THE GENUS *Dendarus* Latreille, 1829
(COLEOPTERA, TENEBRIONIDAE: DENDARINI) IN GREECE
(A systematic account of the genus with description of a new species and four new systematic combinations)

Apostolos Trichas

*Natural History Museum of Crete, University of Crete, 71409 Irakleio, Crete, Greece*

**Abstract** — A full systematic account of the genus *Dendarus* Latreille, 1829 (Coleoptera, Tenebrionidae) in Greece is presented, based on examination of material in the collections of the NHMC and review of the referenced data currently available. A new species from the Aegean area (*D. kochi* sp. nov. from Kythnos Island) is proposed, as well as several other taxonomic changes. Specifically, four subspecies are elevated to specific status [*Dendarus plicatulus* (Brullé, 1832); *D. paganettii* Koch, 1948; *D. jonicus* Koch, 1948; and *D. victoris* (Mulsant & Rey, 1854)].

**Key words**: *Dendarus*, Tenebrionidae, Aegean, Greece, Greek islands, islets

**INTRODUCTION**

The genus *Dendarus* Latreille, 1829 is distributed throughout the Mediterranean basin from Morocco to the Caucasus. The distribution pattern is only interrupted on the North African coasts of Algeria, Tunisia, and Libya, pointing to a possible avoidance of eremic and sandy biotopes without minimum vegetation.

More than 70 species of this genus are known so far from the distribution area, but given the remarkable diversity of these beetles on the Aegean islands (more than 30 species) this number can be easily surpassed in the future.

Only a few scientists have studied the genus extensively. Apart from several species descriptions in the 19th and early 20th century by well-known researchers of that time (Brullé, Mulsant, Rey, Reitter, etc.), only the works of Koch and Espanol in the middle of the 20th century went deeply enough into diversity of the genus to be satisfactory. Espanol (1937, 1945, 1961, plus numerous descriptions and smaller contributions) dealt mainly with diversity of the genus *Dendarus* in the Western Mediterranean area, while Koch (1935a, 1935b, 1935c, 1948a, 1948b) focused mainly on the Eastern Mediterranean.

The taxonomy of this genus before the monographic contributions of the last two authors was cloudy. Formulated mainly by Reitter (1904), the older taxonomy
postulated a subgenus on the basis of a few misguided morphological traits, which led to a confusing classification, mixing Western with Eastern Mediterranean taxa under the same subgenus. However, even with several of the older problems solved, systematic confusion in the Eastern Mediterranean area is still apparent, and a robust phylogenetic hypothesis of this area is needed.

A project involving phylogenetic and biogeographic studies on this genus (and several more Tenebrionid taxa) in the Eastern Mediterranean region has therefore been going on over the last six years, these studies incorporating both morphological (Chatzimanolis et al., 2002, 2003; Trichas et al., 2008) and molecular data (Poulakakis et al., in preparation). The current paper is an attempt to summarize existing knowledge about the Greek taxa of the genus *Dendarus* and establish a basis for forthcoming analyses of the extant data. During preparation of the material herein, a new taxon (*D. kochi*) from Kythnos Island (Aegean Sea) was discovered, and the need for several new systematic combinations of older taxa became apparent. To be specific, *D. plicatulus plicatulus* (Brullé, 1832), *D. plicatulus paganettii* Koch, 1948, *D. plicatulus jonicus* Koch, 1948, and *D. plicatulus victoris* (Mulsant & Rey, 1854) are all well-known taxa established on the basis of clear and discrete characters. They also are allopatric to the best of our knowledge, some of them insular, others inhabitants high mountains. We therefore propose their elevation to specific status herein.

**MATERIAL AND METHODS**

All examined specimens are deposited in the Natural History Museum of Crete, University of Crete (NHMC, Arthropod Section), dry mounted or in jars with alcohol (75% or 99%) as preservative. The vast majority of these specimens were collected either by hand or with the aid of pitfall traps from 1985 to 2008. Several specimens are dated even before this time period. For specimens obtained by pitfall trapping, the date affixed to samples is the date of trap collection. In cases when trapping was repeated over several periods (for experimental purposes or for faunistic studies) and the coordinates were the same, we combined all the specimens belonging to a single coordinate (site) with the note: «in total».

Specimens deposited in the NHMC and collected after 1995 are designated by corresponding coordinate data obtained through field GPS devices by the collectors. Coordinates are also designated for older specimens (after communication with the collectors, members of the NHMC staff). The Google Earth (v. 4.3) and ESRI ArcGIS Desktop (Redlands, California, USA) computer programs were used to establish the given coordinates. In most of these cases, the accuracy of placement was in the range of several hundreds meters (vs. several meters for data obtained after 1995). The GIS re-designation of older data was in many cases obligatory due to many specimens from small islets and many islets with name problems (more than one name, same names but in different archipelagoes, etc.).

The following things are given for each species is given: 1) *brief diagnostic notes*
treating only crucial morphological characters [more complete descriptions of Greek *Dendarus* spp. can be found in published sources such as Reitter (1905), Koch (1948), Chatzimanolis et al. (2002), etc.], 2) general *distribution* of the species with all *localities referenced* for Greece and Cyprus [references before 1965 are given only if omitted from the last catalog of Greek Tenebrionidae compiled by Kühnelt in “*Catalogus Faunae Graeciae*” edited by Kanellis (1965)], 3) *material examined* by the author (all locations on the island of Crete are presented geographically from west to east), and 4) taxonomic or distributional *remarks*.

- Each species is accompanied by a photograph of a male specimen taken by the author (*Dendarus* females share almost none of the crucial traits that designate the species).
- The species account is given alphabetically, while the photographic appendix follows a systematic approach.
- When very small islets are near a well-known larger island, the name of the islet is followed by the nearest large island’s name (i.e., Styra Islet, Evvoia Isl.)
- Abbreviations: BL=Body length, N and E indicate cardinal points (north and east, respectively).

### RECORDED SPECIES AND TAXONOMY

1. *Dendarus ananensis* Chatzimanolis, Engel & Trichas, 2002

**Brief diagnosis:** Species belonging to the Cretan “*foraminosus* species-group”, with clearly elongate pronotum (with almost parallel lateral margins) and no groove on the anterior part of the prosternum. BL: 10 mm. (Photo 1, Table I).

**Distribution and referenced localities:** Ananes Islet endemic.

Ananes islet (Chatzimanolis et al., 2002).

**Material examined:**


**Remarks:** *Dendarus ananensis* is the most remotely located species of the “*foraminosus* species-group” (Ananes Islet is less than 25 ha, lying 22 km southwest of the island of Milos and 112 km north of Chania, the nearest Cretan landmass).

The volcanic origin of Ananes Islet [the date of which remains unknown, but was probably somewhat less than ~300.000 years ago (see also Tataris, 1970; and Anastasakis and Piper, 2005)] and geographical position of the islet leave no other way of explaining the occurrence of this species there than by long-distance dispersal from Crete.

Also noteworthy is the fact that the given species co/occurs on the islet with *D. werneri*, a species endemic to the nearby Milos and Kimolos Islands. This makes the islet of Ananes the smallest area in the Aegean Sea with two different species of *Dendarus*!
2. *Dendarus anaphianus* Koch, 1948

**Brief diagnosis:** Species with undeveloped mesal process on protibiae (extremely obtuse angle in the beginning of the process and mostly convex interspaces between longitudinal grooves on elytra). Mesotarsi very slightly or not dilated. BL: 11-15 mm. (Photo 17, Table V).

**Distribution and referenced localities:** Endemic to Anaphi and Astypalaia Archipelagoes.

Anaphi; Ftena Islet of Anaphi (Kühnelt, 1965).

Anaphi Island and the surrounding islets: Ftena; Flini; Pacheia; Anydros Islet (Chatzimanolis et al., 2002).

Astypalaia Island and the surrounding islets: Pontikousa; Ag. Kyriaki; Fteno; Koutsomytis; Lignos; Chondros; Megalo Fokionisi; Vagi; Kounoupi (Trichas et al. 2008).

**Material examined:**

Astypalaia, 36°33′55″N, 26°24′2″E, 24.02.2005, one male, leg. Chatzaki; Megalo Fokionisi Islet, near Astypalaia, 36°36′32″N, 26°21′0″E, 28.02.2005, one female, leg. Chatzaki; Vagi Islet, near Astypalaia, 36°35′44″N, 26°21′35″E, 28.02.2005, one female, leg. Chatzaki; Kounoupi Islet, near Astypalaia, 36°32′16″N, 26°28′6″E, 11.06.2005, one female, leg. Chatzaki;

Remarks: The distribution of *D. anaphianus* marks the southern border of distribution of the “sinuatus-group”, reflecting the edges of the old pre-Pleistocene landmasses of the Central Aegean (Cyclades) area [see also discussion in Chatzimanolis et al., (2003)]. The small Astypalaia Archipelago seems to represent exactly these southern edges, as all islets or small archipelagoes south of Astypalaia (i.e., the Syrna islets) share *Dendarus* spp. of totally different lineages (*D. stampalicus* of the *rhodius*-group). Moreover, when Koch named *D. anaphianus* as such, from the island of Anaphi, no Astypalaia specimens were available; thus, he gave the name of Astypalaia island (Astypalaia = Stampalia in his time, ~1940) to Syrna specimens, possibly implying that the island of Astypalaia also shares the *D. rhodius stampalicus* form [see faunal remarks in Trichas et al., (2008)].

The complex geological history of the Central Aegean landmass throughout the last 3-4 million years is reflected by the present-day distribution of many members of the “sinuatus-group” on these islands (see the remarks on other members of this group). Different populations on several islands or islets show considerable variation in size, i.e., specimens from Anydros Islet are 30% shorter than Astypalaia or Anaphi individuals. Others seem to hop some islets and can be found where another species could be expected on the basis of geography. For example, although the geographical position of Iraklia islet suggests that it should be populated by *D. sinuatus* individuals, the male that we examined from this islet clearly shares all the typical *D. anaphianus* characters (undeveloped mesal process on protibiae, not dilated mesotarsi, and clearly carinated elytral interspaces), making this specimen the most remote representative of the species.

3. *Dendarus angulitibia* Koch 1948

Brief diagnosis: Species very similar to *D. dentitibia*, with less strongly developed tooth on protibiae. BL: 14-15 mm. (Photo 18, Table V).

Distribution and referenced localities: Tinos Island endemic.

Tinos Island (Kühnelt, 1965).

Tinos Island (Chatzimanolis et al., 2002).

Material examined:

Tinos Island, 6 km southeast of Kardiani, 410 m alt., 37°34′46″N, 25° 8′36″E, 26.09.2002, one male, three females, leg. Simaiakis; Tinos Island, Kionia Beach, 37°33′6″N, 25° 8′35″E, 07.04.2004, one female, leg. Simaiakis; Tinos Island, east of Chora, 100 m alt., 37°32′40″N, 25°10′56″E, 07.04.2004, one male, three females, leg. Simaiakis; Tinos Island, Kampos, 6 km northwest of Kardiani, 250 m alt., 37°35′2″N, 25°8′12″E, 07.04.2004, one female, leg. Simaiakis; Tinos Island, 4 km
north of Chora, 250 m alt., \[37^\circ\text{33}'53"N, 25^\circ\text{10}'16"E\], 26.09.2002, two males, one female, leg. Simaiakis.

