Zootaxa 2318: 339–385 (2009)
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

The Dasytidae (Coleoptera) of Sardinia*

GIANFRANCO LIBERTI
Via Cascina Girola 81, I-21040 Uboldo (VA), Italy. E-mail: gianfranco.liberti@login.it

**In*: Cerretti, P., Mason, F., Minelli, A., Nardi, G. & Whitmore, D. (Eds), *Research on the Terrestrial Arthropods of Sardinia (Italy). Zootaxa*, 2318, 1–602.

Table of contents

Abstract

The study of over 10,000 specimens of Dasytidae from about 35 collections has led to the conclusion that 8 genera and 32 species and subspecies of this family, all actually observed by the author, occur in Sardinia. This number is believed to be rather close to completion. A further 30 species, reported in the past as occurring on the island, are discussed and have been removed from the list. Identification keys based on external characters only are proposed for genera and species. However, for difficult groups and where confusion may arise, drawings of aedeagi are supplied. An annoted catalogue

Accepted by P. Cerretti: 28 Oct. 2009; published: 22 Dec. 2009

follows with, for each species, synonymies, bibliography, a list of sampling localities with last year of collection, notes, and chorotype. A zoogeographical analysis shows that the Sardinian Dasytidae conform to a Central Mediterranean type, with rather strong North African influences and with a high presence of strict endemics (11 species), higher than in Corsica (7 species). *Danacea* (*Allodanacaea*) is no doubt the most interesting group with 7 taxa, none of which are spread all over Sardinia and 2 of which—*D.* (*A.*) *gorditana* Liberti and *D.* (*A.*) *nympha* Liberti—only occur in a tiny area in the Nurra region. Two species, *Dasytes doderoi* Pic and *Aplocnemus* (*Diplambe*) *januaventi* Liberti, both strict Sardinian endemics, are very rare and poorly known: the first is only known on two female specimens, both collected in the Gennargentu area many years ago; the second seems in a "safer" situation because several specimens have been collected recently.

Trap samples (mainly Malaise) from the Marganai and Montimannu region-owned forests (SW Sardinia, respectively Carbonia-Iglesias and Medio Campidano provinces), are also discussed.

Key words: Melyridae, Prionoceridae, Acanthocnemidae, *Dasytes*, *Danacea*, *Aplocnemus*, *Psilothrix*, *Dolichosoma*, *Divales*, Italy, Corsica, Tyrrhenian, identification keys

Introduction

Several generations of entomologists have collected beetles in Sardinia and, all in all, the island's Coleoptera are rather well known. Nevertheless, collecting in Sardinia is still an exciting experience, often supplying little known or even unknown species.

The Dasytidae are small, often black and hairy (sometimes green) beetles, living on flowers and feeding on pollen. Their biology is little known apart from a few species, especially *Psilothrix viridicoerulea* (Geoffroy, 1785) the larval life of which was thoroughly studied by Fiori (1971) in Sardinia. The Dasytidae are not among the most popular beetles in collections, but they are often collected and mounted because rather common and easily found. The main problem seems to be their identification, which is usually considered difficult and frustrating. In reality, most Sardinian species are easy to recognize at a glance except for those of *Danacea* Laporte de Castelnau subgenus *Allodanacaea* Liberti. The main aim of this paper is to supply sufficient information to allow coleopterists to identify specimens of Sardinian Dasytidae.

An interesting feature of the Sardinian dasytid fauna is the high number of endemics, which witnesses its long geographical isolation. Several species are rare and still poorly known like *Dasytes doderoi* Pic, 1924 from the Gennargentu massif, of which only two females are known.

The Dasytidae were recently given full family rank by Majer (1995) and placed within the superfamily Cleroidea in the so called "Melyrid lineage", close to the Malachiidae, Melyridae, Prionoceridae and Acanthocnemidae, only to mention the families present in Europe. Before Majer's revision these families were considered as subfamilies of the Melyridae in a broader sense (Crowson 1964), a view maintained by Lawrence and Newton (1995). Before Crowson (1964), both the Malachiidae and the Dasytidae were included, as families, in the somewhat heterogeneous group called "Malacodermata", together with the Cantharidae, Lampyridae, Lycidae and other families.

Specimens of these 5 families of Cleroidea can be recognized using Majer (1995).

The Malachiidae are a large family spread all over the world and well represented in Sardinia by more than 30 species (Audisio *et al*. 1995).

Four species of Melyridae have been reported from Sardinia: *Falsomelyris granulata* (Fabricius) (Baudi di Selve 1873b: 252, as *Melyris granulata*; Schilsky 1897b: nr. 97, as *Zygia nigra* Fabricius; Porta 1929: 130, as *Melyris nigra*), *Melyris bicolor* Fabricius (Baudi di Selve 1873b: 252), *Melyris oblonga* (Fabricius) (Baudi di Selve 1873b: 252; Costa 1882: 19; Luigioni 1929: 635; Porta 1929: 130) and *Melyris* (*Zygia*) *versicolor* Chevrolat (Schilsky 1897b: nr. 90; Luigioni 1929: 635; Porta 1929: 130). Their presence on the island could not be confirmed by the author; the most reliable records are those of *Melyris oblonga* by Costa (1882: 19, 1884: 28) with two findings (September 1881 near Cagliari and August 1883 near Sassari), suggesting that this species may have an end of summer appearance.

The Prionoceridae are represented in the Mediterranean area only by genus *Lobonyx* Jacquelin du Val (Mayor 2007b). One species, *Lobonyx aenea* (Fabricius), has been reported for Sardinia (Luigioni 1929: 632; Porta 1929: 124). At a glance it is rather similar to the dasytid *Psilothrix viridicoerulea* (Geoffroy) (see key). In Europe, *L. aenea* is rather widespread in Spain, north to the Pyrenees (Mayor 2007b: 384) but the author has never seen it from any Italian locality; its presence in Sardinia is considered doubtful.

The Acanthocnemidae are a monospecific family including only *Acanthocnemus nigricans* (Hope): a peculiar small brown beetle of Australian origin, now cosmopolitan (Mayor 2007b), very rare in Italy and having been found more than once in Sardinia and Corsica (Constantin 2007). It probably feeds on fungi that grow on burned wood residues immediately after forest fires (Schmitz *et al*. 2002).

Material and methods

Collecting and handling:

This paper is based on the examination of more than 10,000 dasytid specimens coming from 31 collections (see below). Dasytidae are usually collected by sweeping weeds and flowers in meadows with a suitable net, and by beating the accessible branches of trees and bushes, preferably when blossoming. The adults are mainly found on flowers, where they assemble to feed on pollen, although several species are apparently associated with graminaceous grasses (*Psilothrix* Redtenbacher spp., *Dolichosoma* Stephens) and others live on trees (some *Aplocnemus* Stephens). Passive collecting (mainly with Malaise and window traps) was recently used in the Monti Marganai and Montimannu forests, with interesting results (see Discussion).

Microscopic mountings were done in Euparal until approximately 2001 and subsequently in water-soluble PVP according to the method described by Liberti (2005). The dissected parts have always been mounted on a transparent acetate card pinned below the specimen.

Drawings were made with the aid of a 10x grid eyepiece mounted on a stereomicroscope, with a total magnification ranging from 20x to 80x.

Acronyms of specimen depositories:

CAN	Fernando Angelini collection, Francavilla Fontana, Brindisi, Italy;
CBA	Giorgio Bartoli (†) collection (at MCSNG);
CBI	Giovanni Binaghi (†) collection (at MCSNG);
CCA	Claudio Canepari collection, Milan, Italy;
CCL	Franco Callegari collection, Ravenna, Italy;
CCO	Robert Constantin collection, Saint Lo, Manche, France;
CCR	Paolo Cornacchia collection, Porto Mantovano, Mantua, Italy;
CDO	Agostino Dodero (†) collection (at MCSNG);
CNBFVR	Centro Nazionale per lo Studio e la Conservazione della Biodiversità Forestale “Bosco Fontana”, Verona, Italy;
CFA	Luca Fancello collection, Cagliari, Italy;
CFO	Alessandro Focarile collection, Saint Pierre, Aosta, Italy;
CFR	Mario E. Franciscolo (†) collection (at MCSNG);
CLI	Gianfranco Liberti collection, Uboldo, Varese, Italy;
CMA	Karel Majer (†) collection (at NMBA);
CME	Carlo Meloni collection, Cagliari, Italy;
CMG	Enrico Migliaccio collection, Rome, Italy;
CML	Mauro Malmusi collection, Modena, Italy;
CMO	Riccardo Monguzzi collection, Milan, Italy;
CPA	Rossano Papi collection, Castelfranco di Sopra, Arezzo, Italy;
CPN	Philippe Ponel collection, Pourcieux, Var, France;

CPO Roberto Poggi collection, Genoa, Italy;
CRO Saverio Rocchi collection, Florence (at MSNUF);
CSA Nino Sanfilippo (†) collection (at MCSNG);
CSL Lucio Saltini collection, Carpi, Modena, Italy;
NMBA Naturhistorisches Museum, Basel, Switzerland;
MNHU Museum fur Naturkunde der Humboldt Universität, Berlin, Germany;
MSNUF Museo di Storia Naturale dell'Università degli Studi, Florence, Italy;
MCSNG Museo Civico di Storia Naturale "Giacomo Doria", Genoa, Italy;
MCSNM Museo Civico di Storia Naturale, Milan, Italy;
SMNS Staatliches Museum für Naturkunde, Stuttgart, Germany;
MCSNV Museo Civico di Storia Naturale, Venice, Italy.

Terminology:

Morphological terminology generally follows Cooter (1991).

Chorotypes:

The chorotypes (and respective letter codes) adopted and listed below have been taken from Vigna Taglianti *et al*. (1993, 1999) with the exception of the one here referred to as "Central Mediterranean":

- West-Mediterranean (3.02, WME): western countries of the Mediterranean basin, west of the Italian peninsula (which can be, at least in part, included).
- East-Mediterranean (3.03, EME): eastern countries of the Mediterranean basin, east of the Italian peninsula (which can be, at least in part, included).
- Tyrrhenian (3900.18, TYRR): Corsica, Sardinia, Tuscan Archipelago, Italian coast to some extent, smaller Tyrrhenian islands, Sicily.
- Central Mediterranean (no code): Tyrrhenian plus Malta, Tunisia and Algeria.
- Sardo-Corsican (3900.19, SACO): both Corsica and Sardinia.
- Sardinian (3900.20, SARD): only Sardinia
- Corsican (3300.01, CORS): only Corsica

The introduction of a Central Mediterranean chorotype is considered useful to avoid confusion with the Tyrrhenian one and is in agreement with the advice given by Vigna Taglianti *et al*. (1993: 164, point C) relating to the possible adoption of small range distributions whenever a better precision is felt necessary.

Bibliographic references of the species:

For each species a rather detailed bibliography is given, but catalogues and other references containing little information have often been excluded.

In the references given below the first description of a species, the genus is added in square brackets when it differs from the one in present use, with the exception of unjustified amendments (for example *Haplocnemus* and *Danacaea* are unjustified amendments of *Aplocnemus* and *Danacea* in current use and are not added).

Remarks on the "Annoted catalogue":

For localities reported in the catalogue, when not otherwise stated, the relevant specimens have been studied by the author, the labelling has been considered reliable and the locality given on the label has been retrieved. All doubtful determinations and/or labellings have been excluded. All listed locality names can be found, with the same spelling, in a widespread road atlas of Italy (Anonymous 1994): all other geographical names have been replaced by the closest locality that could be found in the atlas. Localities from which specimens were not personally examined, i.e. those quoted from other authors, have been reported only when considered reliable and their sources are clearly indicated. Localities marked * had already been published by

the author in the paper marked with the same symbol in the species' bibliography. In 2005 the Sardinian provinces were increased in number from four to eight; the new arrangement is adopted here and provinces are listed from north-east to south-west in the order Sassari, Olbia-Tempio, Nuoro, Oristano, Ogliastra, Medio Campidano, Carbonia-Iglesias and Cagliari. Localities are listed alphabetically within each province. After each locality both the year of collection and the depository of the material have been added. When a locality was sampled over several years, only the most recent year is reported. When the year of collection is unknown, the following symbols have been used: y-? = unknown; y-a = ancient; supposedly before 1900; y-o = old: supposedly between 1900 and 1950; y-r = recent: supposedly after 1950.

The first and/or the most important papers to have mentioned a species for Sardinia are reported under the heading "Notes", with the exception of species described from the island.

Further information, such as phenology, altitude or collecting details was purposely omitted for most species, as adults are usually found in spring and early summer and the only altitudinal effect usually observed is a delay in adult appearance with altitude. Such data are reported only for species that are either rare or show an unusual phenology or altitudinal behaviour.

Checklist

Genera and species have been arranged following Mayor (2007b).

Danacea Laporte de Castelnau subgenus *Danacea*
Danacea (*Danacea*) *corsica* Kiesenwetter, 1871
Danacea (*Danacea*) *imperialis* (Gené, 1836)
Danacea (*Danacea*) *mitis* (Küster, 1850)
Danacea (*Danacea*) *sardoa declivis* Liberti, 1989
Danacea (*Danacea*) *sardoa sardoa* Kiesenwetter, 1871

Danacea subgenus *Allodanacaea* Liberti
Danacea (*Allodanacaea*) *gorditana* Liberti, 2007
Danacea (*Allodanacaea*) *milleri* Schilsky, 1897
Danacea (*Allodanacaea*) *nympha* Liberti, 1985
Danacea (*Allodanacaea*) *oreas* Liberti, 1985
Danacea (*Allodanacaea*) *picicornis picicornis* (Küster, 1850)
Danacea (*Allodanacaea*) *picicornis supramontana* Liberti, 1985
Danacea (*Allodanacaea*) *sulcitana* Liberti, 1985

Dasytes Paykull subgenus *Dasytes*
Dasytes (*Dasytes*) *flavescens* Gené, 1839
Dasytes (*Dasytes*) *pauperculus* Laporte de Castelnau, 1840

Dasytes subgenus *Hypodasytes* Mulsant & Rey
Dasytes (*Hypodasytes*) *coerulescens* Küster, 1852

Dasytes subgenus *Mesodasytes* Mulsant & Rey
Dasytes (*Mesodasytes*) *aeneiventris* Küster, 1850
Dasytes (*Mesodasytes*) *croceipes* Kiesenwetter, 1865
Dasytes (*Mesodasytes*) *iteratus* Peyerimhoff, 1925
Dasytes (*Mesodasytes*) *nigroaeneus* Küster, 1850

Dasytes (subgenus?) *doderoi* Pic, 1924

Divales Laporte de Castelnau
Divales cinctus (Gené, 1839)

Dolichosoma Stephens
Dolichosoma lineare (Rossi, 1794)
Dolichosoma simile (Brullé, 1832)

Psilothrix Küster
Psilothrix aureola (Kiesenwetter, 1859)
Psilothrix protensa (Gené, 1836)
Psilothrix viridicoerulea (Geoffroy, 1785)

Aplocnemus Stephens subgenus *Aplocnemus*
Aplocnemus (*Aplocnemus*) *cribricollis* Mulsant & Rey, 1868
Aplocnemus (*Aplocnemus*) *jejunus* Kiesenwetter, 1863
Aplocnemus (*Aplocnemus*) *pectinatus* (Küster, 1849)
Aplocnemus (*Aplocnemus*) *rufomarginatus* Perris, 1869

Aplocnemus subgenus *Diplambe* Schilsky
Aplocnemus (*Diplambe*) *duplicatus* Kiesenwetter, 1871
Aplocnemus (*Diplambe*) *januaventi* Liberti, 2007

Species of doubtful occurrence

On top of the above-listed species and subspecies, many more taxa have been reported for Sardinia in the past by several authors, even though none of them are believed to be actually part of the island's fauna. Most of these have already been excluded from the Sardinian fauna by Audiso *et al.* (1995) and Liberti (2004b). A rather long list (more than 30 species, and probably incomplete) follows with a few comments as to why they have been left out.

Danacea* (*Danacea*) *ambigua Mulsant & Rey, 1868 (Costa 1883: 44; Bertolini 1899–1904: 74; Porta 1929: 109), ***D.* (*D.*) *aurichalcea*** (Küster, 1850) (Porta 1929: 110), ***D.* (*D.*) *distincta*** (Lucas, 1846) (Costa 1883: 44; Bertolini 1899–1904: 74) and ***D.* (*D.*) *pallipes*** (Panzer, 1793) (Bargagli, 1873: 39; Costa 1883: 44): probably all of them originate from incorrect identifications of *D.* (*D.*) *imperialis*.

Danacea* (*Danacea*) *cusanensis (Costa, 1847a) (Bargagli, 1873: 39; Bertolini 1899–1904: 74; Luigioni 1929: 634; Porta 1929: 111): probably a misidentification of an *Allodanacaea* species; *D.* (*D.*) *cusanensis* is endemic of mainland Italy (Liberti 2007c).

Danacea* (*Danacea*) *murina (Küster, 1850) (Bargagli, 1873: 39; Costa 1883: 44; Bertolini 1899–1904: 74): probably misidentified with the closely related *D.* (*D.*) *mitis*.

Danacea* (*Danacea*) *nigritarsis (Küster, 1850) (Bertolini 1899–1904: 74; Luigioni 1929: 634; Porta 1929: 112): probably misidentified with the closely related *D.* (*D.*) *mitis* or with females of *D.* (*Allodanacaea*) *picicornis* group.

Enicopus pilosus (Scopoli, 1763) (Luigioni 1929: 625; Porta 1929: 116) and ***E. armatus*** (Lucas, 1846) (Baudi di Selve 1873b: 247; Bertolini 1899–1904: 73): the author has not yet seen any *Enicopus* Stephens species from Sardinia and Corsica and it is considered reasonable to exclude this genus from the Sardinian fauna.

Dasytes* (*Hypodasytes*) *algiricus Lucas, 1846 (Costa 1883: 44) and ***D.* (*H.*) *metallicus*** (Fabricius, 1792) (Bertolini 1899–1904: 73): both of these records almost certainly originated from confusion with the very similar *D.* (*H.*) *coerulescens*.

Dasytes* (*Mesodasytes*) *plumbeus (O.F. Müller, 1776) (Bargagli, 1873: 38, as *D. flavipes* Fabricius; Costa 1883: 44; Luigioni 1929: 631; Porta 1929: 121): this species is very common all over Europe, is present in Corsica (Liberti 2004a) and could reasonably occur also in Sardinia. However, the author has never seen it from the island and three similar species – *D.* (*Mesodasytes*) *iteratus*, *D.* (*M.*) *croceipes*, *D.* (*M.*) *nigroaeneus* – are rather common in Sardinia making misidentifications likely.

Dasytes* (*Mesodasytes*) *virens (Marsham, 1802) (Costa 1883: 44; Bertolini 1899–1904: 73; Luigioni 1929: 630; Porta 1929: 121, all as *D. flavipes* Olivier, 1790): these records probably originate from a misidentification. The species is common in northern Italy and the southernmost locality known until now is in Abruzzi (Liberti 2004a). It has never been seen from Corsica or Sardinia by the author.

Dasytes* (*Metadasytes*) *fusculus (Illiger, 1801) (Bargagli, 1873: 38; Bertolini 1899–1904: 73; Porta 1929: 121): a rare species from central-eastern Europe and central Asia, very rare in the Alps (Liberti 2004a). It is certainly absent from Sardinia.

Dasytes* (*Anthoxenus*) *griseus Küster, 1849 (Bertolini 1899–1904: 73; Luigioni 1929: 630): a species, described from Dalmatia (Croatia), probably a synonym of *D.* (*Anthoxenus*) *subaeneus* Schönherr, 1817 (Liberti, unpublished) which is missing in Sardinia. It was also misidentified by Mulsant and Rey (1868): the species they thought to be *D. griseus* actually is *D. tristiculus* Mulsant & Rey, 1868, rather common in Corsica (Liberti 2004a) but not yet found in Sardinia.

Divales haemorrhoidalis (Fabricius, 1798) (Bargagli, 1873: 38; Bertolini 1899–1904: 73; Luigioni 1929: 627): a species from southern Spain and North Africa (Majer 1984), the presence of which in Sardinia is not impossible, even though the author has never seen it from any Italian region.

Divales bipustulatus (Fabricius, 1781) (Bargagli, 1873: 38; Luigioni 1929: 627): again a species known from Corsica (Liberti 2004b), which could be present in Sardinia but has never been recorded by the author.

Psilothrix melanostoma (Brullé, 1832) (Bargagli, 1873: 38; Bertolini 1899–1904: 73; Porta 1929: 123) and ***P. smaragdina*** (Lucas, 1846) (Bertolini 1899–1904: 73; Porta 1929: 123): both these names probably refer to the wingless form of *P. aureola*, which is actually present in Sardinia (see below).

Psilothrix illustris (Wollaston, 1854) (Bertolini 1899–1904: 73; Porta 1929: 123): a Macaronesian species (Canary islands, Madeira Archipelago) marginally present in westernmost Europe (Portugal, Spain) and North-West Africa (eastern Morocco) (Schilsky 1894b: 47; Kocher 1956: 66). It has never been seen in Sardinia by the author.

Aplocnemus* (*Aplocnemus*) *basalis (Küster, 1849) (Baudi di Selve 1873b: 249; Bertolini 1899–1904: 74; Porta 1929: 126): a Balkan species (Liberti 2004b; Mayor 2007b), likely to have been confused with the similar *A.* (*A.*) *cribricollis*. Two specimens, labelled "Corsica - Reitter", are in MCSNM: this is without a doubt a locality mistake.

Aplocnemus* (*Aplocnemus*) *chlorosoma (Lucas, 1846) (Bertolini 1899–1904: 74; Porta 1929: 126): a North African species (Schilsky 1897b: nr. 57; Mayor 2007b) never seen from Sardinia.

Aplocnemus* (*Aplocnemus*) *cylindricus Kiesenwetter, 1863 (Bertolini 1899–1904: 73; Luigioni 1929: 626; Porta 1929: 125): a species living in the south of France close to the seaside (Liberti 1995a; Constantin 2007); the very similar *A.* (*A.*) *angelinii* Liberti, 1995 lives in peninsular Italy (Liberti & Zinetti 2009: 46): although its presence in Sardinia would not be unreasonable, it has never been seen from the island by the author.

Aplocnemus* (*Aplocnemus*) *impressus (Marsham, 1802) (Bertolini 1899–1904: 73; Luigioni 1929: 626; Porta 1929: 125, all as *A. pini* Redtenbacher, 1849): a West-European species (France, Spain, England) marginally present in Italy in the Alps (Liberti 1995a); probably confused with *A.* (*A.*) *rufomarginatus*.

Aplocnemus* (*Aplocnemus*) *marginatus Rottenberg, 1870 (Baudi di Selve 1873b: 250): this species was described from Sicily and has been recently found in Greece (Liberti & Zinetti 2009: 49); it is rather similar to *A.* (*A.*) *rufomarginatus*, which actually lives in Sardinia: Baudi's record is undoubtedly based on a misidentification.

Aplocnemus* (*Aplocnemus*) *nigricornis (Fabricius, 1792) (Bargagli, 1873: 39; Bertolini 1899–1904: 73; Luigioni 1929: 626; Porta 1929: 125): given its wide European distribution (Liberti 1995a; Constantin

2007) its presence in Sardinia and Corsica would not be impossible, but it has never been seen by the author from these islands: the confusion probably originated from its similarity with *A.* (*A.*) *rufomarginatus* and/or *A.* (*Aplocnemus*) *koziorowiczi* Desbrochers de Loges, 1870; the latter is absent from Sardinia but can be found, although rarely, in Corsica (Liberti 1995a).

Aplocnemus* (*Aplocnemus*) *pectinicornis Lucas, 1846 (Costa 1883: 44, as *Haplochnemus pectinicornis* Luc.): this species was originally described from Algeria, has never been redescribed and is still little known (Schilsky 1897b: nr. 56 [note]). No doubt it is a spelling mistake of Costa for *A. pectinatus*.

Aplocnemus* (*Aplocnemus*) *trinacriensis Ragusa, 1872 (Luigioni 1929: 626): a Sicilian and North African species (Liberti 1995a) never seen by the author from Sardinia.

Aplocnemus* (*Diplambe*) *abietum Kiesenwetter, 1859 (Bertolini 1899–1904: 74; Porta 1929: 124): a Balkan species, never reliably recorded from Italy (*cf.* Liberti 2004b; Mayor 2007b) and never seen from Sardinia by the author.

Aplocnemus* (*Diplambe*) *crenicollis Kiesenwetter, 1863 (Baudi di Selve 1873b: 249; Bertolini 1899–1904: 74; Luigioni 1929: 625): a Sicilian and North African species (Liberti 1995a) close to *A.* (*D.*) *duplicatus* and never seen from Sardinia by the author.

Aplocnemus* (*Diplambe*) *montivagus (Rosenhauer, 1856) (Bargagli, 1873: 39; Bertolini 1899–1904: 74; Porta 1929: 124): a Spanish species (Constantin 2005) never seen from Sardinia by the author.

Amauronia subaenea Westwood, 1839 (Bertolini 1899–1904: 74): an uncommon species described from Kerkyra island (Greece) and living in the Balkans south of Belgrade (Majer 1997: 372), very likely absent from Sardinia.

Pseudoamauronia danacaeoides (Reitter, 1885) (Luigioni 1929: 632; Porta 1929: 129, both as *Amauronia danacaeoides*): a rather uncommon species living in the southern Balkans (Greece) (Majer 1997: 382), very likely absent from Sardinia.

Dasytidae: family description and identification keys

The following description is based on the Italian Dasytidae only, with special reference to the Sardinian ones. Body shape elongated, rather depressed or normally convex, more or less covered with hairs (setae, thin pubescence, scale-like hairs or combinations of the three); integuments often rather soft, frequently black (sometimes with red spots), brown or green (shiny or matt) or covered with green-yellow, short and thick hairs that resemble scales and give their colour to the body surface. Dorsal body surface (head, pronotum and elytra) variously punctured, weakly striated or otherwise impressed (in the Malachiidae and Prionoceridae they are smooth and in the Melyridae heavily sculptured).

Antenna filiform (*Dasytes*, *Psilothrix*, *Dolichosoma*), gradually widened to weakly clubbed (*Danacea*), short and serrate (*Divales* and some *Dasytes*, for instance *D. flavescens*) or serrate to pectinate (*Aplocnemus*). In *Acanthocnemus nigricans* the antenna is distinctly clubbed (in the Melyridae it is short and serrated as in *Divales*; in Sardinian Malachiidae and in *Lobonyx* (Prionoceridae) it is filiform).

Lateral sides of thorax free from defensive extrudable vesicles typical of the Malachiidae, hind coxa more or less perpendicular to sagittal plane of body (oblique in the Malachiidae). Legs usually rather long and thin with simple tibiae and femora; pro-, meso- and metatarsi each consisting of 5 segments: claws showing important characters at the genus level as reported in the identification keys.

Size generally rather small: body length ranging between 2.5 (in some *Allodanacaea*) and 7 mm (in some large specimens of *Aplocnemus pectinatus* and *Psilothrix viridicoerulea*).

Key to the Sardinian genera and species of Dasytidae

For ease of use, the following keys are based on external characters only. Sometimes, mainly for *Allodanacaea*, dissection of male genitalia is necessary for identification: for these, as well as for several other species, a drawing of the median lobe of aedeagus is provided to help identification.

