacea*; close to the posterior edge it is rather abruptly narrowed. As a result, the pronotum is approximately trapezium shaped, with shorter base behind and lateral sides irregular.

Elytra parallel, rather flat, evidently bordered on the whole lateral sides, apices flattened, moderately divergent, separately rounded; apical angle undefined. Abdomen penultimate sternite feebly emarginated in the middle of posterior edge.

Pronotum discal setae arranged more or less as in group 1 but somewhat intermediate to group 2: all parallel except on a small median area on the front edge, where the setae converge towards a point (or a short vertical line) in the middle of it (a variable character). Dorsal setae yellow-greenish, thick and dense, well masking the integuments which are blackish, rather bright, punctuated and similar on pronotum and elytra. Legs yellowish-reddish with darkened tarsi; antennae entirely reddish, more or less darkened at apices, mouth parts blackish with pale grey pubescence on epistoma and mandibles.

Median lobe as in Figs. 12-14. Internal sac rather long, basal part membranous, with no visible structures; median and apical parts densely and finely granulated. Tegmen elliptical with normal apical process. Spicular fork branches moderately widened at base.

♀. As the male but head and eyes smaller, head much narrower than pronotum; pronotum lateral expansions rather variable and often less developed than in males; elytra moderately widened in apical half, apical angle more rounded.

**NOTES.** A species of the *D. iners* Kiesenwetter, 1859 group and close to *D. lysholmi* (see table above), well different from the former by pronotum shape and median lobe, more or less differentiated from (however very similar to) the latter by median lobe (apically more straight: compare Figs. 10,11 with 12, 13, 14) and pronotum shape (which, in *D. lysholmi*, is clearly less developed). Its real status, with respect to *D. lysholmi* (whether a good species, a subspecies or a synonym) should be assessed by examination of more materials.

**MATERIALS STUDIED.** Turkey. Adana prov.: Balcali* (C. W. Mills, 2000, CMa); Feka (Liberti, 2011, CLi). Mersin prov.: Camliyayla (Saltini, 2000, CLi; Angelini, 2011, CAn).

* a doubtful locality: assuming a right spelling it should be a University Campus in Adana city, if the spelling would be Baklali than it is a village about 30 Km ENE of Adana.

**Danacea syriaca** Schilsky, 1897 (Fig. 8)

*Danacea syriaca* Schilsky, 1897: 11, loc. typ. Akbez<sup>(n1)</sup>; Pic 1937: 18; Mayor 2007: 399.

**TYPE MATERIALS.** As reported by Schilsky (1897: 11), this species has been described on 1 ♀ specimen from Akbez, that should be considered holotype (ICZN 1999, Art. 73.1.2). It is kept at MBe and has been identified by the labelling, as follows: “Akbez / Staudgr.” hw. by Schilsky; “Danacea / cavifrons / Pic” hw. pos
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sibly by Pic, however old; “syriaca / Schils.” hw. by Schilsky.
Close to the holotype 2 further specimens are pinned, deemed to belong to the same species: 1♀ “Akbes / Staudgr.” hw. by Schilsky; “syriaca” hw. apparently rather recent (K. Majer ?), 1♂, dissected by K. Majer (re-mounted by the writer): “Mardin” hw. with red ink; “Danacea / cavifrons / Pic” hw. possibly by Pic; “syriaca / Schilsky” hw. by K. Majer.
It is here assumed that the ♂ from Mardin would belong to the same species of the ♀♀ from Akbez (the two localities are more than 350 Km apart) due to the general resemblance and the congruence of several characters: dorsal and pronotal setae, body shape, antennal shape, colour, size.