**Remarks:** *Dendarus angulitibia* is strongly related to *D. dentitibia* and *D. sinuatus* of the “sinuatus species-group”, which is associated with the Cyclades Islands of the Aegean Sea. The species coexists on the island of Tinos together with *D. messenius*, a common species of continental Greece (that penetrates the Cyclades area over island “stepping stones” from Ëvvoia to Andros, Tinos, and Mykonos Islands).

4. *Dendarus antikythirensis* Chatzimanolis, Engel & Trichas, 2002

**Brief diagnosis:** Species with almost absent mesal process on protibiae (less eminent even than in *D. anaphianus*), although showing clear affinities to the “sinuatus species-group” in all other traits. BL: 13–14 mm. (Photo 19, Table V).

**Distribution and referenced localities:** Antikythira Island endemic.
Antikythira Island, Aegean Sea (Chatzimanolis et al., 2002).

**Material examined:**
Antikythira Island, 700 m. vest of Potamos, in abandoned cultivations, \[35^\circ\text{52}'53"N, 23^\circ\text{17}'6"E\], 05.08.2001, one male, leg. Chatzaki; Antikythira Isl., Potamos to Pateriana, \[35^\circ\text{52}'24"N, 23^\circ\text{17}'42"E\], 05.08.2001, one female, leg. Chatzaki; Antikythira Isl., labelled: “dense maquis”, same coordinates, 01.01.1992, two males, one female, leg. Mylonas; Antikythira Isl., labelled: “maquis”, \[35^\circ\text{52}'3"N, 23^\circ\text{17}'40"E\], 18.01.1992, three males, one female, leg. Mylonas; Antikythira Isl., labelled: “cultivations”, \[35^\circ\text{52}'44"N, 23^\circ\text{17}'47"E\], 20.01.1992, nine males, seven females, leg. Mylonas; Antikythira Isl., labelled: “abandoned cultivations”, \[35^\circ\text{52}'32"N, 23^\circ\text{17}'22"E\], 20.01.1992, one female, leg. Mylonas; Antikythira Isl., labelled: “cultivations”, \[35^\circ\text{51}'57"N, 23^\circ\text{18}'14"E\], 25.01.1992, five males, leg. Mylonas; Antikythira isl., labelled: “Antikythira”, 22.01.1992, one female, leg. Mylonas;

**Remarks:** The distribution of *D. antikythirensis* represents the southwest boundary of the “sinuatus species-group”. Antikythira Islet, although very close to Crete (~35 km from the nearest Cretan coast vs. 112 km between Ananes Islet and Crete, see also *D. ananensis*), shares no common *Dendarus* spp. with Crete or forms of Cretan origin like those of “foraminosus” lineage. The same pattern is also followed by many other Tenebrionidae and other beetle species of the islet, which show Central Aegean faunal affinities instead (Trichas, 1996). This seems to support a vicariant hypothesis as to formation of the islet’s fauna, a remnant character being assigned to *D. antikythirensis* (Chatzimanolis et al., 2003).

5. *Dendarus caelatus* Brullé 1832

**Brief diagnosis:** Clearly wider than long ninth and 10\(^{\text{th}}\) antennal segments, almost quadrate pronotum, deep apical lateral invagination of inner surface of protibias, widened mesotibiae, thick line of yellow setae present on meso- and metatibiae. BL: 9 mm.

**Distribution and referenced localities in Greece:** Continental Greece and Ionian
Sea, Western Italy, Southern Albania.

Epirus: Ioannina (Kühnelt, 1965);

Ionian Sea: Kerkýra isl.: Mt. Pantokrator, Gastouri, Mandouki, Lagoon, (Kühnelt, 1965), Kassiopi, Vraganiotika, Mt. Pantokrator 900 m (Ardoin, 1976) Lefkada Isl.: Mt. Stavrotas, Syvros, Mt. Megan Oros, Kefallinia Isl.: Argostoli, Krani, Zakynthos Isl.: Zakynthos Castle, Keri, Skopos, Maries, Koiliomenos, Volimes, Mt. Vrachionas (Kühnelt, 1965); Ionian Islands (Andres, 1921);

Akarnania: Mesolóngi (Kühnelt, 1965);

Thessália: Mt. Pílio (Kühnelt, 1965);

Peloponnísos: Patra, Methoni (Modon in Kühnelt), Kambós, Exochori, Gytheio (Kühnelt 1965); Patra (Andres, 1921);

Greece and Ionian Islands (Kaszab, 1967).

**Material examined:**


**Remarks:** A few years ago, *D. caelatus* was believed to have a western (Ionian) distribution in continental Greece, being also present in a few locations in Puglia (Eastern Italy; Aliquo et al., 2007) and Southern Albania (Kaszab, 1967). However, recent findings at two locations in Central and Eastern Turkey (Kula and Ulukışla, Tezcan et al., 2004) throw totally new light on the distribution of this species.

### 6. *Dendarus corcyrensis* Koch, 1948

**Brief diagnosis:** Apicolateral invagination of the inner surface of protibiae very faint (as in *D. lugens*); small and dense setae present underneath the profemur (sparse in *D. lugens*); third to seventh elytral interspaces strongly carinated. Metatibiae straight (slightly curved in *D. lugens* Koch, 1948).

**Distribution and referenced localities:** Kerkyra’s endemic species.

Kerkyra (Corfu), Palaiokastritsa (Kühnelt, 1965);

Ionian Islands (Kaszab, 1967).

**Remarks:** There are no new specimens available after Koch’s (1948) original description.

### 7. *Dendarus dalmatinus* (Germar 1824)

**Brief diagnosis:** Apicolateral invagination of the inner surface of protibiae developed as a strong notch, elytral interspaces strongly carinated, metatarsi with two lines of golden yellow setae (in both sexes; Koch, 1948).

**Distribution and referenced localities:** Eastern Adriatic Coasts and other continental sites from Trieste to Greece, peninsular Central-South Italy (Aliquo et al., 2007), Asia Minor (Ferrer and Soldati, 1999).
Kefallinia and Kerkyra (Mt. Pantokrator) Islands (Kühnelt, 1965);
Kefallinia and Kerkyra Islands (Marcuzzi, 1981);
Ionian Islands (Kaszab, 1967);
Greece (Andres, 1921);

8. Dendarus dentitibia Koch, 1948

**Brief diagnosis:** Unique among “sinuatus species-group” for the extreme development of the mesal process on protibiae. BL: 15-16 mm. (Photo 20, Table V).

**Distribution and referenced localities:** Andros Island endemic.
Andros Island, Mt. Kouvaras (Kowari in Kühnelt) (Kühnelt, 1965).
Andros Island (Chatzimanolis et al., 2002).

**Material examined:**
Andros Island, Menites, “dense phrygana”, 284 m alt., 37°49′34″N, 24°54′6″E, 01.05.2002, two males, three females, leg. Simaiakis; Andros Island, Menites, “dense maquis”, 317 m alt., 37°49′35″N, 24°53′54″E, 01.05.2002, 14 males, two females, leg. Simaiakis; Andros Island, Pitrofos, 378 m alt., 37°48′53″N, 24°52′52″E, 01.05.2002, one male, one female, leg. Simaiakis; Andros Island, Stenies Beach, 37°51′11″N, 24°56′19″E, 14.06.2003, one male, leg. Simaiakis; “Andros”, 19.12.1976, one female, leg. Mylonas.

**Remarks:** The species coexists on the island of Andros with D. messenius, which penetrates the Cyclades area over island “stepping stones” from Evvoia to Andros, Tinos, and Mykonos Islands.

9. Dendarus dragonadanus Koch, 1948

**Brief diagnosis:** Similar in appearance to Cretan high-mountain foraminosus-group species, with flattened interspaces between longitudinal grooves on elytra, subequal pronotal length and width, small and less deep punctures on longitudinal grooves of elytra, and protarsi less dilated than in other foraminosus-group species [see Chatzimanolis et al. (2002) for discussion of the male protarsus in Dendarus spp., p. 311]. BL: 10-11 mm. (Photo 2, Table I).

**Distribution and referenced localities:** Dionysades Archipelago endemic, Northeast Crete.
Dionysades and Janisada Islets (Kühnelt, 1965).
Dionysades Archipelago (Chatzimanolis et al., 2002).

**Material examined:**
Gianisada Islet, 50 m alt., 35°19′36″N, 26°10′22″E, 15.04.2000, seven males, two females, leg. Mylonas; Dragonada Islet, 85 m alt., 35°20′48″N, 26°10′42″E, 15.04.2000, four males, three females, leg. Mylonas; Prasonisi Islet, 35°21′28″N, 26°10′42″E, 15.04.2000, 18 males, 13 females, leg. Mylonas; Paximada Islet, 35°22′36″N, 26°10′27″E, 14.04.2000, 10 males, 5 females, leg. Lymberakis.

**Remarks:** We examined all four populations of this small archipelago. Beetles
from the two larger islets (Gianisada and Dragonada) are identical in all traits, but
the Prasonisi and Paximada specimens are at least 25% shorter (10-11 vs. 7-8 mm,
respectively), and have even shallower punctuation on longitudinal grooves of the
eytra and even less dilated protarsi. Also, protibiae of the larger islet’s specimens are
more conical than protibiae of specimens from the smaller islets (the distal region
is almost twice as wide as the proximal region). Finally, although comparisons of
male genitalia within a single genus of Tenebrionidae are of little taxonomic value
due to wide variability (Bouchard and Yeates, 2001 and references therein), it should
be pointed out that the populations from the two larger islets follow the rules of
morphological uniformity outlined above, while in specimens from Prasonisi and
Paximada the male genitalia are more variable (e.g., they have much shorter median
lobes than males from the big islets).

New to Prasonisi and Paximada Islets.

10. Dendarus falassarnensis Chatzimanolis, Engel & Trichas, 2002

Brief diagnosis: Very similar to D. rhodius, but 20% smaller and with totally absent
apicolateral invagination (depression rather) on the inner surface of the protibiae.
BL: 8-9 mm. (Photo 13, Table IV).

Distribution and referenced localities: Falassarna Islet endemic, Northwest Crete
(Chatzimanolis et al., 2002).

Material examined:
Falassarna Islet (the northernmost of the three islets in Falassarna Bay), 35°30’16”N,
23°33’46”E, 26.11.1995, five males, two females, leg. Trichas.

Remarks: This is the most remote member of the “rhodius-group” of species (occurring
almost 300 km to the west of all other members of this group of species). The
location of the small islet in the vicinity of the famous ancient port of Polyrhenia
(more than 2,500 years old) suggests a possible human-induced dispersal (see also
comments in Chatzimanolis et al., 2003). Finally, it is noteworthy that specimens col-
lected along the nearby coast of Falassarna or on other islets of the Falassarna Cove
belong to a common species of Western Crete (D. opacus, see relevant entry).