Key to genera

1. Last tarsal segments of all legs fitted with 2 claws and 2 evident pulvilla (membrane appendages independent from claws) ..... *Aplocnemus*
- Last tarsal segment of all legs fitted with 1 or 2 claws (which may have a membranous tooth or expansion) but no pulvilla 2
2. Last tarsal segment with 1 claw only (the second one looking like a short, chunky appendage). Dorsal body surface without setae but covered with short, green, grey-green or yellowish scale-like hairs, covering and hiding background surface to a good extent ..... *Danacea*
- Last tarsal segments with 2 claws. Dorsal body surface usually without scale-like hairs (present, although sparse, in genus *Dolichosoma* only) but always with upright setae, more or less abundant, at least on head and at elytral apex..... 3
3. Prothorax narrow, much longer than wide. Habitus very narrow, grey-green in colour and elytra with a grey scale-like pubescence. A few upright setae only on head and at elytral apex (and, sometimes, on pronotum).. *Dolichosoma*
- Prothorax at most slightly longer than wide, but usually wider than long or approximately square. Dorsal body surface black, black with red spots, yellow-brown or bright green, without any scale-like pubescence and entirely covered with setae and/or normal, thin pubescence 4
4. Body surface entirely bright green with metallic reflexes. Elytral surface rough ..... *Psilothrix*
- Body surface (apart from antennae and legs) entirely black, or black with red spots (*Divales*), or yellowish or bicoloured yellowish-brown (*Dasytes flavescens*) but never bright green. Elytral surface rather smooth and/or slightly punctured..... 5
5. Dorsal body surface black, yellowish or bicoloured yellowish-brown. If body black, antennae filiform with all segments longer than wide (or, mainly in females, intermediate segments can be more or less square-shaped). If body yellowish or bicoloured yellowish-brown, antennae short and serrate..... *Dasytes*
- Dorsal body surface black, usually with two small orange-red spots on elytron. However, in this genus elytral colour pattern is very variable and orange-red spots can be either merged in a band, more or less evident or lacking altogether. Antenna short and serrate, all segments being much wider than long..... *Divales* [1 sp.: *D. cinctus*]

Genus *Danacea* Laporte de Castelnau

Danacea has been split (Liberti 1985) into two subgenera, *Danacea* and *Allodanacaea*, that mainly differ in the position of the median lobe's apical orifice: ventral in *Danacea* (*Danacea*) and dorsal (thus conforming to the other Dasytidae, see for instance Figs 1 and 5) in *D.* (*Allodanacaea*); differences in the external morphology are reported in the identification key below. The *Danacea* s. str. were split by Schilsky (1897a) into four groups (see also Liberti 1989), based on the hair pattern on the disc; these groups are only used to help identification and bear little systematic meaning. In Sardinia only groups 1, 2 and 4 can be found (see key below).

The genus includes 12 taxa in Sardinia, 10 of which strictly endemic and 2 Sardo-Corsican. Species identification is not easy particularly in subgenus *Allodanacaea*, where dissection can be necessary. The definition of some terms is useful to work through the key:

- disc: the central area of pronotum, easily and immediately seen when looking at the insect from above;
- hairs: in *Danacea*, hairs are intermediate between setae and scales, rather short and thick, green, grey-green or yellowish. They cover the whole body and hide, to a good extent, the colour of the underlying integuments, which are usually dark green to blackish; the pattern made by such hairs on the disc of pronotum is a character widely used for indentification;
- ornate elytra: in *Danacea* the elytra are usually uniformly covered with hairs; however in certain species, specimens or entire populations show elytral patterns of differently coloured hairs (for instance green and white) and/or symmetrically arranged naked areas. The presence of individuals with ornate elytra is frequent in some group 1 species (see below), although it has little systematic meaning, as it is rather common to find both pure populations (i.e. populations where all the individuals have either normal or ornate elytra) and mixed ones. Ornate elytra can also be found in some group 3 species, not found in the Sardinian fauna.

Key to species of subgenus *Danacea*

1. Discal hairs all parallel and directed forwards (group 1). Elytron sometimes ornate. Length 3.0–4.4 mm. Very common throughout the whole island..... *imperialis*
- Discal hairs with a different pattern. Elytron never ornate..... 2
2. 6th and 8th antennal segments about as large as 5th, 7th and 9th segments: antenna appearing as gradually and slightly broadening from base to apex..... 3
- 6th and 8th antennal segments smaller than 5th, 7th and 9th segments: antennae appearing as longer, thinner and suddenly broadening; last three antennal segments (9th, 10th and 11th) forming a weak club .....see *Allodanacaea*
3. Nearly all discal hairs directed forwards, but in a rather small area close to anterior edge of pronotum (i.e. close to head) where hairs are directed backwards (group 2) 4
- Discal hair pattern with a crosswise confluence line resulting from anterior hairs directed backwards and posterior ones directed forwards (group 4); some *D.* (*Allodanacaea*) species show this same pronotal character, but the antenna has a different structure (see couplet 2 above). Length 3.4–4.7 mm..... *mitis*
4. Body surface rather shiny. Head large with small eye and long temple. Hind trochanter of male with a small tooth. Femora darker than tibiae. Anterior area of pronotum with a narrow backwards oriented patch of hairs, both in male and female. Length 3.5–4.5 mm ..... *corsica*
- Body surface dull. Head of normal size with rather large eye and short temple. Hind trochanter of male without a tooth. Femora and tibiae of same yellowish or reddish colour. Anterior area of pronotum, with backwards oriented hairs, wider and less well defined, mainly in female 5
5. Elytral apex, in lateral view, sloping down rather steeply (Fig. 3). Length 2.7–4.0 mm. Common in Sardinia but absent in the Iglesias area..... *sardoa sardoa*
- Elytral apex, in lateral view, sloping down more gently and extended in an incipient concavity (Fig. 4). Length 3.3–4.0 mm. Replaces ssp. *sardoa* in the Iglesias and Monte Linas area, where it is common .... *sardoa declivis*

Key to species of subgenus *Allodanacaea* Liberti

Allodanacaea species are rather homogeneous and their identification may require dissection of male genitalia. Females of the *picicornis*-group are difficult or even impossible to identify. Two separate keys for males and females are proposed. The overall body length, supplied only in the key to males, applies also to females.

1. Body shape parallel, elytron not widened in apical third ..... A - Males
- Body shape slightly enlarged posteriorly, elytron slightly but distinctly widened in apical third..... B - Females

A - Males

1. Elytron rather long, more than twice as long as wide. Head restricted behind eye, with long temple. 1st segment of hind tarsus shorter than 2nd. Femora sturdy and blackish, darker than tibiae. Length 2.6–3.6 mm..... *nympha*
- Elytron less than twice as long as wide. Head normal, temple short. 1st segment of hind tarsus as long as or longer than 2nd. Femora normal and usually pale, same colour as tibiae (a rather variable character)..... 2
2. 1st segment of hind tarsus longer than 2nd..... 3
- 1st segment of hind tarsus about as long as 2nd..... *picicornis picicornis* (length: 2.7–3.3 mm) .....*picicornis supramontana* (length: 2.7–3.3 mm) ..... *sulcitana* (length: 2.4–3.0 mm)
[Dissection of male genitalia is necessary to identify these taxa: see Figs 8, 10–11]
3. 1st segment of mid tarsus very long, more than twice as long as 2nd. Length 2.5–3.0 mm..... *gorditana*
- 1st segment of mid tarsus only slightly longer than 2nd 4
4. Elytra jointly rounded off at apex. Length 2.7–2.8 mm ..... *oreas*
- Elytra separately rounded off at apex. Length 2.4–2.6 mm..... *milleri*

B - Females

1. Femora sturdy and blackish, darker than tibiae. 1st segment of hind tarsus shorter than 2nd. Body size often smaller than in male ..... *nympha*
- Femora normal, pale, same colour as tibiae. 1st segment of hind tarsus as long as or longer than 2nd 2
2. 1st segment of hind tarsus longer than 2nd. Elytral suture with a small apical tooth. Body size often smaller than in male ..... *gorditana*
- 1st segment of hind tarsus about as long as 2nd. Elytral suture with or without a small apical tooth 3
3. Elytral suture with a small apical tooth, apical angle acute ..... *oreas*
- Elytral suture simple at apex, apex right-angled 4
4. Pronotal hairs on disc forming just a short convergent crosswise line in the middle ..... *milleri*
- Pronotal hairs on disc forming a long convergent crosswise line, almost reaching from side to side (as in the group 4 *Danacea* described above) ..... *picicornis picicornis* ..... *picicornis supramontana* ..... *sulcitana*

Key to species of genus *Dasytes* Paykull

Dasytes has been divided into five subgenera (see Liberti 2004a); in Sardinia it is represented by 8 species belonging to the following subgenera: *Dasytes*, *Hypodasytes* and *Mesodasytes*.

Dasytes flavescens and *D. pauperculus* have possibly been improperly placed in *Dasytes* (*Dasytes*), as this subgenus has been provisionally used as a "container" for species of doubtful affiliation (see Liberti 2004a).

1. Body colour yellow to brown (sometimes bicoloured yellow and brown) but never black; dull, with no metallic reflexions; antennal segments short and compressed (character more evident in females); sexual dimorphism reduced; length about 3 mm ..... *D.* (*D.*) *flavescens*
- Body colour black (excluding legs and antenna which can be yellowish or reddish in part); rather bright and, sometimes, with metallic reflexions; antennal segments longer than wide or, mainly in female, more or less square-shaped; evident sexual dimorphism (male with longer and thinner antenna and parallel body shape) 2
2. All antennal segments with long setae (character most evident in male); male with 5th antennal segment long, sub-trapezoidal; female elytral pubescence simple, only consisting of thin, pale and rather erect setae (no black, stiff ones); length: 3.0–3.5 mm ..... *D.* (*D.*) *pauperculus*
- Only first 5–6 antennal segments with long setae; 5th antennal segment of male either short or sub-triangular; female elytral pubescence double, consisting of both recumbent pubescence and black setae 3
3. Pronotum flattened and very transverse, about twice as wide as long; completely black (legs included). Body larger, of wider shape: length 4.5–5 mm ..... *D.* (*H.*) *coerulescens*
- Pronotum normally convex, 1.0–1.5 times as wide as long. Legs and antenna may be yellow to reddish in part. Body smaller, of narrower shape: length 3.5–4.5 mm 4
4. Female head, eye included, narrower than anterior edge of pronotum; eye small. Length 4–4.5 mm [the male of this species is unknown]. ..... *D.* (subgen. ?). *doderoi*
- Female head, eye included, approximately as wide as anterior edge of pronotum, eye normal 5
5. Legs entirely black; antenna black apart from 2nd segment (sometimes reddish). Length 3.5–4.5 mm ..... *D.* (*M.*) *aeneiventris*
- Legs, and often also antenna, pale in part (yellowish or reddish) 6
6. Femora and antenna entirely black; tibiae reddish or yellowish, pronotum heavily punctured and rather dull on disc. Length 3.5–4 mm ..... *D.* (*M.*) *nigroaeneus*
- Basal half of femora yellow; first 3–4 antennal segments yellow; tibiae yellow, pronotum smooth and bright on disc. Length 3–4 mm. Although very similar, these two species clearly differ in the shape of the aedeagus (Figs 12–13) ..... D. (*M.*) *croceipes* ..... *D.* (*M.*) *iteratus*

Key to species of genus *Dolichosoma* Stephens

1. Elytron with weak longitudinal striae and a sharp apex. Pronotum usually without black setae laterally. Length 4.0–6.0 mm ..... *lineare*

- Elytron without visible striae and with a rounded apex. Pronotum usually with some (5–10) black setae laterally. Length 4.0–5.8 mm ..... *simile*

Key to species of genus *Psilothrix* Redtenbacher

1. Male 7th sternite (5th visible) very deeply emarginated on posterior edge. Pronotum longer than wide. Wingless (actually brachypterous), showing elytral modifications often associated with loss of wings: lack of humeral callous, elytron narrow at base and widened in apical third (in female only). Length 4.0–5.5 mm ..... *protensa*
- Male 7th sternite straight or only slightly emarginated on posterior edge. Pronotum wider than long. Wing may or may not be present 2
2. Pygidium (last male tergite) with a deep U-shaped notch (Fig. 22). This species can be winged or brachypterous: only the brachypterous form is known from Sardinia, but it does not show the elytral modifications often associated with loss of wings (i.e. humeral callous normally developed, female elytron normally widened posteriorly). Small size: length 4.0–4.5 mm ..... *aureola*
- Pygidium (last male tergite) showing a deep but small V-shaped notch (Fig. 23). Winged. Larger size: length 4.8 to 6.6 mm ..... *viridicoerulea*

Key to species of genus *Aplocnemus* Stephens

1. Basal half of elytral edge, in lateral view, clearly double; pronotum very convex both crosswise and lengthwise (from base to front) (subgenus *Diplambe*) 2
- Elytral edge, in lateral view, simple; pronotum more or less convex crosswise but rather flat lengthwise (subgenus *Aplocnemus*) 3
2. Body surface shiny black, elytral punctuation deeply impressed; male antenna pectinate. Length 4.5–5.0 mm..... ..... *duplicatus*
- Body surface dark brown, rather dull; elytral punctuation less impressed: male antenna serrate. Length 5.0–5.5 mm ..... *januaventi*
3. Pronotum not particularly convex (crosswise), front edge straight with lateral anterior angles well visible; head (eye included) narrower than anterior edge of pronotum 4
- Pronotum very convex (crosswise), anterior edge rounded with lateral anterior angles not well defined; head (eye included) about as wide as anterior edge of pronotum 5
4. Margins of pronotum and elytron reddish; antenna weakly serrate; antennal segments 4–11 short in both sexes, about as long as wide. Length 4.5–4.7 mm ..... *rufomarginatus*
- Margins of pronotum and elytron not as above; antenna serrate in female and almost pectinate in male; antennal segments 4–11 longer (female) or much longer (male) than wide. Length 5.3–6.7 mm ..... *jejunus*
5. Male antenna pectinate, female antenna serrate; elytral pubescence pale brown. Large size: length 4.5–5.5 mm..... .....*pectinatus*
- Male and female antenna serrate; elytral pubescence dark brown to black. Smaller size: length 3.5–4.0 mm..... ..... *cribricollis*

Annoted catalogue

***Danacea* (*Danacea*) *corsica* Kiesenwetter, 1871**

Danacea corsica Kiesenwetter, 1871: 86 (Loc. typ. Corsica); Baudi di Selve 1873b: 251; Schilsky 1897a: nr. 33; Sainte-Claire Deville 1908: 221; Porta 1929: 110; Pic 1937: 8; Liberti 1989: 287; *Constantin & Liberti 2006: 376.

= *Danacea corsica* var. *luteipes* Schilsky, 1897a: 33 (Constantin & Liberti 2006: 376).

Material examined. Olbia-Tempio prov.: *Aglientu, 1995 (CAN). Nuoro prov.: *Bruncu Spina, 2004 (CCA, CCR, CLI).

Chorotype. Sardo-Corsican. Affinities unknown.

Notes. This species is well characterized and easily recognizable. It is rather common all over Corsica and often found on blossoming *Cistus* bushes. Already reported from Sardinia (Baudi di Selve 1873b; Bertolini

1899–1904; Sainte-Claire Deville 1908; Constantin & Liberti 2006), where it appears uncommon and localized.

Danacea (*Danacea*) *imperialis* (Gené, 1836)

Dasytes imperialis Gené, 1836: 20, pl. I, fig. 11 (Loc. typ. "prope Iglesias", Sardinia); Schilsky 1897a: nr. 13; Porta 1929: 109; Pic 1937: 10; *Liberti 1979: 40.
= *Danacaea mitis* Küster *sensu* Prochazka 1894: 12 (Schilsky 1897a: nr. 13).
= *Danacaea distincta* var. *solarii* Pic, 1895c: 122 (Liberti 1979: 40).
= *Danacaea imperialis* var. ♀ *versicolor* Schilsky, 1897a: 13 (Loc. typ. Sardinia) (Mayor 2007a).
= *Danacaea imperialis* var. *uniformis* Schilsky, 1897a :13 (Loc. typ. Sardinia) (Mayor 2007a).

Material examined. Sassari prov.: Alghero, 1998 (CME); Argentiera, 1992 (CME); Isola Asinara, 1904 (MCSNG); Isola Piana di Capo Caccia, 1987 (MCSNG); Lago Baratz, 1995 (CAN); Mores, y-? (NMBA); Nulvi, 1974 (CFR); Osilo, 1974 (CFR); Ozieri, y-? (NMBA); Platamona Lido, 1974 (CFR); Ploaghe, 1909 (CBI); Ponte di Caitta, 2001 (CLI); Sassari, y-? (MCSNM); Stagno di Pilo, 1974 (CLI); Stintino, 1974 (CFR). Olbia-Tempio prov.: Aggius, 1995 (CMG); Aglientu, 1995 (CAN); Alà dei Sardi, 1907 (CBI); Figaruia, 2003 (CRO); Isola Caprera, 1984 (MSNUF); Isola Maddalena, 1993 (CME); Isola Santo Stefano, 1994 (CME); Isole di li Nibani, 1986 (MCSNG); Monte Limbara, 1995 (CAN, CLI); Oschiri, 1995 (CAN); Padrogiano, 1995 (CAN); Tempio Pausania, 1995 (CAN, MCSNG, NMBA). Nuoro prov.: Altopiano della Campeda, y-? (NMBA); Arcu Guddetorgiu, 1995 (CAN); *Aritzo, 1998 (CME, MCSNM, NMBA); Belvì, 1995 (CAN); Bruncu Spina, 2003 (CAN, CLI, CME, CMO, CPN); Cala Gonone, 1980 (CFR); Cantoniera di Sant'Anna, 2008 (CNBFVR); Cantoniera Guzzurra, 1995 (CAN); Oliena, San Giovanni, 1995 (CAN); Desulo, 2008 (CAN, CNBFVR); Dorgali, 1995 (CAN, CFR, CME, MCSNG, NMBA,); Flumineddu a Monte Novo, 1983 (MCSNG); Fonni, 1999 (CLI, CME); Funtana Bona, 1983 (MCSNG); Gadoni, 2008 (CNBFVR); Galtellì, 1995 (CAN); Irgoli, 1977 (CME); Lago di Gusana, 1995 (CAN); Lodè, 1978 (MCSNG); Lula, 2008 (CAN, CBI, CNBFVR); *Macomer, 1936 (CMA, MCSNM, MNHU, MSNUF, NMBA,); Mamoiada, 1976 (CPO); Monte Albo, 1997 (CBA, CME, MCSNG); Monte Novo San Giovanni, 1983 (MCSNG); Monte Ortobene, 1920 (MCSNG); Monte Spada, 2003 (CLI); Monte d'Iscudu, 2003 (CLI); Nuoro, 1920 (MCSNG); Orgosolo, 2003 (CAN, MCSNG); Orune, 1976 (CPO); Pratobello, 1995 (CAN); Punta Cupetti, 1995 (CAN); Sorgono, y-? (NMBA). Oristano prov.: Asuni, y-? (MCSNG, NMBA); Badde Urbara, 1987 (SMNS); Bauladu, 1995 (CAN); Laconi, 1995 (CAN, CME, CSA, MCSNG); Monte Ferru, 1979 (CML); Oristano, y-? (NMBA); Senis, y-? (NMBA); San Leonardo de Siete Fuentes, 1983 (CLI). Ogliastra prov.: Gairo Taquisara, 1992 (CME); Genna Silana, 1980 (CFR); Monte Perda Liana, 2008 (CNBFVR, MCSNG); Monte Tonneri, 2008 (CNBFVR); *Seui, 2001 (CFA, CLI, CME, MCSNM, NMBA), Talana, 2008 (CNBFVR). Medio Campidano prov.: Arbus, 1995 (CAN); Giara di Gesturi, 1999 (CME); Gonnosfanadiga, 2006 (CFA, CMG, CNBFVR); Monte Linas, 1995 (CME); Sant'Antonio di Santadi, 2003 (CPA); Serramanna, 1944 (MCSNV); Villacidro, 2006 (CNBFVR). Carbonia-Iglesias prov.: Carloforte, 1912 (MCSNG); Domusnovas, 2006 (CNBFVR); Iglesias, 2006 (CNBFVR); Monti Marganai, 2005 (CNBFVR); Nebida, 2000 (CME); sa Duchessa, 2006 (CNBFVR); Tempio di Antas, 1999 (CME). Cagliari prov.: *Cagliari, y-o (MCSNM, NMBA); Cantoniera Campu Omu, 1998 (CLI, CME); Colle della Campanasissa, y-r (CFO); Esterzili, 1994 (CME); Flumini, y-? (NMBA); Isola Serpentara, 1988 (MCSNG); Monte dei Sette Fratelli, 1995 (CAN, CME); Nurri, 2001 (CFA); Porto di Teulada, 1999 (CME); Quirra, 1992 (CLI, CME); *Sadali, 2008 (CNBFVR, CPN, MCSNG, MCSNM, MNHU); San Gregorio, 1985 (CLI); Seulo, 2008 (CNBFVR); Solèminis, 1983 (CFO); Stagno di Simbirizzi, 1983 (CFO); Teulada, 1912 (MCSNG); Uta, 1989 (CME); Villanovatulo, 1994 (CME).

Chorotype. Strict Sardinian endemic. Affinities: several similar species can be found in the Central Mediterranean area, sometimes with ranges which are small and even limited to just one island, e.g. *D. trinacriae* Liberti, 1979, limited to Sicily, and *D. eludens* Liberti & Schembri, 2002, a Maltese endemic.

Notes. The two varieties described by Schilsky (1897a: nr. 13), var. *versicolor* and var. *uniformis*, differ from the nominotypical form only by the colour and pattern of elytral hairs. Populations with ornate elytra and showing a rather strong variability often occur, and no other species with a group 1 pronotal hair pattern occur in Sardinia. For these reasons, these two varieties are deemed to have infrasubspecific value.

Danacaea imperialis is rather variable in size and hair coverage (specimens with ornate elytra are common), as well as in the shape of aedeagus. It is easily recognized because the pronotal hairs are all parallel and pointing forwards. Very common all over the island and often collected in large series, it can be found in spring on flowers, for instance of *Crataegus* and *Erica*.

Danacea (*Danacea*) *mitis* (Küster, 1850)

Cosmiocomus mitis Küster, 1850: nr. 11 (Loc. typ. Ussana, Sardinia); Porta 1929: 112; Pic 1937: 13; *Liberti 1984: 177.
= *Danacaea laevicollis* Baudi di Selve, 1873a: 313 (Liberti 1984: 177).

Material examined. Olbia-Tempio prov.: Isola Maddalena, 1987 (CSA); Isola Molara, 1989 (MCSNG); Isola Santo Stefano, 1989 (MCSNG); *Isola Tavolara, 1966 (MCSNM); Monte Limbara, 2004 (CCR). Nuoro prov.: Bruncu Spina, 2004 (CCA, CCR, CLI, CME); Cala Gonone, 1983 (CFR, CLI); *Dorgali, 1983 (CBI, CLI, NMBA); Fonni, 2003 (CLI, CME); Gadoni, 2008 (CNBFVR); *Lodè, 1978 (MCSNG); *Lula, 1912 (CBI); *Monte Albo, 2004 (CBI, CCR, CME); Monte d'Iscudu, 2003 (CLI); *Monti del Gennargentu, 1957 (MCSNM); Stazione Ortuabis, 1994 (CME). Oristano prov.: Laconi, 1995 (CME, MNHU). Ogliastra prov.: Monte Tonneri, 2008 (CNBFVR); *Seui, y-? (NMBA); Talana, 1863 (MNHU). Medio Campidano prov.: Giara di Gesturi, 1999 (CME); Gonnosfanadiga, 1983 (CLI); Monte Linas, 1995 (CME); *Torre di Flumentorgiu, 1895 (MCSNM); Villacidro, 2006 (CNBFVR). Carbonia-Iglesias prov.: Domusnovas, 2006 (CNBFVR); Iglesias, 2006 (CNBFVR); Nebida, 2000 (CME). Cagliari prov.: Chia, 1995 (CAN); Monte dei Sette Fratelli, 1985 (CME); Nurri, 1983 (CLI); Quirra, 1992 (CME); *Sadali, 1901 (CBI); Siliqua, 1998 (CME); Villagreca, 1994 (CME).

Chorotype. A strict Sardinian endemic. Affinities unknown.

Notes. The crosswise pronotal line—given by the confluence of hairs—is rather short and limited to the disc. Although it is the only species on the island belonging to group 4, antennal examination is also needed because some *D.* (*Allodanacaea*) show the same pronotal hair pattern. Common all over the island.

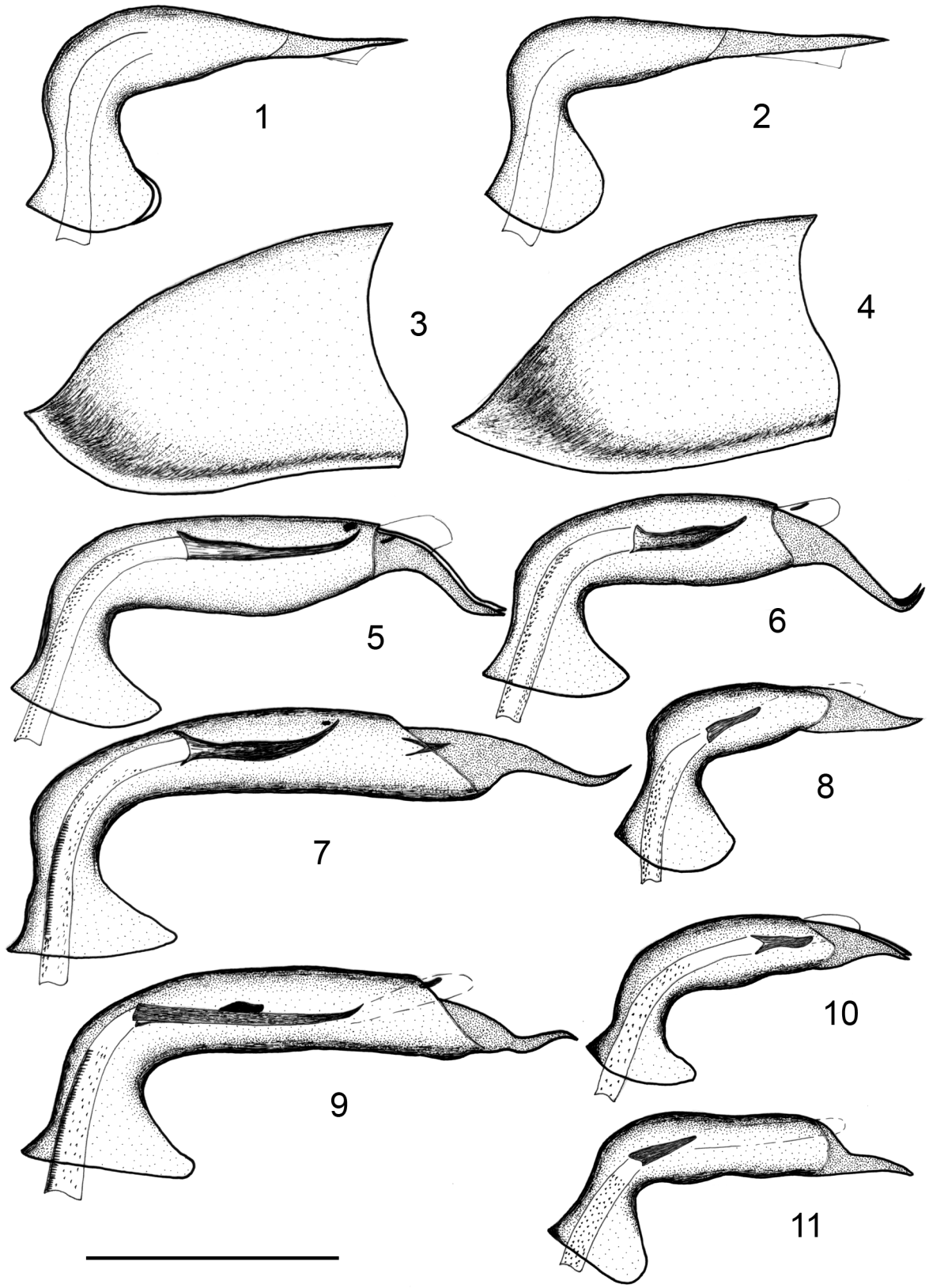
Danacea (*Danacea*) *sardoa declivis* Liberti, 1989
(Figs 2, 4)

Danacaea sardoa declivis *Liberti, 1989: 286 (Loc. typ. Gonnosfanadiga, Sardinia).