DESCRIPTION. The following description is just based on the 3 known specimens (1♂ and 2♀♀, one of which is the holotype) available.
Size large, length in mm: ♂ 4.6; ♀♀ 5.2-5.6.
♂. Head rather small, sub-triangular, balanced (l/w ~1.0), narrower than pronotum; eyes normal; snout short to medium (sl/eyl=1.1); clypeus regular (ad/eyl<1.4). Antennae rather short, approximately of the same thickness, articles 2-4 slightly thinner than 5-10; these more or less globular. Pronotum approximately square shaped (PW/PL ~1.0), slightly narrower on anterior than in posterior side, its maximum width just behind the middle, feebly crenulated on lateral sides.
Elytra regular (EL/EW=2.1), parallel, rather depressed, bordered on the whole length, apices flattened, more or less jointly rounded, apical angle rounded and rather undefined. Posterior edge of second-last sternite clearly emarginated. Discal setae of pronotum all parallel and pointing ahead as in group 1, dorsal setae coverage dense, pale green-grey, well covering the underneath blackish, strongly punctured integuments. Antennae pale brown, darkened towards apex; legs entirely yellowish with slightly darkened tarsi.
Median lobe as in Fig. 8. Internal sac short, not even reaching the median lobe base (namely fully internal), finely denticulated in basal half as visible through the median lobe integument. Tegmen extended apically in a thin and short process bearing the setae. Spicular fork branches moderately expanded basally.
♀. As the ♂ but slightly larger, head smaller with eyes less protruding; elytra rather flat and widened in apical half.

NOTES. A South-East Turkey species. Very close to D. flava, with a similar median lobe, from which it differs for group 1 pronotal setae pattern. Once again, more materials should be necessary to correctly understand its specific status.

MATERIALS STUDIED. Turkey. Adiyaman prov.: Nemrut Dagi 1400-1600 m (Saltini, 2002, CLI) (1♀ only).

Danacea tektirdagi sp. n. (Figs. 34-36, 94)
A small (to medium) sized species (TL in mm: ♂♂ 2.9-3.8; ♀♀ 3.0-4.2) with pronotal setae pattern of group 2. Typical locality Uçmakdere (Tektirdag province). The name, a noun, derives from the province in which the typical locality is placed.

TYPE MATERIALS. Holotype, ♂ (MMi), 11 paratypes (1♂, 1♀: MMi; 2♂♂, 2♀♀: MGe; 5♂♂: CLI) labelled: “TR (Tektirdag prov.) / Uçmakdere 1 Km NE / 40°48.4'N, 27°23.1'E / 102 m, 26.V.2010, Liberti”.
Allotype, ♀ (MMi), 14 paratypes (8♂♂, 8♀♀: CLI) bearing the same label (but the date): “TR (Tektirdag prov.) / Uçmakdere 1 Km NE / 40°48.4'N, 27°23.1'E / 102 m, 19.V.2010, Liberti”.
Seven paratypes (3♂♂, 4♀♀: CLI) labelled: “TR (Tektirdag prov.) / Mürefte 10 Km NE / 40°41.6'N, 27°17.5'E / 6 m, 26.V.2010, Liberti”

DESCRIPTION (Fig. 94). ♂. Head balanced, approximately as wide as – and slightly longer than – pronotum. Eyes normally rounded, snout regular to long (sl/eyl=1.3-1.5), clypeus regular (ad/eyl=1.2-1.4). Antennae rather short, gradually widened from article 3 to 11; article 3 narrow, conical; 4-8 approximately of the same length; 4, 5 sub-triangular; 6-10 globular; 9, 10 slightly larger than the previous ones. Pronotum just wider than long, feebly expanded laterally and more or less necked forward (a variable character); lateral sides rather rounded; wider on anterior side than in posterior.
Elytra just slightly widened on posterior half, narrowly bordered on the whole perimeter; not very convex; apices rather flattened, slightly divergent to jointly rounded; apical angle more or less rectangular. Penultimate sternite straight on posterior edge. Pronotal discal setae pattern as in group 2. Dorsal setae rather thin and sparse (but a variable character), yellowish-green to gray-green. Dorsal integments,
beneath the setae coverage, blackish often with green reflexes; legs and antennae yellowish with tarsi and last 3 antennal segments more or less darkened. 

Median lobe as in Figs. 34 and 35. Internal sac long, showing a sub-elliptical basal structure and a tiny, hardly visible granulation in the middle. Tegmen with a short, narrow apex bearing 4 strong setae (Fig. 36). Spicular fork branches strongly widened basally.

♀. As the male but eyes slightly smaller and head feebly narrower than pronotum, elytra widened in apical half with apical angle acute.

Dimensions: ♂. TL=3.38±0.37, PL=0.65±0.08, EL=2.06±0.25, PW=0.70±0.08, EW=1.04±0.12 (95% probability, 6 specimens). ♀. TL=3.53±0.52, PL=0.72±0.10, EL=2.28±0.33, PW=0.79±0.12, EW=1.29±0.20 (95% probability, 5 specimens).