11. Dendarus foraminosus (Küster, 1851)

Brief diagnosis: The reduced interspace between longitudinal grooves on the elytra
due to hyper-development of the punctures (which actually form the grooves) is
the most striking trait of external morphology of D. foraminosus. These punctures
are deep and large, giving in some specimens the appearance of irregularly formed
grooves. In addition, the elytra in typical specimens are mat and the pronotum
semi-mat or shiny (but never as shiny as in D. politus specimens). BL: 10-11 mm.
(Photo 3, Table I).

Distribution and referenced localities: Central Crete endemic.
Agios Ioannis, Rethymnon; Loutra, Rethymnon; Moni Agkarathou (Ep. Pediadas),
Irakleon; Astritsi (Ep. Pediadas), Irakleon; Kolomodis (Ep. Pediadas), Irakleon;
Gazi Maleviziou Irakleiou; Stalida Pediadas Irakleiou (Picka, 1984).

Irakleiou; Preveli 300 m Agiou Vasileiou Rethymnis; Rethymnon; Moires Kainouriou Irakleiou; Korfes Maleviziou Irakleiou; Armenoi Kriti; Askyfou Sfakion Chanion (?) The last reference of “Askyfou” should be assigned to *D. opacus* specimens, as *D. foraminosus* does not extend that far in Western Crete (Fattorini et al., 1999).

Prefectures of Irakleion and Rethymnon (Chatzimanolis et al., 2002).

**Material examined:**


Remarks: This is the most variable Cretan species in the foraminosus-group. The typical form with hyper-development of the elytral punctures and mat appearance can be found near the city of Irakleion and straight south, through the Messara Lowlands to Mt. Asterousia. To the east and west (ascending Mts. Dikti and Psiloritis), specimens with smaller elytral punctures and shiny appearance are more frequent, as a possible result of hybridization with high-altitude D. politus populations. This is strikingly evident at higher altitudes on Mt. Psiloritis (between 1400 and 1700 m alt., i.e., on the Nida Plateau). Many specimens show characters intermediary between D. foraminosus and D. politus: from extremely shiny appearance and minimal punctures (“politus” traits, see relevant entry) to less shiny with various sizes of punctures.

12. Dendarus graecus Brullé, 1832

Brief diagnosis: Species similar in appearance to the “sinuatus species-group” of the Central Aegean area. The most striking difference from all similar species is the presence of a deep invagination of the gula. Other traits: broad pronotum with strongly elongate punctures, sparse small yellow setae on the anterior surface of
the profemur, and small patches of yellow setae ventrally (a unique characteristic, ventrally present also on *D. mylonasi*, which in all other traits fits the definition of the “*foraminosus* group”). Large yellow setae on ventral surface of protibiae (on proximal part), thick yellow line of setae present only on metatibiae, and yellow thick brush of setae covering fully the ventral surface of metafemur. BL: 15-16 mm. (Photo 25, Table VII).

**Distribution and referenced localities:** Cretan endemic.

Agios Ioannis, (Ep. Agiou Vasileiou), Rethymnon; Kalathenes, (Ep. Kissamou), Chania, (“Chalatheres” in Kühnelt is probably the present-day “Malathiros”); Elos, (Ep. Kissamou), Chania; Ennea Choria, (Ep. Selinou), Chania; Omalos Plateau, (Ep. Kydonias), Chania (“Homalos-Hochebene” in Kühnelt); Mts. Lefka Ori and Psiloreitis (as “*D. graecus montanus*”) (Kühnelt, 1965); Mt. Lefka Ori on Omalos Plateau; Mt. Psiloreitis on Nida Plateau (Picka 1984); Mt. Lefka Ori on Omalos Plateau (Dajoz, 1976); Mt. Psiloreitis (Mt. Ida), Altopiano, north side, 1200 m (Ardoin, 1976); Mt. Lefka Ori on Omalos Plateau (1100 m alt.); Mt. Psiloreitis on Idaion Antron; Agia Sulia; Avdou 350 m alt.; Theriso (Fattorini et al., 1999). Western and Central Crete (Chatzimanolis et al., 2002).

**Material examined:**

Elos, Chania, 620 m alt., 35°21′41″N, 23°38′10″E, 25.06.1986, one male, leg. Legakis; Mt. Lefka Ori, Omalos Plateau, 1010 m alt., 35°19′49″N, 23°54′16″E, 19.10.1996, one male, leg. Vardinoyannis; Mt. Lefka Ori, north of Melindaou Peak, 1683 m alt., 35°20′20″N, 23°59′7″E, 09.05.2004, 11 males, 17 females, leg. Trichas; Mt. Lefka Ori, Kallergis Mountain Refuge, 1450 m alt., 35°19′25″N, 23°56′13″E, 19.10.1996, five males, two females, leg. Vardinoyannis; Mt. Lefka Ori, Trocharis Peak, 1800 m alt., 35°17′40″N, 24°3′7″E, 26.09.1991, three females, leg. Trichas; Mt. Lefka Ori, Melindaou Peak, 2000 m alt., 35°19′49″N, 23°58′52″E, 01.07.1994, one male, leg. Trichas; Mt. Lefka Ori, Anopoli, 600 m alt., 35°13′5″N, 24°6′8″E, 20.04.1991, one male, four females, leg. Trichas; Mt. Lefka Ori, Amonydi Plateau (above Askifou Plateau), 1300 m alt., 35°17′29″N, 24°8′46″E, 23.06.1990+26.09.1991, one male, one female (in total), leg. Trichas; Mt. Lefka Ori, Anopoli (*Pinus brutia* forest), 1105 m alt., 35°14′40″N, 24°6′8″E, 20.04.1991, one male, four females, leg. Trichas; Mt. Lefka Ori, Ammoudari Plateau (above Askifou Plateau), 1300 m alt., 35°17′29″N, 24°8′46″E, 23.06.1990+26.09.1991, one male, one female (in total), leg. Trichas; Mt. Lefka Ori, from Anopoli to Pachnes Peak, 1200 m alt., 35°15′0″N, 24°5′52″E, 03.08.1991, one female, leg. Lymberakis; Mt. Lefka Ori, south of Omalos Plateau, 1000 m alt., 35°19′56″N, 23°53′48″E, 08.05.1992, one male, leg. Trichas; Mt. Lefka Ori, Kallikratis Plateau, 950 m alt., 35°15′34″N, 24°15′8″E, one male, leg. Stathi; As Gonia, 6 km southeast of Kallikratis, 716 m alt., 35°15′22″N, 24°16′43″E, 29.05.2001+17.11.2000, seven males, three females (in total), leg. Stathi; Kournas lake (*Quercus coccifera* forest south of the lake), 35°19′36″N, 24°16′44″E, 20.08.1996+10.07.1997+10.05.1997+30.10.1996+25.06.1996, 16 males, 25 females (in total), leg. Lymberakis; leg. Trichas; Lake Kournas, 35°19′45″N, 24°16′7″E, 31.03.2000, 17 males, six females, leg. Stathi; Mt. Psiloreitis, Tigania,
Apostolos Trichas 431


Remarks: This species is a very interesting, both for its distribution on Cretan mainland and for its position in the Aegean area (in the context of its related species).

We have stressed in the past (Chatzimanolis et al., 2002) that D. graecus is distributed in Western to Central Crete. However, the records in Sitia and on Mt. Thrypti extend the limits of the species to the east, revealing at the same time an ecological rather than geographic distribution pattern. From the numerous records in Crete during the last years (and the older references as well), it is clear that lowland specimens are extremely rare. There are only a very few records under 600 m alt., and they are all by rivers or streams, generally in places with increased humidity. Dendarus graecus is also never recorded close to the sea or on any rocky or sandy islet north or south of Crete, as is the case with all members of the “foraminosus species-group”. Moreover, a pattern of decline in D. graecus population densities
is discernible from west to east on Crete and from north to south, following the climatic pattern of the island (humid northwest vs. dry southeast). The dry Mt. Asterousia in the south is the only mountainous area in Crete with no _D. graecus_ evidence so far.

### 13. _Dendarus grampusanus_ Koch, 1948

**Brief diagnosis:** Similar to _D. opacus_ of Western Crete, with less dull appearance (both pronotum and elytra are more shiny), pronotum almost quadrate with deeper punctuation, male protarsi clearly less dilated than in _D. opacus_, and elytra more curved laterally, giving a less slim shape than _D. opacus_. BL: 10-11 mm. (Photo 4, Table I).

**Distribution and referenced localities:** Gramvousa Islets of Western Crete: Imeri and Agria Gramvousa endemic.

Gramvousa Islet, Western Crete (“Grampusa” in Kühnelt, not mentioning the exact islet) (Kühnelt, 1965).

Grabousa Islet, Northwest Crete (Chatzimanolis et al., 2002).

**Material examined:**


**Remarks:** Some differences of minimal scale were recorded in specimens from the two islets. Agria Gramvousa’s form is closer to Koch’s (1948) original description: deeper punctuation on the pronotum, which is almost quadrate and shiny in contrast to Imeri Gramvousa’s _D. grampusanus_ and Cretan mainland specimens of _D. opacus_ (somewhat elongate pronotum in Imeri Gramvousa and clearly elongate and dull in _D. opacus_). Otherwise, both populations of the two islets differ clearly from mainland species in having a far less dilated protarsi.

### 14. _Dendarus jonicus_ Koch, status novum

**Phylax plicatulus** Brullé, 1832:210

**Dendarus plicatulus jonicus** Koch, 1948:352

**Brief diagnosis:** Profemorae with sparse golden seate underneath, elytral interspaces convex (flat or carinated in other species of the _plicatulus_-group, see relevant descriptions). BL: 15-16 mm. (Photo 31, Table VIII).

**Distribution and referenced localities:** Ionian Sea endemic.

Kefallinia Island: Argostoli, Mt. Ainos, 1000-1600 m alt. (Megalo Wouno in Kühnelt); Kerkyra island (Kühnelt, 1965).

Kerkyra Is.: Vraganiotika, Mt. Pantokrator, 900 m alt. (Dajoz, 1976).

Ionio (Kaszab, 1967).

**Material examined:**
Stamfani Islet, (Strofades Islands), juniper forest, $37^\circ14'51"N$, $21^\circ0'40"E$, 06.12.1991, one male, one female, leg. Mylonas; Stamfani Islet, (Strofades Islands), burnt phrygana and maquis, $37^\circ14'47"N$, $21^\circ0'28"E$, 05.12.1991, one male, leg. Mylonas; Arpya Islet, (Strofades Islands), site with halophytes, $37^\circ15'34"N$, $21^\circ0'16"E$, 06.12.1991, one female, leg. Mylonas; Arpya Islet, (Strofades Islands), maquis, $37^\circ15'37"N$, $21^\circ0'9"E$, 05.12.1991, one male, leg. Mylonas.

Remarks: New to Strofades Islets: Stamfani and Arpya, two totally isolated islets in the Ionian Sea, 50 km west of from the nearest Peloponnesian Coast and 45 km south of Zakynthos Island.

15. Dendarus kochi, new species

**Diagnosis (male):** The species is similar to *D. graecus* (Crete) and *D. werneri* (Milos, Kimolos, Ag. Efstratios), sharing several crucial characters with them, some of which once determined the state of the subgenus *Pandarus* Mulsant, 1854.