Material examined. Medio Campidano prov.: *Gonnosfanadiga, 1983 (CLI); Monte Linas, 1995 (CME); Villacidro, 2006 (CNBFVR). Carbonia-Iglesias prov.: Domusnovas, 2006 (CNBFVR); *Iglesias, 2006 (CNBFVR, MNHU); sa Duchessa, 2006 (CNBFVR).

Chorotype. See below under *D. sardoa sardoa*. This strictly Sardinian subspecies replaces the nominotypical one in the Monte Linas-Iglesias area, in the south-western part of the island. Affinities: see below under *D. sardoa sardoa*.

Notes. Rather common throughout its small range, like other *Danacea* it lives on flowers, feeding on pollen, and has been collected in series.



FIGURES 1–11. *Danacea* spp. from Sardinia, scale bar: 0.5 mm. **1–2.** Median lobe in lateral view. **1.** *Danacea* (*D.*) *sardoa sardoa* Kiesenwetter (San Leonardo de Siete Fuentes). **2.** *Danacea* (*D.*) *sardoa declivis* Liberti (Gonnosfanadiga). **3–4.** Elytral apex in lateral view. **3.** *Danacea* (*D.*) *sardoa sardoa* (Dorgali). **4.** *Danacea* (*D.*) *sardoa declivis* (Gonnosfanadiga). **5–11.** Median lobe in lateral view. **5.** *Danacea* (*Allodanacaea*) *oreas* Liberti (Gonnosfanadiga). **6.** *Danacea* (*A.*) *milleri* Schilsky (Paduledda). **7.** *Danacea* (*A.*) *gorditana* Liberti (paratype, Capo del Falcone). **8.** *Danacea* (*A.*) *sulcitana* Liberti (Olia Speciosa). **9.** *Danacea* (*A.*) *nympha* Liberti (Capo Caccia). **10.** *Danacea* (*A.*) *picicornis picicornis* (Küster) (Monti Marganai). **11.** *Danacea* (*A.*) *picicornis supramontana* Liberti (Dorgali).

***Danacea* (*Danacea*) *sardoa sardoa* Kiesenwetter, 1871**
(Figs 1, 3)

Danacaea sardoa Kiesenwetter, 1871: 86 (Loc. typ. Sardinia); Schilsky 1897a: nr. 37; Porta 1929: 111; Pic 1937: 18; *Liberti 1989: 282

Material examined. Sassari prov.: Capo del Falcone, 2006 (CLI, CPN); *Isola Asinara, 1988 (MCSNG); Monte Pettenadu, 2001 (CPN); Sassari, y-? (MSNUF); Torre del Porticciolo, 2001 (CPN). Olbia-Tempio prov.: Aglientu, 1995 (CAN); Golfo Aranci, 1995 (CAN); Isola Santa Maria, 1991 (CME); Isola Santo Stefano, 1994 (CME); La Maddalena, 1978 (MCSNV); *Monte Limbara, y-o (CBI); *Tempio Pausania, y-? (CBI, NMBA). Nuoro prov.: *Aritzo, 1994 (CME, MCSNM, NMBA); Bruncu Spina, 2004 (CCR, CLI, CME); Cantoniera Ortuabis, 1994 (CME); Cantoniera di Sant'Anna, 2008 (CNBFVR, MCSNG); Desulo, 2008 (CNBFVR); *Dorgali, 1983 (CLI, NMBA); *Fonni, 2003 (CLI, CME, MCSNG); Gadoni, 2008 (CNBFVR); Galtellì, 1995 (CAN, CFR); Irgoli, 1977 (CME); *Lodè, 1978 (MCSNG); *Lula, 2008 (CMBF, MCSNG); *Mamoiada, 1976 (MCSNG); *Monte Albo, 2004 (CCR, CME, MCSNG); *Monte Ortobene, 1985 (CCL, MCSNG); Monte Spada, 2003 (CLI); Monte d'Iscudu, 2003 (CLI); *Nuoro, 1920 (MCSNG); Oliena, 1995 (CAN); Orgosolo, 1963 (MCSNG); Orune, 1899 (MSNUF). Oristano prov.: *Asuni, y-? (NMBA); Monte Ferru, 1987 (SMNS); Seneghe, 1987 (SMNS); *San Leonardo de Siete Fuentes, 1983 (CLI). Ogliastra prov.: Monte Perda Liana, 2008 (CNBFVR); Seui, 2001 (CFA, CME). Medio Campidano prov.: Giara di Gesturi, 1995 (CAN, CME). Carbonia-Iglesias prov.: Santadi, 1997 (CME). Cagliari prov.: Burcei, 1987 (CME); *Cantoniera Campu Omu, 1985 (CLI); Capo Carbonara, 1998 (CME); Esterzili, 1994 (CME); Monte dei Sette Fratelli, 1995 (CAN); *Nurri, 1983 (CLI); *Olia Speciosa, 1985 (CLI); Quartu Sant'Elena, y-? (CDO); *Quirra, 1985 (CLI); Sarrabus, 1885 (MNHU); Sarroch, 1985 (CME).

Chorotype. *Danacea* (*D.*) *sardoa* is a Tyrrhenian species mainly present in the north: Corsica, Sardinia, Elba and Capraia islands; *D. s. sardoa* is a strict Sardinian endemic occurring all over the island except in the area occupied by *D. s. declivis* (see above). Affinities: Tyrrhenian: a third subspecies, *D. s. mancinii* Pic, 1927, occurs in the whole of Corsica and in the Tuscan Archipelago; a fourth one, *D. s. renosensis* Constantin & Liberti, 2006, is an altitudinal subspecies living on a high Corsican mountain (Constantin & Liberti 2006). A similar species, *D. ligurica* Liberti, 1984, occurs in eastern coastal Liguria (NW Italy).

Notes. Rather common all over its distribution area, from sea level up to the top of Bruncu Spina mountain (1800 m); it has been sometimes found in series.

***Danacea* (*Allodanacaea*) *gorditana* Liberti, 2007**
(Figs 7, 24)

Danacea (*Allodanacaea*) *gorditana* *Liberti, 2007b: 5 (Loc. typ. Asinara Island, Sardinia).

Material examined. Sassari prov.: *Isola Asinara, "VII-VII. 1903, leg. S. Folchini", 1 ♂, 1 ♀ (holotype and allotype, MCSNG). Isola Asinara, "Cala d'Arena, 1.VII.1987, leg. V. Vomero" 1 ♀ (CNBFVR). *Capo del Falcone "18.VI.2003, leg. G. Liberti", 3 ♀♀ on blossoming *Cistus* sp. (paratypes, CLI). *Penisola di Stintino, "18.V.2006, leg. P. Ponel", 2 ♂♂, 1 ♀ on *Daucus* sp. (mixed up with approximatly 140 specimens of *Danacea sardoa sardoa*) (paratypes, CPN).

Chorotype. Strict Sardinian endemic, limited to the north-western corner of the island in a very small area which includes Capo del Falcone and Asinara Island (Fig. 24). Affinities: Central Mediterranean; rather well characterized, it shows some relations (mainly in the aedeagal structure) with two *D.* (*Allodanacaea*) species: *D. nympha*, which occurs in the nearby Alghero area, and *D. constantini* Liberti, 1985, which is a strict Corsican endemic.

Notes. An apparently uncommon species, of which only the type specimens are known so far; it lives on flowers (e.g. *Cistus*, *Daucus*), feeding on pollen. No other *Allodanacaea* species are known from the type locality of *D. gorditana*, but *D. sardoa sardoa* is common there and has been collected in numbers.

Danacea (*Allodanacaea*) *milleri* Schilsky, 1897
(Figs 6, 24)

Danacaea milleri Schilsky, 1897a: nr. 49 (Loc. typ. Corsica); Porta 1929: 111; Pic 1937: 13; *Liberti 1985: 347; Constantin & Liberti 2006: 390.

Material examined. Olbia-Tempio prov.: Capo Testa, 2003 (CLI); *Golfo Aranci, y-o (CDO); Isola Mortorio, 1987 (CNBFVR); Isola Razzoli, 1987 (CNBFVR, MCSNG); Isola Rossa, 1995 (CPA); Isola Santo Stefano, 1989 (MCSNG); Isola Soffi, 1987 (CNBFVR, MCSNG); Isole le Camere, 1987 (MCSNG); *Lido di Pittulongu, 1983 (CLI); *Padrogiano, 1983 (CLI); Paduledda, 2003 (CLI); Santa Teresa di Gallura, 2003 (CLI). Nuoro prov.: Aritzo, 1994 (CME); Bruncu Spina, 2003 (CLI); Cantoniera Berchida, 2004 (CCR); *Dorgali, 1983 (CLI); Fonni, 2003 (CLI); Monte Albo, 2004 (CCR); Rio Berchida, 2001 (CCR); Santa Lucia, 2000 (CCR); *Siniscola, 1983 (CLI). Cagliari prov.: Monte dei Sette Fratelli, 1998 (CME); *Quirra, 1985 (CLI); Stazione di Sarcidano, 1994 (CME).

Chorotype. A Sardo-Corsican endemic, the distribution area of which includes the eastern part of Corsica and the northern and western parts of Sardinia. Affinities: Central Mediterranean; the structure of the median lobe of aedeagus is rather similar to that of *D. oreas*.

Notes. Like the majority of *Allodanacaea* species, it has a late spring and early summer appearance and is common on flowers of, e.g., *Myrtus*, *Daucus* and *Achillea*. First recorded for Sardinia by Strassen (1954).

Danacea (*Allodanacaea*) *nympha* Liberti, 1985
(Figs 9, 24)

Danacaea (*Allodanacaea*) *nympha* *Liberti, 1985: 348 (Loc. typ. Capo Caccia, Sardinia).

Material examined. Sassari prov.: *Alghero, 1983 (CDO, CLI, MSNUF); *Capo Caccia, 1983 (CLI, MCSNG); Isola Piana di Capo Caccia, 1987 (CNBFVR, MCSNG); Torre del Porticciolo, 2001 (CLI, CPN).

Chorotype. A strict Sardinian endemic, limited to the north-west of the island; it has only been found between Alghero and Capo Caccia (Fig. 24). Affinities: Central Mediterranean; rather different from the other known *Allodanacaea*, it shows some relations (mainly in the aedeagal structure) with *D. gorditana* and the strictly Corsican *D. constantini*.

Notes. This species has a really small range, where it is common or very common on flowers, even close to the seaside. Further investigations would be necessary to look for possible other species of *Allodanacaea* in the Nurra area (NW Sardinia) and to better understand the actual distribution of *D. nympha* and *D. gorditana*, both of which occur in the area with apparently non-overlapping ranges.

Danacea (*Allodanacaea*) *oreas* Liberti, 1985
(Figs 5, 24)

Danacaea (*Allodanacaea*) *oreas* *Liberti, 1985: 350 (Loc. typ. Santu Lussurgiu, Sardinia).

Material examined. Oristano prov.: *Abbasanta, 1983 (CLI); *San Leonardo de Siete Fuentes, 1983 (CLI, MCSNG). Medio Campidano prov.: *Gonnosfanadiga, 1983 (CLI); Monte Anzeddu, 2006 (CNBFVR).

Carbonia-Iglesias prov.: Isola di San Pietro, 1987 (MCSNG); sa Duchessa, 2006 (CNBFVR). Cagliari prov.: Monte Orri, 1910 (MCSNM).

Chorotype. Another strictly Sardinian *Allodanacaea* known so far only from the western side of the island (Fig. 24). Affinities: Central Mediterranean; not very far, in the median lobe structure, from *D. milleri*.

Notes. Apparently uncommon and only known from a few localities, it has been found on wild carrot umbrellas (*Daucus* spp.) and on blossoming chestnuts.

Danacea (*Allodanacaea*) *picicornis picicornis* (Küster, 1850)

(Figs 10, 25)

Cosmiocomus picicornis Küster, 1850: nr. 18 (Loc. typ. Nurri, Sardinia); Porta 1929: 111; Pic 1937: 17; *Liberti 1985: 353.
= *Danacaea misella* Baudi di Selve, 1873a: 314 (Liberti 1985: 353).

Material examined. Nuoro prov.: *Aritzo, 1911 (CDO). Oristano prov.: *Abbasanta, 1983 (CLI); *Oristano, 1983 (CLI, MSNUF); *San Giovanni Sinis, 1983 (CLI); Stagno Sale Porcus, 1999 (MCSNG). Ogliastra prov.: Seui, 1994 (CME). Carbonia-Iglesias prov.: Domusnovas, 2006 (CNBFVR); Monti Marganai, 2006 (CNBFVR). Cagliari prov.: *Assemini, y-? (CBI); Decimomannu, 1999 (CME); Giorgino, 1998 (CME); Maracalagonis, 1977 (CLI, CME); Monastir, 1991 (CME); *Nurri, 1983 (CLI); *Quartu Sant'Elena, 1976 (CDO, CME); *Stagno di Simbirizzi, 1899 (MNHU).

Chorotype. Sardinian. This species includes two subspecies: the nominotypical one lives in the central and southern parts of the island (Fig. 25). Affinities: Central Mediterranean; the median lobe structure is rather close to that of *D. sulcitana*.

Notes. Common on flowers (e.g. *Daucus*, *Sambucus*) in late spring and early summer.

Danacea (*Allodanacaea*) *picicornis supramontana* Liberti, 1985

(Figs 11, 25)

Danacaea (*Allodanacaea*) *picicornis supramontana* *Liberti, 1985: 354 (Loc. typ. Dorgali, Sardinia).

Material examined. Olbia-Tempio prov.: *Golfo Aranci, y-? (CBI). Nuoro prov.: *Cala Gonone, 1983 (CFR, CLI, MCSNG); *Dorgali, 1983 (CBI, CDO, CLI, MCSNG, NMBA); *Lula, 1911 (CDO); Monte Albo, 2000 (CCR); Oliena, 2000 (CCR); *Siniscola, 1983 (CLI).

Chorotype. Sardinian. This subspecies has thus far only been found in N-E Sardinia, from the Olbia area to the Orosei Gulf (Fig. 25).

Notes. Adults of this subspecies have the same habits as *D.* (*A.*) *p. picicornis*.

Danacea (*Allodanacaea*) *sulcitana* Liberti, 1985

(Figs 8, 26)

Danacaea (*Allodanacaea*) *sulcitana* *Liberti 1985: 356 (Loc. typ. Gonnosfanadiga, Sardinia).

Material examined. Sassari prov.: *Alghero, 1983 (CLI); Sassari, y-a (MSNUF).Oristano prov.: *Laconi, y-? (MNHU). Medio Campidano prov.: *Gonnosfanadiga, 1983 (CLI, MCSNG); Monte Linas, 1994 (CME); Montevecchio, y-a (MSNUF); Sant'Antonio di Santadi, 1995 (CAN); *Torre di Flumentorgiu, 1897 (MCSNM). Carbonia-Iglesias prov.: Domusnovas, 2006 (CNBFVR); *Iglesias, 1998 (CAN, CCO, CME); Isola La Vacca, 1988 (CNBFVR, MCSNG); Isola di San Pietro, 1987 (CNBFVR, MCSNG); *Isola di San Pietro, Carloforte, 1989 (CBI, CDO, MCSNG); Isola di Sant'Antioco, 1998 (CME); Isola di Sant'Antioco,

Cala Lunga, 1989 (MCSNG); *Isola di Sant'Antioco, Capo Sperone, 1978 (CLI); Monti Marganai, 2006 (CNBFVR); Nebida, 2000 (CME). Cagliari prov.: *Cagliari, 1902 (CDO); Capo Carbonara, 1985 (CSA); Capoterra, 1997 (CME); Dolianova, 1995 (CME); Domus de Maria, 1989 (CSA); Isola Serpentara, 1988 (MCSNG); Isola dei Cavoli, 1988 (MCSNG); Monte Arcosu, 2001 (CLI, CPN); Monte Sant'Elia, 1997 (CME); Monte dei Sette Fratelli, 1989 (CME); *Olia Speciosa, 1985 (CLI); Pula, 1992 (CME); Quartu Sant'Elena, 1991 (CME); *Quirra, 1985 (CLI); *San Gregorio, 1985 (CLI); San Nicolò Gerrei, 1992 (CME); Siliqua, 1997 (CME); Solèminis, 1983 (CFO); *Uta, 1985 (CLI); Villasimius, 1995 (CAN).

Chorotype. Sardinian; widespread in the south and also occurring along the west coast of the island (Fig. 26). Affinities: Central Mediterranean, very close to *D.* (*A.*) *picicornis*.

Notes. This is the most common *Allodanacaea* of the island, particularly in Cagliari province, and it is often collected in numbers. It is very similar to *D.* (*A.*) *picicornis* and cannot be distinguished from it by external characters only. It may well be a subspecies; it was given species rank only because its distribution area (Fig. 26) overlaps with that of *D.* (*A.*) *picicornis picicornis* (Fig. 25), even though the two taxa have not yet been collected together.

Dasytes (*Dasytes*) *flavescens* Gené, 1839

Dasytes flavescens Gené, 1839: 17, pl. II fig. 5 (Loc. typ. "prope Mandas", Sardinia); Küster 1850: nr. 3; Kiesenwetter 1863: 632 footnote; Kiesenwetter 1871: 83; Baudi di Selve 1873a: 297, 309; Schilsky 1897b: nr. 4, 34G; Sainte-Claire Deville 1908: 214; Porta 1929: 118; Pic 1937: 69; Fagniez 1946: 20, 23; Porta 1949: 214; Kocher 1956: 60; Sparacio 1997: 106; *Liberti 2004a: 284.
= *Dasytes posticus* Solsky, 1868: 34 (Pic 1895b: 107; Schilsky 1897b: nr. 4).
= *Dasytiscus scutellaris* Solsky, 1868: 34 (Schilsky 1897b: nr. 4).
= *Dasytes flavescens* var. *pectoralis* Baudi di Selve, 1873a: 297 (Schilsky 1897b: nr. 4).
= *Dasytiscus rufotestaceus* Reitter, 1889: 373 (Schilsky 1897b: nr. 4).
= *Dasytes parvulus* Schilsky, 1894b: 32 (Schilsky1897b: nr. 4).
= *Dasytes parvulus* var. *unicolor* Schilsky, 1894b: 32 (Schilsky 1897b: nr. 4).
= *Dasytes posticus* var. *inapicalis* Pic, 1894: 112 (Schilsky 1897b: nr. 4).
= *Dasytes flavescens* var. *biskrensis* Pic, 1895a: 80 (Schilsky 1896: nr. 35: syn. of *D. scutellaris* Solsky, 1868).
= *Dasytes flavescens* var. *apicalis* Ragusa, 1896: 72 (Schilsky 1897b: nr. 4).
= *Dasytes posticus* var. *nigriceps* Schilsky, 1896: 35 (Schilsky 1897b: nr. 4).

Material examined. Sassari prov.: Alghero, 1999 (CCR); Argentiera, 2003 (CLI); Sassari, y-a (MSNUF). Olbia-Tempio prov.: Oschiri, y-a (MSNUF). Oristano prov.: *Solarussa. 1975 (CME). Nuoro prov.: Cala Gonone, 1920 (MCSNG); Santa Lucia, 2004 (CCR). Medio Campidano prov.: Monte Anzeddu, 2006 (CNBFVR). Carbonia-Iglesias prov.: Isola di Sant'Antioco, Cala Lunga, 1989 (MCSNG); *Isola di Sant'Antioco, Capo Sperone, 1978 (CLI); Monti Marganai, 2006 (CNBFVR). Cagliari prov.: *Assemini, 1989 (CME); Capo Carbonara 1985 (MCSNG); Decimomannu, 1983 (CCA); Elmas, 1982 (CCA); *Geremeas, 1976 (CME); *Nurri, 1983 (CLI);*Quartu Sant'Elena, 1976 (CME); *Sarroch, 1978 (CME); *Uta, 1995 (CME); *Villaspeciosa, 1976 (CME).

Chorotype. West-Mediterranean; living in North Africa, Malta and the whole of southern Italy, reaching Latium northwards (Liberti 2004a). Affinities unknown.

Notes. This species is immediately recognizable by its small size, reduced sexual dimorphism and colour, which is variable from entirely yellow to entirely brown; in Sardinia it is often yellow with a brown pronotum and a brown triangular sutural spot at the base of the elytra. Common in early summer on flowers.

Dasytes (*Dasytes*) *pauperculus* Laporte de Castelnau, 1840

Dasytes pauperculus Laporte de Castelnau, 1840: 232 (Loc. typ. Lyon, France); Mulsant & Rey 1868: 142; Schilsky 1897b: nr. 34V; Pic 1937: 80; *Liberti 2004a: 290.

= *Dasytes pilicornis* Kiesenwetter, 1864: 388 (Kiesenwetter 1864: 388; Pic 1937: 80); Mulsant & Rey 1868: 137, 138 pl. VII; Baudi di Selve 1873a: 310; Schilsky 1894a: 230; Schilsky 1894b: nr. 35; Schilsky1897a: nr. 34R; Bertolini 1899–1904: 73; Pic 1903: 128; Sainte-Claire Deville 1908: 215; Fiori 1912: 131; Pic 1918: 5, 11, 12; Pic 1924a: 81, 87; Porta 1929: 120; Fagniez 1946 : 26; Horion 1953: 132.

= *Dasytes pilicornis* var. *mesmini* Pic, 1908: 46 (Liberti 2004a: 290).

= *Aplocnemus ponferradanus* Pic, 1913: 105 (Constantin 2005: 229).

Material examined. Nuoro prov.: *Orgosolo, 1995 (CAN). Medio Campidano prov.: *Giara di Gesturi, 1999 (CME). Carbonia-Iglesias prov.: Monti Marganai, 2005 (CNBFVR).

Chorotype. Euro-Mediterranean; found everywhere in Italy. Affinities unknown.

Notes. Reported for Sardinia by Bertolini (1899–1904) and Sainte-Claire Deville (1908). It is easy to recognize by the small, rather short and flat shape with transverse pronotum and—in the male sex—by the long antennae fitted with long hairs on all segments. A rare species probably associated with oaks; it has been collected several times by passive breeding from oak branches and, mainly females, by flight interception traps (Liberti, unpublished data). In Sardinia and Sicily it seems to be less rare than elsewhere in Italy (Liberti, unpublished data).

Dasytes (*Hypodasytes*) *coerulescens* Küster, 1852

Dasytes coerulescens Küster, 1852: nr. 81 (Loc. typ. Sardinia); Kiesenwetter 1863: 633 [syn. of *D. algiricus* Lucas, 1846]; Schilsky1897a: nr.18, 34L; Sainte-Claire Deville 1908: 214; Porta 1929: 119; Pic 1937: 66; Fagniez 1946: 23; *Liberti 2004a: 292.

= *Dasytes sardous* Rosenhauer, 1856: 164 (Schilsky 1897b: nr. 18).

Material examined. Sassari prov.: *Alghero, 1995 (CAN, CML); Ardara, 1994 (CMG); Argentiera, 1974 (MCSNG); *Isola Asinara, 1988 (MCSNG); Lago Baratz, 1974 (MCSNG); Lago Bunnari, 1951 (MSNUF); Monte Pettenadu, 2001 (CPN); *Nulvi, 1974 (CFR); *Osilo, 1974 (CFR); *Ottava, 1964 (MCSNG); *Ozieri, 1976 (CPO); *Pattada, 1972 (CSA); *Platamona Lido, 1974 (CFR, CLI); Porto Conte, 1985 (MSNUF); *Sassari, 1974 (CFR, MSNUF); Stagno di Casaraccio, 1974 (MCSNG); *Stagno di Pilo, 1995 (CAN, CLI, MCSNG); *Stintino, 2004 (CFR, CRO); *Tissi, 1964 (MCSNG); Torre del Porticciolo, 2001 (CPN); *Tottubella, 1964 (MCSNG); *Tula, 1995 (CAN). Olbia-Tempio prov.: *Aglientu, 1995 (CAN); *Alà dei Sardi, 1976 (CPO); Arzachena, 1994 (CME); Bassacutena, 1993 (CME); *Cantoniera Pedredu, 2004 (CAN, CRO); Cantoniera Zuighe, 2005 (CLI); *Golfo Aranci, 1995 (CAN, MCSNG); Isola Rossa, 1995 (CPA); Lago del Coghinas, 1997 (CSL); Lido del Sole, 2005 (CLI); *Monte Limbara, 2004 (CAN, CCR, CSL); *Olbia, 1976 (CLI, CPO, MCSNG); *Oschiri, 1976 (CPO); *Padrogiano, 1995 (CAN); *San Teodoro, 1995 (CAN); *Telti, 1976 (CPO); *Tempio Pausania, 1995 (CAN, MCSNG). Nuoro prov.: *Aritzo, 1968 (MCSNG); *Bolotana, 1995 (CAN); Bruncu Spina, 2004 (CCR); *Cala Gonone, 1980 (CFR); Cantoniera di Sant'Anna, 2008 (CNBFVR); *Cantoniera Guzzurra, 1995 (CAN); *Catena del Marghine, 1936 (MCSNG); *Dorgali, 1980 (CFR, MCSNG); *Fonni, 1920 (MCSNG); Gadoni, 2008 (CNBFVR); *Galtellì, 1995 (CAN, CFR); *Lula, 2008 (CAN, CNBFVR); *Macomer, 1975 (CME, MCSNG); *Monte Albo, 1976 (CCR, CPO); *Monte Ortobene, 1985 (CCL, MCSNG); *Monti del Gennargentu, 1957 (MCSNM); *Nuoro, 1920 (MCSNG); Oliena, 1974 (MCSNG); *Oliena, San Giovanni, 1995 (CAN); *Orgosolo, 1995 (CAN); Orune, 1899 (MSNUF); *Ottana, 1995 (CAN); *Punta Cupetti, 1995 (CAN). Oristano prov.: *Asuni, y-? (MNHU), *Baratili San Pietro, 1987 (SMNS); *Bauladu, 1995 (CAN); Cabras, 2005 (CLI); *Laconi, 1995 (CAN); Oristano, 1914 (MSNUF); *Porto Mandriola, 1987 (SMNS); Putzu Idu, 1974 (MCSNG, MSNUF); *Riola Sardo, 1987 (MCSNG, SMNS); *Sedilo, 1995 (CAN); Soddi, 2003 (CPA); Stagno Sale Porcus, 2005 (CLI);

*Stagno di Cabras, 1995 (CAN, MSNUF); *Tadasuni, 1995 (CAN); Tharros, 2008 (CPA, CNBFVR). Ogliastra prov.: Monte Perda Liana, 2008 (CNBFVR); *Porto Santoru, 1936 (MCSNG); Villanova Strisaili, 1974 (CMO). Medio Campidano prov.: Giara di Gesturi, 2001 (CAN, CLI); *Cantoniera Bidderdi, 1995 (CAN); Capo Pecora, 2004 (CCR); Gonnosfanadiga, 2006 (CNBFVR); Marina di Arbus, 1974 (MCSNG); Monte Anzeddu, 2006 (CNBFVR); Montevecchio, 1974 (MCSNG, MSNUF); Porto Palma, 2003 (CPA); Sant'Antonio di Santadi, 2003 (CPA); *Torre dei Corsari, 1995 (CAN); *Villacidro, 2008 (CAN, CNBFVR). Carbonia-Iglesias prov.: Domusnovas, 2006 (CNBFVR); Fluminimaggiore, 2003 (CPA); *Fontanamare, 1995 (CAN); *Iglesias, 1995 (CAN, MSNUF); Monti Marganai, 2006 (CNBFVR); Nebida, 2001 (CFA); sa Duchessa, 2006 (CNBFVR); Sant'Antioco, 1869 (MSNUF); Sant'Antioco, sa Scrocca Manna, 1988 (MCSNG); Villaperuccio, 2004 (CCR). Cagliari prov.: *Cagliari, 1976 (CME, MCSNG , MSNUF); *Cantoniera Campu Omu, 1985 (CLI); Capoterra, 2000 (CFA); Chia, 2004 (CCR); *Elmas, 1975 (CME); *Foce del Flumendosa, 1995 (CAN); *Macchiareddu, 1985 (CLI); *Maracalagonis, 1975 (CME); Monte Arcosu, 2001 (CLI); *Monte dei Sette Fratelli, 1995 (CAN, MSNUF); Nurri, 2001 (CFA); *Olia Speciosa, 1985 (CLI); Pula, 2001 (CFA); *Quartu Sant'Elena, 1977 (CME); *Quirra, 1985 (CLI, MSNUF); Saline di Santa Gilla, 2001 (CFA); *Salto di Quirra, 1986 (CME); *San Gregorio, 1985 (CLI); *San Priamo, 1995 (CAN); *San Simone di Cagliari, 1936 (MCSNG); Sarrabus, 1880 (MCSNG); Serdiana, 2001 (CFA); Solèminis, 1983 (CFO); *Stagno di Molentargius, 1994 (CMG, MCSNG, MSNUF); Stagno di Quartu, 1974 (MCSNG); Stagno di Simbirizzi, 1983 (CFO); Teulada, y-? (MNHU); *Uta, 1989 (CLI, CME); Vallermosa, 2008 (CNBFVR); *Villaputzu, 1955 (CLI); *Villasimius, 1995 (CAN).

