

## A preliminary survey of the Cerambycidae of Libya (Coleoptera)

by Gianfranco SAMA\*, Jean-Claude RINGENBACH\*\* and Martin REJZEK\*\*\*

\* Via Raffaello, 84, I - 47023, Cesena, Italy <g.sama@cesena.nettuno.it>

\*\* 26, rue de Tourville, F - 78100 St-Germain-en-Laye, France <jc.ringenbach@free.fr>

\*\*\* 6 Primrose Road, Thorpe Hamlet, Norwich NR1 4AT, UK <bodo.bodemeyer3@ntlworld.com>

**Summary.** – An updated catalogue of the Cerambycidae of Libya is given. A total of 35 species (14 for the first time) are recorded. Six species, previously recorded from this country due to misidentification or introduction, are excluded. Distribution range, collecting localities and dates, known host plants and notes about the biology are provided for each species.

**Résumé.** – *Etude préliminaire des Cérambycides de Libye (Coleoptera).* Les auteurs donnent un inventaire commenté des Coléoptères Cérambycides de la faune de Libye; pour chaque espèce la nomenclature est actualisée et des informations sont données sur la répartition générale, les localités et dates de capture en Libye, les plantes-hôtes et la bionomie. Au total 35 espèces (dont 14 pour la première fois) sont recensées pour la région; six espèces, précédemment citées, sont à exclure de la faune libyenne.

**Keywords.** – Coleoptera, Cerambycidae, Libya.

Scientific exploration of Libya practically began after the Italian colonization during the first decade of the last century; the first Cerambycidae were recorded by PIC (1900), ZANON (1922), FALZONI (1923) and DODERO (1922, 1925), who collected in the coastal regions of Tripolitania and Cyrenaica. Further material, collected in these regions by other entomologists and agronomists (such as C. Krüger), remained unpublished. Some years later, zoological expeditions were organized by Italian scientific institutions to Al Jaghbüb (Giarabub) in 1926-27, Al Kufrah in 1931, Fazzān in 1931 and 1934, Tassili in 1936; the results were partly published by GRIDELLI (1930, 1933, 1939) and by ZAVATTARI (1934), who summarized all previous knowledge of Libyan fauna. PEYERIMHOFF (1948) gave the list of Coleoptera collected by french expeditions (1944-1946) and discussed, both from the systematics and biogeographical points of view, all known data (including Cerambycidae) regarding the Libyan desert countries Fazzān and Al Kufrah. The most recent expeditions, organised by the Institute of Entomology, Bologna University, from the last 50s- to early 70s, dealing with the ecology of wādīs in Tripolitania (MELLINI & FIORI, 1954; MELLINI, 1956a, 1956b; FIORI, 1956; MELLINI, 1976a, 1976b), focused on Carabidae, Scarabaeoidea and Tenebrionidae, surprisingly recorded only two species of Cerambycidae [(*Derolus mauritanicus* (Buquet, 1840) and *Neoplocaederus caroli* (Leprieur, 1876)]. The most recent publications regarding Cerambycidae fauna of Libya comprise a record of *Crossotus subocellatus* (BECCARI & GERINI, 1976) and two descriptions of new species: *Agapanthia zappii* Sama, 1987, and *Chlorophorus ringenbachi* Sama, 2004.

For professional reasons J.-C. Ringenbach was allowed to live in Libya and had the opportunity to collect both adults and larvae of Cerambycidae in Tripolitania, Cyrenaica and Fazzān for 3 years. Moreover, G. Sama studied material deposited in various Italian public institutions including a small collection of Cerambycids recorded in Libya by C. Krüger in the early 30s. This provided an opportunity to sum up the knowledge of the Cerambycid fauna of Libya.

In the present paper, we give an updated preliminary list of Cerambycidae of Libya, which includes records previously reported in literature and material collected or studied by J.-C. Ringenbach (JR), G. Sama (GS) and M. Rejzek. For each species we give literature references, distribution range, collecting dates and locality data in Libya, notes on host plants, biology

and flight period. Names of old collecting localities are given as in the original papers or as written on specimen labels (sometimes between inverted commas). Information about most local names mentioned in the present study, as well as current Libyan names transliterated from Arabic to English, are proposed in table 1 [transliteration by Pr. Mustafa Salem or taken from a web site "Index Mundi" (<http://www.indexmundi.com/zp/ly/>)]. Emphatic vowels are indicated by a bar and emphatic consonants are in bold.

In case of species reared from larval substrate kept under natural conditions we were able to determine the flight periods of adults. Such data are shown in a form of a graph.

If not stated otherwise, notes about distribution, host plants and biology are taken from authors' archives or personal experiences. Nomenclature follows SAMA (2002 and in preparation). When enough specimens were obtained by breeding by J. R., and when hatching occurred outside in Tripoli, graphs are shown.

### Check list of the Cerambycidae from Libya

(\*) = species recorded for the first time. Unnumbered species are most likely imported specimens or the record is likely to be based on mislabelling.

- |  |   |
|--|---|
| 1) <i>Macrotoma palmata</i> (Fabricius, 1792)*               | 21) <i>Stenopterus ater</i> (Linnaeus, 1767)              |
| 2) <i>Prinobius myardi</i> Mulsant, 1842*                    | 22) <i>Deilus fugax</i> (Olivier, 1790)*                  |
| [ <i>Aegosoma scabricorne</i> (Scopoli, 1763)]               | 23) <i>Certallum ebulinum</i> (Linnaeus, 1781)            |
| 3) <i>Polyarthron pectinicornis</i> (Fabricius, 1792)        | [ <i>Hylotrupes bajulus</i> (Linnaeus, 1758)]             |
| 4) <i>Monocladum aegypt. aegyptiacum</i> (Guérin, 1844)      | [ <i>Phymatodes testaceus</i> (Linnaeus, 1758)]           |
| 5) <i>Stictoleptura cordig. cordigera</i> (Fuesslins, 1775)* | [ <i>Plagionotus arcuatus</i> (Linnaeus, 1758)]           |
| 6) <i>Arhopalus sp.*</i>                                     | [ <i>Xylotrechus antilope antilope</i> (Schönherr, 1817)] |
| 7) <i>Phoracantha semipunctata</i> (Fabricius, 1775)*        | [ <i>Chlorophorus figuratus</i> (Scopoli, 1763)]          |
| 8) <i>Phoracantha recurva</i> Newmann, 1840*                 | 24) <i>Chlorophorus ringenbachi</i> Sama, 2004*           |
| 9) <i>Tibestia dallonii</i> Peyerimhoff, 1936*               | 25) <i>Chlorophorus sexguttatus</i> (Lucas, 1846)*        |
| 10) <i>Hesperophanes sericeus</i> (Fabricius, 1787)          | 26) <i>Agapanthia suturalis</i> (Fabricius, 1787)         |
| 11) <i>Trichoferus holosericeus</i> (Rossi, 1790)            | 27) <i>Agapanthia zappii</i> Sama, 1987                   |
| 12) <i>Trichoferus griseus</i> (Fabricius, 1792)             | 28) <i>Agapanthia annularis</i> (Olivier, 1795)           |
| 13) <i>Trichoferus fasciculatus</i> (Faldernann, 1837)       | 29) <i>Calamobius filum</i> (Rossi, 1790)                 |
| 14) <i>Daramus mehennii</i> Sama, 1994*                      | 30) <i>Niphona picticornis</i> Mulsant, 1839*             |
| 15) <i>Icosium tomentosum tomentosum</i> Lucas, 1854         | 31) <i>Parmena pubescens s.l.</i> (Dalman, 1817)*         |
| 16) <i>Neoplocaederus caroli</i> (Leprieur, 1876)            | 32) <i>Crossotus subocellatus</i> (Fairmaire, 1886)       |
| 17) <i>Derolia mauritanicus</i> (Buquet, 1840)               | 33) <i>Derolia troberti troberti</i> (Mulsant, 1843)      |
| 18) <i>Purpuricenus desf. desfontainii</i> (Fabricius, 1792) | 34) <i>Opsilia coerulescens</i> (Scopoli, 1763)           |
| 19) <i>Penichroa fasciata</i> (Stephens, 1831)               | 35) <i>Blepisanis melanocephala</i> (Fabricius, 1787)     |
| 20) <i>Nathrius brevipennis</i> (Mulsant, 1839)*             |   |

### List of the species

#### *Macrotoma palmata* (Fabricius, 1792) (\*)

*Prionus palmatus* Fabricius, 1792, *Ent. Syst.*, 1(2): 249. Type locality: "Guinea".