*Dendarus kochi* sp. n. (Photo 26, Table VII; and Photo 35, Table IX) shares with both of the above species: 1) the “golden thick brush of setae” that fully covers the ventral surface of the metafemora; 2) a thick yellow line of setae on the ventral surface of the metatibiae; 3) the absence of the same structure on the ventral surface of the mesotibiae; 4) small and sparsely distributed yellow setae ventrally on the profemur; 5) large yellow setae on the ventral surface of the protibiae; 6) two lines of golden-yellow setae on the ventral surface of the mesotarsus.

*Dendarus kochi* sp. n. can be easily distinguished from *D. graecus* and *D. werneri* by the complete absence of round punctures on the head and pronotum (even on the central disk of pronotum, *D. kochi* sp. n. shows a dense “mesh” of elongated punctures (Photo 35, Table IX) and by the presence of a pronotal central disk highly elevated over the level of the remainder of the pronotum in contrast to the two aforementioned species.

Other diagnostic characters: 1) shape of ninth and 10th antennal segments: clearly longer than wide (as in *D. werneri*, *D. graecus* has ninth and 10th antennal segments as long as wide); 2) shallow invagination of the gula (as in *D. werneri*, *D. graecus* has a very deep invagination, a unique character not shared by any other *Dendarus* spp. in the area); 3) transverse pronotum (1.5 times wider than long); 4) dense and deep punctuation on both sides of the body, which has a shiny appearance; 5) very small and delicate yellow setae underneath the profemora, more delicate and less dense than in *D. werneri* (*D. graecus* is the “hairiest”, on all legs); 6) mesal process on ventral surface of protibiae having the characteristic “straight-razor” shape of the “*sinuatus* species-group”; 7) probasitarsus clearly smaller than immediately following tarsomere; 8) male protarsus enlarged (moderately); 9) slender and straight meso- and metatibiae; 10) middle spaces between longitudinal grooves on elytra clearly convex, even on disk (*D. werneri* has almost flat interspaces, being slightly more convex from the disk to the lateral margins, while *D. graecus* also has convex interspaces); 11) body length: 14.7 mm (male).

Genitalia are very similar in all three species (Photo 38, Table IX).
Holotype: Male, labelled (in Greek): “Driopis to Lefkes, 3 km before Lefkes, KYTHNOS, 19.10.2002 [19 October 2002], leg. Simaiakis”. In the collection of the NHMC.

Paratype: One female; same locality, collection date, and collector as holotype. In the collection of the NHMC.

Distribution: Kythnos Island endemic (Aegean Sea).

Etymology: The specific epithet is a patronymic honoring C. Koch for his noted research in the Eastern Mediterranean region.

Material examined: Kythnos Island.
Kythnos Island, Driopis Road to Lefkes, 190 m alt., 37°22′29″N, 24°26′30″E, 19.10.2002, one male, one female, leg. Simaiakis.

16. Dendarus maximus Koch, 1948

Brief diagnosis: Distinct among the “foraminosus species-group” of the “Cretan area” by virtue of clearly larger body size in both sexes (~20%), dull appearance of the (almost quadrate) pronotum and elytra, almost invisible punctuation of the pronotum, and small punctures on longitudinal grooves of the elytra. BL: 13-14 mm (Photo 5, Table II).

Distribution and referenced localities: Gavdos Island and Gavdopoula Islet (Southwest Crete) endemic.

Gavdos Island (Kühnelt, 1965);
Gavdos Island (Picka, 1984).
Gavdos Island and Gavdopoula Islet (Chatzimanolis et al., 2002).

Material examined:

Remarks: Although many specimens from both Gavdos Island and Gavdopoula Islet were carefully compared, no differences between the two populations were detected (contrary to the existence of several morphological differences between populations on islets north of Crete, - i.e., D. dragonadanus, D. grampusanus, etc.).
Moreover, *D. maximus* is the only distinct form of the “*foraminosus* species-group” south of Crete. All other islets of Southern Crete are populated by species common on the nearby coast.

**17. Dendarus messenius** (Brullé, 1832)

**Brief diagnosis:** Apicolateral invagination of the inner surface of protibiae developed as a notch. Mesotarsi with a brush of yellow setae on middle of second and third tarsomeres, but only a tiny brush (~triangle) on anterior part of first. Metatarsi with dark setae (in both sexes). BL: 10-12 mm. (Photo 11, Table III).

**Distribution and referenced localities:** Southern Balkan Peninsula and Asia Minor.

Gevgeli, Kilkis; Vardarebene, Macedonia; Agion Oros, Chalkidiki; Ioannina; Mt. Oxya; Mt. Osra; Volos Magnisias; Megalo Keserli, Thessaly; Livanates, Fthiotis; Lamia Castle, Fthiotis; Mt. Parnassos, Fthiotis; Styliada, Fthiotis; Doris, Fokida; Mt. Penteliko, Attica; Mt. Parnitha, Attica; Athens, Attica; Faliro, Attica; Kareas, Attica; Mt. Ymittos, Attica; Pagkrati, Attica; Kifisia, Attica; Aigina, Attica; Velouchi, Sterea Ellada; Mt. Gkiona, Sterea Ellada; Pyrgos, Ilia; Corinth; Ano Trikala, Corinth; Kalamata, Messinia; Rintomo, Messinia; Mt. Parnon, Laconia; Koumani, Peloponneseus; Gytheio, Laconia; Anavryti, Mt. Taygetos, Peloponneseus; Mt. Chelmos, Peloponneseus; Mystras, Laconia; Voidia, Achaia; Kalavryta, Achaia; Tiryntha, Argolida; Nauplio, Argolida; Samothraki Isl., Evros; Karystos, Evvoia; Kyra Panagia Isl.; Skopelos Isl.; Skyros Isl.; Makronisos Isl.; Ikaria Isl., Agios Kirykos; Andros Isl., Mt. Kouvaras, Cyclades; Syros Isl. (Syra in Kuehnelt), Cyclades; Naxos Isl., Cyclades; Kea Isl., Cyclades; Tinos Isl., Cyclades; Mykonos Isl., Cyclades; Milos Isl., Cyclades; Palaeomilos (?) (No such islet or location in the area. Probably misspelled Antimilos or Erimomilos Islets); Lefkada Isl., Mt. Stavrotas; Lefkada Isl., Mt. Megan Oros; (Kühnelt, 1965).

Evvoia, Mt. Dirfi, Platania, 700 m (Fattorini et al., 1999).

Thasos Isl., Mt. Yparsi, 1127 m; Thasos Isl., Skala Kallirachis; Thasos Isl., Rachoni; Thasos Isl., Chrysi Akti (Ardoin, 1976).

Syros Isl., Cyclades (Andres, 1921)

Lake Kastoria, northern banks, 700 m; Mt. Vermio, 7 km southwest of Veria, 600 m (Schawaller, 1996).

Greece and Ionian islands (Kaszab, 1967).

**Material examined:**

Mt. Tzoumerka, saddle Tsoouma Plastari, crossroad from Kalarites to Matsouki, 1889 m alt., 39°36′54″N, 21°10′25″E, 28.06.2004, one female, leg. Trichas; Mt. Olympos, Bara Plateau, 4 km south of Petra, 805 m alt., 40°9′13″N, 22°20′4″E, 4.6.2007, three males, leg. Trichas; Volos, Alykes, 97 m alt., 39°20′20″N, 22°54′33″E, 30.10.2003, one female, leg. Kaltsas; Mt. Gkiona, Paliovouni Peak, Makrylakoma, 1965 m alt., 38°38′45″N, 22°18′48″E, 04.07.2008, eight males, eight females, leg.

Remarks: New for Limnos, Lesvos, and Kalymnos Islands and some massifs on the Greek mainland (i.e., Mt. Olympos). Specimens from Limnos and Kalymnos (as well as some Evvoia islets) are very tiny (~8 mm), but clearly bear the characteristic trait of the mesotarsi in *D. messenius*: “brush of yellow setae on middle of second and third tarsomeres, but only a tiny brush (~triangle) on anterior part of first tarsomere”.

18. *Dendarus moesiacus* (Mulsant & Rey, 1854)

Brief diagnosis: Similar to *D. messenius*, with an apicolateral invagination on the inner surface of the protibiae. Mesotarsi with a full brush of yellow setae on the first, second and third tarsomeres. More “coriaceus” appearance than *D. messenius* (due to heavier punctuation), which in many cases appears shiny. Elytral punctures generally bigger and deeper than in *D. messenius*. BL: 11-13 mm. (Photo 12, Table III).

Distribution and referenced localities: Southern Balkan Peninsula and Asia Minor. Agion Oros, Chalkidiki; Keretschkoj, Macedonia; Mt. Chortiatis, Salonika;
Samothraki Isl., Evros; Ikaria Isl., Agios Kirykos; Limnos Isl.; Chios Isl.; Kos Isl.; Skyros Isl., Linaria (Kinaria in Kühnelt); Mt. Penteliko, Attica; Mt. Ymittos, Attica; Mt. Pilio, Magnisia (Kühnelt, 1965).

18 km west of Amindeo, 700 m, Florina; delta of Evros River; Mt. Falakro, western slopes, 5 km north of Prototsani, 400 m, Drama (Schawaller, 1996).

Thasos Isl., Mt. Ypsari, 1127 m; Thasos Isl., Skala Kallirachis; Thasos Isl., Theologos; Thasos Isl., Chrysi Akti (Ardoin, 1976).

Gargaliani, southeast Peloponnesus, 400 m (the only reference from the southern end of Peloponnesus needs reconfirmation) (Dajoz, 1976).

Ipeiriotiki Ellada, Macedonia (Kaszab, 1967).

Ellada, Thrace (Picka, 1983).