Chorotype. Central Mediterranean, present in the south of Corsica, Sardinia and North Africa (but not in Sicily) (Liberti 2004a: 292). Affinities: it is the Sardinian representative of a small group of species from North Africa, characterized by the robust tooth on the median male trochanter; the similar *D. metallicus* (Fabricius, 1792) is common in Sicily (Liberti 2004a: 291).

Notes. This species is immediatly recognizable (see also *D. aeneiventris* below) by its entirely black colour, rather large size and very transverse pronotum. Very common in spring all over the island, on flowers in meadows.

Dasytes (*Mesodasytes*) *aeneiventris* Küster, 1850

(Fig. 15)

Dasytes aeneiventris Küster, 1850: nr. 6 (Loc. typ. Italia); Kiesenwetter 1863: 640 footnote; Rottenberg 1870: 243; Kiesenwetter 1871: 83; Baudi di Selve 1873a: 310; Schilsky 1894a: 231, 232; Schilsky 1895: nr. 15; Schilsky 1897b: nr. 34S; Sainte-Claire Deville 1908: 216; Porta 1929: 121; Pic 1937: 62; Fagniez 1946: 20, 26; Horion 1953: 133; Kaszab 1955b: 114; Angelini 1991: 198; Constantin 1991: 404, 405; Sparacio 1997: 106; *Liberti 2004a: 315.

= *Dasytes roberti* Abeille de Perrin, 1907: xx (Liberti 2004a: 315).

Material examined. Sassari prov.: *Isola Asinara, 1988 (MCSNG); Monte Lerno, 1994 (CMG); *Nulvi, 1974 (CFR); *Osilo, 1974 (CFR); *Ozieri, 1976 (CPO); *Platamona Lido, 1974 (CFR); Sassari, y-a (MSNUF); *Stintino, 1874 (CFR); *Torralba, 1974 (MCSNV); *Tula, 1995 (CAN). Olbia-Tempio prov.: Bassacutena, 1993 (CME); Berchidda, 1991 (CFO); *Cantoniera Pedredu, 1995 (CAN); *Isola Caprera, 1993 (CME, MSNUF); *Monte Limbara, 1995 (CAN, CPA, MNHU); *Monti, 1991 (CFO, CPO); *Olbia, y-? (NMBA); *Padrogiano, 1995 (CAN); *Telti, 1976 (CPO); *Tempio Pausania, 1995 (CAN, NMBA). Nuoro prov.: *Arcu Guddetorgiu, 1995 (CAN); *Aritzo, 1994 (CME); Badde Salighes, 2003 (MCSNG); *Belvì, 1995 (CAN, CME); *Bolotana, 1995 (CAN); Bruncu Spina, 2004 (CCR, CLI, CMO, CPN); Cantoniera di Sant'Anna, 2008 (CNBFVR); *Cantoniera Ortuabis, 1994 (CME); *Desulo, 1995 (CAN); *Dorgali, 1991 (CFR, CME); *Fonni, 1995 (CLI, CME, MCSNG); *Gadoni, 1890 (MNHU); *Galtellì, 1980 (CFR); *Lago di Gusana, 1995 (CAN); *Macomer, 1974 (MCSNG, NMBA); *Mamoiada, 1976 (CPO); Monte Albo, 1997 (CME); *Monte Ortobene, 1985 (CCL, MCSNG, MCSNM); Monte Spada, 2003 (CLI); Monte d'Iscudu, 2003

(CLI); *Monti del Gennargentu, 1890 (MNHU); *Nuoro, 1980 (MCSNG); *Oliena, 1995 (CAN, MCSNG); *Oliena, San Giovanni, 1995 (CAN); *Orgosolo, 1995 (CAN); Ponte Guspene, 2008 (CNBFVR); *Sorgono, 1912 (MNHU); Stazione Ortuabis, 1995 (CME). Oristano prov.: Abbasanta, 1993 (CML); *Laconi, 1995 (CAN, CME); *Oristano, 1985 (MSNUF, NMBA); *Sedilo, 1995 (CAN); *San Leonardo de Siete Fuentes, 1983 (CLI). Ogliastra prov.:Monte Tonneri, 2008 (CNBFVR); *Seui, 2001 (CFA, NMBA). Medio Campidano prov.: *Arbus, 1995 (CAN); *Cantoniera Bidderdi, 1995 (CAN); *Giara di Gesturi, 1999 (CAN, CME); *Gonnosfanadiga, 1983 (CLI); Monte Anzeddu, 2006 (CNBFVR); *Monte Linas, 1995 (CME); *Villacidro, 1991 (CME). Carbonia-Iglesias prov.: Domusnovas, 2006 (CNBFVR); *Fluminimaggiore, 1995 (CME); *Iglesias, 2006 (CAN, CME, CNBFVR, MNHU); Monti Marganai, 2006 (CNBFVR); sa Duchessa, 2006 (CNBFVR); Villaperuccio, 2004 (CCR). Cagliari prov.: *Cagliari, Monte Urpino, 1978 (CME); *Cantoniera Campu Omu, 1998 (CLI, CME); *Monte dei Sette Fratelli, 1995 (CAN, CME, CMG); *Nurallao, 2001 (CFA, CME); Nurri, 2008 (CFA, CNBFVR); *Quirra, 1985 (CLI); Selargius, 1992 (CMG); Serri, 1998 (CME); Seulo, 2008 (CNBFVR); *Seuni, y-o (MNHU); Solèminis, 1983 (CFO).

Chorotype. A West-Mediterranean species also present, albeit rare, in Greece (Liberti 2004a).

Notes. Reported for Sardinia by Bertolini (1899–1904), Sainte-Claire Deville (1908) and Krausse (1913: 61), this species is easily recognizable by its entirely black colour (legs and antennae included), the shape of pronotum (slightly wider than long), and the evident sexual dimorphism (the other entirely black *Dasytes* living in Sardinia, *D. coerulescens*, is larger, has a strongly transverse pronotum and weaker sexual dimorphism). Very common in Sardinia.

Dasytes (*Mesodasytes*) *croceipes* Kiesenwetter, 1865

(Fig. 13)

Dasytes croceipes Kiesenwetter, 1865: 366 (Loc. typ. Spain); Kiesenwetter 1867a: 116; Baudi di Selve 1873a: 308, 309; Schilsky 1894a: 227, 228, 232, 233; Schilsky 1894b: nr. 41; Schilsky 1897b: nr. 34T; Sainte-Claire Deville 1908: 216; Porta 1929: 121; Pic 1937: 68; Fagniez 1946: 27; Kocher 1956: 65; *Liberti 2004a: 316.

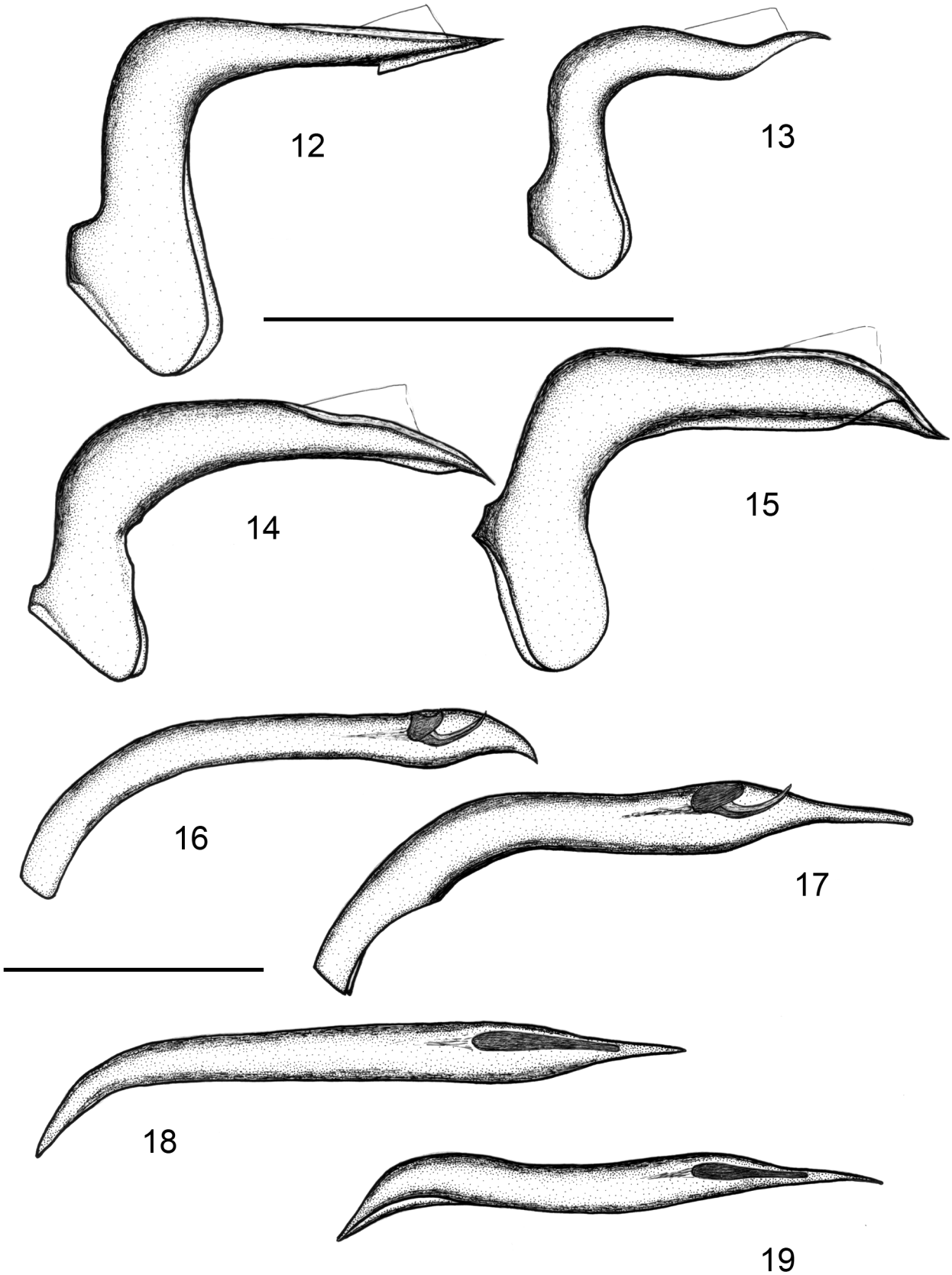
= *Dasytes cruralis* Mulsant & Rey, 1868: 132 (Schilsky 1894a: 228).

= *Dasytes croceipes* var. *corsicus* Schilsky, 1894b: 228 (Liberti 2004a: 317).

Material examined. Olbia-Tempio prov.: Lido del Sole, 2005 (CLI). Nuoro prov.: *Oliena, 1995 (CAN); *Ponte Marreri, 1983 (MCSNG); *Posada, 1983 (MCSNG). Ogliastra prov.: Monte Tonneri, 2008 (CNBFVR). Medio Campidano prov.: Giara di Gesturi, 2001 (CPN); Monte Anzeddu, 2006 (CNBFVR); Villacidro, 2006 (CNBFVR). Carbonia-Iglesias prov.: Monti Marganai, 2006 (CNBFVR); Nebida, 2001 (CLI); sa Duchessa, 2006 (CNBFVR). Cagliari prov.: *Cantoniera Campu Omu, 1998 (CME); *Monte dei Sette Fratelli, 1995 (CAN); Solanas, 2004 (CCR); *Villasimius, 1995 (CAN).

Chorotype. West-Mediterranean: North Africa, Spain, southern France and marginally mainland Italy (western Liguria). Affinities: Mediterranean, close to *D.* (*M.*) *iteratus*, which probably has the same distribution area, and *D.* (*M.*) *nigroaeneus*, which is Mediterranean.

Notes. Reported for Sardinia by Kiesenwetter (1871: 84, as *D. cruralis*), Bertolini (1899–1904) and Sainte-Claire Deville (1908), it is easily recognized by the colour of femora: all black with a large yellow base, although this same character is shared by the similar *D.* (*M.*) *iteratus* Peyerimhoff (see below). Although *D. iteratus* has a later appearance, they can often be found together and their indentification usually requires the dissection of male genitalia. As a matter of fact, Sardinian populations of both species look very alike, whereas in other regions (e.g. in southern France) they appear more differentiated, *D. croceipes* often having smaller eyes, shorter antennae, more rounded sides of pronotum and a slightly smaller size (all characters which can be better detected in males). It appears in early spring and can be found on blossoming bushes of, for instance, *Crataegus*, *Prunus*, and *Erica*.



FIGURES 12–19. Median lobe in lateral view. **12–15.** *Dasytes* spp., scale bar: 0.5 mm. **12.** *Dasytes* (*Mesodasytes*) *iteratus* Peyerimhoff (Sardinia, Nebida). **13.** *Dasytes* (*M.*) *croceipes* Kiesenwetter (Sardinia, Lido del Sole). **14.** *Dasytes* (*M.*) *nigroaeneus* Küster (Italy, Campania, Napoli province, Campagnano d'Ischia). **15.** *Dasytes* (*M.*) *aeneiventris* Küster (Sardinia, Fonni). **16–19.** *Aplocnemus* spp. from Sardinia, scale bar: 0.5 mm. **16.** *Aplocnemus* (*Aplocnemus*) *cribricollis* Mulsant & Rey (Burcei). **17.** *Aplocnemus* (*A.*) *pectinatus* (Küster) (Stagno di Colostrai). **18.** *Aplocnemus* (*Diplambe*) *januaventi* Liberti (Bruncu Spina). **19.** *Aplocnemus* (*D.*) *duplicatus* Kiesenwetter (Seui).

***Dasytes* (*Mesodasytes*) *iteratus* Peyerimhoff, 1925**
(Fig. 12)

Dasytes iteratus Peyerimhoff, 1925: 5 (Loc. typ. Massif de Mozuaïa, Algeria); Pic 1937: 73; *Liberti 2004a: 317; Constantin 2007: 166.

Material examined. Sassari prov.: *Lago Baratz, 1995 (CAN); Monte Pettenadu, 2001 (CPN); Osilo, 1974 (CFR); Ponte di Caitta, 2001 (CPN). Olbia-Tempio prov.: *Olbia, 1976 (CPO); *San Teodoro, 1976 (CPO). Nuoro prov.: *Aritzo, 1994 (CME); *Cala Gonone, 1980 (CFR); *Dorgali, 1992 (CLI, CME); *Macomer, 1975 (CME). Oristano prov.: *Allai, 1981 (NMBA); *San Leonardo de Siete Fuentes, 1983 (CLI). Medio Campidano prov.: *Gonnosfanadiga, 1983 (CLI); Montevecchio, 1974 (MCSNG); *Sant'Antonio di Santadi, 2003 (CAN, CPA). Carbonia-Iglesias prov.: Fluminimaggiore, 2003 (CPA); *Iglesias, 2000 (CME); Monti Marganai, 2006 (CNBFVR); Nebida, 2001 (CLI). Cagliari prov.: *Cantoniera Campu Omu, 1985 (CLI); *Capoterra, 1985 (CME); *Chia, 1975 (CME); *Dolianova, 1993 (CME); *Esterzili, 1994 (CME); *Maracalagonis, 1993 (CME); *Monte dei Sette Fratelli, 1995 (CME); *Pula, 1992 (CME); *Quartu Sant'Elena, 1986 (CME); *Quirra, 1985 (CLI); *San Gregorio, 1985 (CLI); *Uta, 1998 (CME); *Villasimius, 1995 (CAN).

Chorotype. West-Mediterranean. Affinities: Mediterranean, close to *D.* (*A.*) *croceipes*, which probably has the same distribution area, and *D.* (*A.*) *nigroaeneus*, which is Mediterranean.

Notes. Reported by Liberti (2004a) for Sardinia, where it is rather frequent and appears from late spring to early summer, usually later than the very similar *D.* (*A.*) *croceipes* (see above).

***Dasytes* (*Mesodasytes*) *nigroaeneus* Küster, 1850**
(Fig. 14)

Dasytes nigroaeneus Küster, 1850: nr. 7 (Loc. typ. Taranto, Italy); Kiesenwetter 1863: 639 footnote; Kiesenwetter 1867a: 117; Baudi di Selve 1873a: 309; Schilsky 1894a: 227, 231; Schilsky 1895: nr. 14; Schilsky 1897b: nr. 34S; Sainte-Claire Deville 1908: 216; Fiori 1912: 132; Porta 1929: 121; Pic 1937: 77; Fagniez 1946: 26; Horion 1953: 133; Kocher 1956: 64; Liberti 1995b: 500; Sparacio 1997: 106; *Liberti 2004a: 318.
= *Dasytes tibiellus* Mulsant & Rey, 1868: 126 (Pic 1937: 78; Liberti 2004a: 318).

Material examined. Sassari prov.: *Isola Asinara, 1988 (MCSNG); *Osilo, 1974 (CFR); Ponte di Caitta, 2001 (CPN); Sassari, y-a (MSNUF); *Stintino, 2004 (CFR, CRO); Torre del Porticciolo, 2001 (CPN). Olbia-Tempio prov.: *Aglientu, 1995 (CAN); *Golfo Aranci, 1995 (CAN, MCSNG, MNHU); Isola Caprera, 1993 (CME); *Isola Maddalena, 1993 (CME, MCSNG); *Lago del Liscia, 1968 (MCSNG); Lido del Sole, 2005 (CLI); *Olbia, 1933 (NMBA); *Padrogiano, 1995 (CAN). Nuoro prov.: *Cala Gonone, 1980 (CFR, MCSNG); Cantoniera Ortuabis, 1998 (CME); *Dorgali, y-? (NMBA); *Lodè, 1978 (MCSNG); *Mamoiada, 1976 (CPO); Siniscola, 1979 (MSNUF). Oristano prov.: Laconi, 1998 (CME); Monte Ferru, 1999 (MCSNG); Oristano, 1982 (CML, MCSNG); *Stagno di Santa Giusta, 1995 (CAN); Tharros, 2008 (CNBFVR). Ogliastra prov.: *Capo Sferracavallo, 1992 (CME); *Lotzorai, 1978 (CME). Medio Campidano prov.: *Gonnosfanadiga, 1983 (CLI); *Montevecchio, 1990 (CME); *Torre dei Corsari, 1995 (CAN). Carbonia-Iglesias prov.: Carloforte, 1989 (CME, MCSNG); *Gonnesa, 1985 (CME); *Isola Piana di San Pietro, 1956 (MCSNG); *Isola di San Pietro, 1988 (CME, MCSNG); Monti Marganai, 2005 (CNBFVR); Sant'Anna Arresi, 2004 (CCR). Cagliari prov.: *Cagliari, 1989 (CME, MCSNG, MNHU, NMBA); Capo Carbonara, 1998 (CME); Castiadas, 2004 (CCR); Chia, 2004 (CCR); *Flumini, y-? (NMBA); *Giorgino, 1976 (CME); Monte Sant'Elia, 1997 (CME); *Quartu Sant'Elena, 1986 (CME, MNHU); Sant' Isidoro near Cagliari, 1996 (CME); *Stagno di Chia, 1977 (CME); *Stagno di Colostrai, 1985 (CLI); *Stagno di Simbirizzi, 1975 (CME); Uta, 1998 (CME); *Villasimius, 1995 (CAN).

Chorotype. Mediterranean: from the east coast of the Black Sea to Portugal (Liberti 2004a). In Italy it can be found along the Tyrrhenian coast from Liguria to Sicily and in several of the neighbouring Tyrrhenian

islands (Liberti 2004a). Affinities: rather close to *D.* (*M.*) *iteratus* and *D.* (*M.*) *croceipes*, which have a smaller range.

Notes. Reported by Schilsky (1895), Bertolini (1899–1904) and Sainte-Claire Deville (1908) for Sardinia, where it is uncommon and is usually collected in just a few specimens. It can be easily differentiated from the other *Mesodasytes* by the colour of legs and antennae.

Dasytes (subg.?) *doderoi* Pic, 1924

Dasytes doderoi Pic, 1924b: 80 (Loc. typ. Gennargentu, Sardinia); Porta 1929: 122; Pic 1937: 69; *Liberti 2004a: 281.

Material examined. Nuoro prov.: *Gennargentu: "Mte Gennargentu, VII.1911, [leg.] A. Dodero", holotype ♀ (MCSNG); "Gennargentu, VI.1957, [leg.] Dr. Ed. Moltoni", 1 ♀ (MCSNM).
Chorotype. Probably strictly Sardinian. Affinities unknown.
Notes. A little-known, very rare species: only two females (one being the holotype) from the Gennargentu massif (no more precise indications), rather old, have been examined by the author. The male of this species is unknown, so it cannot be assigned to a subgenus.

Divales cinctus (Gené, 1839)

Dasytes cinctus Gené, 1839: 17, pl. II, fig. 4 (Loc. typ. "alla Scafa prope Karales", Sardinia); Küster 1849: nr. 22 [*Dasytes*]; Kiesenwetter 1863: 630 footnote [*Dasytes*]; Kiesenwetter 1871: 83 [*Dasytes*]; Baudi di Selve 1873a: 309 [*Dasytes*]; Schilsky 1897b: nr. 3 ; Porta 1929: 116; Pic 1937: 57; Fagniez 1946: 21; Majer 1984: 287.
= *Dasytes communimacula* Costa, 1847b: 142 (Majer 1984: 287); Kiesenwetter 1863: 630 [*Dasytes*]; Kiesenwetter 1871: 82 [*Dasytes*]; Schilsky 1894a: 229; Schilsky 1894b: nr. 16; Holdhaus 1923: 96; Porta 1929: 117; Pic 1937: 58; Sparacio 1997: 105.
= *Dasytes lateralis* Küster, 1849: nr. 22 (Pic 1937: 57).
= *Dasytes tibialis* Mulsant & Revelière, 1861: 10 (Majer 1984: 287); Mulsant & Rey 1868: 67; Kiesenwetter 1871: 83 [*Dasytes*]; Baudi di Selve 1873a: 309 [*Dasytes*]; Porta 1929: 117; Pic 1937: 60; Majer 1984: 287.
= *Dasytes flavipennis* Baudi di Selve, 1873: 296 (Majer 1984: 287); Schilsky1897a: Nr 34V; Porta 1929: 117; Pic 1937: 58 [possible syn. of *Dasytes flavescens*].
= *Dasytes reyanus* Gozis, 1881: cxxxv (Schilsky1894b: nr. 15: = *tibialis* Mulsant & Revelière, 1861); Pic 1937: 60; Fagniez 1946: 19, 22 [good species].
= *Divales bipustulatus* var. *ater* Schilsky, 1888: 189 (Schilsky 1894b: nr. 16: syn. of *Divales communimacula* Costa, 1847b).
= *Divales reyanus* var. *conjunctus* Schilsky, 1894b: 15 (Majer 1984: 287).
= *Divales reyanus* var. *notaticollis* Schilsky, 1894b: 15 (Majer 1984: 287).
= *Divales cinctus* var. *affinis* Schilsky, 1897b: 3 (Majer 1984: 287).
= *Divales cinctus* var. *apicatus* Schilsky, 1897b: 3 (Majer 1984: 287).
= *Divales cinctus* var. *atratulus* Schilsky, 1897b: 3 (Majer 1984: 287).
= *Divales cinctus* var. *discedens* Schilsky, 1897b: 3 (Majer 1984: 287).
= *Divales cinctus* var. *ephippiatus* Schilsky, 1897b: 3 (Majer 1984: 287).
= *Divales cinctus* var. *quadrinotatus* Schilsky, 1897b: 3 (Majer 1984: 287).
= *Divales communimacula* var. *gemellatus* Schilsky, 1897b: 34 (Majer 1984: 287).

Material examined. Sassari prov.: Alghero, 1983 (CLI); Ponte di Caitta, 2001 (CLI); Sassari, y-a (MSNUF); Stagno di Pilo, 1995 (CAN); Torre del Porticciolo, 2001 (CPN). Olbia-Tempio prov.: Bassacutena, 1993 (CME); Capo Testa, 2003 (CLI); Golfo Aranci, 1995 (CAN); Isola Tavolara, 1994 (MCSNG); Palau, 1990 (CME); San Teodoro, 1995 (CAN); Trinità d'Agultu, 1972 (MCSNG). Nuoro prov.: Bruncu Spina, 2003 (CLI); Dorgali, 1991 (CME, MCSNG); Monte Albo, 2004 (CCR); Monte Spada, 2003 (CLI); Monte d'Iscudu, 2003 (CLI); Nuoro, 1920 (MCSNG); Oliena, 1995 (CAN); Punta Cupetti, 1995 (CAN); Santa Maria di Mare,

1983 (MCSNG). Oristano prov.: Arborea, 2002 (CFA); Bauladu, 1995 (CAN); Foce Fiume Tirso, 1995 (CAN, CME); Porto Mandriola, 1987 (SMNS); Mari Ermi, 1990 (CMG); Stagno di Santa Giusta, 1995 (CAN); San Leonardo de Siete Fuentes, 1983 (CLI); Tharros, 2008 (CNBFVR). Medio Campidano prov.: Gonnosfanadiga, 2006 (CLI, CNBFVR); Marina di Arbus, 2006 (CNBFVR); Monte Linas, 1995 (CME). Carbonia-Iglesias prov.: Domusnovas, 2006 (CME, CNBFVR); Gonnesa, 1985 (CME); Iglesias, 2006 (CNBFVR); Isola di San Pietro, 2000 (CNBFVR); Isola Piana di San Pietro, 1959 (MCSNG). Cagliari prov.: Assemini, 1989 (CME); Elmas, 1983 (CCA); Geremeas, 1976 (CME); Nurri, 1983 (CLI); Serri, 2002 (CFA); Stazione di Sarcidano, 1994 (CME); Teulada, 1998 (CCA); Uta, 1995 (CME).

Chorotype. Tyrrhenian, rather widespread in the Italian peninsula. Affinities unknown.