Notes. A little known species, collected on flowers [of an Umbellifera, of a rubiacea (Galium or Asperula) and of a graminaceous weed identified as Dactylis sp.] on a rather steep ground, southern exposure, close to a small source, with manna-ash trees, oak trees and broom bushes around. A taxon possibly limited to the European Turkish provinces (to our present knowledge).

Materials studied. Only the types.

*Danacea tokatensis* Pic, 1901 (Fig. 9)

*Danacea tokatensis* Pic, 1901: 89, loc. typ. Tokat (TR); Pic 1937: 19; Mayer 2007: 399.

Type materials. 2 syntypes (1♂, 1♀) are in coll. Pic (box VIII, MNHNP), labelled: ♂: “Tokat” pr.; “type” hw. by Pic; “tokatensis” hw. by Pic, “type” prr. ♀: “Tokat” pr., “type” hw. by Pic, “♀ var” hw. by Pic. Both syntypes bear the further label “Syntypus / Danacea / tokatensis Pic / vidit Liberti, 2008” prr.

Description. Description based on 1♂ (syntype). Size small to medium: length in mm: 3.7.

Head large, elongate (l/w≈1.2), as wide as, and longer than, pronotum; clypaeus wide (ad/eyl≈1.8); snout long (sl/eyl≈1.7); eyes rather small and flattened. Antennae rather short, gradually widened from base to apex; articles 3–6 elongate, 7–10 balanced. Pronotum transverse (PW/PL≈1.1), widened in the middle and smoothly narrowed forwards and backwards, the front side longer than the rear one. Elytra parallel, not very convex, bordered on lateral sides; apices rather wide, divergent, separately truncated; apical angle undefined, rounded, apical slope flattened. Penultimate sternite nearly truncated (very weakly margined) on posterior side. Pronotal discal setae as in group 2; elytral setae thick and dense, yellow-green; integuments blackish, roughly punctured; overall colour yellow-green. Legs and antennae yellow with tarsi and last antennal articles slightly darkened; palpi pale brown. Median lobe as in Fig 9. Internal sac of intermediate length, with no visible structure in the basal part and a very tiny, hardly visible granulation in the median part. Spicular fork branches moderately widened at base.

Dimensions: ♂. TL: 3.70; PL: 0.75; EL: 2.20; PW: 0.80; EW: 1.15

Notes. An obscure taxon, known only from the syntypes. Certainly close to *D. lysholmi*, from which it differs for pronotal anterior half free from spines and – to a lesser extent – for median lobe shape (which seems to be closer to *D. spinicollis* than to *D. lysholmi*). The study of more materials would be required to reach a clear mind on its status. It might turn out indeed to be either a synonym or a geographical race of the latter. For the time being, however, it has to be considered as a good species. *D. tokatensis* might belong to the *iners* group, as suggested by head and pronotal shape, elytral apices slope and median lobe.

Materials studied. Only the 2 syntypes

*Danacea zolotarewi* Pic, 1910 (raised to species) (Figs. 47-52)

*Danacea nigritarsis* var. Zolotarewi Pic, 1910: 34, loc. typ. upper basin of Kuban river, Russia (Caucasian Territories); Pic 1937: 15; Mayor 2007: 398.