Material examined:
Kavala, near Nestos River, Komnina, 100 m alt., 41°10'44"N, 24°41'52"E, 09.08.1999+10.10.1999, 10 males, 15 females (in total), leg. Nikolakakis; Kavala, Kotza Orman Forest, 11 km before the estuary, 48 m alt., 40°56'39"N, 24°44'56"E, 13.08.1999+10.10.1999, four males, six females (in total), leg. Havres; Drama, road from Livadero to Drama (10 km after Livadero), 896 m alt., 41°18'15"N, 24°13'3"E, 09.10.1999, one male, leg. Havres; Drama, road from Livadero to Drama (12 km before Livadero), 430 m alt., 41°14'23"N, 24°12'2"E, 11.08.1999+09.10.1999, seven females, leg. Nikolakakis; Skyros Island, Ferekampos, Agios Dimitrios Church, 109 m alt., 38°53'21"N, 24°32'20"E, 24.01.2002, two males, two females, leg. Triantis; Skyros Isl., Dafni Plateau, 402 m alt., 38°48'0"N, 24°38'45"E, 23.01.2002, three males, two females, leg. Triantis; Skyros Isl., Nyfi, 75 m alt., 38°48'44"N, 24°34'20"E, 23.01.2002, three males, two females, leg. Triantis; Skyros Isl., from Atsili to Panagia, 74 m alt., 38°51'48"N, 24°34'29"E, 20.01.2002, one male, four females, leg. Triantis; Skyros Isl., from Perama to Toumba (pine forest), 38 m alt., 38°54'29"N, 24°27'48"E, 22.01.2002, one female, leg. Triantis; Skyros Isl., Atsili, 76 m alt., 38°51'55"N, 24°34'6"E, 20.01.2002, one female, leg. Triantis; Skyros Isl., Mt. Kochylas, 588 m alt., 38°49'26"N, 24°36'52"E, 13.05.2002, six males, six females, leg. Mylonas; Skyros Isl., Kalamitsa, 38°55'56"N, 24°34'2"E, 23.1.2002, one male, leg. Mylonas; Skyros Isl., from Fortuna to Atsitsa (pine forest), 100 m alt., 38°56'41"N, 24°30'59"E, 22.01.2002, one male, leg. Triantis; Skyros Isl., Treis Boukes, Brouk Tomb, 100 m alt., 38°47'0"N, 24°36'42"E, 23.01.2002, eight males, five females, leg. Triantis; Skyros Isl., Thalia Islet, 38°51'43"N, 24°27'51"E, 12.05.2002, one male, six females, leg. Triantis; Skyros Isl., Platia Islet, 38°45'51"N, 24°35'2"E, 10.05.2002, three males, four females, leg. Triantis; Skyros Isl., Sarakino Islet, 38°45'11"N, 24°36'55"E, 10.05.2002, two males, leg. Triantis; Skyros Isl., Agios Fokas Islet, 38°51'40"N, 24°28'14"E, 12.05.2002, two males, three females, leg. Triantis; Skyros Isl., Valaxa Islet, 38°49'21"N, 24°30'6"E, 21.01.2002, one male, leg. Triantis; Mt. Gkiona, Kapsitsa Brook (fir forest), 905 m alt., 38°34'13"N, 22°19'43"E, 06.07.2008, five males, two females, leg. Vardinoyannis; Limnos Island, Kaspakas, 84 m alt., 39°56'4"N, 25°12'55"E, 09.06.2006, two males, six females, leg. Simaiakis.
Remarks: In our opinion, this species is not distributed as far south as Southern Attica. The older record in the southern end of Peloponnesus (Dajoz, 1976) needs reconfirmation.

19. *Dendarus mylonasi* Chatzimanolis, Engel & Trichas, 2002

Brief diagnosis: Distinct among all other *foraminosus*-group species by virtue of: 1) completely separated (by integument) dorsal and ventral portions of the compound eyes; and 2) yellow setae on the ventral surface of the profemur. It is also distinguished by extremely shallow punctures on the pronotum and elytra, which are dull (shiny on most other *foraminosus*-group species). Legs of more robust appearance than in other species of the *foraminosus*-group. BL: 14 mm. (Photo 6, Table II).

Distribution and referenced localities: Avgo Islet endemic, Cretan Sea (Chatzimanolis et al., 2002).

Material examined:
Avgo Islet (35 km north of Sissi, Eastern Crete, 85 km south of Santorini Is.), 35°36'10"N, 25°34'36"E, 02.03.1994, 12 males, 11 females, leg. Mylonas.

20. *Dendarus opacus* Koch, 1948

Brief diagnosis: Similar to *D. foraminosus*, as both have elongate pronota, prosterna posteriorly developed into a process, and enlarged protarsi. However, interspaces between longitudinal grooves on elytrae are always distinct, due to absence of hyper-developed punctures in longitudinal grooves. Punctuation on the central disk of the pronotum is more regular than in *D. foraminosus* and of equal density as elsewhere on the pronotum. BL: 11-12 mm. (Photo 7, Table II).

Distribution and referenced localities: Western Crete endemic.

Chalatheros (?) Chanion (Probably the present-day village of “Malathyro”, the entry being otherwise referred to as *D. foraminosus s. lato*) (Schuster, 1915).


Prefecture of Chania (Chatzimanolis et al., 2002).

Material examined:
Gramvousa Peninsula, 400 m alt., 35°34’22”N, 23°35’38”E, 26.06.1996, two females, leg. Lymberakis; Gramvousa Peninsula, 225 m alt., 35°34’25”N, 23°35’56”E, 21.04.1996, one female, leg. Trichas; Gramvousa Peninsula, small plateau at Agios Sozos Church, 168 m alt., 35°33’30”N, 23°36’21”E, 26.06.1996+ 23.08.1996+29.10.1996,
three males, five females (in total), leg. Trichas; Tigani on Gramvousa Peninsula, 17 m alt., 35°34'48"N, 23°35'19"E, 20.04.1996, one male, one female, leg. Trichas; Balos on Gramvousa peninsula, 50 m alt., 35°34'40"N, 23°35'8"E, 21.04.1996, four males, two females, leg. Trichas; Falasarna, 40 m alt., 35°30'32"N, 23°34'37"E, 26.11.1995, one male, five females, leg. Trichas; ancient port of Falasarna, 14 m alt., 35°30'38"N, 23°34'11"E, 26.11.1995, six males, leg. Trichas; Elafonisi, 7 m alt., 35°16'16"N, 23°32'48"E, 10.05.1997, one male, six females, leg. Trichas; Elafonisi, western end of the beach, end of the road, 35°18'39"N, 23°31'54"E, 04.07.1990, one female, leg. Trichas; Gouverneto, Strongylo Kefali, 212 m alt., 35°16'58"N, 24°8'25"E, 09.03.1997, three females, leg. Trichas; Mt. Lefka Ori, Xyloskalo, Crete, 1238 m alt., 35°18'32"N, 23°55'4"E, 10.04.1995+23.07.2008, one male, one female, leg. Mylonas; leg. Trichas; Mt. Lefka Ori, Village of Samaria (in Samaria Gorge), 312 m alt., 35°16'58"N, 23°57'33"E, 11.06.2006, one male, two females, leg. Stathi; Mt. Lefka Ori, Kladou Gorge, 343 m alt., 35°14'25"N, 23°55'43"E, 15.07.1994, two males, one female, leg. Trichas; Mt. Lefka Ori, Anopoli (Pinus brutia forest), 1105 m alt., 35°14'40"N, 23°58'8"E, 20.04.1991, one male, one female, leg. Trichas; Mt. Lefka Ori, Anopoli, 1005 m alt., 35°14'27"N, 24°6'20"E, 03.11.2001, two males, one female, leg. Galani; Mt. Lefka Ori, Anopoli, 600 m alt., 35°13'5"N, 24°5'14"E, 26.09.1991, two females, leg. Trichas; Mt. Lefka Ori, Anopoli, 891 m alt., 35°14'6"N, 24°6'6"E, 01.06.1990, one male, leg. Lymberakis; Mt. Lefka Ori, Amoudari Plateau (above Askyfou plateau), 1300 m alt., 35°17'29"N, 24°8'46"E, 20.04.1991+26.09.1991, one male, four females (in total), leg. Trichas; Mt. Lefka Ori, Niatou Plateau, 1235 m alt., 35°17'40"N, 24°8'18"E, 05.05.2001, one male, one female, leg. Parmakelis; Lake Agia, 100 m alt., 35°28'29"N, 23°56'2"E, 26.06.1996+22.08.1996+08.07.1997, seven males, two females (in total), leg. Trichas; leg. Lymberakis; Sémpronas, 638 m alt., 35°22'52"N, 23°48'37"E, 13.05.1995, two males, three females, leg. Trichas; Asì Gonia 6 km southeast of Kallikratis, 716 m alt., 35°15'22"N, 24°16'43"E, 17.11.2000+29.05.2001, six males, three females (in total), leg. Stathi; Lake Kournas (Quercus coccifera forest south of the lake), 100 m alt., 35°19'36"N, 24°16'44"E, 20.08.1996+10.07.1997+30.10.1996, 16 males, six females (in total), leg. Lymberakis; leg. Trichas; Lake Kournas, 100 m alt., 35°20'0"N, 24°16'44"E, 01.05.1985, one female, leg. Legakis; Archontiki, Mouselas, 100 m alt., 35°19'17"N, 24°19'30"E, 15.10.1987, one female, leg. Legakis; Bali Islet, 35°24'54"N, 24°49'35"E, 10.11.1995, two males, leg. Trichas.

Remarks: Although many individuals of high-altitude populations of D. opacus (ones living at 1000-1400 m alt.) were examined, no intermediate forms were observed between this species and D. wettsteini (see relevant entry) as in the case of mountain populations of other species of the foraminosus-group on Mts. Psiloreitis and Dikti. This fact points to a stronger degree of isolation of the two species and a possibly different scenario of evolution of the faunas on the three main Cretan mountain massifs.
21. **Dendarus paganettii** Koch, status novum

*Phylax plicatus* Brullé, 1832: 210

*Dendarus plicatus paganettii* Koch, 1948: 353

**Brief diagnosis:** Clearly distinguishable from similar species of the *plicatus*-group by virtue of possessing profemorae which are bald or with a few sparse setae underneath (golden brushes or dense setae are present in other members of the same group) and totally flat elytral interspaces (convex or carinated in other species). BL: 13-14 mm. (Photo 30, Table VIII).

**Distribution and referenced localities:** Attica and Peloponnesus endemic.

Attica; Mt. Parnassos; Mt. Parnitha (Parnes in Kühnelt); Mt. Kyllini mt. “hochalpin” (Ziria in Kühnelt); Skyros (Kühnelt, 1965).

Ziria; Mt. Kyllini, 2300 m; Mt. Chelmos, Zarouchla, 1000 m (Scupola, 1998).

Ipeirotiki Ellada (Kaszab, 1967).

**Material examined:**

Mt. Mainalo, Mourtzia Peak, 1789 m alt., 37°38’52”N, 22°15’34”E, 04.07.1998, one male, three females, leg. Trichas; Mat. Kyllini (peak), 2100 m alt., 37°55’38”N, 22°23’56”E, 07.07.1998, one male, leg. Trichas; Mt. Chelmos, plateau at ski center, 1700 m alt., 38°00’29”N, 22°12’15”E, 08.05.1999, one male, leg. Trichas.

**Remarks:** The specimens from Mts. Mainalo and Kyllini have profemora that are totally bald underneath, whereas the Mt. Chelmos sample has sparse yellow setae, but all of them bear entirely flat elytral interspaces.

22. **Dendarus plicatus** (Brullé), sensu stricto

*Phylax plicatus* Brullé, 1832: 210

*Dendarus plicatus plicatus* (Brullé, 1832)

**Brief diagnosis:** Protibiae with an apical (rather shallow) depression. Profemora with distinct golden brushes or dense setae underneath (characteristic only of *D. plicatus* and *D. victoris*). Metatarsi with two lines of golden setae (in both sexes), and meso- and metatibae with a thick yellow line underneath (characteristic also of *D. victoris*, *D. paganettii*, and *D. jonicus*). Metatibiae not straight in any *plicatus*-group members (skewed all the way from the middle to the distal end). Elytra with very thin longitudinal grooves of punctures, which (punctures) are dense and small. In the fourth groove, more than 30-35 punctures can be counted (trait of *D. plicatus* only). Interspaces on elytra, apart from the pronotal disk, mildly convex (totally flat in *D. paganettii*), never carinated (as in *D. victoris*). BL: 13-14 mm. (Photo 29, Table VIII).

**Distribution and referenced localities:** Peloponnesus endemic.

Mt. Taygetos: Rintomo (1000 – 1500 m alt.) and Vasiliki; Mt. Parnonas; Kalavryta; (Kühnelt, 1965).