Notes. A species which is very variable in colour, from completely black to largely orange-red, usually black with two (humeral and apical) more or less visible red spots on each elytron; femora black and tibiae usually reddish. Common or very common throughout its range; as normally in the Dasytinae, adults appear in spring and feed on pollen. Reported from Sardinia by Majer (1984: 289) as follows: "Sardinia" (MNHU), "Cagliari, U. Lostia" (MNHU).

***Dolichosoma lineare* (Rossi, 1794)**
(Fig. 21)

Lagria linearis Rossi, 1794: 92 (Loc. typ. Tuscany); Stephens 1830: 320; Redtenbacher 1858: 547; Kiesenwetter 1863: 642; Thomson 1864: 146; Kiesenwetter 1867a: 119; Kiesenwetter 1867b: 137; Mulsant & Rey 1868: 269, pl. XVI; Seidlitz 1891a: 489; Seidlitz 1891b: 522; Schilsky 1897b: nr. 26; Reitter 1911: 289; Pic 1918: 2; Pic 1924a: 57, 83; Porta 1929: 123; Pic 1937: 106; Horion 1953: 140; Kaszab 1955a: 118; Kaszab 1955b: 118, figs 40 F, 42; Allenspach & Wittmer 1979: 110; Lohse 1979: 80; Majer 1990: 97; Constantin & Klausnitzer 1996: 196; Sparacio 1997: 106; Bahillo de la Puebla & Lopez-Colon 2002: 145; Liberti & Focarile 2005: 29, 35; Mayor 2007b: 407.
= *Tillus filiformis* Panzer, 1799: 17 (Illiger 1801: 84).
= *Dolichosoma filum* Fairmaire, 1860: 630 (Constantin 2007: 167).
= *Dolichosoma subdensatum* Mulsant & Rey, 1868: 273 (Schilsky 1897b: nr. 26)
= *Dolichosoma submicaceum* Mulsant & Rey, 1868: 274 (Schilsky 1897b: nr. 26).
= *Dolichosoma subnodosum* Mulsant & Rey, 1868: 274 (Schilsky 1897b: nr. 26).

Material examined. Sassari prov.: Nulvi, 1974 (CFR); Osilo, 1974 (CFR); Tula, 1995 (CAN). Olbia-Tempio prov.: Padrogiano, 1995 (CAN); Tempio Pausania, 1995 (CAN). Nuoro prov.: Oliena, San Giovanni, 1995 (CAN). Oristano prov.: Asuni, y-? (MNHU); Sedilo, 1995 (CAN); Soddi, 2003 (CPA). Cagliari prov.: Stazione di Sarcidano, 1994 (CME); Villanovatulo, 1994 (CME).

Chorotype. Probably Sibero-European: from Finland to Spain and eastwards at least to central Siberia (Mayor 2007b); in Italy it mainly occurs in the north and in the centre down to Latium (Liberti unpublished data). Affinities: the genus *Dolichosoma* is Euro-Asiatic.

Notes. Members of *Dolichosoma* are immediately recognizable by their surprisingly thin and long shape; *D. lineare* can be distinguished from the closely related *D. simile* by good and reliable characters (see key above). *Dolichosoma* species are associated with graminaceous weeds and can be collected by sweeping on dry meadows. *Dolichosoma lineare* was already reported for Sardinia by Costa (1883), Bertolini (1899–1904) and Sainte-Claire Deville (1908: 217) under the name *D. filum*. Often common or very common elsewhere, it appears to be rather rare in Sardinia.

***Dolichosoma simile* (Brullé, 1832)**
(Figs 20, 30)

Dasytes similis Brullé, 1832: 154 (Loc. typ. Greece); Kiesenwetter 1859: 177; Kiesenwetter 1863: 643 footnote; Kiesenwetter 1867b: 137; Baudi di Selve 1873a: 318; Schilsky 1894b: nr. 51; Ragusa 1896: 77; Porta 1929:

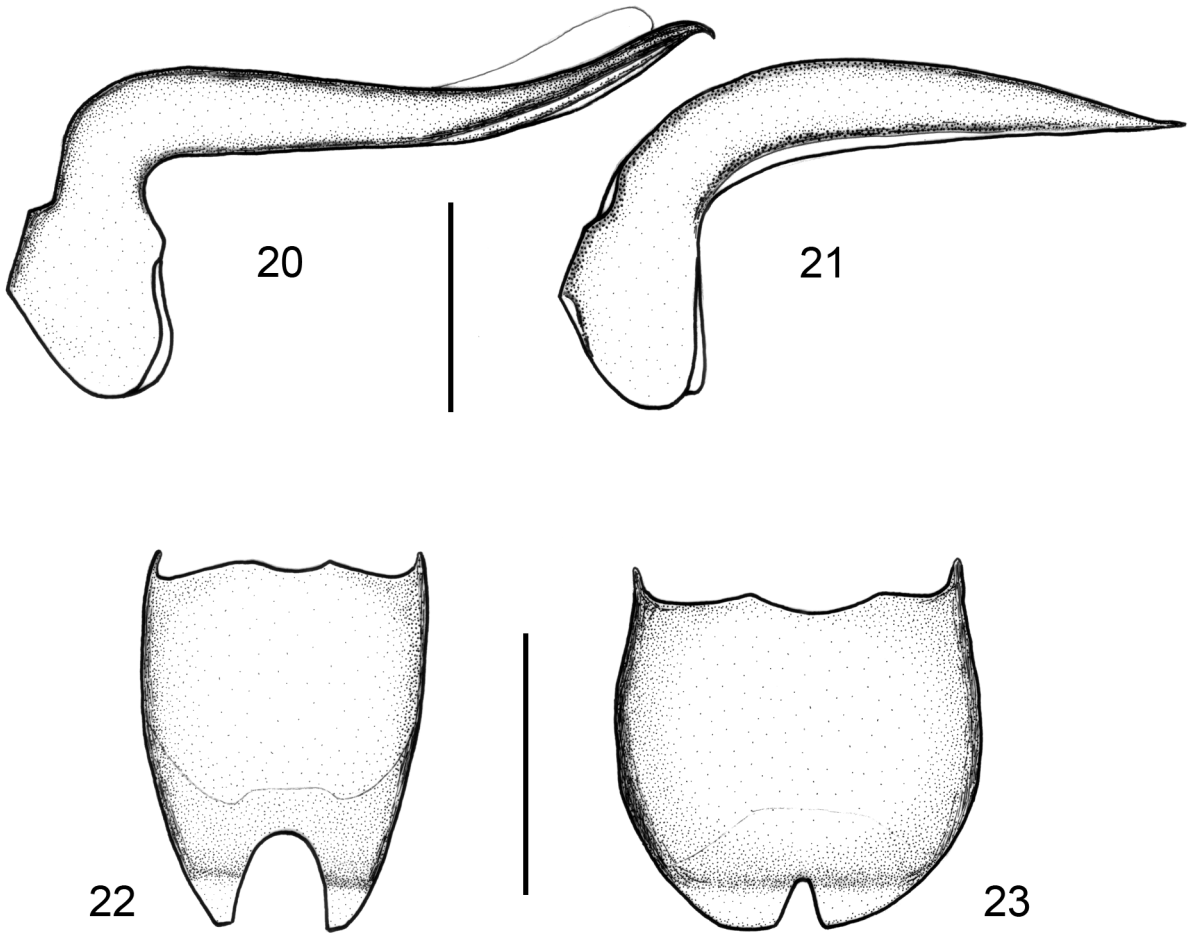
124; Pic 1937: 107; Gridelli 1950: 132; Kaszab 1955a: 118; Kaszab 1955b: 118, fig. 40 G; Tempère 1974: 227; Liberti 1988: 12; Lohse 1992: 22; Sparacio 1997: 106, fig. 122.

= *Dasytes cinereum* Ménétries, 1832: 165 (Kiesenwetter 1859: 177).

Material examined. Sassari prov.: Alghero, 1974 (MCSNG, MCSNV); Codrongianos, 2003 (MCSNG); Lago Baratz, 1999 (MCSNG); Porto Conte, 1985 (MSNUF); Stagno di Pilo, 1995 (CAN, CLI, MCSNG); Viddalba, 1995 (CAN). Oristano prov.: Foce Fiume Tirso, 1991 (CME); Stagno di Cabras, 1995 (CAN). Medio Campidano prov.: Cantoniera Bidderdi, 1995 (CAN); Giara di Gesturi, 1999 (CME); Marina di Arbus, 2006 (CNBFVR, MCSNG); Montevecchio, 1990 (CME); Porto Palma, 2003 (CPA); Sant'Antonio di Santadi, 2003 (CPA); Torre dei Corsari, 2003 (CPA). Carbonia-Iglesias prov.: Fontanamare, 1995 (CAN); Gonnesa, 1990 (CME); Iglesias, 1999 (CME); Monti Marganai, 2006 (CNBFVR); Villamassargia, 1998 (CME). Cagliari prov.: Isili, 2000 (CFA); Monte Coa Margine, 1994 (CME); Pula, 2001 (CFA, CLI); Quirra, 1992 (CME); San Priamo, 1994 (CAN); Villanovatulo, 1994 (CME).

Chorotype. East-Mediterranean; it replaces *D. lineare* in south-eastern Europe and Turkey (Mayor 2007b). In the Balkan Peninsula the two species have been sometimes found together (Croatia, northern Greece) (Liberti unpublished). Common in central and southern Italy, present in Sicily (probably not in North Africa). Sardinia appears to be the western limit of its distribution area.

Notes. Very similar species to *D. lineare*, from which it can be easily distinguished by the rounded elytral apex (not sharp as in *D. lineare*). Rather common and widespread in Sardinia and already reported for the island by Bertolini (1899–1904) and Porta (1929). Recorded from Nuoro (MCSNG, in Mancini collection, det. Pic) by Gridelli (1950).



FIGURES 20–23. 20–21. Median lobes in lateral view, scale bar: 0.25 mm. **20.** *Dolichosoma simile* (Brullé) (Italy, Tuscany, Grosseto province, Talamone). **21.** *Dolichosoma lineare* (Rossi) (Sardinia, Padrogiano). **22–23.** Pygidium, scale bar: 0.5 mm. **22.** *Psilothrix aureola* (Kiesenwetter, 1859) (Malta, Gozo Island). **23.** *Psilothrix viridicoerulea* (Italy, Liguria, La Spezia province, Montemarcello).

***Psilothrix aureola* (Kiesenwetter, 1859)**
(Figs 22, 27)

Dolichosoma (*Psilothrix*) *aureolum* Kiesenwetter, 1859: 178 (Loc. typ. central Italy); Kiesenwetter 1863: 644 footnote; Kiesenwetter 1867b: 139 [syn. of *Dasytes smaragdinum* Lucas, 1847]; Schilsky 1894a: 230, 236 [good species]; Schilsky 1894b: nr. 50; Ragusa 1896: 76; Porta 1929: 123; Pic 1937: 108 [*Lasius*]; Tempère 1974: 226; Liberti 1995b: 501; Sparacio 1997: 106, fig. 37.
= *Dolichosoma splendidum* Schaufuss, 1867: 81 (Schilsky 1894a: 236).

Material examined. Sassari prov.: Codaruina, 1995 (CAN); Isola Asinara, 1988 (MCSNG); Isola Piana dell'Asinara, 1989 (MCSNG); Porto Torres, 1974 (CMO); Sassari, 1962 (MCSNG, MSNUF); Stagno di Casaraccio, 1985 (MSNUF); Stagno di Pilo, 1995 (CAN, CLI, MCSNG); Stintino, 1974 (CFR, MCSNG). Olbia-Tempio prov.: Santa Teresa di Gallura, 1975 (MCSNG). Oristano prov.: Stagno di Cabras, 1974 (MCSNG).

Chorotype. Mediterranean: mainly eastern, from the Balearic islands to the south of Greece (but probably reaching further east), Tunisia, Algeria (*cf.* Mayor 2007b). In Italy it is common or very common from Emilia to Sicily (Liberti 2007c). Affinities: the genus *Psilothrix* has a wide distribution (*cf.* Mayor 2007b).

Notes. Species characterized by its bright green colour, rather small size and the shape of the male pygidium (Fig. 22). The taxonomy of this species may be slightly modified in the future to take into account the existence of both winged and wingless forms. Recorded for Sardinia by Bertolini (1899–1904, as *P. melanostoma* and *P. smaragdinus*). Although often very common within its distribution area, it is not so in Sardinia where a wingless form has only been found in the north-west (Fig. 27).

***Psilothrix protensa* (Gené, 1836)**
(Fig. 27)

Dasytes protensus Gené, 1836: 19, pl. I, fig. 10 (Loc. typ. “Karali, Pulae, Iglesias, etc.”, south-west Sardinia); Küster 1850: nr. 9; Redtenbacher 1858: 546; Kiesenwetter 1859: 177; Kiesenwetter 1863: 644 footnote; Kiesenwetter 1867b: 137, 139; Rottenberg 1870: 243; Schilsky 1894a: 235; Ragusa 1896: 76; Porta 1929: 122; Pic 1937: 109 [*Lasius*]; Sparacio 1997: 106.

Material examined. Carbonia-Iglesias prov.: Isola di Sant'Antioco, 1989 (MCSNG); Isola di Sant’Antioco, Capo Sperone, 1978 (CLI). Cagliari prov.: Cagliari, y-a (MSNUF); Cagliari, Monte Urpino, 1975 (CME); Elmas, 1991 (CMG); Saline di Santa Gilla, 2001 (CLI); Serdiana, 2001 (CFA, CLI); Sestu, 1975 (CME); Stagno di Molentargius, y-? (MSNUF); Stagno di Simbirizzi, 1986 (CME); Villaspeciosa, 1979 (CME).

Chorotype. Central Mediterranean: Sicily, Corsica and Sardinia, Tunisia, Algeria (Mayor, 2007b). Affinities: see *P. aureola*.

Notes. A wingless species, bright green as the other *Psilothrix*, rather small and showing the modifications often associated with apterism: elytra without humeral calli and, in females only, widened in posterior half. Not uncommon in Sardinia but only in the south (Fig. 27); also known from Corsica (Mayor 2007b), where it is rare.

***Psilothrix viridicoerulea* (Geoffroy, 1785)**
(Fig. 23)

Cicindela viridi-coerulea Geoffroy, 1785: 63 (Loc. typ. Paris); Rottenberg 1870: 243 [*Dolichosoma*]; Sainte-Claire Deville 1908: 217; Porta 1929: 123; Pic 1937: 110 [*Lasius*]; Kocher 1956: 66; Fiori 1963: 283; Fiori 1971: 3; Allenspach & Wittmer 1979: 110; Liberti 1988: 12; Majer 1990: 97; Constantin 1991: 404; Lohse 1992: 22; Constantin & Klaunitzer 1996: 196; Liberti & Focarile 2005: 29, 35.

= *Melyris cyaneus* Olivier, 1790: 21 (Sainte-Claire Deville 1908: 217); Seidlitz 1891a: 489; Seidlitz 1891b: 522; Schilsky 1894a: 235; Schilsky 1894b: nr. 46; Ragusa 1896: 76; Pic 1908: 46; Reitter 1911: 286; Pic 1918: 3; Holdhaus 1923: 96; Pic 1924a: 58, 84; Porta 1929: 123; Pic 1937: 110; Horion 1953: 138; Kaszab 1955a: 116; Kaszab 1955b: 116, fig. 40 P; Piras *et al*. 1970: 85, 90; Piras & Pisano 1972: 17, 25; Allenspach & Wittmer 1979: 110; Lohse 1979: 80.

= *Lagria viridis* Rossi, 1792: 35 (Kiesenwetter 1863: 644: syn. of *nobilis* Ill.); Stephens 1830: 319 [*Dasytes*]; Stephens 1839: 196 [*Dasytes*]; Pope 1977: 55.

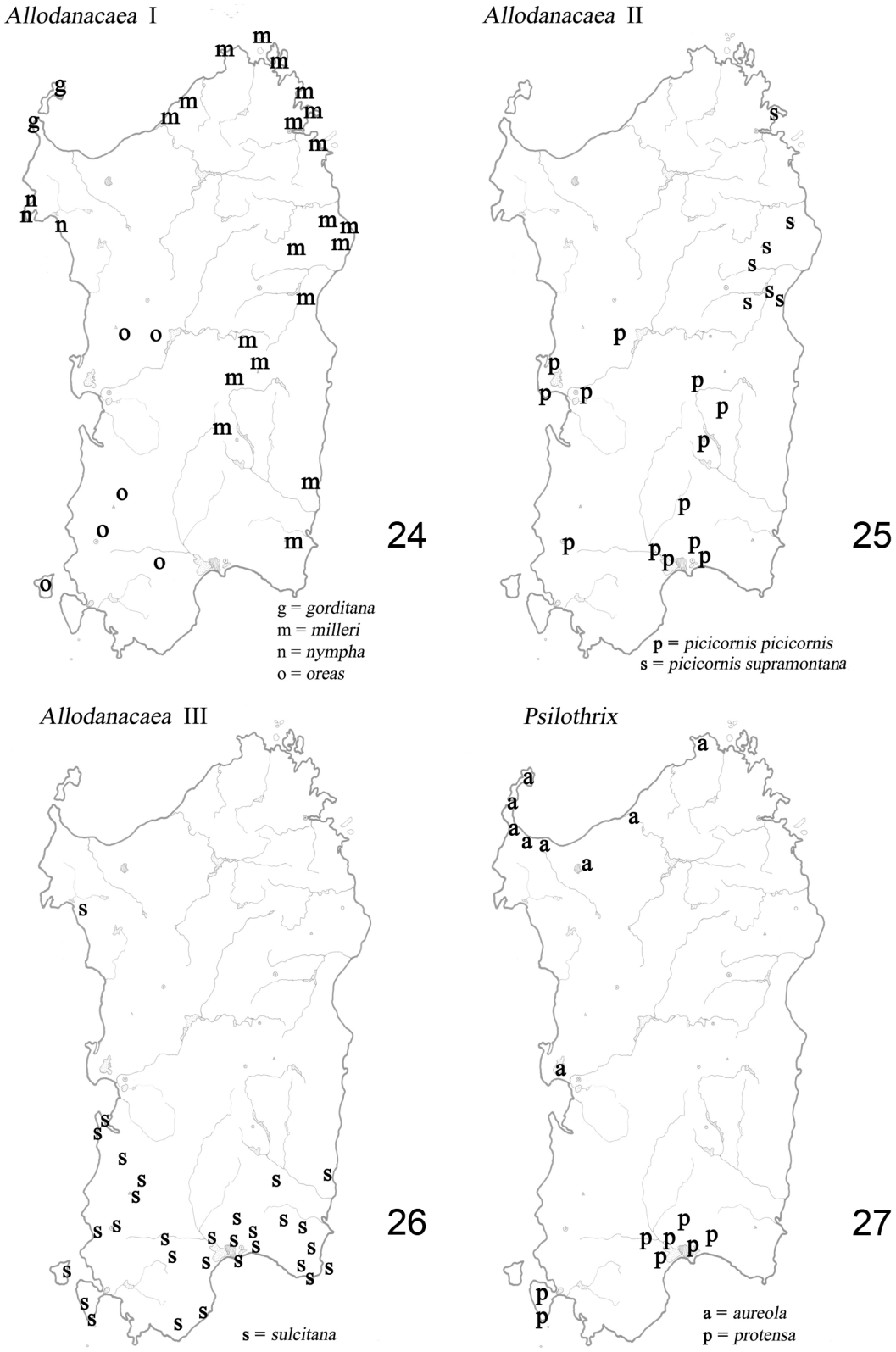
= *Melyris nobilis* Illiger, 1798: 308 (Reiche 1863: 132); Brullé 1832: 150 [*Dasytes*]; Laporte de Castelnau 1840: 281 [*Dasytes*]; Lucas 1846: 195 [*Dasytes*]; Kiesenwetter 1859: 178; Kiesenwetter 1863: 644; Kiesenwetter 1867a: 119 [*Dolichosoma*]; Mulsant & Rey 1868: 177, pl. X; Baudi di Selve 1873b: 249; Pic 1937: 110; Crowson 1964: 320; Allenspach & Wittmer 1979: 110.

= *Tillus aeneus* Marsham, 1802: 230 (Kiesenwetter 1863: 645).

= *Dasytes caeruleus* De Geer *sensu* Stephens 1830: 319 (Pope 1977: 55).

Material examined. Sassari prov.: Alghero, 1979 (CME, CML); Argentiera, 2003 (CLI, MCSNG); Chilivani, 1975 (CME, MCSNG); Codaruina, 1995 (CAN); Foce Fiume Coghinas, 1981 (CFO); Isola Asinara, 1988 (MCSNG); Lago Baratz, 1995 (CAN); Lago Bunnari, 1961 (MCSNG); Nulvi, 1974 (CFR); Olmedo, 1962 (MCSNG); Osilo, 1974 (CFR); Platamona Lido, 1974 (CFR, CLI); Porto Conte, 1985 (CFR, MSNUF); Porto Torres, 1974 (CLI); Sassari, 1974 (CFR, MCSNG); Sorso, 1956 (MCSNG); Stagno di Casaraccio, 1974 (MCSNG); Stagno di Pilo, 1995 (CAN, CLI, MCSNG); Stintino, 1996 (CFR, CMO); Torre del Porticciolo, 2001 (CLI); Tula, 1995 (CAN); Viddalba, 1995 (CAN). Olbia-Tempio prov.: Alà dei Sardi, 1997 (CSL); Bassacutena, 1993 (CME); Berchidda, 1991 (CFO); Golfo Aranci, 1995 (CAN); Isola Caprera, 1991 (CME, MSNUF); Isola Maddalena, 1987 (MCSNG); Isola Molara, 1989 (MCSNG); Isola Rossa, 1995 (CPA); Lago del Coghinas, 1997 (CSL); Monte Limbara, 1995 (CAN, CMG, CPA); Monti, 1991 (CFO); Mulino di Arzachena, 1995 (CAN); Oschiri, 1995 (CAN); Padrogiano, 1995 (CAN); Palau, 1943 (CLI, MCSNG); Santa Teresa di Gallura, 1975 (MCSNG); San Teodoro, 1995 (CAN); Tempio Pausania, 1995 (CAN). Nuoro prov.: Bolotana, 1995 (CAN); Bruncu Spina, 2004 (CAN, CCR); Cantoniera di Sant'Anna, 2008 (CNBFVR); Cantoniera Donnacori, 1980 (CFR); Cantoniera Guzzurra, 1995 (CAN); Dorgali, 1980 (CFR); Gadoni, 2008 (CNBFVR); Galtellì, 1995 (CAN, CFR); Lago di Gusana, 1995 (CAN); Lula, 2008 (CAN, CNBFVR); Macomer, 1961 (MCSNG); Monte Ortobene, 1985 (CCL); Monte Spada, 2003 (CLI); Nuoro, 1928 (MCSNG); Oliena, 1995 (CAN); Oliena, San Giovanni, 1995 (CAN); Orune, 1899 (MSNUF); Pratobello, 1995 (CAN); Punta Corrasi, 1981 (MSNUF); Punta Cupetti, 1995 (CAN); Siniscola, 1979 (MSNUF). Oristano prov.: Badde Urbara, 1987 (SMNS); Bauladu, 1995 (CAN); Laconi, 1995 (CAN); Lago Omodeo, 1979 (CML); Riola Sardo, 1987 (SMNS); San Giovanni Sinis, 1974 (MCSNG); San Leonardo de Siete Fuentes, 1983 (CLI); Stagno di Cabras, 1995 (CAN); Stagno di Marceddì, 2006 (CNBFVR); Stagno di Santa Giusta, 1995 (CAN); Soddi, 2003 (CPA); Tharros, 2008 (CNBFVR). Medio Campidano prov.: Arbus, 1995 (CAN); Cantoniera Bidderdi, 1995 (CAN); Gonnosfanadiga, 2006 (CMG, CNBFVR); Monte Anzeddu, 2006 (CNBFVR); Montevecchio, 2003 (CPA); Pabillonis, 1995 (CAN); Porto Palma, 2003 (CPA); Sant'Antonio di Santadi, 2003 (CPA); Torre dei Corsari, 1995 (CAN); Villacidro, 2008 (CNBFVR). Carbonia-Iglesias prov.: Arcu Genna Bogai, 2004 (CCR); Calasetta, 1988 (CME, MCSNG); Carloforte, 1989 (CME, MCSNG); Domusnovas, 2006 (CNBFVR); Fontanamare, 1995 (CAN); Iglesias, 1995 (CAN); Isola La Vacca, 1988 (MCSNG); Isola di San Pietro, 1989 (MCSNG); Monti Marganai, 2006 (CNBFVR); Nebida, 2001 (CFA); sa Duchessa, 2006 (CNBFVR); Sant'Anna Arresi, 2004 (CCR); Sant'Antioco, y-a (MSNUF). Cagliari prov.: Capo Malfatano, 1989 (CME); Chia, 2004 (CCR); Domus de Maria, 1989 (CSA); Monte dei Sette Fratelli, 1995 (CAN, MSNUF); Olia Speciosa, 1985 (CLI); Pula, 2001 (CFA); Quartu Sant'Elena, 1986 (CME); Quirra, 1985 (CLI, MSNUF); Saline di Santa Gilla, 2001 (CFA); Salto di Quirra, 1986 (CME); San Priamo, 1995 (CAN); San Vito, 1872 (MSNUF); Sinnai, 1979 (CME); Solanas, 2004 (CCR); Stagno di Molentargius, y-a (MSNUF); Stagno di Simbirizzi, 1986 (CME); Teulada, y-? (MNHU); Uta, 1985 (CLI); Vallermosa, 2008 (CNBFVR); Villasimius, 1995 (CAN).

Chorotype. Euro-Mediterranean; also in the Canary islands. Occurring all over Italy. Affinities: see *P. aureola*.



FIGURES 24–27. Distribution maps of species with a limited range in Sardinia. **24–26.** *Danacea* (*Allodanacea*) spp. **27.** *Psilothrix* spp.

Notes. Very common all over Sardinia (Costa 1883: 44, Sainte-Claire Deville 1908: 217, Luigioni 1929: 631, Porta 1929), this species is immediatly recognizable by its bright green colour, shape of pygidium and larger size. The biology of *P. viridicoerulea* was studied by Fiori (1971) at Sassari University: the larvae

initially feed on dead insects found on the ground, and then become phytophagous and bore galleries in the stems of big annual weeds (*Ferula*, *Magydaris*, *Carlina*, *Cirsium*, etc.) with a marrow of sufficient size to hold the full-grown larva. Metamorphosis takes place in late winter within the same stem (when the weed is dead and the stem may no longer be in an upright position) and, eventually, the adults leave the pupal cell in early spring by boring an oval hole in the dead stem tissues.

Piras *et al*. (1970) recorded this species from several localities in Oristano province, Piras and Pisano (1972) from two localities in Carbonia-Iglesias province.

Aplocnemus (*Aplocnemus*) *cribricollis* Mulsant & Rey, 1868

(Fig. 16)

Haplocnemus cribricollis Mulsant & Rey, 1868: 234 (Loc. typ. Corsica); Schilsky 1897b: nr. 61; Sainte-Claire Deville 1908: 219; Porta 1929: 127; Pic 1937: 33; *Liberti 1995a: 176.
= *Haplocnemus erosus* Mulsant & Rey, 1868: 233 (Liberti 1995a: 176).
= *Haplocnemus elongatus* Pic, 1921: 3 (Liberti 1995a: 176).