*Danacea zolotarewi* is here considered as a good species, not a subspecies of *D. nigritarsis*, because of the meaningful differences between the two. It is well characterized by group 4 pronotal setae pattern, body appearance and aedeagus shape. However, as below explained, more materials should be studied to better understand its variability and its distribution range: it is indeed possible that, under the name *D. zolotarewi*, more than one species might be recognized.
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**Type Materials.** 4 syntypes of this taxon are in collection Pic (MNHN), labelled: 1♀: “Kuban sup. / Campi Ca. bor. / Kpekzi 8.VI [this line hw] / A. Zolotarew” pr.; “Danacea / var. Zolotarewi / Pic det. Pic “ hw. by an unknown hand; a red label with no writings; “SYNTYPUS / Danacea nigritarsis / var. zolotarewi Pic / vidit Liberti V.2010” prr. 1♂: “Kuban sup. / Campi Ca. bor. / A. Zolotarew” pr.; “caucasica / zolotarewi Pic” hw. by Pic; “D. nigritarsis / Küster var.” hw. by Pic; “SYntYPUS / Danacea nigritarsis / var. zolotarewi Pic / vidit Liberti V.2010” prr. 1♀: “Kuban sup. / Campi Ca. bor. / A. Zolotarew” pr.; “caucasica / zolotarewi Pic” hw. by Pic; “SYntYPUS / Danacea nigritarsis / var. zolotarewi Pic / vidit Liberti V.2010” prr. 1♀: “Kuban sup. / Campi Ca. bor. / A. Zolotarew” pr.; “transcription: / 77”; “transcription: / type / manuscript par Pic” these 3 labels placed by the writer; “SYntYPUS / Danacea nigritarsis / var. zolotarewi Pic / vidit Liberti V.2010” prr.

**Description.** A small Danacea: TL (mm): ♂♂ 3.0-3.3; ♀♀ 3.2-3.6.

♂. Head balanced, as wide as (or very slightly narrower than) - and as long as (or moderately longer than) - pronotum; snout short (sl/eyl ≤1.1); clypeus narrow (ad/eyl <1.1). Antennae rather short, sub-capitate (articles 9-11 moderately larger than the previous ones); article 5 clearly larger than 3, 4, 6, 7 and 8; these narrow, rather similar to each other. Pronotum transverse (PL/PW=1.1-1.2), moderately crenulated on lateral sides (a variable character), expanded and rounded on lateral sides; regularly narrowed both forwards and backwards. Elytra rather short (EL/EW=1.9-2.0), convex, parallel, narrowly bordered on lateral sides, apices a little flattened, more or less jointly rounded, slightly divergent; apical angle well defined and variable, mostly rectangular (but at times slightly acute or obtuse). Pronotal discal setae arranged as in group 4; dorsal setae yellow, rather thin and sparse, poorly covering the underlying black integuments. Overall colour blackish-yellowish; legs reddish yellowish with tarsal tips darkened. Antennae yellowish, usually with articles 6-11 more or less darkened. Median lobe rather variable, as in Figs. 47, 49, 50, 52. Internal sac rather long, with the basal lamellar process membranous and just visible inside the median lobe; median part finely granulated, apical part membranous. Tegmen elliptical, feebly extended apically (Figs. 48 and 51). Spicular fork branches thin, feebly widened at base.

♀. As the male but eyes smaller, head narrower than pronotum, antennae shorter, elytra widened in apical half, apical angle acute to rectangular.

**Notes.** This taxon has not been satisfactorily understood. It looks different from *D. nigritarsis* and shows a high aedeagus variability, up to the point of raising the suspect of having mixed up, here, two (or even more) species. However, and for the time being, it seems wise to the writer:
- to regard *D. zolotarewi* as a good species (not as a subspecies of *D. nigritarsis*),
- to assume ( provisionally) that all population samples studied, of Asiatic Turkey and Caucasian region, would belong to this species only (in spite of the variability of both median lobe and tegmen),
- to supply several (four) drawings of the median lobe, more or less covering such variability.

A better understanding of the *D. zolotarewi* scenario will be based on the availability of more materials and, at the moment, is necessarily postponed.

This “species” seems to be rather frequent in the north of Turkey and in western Caucasus.

**Materials Studied.** Turkey. Bolu prov.: Abant Gölü (Klapperich, 1965, CCo; Saltini, 1997, CLi); Gerede (Angelini, 2009, CLi). Erzurum prov.: tortum (Gültekin, 1997, CYi); Askale (Gültekin, 1997, CYi); Kop Gecidi (Gültekin, 1997, CYi); Ilica (Gültekin, 1997, CYi); Güzelyayla (Gültekin, 1997, CYi). Kastamonu prov.: Abana (Angelini, 2009, CLi). Sinop prov.: Cangal Gecidi near Ayancik (Angelini, 2009, CLi). Zonguldak prov.: Gökceler (Link, 1987, CLk). Georgia. Pitsunda (Bohàc, 1974, CCo & CLi); Tbilisi (Kaziuschi; 1963, CLi). Russia: Caucasian Territories. Soci (Luther, ?, MHe).