**Range.** – Mauritius, Saudi Arabia, Yemen, Africa from Egypt to Cape and from Abyssinia to Senegal; Mauritania, Morocco and Algeria. A new record from Libya.

**Libya.** – Tripolitania: "Sirtica occ.: Djebel el Soda, Bir Ctaifa, 15.10.1938", *Jeg. C. Krüger* (GS); wādīs near Ghirza: several attacked *Acacia raddiana*, 3 dead females in emergence holes (JR); Fazzān: damages observed on *A. raddiana* in most wādīs of both Akākūs and Messāk ranges (JR); Messāk: 1 male collected in wādī Erāwen, 12.X.2001, and Terhin, 18.X.2001, one recently dead female found in its emergence hole, 23.X.2002, in wādī Tiksatīn (JR).

**Biology, host plants and flight period.** – Polyphagous on many deciduous trees, but in North Africa chiefly on *Acacia* such as *A. nilotica*, *A. raddiana*, *A. seyal* (MATEU, 1972). In Libya only observed on *A. raddiana*, usually in the driest wādīs where the trees struggle for life. All adults were collected in October.

**Remark.** – The name *Macrotoma* Serville, 1832 (July) has been recently recognized as a primary homonym of *Macrotoma* Laporte, 1832 (April), Diptera (Vives & Alonso-Zarazaga, *in VIVES*, 2000);



*Dapsilus* Gistel, 1848, originally proposed as a replacement name, has never been used and could be regarded as a "nomen oblitum". We provisionally maintain here the name *Macrotoma* Serville, waiting for a petition (currently in preparation) to the Commission of ICZN, devoted to conserve this name after suppression of *Macrotoma* Laporte.

***Prinobius myardi* Mulsant, 1842 (\*)**

*Prinobius Myardi* Mulsant, 1842, *Ann. Sci. Phys. Nat. Agr. Lyon*, 5: 207. Type locality: "Vallée d'Albatesco" (Corsica).

**Range.** – Whole Mediterranean area from Portugal and North Africa to Iran, mostly along the coastal plains. A new record from Libya.

**Libya.** – Cyrenaica: Ad Darsiyāh (in the Greek site of Ptolemais), two old dead males under the bark of a dry *Acacia cyanophylla* (JR). Three males collected by night on old *Ceratonia siliqua* in Wādī al Kūf, 20.VIII.2003 (JR). Attacked trees were observed in Sūṣah, Ra's al Hilāl, Al Athrūn. Widespread in Al Jabal al Ackdar (JR).

**Biology, host plants and flight period.** – Polyphagous on many deciduous trees; in North Africa chiefly recorded on *Quercus ilex*, *Q. suber*, *Fraxinus*, *Eucalyptus*. Flight period: June to September; adults nocturnal, frequently attracted to light. In Cyrenaica, the species attacks *Ceratonia siliqua*, *Olea europaea*, *Acacia cyanophylla*, *Ficus* sp. (tropical); pupae and larvae were found at the end of June, adults were collected during the second half of August.

**[*Aegosoma scabricorne* (Scopoli, 1763)]**

*Cerambyx scabricornis* Scopoli, 1763, *Ent. Carn.*: 54. Type locality: "Carniola media" (Slovenia).

*Aegosoma scabricorne*: KRÜGER, 1931: 6; ZAVATTARI, 1934: 535.

**Range.** – Europe, Caucasus, Asia Minor, Iran. Widely distributed in Europe from Iberian Peninsula, France and Italy (including Sardinia and Sicily) to Balkans, Ukraine and southern Russia; apparently missing in northern Europe and northern part of central Europe, unknown from North Africa. The record of Krüger appears quite dubious.

**Libya.** – "Derna" (KRÜGER, 1931; ZAVATTARI, 1934).

***Polyarthron pectinicornis* (Fabricius, 1792)**

*Prionus pectinicornis* Fabricius, 1792, *Ent. Syst.*, 1 (2): 251. Type locality: Senegal.

*Prionus pectinicornis*: GRIDELLI, 1933: 88; ZAVATTARI, 1934: 535; GRIDELLI, 1937: 53; PEYERIMHOFF, 1948: 45.

**Range.** – Sahelo-saharan species known from Libya and Ennedi (north-eastern Chad) westwards to the Atlantic coasts of Mauritania and Senegal and from the oasis of Bou Saada and Biskra (Algeria), southwards to Senegal, northern Nigeria and Chad.

**Libya.** – "Fezzan: Gelid (Sabha), VIII.1931"; "Ubari, IX.1931"; "Ghat, IX.1931", all leg. Zavattari (GRIDELLI, 1933; MCSNG); "Gat, estate 1934" (GRIDELLI, 1937); "Sabha, IX.1944" (PEYERIMHOFF, 1948); "Sabha, Ghat" (Batelka, pers. comm.); "Ghat, IX.1936", leg. *Scortecci*; Ghât, I.IX.2003, many males attracted to light and two females drowned in a water pool (JR). Tibesti: Zonar, VIII.61, leg. *C. Vita-Finzi* (GS).

**Biology, host plants and flight period.** – Larvae underground feeding on living roots of palms and maybe other plants. Adults in August-September, males are commonly attracted to light.

**Note.** – *P. pectinicornis* is a very variable species which was divided into several taxa, regarded in different way (distinct species, subspecies or individual variations) by different authors. According to GRIDELLI (1933) the three specimens collected by Zavattari could be referred to three different subspecies: *P. p. fairmairei* Pic, 1893 (described from Touggourt in Algeria), *P. p. gaillardi* Lameere, 1912 (Chad) and *P. p. faurebigueti* Pic, 1898 (Mali). Most specimens from Libya could be identified as "ssp." *fairmairei* Pic on the basis of their red-yellow integument. Specimens from Ghât (MCSNT) bear the identification label "*Polyarthron pectinicornis* sbsp. *jolyi* race *lothei*", handwritten by A. Villiers.

***Monocladum aegyptiacum aegyptiacum* (Guérin, 1844)**

*Polyarthron aegyptiacum* Guérin, 1844, *Icon. Regne Anim.*, Ins.: 214. Type locality: "Egypte".

*Polyarthron unipectinatum* White, 1853, *Cat. Long. Brit. Mus.*, 1: 21. Type locality: "West Africa".

*Prionus unipectinatus*: GRIDELLI, 1930: 340; 1933: 88; ZAVATTARI, 1934: 35; SCHATZMAYR, 1938: 186.

**Range.** – Southern Israel, Jordan, Egypt, Eastern Libya; it occurs in Saudi Arabia and Yemen with two questionable subspecies (*M. a. arabicum* Villiers, 1961, and *M. a. granulipenne* Holzschuh, 1993).

**Libya.** – Tripolitania: “Hammam di Hon, 10.IX.1937, 4 ex, leg. Moltoni” (SCHATZMAYR, 1938); “Giarabub, VII.1926, leg. Krüger” (GRIDELLI, 1930; ZAVATTARI, 1934).

**Biology, host plants and flight period.** – Recorded as a pest of *Phoenix dactylifera* (BYTINSKI-SALTZ, 1956); larvae underground feeding on living roots of palms and maybe other plants. Adults, chiefly males, attracted to light, in August–September.

***Stictoleptura cordigera cordigera* (Fuesslins, 1775) (\*)**

*Leptura cordigera* Fuesslins, 1775, *Verz. Schweiz. Ins.*: 14. Type locality: “Luggaris” (Locarno, Switzerland).

**Range.** – Europe, Asia Minor, Caucasus, Transcaucasia, northern Iran, Syria, Lebanon, Iraq, Israel. A distinct subspecies [*S. cordigera anojaensis* (Sláma, 1982)] was described from Crete.