Material examined. Sassari prov.: *Isola Asinara, 1998 (MCSNG); Monte Pettenadu, 2001 (CPN); Porto Conte, 1974 (CFR); Stagno di Pilo, 1995 (CAN); Torre del Porticciolo, 2001 (CPN); *Tottubella, 1964 (MCSNG). Olbia-Tempio prov.: Cantoniera Pedredu, 1995 (CAN); Coghinas, 1974 (CMO); Golfo Aranci, 1995 (CAN); Isola Caprera, 1987 (MSNUF); *Isola Maddalena, 1987 (MCSNG); *Isola Tavolara, 1994 (MCSNG, MCSNM); Monte Limbara, 2004 (CCR); Padrogiano, 1995 (CAN); San Teodoro, 1995 (CAN); *Tempio Pausania, y-? (NMBA). Nuoro prov.: Bolotana, 1995 (CAN); Bruncu Spina, 2004 (CCR, CLI); *Cala Gonone, 1980 (MCSNG); Cantoniera di Sant'Anna, 2008 (CNBFVR); *Dorgali, 1983 (CFR, CLI, NMBA); *Gadoni, 1987 (CME); Lula, 1995 (CAN); *Mamoiada, 1976 (CPO); *Monte Albo, 2004 (CCR, CME, MCSNG, NMBA); Monte d'Iscudu, 2003 (CLI); *Nuoro, 1920 (MCSNG); Oliena, San Giovanni, 1995 (CAN); *Posada, 1983 (MCSNG). Oristano prov.: Bauladu, 1995 (CAN); Laconi, 1995 (CAN, CME); Marceddì, 1995 (CAN); *Monte Ferru, 1987 (SMNS); *San Leonardo de Siete Fuentes, 1983 (CLI). Ogliastra prov.: Seui, 1994 (CME); *Talana, 1873 (MCSNG). Medio Campidano prov.: Giara di Gesturi, 2001 (CLI, CPN); *Gonnosfanadiga, 1983 (CLI); Monte Anzeddu, 2006 (CNBFVR); Monte Linas, 1995 (CME); Sant'Antonio di Santadi, 2003 (CPA); Villacidro, 2006 (CNBFVR). Carbonia-Iglesias prov.: Domusnovas, 2006 (CNBFVR); Isola di San Pietro, 1989 (MCSNG); Monti Marganai, 2006 (CNBFVR); sa Duchessa, 2006 (CNBFVR); Villamassargia, 1998 (CME). Cagliari prov.: Burcei, 1997 (CME); *Cantoniera Campu Omu, 1998 (CLI, CME), Donori, 1998 (CME); *Elmas, 1873 (MCSNG); Esterzili, 1994 (CME); *Flumini, y-? (NMBA); Monte dei Sette Fratelli, 1995 (CAN, CME, MSNUF); Nurallao, 1994 (CME); *Nurri, 1983 (CLI); *Olia Speciosa, 1985 (CLI); Pula, 1992 (CME); *Quirra, 1985 (CLI); *San Gregorio, 1997 (CLI, CME); *San Vito, 1872 (MCSNG); Siliqua, 1998 (CME); Solèminis, 1983 (CFO); Villasimius, 1995 (CAN).

Chorotype. Tyrrhenian: Corsica, Sardinia, Tuscan Archipelago, Ponza, Ischia and Capri Islands, Monte Circeo (Latium, this being the only known locality on the Italian Tyrrhenian coast) (Liberti 1995a). Affinities: rather close to another Tyrrhenian species, *A. difficilis* Holdhaus, 1923, which has a more limited, northern range, in Corsica, Tuscan Archipelago, and Monte Argentario on the Tuscan coast (Liberti 1995a).

Notes. Very common throughout Sardinia (Schilsky 1897b; Sainte-Claire Deville 1908). It is characterized by its small size, the femora darker than the tibiae (mainly in males) and the serrate antennae. Adults can be found in spring on flowers (e.g. *Cistus*).

Aplocnemus (*Aplocnemus*) *jejunus* Kiesenwetter, 1863

Haplocnemus jejunus Kiesenwetter, 1863: 652 (Loc. typ. southern France); Mulsant & Rey 1868: 210, 211 pls. XII, XIII; Schilsky 1894b: nr. 70; Sainte-Claire Deville 1908: 220; Porta 1929: 127; Pic 1937: 36; Prota 1966: 18,

fig. III; Fiori 1971: 56; Liberti 1995a: 167; Constantin 2007: 161.
= *Haplocnemus capillicornis* Abeille de Perrin, 1907: xxi (Liberti 1995a: 167).

Material examined. "Sardinia" y-? (NMBA). Ogliastra prov.: Monte Arcueri "IV.1909, leg. F. Solari" (MCSNM).

Chorotype. Possibly Central Mediterranean: it is present in the whole of Italy (islands included), southern France, Slovenia, Bulgaria, northern Greece (Constantin 2007; Liberti, unpublished data). Affinities unknown.

Notes. Males of this species have long, almost pectinate antennae, a rather flat body with a rough, heavily and disorderly impressed surface, and is of metallic grey-green colour. *Aplocnemus* (*A.*) *jejunus* was reported for Sardinia by Bertolini (1899–1904: 74), Luigioni (1929: 627) and Porta (1929: 127), and is rare all over its range. It has been found more than once, in peninsular Italy, wintering under bark. Information on its biology and the description of its larva can be found in Prota (1966) and Fiori (1971). Reported for Sardinia by Prota (1966): "Tempio Pausania, SS [= Sassari prov.] (det. R. Constantin)" and Constantin (2007): Sassari "22.III.1949, leg. G. Fiori" 1949 (CCO); Lago del Cedrino NU [= Nuoro prov.] "12.IV.1988, leg. R. Constantin" (CCO).

***Aplocnemus* (*Aplocnemus*) *pectinatus* (Küster, 1849)**
(Fig. 17)

Dasytes pectinatus Küster, 1849: nr. 19 (Loc. typ. Cagliari, Sardinia); Schilsky 1897b: nr. 56; Sainte-Claire Deville 1909: 219; Porta 1929: 126; Pic 1937: 39; Liberti 1995a: 177; *Liberti 1995b: 501; Sparacio 1997: 107; Constantin 2005: 228.
= *Haplocnemus siculus* Kiesenwetter, 1863: 654 (Liberti 1995a: 177); Porta 1929: 127; Pic 1937: 41.
= *Haplocnemus eumerus* Mulsant & Rey, 1868: 194 (Liberti 1995a: 177); Pic 1937: 33; Majer 1985: 38.
= *Haplocnemus melitensis* Schilsky, 1897b: 60 (Liberti 1995a: 177); Porta 1929: 127; Pic 1937: 37.
= *Haplocnemus siculus* var. *flavipes* Schilsky, 1897b: 59 (Liberti 1995a: 177).
= *Haplocnemus siculus* var. *obscuripes* Schilsky, 1897b: 59 (Liberti 1995a: 177).

Material examined. Sassari prov.: *Alghero, 1995 (CAN, MCSNG); Argentiera, 2003 (CLI, MCSNG); *Castelsardo, 1964 (MCSNG); Codaruina, 1995 (CAN); *Isola Asinara, 1988 (MCSNG); Lago Baratz, 1999 (CAN, MCSNG); Monte Pettenadu, 2001 (CPN); Ponte di Caitta, 2001 (CPN); *Porto Torres, 1964 (MCSNG); Sassari, y-? (MSNUF); *Sorso, 1964 (MCSNG); *Stagno di Pilo, 2000 (CAN, CLI, MCSNG); *Stintino, 1976 (CFR, CPO); *Tissi, 1964 (MCSNG); Torre del Porticciolo, 2001 (CLI, CPN); Viddalba, 1995 (CAN). Olbia-Tempio prov.: Aglientu, 1995 (CAN); Golfo Aranci, 1995 (CAN); Isola Maddalena, 1994 (CME, MCSNG); Monte Limbara, 2004 (CCR); *Olbia, 1995 (CAN, NMBA); Oschiri, 1995 (CAN); Padrogiano, 1995 (CAN); San Teodoro, 1995 (CAN); *Telti, 1976 (CPO). Nuoro prov.: Arcu Guddetorgiu, 1995 (CAN); Bolotana, 1995 (CAN); Cantoniera di Sant'Anna, 2003 (MCSNG); Fiume di Posada, 1999 (MCSNG); *Macomer, y-? (NMBA); Oliena, 1995 (CAN); Orgosolo, 2003 (MCSNG); Punta Cupetti, 1995 (CAN). Oristano prov.: *Baratili San Pietro, 1987 (SMNS); Bauladu, 1995 (CAN); Bosa, 1985 (MSNUF); Foce Fiume Tirso, 1995 (CAN); Laconi, 1995 (CAN); Marceddì, 1995 (CAN); Monte Grighini, 1998 (CCA); *Oristano, 1986 (MCSNG, MSNUF, NMBA); *Porto Mandriola, 1987 (SMNS); Putzu Idu, 1998 (CCA); Riola Sardo, 1995 (CAN); *San Giovanni Sinis, 1999 (CAN, CLI, MCSNG); Sedilo, 1995 (CAN); Stagno di Cabras, 1995 (CAN, MSNUF); Stagno di Marceddì, 2006 (CNBFVR); Stagno di Santa Giusta, 1995 (CAN); Tadasuni, 1995 (CAN); Tharros, 2008 (CNBFVR, CPA). Ogliastra prov.: *Porto Santoru, 1936 (MCSNG). Medio Campidano prov.: *Arbus, 1983 (CLI); Cantoniera Bidderdi, 1995 (CAN); Gonnosfanadiga, 2006 (CMG, CNBFVR); Marina di Arbus, 2006 (CNBFVR); Monte Anzeddu, 2006 (CNBFVR); Montevecchio, 2003 (CPA); Pabillonis, 1995 (CAN); Porto Palma, 2003 (CPA); Sant'Antonio di Santadi, 2003 (CAN, CPA); *Torre di Flumentorgiu, 1895 (MCSNM); Villacidro, 2008 (CAN, CNBFVR). Carbonia-Iglesias prov.:

*Calasetta, 1988 (CME, MCSNG); *Carloforte, 1969 (MCSNG); Cussorgia, 1989 (MCSNG); Domusnovas, 2008 (CNBFVR); Fluminimaggiore, 2003 (CPA); Fontanamare, 1995 (CAN); *Iglesias, 1999 (CAN, CME, MCSNG); Isola La Vacca, 1988 (MCSNG); *Isola Piana di San Pietro, 1956 (MCSNG); *Isola dei Ratti, 1988 (MCSNG); *Isola di San Pietro, 1988 (MCSNG); *Isola di Sant'Antioco, 1988 (MCSNG, MSNUF); Monti Marganai, 2006 (CNBFVR); Nebida, 2001 (CFA); sa Duchessa, 2006 (CNBFVR); Santadi, 1998 (CME); Sant'Anna Arresi, 2004 (CCR); Tempio di Antas, 1983 (MCSNG). Cagliari prov.: Assemini, 1995 (CME); *Cagliari, 1989 (CME, MCSNG); *Capo Carbonara, 1985 (CSA, MCSNG); Chia, 2004 (CCR); *Domus de Maria, 1989 (CSA, MCSNM); *Elmas, 1975 (CME); *Geremeas, 1975 (CME); Isola Serpentara, 1989 (MCSNG); *Maracalagonis, 1975 (CME); Monte dei Sette Fratelli, y-a (MSNUF); Nora, 1992 (MSNUF); Nurallao, 1994 (CME); *Olia Speciosa, 1985 (CLI); Pula, 2001 (CFA); *Quartu Sant'Elena, 1977 (CME); Quartucciu, 1995 (CME); *Quirra, 1985 (CLI); Saline di Santa Gilla, 1995 (CME); San Priamo, 1995 (CAN); *San Vito, 1872 (MCSNG); Sarroch, 1995 (CAN); Serdiana, 2001 (CFA); Solèminis, 1983 (CFO); *Stagno di Colostrai, 1985 (CLI); Stagno di Molentargius, 1994 (CMG, MSNUF); *Stagno di Simbirizzi, 1983 (CFO, CME); *Uta, 1989 (CLI, CME) ; Vallermosa, 2008 (CNBFVR); *Villaputzu, 1965 (CLI); Villasimius, 1995 (CAN).

Chorotype. Central Mediterranean: Corsica, Sardinia, Sicily, Malta, Tunisia, Algeria and, marginally, the Balearic Islands (Constantin 2005). Affinities unknown.

Notes. A species very variable in leg colour (from entirely yellowish to entirely black) and size. In Sardinia it often has black legs while in Corsica the prevailing leg colour is reddish tibiae and dark femora (variable however). Rather similar to *A. cribricollis*, it is characterized by the pale brown pubescence, larger size and pectinate male antennae (the female antennae being serrate). Common all over Sardinia.

Aplocnemus (*Aplocnemus*) *rufomarginatus* Perris, 1869

Haplocnemus rufomarginatus Perris, 1869: 18 (Loc. typ. Tenés, Algeria); Porta 1929: 125; Pic 1937: 40; *Liberti 1995a: 184.

Material examined. Olbia-Tempio prov.: *Buddusò, 1972 (CCO); *Tempio Pausania, 1944 (MCSNV, NMBA). Nuoro prov.: *Aritzo, 1910 (MCSNG); Bolotana, 1995 (CAN); Monte Spada, 1994 (CME); *Orune, 1976 (CPO); *Sorgono, y-? (NMBA). Oristano prov.: Laconi, 1995 (CAN). Ogliastra prov.: Punta La Marmora, 1995 (CMG). Carbonia-Iglesias prov.: Monti Marganai, 2005 (CNBFVR). Cagliari prov.: Villanovatulo, 1994 (CME).

Chorotype. Central Mediterranean: its known distribution includes Algeria and Sardinia only (Liberti 1995a). Affinities: rather close to *A.* (*A.*) *marginatus* Rottenberg, 1870, which occurs in Sicily and southern Greece (Liberti & Zinetti 2009: 49).

Notes. A species easily recognizable by the shape of pronotum, rather depressed with well visible anterior angles, and by the reddish margin all around the body, more evident on sides of pronotum. Already reported for Sardinia by Bertolini (1899–1904: 73), Luigioni (1929: 626) and Porta (1929). Despite being rare, it has been repeatedly collected with traps at Marganai (see below) all year round except in summer.

Aplocnemus (*Diplambe*) *duplicatus* Kiesenwetter, 1871
(Fig. 19)

Haplocnemus duplicatus Kiesenwetter, 1871: 85 (Loc. typ. Sardinia); Sainte-Claire Deville 1908: 220; Porta 1929: 124; Pic 1937: 33 [*A.* (*D.*) *crenicollis* Kiesenwetter, 1863 var. *duplicatus*]; *Liberti 1995a: 159.

Material examined. Sassari prov.: *Ozieri, 1976 (CPO). Olbia-Tempio prov.: *Isola Caprera, 1986 (MCSNG); Monte Limbara, 1995 (CAN); Tempio Pausania, 1995 (CAN). Nuoro prov.: Bruncu Spina, 1974

(CMO); Cala Gonone, 1980 (CFR); Cantoniera Guzzurra, 1995 (CAN); Desulo, 1995 (CAN); Dorgali, 1995 (CAN); Lago di Gusana, 1995 (CAN); *Oliena, 1995 (CAN, MCSNG); Oliena, San Giovanni, 1995 (CAN); Orgosolo, 1995 (CAN); *Orune, 1976 (CPO). Oristano prov.: Laconi, 1998 (CAN, CME); Tharros, 2008 (CNBFVR). Ogliastra prov.: Monte Perda Liana, 2008 (CNBFVR); Monte Tonneri, 2008 (CNBFVR); Seui, 2001 (CFA, CLI); Talana, 2008 (CNBFVR); *Villanova Strisaili, 1974 (CLI). Medio Campidano prov.: Giara di Gesturi, 2001 (CLI); Monte Anzeddu, 2006 (CNBFVR); Sant'Antonio di Santadi, 2003 (CPA). Carbonia-Iglesias prov.: Monti Marganai, 2006 (CNBFVR); sa Duchessa, 2006 (CNBFVR). Cagliari prov.: Burcei, 1997 (CME); *Cantoniera Campu Omu, 1998 (CLI, CME); Monte dei Sette Fratelli, 1995 (CAN); Sadali, 2001 (CPN); Soléminis, 1983 (CFO); Stagno di Piscinni, 1995 (CAN).

Chorotype. Strictly Sardinian. Affinities: close to *A.* (*D.*) *crenicollis*, which is a Sicilian and North African species (Liberti 1995a).

Notes. This species is characterized by the pectinate male antennae, convex body, black colour, dark pubescence and well impressed elytral punctuation. Rather common all over the island.

Aplocnemus (*Diplambe*) *januaventi* Liberti, 2007

(Fig. 18)

Aplocnemus (*Diplambe*) *januaventi* *Liberti, 2007a: 2 (Loc. typ. Gennargentu, Sardinia).

Material examined. Nuoro prov.: *Aritzo, 2009 (CLI, MCSNM); *Bruncu Spina, 1974 (CMO); *Desulo, 2009 (CAN, CLI, MCSNG); *Lago di Gusana, 1995 (CLI). Ogliastra prov.: Genna Silana, 2009 (CLI); Genna Croce, 2009 (CLI). Cagliari prov.: *San Vito, 1872 (MCSNG); *Sarrabus, y-a (MCSNG).

Chorotype. Strictly Sardinian. Affinities: among the *Diplambe*, this species appears rather peculiar and no hypotheses are attempted as to its affinities.

Notes. A rather rare species known from a limited number of specimens from the Gennargentu and Sarrabus areas only, and well characterized by the serrate male antennae, dark brown body with brown tarsi (paler than the tibiae), pale pubescence and elytral punctuation not as impressed as in *A.* (*D.*) *duplicatus*. Uncommon, probably altitudinal species, repeatedly collected on blossoming *Erica* bushes together with *A.* (*D.*) *duplicatus*.

Discussion

Zoogeographical analysis:

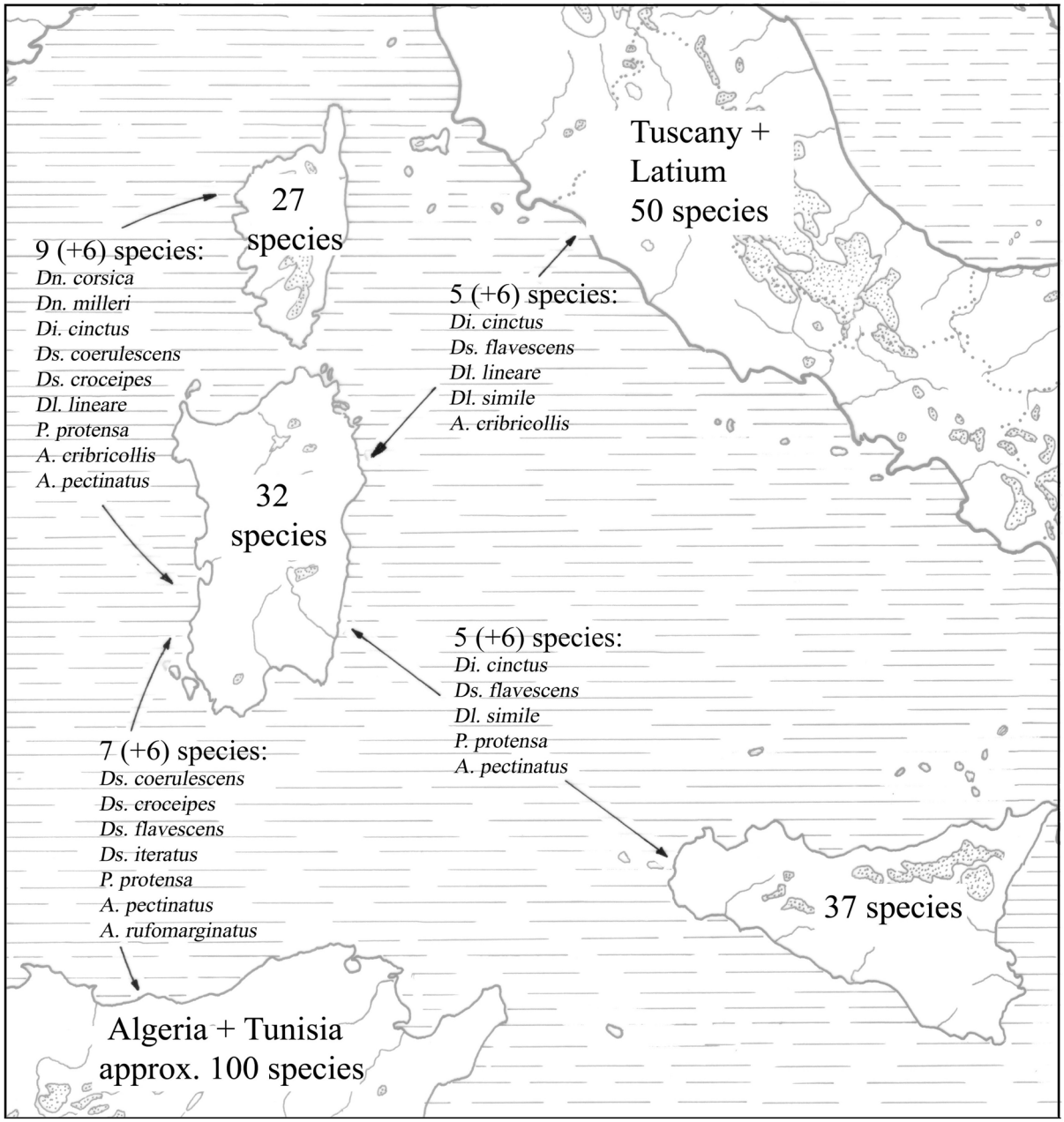
The overall picture is shown in Figs 28–29.

Out of 30 species (32 taxa) present in Sardinia, 11 species (13 taxa) are strict Sardinian endemics: *Danacea* (*Danacea*) *imperialis*, *D.* (*D.*) *mitis*, *D.* (*D.*) *sardoa sardoa*, *D.* (*D.*) *sardoa declivis*; *D.* (*Allodanacaea*) *gorditana*, *D.* (*A.*) *nympha*, *D.* (*A.*) *oreas*, *D.* (*A.*) *picicornis picicornis*, *D.* (*A.*) *picicornis supramontana*, *D.* (*A.*) *sulcitana*, *Dasytes doderoi*, *Aplocnemus* (*Diplambe*) *duplicatus*, *A.* (*D.*) *januaventi*.

Two species are endemic of Sardinia and Corsica: *Danacaea* (*Danacea*) *corsica* and *D.* (*Allodanacaea*) *milleri*.

Two species are Tyrrhenian, occurring in Sardinia, Corsica, the Tuscan Archipelago and smaller Tyrrhenian islands, eastern Liguria, the Tyrrhenian coast of peninsular Italy (to some extent), and Sicily: *Divales cinctus* (also widespread in peninsular Italy and common in Sicily); *Aplocnemus* (*Aplocnemus*) *cribricollis* (with only a marginal presence in peninsular Italy, on Monte Circeo (Latium), and absent from Sicily).

Five species have a Central Mediterranean distribution, i.e. Tyrrhenian plus Tunisia and Algeria: *Dasytes coerulescens*, *Psilothrix protensa*; *Aplocnemus* (*Aplocnemus*) *pectinatus*, *A.* (*A.*) *rufomarginatus* and maybe *A.* (*A.*) *jejunus*.



FIGURES 28. Similarities of the Sardinian Dasytidae fauna with those of Corsica, North Africa, Sicily and mainland Italy. Numbers refer to the Dasytidae species living in each region, arrows list the Mediterranean species common to Sardinia and these same regions. Only the species with an incomplete Mediterranean range are listed in the figure: five or six further ones, occurring in the whole Central Mediterranean area, are listed in the text but not in the drawing for sake of clarity.

Seven species have a wider Mediterranean distribution, either West- or East-Mediterranean or Mediterranean. West-Mediterranean: *Dasytes* (*Mesodasytes*) *aeneiventris*, *D.* (*M.*) *croceipes*, *D.* (*M.*) *iteratus*, *Dasytes* (*Dasytes*) *flavescens*; East-Mediterranean: *Dolichosoma simile*, *Psilothrix aureola*; Mediterranean: *Dasytes* (*Mesodasytes*) *nigroaeneus*.

Three species have a wide chorotype (Sibero-European or Euro-Mediterranean). Sibero-European: *Dolichosoma lineare*; Euro-Mediterranean: *Dasytes* (*Dasytes*) *pauperculus*, *Psilothix viridicoerulea* (also Canary Islands).

As expected, the Dasytidae fauna conforms to Sardinia's Central Mediterranean character with, however, a high percentage of strict endemic species (36.7%; which becomes 40.6% considering all taxa).

In Fig. 28, Sardinian species that also occur in the neighbouring regions of Corsica, peninsular Italy, Sicily and Tunisia + Algeria are listed separately; for sake of clarity, the 5 or 6 species that occur in all of these regions, i.e. *Dasytes* (*Mesodasytes*) *aeneiventris*, *D*. (*M*.) *nigroaeneus*, *D*. (*Dasytes*) *pauperculus*, *Psilothrix aureola*, *P. viridicoerulea* and maybe also *Aplocnemus* (*Aplocnemus*) *jejunus* (the presence of which in North Africa is not certain), have been omitted.

The overlap with Corsica, although consistent, may not be as high as would be expected given the proximity of the two islands; on the other hand, it is remarkable that the overlap with North Africa is not inferior to the overlap with Sicily and peninsular Italy.

Fig. 29 shows the numbers of strict Sardinian and Corsican endemic taxa and the two Sardo-Corsican endemics; it also shows the North-Thyrrenian distribution of the eight known Tyrrhenian Dasytidae species and subspecies (only two of which are present in Sardinia). The two islands clearly differ from each other, Corsica being more Tyrrhenian and Sardinia showing higher isolation and more southern affinities.

These comparisons are useful only on a purely qualitative ground, being based solely on species' numbers and not taking into account the affinities between species, which are both important and difficult to quantify.

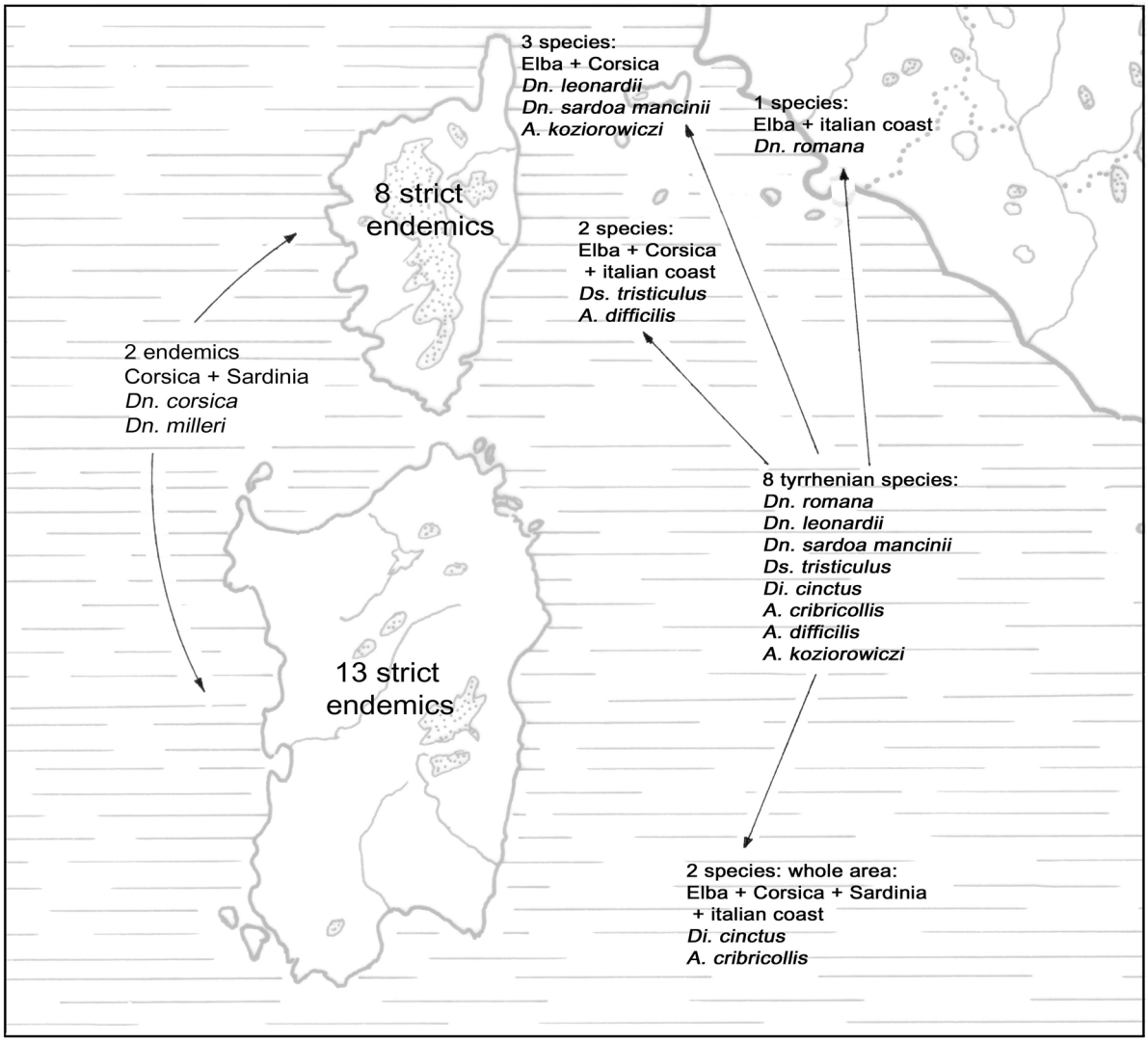


FIGURE 29. A picture of the highly endemic Dasytidae fauna of Sardinia and its reduced Tyrrhenian character. Numbers refer to the endemics living in Sardinia and Corsica (i.e. strict Sardinian and strict Corsican), arrows show the two Sardo-Corsican endemics and the distribution details (in the North Tyrrhenian area) of the eight known Tyrrhenian species, only two of which are found in Sardinia.