**Uncertain Names**

*Danacea citrina* Procházka, 1894

Danacea citrina Procházka, 1894: 23, 31, Fig. 11, loc. typ. Lebanon and Sicily; Ragusa 1896: 81; Schilsky 1897: 38; Luigioni 1920: 21; Luigioni 1929: 633; Porta 1929: 110 (note); Pic 1937: 8.

1♀ syntype of this species has been found at MBp, labelled as follows:
“Appl. / Beirut / 1878”; “coll. Reitter” pr.; “Paratypus 1895 / Danacaea / citrina / Procházka” wrb(n2).

This species, probably absent from Turkey, has been described of Lebanon and Sicily. It seems possible that Procházka, mistakenly, described a mixture of two similar species. Following Porta (1929: 110, note) the writer suggests, for the time being, to keep the name _D. citrina_ for the Middle-East species.

Ragusa (1896: 81), “correctly” from his point of view, reported _D. citrina_ for Sicily but he most likely referred to the similar _D. nigripalpis_ Fiori, 1912, common on the island. Luigioni (1920: 21, 1929: 633) (erroneously) reported this species from Latium, likely mistaking it (consequent to a Pic determination) with the similar _D. cusanensis_ (Costa, 1847).

However no male typical (or topotypical) specimens has been found till now so that the real identity of _D. citrina_ is still open to doubts.

The _♀_ syntype studied actually looks very similar to both _D. cusanensis_ and to _D. nigripalpis_ both for general appearance and for group 3 pronotal discal setae pattern.

_Danacea genistae_ Marseul, 1868

_Danacaea genistae_ Marseul, 1868: 190, loc. typ. Mount Liban; Procházka 1894: 21; Pic 1894a: 101; Pic 1937: 10; Schilsky 1897: 42; Mayor 2007: 396.

= _Danacea genistae_ var. _berytensis_ Pic, 1902: 31 (synonymized by Mayor 2007: 59).

The Marseul types have not been studied.

3 syntypes, _♀_ of _D. genistae_ v. _berytensis_ have been found in collection Pic, at MNHN. They are labelled as follows:

1 _♀_: “Beyrouth” hw. by Pic; “sp. près / genistae” hw. by Pic; “5” hw.; “type” hw. by Pic; “SYNTYPUS / Danacea genistae / var. berytensis Pic / vidit Liberti V.2002” prr.

1 _♂_: “Beyrouth” hw. by Pic; “sp. près / genistae” hw. by Pic; “5” hw.; “♀” hw. by Pic; “type” hw. by Pic; “SYNTYPUS / Danacea genistae / var. berytensis Pic / vidit Liberti V.2002” prr.

1 _♀_: “Beyrouth” hw. by Pic; “SYNTYPUS / Danacea genistae / var. berytensis Pic / vidit Liberti V.2002” prr.

Schilsky (1897: 42a) reports this species for Turkey, detailing just one locality: “Gjölbanhi” which has not been identified(ND) but should be far from Mount Lebanon (loc. typ.). This taxon remains doubtful for the time being.

The 3 typical _♀♀_ studied of _D. genistae_ var. _berytensis_ look rather similar to _Danacea cusanensis_ (and to the _♀_ syntype of _D. citrina_ mentioned above) and have pronomal discal setae pattern as in group 3.

_Danacea peyroni_ Pic, 1902: 31
_Danacaea peyroni_ Pic, 1902: 31, loc. typ. Beirut; Pic 1937: 17; Mayor 2007: 398.

1 syntype, _♀_ of this species has been found in collection Pic, at MNHN, labelled: “Beyrouth” pr. (green on white background); “sp. près / olympiaca” hw. by Pic; “type” hw. by Pic; “peyroni Pic” hw. by Pic; “… …”[a long writing on descriptive features, difficult to read] hw. by Pic; “SYNTYPUS / Danacea / peyroni Pic / vidit Liberti V.2010” prr.

This typical specimen is rather similar to _D. genistae_ _berytensis_ (and to _D. cusanensis_) but the setae on dorsal surface are here more dense – and better covering the beneath integuments – and antennal articles are more transverse. Here again it has been, at the moment, impossible to link this name to an identifiable specie.