**Libya.** – Ra’s al Hilāl, 30.V.2004, one female on thistle (JR). A new record from Libya and North Africa.

**Biology, host plants and flight period.** – Development in dead wood of trunks and stumps usually of deciduous plants, in Israel also reared from *Pinus sp.* Adults on flowers.

***Arhopalus sp.* (\*)**

**Libya.** – Old larval galleries and emergence holes were observed on dead trunks of *Pinus sp.* Cyrenaica: wādī east of Al Athrūn (JR). Tripolitania: Az Zintān in Jabal Nafusāh (JR).

Two species belonging to this genus are known from coastal plains of North Africa: *A. ferus* (MULSANT, 1839) and *A. syriacus* (REITTER, 1895); both of them may occur in Libya.

***Phoracantha semipunctata* (Fabricius, 1775) (\*)**

*Phoracantha semipunctata* Fabricius, 1775, *Syst. Entomol.*: 180. Type locality: “Nova Hollandia” (Australia).

**Range.** – Australia, imported nearly everywhere the host plants are grown; known in whole Mediterranean from Portugal and France to Turkey, Jordan and Israel. Recorded in North Africa from Egypt to the Atlantic coast of Morocco.

**Libya.** – Tripolitania: Janzūr, 03.VIII.2002; Al ‘Azīziyah, 30.V.2003; Cyrenaica: Cyrene, 21.VIII.2003; Tūkraḥ, 01.VI.2004, all hidden under bark, except the one in Tūkraḥ which was attracted to a fruit trap. Common in Tripolitania and Cyrenaica, where all growths of *Eucalyptus* are infested. The species follows *Eucalyptus* trees within the whole of the study area and is frequently accompanied by its close relative *P. recurva*. Not yet found in Fazzān but likely present wherever *Eucalyptus* grown. A new record from Libya.

**Biology, host plants and flight period.** – Well known as a dangerous pest of many species of *Eucalyptus*. Adults crepuscular and nocturnal; they remain hidden under bark during day, fly or run on the host plants in the evening and at night, from February to October (chiefly from May to August in Libya).

***Phoracantha recurva* Newman, 1840 (\*)**

*Phoracantha semipunctata* Newman, 1840, *The Entomologist*, 5: 17. Type locality: “Nova Hollandia” (Australia).

**Range.** – Originally from Australia, like the preceding species it has been introduced to several countries; in the Mediterranean area it is known from Morocco, south-western Spain, Tunisia, Malta, Italy and Greece (COCQUEMPOT & SAMA, 2003; SAMA & BOCCHINI, 2003). It is a new record from Libya.

**Libya.** – Found in Tripolitania with the preceding species, but more common: Janzūr, 03.VIII.2001 and 10.I.2004; Sūq al Khamīs, 13.V.2003; Al ‘Azīziyah, 30.V.2003; east of Tajūrā, 1.2002. Likely widespread all over Libya.

**Biology, host plants and flight period.** – Bionomics similar to *P. semipunctata*.

***Tibestia dallonii* Peyerimhoff, 1936 (\*)**

*Tibestia dallonii* Peyerimhoff, 1936, *Mém. Acad. Sci.*, 2(62): 78. Type locality: “Tibesti, Massif de Turkou à l’ouest de Bardaï” (Chad).

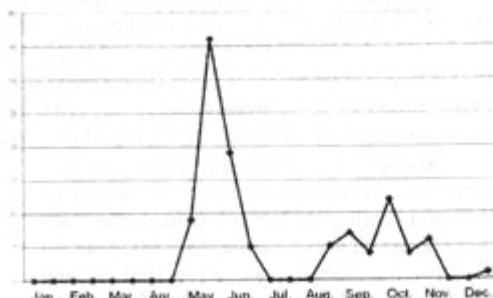
**Range.** – Libya, Chad, Niger (Aïr), southern Algeria, southern Morocco, former Spanish Sahara,



Mauritania, Senegal, Sudan, Ethiopia, Uganda (PEYERIMHOFF, 1936; VILLIERS, 1946; PEYERIMHOFF, 1948; MATEU, 1954, 1965; KOCHER & REYMOND, 1954; BREUNING & VILLIERS, 1960). A new record from Libya.

**Libya.** – Tripolitania: Mizdah, (200 km south of Tripoli) and in a tributary of wādī Sūf Ajjīn; 30 km from As Sdadah; Fazzān: Tehi-n-Tamellet, (JR), generally hatching in large number from *A. raddiana*. The species was also shown to breed in *A. karoo* (JR).

**Biology, host plants and flight period.** – Development in dead and dying wood of large branches and trunks of *A. raddiana*. Emergences take place throughout the year, in Libya mostly from May to November. Hatching of *Tibestia dallonii* in 2003-2004 from *A. raddiana* collected in As Sdadah, Tripolitania. Fall generation from collected *A. raddiana* wood and spring generation from a couple which laid eggs in freshly cut wood of *A. karoo*. (Hatchings per periods of 2 weeks, for 107 specimens).



### *Hesperophanes sericeus* (Fabricius, 1787)

*Callidium sericeum* Fabricius, 1787, *Mant. Ins.*, 1: 152. Type locality: "Barbaria" (North Africa).

*Hesperophanes sericeus*: FALZONI, 1923: 89; GRIDELLI, 1930: 342; ZAVATTARI, 1934: 536.

**Range.** – Mediterranean: North Africa (including Egypt), Iberian Peninsula, southern France, Italy, Balkans, Greece (including Crete), Romania, Crimea, Asia Minor, Caucasus, Iraq, Jordan, Israel.

**Libya.** – "Cirene" (FALZONI, 1923; GRIDELLI, 1930) (MCSNG); "Cirenaica, Bengasi, 25.VIII, leg. C. Krüger" (GS).

**Biology, host plants and flight period.** – Polyphagous on dead deciduous trees: in North Africa mostly on *Quercus*, *Prunus*, *Pistacia* and fruit trees.

### *Trichoferus holosericeus* (Rossi, 1790)

*Callidium holosericeum* Rossi, 1790, *Fauna Etrusca*, 1: 153. Tab.1, Fig. 6. Type locality: "Etruria" (Tuscany, central Italy).

= *Cerambyx cinereus* Villers, 1789, *Linn. Entomol.*, 1: 256 (*nec* De Geer, 1775, now synonym of *Phytoecia cylindrica* Linnaeus, 1758). Type locality: "circa Nemausum" (Nîmes, France).

*Hesperophanes cinereus*: ZANON, 1922: 132; BOSELLI, 1930: 295.

*Hesperandrius cinereus*: GRIDELLI, 1930: 343; ZAVATTARI, 1934: 536.

**Range.** – Europe (chiefly in southern countries), Crimea, Turkey, imported (?) in Israel. In North Africa it is a very rare and local species, known in Morocco, Algeria and Libya; record from Libya is maybe due to introduction. The species could however easily become established.

**Libya.** – Cyrenaica: "Fuehat (Benghazi), V.1916" (ZANON, 1922).

**Biology, host plants and flight period.** – Polyphagous on deciduous trees, larvae usually feed in dead, even very old wood, sometimes in furniture. Adults nocturnal, occurring on the host plants from June to October (mostly in July and August), frequently attracted to lights.

### *Trichoferus griseus* (Fabricius, 1792)

*Callidium griseum* Fabricius, 1792, *Ent. Syst.*, 1 (2): 325. Type locality: "Barbaria" (North Africa).

*Hesperandrius griseus*: GRIDELLI, 1930: 343. ZAVATTARI, 1934: 536.

**Range.** – Circum-Mediterranean species widespread from North Africa (including Egypt) and Iberian peninsula to Crete, Cyprus, South Turkey, Jordan, Iraq, Israel. Probably in all countries of Near East eastwards to Iran.

**Libya.** – "Cirene, leg. Anti" (GRIDELLI, 1930; ZAVATTARI, 1934); Cyrenaica: Hawa Fteah (Sūsah), 14 specimens hatched ex larva from *Ficus carica* from the end of August to early September 2003 and VI.2004; Cyrene (Shahāt), 3 adults emerged from *F. carica*, 4/22/26.VII.2004 (JR); wādī Darnah, 31.V.2004, in pupal cell in *F. carica* (JR).