FIGURE 30. A mating pair of *Dolichosoma simile* (Brullé) (Greece, Igoumenitza) (photo by R. Constantin).

The endemics:

Danacea (*Allodanacaea*)

This is a Central Mediterranean subgenus showing a high speciation potential, and totalling 26 taxa: 18 species and 1 subspecies in Italy—one from Apulia, the remaining from Tyrrhenian Italy and Corsica (Liberti 1985, 2007b)—one in Malta (Liberti & Schembri 2002) and 6 in Tunisia and Algeria (Constantin, pers. comm.). Many species live on islands and all of them have a small or very small range: the widest known range is that of *D. romana* Pic, 1902, which lives on the Italian Tyrrhenian coasts of Tuscany and Latium (from Livorno province to Monte Circeo, Elba and Pianosa islands included), and the smallest is probably that of *D. poggii* Liberti, 1985, which is limited to the tiny island of Montecristo (Tuscan Archipelago) (Liberti 1985: 337, 340). Sardinia is inhabited by 6 *Danacea* (*Allodanacaea*) species (7 taxa), 5 (6 taxa) of which are strict endemics and 1 Sardo-Corsican.

Sometimes, insular species can be found on more than one neighbouring island: *D. caprariae* Liberti, 1985 occurs on Capraia and Gorgona (Tuscan Archipelago, approximately 40 km apart); *D. pontina* Liberti, 2007b occurs on Ponza and Ventotene (Pontine Islands, again approximately 40 km apart). *Danacea* (*A.*) *caneparii* Liberti, 1985, described from Pantelleria (Sicily), has been collected 280 km to the west on La

Galite islands (Tunisia) (Liberti & Schembri 2002), but not yet in mainland Tunisia (Constantin, pers. comm.), situated less than 80 km to the south; this species probably landed on Pantelleria rather "recently" because it is a volcanic island which emerged 320–330.000 years ago and was completely covered by a 5 m layer of erupted volcanic rocks 45.000 years ago (Agnesi & Federico 1995).

On the other hand, several *Danacea* (*Allodanacaea*) species show small mainland ranges: *D. ilicis* Liberti, 1985 occurs on the Mount Argentario peninsula (and also on Giglio and Giannutri islands) (Tuscan Archipelago), but has never been found on the nearby mainland. *Danacea wittmeri* Liberti, 1985 lives on Capri and Ischia islands and on the Sorrento peninsula (Campania) but has not yet been found outside this rather small coastal area around Naples (Liberti 2007c: 195).

A remarkable feature of the Sardinian *D.* (*Allodanacea*) is that all taxa have a range which is smaller, sometimes much smaller, than Sardinia itself (see Figs 24–26). The best examples are those of *D. gorditana* and *D. nympha* (Fig. 24), only known from restricted, neighbouring areas of the north-western corner of the island (the Nurra region). They cannot be recently formed species (i.e. recent endemics) because they are well differentiated from one another and from the other species living in Sardinia and Corsica. It cannot be decided whether these two species had wider ranges in the past (in which case they could be considered as "relictual endemics") or whether the extension of their ranges has been subject to little changes over time ("autocthonous endemics").

Also, the apparent lack of other *D.* (*Allodanacaea*) species in the Nurra region represents a question mark. The author attempted to collect some in June 2003 in the hilly area around Argentiera, between Stintino and Porto Conte, with no results whatsoever; on the other hand, several samplings in the coastal Mediterranean bush carried out between Castelsardo and Capo Testa, 50–60 km east, yielded *D.* (*Allodanacaea*) *milleri* in high numbers, as expected. Further collecting should be carried out in this interesting area.

Danacea (*Danacea*)

Two out of the four Sardinian *Danacea* (*Danacea*) species are strict endemics, occurring all over the island. A third species, *D. sardoa*, has been split into four subspecies, two of which are Sardinian strict endemics: *D. sardoa declivis*, which has a small range more or less limited to the Monte Linas and Iglesias areas, and *D. sardoa sardoa*, which can be found everywhere else; both are common. The similarity of these two taxa suggests a rather recent differentiation, but the question of what kind of barriers may have been active in the past, preventing the free genetic exchange between populations of the former *Danacea sardoa* before the split, cannot be answered yet.

Dasytes

One species, *Dasytes doderoi*, is a very poorly known Sardinian endemic limited to the Gennargentu massif. Its rarity suggests that it could be the remnant of a more widespread past population. Its distribution could be Central Mediterranean, as is the case for other Sardinian dasytids. Many *Dasytes* have indeed been described from North Africa and are insufficently known, but data thus far collected by the author seem to exclude such possibility.

Although *Dasytes* species with small ranges are quite uncommon, *D.* (*Hypodasytes*) *grenieri* Kiesenwetter, 1871 is restricted to Corsica, where it is common and widespread from sea level to over 2000 m (Liberti 2004a). It has never been found in Sardinia and is mentioned here only as a possible example of a "lucky" species having successfully survived on an island – differing in many aspects from Sardinia (higher mountains, more water, etc.) – which may have better sheltered its original *Dasytes* stock.

Aplocnemus (*Diplambe*)

Both *A.* (*Diplambe*) species present in Sardinia are strict endemics: *A.* (*D.*) *duplicatus* is spread all over the island and is rather common, whereas *A.* (*D.*) *januaventi* is rather rare and apparently limited to the Gennargentu and Sarrabus areas. The latter species, like *Dasytes doderoi*, could be a relictual endemic; here again, checks have been made to minimize the possibility that it could be a Central Mediterranean species

(present also in North Africa). However, *A.* (*Aplocnemus*) and *A.* (*Diplambe*) offer many more examples of small distributions than *Dasytes*.

Collecting with traps at Marganai and Montimannu:

A collecting campaign was carried out by CNBFVR in the years 2003–2006 in the Monti Marganai and Montimannu region-owned forests, in the communes of Iglesias, Domusnovas and Villacidro (*cf*. Mason *et al*. 2006): several traps, mostly Malaise, were placed at several sites and collected over 2,000 specimens of Dasytidae (Tabs 1–2).

Fifteen species – another 3 species (see Tab. 1) were collected in 1 specimen only and are not considered here – were repeatedly collected, representing about 60% of the approximately 25 species expected to occur in the study area. All the species collected are good flyers, and many of them have a wide distribution area, but also several Sardinian endemics were trapped.

TABLE 1. Trap collections at Marganai and Montimannu: *Danacea*, *Psilothrix*, *Dolichosoma*, *Dasytes*. See text for comments. Legend: * = sex not recorded; ** = assignments of females to *D. croceipes* or *D. iteratus* might be unreliable because of the similarity between the two; A = Iglesias, Marganai, 700 m, Area Conecofor SAR 1, Malaise trap, leg. G. Chessa; B = Iglesias, Monti Marganai, 480 m, locality Tintillonis, Malaise trap, leg. D. Birtele, P. Cerretti, G. Nardi & D. Whitmore; C = as in A but window trap; D = as in A but pitfall trap; E = Villacidro, left bank Rio Cannisoni, light trap, leg. M. Bardiani, D. Birtele, P. Cornacchia & D. Whitmore; F = Domusnovas, Lago [= lake] Siuru, 322 m, Malaise trap, leg. M. Bardiani , D. Birtele, P. Cornacchia & D. Whitmore; G = Domusnovas, near Planargia-Scoveri, 625 m, Malaise trap, leg. M. Bardiani, P. Cerretti, G. Nardi & D. Whitmore; S1 = Iglesias, Colonia Beneck, 636 m, Malaise trap, leg. G. Chessa; S2 = Domusnovas, Sa Duchessa, 371 m, Malaise trap, leg. G. Chessa; S3 = Domusnovas, Valle Oridda, 592 m, Malaise trap, leg. G. Chessa.

Species	Years 2004, 2005, 2006			Year 2006: Traps S1, S2, S3				
	Dates	Specimens	Trap	Dates	Specimens	Specimens /Trap		
						S1	S2	S3
Danacea (*Danacea*) *imperialis*	21.X-12.XII.2004	1 ♀	A	21.III–4.VI	30 ♂, 29 ♀	5	52	2
	15–30.VI.2004	1 ♀	A	4–18.IV	4 ♂, 10 ♀	1	12	1
	11–12.VI.2004	16*	B	18.IV–2.V	7 ♂, 11 ♀	4	14	
	20–24.V.2006	17♂, 25♀	G	2–16.V	4 ♂, 7 ♀		11	
	20.V–16.VI.2005	1 ♀	A	16–30.V	1 ♂, 12 ♀	3	10	
	12–17.VII.2006	1 ♀	F					
Danacea (Danacea) sardoa declivis	20–23.V.2006	2 ♀	F	18.IV–2.V	2♀		2	
				2–16.V	5♀		5	
				16–30.V	--			
				30.V–13.VI	1♀	1		
				13–27.VI	2 ♀	1		1
Danacea (Danacea) mitis				13–27.VI	1 ♀	1		
D. (Allodanacaea) sulcitana				13–27.VI	1 ♂	1		
D. (Allodanacaea) oreas				13–27.VI	3 ♀			3
				27.VI–11.VII	1 ♂, 10 ♀			11
				11–25.VII	1 ♂, 7 ♀			8
Psilothrix viridicoerulea				21.III–4.VI	2*	1		1
				4–18.IV	18*	3	3	12
				18.IV–2.V	65*	13	13	39
				2–16.V	229*	79	33	117
				16–30.V	249*	111		138
				30.V–13.VI	24*			24

..... continued

TABLE 1 (*continued*)

Species	Years 2004, 2005, 2006			Year 2006: Traps S1, S2, S3				
	Dates	Specimens	Trap	Dates	Specimens	Specimens /Trap		
						S1	S2	S3
Dolichosoma simile				16–30.V	2 ♂	2		
Dasytes (Dasytes) flavescens				13–27.VI	40*	40		
				27.VI–11.VII	21*	21		
				11–25.VII	3*	2		1
Dasytes (Dasytes) coerulescens	20–23.V.2006	5*	F	18.IV–2.V	35*	1	8	26
		29*	G	2–16.V	92*		59	33
				16–30.V	54*	14	16	24
				30.V–13.VI	2*	2		
				13–27.VI	1*			1
Dasytes (*Dasytes*) *pauperculus*	15–30.VI.2004	2 ♀	A					
	20.V–16.VI.2005	1 ♀	C					
D. (*Mesodasytes*) *nigroaeneus*	20.V–16.VI.2005	1 ♀	A					
D. (*Mesodasytes*) *aeneiventris*	11–12.VI.2004	1 ♂, 4 ♀	B	4–18.IV	1 ♂		1	
	15–30.VI.2004	10 ♂, 13 ♀	A	18.IV–2.V	397 ♂,82 ♀	140	328	11
	1–16.VIII.2004	1 ♀	D	2–16.V	334 ♂, 166♀	260	137	103
	16.VIII–8.IX.2004	1 ♀	D	16–30.V	13 ♂,121 ♀	106	11	17
	29.IV–16.V.2005	1 ♀	A	30.V–13.VI	2 ♂, 24 ♀	25	1	
	20.V–16.VI.2005	7 ♀	A	13–27.VI				
	20.V–16.VI.2005	2 ♀	C	27.VI–11.VII	1 ♂	1		
	16.VI–14.VII.2005	1 ♀	A					
	20–23.V.2006	5 ♀	F					
	20–24.V.2006	2♂, 13♀	G					
	19–24.V.2006	8 ♂, 5 ♀	E					
D. (*Mesodasytes*) *iteratus*	15–30.VI.2004	2 ♀	A	16–30.V	1 ♂, 1 ♀	2		
	16.VI–14.VII.2005	1 ♂, 3 ♀	A	30.V–13.VI	2 ♂, 3 ♀	5		
	16.VI–14.VII.2005	1 ♀	C	13–27.VI	10 ♂, 13 ♀	22		1
	20–23.V.2006	1 ♀	F	27.VI–11.VII	4 ♀	4		
				11–25.VII	1 ♀	1		
D. (*Mesodasytes*) *croceipes***	15–30.VI.2004	1 ♂, 58 ♀	A	18.IV–2.V	3 ♀	1	2	
	29.IV–20.V.2005	3 ♀	A	2–16.V	4 ♂, 4 ♀	2	6	
	20.V–16.VI.2005	2 ♂, 69 ♀	A					
	19–24.V.2006	1 ♂, 6 ♀	E					

Trap location appears to be an important factor determining the species composition and abundance of samples. Many species seem to be "site-specific": out of 15, only one species (*Dasytes aeneiventris*) was collected in nearly all the traps installed in the study area while three (*Danacea oreas*, *Dolichosoma simile* and *Aplocnemus marginatus*) were collected in just one trap, three (*Dasytes flavescens*, *D. pauperculus* and *Aplocnemus cribricollis*) in two traps and another three (*Psilothrix viridicoerulea*, *Dasytes coerulescens* and *Aplocnemus duplicatus*) in three traps.

Tab. 1 provides an account of the phenology of several species, which ranges from April (*Danacea imperialis*, *Dasytes croceipes*) to July (*Danacea oreas*, *Dasytes flavescens*). Males tend to appear earlier than females; this is well exemplified by *Dasytes* (*Mesodasytes*) species, where males largely exceed females in the earlier samples, the opposite being true for later samples (see for instance the *Dasytes aeneiventris* traps in S1, S2 and S3). The same trend is usually found when collecting *Dasytes* species with traditional methods (with sweep nets or by branch beating).

Tab. 2 reports the trapping of many *Aplocnemus* (*Aplocnemus*) *rufomarginatus* (46 specimens). This result is surprising for such a rare species, and shows that *A.* (*A.*) *rufomarginatus* must be a much better flyer than the other, more common, *Aplocnemus* species. Its phenology is also surprising: it was mostly collected a few specimens at a time, irrespective of the season, although not in summer, and only in one instance (October 2004) was it trapped in great numbers.

TABLE 2. Trap collections at Marganai and Montimannu: *Aplocnemus*. See text for comments. Legend: * = sex not recorded; A = Iglesias, Marganai, 700 m, Area Conecofor SAR 1, Malaise trap, leg. G. Chessa; G = Domusnovas, near Planargia - Scoveri, 625 m, Malaise trap, leg. M. Bardiani, P. Cerretti, G. Nardi & D. Whitmore; M1 = Villacidro, left bank of Rio Cannisoni, 401 m, Malaise trap, leg. M. Bardiani, D. Birtele, P. Cornacchia & D. Whitmore; S1 = Iglesias, Colonia Beneck, 636 m, Malaise trap, leg. G. Chessa; S2 = Domusnovas, Sa Duchessa, 371 m, Malaise trap, leg. G. Chessa; S3 = Domusnovas, Valle Oridda, 592 m, Malaise trap, leg. G. Chessa.

Species	Years 2004, 2005, 2006			Year 2006, Traps S1, S2, S3				
	Dates	Specimens	Trap	Dates	Specimens	Specimens / Trap		
						S1	S2	S3
Aplocnemus (*Aplocnemus*) *rufomarginatus*	14-29.IX.2003	1*	A					
	29.IX-21.X.2003	1*	A					
	21.X-17.XI.2003	1*	A					
	21.I-16.II.2004	1♀	A					
	16.II-15.VI.2004	1*	A					
	21.IX-6.X.2004	1*	A					
	6.X-5.XI.2004	9 ♂, 13 ♀	A					
	17.XII-4.I.2005	1*	A					
	18.I-1.III.2005	1 ♂, 1 ♀	A					
	1.III-29.IV.2005	1 ♂, 2 ♀	A					
	29.IV-10.V.2005	2 ♀	A					
	20.V-16.VI.2005	1 ♀	A					
	30.IX-17.X.2005	4♂, 2 ♀	A					
	17.X-3.XI.2005	1 ♂	A					
	16.XII.05-3.I.2006	1 ♂, 1 ♀	A					
Aplocnemus (*Aplocnemus*) *pectinatus*	16.VI-14.VII.2005	1 ♀	A	4-18.IV	1*			1
	19-24.V.2006	1♀	M1	18.IV-2.V	4*		4	
	20-24.V.2006	1♂, 1♀	G	2-16.V	11*	5	7	
				16-30.V	40*	22	17	1
				30.V-13.VI	21*	13	8	
				13-27.VI	9*	6	3	
				27.VI-11.VII	1*	1		
Aplocnemus (Aplocnemus) cribricollis	19-24.V.2006	1♂, 1♀	M1	18.IV-2.V	1*		1	
				2-16.V	1*		1	
				16-30.V	2♂		2	
				30.V-13.VI	1*	1		
				13-27.VI	2*	2		
A. (*Diplambe*) *duplicatus*	29.IV-20.V.2005	6 ♂, 3 ♀	A	21.III-4.IV	1*		1	
	20.V-16.VI.2005	3 ♀	A	4-18.IV	2*		1	
	16.VI-14.VII.2005	1 ♀	A	18.IV-2.V	4*		4	
				2-16.V				
				16-30.V				
				30.V-13.VI	1*	1		
				13-27.VI	1*	1		

Acknowledgements

All curators of the above-listed collections are thanked for making avaible the specimens under their care. Special thanks to L. Bartolozzi (MSNUF, Italy), M. Brancucci (NMBA, Italy), B. Jaeger (MNHU, Germany), C. Leonardi (MCSNM, Italy), R. Poggi (MCSNG, Italy), F. Rigato (MCSNM, Italy) and M. Uhlig (MNHU, Germany). A number of friends and colleagues recently collected Dasytidae in Sardinia with extraordinary results: I am pleased to personally thank at least F. Angelini (Francavilla Fontana, Italy), P. Cornacchia (CNBFVR, Italy), C. Meloni (Cagliari, Italy), R. Monguzzi (Milano, Italy), R. Papi (Castelfranco di Sopra, Italy), P. Ponel (Pourcieux, France) and R. Poggi (MCSNG, Italy). R. Constantin (Saint Lô, France) offered substantial help in all matters relating to the Dasytidae of Corsica and North Africa. P. Cornacchia (CNBFVR, Italy) prepared the huge amount of specimens trapped at Monti Marganai and Montimannu. P. Cerretti, F. Mason, G. Nardi and D. Whitmore (CNBFVR, Italy) suggested the work and facilitated its publication. Thanks to G. Nardi for help with literature; R. Constantin and R. Poggi for providing useful comments on an early draft of the manuscript; and D. Whitmore for revising the English.

References

Abeille de Perrin, E. (1907) Dasytides nouveaux. *Annales de la Société des Sciences Naturelles de Provence, Comptes Rendus*, 1, xx–xxiii.

Agnesi, V. & Federico, C. (1995) Aspetti geografico-fisici e geologici di Pantelleria e delle Isole Pelagie (Canale di Sicilia). *In*: Massa, B. (Ed.), *Arthropoda di Lampedusa, Linosa e Pantelleria (Canale di Sicilia, Mar Mediterraneo). Il Naturalista siciliano*, 19 (Suppl.), pp. 1–22.

Allenspach, V. & Wittmer, W. (1979) *Insecta Helvetica Catalogus. 4. Coleoptera: Cantharoidea, Cleroidea, Lymexylonoidea*. Schweizerischen Entomologischen Gesellschaft, Zürich, 139 pp.

Angelini, F. (1991) Coleotterofauna dell'altipiano della Sila (Calabria, Italia) (Coleoptera). *Memorie della Società Entomologica Italiana*, 70(1), 171–254.

Anonymous (1994) *Atlante stradale d'Italia 1:200,000. Centro, vol. 2*. Touring Club Italiano, Milano, 132 pp.

Audisio, P., Gobbi, G., Liberti, G. & Nardi, G. (1995) Coleoptera Polyphaga IX (Bostrichoidea, Cleroidea, Lymexyloidea). *In*: Minelli, A., Ruffo, S. & La Posta, S. (Eds), *Checklist delle specie della fauna italiana, 54*. Edizioni Calderini, Bologna, pp. 1–27.

Bahillo de la Puebla, P. & Lopez-Colon, J.I. (2002) Aportaciones al Catalogo de los Coleopteros de la Comunidad autonoma vasca (Coleoptera). *Estudios del Museo de Ciencias Naturales de Alava*, 17, 141–145.

Bargagli, P. 1873. Materiali per la fauna entomologica dell'isola di Sardegna. Coleotteri. *Bullettino della Società Entomologica Italiana*, 5: 34–49.

Baudi di Selve, F. (1873a) Europae et circummediterraneae Faunae Dasytidum et Melyridum specierum, quae Comes Dejean in suo Catalogo ed. 3ª consignavit, ex ejusdem collectione in R. Taurinensi Musaeo asservata, cum auctorum hodierne recepta denominatione. *Berliner Entomologische Zeitschrift*, 17, 293–316.

Baudi di Selve, F. (1873b) Catalogo dei Dascillidi, Malacodermi e Teredili della Fauna europea e circummediterranea appartenenti alle collezioni del Museo Civico di Genova. *Annali del Museo Civico di Storia Naturale di Genova*, 4, 226–268.

Bertolini, S. (1899–1904) *Catalogo dei Coleotteri d'Italia*. *Rivista Italiana di Scienze Naturali*, 19–24 (Appendices), 144 pp.

Brullé, G.A. (1832) *Expedition scientifique de Morée; Section des Sciences Physiques Tome III, 1ière Partie. Zoologie, deuxième Section: les Animaux articulés*. Imprimeur Levrault, Paris, 395 pp.

Constantin, R. (1991) Description d'un *Dasytes* nouveau d'Espagne et notes faunistiques sur quelques Dasytinae aragonais (Coleoptera Melyridae). *Nouvelle Revue d'Entomologie (n.s.)*, 8, 399–406.

Constantin, R. (2005) Révision des *Aplocnemus* Stephens ibériques (Coleoptera Cleroidea Dasytidae). *Nouvelle Revue d'Entomologie (n.s.)*, 22(3), 197–231.

Constantin, R. (2007) Révision des *Aplocnemus* de France avec description de trois nouvelles espèces. Observations taxonomiques et faunistiques sur les espèces françaises de Dasytidae et Acanthocnemidae (Coleoptera Cleroidea). *Bulletin de la Société Entomologique de France*, 112(2), 151–170.

Constantin, R. & Klausnitzer, B. (1996) 65. Familie: Melyridae. *In*: Klausnitzer, B. (Ed.), *Die Käfer Mitteleuropas. Die Larven. 3.Band, Polyphaga, Teil 2*. Goecke & Evers Verlag, Krefeld, pp. 188–203.

Constantin, R. & Liberti, G. (2006) Révision des *Danacea* de Corse avec description de trois espèces et d'une sous-

espèce nouvelles (Coleoptera, Dasytidae). *Bulletin de la Société Entomologique de France*, 111(3), 369–392.
Costa, A. (1847a) Specie nuove e rare d'insetti delle montagne del Matese. *Annali dell'Accademia degli Aspiranti Naturalisti di Napoli (2ª Serie)*, 1, 89–131.
Costa, A. (1847b) Descrizione di alcuni coleotteri del Regno di Napoli. *Annali dell'Accademia degli Aspiranti Naturalisti di Napoli (2ª Serie)*, 1, 134–162.
Costa, A. (1882) Notizie ed osservazioni sulla geo-fauna sarda. Memoria Prima. Risultamento di ricerche fatte in Sardegna nel Settembre 1881. *Atti della Reale Accademia delle Scienze Fisiche e Matematiche di Napoli*, 9(11), 1–41.
Costa, A. (1883) Notizie ed osservazioni sulla geo-fauna sarda. Memoria Seconda. Risultamento di ricerche fatte in Sardegna nella primavera del 1882. *Atti della Reale Accademia delle Scienze Fisiche e Matematiche di Napoli, serie seconda*, 1(2), 1–109.
Costa, A. (1884) Notizie ed osservazioni sulla geo-fauna sarda. Memoria Terza. Risultamento di ricerche fatte in Sardegna nella estate del 1883. *Atti della Regia Accademia delle Scienze Fisiche e Matematiche di Napoli, serie seconda*, 1(9), 1–64.
Crowson, R.A. (1964) A review of the classification of Cleroidea (Coleoptera), with descriptions of two new genera of Peltidae and of several new larval types. *Transactions of the Royal Entomological Society*, 116(12), 275–327.
Cooter, J. (1991) *A Coleopterist's Handbook (3rd Edition)*. The Amateur Entomologist's Society, Feltham, 294 pp.
Desbrochers des Loges, J. (1870) Descriptions de Coléoptères nouveaux d'Europe et confins. *L'Abeille*, 7 [1869–1870], 97–135.
Fabricius, J.C. (1781) *Species Insectorum exhibentes eorum differentias specificas, synonyma, auctorum, loca natalia, metamorphosin. Adiectis observationibus, descriptionibus. Tom. I.* Carol. Ernest. Bohnii, Hamburgi et Kilonii, 552 pp.
Fabricius, J.C. (1792) *Entomologia Systematica emendata et aucta. Tom. I. Pars II.* Impensis Christ. Gottl. Proft, Hafniae, 538 pp.
Fabricius, J.C. (1798) *Supplementum Entomologiae Systematicae. Tom. V.* Proft et Storck, Hafniae, 572 pp.
Fagniez, C. (1946) Etude des *Divales* et *Dasytes* de France et de Corse (Col., Dasytidae). *Revue Française d'Entomologie*, 13(1), 19–27.
Fairmaire, L. (1860) Diagnoses de nouvelles espèces de Coléoptères. *Annales de la Société Entomologique de France (3)*, 8, 629–632.
Fiori, A. (1912) Indicazioni topografiche. *Rivista Coleotterologica Italiana*, 10, 127–133.
Fiori, G. (1963) Alcuni appunti sulla sistematica dei coleotteri Malachiidi e Dasytidi a livello delle famiglie e sulla loro etologia. *Atti dell'Accademia delle Scienze di Torino*, 97, 265–288.
Fiori, G. (1971) Contributi alla conoscenza morfologica ed etologica dei Coleotteri. IX. *Psilothrix viridicoeruleus* (Geoffr.) (Melyridae Dasytinae). *Studi Sassaresi. Sezione III: Annali della Facoltà di Agraria dell'Università di Sassari*, 19, 1–70.
Gené, J. (1836) De quibusdam Insectis Sardiniae novis aut minus cognitis. Fasciculus I. *Memorie della Reale Accademia delle Scienze di Torino*, 39, 161–199 + 1 pl.
Gené, J. (1839) De quibusdam Insectis Sardiniae novis aut minus cognitis. Fasciculus II. *Memorie della Reale Accademia delle Scienze di Torino (2ª serie)*, 1, 43–84 + 2 pls.
Geoffroy, E.L. (1785) [new taxa, as witnessed by Fourcroy]. *In*: Fourcroy, A.F. (1785) *Entomologia Parisiensis sive Catalogus Insectorum quae in Agro Parisiensi reperiuntur secundum methodum Geoffraeanam in sectiones, genera et species distributus; Pars prima*. Privilegio Academiae, Paris, 231 pp.
Gozis, M. des (1881) Quelques rectifications synonymiques touchant defférents genres et espèces de Coléoptères français (4e partie). *Bulletin de la Société Entomologique de France*, 1881, cxxxiv–cxxxv.
Gridelli, E. (1950) Il problema delle specie a diffusione transadriatica, con particolare riguardo ai Coleotteri. *Memorie di Biogeografia Adriatica*, 1, 7–288.
Holdhaus, K. (1923) Elenco dei Coleotteri dell'Isola d'Elba, con studi sul problema della Tirrenide. *Memorie della Società Entomologica Italiana*, 2, 77–175
Horion, A. (1953) *Faunistik der Mitteleuropäischen Käfer. Band III: Malacodermata, Sternoxia (Elateridae bis Throscidae)*. Entomologische Arbeiten aus dem Museum G. Frey, München (Sonderband), 332 pp.
Illiger, K. (1798) *Verzeichniss der Käfer Preussens. Entworfen von Johann Gottlieb Kugelann Apotheker in Ofterode. Ausgearbeiten von Johann Karl Wilhelm Illiger. Mit einem vorrede der Professors und Pagenhofmeisters Hellwig in Braunschweig*. Bei J. Gebauer, Halle, 510 pp.
Illiger, K. (1801) Nachtrag zum Verzeichnisse der Käfer Preussens. *Magazin für Insectenkunde*, 1(1–2), 1–94.
Kaszab, Z. (1955a) Neue und wenig bekannte Malacodermata (Coleoptera) aus dem Karpatenbecken. *Acta Zoologica Hungarica*, 1, 289–307.
Kaszab, Z. (1955b) *Különbözó Csápú Bogarak Diversicornia I. Lágytestú Bogarak Malacodermata (62 ábrával). Magyaroszág Allatvilága, VIII Kötet, Coleoptera III, 1. Füzet*. Akademiai Kiadó, Budapest, 144 pp.