Ipeirotiki Ellada (Kaszab, 1967).
Material examined:
Mt. Taygetos, Saidona, 1005 m alt., 36°53’22"N, 22°18’12"E, 10.05.1999, one male, leg. Mylonas.

23. Dendarus politus Reitter, 1904

Brief diagnosis: Easily recognizable among all Cretan Dendarus spp. by its overall very shiny appearance (Koch’s “lackglänzend”; Koch, 1948), which is due to extremely reduced overall punctuation (punctures sometimes not visible to the naked eye). Body generally smaller than in other Cretan Dendarus spp. Protarsi very dilated. BL: 10-11 mm. (Photo 8, Table II).

Distribution and referenced localities: Endemic at high altitudes (above ~1400 m) on Central Cretan mountains (Mts. Psiloreitis, Ida, Dikti, or Lassithi).
Mt. Psiloreitis, Timios Stavros Peak; Nida Plateau (Kühnelt, 1965).
Mt. Ida, north side, 1200 m (Ardoin, 1976).
Mt. Psiloreitis, 1200 m; Oros Ida, Psiloreitis, 1800 m; Mt. Psiloreitis, Idaion Antron; Mt. Psiloreitis, 1200-1500 m (Fattorini et al., 1999).
Mt. Psiloreitis, above 1000 m, prefecture of Rethymnon (Chatzimanolis et al., 2002).

Material examined:
27.11.1994, two males, leg. Trichas; Mt. Dikti, from Limnakaro Plateau to Dikti Peak, on a small leveling, 1464 m alt., \(35^\circ7'21''N, 25^\circ28'42''E\), 18.04.2004, one female, leg. Vardinoyannis.

**Remarks:** A very interesting species due to high-altitude endemism and extreme morphological adaptations. The striking shiny black appearance and overall smaller body size could be special adaptations to high altitude radiation and extreme temperatures at high altitudes on the Cretan massifs [for a more complete discussion of this subject, see Hodkinson (2005) and references therein].

The records on Mt. Dikti (one of the three main Cretan massifs) are new.

### 24. *Dendarus puncticollis* Koch, 1948

**Brief diagnosis:** Punctures on the abdomen deeply excavated and denser than in other *foraminosus*-group species. Protarsi clearly not enlarged (enlarged in *D. opacus, D. wettsteini, D. politus,* and *D. foraminosus*). Elytral punctuation similar to *D. opacus*. BL: 9-10 mm. (Photo 9, Table III).

**Distribution and referenced localities:** Eastern Crete endemic. 
Koufonisi Island (Koufonisi Siteias in Kühnelt); Chrysi Island (Gaidaronisi in Kühnelt); Goudouras Siteias; Ziros Siteias Plateau; Ierapetra; Siteia (Kühnelt, 1965). 
Koufonisi Island; Strongylo Islet; Trachilos Islet; Chrysi Island; Dia Islet (Chatzimanolios et al., 2002). 
Zakros Siteias; Knossos Irakleiou; Lake Kourna (Picka, 1984). The reference from Lake Kourna should be treated as erroneous (see *D. opacus* distribution); also, Knossos may refer to *D. foraminosus*.
Pacheia Ammos Ierapetras (Ardoin, 1976).

**Material examined:**
Dia Islet, \(35^\circ26'46''N, 25^\circ11'41''E\), 24.04.1994, one male, leg. Chatzaki; Dia Islet, \(35^\circ26'48''N, 25^\circ12'1''E\), 02.05.1999, three males, three females, leg. Nikolakakis; Dia Islet, \(35^\circ26'47''N, 25^\circ12'21''E\), 03.08.1999, three males, four females, leg. Trichas; Dia Isl., Panagia Cove, 31 m alt., \(35^\circ26'24''N, 25^\circ13'27''E\), 03.08.1999, one female, leg. Trichas; Mt. Dikti, Magoulas, 995 m alt., \(35^\circ9'18''N, 25^\circ27'8''E\), 11.12.1990, one female, leg. Trichas; Mt. Dikti, Omalos Viannou Plateau, 1400 m alt., \(35^\circ4'20''N, 25^\circ26'55''E\), 26.05.1999, one male, two females, leg. Trichas; Agioi Pantes Islet, \(35^\circ11'53''N, 25^\circ43'52''E\), 16.02.1996+03.05.1997, five males (in total), leg. Trichas, leg. Mylonas; Psira Islet, \(35^\circ11'22''N, 25^\circ51'39''E\), 05.05.1997, one male, three females, leg. Mylonas; Cha Gorge, 295 m alt., \(35^\circ5'12''N, 25^\circ49'58''E\), 14.12.1997, one female, leg. Trichas; Xerokampos, southeast of Chamaetoulo, 134 m alt., \(35^\circ2'13''N, 26^\circ12'17''E\), 06.08.2000+12.10.2000+06.05.2001, five males, five females (in total), leg. Chatzaki; Eastern Crete, road from Moni Toplou to Vai, 105 m alt., \(35^\circ14'11''N, 26^\circ13'38''E\), 02.06.1997, five males, five females, leg. Stathi; Eastern Crete, road from Moni Toplou to Vai, 107 m alt., \(35^\circ14'2''N, 26^\circ13'24''E\), 11.12.1993, five males, five females, leg. Trichas; Eastern Crete, road from Moni Toplou to Vai, 2 km before Vai, 107 m alt., \(35^\circ14'32''N, 26^\circ14'59''E\), 14.01.1996, 1 male, leg. Lymberakis; Moni...

Remarks: Although *D. puncticollis* is present on all small islets in Eastern and Southeast Crete, the degree of variation of the populations on those islets is surprisingly low, contrary to speciation of the *foraminosus*-group on northern islets (see relevant entries for *D. mylonasi*, *D. dragonadanus*, *D. grampusanus*, etc.). The difference in geological age of the northern vs. the southern part of Crete (the northern part is much older on the geological time scale) (Meulenkamp et al., 1994) could constitute interesting grounds on which to base phylogenetic hypotheses about formation of the Cretan *Dendarus* fauna.

### 25. Dendarus rhodius Baudi, 1876

**Brief diagnosis:** Pronotum with subequal sides (elongate in *D. sporadicus* of the *rhodius*-group), apicolateral depression very clear on inner surface of protibiae, tibia forming a small inwardly directed process at the end (absent in *D. stampalicus*). BL: 10-12 mm. (Photo 14, Table IV).

**Distribution and referenced localities:** Dodecanese Islands and southern coastal regions of Asia Minor.

Rhodes, Mt. Filerimos; Trianta; Agia Anastasia; Kalythies (Kalithea in Kühnelt); Ikaria, Agios Kirykos; Alatonisi Islet in Fournoi Islets (Alazonisi bei Phurni in Kühnelt); Karpathos; Kos; Chalki Island (Kühnelt, 1965).

Rhodes, Mt. Profitis Ilia, 800 m (Ardoin, 1976).
Rhodes (Marcuzzi, 1976).

Kos, Mt. Dikaios, 350 m; Karpathos, Katodio Aperiou; Karpathos, Olympos, 300 m; Karpathos, Stes, 450 m; Kos, Lagoudi, 250 m; Kos, Old Pyli, 400 m (Fattorini et al., 1999)

Rhodes, Karpathos, Ikaria, Kos, and Chalki Islands (Chatzimanolis et al., 2002).

**Material examined:**

Rhodes Island, Mt. Attavyros, phrygana, 1010 m alt., 36°11’52”N, 27°51’5”E, 12.05.2006+08.07.2006, two males, five females (in total), leg. Chatzaki; Rhodes Isl., road from Afandou to Psinthos, 115 m alt., 36°18’15”N, 27°38’56”E, 04.01.2000, one female, leg. Mylonas; Rhodes Isl., Mt. Profitis Ilias, 641 m alt., 36°16’28”N, 27°56’26”E, 01.01.20000, two females, leg. Mylonas; Rhodes Isl., Moni Tsampika, 128 m alt., 36°13’50”N, 28°8’2”E, 10.07.2006, one female, leg. Chatzaki; Rhodes Isl., Mt. Profitis Ilias, 2 km before Elafos Hotel, 553 m alt., 36°16’50”N, 27°56’26”E, 04.01.2000, one female, leg. Mylonas; Rhodes Isl., Loutani River, near Epta Piges, by the riverbank, 100 m alt., 36°15’23”N, 28°6’54”E, 10.07.2006, one female, leg. Chatzaki; Rhodes Isl., Mt. Profitis Ilias, 2 km before Elafos Hotel, 553 m alt., 36°16’26”N, 27°57’5”E, 04.01.2000, one female, leg. Mylonas; Rhodes Isl., Mt. Profitis Ilias, 614 m alt., 36°16’28”N, 27°56’26”E, 01.01.2000, two females, leg. Mylonas; Rhodes Isl., Moni Tsampika, 128 m alt., 36°13’50”N, 28°8’2”E, 02.01.2000, one male, one female, leg. Mylonas; Rhodes Isl., Prasonisi Islet, phrygana, 14 m alt., 35°53’3”N, 27°46’2”E, 09.07.2006, six females, leg. Chatzaki; Rhodes Isl., Prasonisi Beach (before the islet, phrygana), 42 m alt., 35°53’34”N, 27°46’32”E, 09.07.2006, five females, leg. Chatzaki; Karpathos Island, near the airport, 12 m alt., 35°25’48”N, 27°7’39”E, 23.08.2001, four males, three females, leg. Chatzaki; Karpathos Isl., road from Volada to Lastos, 727 m alt., 35°33’41”N, 27°9’12”E, 08.04.2000, four males, three females, leg. Stathi; Karpathos Isl., road from Pyles to Foiniki (phrygana), 157 m alt., 35°31’27”N, 27°7’20”E, 11.07.2006, one male, two females, leg. Chatzaki; Karpathos Isl., road from Volada to Lastos, 727 m alt., 35°33’41”N, 27°9’12”E, 23.08.2001, four males, three females, leg. Chatzaki; Karpathos Isl., road from Pyles to Foiniki (phrygana), 157 m alt., 35°31’27”N, 27°7’20”E, 11.07.2006, one male, two females, leg. Chatzaki; Karpathos Isl., road from Volada to Lastos, 727 m alt., 35°33’41”N, 27°9’12”E, 23.08.2001, three males, five females, leg. Chatzaki; Telendos Islet (near Kalymnos Island), 37°0’14”N, 26°55’19”E, 10.06.2005, four males, 10 females, leg. Chatzaki; Platy Islet (between Kalymnos and Pserimos Islands), 36°56’42”N, 27°5’41”E, 31.03.2005, one male, leg. Mylonas; Symi Island, Megalos Sotiras Monastery, road to Panormitis, 458 m alt., 36°34’29”N, 27°50’6”E, 12.07.2006, two males, four females, leg. Chatzaki; Pserimos Islet, 121 m alt., 36°56’21”N, 27°7’46”E, 01.04.2005, two males, one female, leg. Mylonas; Pserimos Islet, 22 m alt., 36°56’55”N, 27°8’26”E, 02.04.2005, two males, two females, leg. Mylonas; Pacheia Islet (near Nisyros), 36°34’9”N, 27°4’18”E, 05.02.1993, one male, two females, leg. Mylonas.