_Danacea splendida_ Pic, 1903 (Fig. 1)
_Danacaea splendida_ Pic, 1903: 162, loc. typ. Tokat (TR); Pic 1937: 18; Mayor 2007: 399.

1 syntype, _♂_ of this species has been found in collection Pic, at MNHN, labelled: “Tokat” hw. on dark green paperboard; “Genista” hw.; “ex Demaison” hw. by Pic; “type” hw. by Pic; “splendida” hw. by Pic; “Type” prr.; “Syntypus / Danacea / splendida Pic/ vidit Liberti 2008” prr. The cardboard bearing the insect has a small, basal, green band whose meaning is unknown. Further specimens belonging to the typical series might be found in the Demaison collection (Pic, 1903: 162).

This syntype currently is the only known specimen of this species, but more are reported, in original description, to be in collection Demaison (MNHN). It looks similar to _D. cavifrons_ for several characters, including median lobe (compare Figs. 1 and 2, 4), tegmen...
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apex (extended in a thin process) and penultimate sternite (emarginated) but differs from it mainly for external shape, as detailed in the following comparative description:

overall shape less elliptical (than in *D. cavifrons*); head slightly larger: clypaeus median (ad/eyl about 1.2-1.3), snout median (sl/eyl about 1.3). Pronotum moderately widened in the middle, well narrowed forwards and slightly backwards (not really trapezium shaped); posterior angles rather defined, obtuse. Elytra parallel (not widened in the middle), convex, rather long, narrowly bordered on the lateral sides; apices slightly divergent, jointly rounded, apical angle well defined, right; apical slope normally convex. Penultimate sternite strongly emarginated on posterior border, as in *D. cavifrons*. Internal sac short, only the median tract with a tiny but visible granulation. Tegmen apically extended in a thin process bearing the terminal setae, as in *D. cavifrons*. Size: total length 4.2 mm.

In spite of the existence of one ♂ syntype, the taxon *Danacea splendida* is to be considered uncertain, for the time being, because of the median lobe similarity with *D. cavifrons* (it might turn out to be a good species, a geographical subspecies or even a synonym). The study of further materials (and/or further syntypes) will be necessary to reach a better understanding of this species.