Kiesenwetter, H. von (1859) Beitrag zur Käferfauna Griechenlands. Fünftes Stück: Elateridae, Dascillidae, Malacodermata. *Berliner Entomologische Zeitschrift*, 3, 17–34.
Kiesenwetter, H. von (1863) Zweite Gruppe. Dasytina, *In*: Erichson, W.F. *Naturgeschichte der Insecten Deutschland. IV Band, erste Abteilung*. Ed. Nicolai, Berlin, pp. 621–668.
Kiesenwetter, H. von (1864) Neue Arten der Gattungen *Antidipnis* und *Dasytes*. *Berliner Entomologische Zeitschrift*, 8, 387–389.
Kiesenwetter, H. von (1865) Eine entomologische Excursion nach Spanien im Sommer 1865. *Berliner Entomologische Zeitschrift*, 9, 359–396.
Kiesenwetter, H. von (1867a) Beiträge zur Käferfauna Spaniens (Zweites Stück). Melyridae (Fortsetzung), Ptinidae. *Berliner Entomologische Zeitschrift*, 11, 109–134
Kiesenwetter, H. von (1867b) Revision der Dasytidengattung *Dolichosoma*. *Berliner Entomologische Zeitschrift*, 11, 136–140.
Kiesenwetter, H. von (1871) Beiträge zur Kenntniss der Malacodermen-Fauna von Corsica, Sardinien und Sicilien. *Berliner Entomologische Zeitschrift*, 15, 75–86.
Kocher, L. (1956) Catalogue commenté des Coléoptères du Maroc. Fascicule III. Malacodermes, Serricornes. *Travaux de l'Institut Scientifique Chérifien, Série Zoologie*, 8, 50–71.
Krausse, A. (1913) Bei Sorgono im Gennargentugebirge auf Sardinien gesammelte Coleopteren. *Archiv für Naturgeschichte*, 79 (Abt. A, Heft 1), 59–64
Küster, H.C. (1849) *Die Käfer Europa's. Nach der Natur beschriben. 19es Heft*. Verlag von Bauer und Raspe, Nürnberg, 100 nr's.
Küster, H.C. (1850) *Die Käfer Europa's. Nach der Natur beschriben. 21es Heft*. Verlag von Bauer und Raspe, Nürnberg, 100 nr's.
Küster, H.C. (1852) *Die Käfer Europa's. Nach der Natur beschrieben. 24es Heft*. Verlag von Bauer und Raspe, Nürnberg, 100 nr's.
Laporte de Castelnau, F.L. (1840) *Histoire Naturelle des Insectes Coléoptères, tome premier*. Duménil Editeur, Paris, 325 pp.
Lawrence, J.F. & Newton, A.F.Jr. (1995) Families and subfamilies of Coleoptera (with selected genera, notes, references and data on family-group names). *In*: Pakaluk, J. & Ślipiński, S.A. (Eds), *Biology, Phylogeny and Classification of Coleoptera - Papers celebrating the 80th birthday of Roy A. Crowson*. Museum i Instytut Zoologii PAN, Warszawa, pp. 779–1006.
Liberti, G. (1979) Revisione delle specie italiane del genere *Danacaea*, primo gruppo (Coleoptera Dasytidae). *Memorie della Società Entomologica Italiana*, 57 [1978], 29–45.
Liberti, G. (1984) III Contributo alla conoscenza del Genere *Danacaea*. Revisione delle specie italiane del 4° gruppo (Coleoptera Dasytidae). *Atti della Società Italiana di Scienze Naturali e del Museo Civico di Storia Naturale di Milano*, 125(3–4), 159–179.
Liberti, G. (1985) IV Contributo alla Conoscenza del Genere *Danacaea* Cast. (Col., Dasytidae). Descrizione del Sottogenere nuovo *Allodanacaea* e revisione delle specie italiane. *Annali del Museo Civico di Storia Naturale "Giacomo Doria"*, 85, 333–362.
Liberti, G. (1988) The fauna of the Aegean island of Thira. VIII. Dasytidae (Coleoptera). *Giornale Italiano di Entomologia*, 4, 11–15.
Liberti, G. (1989) V Contributo alla conoscenza del genere *Danacaea* Cast. (Coleoptera, Dasytidae). Revisione delle specie italiane del II e del III Gruppo. *Entomologica Basiliensia*, 13, 279–302.
Liberti, G. (1995a) Revisione delle specie italiane del genere *Aplocnemus* Stephens (Coleoptera Melyridae Rhadalinae). *Memorie della Società Entomologica Italiana*, 73, 153–194.
Liberti, G. (1995b) Coleoptera Melyridae. *In*: Massa, B. (Ed.), *Arthropoda di Lampedusa, Linosa e Pantelleria (Canale di Sicilia, Mar Mediterraneo). Il Naturalista siciliano*, 19 (Suppl.), pp. 493–503.
Liberti, G. (2004a) Il genere *Dasytes* Paykull in Italia. Revisione e catalogo topografico, sinonimico e bibliografico delle specie italiane (Coleoptera, Dasytidae). *Annali del Museo Civico di Storia Naturale "Giacomo Doria"*, 96, 253–340.
Liberti, G. (2004b) Fauna Europaea: Dasytidae. *In*: P. Audisio (Ed.), *Fauna Europaea: Coleoptera 2, Beetles*. Fauna Europaea version 1.1, available at http://www.faunaeur.org [accessed September 2009 as version 1.3 of April 19th 2007.]
Liberti, G. (2005) Improved solutions of two water soluble media for mounting beetle genitalia. *The Coleopterist*, 14(1), 29–35.
Liberti, G. (2007a) Descrizione di un nuovo *Aplocnemus* subg. *Diplambe* di Sardegna (Coleoptera, Cleroidea, Dasytidae). *Doriana*, 8(353), 1–5.
Liberti, G. (2007b) Descrizione di 3 nuove specie di *Danacea* subg. *Allodanacaea* della fauna italiana (Coleoptera, Cleroidea, Dasytidae) (7° contributo alla conoscenza delle *Danacea* italiane). *Doriana*, 8(355), 1–10.
Liberti, G. (2007c) The Dasytidae of the Naples province (Coleoptera). *In*: Nardi, G. & Vomero, V. (Eds), Artropodi del

Parco Nazionale del Vesuvio. Ricerche preliminari. *Conservazione Habitat Invertebrati, 4*. Cierre Edizioni, Verona, pp. 191–200.
Liberti, G. & Focarile, A. (2005) I Dasytidae del Canton Ticino (Coleoptera, Cleroidea). *Bollettino della Società Ticinese di Scienze Naturali*, 93, 19–39.
Liberti, G. & Schembri, S. (2002) Dasytidae of the Maltese Archipelago (Coleoptera, Cleroidea). *Bollettino della Società Entomologica Italiana*, 134(2), 175–186.
Liberti, G. & Zinetti, F. (2009) Nota su alcuni *Aplocnemus* italiani nuovi o poco noti, con descrizione di *Aplocnemus etruscus* n. sp. (Coleoptera Dasytidae). *Bollettino della Società Entomologica Italiana*, 141(1), 45–53.
Lohse, G.A. (1979) 30. Familie: Melyridae (Dasytidae). *In*: Freude, H., Harde, K.W. & Lohse, G.A. (Eds), *Die Käfer Mitteleuropas, Band 6: Diversicornia*. Goecke & Evers Verlag, Krefeld, pp. 69–83.
Lohse, G.A. (1992) 30. Familie: Melyridae. *In*: Lohse, G.A. & Lucht, W.H. (Eds), *Die Käfer Mitteleuropas 2. Supplementband mit Katalogteil*. Goecke & Evers Verlag, Krefeld, pp 19–23.
Lucas, H. (1846) *Exploration Scientifique de l'Algerie pendant les Années 1840, 1841, 1842. Vol II. Histoire naturelle des animaux articulés. Cinquième classe. Insectes. Premier Ordre. Les Coléoptères.* Imprimerie Royale, Paris, 589 pp.
Luigioni, P. (1929) Coleotteri d'Italia. Catalogo sinonimico-topografico-bibliografico. *Memorie della Pontificia Accademia delle Scienze Nuovi Lincei*, 13, 1–1160.
Majer, K. (1984) A revision of the Genus *Divales* Cast. (Coleoptera, Melyridae, Dasytinae). *Entomologica Basiliensia*, 9, 265–317.
Majer, K. (1985) Supplementary notes to "Species of the Genus *Aplocnemus* of Middle Europe" (Col. Melyridae). *Deutsche Entomologische Zeitschrift*, 32, 35–41.
Majer, K. (1990) Anatomy of the alimentary canal and internal copulatory organs in Melyridae (Coleoptera). *Elytron*, 4, 83–99.
Majer, K. (1995) A review of the classification of the Melyridae and related families (Coleoptera, Cleroidea). *Entomologica Basiliensia*, 17 [1994], 319–390.
Majer, K. (1997) A revision of the tribe Amauronioidini (Coleoptera, Dasytidae). *Acta Musei Moraviae Scientiarum Naturaliae*, 81 [1996], 363–402.
Marsham, T. (1802) *Entomologia Britannica, sistens insecta britanniae indigena, secundum methodum linnaeanam disposita. Tomus I. Coleoptera.* Prostat Venalis Apud J. White, Londini, i-xxxi + 547 pp.
Mason, F., Cerretti, P., Nardi, G., Whitmore, D., Birtele, D., Hardersen, S. & Gatti, E. (2006) Aspects of biological diversity in the CONECOFOR plots. IV. The InvertebrateBiodiv pilot project. *In*: Ferretti, M., Petriccione, B., Bussotti, F. & Fabbio, G. (Eds), *Aspects of biodiversity in selected forest ecosystems in Italy: status and changes over the period 1996-2003. Third report of the Task Force on Integrated and Combined (I&C) evaluation of the CONECOFOR programme*. *Annali dell'Istituto Sperimentale per la Selvicoltura*, 30 (Suppl. 2), pp. 51–70.
Mayor, A. (2007a) New nomenclatorial and taxonomic acts, and comments. Dasytidae. *In*: Löbl, I. & Smetana, A. (Eds), *Catalogue of Palaearctic Coleoptera, Vol. 4. Elateroidea - Derodontoidea - Bostrichoidea - Lymexyloidea - Cleroidea - Cucujoidea. Catalogue*. Apollo Books, Stenstrup, pp. 58–59.
Mayor, A. (2007b) Acanthocnemidae; Prionoceridae; Melyridae; Dasytidae. *In*: Löbl, I. & Smetana, A. (Eds), *Catalogue of Palaearctic Coleoptera, Vol. 4. Elateroidea - Derodontoidea - Bostrichoidea - Lymexyloidea - Cleroidea - Cucujoidea.* Apollo Books, Stenstrup, pp. 384; 384–386; 386–388; 388–415.
Ménétriés, E. 1832. *Catalogue raisonné des objets de Zoologie recueillis dans un voyage au Caucase et jusqu'aux frontières actuelles de la Perse. Entrepris par ordre de S. M. L'Empereur.* L'Académie Imperiale des Sciences, St. Pétersbourg, 271 + xxxiii pp.
Müller, O.F. (1776) *Zoologiae Danicae prodromus seu animalium Daniae et Norvegiae indigenarum characteres, nomina, et synonyma imprimis popularium.* Hallager, Hafniae, 282 pp.
Mulsant, E. & Revelière, E. (1861) Description d'une espèce nouvelle de Coléoptère du genre *Dasytes*. *Opuscules Entomologiques*, 12, 10–12.
Mulsant, E. & Rey, C. (1868) *Histoire Naturelle des Coléoptères de France, Floricoles*. Deyrolle Naturaliste, Paris, 315 pp. + 19 pls.
Olivier, M. (1790) *Entomologie ou Histoire Naturelle des Insectes, avec leur caractéres génériques et spécifiques, leur descriptions, leur synonimie et leur figures enluminée. Coléoptères. Tome second. [No. 21. Mélyre.* Melyris, *1-12]*. Imprimerie Baudoin, Paris, 485 pp.
Panzer, W.G.F. (1793) *Faunae insectorum Germanicae initia oder Deutschlands Insecten. Heft 6*. Felsecker, Nürnberg, 24 pp.
Panzer, G.W.F. (1799) *Fauna Insectorum Germaniae initia oder Deutschlands Insecten. Heft 67.* Felsecker, Nürnberg, 24 pp.
Perris, E. (1869) Descriptions de quelques Coléoptères nouveaux. Rectifications et notes. *L'Abeille*, 7 [1869–1870], 3–37.
Peyerimhoff, P. de (1925) Nouveaux Coléoptères du Nord-africain. Cinquantième note (avec table). *Annales de la*

Société Entomologique de France, 94, 1–29.
Pic, M. (1894) Notes sur quelques Dasytides d'Algérie. *L'Echange, Revue Linnéenne*, 10(117), 111–112.
Pic, M. (1895a) Descriptions de coleoptères d'Algerie. *L'Echange, Revue Linnéenne*, 11(127), 78–82.
Pic, M. (1895b) A propos de variétés; 2ième article. *L'Echange, Revue Linnéenne*, 11(129–130), 106–108.
Pic, M. (1895c) Diagnoses de *Danacaea*. *Miscellanea Entomologica*, 3(10), 121–122.
Pic, M. (1902) Nouvelles espèces et varietés de coléoptères paléarctiques. *L'Echange, Revue Linnéenne*, 18(210), 31–33.
Pic, M. (1903) Sur les "*Dasytes*" du S.G. "*Metadasytes*" M.R. *L'Echange, Revue Linnéenne*, 19(221), 127–128.
Pic, M. (1908) Sur diverses Coléoptères français rares ou nouveaux. *L'Echange, Revue Linnéenne*, 24(282), 46–47.
Pic, M. (1913) Notes diverses, descriptions et diagnoses. *L'Echange, Revue Linnéenne*, 29(338), 105–106.
Pic, M. (1918) Contribution à l'étude des Dasytides. *L'Echange, Revue Linnéenne*, 34(hors text 385–386), 1–12.
Pic, M. (1921) Notes diverses, descriptions et diagnoses. (Suite.). *L'Echange, Revue Linnéenne*, 37(403), 1–4.
Pic, M. (1924a) Catalogue analytique et raisonné des Coléoptères de Saone-&-Loire et des Departements limitrophes par M. l'Abbé Viturat et M. Louis Fauconnet continué par M. Maurice Pic. 9.- Malachidae [sic]. *Bulletin de la Société d'Histoire Naturelle d'Autun*, 28, 51–114.
Pic, M. (1924b) Un nouveau *Dasytes* F. de Sardaigne. *Bullettino della Società Entomologica Italiana*, 56, 80.
Pic, M. (1927) Notes diverses, descriptions et diagnoses. *L'Echange, Revue Linnéenne*, 43, 13–14.
Pic, M. (1937) *Dasytidae: Dasytinae*. *In*: Schenkling, S. (Ed.), *Coleopterorum Catalogus*, Pars 155. Dr. W. Junk Verlag, s'-Gravenhage, 130 pp.
Pic, M. (1947) Coléoptères du Globe. *L'Echange, Revue linnéenne*, 63(508), 5–8.
Piras, L. & Pisano, P. (1972) Secondo contributo alla conoscenza faunistica della Sardegna: la costa del Sulcis (Sardegna sud-occidentale). *Bollettino della Società Sarda di Scienze Naturali*, 11, 3–28.
Piras, L., Pisano, P. & Solinas, A. (1970) Primo contributo alla conoscenza faunistica di alcune parti della Sardegna: la penisola del Sinis (Sardegna occidentale). *Bollettino della Società Sarda di Scienze Naturali*, 7, 77–93.
Porta, A. (1929) *Fauna Coleopterorum Italica. III – Diversicornia*. Stabilimento Tipografico Piacentino, Piacenza, 466 pp.
Porta, A. (1949) *Fauna Coleopterorum Italica. Supplementum II*. Stabilimento Tipografico Società Anonima G. Gandolfi, San Remo, 386 pp.
Pope, R.D. (1977) A Check List of British Insects, second Edition. Part 3: Coleoptera and Strepsiptera. *In*: Kloet, G.S. & Hinks, W.D (Eds), *Handbooks for the Identification of British Insects, Vol. XI, part 3*. Royal Entomological Society, London, pp. XIV + 105.
Prochazka, J. (1894) *Bestimmungs–Tabelle der europäischen Coleopteren: Cantharidae, II. Teil: Genus Danacaea. XXX. Heft*. Verhandlungen der Naturforschenden Vereins 33 (Sonderdruck), Brünn, 35 pp.
Prota, R. (1966) *Contributi alla conoscenza dell'entomofauna della Quercia da sughero (Quercus suber L.). V. Osservazioni condotte in Sardegna su Ooencyrtus kuwanai (Howard) (Hymenoptera Encyrtidae) nuovo per la fauna italiana*. Stazione sperimentale del Sughero, Tempio Pausania, Memoria nr. 17, 1–26.
Ragusa, E. (1872) *Haplocnemus trinacriensis*. *Bullettino della Società Entomologica Italiana*, 4, 83.
Ragusa, E. (1896) Catalogo ragionato dei Coleotteri di Sicilia. *Il Naturalista Siciliano (n.s.)*, 1, 69–106.
Redtenbacher, L. (1849) *Fauna Austriaca. Die Käfer, nach der analytischen Methode bearbeitet*. Carl Gerold, Wien, 883 pp.
Redtenbacher, L. (1858) *Fauna Austriaca. Die Käfer. Nach der analytischen Methode bearbaitet. Zweite Anlage*. Carl Gerold's Sohn Druck und Verlag, Wien, 1017 pp.
Reiche, M. L. (1863) Examen rapide de quelques pages du catalogue des Coléoptères d'Europe de M. Schaum, Berlin 1862. 2ième Partie. Malacodermata. *Annales de la Société Entomologique de France*, 3(4), 128–132.
Reitter, E. (1885) Übersicht der bekannten Dasytiscus-Arten. *Entomologische Nachrichten*, 11, 241–247.
Reitter, E. (1889) Neue Coleopteren aus Europa, den angrenzenden Ländern und Sibirien, mit Bemerkungen über bekannte Arten. Achter Theil. *Deutsche Entomologische Zeitschrift*, 33, 369–376.
Reitter, E. (1911) *Fauna Germanica. Die Käfer des Deutschen Reiches nach der analytischen Methode bearbeitet. III Band*. Lutz Verlag, Stuttgart, 436 pp.
Rosenhauer, W.G. (1856) *Die Tiere Andalusiens nach dem Resultate einer Reise susammengestellt, nebst den Beschreibungen von 249 neuen oder bis jetzt noch unbeschriebenen Gattungen und Arten.* T. Blaesing, Erlangen, 429 pp.
Rossi, P. (1792) *Mantissa Insectorum, exhibens species nuper in Etruria collectas, adiectis faunae Etriscae illustrationibus, ac emendationibus. Tomus primus*. Tipographia Polloni, Pisis, 148 pp.
Rossi, P. (1794) *Mantissa Insectorum, exhibens species nuper in Etruria collectas, adiectis Faunae etruscae Illustrationibus ac Emendationibus. Tom. II*. Ex Typographia Prosperi, Pisis, 154 pp.
Rottenberg, A. von (1870) Beiträge zur Coleopteren Fauna von Sicilien (Zweistes Stück). *Berliner Entomologische Zeitschrift*, 14, 235–260.
Sainte-Claire Deville, J. (1908) Catalogue critique des Coléoptères de la Corse. *Revue d'Entomologie*, 27(4–5), 213–222.
Schaufuss, L.W. (1867) Beitrag zur Gruppe der Malacodermata. *Stettiner Entomologische Zeitung*, 28, 81–86.

Schilsky, J. (1888) Beitrag zur Kenntnis der deutschen Käferfauna. *Deutsche Entomologische Zeitschrift*, 32(1), 177–190.
Schilsky, J. (1894a) Beitrag zur Kenntniss der Dasytinen. *Deutsche Entomologische Zeitschrift*, 1894(II), 225–236.
Schilsky, J. (1894b) *Die Käfer Europa's. Nach der Natur beschrieben von Dr. H. C. Küster und Dr. G. Kraatz. Heft XXX*. Verlag von Bauer und Raspe, Nürnberg, 100 nr's.
Schilsky, J. (1895) *Die Käfer Europa's. Nach der Natur beschrieben von Dr. H. C. Küster und Dr. G. Kraatz. Heft XXXI*. Verlag von Bauer und Raspe, Nürnberg, 100 nr's.
Schilsky, J. (1896) *Die Käfer Europa's. Nach der Natur beschrieben von Dr. H. C. Küster und Dr. G. Kraatz. Heft XXXII*. Verlag von Bauer und Raspe, Nürnberg, 32A–32Q pp. + 100 nr's.
Schilsky, J. (1897a) *Die Käfer Europa's. Nach der Natur beschrieben von Dr. H. C. Küster und Dr. G. Kraatz. Heft XXXIII*. Verlag von Bauer und Raspe, Nürnberg, 33A–33R pp. + 100 nr's.
Schilsky, J. (1897b) *Die Käfer Europa's. Nach der Natur beschrieben von Dr. H. C. Küster und Dr. G. Kraatz. Heft XXXIV*. Verlag von Bauer und Raspe, Nürnberg, 100 nr's + 34A–34Z, 34AA–34ZZ, 34AAA-34BBB pp.
Schmitz, H., Schmitz, A., Trenner, S. & Bleckmann, H. (2002) A new type of insect infrared organ of low thermal mass. *Die Naturwissenschaften*, 89, 226–229.
Schönherr, C.J. (1817) *Synonymia Insectorum, oder: Versuch einer Synonymie aller bisher bekannten Insecten; nach Fabricii Systema Eleutheratorum geordnet. Erster Band: Eleutherata oder Käfer. Dritter Teil*. Lewerentz, Scaris, 266 pp.
Scopoli, J.A. (1763) *Entomologia Carniolica exhibens Insecta Carnioliae indigena et distributa in ordines, genera, species, varietates. Methodo Linnaeana*. J.T. Trattner Vindobonae, 420 + 36 pp.
Seidlitz, G. (1891a) *Fauna Baltica. Die Käfer (Coleoptera) der deutschen Ostseeprovinzen Russlands. Zweite neu bearbeitete Auflage*. Hartungsche Verlagdrükerei, Königsberg, 818 pp.
Seidlitz, G. (1891b) *Fauna Transsylvanica. Die Kaefer (Coleoptera) Siebenbürgens*. Hartungsche Verlagdrükerei, Königsberg, 914 pp.
Solsky, S.M. de. (1868) Coléoptères nouveaux. *Horae Societatis Entomologicae Rossicae*, 5 [1867], 29–37.
Sparacio, I. (1997) *Coleotteri di Sicilia. Parte II*. L'Epos Editrice, Palermo, 206 pp.
Stephens, J.F. (1830) *Illustrations of British Entomology; or, a Synopsis of indigenous Insects: containing their generic and specific Distinctions, with an Account of their Metamorphoses, times of Appearance, Localities, Food and Economy as far as practicable. Mandibulata. Vol. III*. Baldwin & Cradock Publ., London, 374 pp.
Stephens, J.F. (1839) *A Manual of British Coleoptera, or Beetles; containing a brief description of all the species of beetles hitherto ascertained to inhabit Great Britain and Ireland*. Longman, Orme Brown, Green and Longmans, London, 443 pp.
Strassen, R. zur (1954) Eine Käfer-Ausbeute aus Sardinien. Mit zwei Neubeschreibungen (*Malthodes sassariensis* n. sp., *Amphimallon montanum* n. sp.) und vielen Neunachweisen. *Senckenbergiana*, 34(4–6), 259–289.
Tempère, G. (1974) Quelques Coléoptères méconnus et remarquables de la faune française. *L'Entomologiste*, 30(6), 226–231.
Thomson, C.G. (1864) *Skandinavians Coleoptera Synoptiskt Bearbetede, Tom VI. Lund (Tryckt uti)*. Lundbergska Bokztryckeriet, 385 pp.
Vigna Taglianti, A., Audisio, P., Belfiore, C., Biondi, M., Bologna, M., Carpaneto, G., De Biase, A., De Felici, S., Piattella, E., Racheli, T., Zapparoli, M. & Zoia S. (1993) Riflessioni di gruppo sui corotipi fondamentali della fauna W-paleartica ed in particolare italiana. *Biogeographia, Lavori della Società Italiana di Biogeografia (n. s.)*, 16 [1992], 159–179.
Vigna Taglianti, A., Audisio, P., Biondi, M., Bologna, M., Carpaneto, G., De Biase, A., Fattorini, S., Piattella, E., Sindaco, R., Venchi, A. & Zapparoli, M. (1999) A proposal for a chorotype classification of the Near East fauna, in the framework of the Western Palearctic region. *Biogeographia, Lavori della Società Italiana di Biogeografia (n. s.)*, 20, 31–59.
Westwood, J.O. (1839) Description of a new genus of coleopterous insects from Corfu. *The Transactions of the Entomological Society of London*, 2(3), 174–175.
Wollaston, T.V. (1854) *Insecta Maderensia; being an account of the insects of the islands of the Madeiran group*. J. Van Voorst, London, 634 pp.