**Remarks:** New to Symi, Telendos, Pserimos, Platy, and Pacheia Islands.

*26. Dendarus schatzmayri* Koch, 1948

**Brief diagnosis:** Recognizable by the golden brushes on metafemorae (as in *D. graecus* and *D. werneri*, but sparser) and the clearly visible mesal process on the ventral surface of protibiae. Thick yellow lines absent from both meso- and metatibiae, as in all members of the “sinuatus-group” of species. BL: 15-16 mm. (Photo 21, Table VI).

**Distribution and referenced localities:** Syros, Siphnos, and Kythira Island endemic. Syros (Sira in Kühnelt) (Kühnelt, 1965).
Syros (Fattorini et al., 1999).
Syros and Kythira Islands (Chatzimanolis et al., 2002).

Material examined:

Remarks: New on Siphnos Island.

27. *Dendarus scoparipes* Reitter, 1904

**Brief diagnosis:** The only Greek *Dendarus* species with a characteristic “wisp” (or short brush) of golden setae present apically on the inner side of male protibiae. Mesal process on ventral surface of protibiae absent. Meso- and metatibiae with no thick yellow line of setae underneath (as in “*sinuatus*-group” of species). BL: 15-16 mm. (Photo 24, Table VI).

**Distribution and referenced localities:** Kythira Island endemic.

Kythira (Kühnelt, 1965).

Material examined:

Remarks: This is a species having unsolved relationships with the other lineages of Greek *Dendarus* species. The absence of a thick yellow line of setae underneath meso- and metatibiae links *D. scoparipes* with the “*sinuatus*-group” of species, but the lack of a mesal process on the ventral surface of protibiae, together with the apical golden brush contradict this speculation.

The distribution of this species is also peculiar, since Kythira Island is too close to the Peloponnnesian mainland to have endemic species status without any similar species on the nearby coasts.

28. *Dendarus sinuatus* (Mulsant & Rey, 1854)

**Brief diagnosis:** Koch’s key character of “dilated mesotarsus” in *D. sinuatus* and
D. angulitibia [D. sinuatus tibialis and D. sinuatus angulitibia (in Koch, 1948); see Chatzimanolis et al., (2002) for a taxonomic discussion] is the only reliable trait that can be followed in many D. sinuatus populations of the Central Aegean area. The presence of flat interspaces between longitudinal elytral grooves is also clearly applicable, at least for the majority of D. sinuatus populations. Protarsi are also extremely dilated in most of the populations examined. BL: 14-17 mm. (Photo 22, Table VI).

**Distribution and referenced localities:** Central Aegean (Cyclades) endemic.

Mykonos Isl.; Paros Isl.; Naxos Isl. (Kühnelt, 1965).

Naxos Isl.; Mykonos Isl.; Mavro Islet; Kinaros Islet; Bouves Islet; Amorgos Isl.; (Chatzimanolis et al., 2002).

[The older reference in the table (p. 549): “D. sinuatus: Griechisches Festland” cited by Kaszab (1967) should be considered as erroneous].

[In Schuster (1936) there is a mention of “D. tibialis” distributed on Siphnos, Milos, Sikinos, Ios, Amorgos, Mytilini, Keros, Kato Kupho, and Syra. Since the systematic status of Seitlitz’s (1893) “D. tibialis” has been altered to D. sinuatus (Chatzimanolis et al., 2002), these records are under consideration, although the islands of Ios and Amorgos are indeed populated by D. sinuatus. Keros and Kato Kupho (Kato Koundouros today) probably are also populated by D. sinuatus].

**Material examined:**

Myconos Island, Elia, 100 m alt., 37°26'10"N, 25°23'54"E, 21.10.2002, two males, leg. Simaiakis; Naxos Island, Lionas, 98 m alt., 37°8'30"N, 25°34'59"E, 08.12.1979, one female, leg. Mylonas; Naxos Isl., Moutsouna, 37°4'44"N, 25°35'7"E, 01.05.1982+01.07.1982, one male, one female (in total), leg. Legakis; Naxos Isl., Marathos, 231 m alt., 37°0'16"N, 25°27'56"E, 11.12.1979, one female, leg. Mylonas; Paros Island, Marathi, ancient quarries, 288 m alt., 37°4'34"N, 25°11'3"E, 23.09.2002, one male, leg. Simaiakis; Amorgos Island, Mt. Korakas, 386 m alt., 36°46'54"N, 25°48'6"E, 02.12.1979, one male, one female, leg. Mylonas; Amorgos Isl., Minoa archeological site, 114m alt., 36°49'6"N, 25°51'54"E, 30.10.2002, one female, leg. Simaiakis; Amorgos Isl., Agios Georgios, 36°50'36"N, 25°53'24"E, 03.12.1979, one male, leg. Mylonas; Amorgos Isl., from Arkesini to Ammoudi, 314 m alt., 36°47'2"N, 25°47'19"E, 01.10.2003, eight males, nine females, leg. Simaiakis; Ios Island, Mylopotas, 36°42'21"N, 25°17'41"E, 22.09.2002, one male, one female, leg. Simaiakis; Ios Isl., from Chora to Psathi (10 km before Psathi), 36°44'52"N, 25°18'46"E, 21.11.2002, one female, leg. Simaiakis; Donoussa Islet, Charavgi (Kavos Panagias), 37°5'35"N, 25°47'56"E, 14.05.2003, three females, leg. Simaiakis; Donoussa Islet, Donoussa Beach, next to the port, 37°6'1"N, 25°47'42"E, 13.05.2003, one male, two females, leg. Simaiakis; Schinoussa Islet, 1 km northeast of Mersini (in cultivations), 36°52'37"N, 25°30'38"E, 13.05.2003, four females, leg. Simaiakis; Kinaros Islet, 36°58'50"N, 26°17'18"E, 15.01.1990, three males, leg. Mylonas; Levitha Islet, east of the light house, 37°0'2"N, 26°29'25"E, 17.01.1990, one male, one female, leg. Mylonas; Levitha Islet, central part of the islet, 37°0'20"N, 26°26'53"E, 14.11.1989, one female, leg. Mylonas; Mavria (Mavri or Megalo Mavro) Islet, 36°59'43"N,

**Remarks:** All examined specimens from the bigger islands of Mykonos, Paros, Naxos, and Ios, as well as those from the islets of Donousa and Koufonisi, share with equal strength the following traits: a) extremely dilated protarsi; b) dilated mesotarsi; and c) clearly flattened interspaces on the elytra. Specimens from Amorgos and Kinaros also share characters a+b with equal strength, but there are samples with somewhat convex interspaces on the elytra. It is possible that hybridization with the nearby populations on Anaphi Island (see *D. anaphianus*) took place on Amorgos.

On the island of Mykonos, *D. sinuatus* coexists with *D. messenius*, which penetrates the Cyclades area over island “stepping stones” from Evvoia to Andros, Tinos, and Mykonos Islands.

New on Ios, Donousa, Schinousa, Levitha, and Koufonisi Islands.

29. *Dendarus sporadicus* Koch, 1948

**Brief diagnosis:** Clearly smaller than *D. rhodius*, with elongate pronotum (quadrate in *D. rhodius*). Punctures on longitudinal grooves on elytra more densely packed than in *D. rhodius*. BL: 8-10 mm. (Photo 15, Table IV).

**Distribution and referenced localities:** Kasos Archipelago endemic.

Kasos Island, Armathia Islet (Kühnelt, 1965);

Kasos Island; Armathia; Makronisi; Lytra and Karofylla Islets of Kasos (Chatzimanolis et al., 2002).

**Material examined:**


30. *Dendarus stampalicus* Koch, 1948

**Brief diagnosis:** Smaller than *D. rhodius*. Apicolateral depression of inner surface of protibiae totally absent (as in *D. falassarnensis*). Punctures on head and pronotum clearly elongate (*D. rhodius* and *D. sporadicus* have rounded punctuation). Male protarsi mildly enlarged. BL: 8-10 mm. (Photo 16, Table IV).
Distribution and referenced localities: Syrna Archipelago endemic.
Megali Zafora Islet (Megale Zafrana in Kühnelt); Syrna (Sirina in Kühnelt) (Kühnelt, 1965);
East Ounio, Adelfoi, Astakidopoula, Stefania, Zafora, Karavia, and Astakida Islets of Syrna; Syrna (Chatzimanolis et al., 2002).

Material examined:
Syrna Island, 248 m alt., 36°20'45"N, 26°40'44"E, 27.10.1993, four males, five females,
leg. Mylonas; Stefania Islet, 36°18'0"N, 26°45'30"E, 10.10.1993+29.10.1993, five males,
nine females (in total), leg. Trichas, leg. Mylonas; Plakida Islet, 36°17'5"N, 26°44'43"E,
29.10.1993, two males, three females, leg. Mylonas; Mesi Islet, 36°17'57"N, 26°44'28"E,
29.10.1993, one male, seven females, leg. Mylonas; East Ounio Islet, 35°49'34"N,
26°27'57"E, 20.04.1989, eight males, 13 females, leg. Trichas; Karavia Islet (southern
islet or Mikro Karavonisi), 35°59'41"N, 26°26'9"E, 21.04.1989, one male, five females,
leg. Valakos; Astakida Islet, 35°53'11"N, 26°49'11"E, 22.04.1989, 11 males, 29 females,
leg. Mylonas, leg. Trichas; Astakidopoula Islet, 35°52'31"N, 26°49'28"E, 22.04.1989,
four males, six females, leg. Mylonas; Dyo Adelfia Islet (the east islet), 36°25'20"N,
26°37'11"E, 26.10.1993, one male, four females, leg. Mylonas.

31. *Dendarus stygius* (Waltl, 1838)

Brief diagnosis: General appearance and size close to “*sinuatus*-group” of species,
with characteristic “golden brushes” under profemora and several (6-10) long thin
hairs in the middle of protibiae. Meso- and metatarsi with two lines of golden-yellow
setae. BL: 14-16 mm. (Photo 28, Table VII).

Distribution and referenced localities: Ikaria, Samos, Kalymnos, and Asia Minor
coastal region endemic.

Ikaria (Nikaria in Kühnelt); Samos, Marathokampos; (Koch’s *D. stygius oertzeni* from
Karystos, Evvoia should be given further consideration - see remarks) (Kühnelt, 1965).

*D. s. stygius*: Ipeirotiki Ellada; *D. s. oertzeni*: Ipeirotiki Ellada (see remarks) (Kaszab,
1967).

*D. stygius* - Naxos, *D. stygius* - Syra, Naxos (?) (Ferrer and Soldati, 1999).

Material examined:
Samos Island, Psili Ammos, 37°42'25"N, 27°01'29"E, 02.05.2006+06.07.2006+ 11.
11.2006+01.07.2007+03.09.2007+ 31.11.2007, four males, eight females (in total),
leg. Kaltas; Ikaria Island, Perdiki, Agios Georgios Church, 510 m alt., 37°39'42"N,
26°18'38"E, 26.08.200, one female, leg. Stathi; Kalymnos Island, Emporeios, 50
m alt., 37°2'57"N, 26°55'50"E, 23.02.2004, five males, two females, leg. Triantis;
Kalymnos Island, Stymenia, 150 m alt., 36°59'47"N, 26°57'57"E, 25.02.2004, one
male, one female, leg. Triantis.