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Figs. 1-7. Median lobes (1, 2, 4, 6, 7a) and tegmen apices (Figs. 3, 5, 7). 1 – *D. splendida* (holotype from Tokat): a doubtful taxon; 2-5 – *D. cavifrons* (2, 3 – syntype of *D. tauricola* from “Kizil Dag”; 4, 5 – same specimen from Fevzipasa); 6, 7 – *D. flava* (same specimen from Bjurakan); 7a – *D. caucasica* (Hatsvali near Mestia). Scale: 0.5 mm.
Figs. 8-14. Median lobes. 8 – *D. syriaca* (Mardin); 9 – *D. tokatensis* (syntype from Tokat); 10, 11 – *D. lysholmi* (10 – syntype of *lysholmi* from Mersin; 11 – syntype of var. *subrobusta* from “Syrie”); 12-14 – *D. spinicollis* (12 – syntype of *dentatithorax* from Karsanti; 13 – Feka; 14 – specimen [det Pic] of var. *simplicithorax* from Aladag). Scale: 0.5 mm.
Figs. 15-20. Median lobes. 15, 16 – *D. albella* (15 – syntype from Konia; 16 – Ermenek); 17 – *D. dumifera* (paratype from Isparta); 18 – *D. induta* (Farsian); 19 – *D. nitidissima* (specimen [det Pic] from “Hadjin Dagh [near Saimbeyli]”); 20 – *D. klapperichi* (paratype from “Pass near bolu”). Scale: 0.5 mm.
Figs. 21-28. Median lobes (21, 23, 24, 27), tegmens (22, 25, 28) and spicular fork (26). 21, 22 – *D. anatolica* [topotypes from Hadjin (Saimbeyli)]; 23-26 – *D. phrygia* (23 – Yenice; 24-26 – paratype from Osmaniye); 27, 28 – *D. ochroleuca* (Hisarcandir). Scale: 0.5 mm.
Figs. 29-38. Median lobes (29, 30, 32, 34, 35, 37), tegmens (31, 36) and tegmen apices (33, 38). 29-31 – *D. grandiceps* (29 – holotype from Fethiye; 30, 31 – Mugla); 32, 33 – *D. anemoura* (paratype from Anamur); 34-36 – *D. tekirdagi* (34, 36 – same paratype from Uçmakedere; 35 – paratype from Murefte); 37, 38 – *D. satanas* (same specimen from Ercyes Dagl). Scale: 0.5 mm.
Figs. 39-46. Median lobes (39, 40, 42, 43, 45), tegmen (44) and tegmen apices (41, 46). 39-41 – *D. sequensi* (39 – syntype of *D. holtzi*; 40, 41 – same specimen from Tarsus 38 Km N); 42-44 – *D. olivacea* (42 – Sebinkarahisar; 43 – Mehri Pass; 44 – Küsadagi Gecidi); 45, 46 – *D. micans* (same specimen from Pyatigorsk). Scale: 0.5 mm.
Figs. 47-56. Median lobes (47, 49, 50, 52, 53, 54, 56), tegmens (48, 51) and distal spine (55). 47-52 − *D. zolotarewi* (47, 48 − same specimen from Abant, Bolu; 49 − Tbilisi; 50,51 − Abana; 52 − syntype from Kuban sup., Campi); 53-56 − *D. maculipennis* (53 − Gani Dagi; 54, 55 − Har Meron, Israel; 56 − Montfort, Israel). Scale: 0.5 mm.
Figs. 57-69. Median lobes (57, 59, 61, 62, 63, 66, 68), tegmen (65) and distal spines (58, 60, 64, 67, 69). 57-60 – *D. mersini* (57, 58 – paratype from Camliyayla; 59, 60 – paratype from Tarsus 25 Km N); 61-69 – *D. apicalis* [61 – syntype from Akbez; 62-65 – Saimbeyli - population with dark pronotum (64, 65 – same specimen); 66, 67 – Saimbeyli - population with bicoloured pronotum (both same specimen); 68, 69 – same specimen from Göksun]. Scale: 0.5 mm.
Figs. 70-83. Median lobes (70, 74, 79), tegmens (71, 76), distal spines (75, 80, 81, 82, 83, 83/1), elytral apices (73, 78) and last sternite (72, 77). The letters E, T, U, I, A (all in brackets) refer to the distributions of Fig. 98. 70-73 — *D. marginata* (topotype from Prosecco, all same specimen); 74-83 — *D. reitteri* [74-78 — Devrek (74, 75, 76 — same specimen; 77, 78 — same specimen); 79, 80 — same specimen from Pyatigorsk; 81 — Erdemli; 82 — Yarpuz, prov. Antalya; 83 — Dogankent; 83/1 — lectotype from “Caucasus”]. Scales: 0.5 mm. Scale b for Figs. 73 and 78 only.
Figs. 84–87. Habiti. 84 – *Danacea olivacea* (Sebinkarahisar, 5.6 mm length); 85 – *D. albella* (Ermenek 10 Km W, 4.1 mm length); 86 – *D. spinicollis* (Feka, 4.3 mm length); 87 – *D. dumifera* (paratypus from Isparta, 4.9 mm length). Scales: 1 mm.
Figs. 88-91. Habiti (88, 89, 91), head and pronotum (90). 88 – *D. ochroleuca* (Hisarcandir, 4.1 mm length); 89, 90 – *D. flava* (Aragat Mts: Yerevan 22 Km NW, 3.8 mm length). 91 – *D. grandiceps* (Mugla 5 Km E, 3.7 mm length). Scales: 1 mm.
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Figs. 92-96. Habiti. 92 – *D. anemoura* (holotype from Anamur, 3.4 mm length); 93 – *D. oertzeni* (Yaylasogut: Mugla 24 Km E, 3.0 mm length); 94 – *D. tokirdagi* (paratype di Uçmakdere, 3.0 mm length); 95 – *D. reitteri* (T) (Pyatigorsk, 2.7 mm length); 96 – *D. marginata* (topotype from Prosecco: Italy, Trieste prov., 2.8 mm length). Scales: 1 mm.
Figs. 97, 98. Distribution ranges. 97 – *D. olivacea*, *D. cavifrons*, *D. sequensi*. 98 – *D. reitteri* (different distal spines), *D. maculipennis* (only Turkey), *D. apicalis* and *D. mersini*. 