**Biology, host plants and flight period.** – Development in *Ficus carica*; larvae feed in both living and dead tissues of the host trees. Adults in summer, frequently attracted to light.

**Trichoferus fasciculatus** (Faldermann, 1837)

*Hesperophanes fasciculatus* Faldermann, 1837, *Fauna Transc.*, 2: 266. Type locality: "Transcaucasia".

*Hesperophanes fasciculatus*: DODERO, 1925: 18.

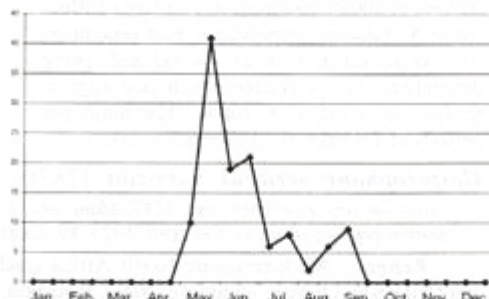
*Hesperandrius fasciculatus*: GRIDELLI, 1930: 343; ZAVATTARI, 1934: 536.

**Range.** – Circum-Mediterranean species recorded from northern Iran to the Canary Islands and Madeira. In North Africa it is recorded from the Mediterranean coasts southward to the northern Sahara (El Goleah) and the "Hauts Plateaux" in Algeria, westward to the Anti-Atlas in southern Morocco.

**Libya.** – Cyrenaica: "Fuehat (Benghazi)" (DODERO, 1925); "es-Scegga, leg. Krüger" (GRIDELLI, 1930). Sūsah *ex larva* from *Ficus carica* (JR). Tripolitania: Az Zintān and Zuwārah, *ex larva* from *Ficus carica*, many hatchings from early May to September (JR).

**Biology, host plants and flight period.** – Extremely polyphagous, both on deciduous trees and conifers. In Libya it is likely the main decomposer of *Ficus carica*, the only plant on which it has been found; larvae feed in both living and dead tissues of the host trees. Replaced by *T. griseus* in Cyrenaica.

Hatching of *Trichoferus fasciculatus* in 2003-2004 from *Ficus carica* wood collected in Zuwārah and Az Zintān (hatchings per 1/2 month for 122 specimens).

**Daramus mehennii** Sama, 1994 (\*)

*Daramus mehennii* Sama, 1994, *L'Entomologiste*, 50, 3: 176. Type locality: "S.O. algérien, Tin Tabarik" (Ti-n-Tebourak ?) (southern Algeria).

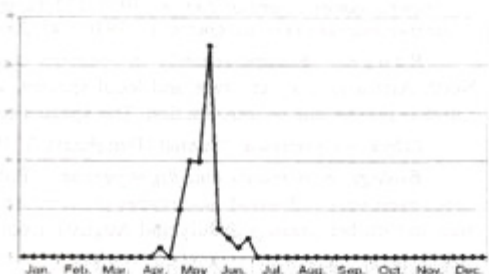
*Tetropiopsis major*: PEYERIMHOFF, 1931: 109 (misidentification).

**Range.** – Previously only recorded from Algeria. A new record from Libya.

**Libya.** – Fazzān. A common pest of the *Acacia tortilis* in SW Libya: Messāk, Akākūs and Tassili. Messāk: Tehi I-n-Elobu, Wādī Ti-n-Sharuma, Terhin, Wādī I-n-Aramas Ikufar, Wādī I-n-Hagarīn, Akākūs and Tassili: Wādī Teshuinat, Wādī Awis and most Wādīs in Akakus, Wādī Taharamat, Wādī I-n-Lalin, Wādī I-n-Aghalin. All hatched from *Acacia raddiana* from end April to June (JR).

**Biology, host plants and flight period.** – Bionomics of *Daramus* was very poorly known. Our specimens, hatched from *A. raddiana*, confirm previous assumption of PEYERIMHOFF (1931), who recorded a female of this species (under the name *Tetropiopsis major* Pic, 1924) sitting on a branch of *A. raddiana* in the Hoggar.

Hatching of *Daramus mehennii* in 2003-2004 from *Acacia raddiana* collected in Messāk (hatchings per 1/4 month for 56 specimens).

**Icosium tomentosum tomentosum** Lucas, 1854

*Icosium tomentosum* Lucas, 1854, *Ann. Soc. ent. Fr.*, 3 (2), Bull.: 8. Type locality: "env. de Ponteba" (Algeria).

**Range.** – Mediterranean species, widespread with two separated geographical populations: *I. tomentosum* s.str., described from Algeria, occurs in west Mediterranean from North Africa, Portugal and Corsica to the Tyrrhenian coasts of Italy. *I. tomentosum* ssp. *atticum* Ganglbauer 1881, is widespread from East Italy and West Balkans to coastal plains of southern Turkey, Near East to Jordan and Israel; isolated populations, very likely established after introduction, have been recently found in southern France, northern Italy and Malta. The only known specimen from Libya belongs to the nominotypical subspecies. A new record from Libya.



**Libya.** – Cyrenaica: “Barce”, Maggio, leg. C. Krüger”, det. Gridelli (GS); Wādī bel Gadim (Shahāt), ex larva from *Cupressus sempervirens*, 30.VI.2004 (JR).

**Biology, host plants and flight period.** – Develops on Cupressaceae such as *Thuya*, *Cupressus*, *Juniperus*. Adults fly from May to August.

***Neoplocaederus caroli* (Leprieur, 1876)**

*Plocaederus caroli* Leprieur, 1876, *Ann. Soc. ent. France* (5), 6, Bull.: VIII. Type locality: “Hodna, Algérie” (Central Algeria).

*Plocaederus caroli*: PIC, 1900: 6; SCHATZMAYR, 1937: 282; KOCHER, 1958: 21; COBOS, 1958: 351; MELLINI, 1956a: 221.

*Plocaederus caroli* v. *jaffexi*: PEYERIMHOFF, 1948: 45.

**Range.** – An endemic species from the Sahara: Libya, Algeria, Morocco, Western Sahara (former Spanish Sahara), Mauritania (!).

**Libya** – Tripolitania: “Tripoli” (Pic, 1900, 1912); “Aïn Zara, 4.4.36”; “Mizda, 23.3.36” (SCHATZMAYR, 1937); “Fezzan: Semna, 22.4.36, nella sabbia sotto una pietra” (SCHATZMAYR, 1937); “Sabha, été 1946” (PEYERIMHOFF, 1948); “Piana di Mizda” (MELLINI, 1956a); “Djedid-Semnou”, leg. Pasquier (COBOS, 1958); “Ostuni (Tripoli), IV.1966, leg. Del Fabbro”, coll. Rapuzzi (GS); “Tripolitania: Mizda, IV.1953” (MCSNT); fossil cocoons collected by JR on a Neolithic site in a dune of the Egede Wa-n-Kaza (Fazzān), now devoid of permanent vegetation, suggest a larger distribution during the past wetter periods (-6000 yr BP?).

**Biology, host plants and flight period.** – Larvae subterranean; they move freely in the sand feeding on roots of *Tamarix*. Pupation within a calcareous cocoon in the soil. Adults crepuscular or nocturnal, from early March to May on the host plants, often attracted to light.

***Derolus mauritanicus* (Buquet, 1840)**

*Hammacherius mauritanicus* Buquet, 1840, *Ann. Soc. ent. France*, 1(9): 395. Type locality: “Algeria”.

*Derolus mauritanicus*: SCHATZMAYR, 1937: 282; MELLINI, 1956a: 221; 1956b: 250.

**Range.** – An endemic species from North Africa. Formerly introduced but not established in southern France (VILLIERS, 1978); records from southern Iran refer to *D. iranensis* Pic, 1956 (= *D. iranensis* Lapesme & Breuning, 1958), currently regarded as a distinct species (Holzschuh, 1993). In North Africa it is widespread from Morocco and Western Sahara to southern Algeria and Libya.