Remarks: In the original description of *D. stygius oertzeni* based on three specimens
from Southern Evvoia (Karystos), Koch (1948) emphasized the reduced “golden
brushes” on the profemora and lack of thin hairs on the protibiae as key traits of
this subspecies. However, one of four males of the Samos population and two males
from Kalymnos show a complete lack of long thin hairs on the protibiae, while the “golden brushes” varied in size. Without excluding accidental severing of the setae, it seems probable that this trait varies widely. The status of *D. stygius oertzeni* therefore needs to be reconsidered.

In addition, male specimens from Kalymnos bear pronota of more or less subequal dimensions vs. clearly transverse shape of the pronotum in specimens of the Samos population.

New to Kalymnos Island.

**32. Dendarus tenellus** (Mulsant & Rey, 1854)

**Brief diagnosis:** Small (almost half the size of *D. messenius*). Apicolateral invagination of the inner surface of protibiae developed as a notch. Protibiae strongly dilated apically and longitudinally arcuate. Mesotibiae each with an apical spine. BL: 7-8 mm.

**Distribution and referenced localities:** Greece and Asia Minor.

Arcadia; Arachova; Dorida; Rafina Attica; Faliro Attica; Mt. Ymittos, Attica, Athens; Akrokorinthos (Kühnelt, 1965).

Milos Isl., south part, 400 m alt. (Dajoz, 1976).

Ipeirotiki Ellada (Kaszab, 1967).

**33. Dendarus victorii** (Mulsant & Rey), status novum

*Phylax plicatulus* Brullé, 1832: 210

*Pandarus victorii* Mulsant & Rey, 1854:288

**Brief diagnosis:** Elytrae with bigger punctures forming the longitudinal grooves than in *D. plicatulus*. Only 20-25 punctures can be counted in the fourth groove. Interspaces on sides of the elytra carinate (convex at most, in contrast to other species of the *plicatulus*-group). Profemora with golden brush as in *D. plicatulus*. Mesotarsi mildly dilated.

**Distribution and referenced localities:** Croatia, Albania, and Ionian Sea.

Pelouzo Islet near Zakinthos Isl.; Zakynthos Isl., Kalamaki (Kühnelt, 1965).


Zakinthos Isl.; Ionian Sea (Kaszab, 1967).

**34. Dendarus werneri** Koch 1948

**Brief diagnosis:** Easily recognizable by the dense golden brush underneath metafemora and the golden series of sparse setae underneath profemora and protibiae. Setae under protibiae are somewhat longer proximally and gradually become smaller in the distal part. Presence of sparse small yellow setae under mesofemora, absence of thick yellow line of setae under mesotibiae, but the same is present under metatibiae (see also remarks below). Head punctuation round in front, becoming gradually elongated towards neck. Small area of round punctures on pronotal disk, sides with
Apostolos Trichas 451

elargated punctuation. BL: 13-14 mm. (Photo 27, Table VII).

Distribution and referenced localities: endemic to Milos, Kimolos, and surrounding islets.

Milos Island; Agios Efstatios Islet near Kimolos Island (Kühnelt, 1965).

Material examined:


Remarks: Although several specimens from the locus typicus (Agios Eustathios Islet) and all other islands where D. werneri is distributed were carefully examined, there were no specimens lacking the thick yellow line in metatibiae as in Koch’s original description (Koch, 1948: 342, see Photo 32, Table VIII).

New to Ananes Islet.

35. Dendarus wernerianus Koch, 1948

Brief diagnosis: Typical specimens of D. wernerianus (from Sikinos Island) are distinguished from other closely related species of the “sinuatus-group” (D. anaphianus and D. sinuatus) only by having flattened interspaces between longitudinal grooves of the elytra and mesotarsi that are not enlarged (Koch, 1948). Specimens of D. anaphianus have convex interspaces and very slightly or not at all dilated mesotarsi, while ones of D. sinuatus have flattened interspaces and clearly dilated mesotarsi. BL: 14-16 mm. (Photo 23, Table VI).

Distribution and referenced localities: endemic to Santorini (with islets) and Sikinos Islands.

Sikinos Island (Kühnelt, 1965);

Thira Island: Mt. Profitis Ilias; Mikros Ilias between Mouzaki Bay and Pori; Foinikia; Imeroviglì; Akrotiri; Kamari; Pyrgos; Oia; Palaia Kameni Islet (Grimm, 1981).

Santorini, Sikinos, and Palaia Kameni Islands (Chatzimanolis et al., 2002).

Material examined:

female, leg. Simaiakis; Thirasia Islet (Santorini), 36°26′52″N, 25°20′38″E, 04.08.2006, two females, leg. Chatzaki; Christiani Islet (Santorini), 36°15′0″N, 25°12′25″E, 04.08.2006, 12 females, leg. Chatzaki; Christiani Islet (Santorini), 36°14′58″N, 25°12′13″E, 19.03.1993, two females, leg. Mylonas.

Remarks: 1) A recent comparison of several species of the “sinuatus-group” (D. wernerianus, D. schatzmayri, D. anaphianus, and D. sinuatus) (Chatzimanolis et al., 2002) failed to specify successfully some of the differences between the above species because of an erroneous statement about “setae covering the ventral surface of metafemur in D. wernerianus” (this trait is only apparent in D. schatzmayri). We here take the opportunity to correct this mistake.

2) After thorough examination of samples from Sikinos, Thira (Santorini), Thirasia (Thira’s islet), and Christiani (or Christiana, Thira’s remote islet), only the Sikinos, Christiani and Thirasia specimens can be clearly assigned to D. wernerianus s. str. Several of Thira’s samples are quite confusing, as they have a more slender body than in the Sikinos specimens, as well as elytral interspaces not as flat as in typical D. wernerianus. Given the volcanic character of Thira (and thus the more “random fauna formation” on the island – [see also Trichas et al. (2008) for a discussion on the faunal character of Thira], we cannot exclude possible influence of D. anaphianus populations of the nearby islands (i.e., Anafi) on Thira’s pool of species.

New on Christiani Islet.

36. Dendarus wettsteini Koch, 1948

Brief diagnosis: Small species (~20% smaller than D. opacus or D. foraminosus) with shiny appearance, deep punctures on the pronotum, and small (sparse) punctuation on longitudinal grooves of the elytra. BL: 9-10 mm. (Photo 10, Table III).

Distribution and referenced localities: Mt. Lefka Ori endemic, Western Crete.
Mt. Lefka Ori, Pachnes Peak (2300 m alt.); Aga Tophi (1700-1900 m alt.) (Kühnelt, 1965);
Mt. Lefka Ori; Omalos Plateau; Knossos (?) (Picka, 1984);
Elos Kissamou (?) (Fattorini et al., 1999).
Mt. Lefka Ori (above 1600 m alt.) (Chatzimanolis et al., 2002).

Material examined:
Mt. Lefka Ori, Anopoli, (subalpine shrubland plateau, above timberline), 1660 m alt.,
35°16′3″N, 24°5′8″E, 01.10.2005, two male, four females, leg. Chatzaki; Mt. Lefka Ori, Anopoli, (subalpine shrubland), 1900 m alt.,
35°17′26″N, 24°4′23″E, 01.10.2005, one male, one female, leg. Chatzaki; Mt. Lefka Ori, Trocharis Peak, 2292 m alt.,
35°16′44″N, 24°3′14″E, 26.09.1991+20.04.1991, 18 males, 10 females, leg. Trichas; Mt. Lefka Ori, north of Melindaou Peak, 1680 m alt.,
35°20′17″N, 23°59′6″E, 09.05.2004, one male, two females, leg. Trichas; Mt. Lefka Ori, near Trocharis Peak, 1950 m alt.,
35°16′31.74″N, 24° 3′48.63″E, 20.04.1991, one male, three females, leg. Trichas; Mt. Lefka Ori, Melindaou Peak, 1997 m alt.,
35°19′46.20″N, 23°59′13.13″E, 01.07.1994, two males, one female, leg. Trichas.

Remarks: *Dendarus wettsteini* is distributed exclusively in several high-mountain areas above ~1500 m of altitude on Mt. Lefka Ori in Western Crete. Older references [like those in Picka (1984): “Knossos”, or “Elos” (600 m alt.) in Fattorini et al., (1999) reported from various collections] should be treated as erroneous. Even populations on Omalos Plateau (1000-1100 m alt.) or on Anopoli (1100 m alt.) of Mt. Lefka Ori belong to *D. opacus*.

CONCLUSION

Based on the existing taxonomy of the genus in the Eastern Mediterranean region (Koch, 1948; Chatzimanolis et al., 2002), *Dendarus* spp. show a remarkable degree of diversity in Greece (36 to date in the present account). Neighboring Mediterranean countries have notably fewer (i.e., Turkey: ~11, Italy: five, France: two, Cyprus: two, etc., see Tezcan et al., 2004; Ferrer and Soldati, 1999; Aliquò et al., 2007; Grimm, 1991). Most of this diversity in Greece can be ascribed to the existence of several thousands of islands and islets. There are approximately 7,582 islands and small islets in the Aegean area alone, constituting the present-day Aegean Archipelago, while 300 more lie in the Ionian Sea. The Greek islands are a heterogeneous group in terms of mode and time of formation and are the only islands with floral and faunal elements originating from three different geographical regions, Europe, Asia, and Africa (Triantis and Mylonas, 2008).
Among 36 Greek species of the genus *Dendarus*, 27 are strictly island endemics (25 in the Aegean Sea and two in the Ionian) confirming the above statement about the role of the Greek islands. In terms of endemics, the genus alone statistically surpasses all other floral or faunal groups in the area [i.e., while plants show 10% endemism in the Aegean, land snails between 35-40%, isopods 60%, and tenebrionids >35% (Triantis and Mylonas, 2008)], representatives of the genus *Dendarus* account for 75% of endemism in Greece.

Another striking characteristic of the Greek islands, especially the Aegean ones, is the presence of a vast number of small islets. More than 90% of the Aegean islands are smaller than 10 km². Most have been formed quite recently on the geological scale and still ‘behave’ as parts of a continuous landmass, even in regard to taxa with reduced dispersal abilities, hosting high species numbers and exhibiting marginal extinctions, limited net effects of island size, and a significant effect of environmental heterogeneity on species richness (Triantis and Mylonas, 2008). These islets in many cases serve as refugia for endangered species, as in the case of the land snail *Helix godetiana*, whereas for plants several species are considered “islet specialists”.

It is evident from the present systematic account that many of the small islet *Dendarus* populations in the Aegean are unique to the evolutionary processes of the region, and outcrops of rock less than 25 ha in area can “pack” hundreds of thousands years of these “experiments of nature” into their history (as in the case of Ananes Islet, see relevant entry for *D. ananensis*).

Finally, we are confident that in the years to come, the puzzle (especially on the islands) of all Greek *Dendarus* taxa will be resolved, providing scientists with essential tools for better understanding evolutionary processes and making it possible to practice species conservation effectively.

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Apostolos Trichas 463