**Libya.** – Tripolitania: “Mizda, 23.3.36, 2 es. sotto pietre” (SCHATZMAYR, 1937); “U. Sofeggin, V, leg. C. Krüger (MCSNT); “Piana di Mizda”, VIII.1954 (MELLINI, 1956a); “Uadi Sofeggin, IX-1954” (MELLINI, 1956b). Fazzān: Ghāt (Wādī I-n-Abaraka); Wādī Iyadar near Ghāt, 23.IV.2003, and Wādī Titersin, near the Algerian boarder, all in pupal cell in *Calotropis procera* (JR).

**Biology, host plants and flight period.** – Development in living plant tissues usually of *Nerium oleander*, but it also attacks different plants such as *Rhus* sp., *Calotropis procera* and *Ficus carica*. Records regarding *Calotropis procera*, regarded as dubious by VILLIERS (1978) are confirmed by our observations in Libya and Algeria. Adults hatch at the end of summer or in autumn, overwinter in their pupal cells and emerge the next year from February (in the Sahara) to May.

***Purpuricenus desfontainii desfontainii* (Fabricius, 1792)**

*Cerambyx desfontainii* Fabricius, 1792, *Ent. Syst.*, 1(2): 258. Type locality: “Barbaria”.

*Purpuricenus desfontainesi*: GRIDELLI, 1930: 343; ZAVATTARI, 1934: 537.

*Purpuricenus desfontaini* “ab. aut sbsp.” *pulcher* Schatzmayr, 1937, *Pubb. Mus. P. Rossi Duino*, 2: 282. Type locality: “Libia, Cirenaica: Luigi di Savoia”.

**Range.** – Inhabits North Africa and the most part of the eastern Mediterranean with two subspecies: *P. desfontainii* s. str., which occurs throughout the Maghreb from Morocco to Libya and, as an isolated population, in the isle of Crete (Greece); the ssp. *innumeralis* Pic, 1891, occurring from Greece (including Peloponnesus) to Turkey and the Near East to Israel.

**Libya.** – “Cirenaica: Cirene, IX.1929, leg. Anti (MCSNG); *idem*, leg. Krüger” (GRIDELLI, 1930, GS, MCSNT); “Cirene, 7.6.36”; “Luigi Savoia, 8.6.36, su onopordi” (SCHATZMAYR, 1937); “Cirene, 7.VI.36, Koch” (paratype male of *P. d.* var. *pulcher* Schatzmayr); Cyrenaica: Al Qubbah, 24.VI.2003; Qandūlah, 05.V-2004; Ra’s al Hilāl, 29.V.2004 (JR).

**Biology, host plants and flight period.** – Development in living branches and twigs of broadleaf trees and bushes such as *Quercus ilex* and *Ceratonia siliqua*; in North Africa very often on *Ziziphus* sp. Adults on different flowers in May-June. In Cyrenaica larvae were collected in dead and dying twigs of *Pistacia lentiscus*, 2-4 cm in diameter.

***Penichroa fasciata* (Stephens, 1831)**

*Callidium fasciatum* Stephens, 1831, Ill. Brit. Entomol., Mand., 4: 250. Type locality: "Norwich" (England).

*Penichroa fasciata*: GRIDELLI, 1930: 341; ZAVATTARI, 1934: 536.

**Range.** – Southern Europe, Caucasus, Azerbaidzhan, northern Iran, Asia Minor, Middle East including Cyprus, North Africa, occasionally imported in North America.

**Libya.** – Cirenaica: "Benghazi", leg. Krüger, 1923 (GRIDELLI, 1930; ZAVATTARI, 1934). Cyrenaica: Hawa Fteah, 16.VII.2004, emerged from *Ficus carica*; Shahät and Wädî al Kûf, several specimens hatched from end of May to July from *Ceratonia siliqua* (JR).

**Biology, host plants and flight period.** – Polyphagous in dead wood of broadleaf trees, sometimes on Conifers. Adults on the host plants from June to August; frequently attracted to light.

***Nathrius brevipennis* (Mulsant, 1839) (\*)**

*Leptidea brevipennis* Mulsant, 1839, Hist. Nat. Coléopt. France, Longic.: 105. Type locality: "Midi de la France".

**Range.** – Southern Europe (occasionally found in central Europe; apparently established in England), Asia Minor, Middle East (including Cyprus, Lebanon and Israel), Caucasus, Transcaucasia, northern Iran, North Africa (from Libya to Morocco); introduced in China, North and South America.

**Libya.** – Cirenaica: Wädî bel Gadim (Shahät), 30.V. and 6.IX.2004, one pair emerged from *Ceratonia siliqua* (JR). First record from Libya.

***Stenopterus ater* (Linnaeus, 1767)**

*Necydalis atra* Linnaeus, 1767, Syst. Nat., 12: 642. Type locality: Southern Europe.

*Stenopterus rufus geniculatus*: ZANON, 1922: 132 (misidentification).

*Stenopterus rufus*: BOSELLI, 1930: 303 (misidentification).

*Stenopterus praeustus*: GRIDELLI, 1930; ZAVATTARI, 1934: 536.

**Range.** – Western-Mediterranean species, known from North Africa (from Libya to the southern Morocco) and Iberian Peninsula to France and Italy; locally in central Europe (Slovakia) and Balkans.

**Libya.** – "Cirenaica: Fuehat (Benghazi), V.1916" (Zanon, 1922). "Tripolitania: Gharian, 16.VI., leg. C. Krüger" (GS); Az Zintân, ex larva from *Ficus carica*, 22.V./10.VI.2002, 25.V.2003; Al 'Azziyah, 05/06/2004 on Apiaceae; Az Zahrah, 11/06/2004 on Apiaceae (JR).

**Biology, host plants and flight period.** – Extremely polyphagous; mostly on deciduous trees (such as *Quercus*, *Ceratonia siliqua*, *Acacia cyanophylla*), sometimes on conifers (*Pinus halepensis* and *Thuya*). In Libya the species hatched from dying branch of *Ficus carica*. Development mostly in branches or small trunks. Adults on the host trees and flowers from May to August.

***Deilus fugax* (Olivier, 1790) (\*)**

*Callidium fugax* Olivier, 1790, Encycl. Méthod. Entom., 5 (Ins.): 253. Type locality: "Provence" (France).

**Range.** – Circum-Mediterranean species known from Europe (chiefly in southern countries), North Africa, Turkey, northern Iran, Middle East.

**Libya.** – Tripolitania: Wädî Labeter, south of Sûq al Ahad in pupal cell and beating *Retama rhaetam*, 21-27/II/2004; Sidi as Sâ'ih, XII/2005 (in apartment), ex larva from *Retama* (JR). A new record from Libya.

**Biology, host plants and flight period.** – Ecologically associated with Fabaceae; attacking dying or recently dead twigs, small branches or shoots of *Spartium*, *Cytisus*, *Sarothamnus*, *Calycotome*, *Genista*. *Retama rhaetam* in Libya. Adults overwinter in pupal cells. Emergence from April to July (February-March in Libya); adults on flowers.

***Certallum ebulinum* (Linnaeus, 1767)**

*Cerambyx ebulinus* Linnaeus, 1767, Syst. Nat., 12: 637. Type locality: "Gallia" (France).

*Certallum ebulinum*: ZANON, 1922: 132; FALZONI, 1923; DODERO, 1925: 18.

*Certallum ebulinum ruficollis*: ZAVATTARI, 1934: 535; SCHATZMAYR, 1937: 282.

**Range.** – Mediterranean area from North Africa and Portugal to Caucasus, Syria, Iran, Iraq, Israel.



**Libya.** – “Fuehat (Benghazi), V.1916” (ZANON, 1922); “Derna, Zavia Mechili, Bengasi” (DODERO, 1925; GRIDELLI, 1930); “Derna, Cirene, Guba”, leg. A.Ghigi (Falzoni, 1923); “Benghazi, Al Qubba, Derna, Makhili” (ZAVATTARI, 1934). Cyrenaica: “R[egio]. Uff[icio]. Agrario, 1.V.24, leg. C. Krüger” (GS); Tripolitania: Al ‘Azīziyah, 10.III.26, Gharyān, 22,23.III.26 (SCHATZMAYR, 1937). Tripolitania: Tarhūnah, 16.II.2002 and 25.III.2003; Az Zahrah, 13.III.2003; Sidi as Sā’ih, 27.II.2004; Cyrenaica: Tūkra, 17.IV.2003. Common in February-March (JR).

**Biology, host plants and flight period.** – Larvae in living stems mostly of Cruciferae like *Psychine stylosa*, *Erysinum grandiflorum*, *Sisymbrium crassifolium*; adults in early spring (from February to April) on flowers and stems of the host plants.

**[*Hylotrupes bajulus* (Linnaeus, 1758)]**

*Cerambyx bajulus* Linnaeus, 1758, Syst. Nat., 10: 396. Typus: “Europa, America sett.”.

*Hylotrupes bajulus*: ZANON, 1922: 132; DODERO, 1922: 6; 1923: 6; BOSELLI, 1930: 296; GRIDELLI, 1930: 343; ZAVATTARI, 1934: 537; SCHATZMAYR, 1938: 187.

**Range.** – Europe, North Africa, Canary Islands, Madeira, Asia Minor, Middle East (Syria, Lebanon, Israel), northern Iran, Caucasus, Siberia, China. Introduced in North America, South Africa, Madagascar, Japan. In North Africa, known from Morocco to Tunisia; introduced in Libya and Egypt.

**Libya.** – Cyrenaica: “Fuehat (Benghazi)” (ZANON, 1922; DODERO, 1923); “Cyrene” (GRIDELLI, 1930). Tripolitania: “Mellaha, VI. 35, 1 ex. leg. W. Benzi” (SCHATZMAYR, 1938).

**Biology, host plants and flight period.** – Development in dead stumps and fallen trunks of coniferous trees (*Picea*, *Abies*, *Pinus*), but also in old dry wood of seasoned timber, furniture and wooden structures. Specimens recorded from Libya were probably introduced with wood.

**[*Phymatodes testaceus* (Linnaeus, 1758)]**

*Cerambyx testaceus* Linnaeus, 1758, Syst. Nat., 10: 396. Type locality: “Europa”.

*Phymatodes testaceus*: DODERO, 1925: 18; BOSELLI, 1930: 300; GRIDELLI, 1930: 343; 1931: 252; 1933: 252; ZAVATTARI, 1934: 536.

**Range.** – Europe, North Africa, Middle East, Turkey, Caucasus, northern Iran, Siberia, Japan, introduced in North America. Widespread throughout North Africa, introduced in Egypt.

**Libya.** – “Tolmetta” (DODERO, 1925); “Cirenaica: Benghazi” (GRIDELLI, 1930), “Bengasi: Giuliana” (GRIDELLI, 1931).

**Biology, host plants and flight period.** – Polyphagous on deciduous plants, preferably on *Quercus*; adults crepuscular or nocturnal, on the host plants from late April to August. Specimens recorded from Libya were probably introduced with wood.

**[*Plagionotus arcuatus* (Linnaeus, 1758)]**

*Leptura arcuata* Linnaeus, Syst. Nat., 10: 399. Loc. Typ.: “Europa”.

*Plagionotus arcuatus*: GRIDELLI, 1930: 344; ZAVATTARI, 1934: 537.

**Range.** – Europe, North Africa, Syria, Turkey, northern Iran, Caucasus, Transcaucasia.

**Libya.** – “Zuetina, leg. Botto” (GRIDELLI, 1930).

**Biology, host plants and flight period.** – Development on dead branches and trunks of deciduous plants, mostly on *Quercus*, but also in *Castanea*, *Carpinus*, *Fagus*, *Salix*, *Prunus* and *Robinia*.

**Note.** – The single record of Zavattari is most likely based on observation of an introduced specimen.

**[*Xylotrechus antilope antilope* (Schönherr, 1817)]**

*Clytus antilope* Schönherr, 1817, Syn. Ins., 1 (3): 465. Type locality: “Germania, Finlandia”.

Distributional range of this species covers Europe, Asia Minor, Caucasus, Transcaucasia, northern Iran and North Africa (from Tunisia to Morocco). All specimens known from North Africa belong to a distinctive subspecies (ssp. *obliquefasciatus* Pic, 1890) (Sama, in preparation) which can be distinguished by totally light antennae and legs, and by elytrae brown with wider bands and spots.

**Libya.** – One specimen, clearly belonging to the nominotypical subspecies and apparently collected in Libya (Tripoli, VI.1937, leg. C.Krüger), is deposited in the coll. G. Müller (MCSNT). In our opinion, this record, if correct, is probably due to introduction.

**[*Chlorophorus figuratus* (Scopoli, 1763)]**

*Cerambyx figuratus* Scopoli, 1763, *Ent. Carn.*: 55, Fig. 176. Type locality: "Carniola" (Slovenia).

*Chlorophorus figuratus*: SCHATZMAYR, 1937.

This species, widely distributed in Europe, northern Turkey, Asia Minor, Caucasus and Iran, appears rather sporadic in the western Mediterranean area and totally absent from North Africa. A single record from Libya: "Tripoli, sul muro del Grand Hotel, 1 es. 5.4.26" (Schatzmayr, 1937) must be regarded as wrong (mislabelling) or due to introduction.

***Chlorophorus ringenbachi* Sama, 2004 (\*)**

*Chlorophorus ringenbachi* Sama, 2004, *Quad. Studi Nat. Romagna*, 19: 147. Type locality: Libya, Cyrenaica, Baladiyat Shahāt: Ra's al Hilāl (Al Jabal al Ackdar).

**Range.** – Apparently an endemic species from Libya, only known from the Al Jabal al Ackdar in Cyrenaica.

**Libya.** – Cyrenaica: Ra's al Hilāl, *ex larva* from *Pistacia lentiscus* 15.VI/17.VII.2004; Tāknis, *ex larva* from *Pistacia lentiscus*, 03.V.2004 (JR).

**Biology, host plants and flight period.** – This interesting species develops on *Pistacia lentiscus*. All known specimens hatched from the dead part of twigs (2-4 cm in diameter), previously girdled by larvae of *Purpuricenus desfontainii*. The 7 known specimens hatched between 15.VI to 17.VII.2004 (JR).

***Chlorophorus sexguttatus* (Lucas, 1849) (\*)**

*Clytus sexguttatus* Lucas, 1846, *Expl. Alg., Col.*: 493, Tav. 42, Fig. 2. Type locality: Algérie: env. d'Alger, Tlemcen (Oran).

**Range.** – Only known from North Africa, it was recorded from Morocco to Tunisia. A new record from Libya.

**Libya.** – Tripolitania: Jabal al 'Allūs (Al Khums), on *Thymus* sp., 31.V.2003 (JR).

**Biology, host plants and flight period.** – In Algeria it develops on *Ebenus pinnata* (Peyerimhoff, 1919), in Morocco on *Ononis natrix* ssp. *hispanica* and *Adenocarpus anagyriifolius* Coss. & Bal. (Fabaceae) (SAMA, 1987). Adults on different flowers and on stems of the host plants from April to early July.

***Agapanthia suturalis* (Fabricius, 1787)**

*Saperda suturalis* Fabricius, 1787, *Mant. Ins.*, 1: 149. Type locality: "in Africae plantis" (North Africa).

*Agapanthia cardui*: ZANON, 1922: 132; FALZONI, 1923: 89; DODERO, 1925: 18; GRIDELLI, 1930: 345; ZAVATTARI, 1934: 537.

*Agapanthia cardui suturalis*: SCHATZMAYR, 1937: 284.

**Range.** – South-western Europe, North Africa, Near East.

**Libya.** – Cyrenaica: "Fuehat (Benghazi), V.1916" (ZANON, 1922); "Cirene, Guba, Bir Gandula, El Garig" (FALZONI, 1923); "Derma, Zavia Mechili, Tecnis, Tolmetta, Bengasi" (DODERO, 1925); "Guarscià, leg. Silvestri"; "Cirene, leg. Krüger" (GRIDELLI, 1930); Tūkraḥ, 17.IV.2003 (JR). Tripolitania: "Sirtica occ.: Al Aziziyah, 10.3.26"; "N'Gila, 13.3.26"; "Sabrata, 11.3.26" (SCHATZMAYR, 1937); "Sirtica occ.: G. es Sada, B. Gleifa, IV.39, leg. C.Krüger" (GS); As Sarrāj, 02.III.2002; Az Zahrah, 13.III.2003 and 06.III.2004; Tarhūnah, 16.II.2002 (JR).

**Biology, host plants and flight period.** – Extremely polyphagous in herbaceous plants: *Urtica*, *Cirsium*, *Scolymus*, *Carduus*, *Melilotus*, *Senecio*, *Chrysanthemum*, *Dipsacus*, *Pyrethrum*, *Valeriana*, *Salvia*, *Echium*, *Phlomis* and maybe others. Adults sitting on the host plants from February to May. In Libya often found with *A. annularis* on thistles. A common species.

***Agapanthia zappii* Sama, 1987**

*Agapanthia zappii* Sama, 1987, *Biocosme mésogéen*, 4(1): 62. Type locality: "Algérie: Col de Telmet (Batna)".

**Range.** – This species replaces *A. asphodeli* (Latreille, 1804) throughout North Africa from Morocco to Libya.

**Libya.** – Tripolitania: Khoms, IV (collector and date not stated) (SAMA, 1987). Sidi as Sā'ih, 27.II.2004 and 02.III.2004; Sidi as Sayd, 02.III.2004; Az Zahrah, 06.III.2004 (JR).



**Biology, host plants and flight period.** – Development like *A. asphodeli* on different species of *Asphodelus*; adults on flowers or twigs of the host plants very early in the spring.

***Agapanthia annularis* (Olivier, 1795)**

*Saperda annularis* Olivier, 1795, *Ent.*, 4, 68: 11, Tav. 4, Fig. 36. Type locality: Spain.

*Agapanthia annularis*, ZANON, 1922: 132; FALZONI, 1923: 89; DODERO, 1923: 6; GRIDELLI, 1930: 345; ZAVATTARI, 1934: 538.

**Range.** – Iberian Peninsula and North Africa from Morocco to Libya.

**Libya.** – Cyrenaica: "Fuehat (Bengasi), V.1916" (ZANON, 1922); "Fuehat" (DODERO, 1923); "Cirene, Derna, leg. Ghigi" (FALZONI 1923); "Benghazi, IV.24, leg. C.Krüger" (GS); Wādī al Kūf, 7.IV.1998, leg. A. Carapezza (GS); Tūkraḥ, 17.IV.2003 (JR). Tripolitania: As Sarrāj, 02.III.2002; Az Zahrah, 13.III.2003 and 06.III.2004 (JR).

**Biology, host plants and flight period.** – Development on herbaceous plants such as *Carduaceae* on which the adults can be found during the spring. Adult from late February to April. Common.

***Calamobius filum* (Rossi, 1790)**

*Saperda filum* Rossi, 1790, *Fauna Etrusca*, 1: 152, Tav. 5, Fig. 10. Type locality: "Etruria".

*Calamobius gracilis*: ZANON, 1922: 132.

*Calamobius filum*: FALZONI, 1923: 89; DODERO, 1925: 18; BOSELLI, 1930: 291; GRIDELLI, 1930: 345; ZAVATTARI, 1934: 537.

**Range.** – Circum-Mediterranean species, very common in the whole Mediterranean area (apparently except Egypt) from Spain to the Near East.

**Libya.** – Cyrenaica: "Fuehat (Benghazi), V.1916" (ZANON, 1922); "Bir Gandula, leg. Ghigi" (FALZONI, 1923); "Wadi Kuf, Tolmetta, leg. Festa" (DODERO, 1925); "Guarscià; Gharib, IV.1922, leg. Silvestri" (GRIDELLI, 1930).

**Biology, host plants and flight period.** – Development in living stems of wild and cultivated Gramineae: *Dactylis glomerata*, *Arrhenatherum elatius*, *Calamagrostis epigeios*, *Avena longiglumis* and others. Adults on the stems of host plants in spring.

***Niphona picticornis* Mulsant, 1839 (\*)**

*Niphona picticornis* Mulsant, 1839, *Long. Fr.*, 1: 169, Tav. 3, Fig. 6. Type locality: "France: Draguignan."

**Range.** – Coastal plains of the whole Mediterranean Sea.

**Libya.** – Tāknis, 5.V.2004, a single specimen collected by beating *Pistacia lentiscus* (JR); Ra's al Hilāl, III.2005, one specimen hatched from *Pistacia lentiscus*, (JR).

**Biology, host plants and flight period.** – Ecologically associated with deciduous trees and shrubs of Mediterranean maquis.

***Parmena pubescens* (s. l.) (Dalman, 1817) (\*)**

*Lamia (Dorcadion) pubescens* Dalman, 1817, in SCHÖNHERR, *Syn. Ins.*, 1(3), Append.: 176. Type locality: Algeria (a wrong locality according to VILLIERS (1978).

**Range.** – Chiefly western Mediterranean: Spain, Italy, Malta, Croatia, Greece; not previously known from North Africa. A new record from Libya.

**Libya.** – Cyrenaica: mouth of Wādī Al Athrūn, one specimen under a stone, 31.VIII.2002 (JR).

**Biology, host plants and flight period.** – Development in the stems of many herbaceous plants such as *Euphorbia*, *Crithmum maritimum*, *Foeniculum vulgare*, *Ferula communis*, *Thapsia garganica*, *Carduaceae*, etc.; sometimes in dead twigs of bushes and trees like *Ficus carica* and *Nerium oleander*.

**Note.** – The only known specimen does not allow analysing the real taxonomic status of this population.

***Crossotus subocellatus* (Fairmaire, 1886)**

*Dichostathes subocellatus* Fairmaire, 1886, *Ann. Soc. Ent. Fr.*, 6 (5): 458. Type locality: "Obock" (Djibouti).

*Crossotus subocellatus*: BECCARI & GERINI, 1976: 105.

**Range.** – Southern part of Arabian Peninsula, intertropical and sahelian Africa from Sudan to

Mauritania; northern Africa from southern Morocco and the Western Sahara to Egypt; apparently missing in Tunisia.

**Libya.** – Fāzzan: 10.VI.2002 Terhin; 27.V.2003 Tehi-n-Tilemsin; 03.V.2004; Wādī I-n-Hagarīn, 31.V/21.VI.2003 in Messak Sattafet, Wādī I-n-Aghalin, 13.V.2004. Judging from observation of emergence holes the species can be considered common on *A. raddiana* all over the Messak and Akākūs areas; Tripolitania: emergence holes observed in Wādī Sūf Ajjīn.

**Biology, host plants and flight period.** – Development usually in moribund branches and trunks of Fabaceae; in Libya, as well as in Algeria and Morocco, frequently attacking *A. raddiana*. Adults crepuscular or nocturnal, sitting on the host plants throughout the year; in the Sahelian zone from June to November, in central Sahara from April to the end of August.

#### ***Deroplia troberti troberti* (Mulsant, 1843)**

*Stenidea troberti* Mulsant, 1843, *Ann. Soc. roy. agr. Hist. nat. Lyon*, 6: 8. Type locality: "Algérie".

*Belodera troberti*: GRIDELLI, 1930: 346; ZAVATTARI, 1934: 538.

**Range.** – SW Europe and Mediterranean area from Spain to southern Greece (including Crete: ssp. *cruciata* Sama, 1996); recorded from Cyprus (VILLIERS, 1967). In North Africa from Morocco (southward to the Anti Atlas) to Libya.

**Libya.** – "Aīn Mara, X.1927, leg. Krüger" (GRIDELLI, 1930; ZAVATTARI, 1934).

**Biology, host plants and flight period.** – In Europe, this species is a typical inhabitant of the Mediterranean maquis where it develops in dead or dying twigs of *Quercus ilex*, *Q. suber*, *Nerium oleander*, *Pistacia lentiscus*, *Laurus nobilis*, *Ficus carica*, etc. In North Africa it commonly attacks apical twigs of *Nerium oleander* previously killed or weakened by *Derolus mauritanicus*. Adults are nocturnal and can be found from the late summer (chiefly in September to October). During the day the adults hide within their old emergence holes or in those of *Derolus mauritanicus*.

#### ***Opsilia coerulescens* (Scopoli, 1763)**

*Leptura coerulescens* Scopoli, *Ent. Carn.*: 49, Fig. 160. Type locality: "Carniola".

*Phytoecia coerulescens grisescens*: SCHATZMAYR, 1937: 284.

**Range.** – Central (mostly warm or xerothermic localities) and South Europe; North Africa, Asia Minor to Syria, Palestine, Jordan, Israel, Turkistan, Kazakhstan, West Siberia, China. In North Africa, common from Morocco to Libya.

**Libya.** – Tripolitania: "Sabrata, 11.3.26" (SCHATZMAYR, 1937).

**Biology, host plants and flight period.** – Development in roots of living Boraginaceae like *Echium*, *Cerinth*, *Cynoglossum*, *Anchusa*, *Symphytum*, *Lithospermum*, *Lycopsis*, etc.; adults on the host plants or flying around them from the early spring to June-July.

#### ***Blepisanis melanocephala* (Fabricius, 1787)**

*Saperda melanocephala* Fabricius, 1787, *Mant. Ins.*, 1: 148. Type locality: "Bizerta" (northern Tunisia).

*Phytoecia rubricollis*: DODERO, 1925: 18; GRIDELLI, 1930: 346; ZAVATTARI, 1934: 538.

**Range.** – Only known from North Africa and Sicily.

**Libya.** – Cyrenaica: "Bengasi, leg. Festa" (DODERO, 1925); "Cirene, leg. Krüger" (GRIDELLI, 1925; 1930).

**Biology, host plants and flight period.** – Development in living herbaceous plants; in Morocco chiefly in Lamiaceae: *Marrubium vulgare* (CHAVANON, 1989; SAGLIOCCO, 2000), *Lavandula multifida* (GS) and maybe others. Adults can be found on the stem of the host plants from the early spring till May-July.



Table 1. – Collecting localities of Libya recorded in this paper.  
(Emphatic vowels are indicated by a bar and emphatic consonants are in bold).

Current name English transliteration	Other spelling/Old name from Italian papers	Baladiyah County	Coordinates WGS 84
Abyār as Sabābil	(Abiar) Es-Schegga	Tārabulus?	32°16'N 13°01'E
Ad Darsiyāh	Ptolemais/Tolmeta	Al Marj	32°42'N 20°56'E
Al 'Azīziyah	Al Aziziyah	Al 'Azīziyah	32°31'N 13°01'E
Al Abraḡ	Luigi di Savoia	Al Qubbah	32°47'N 21°59'E
Al Athrūn	Al Athrun (Wadi)	Al Qubbah	32°52'N 22°16'E
Al Fuehāt	Fuehat	Binghāzī	
Al Gārig?	El Garig	Cyrenaica?	
Al Gharībī	Gharib	?	32°01'N 12°30'E
Al Jadīd (Sabhā)	Gelid	Sabhā	27°01'N 14°25'E
Al Jaghbūb	Giarabub	Tubruḡ	29°45'N 29°31'E
Al Khums	Khoms, Homs	Al Khums	32°38'N 14°16'E
Al Kufrah	Cufra	Al Kufrah	24°10'N 23°15'E
Al Makhīll	(Zavia) Mechili	Al Qubbah	32°10'N 22°17'E
Al Marj	Barce	Al Marj	32°30'N 20°50'E
Al Melāhah	Mellaha	Tārabulus	30°41'N 12°04'E
Al Qawārishah	Guarsciā	Binghāzī	32°01'N 20°04'E
Al Qubbah	Guba	Al Qubbah	32°46'N 22°15'E
An Njīlah	N'gila	Az Zāwiyah	
As Sarrāj		Tārabulus	
As Sdadah	Sdada	Abūgrain	31°16'N 21°43'E
Az Zahrah	Zahara	Az Zāwiyah	32°41'N 12°52'E
Az Zintān	Az Zintan	Yafran	31°03'N 12°22'E
Az Zuwaytīnah	Zuetina	Ajdabiyah	30°57'N 20°07'E
'Ayn Mārā	Ain Mara	Al Qubbah	32°45'N 22°22'E
'Ayn Zārah	Ain Zara/Ostuni	Tārabulus	32°48'N 13°16'E
Awbārī	Ubari	Awbārī	26°35'N 12°46'E
Binghāzī	Bengasi	Binghāzī	32°07'N 20°04'E
Bī'r Ctaifa?	Bir Ctaifa	Al Jufrah	
Bī'r Gleifa?	B. Gleifa	?	Same as Bir Ctaifa?
Bī'r Sakhn (Ghāt)		Murzuḡ	
Cyrene	Cirene	Shahāt	32°49'N 21°52'E
Darnah	Derna	Darnah	32°46'N 22°39'E
Gharyān	Gharian	Gharyān	32°10'N 13°01'E
Ghāt	Ghat (Gat)	Murzuḡ	24°57'N 10°10'E
Ghirza	Ghirza	Banī Walīd	30°56'N 14°33'E
Hawa Fteah (Sūsah)		Shahāt	
Hūn	Hon	Al Jufrah	29°07'N 15°55'E
Janzūr	Janzūr	Az Zāwiyah	32°49'N 13°02'E
Mizdah	Mizda	Mizdah	31°25'N 12°58'E
Qandūlah	Gandula	Al Jabal al Ackdar	
Ra's al Hilāl	Ras el Hilal	Shahāt	32°53'N 22°11'E
Sabhā	Sebha	Sabhā	27°02'N 14°25'E
Sabrātah	Sabrata	?	32°48'N 12°29'E
Samnū	Semnu, Djedid-Sewnou	Sabhā	27°16'N 14°54'E
Shahāt		Shahāt	32°50'N 21°52'E
Sidi as Sayd		Tarhūnah	32°20'N 13°29'E
Sidi as Sā'ih		Tārabulus	32°34'N 13°15'E
Sūḡ al Ahad		Tārabulus	32°33'N 13°26'E
Sūḡ al Khamīs	Sūḡ al Khamīs	Qasr Bin Ghashir	32°35'N 14°21'E
Sūsah	Sousa	Shahāt	32°32'N 13°13'E
Tārabulus	Tripoli	Tārabulus	32°53'N 13°11'E
Tajūrā'	Tagiura	Tārabulus	32°52'N 13°21'E
Tāknīs	Tecnis	Al Marj	32°28'N 21°07'E
Tarhūnah	Tarhuna	Tarhūnah	32°26'N 13°38'E
Tolmeitah	Tolmetta	Al Marj	32°42'N 20°56'E
Tūkraḡ	Tokra	Al Marj	32°32'N 20°34'E
Zuwārah	Zouara	An Niqāt al Khams	32°56'N 12°05'E

Region, Mountains, Wādī, Ergs...	Other spelling/Old name from Italian papers	Mountain, Region
Tripolitania		
Cyrenaica	Cirenaica	
Fazzān	Fezzan	
Erg or Edeyen Murzuq		Fazzān
Erg or Egede Titersin		Fazzān
Erg or Egede Wa-n-Kaza		Fazzān
Al Jabal al Ackdar		Cyrenaica
Jabal Akākūs		Fazzān
Jabal al 'Allūs		Tripolitania
Jabal Nafusāh		Tripolitania
Jabal as Sawdā (Hūn)	Djebel el Soda	Fazzān/ Tripolitania
Tehi l-n-Elobu		Messāk Sattafet /Fazzān
Tehi-n-Tamellelt		Messāk Sattafet /Fazzān
Terhin		Messāk Sattafet /Fazzān
Wādī l-n-Abaraka		Akākūs /Fazzān
Wādī Awis		Akākūs /Fazzān
Wādī Erāwen		Messāk Sattafet /Fazzān
Wādī Sūf Ajjīn	Wadi Sofeggin	Tripolitania
Wādī bel Gadīm		Jabal Ackdar /Cyrenaica
Wādī l-n-Hagarīn		Messāk Sattafet /Fazzān
Wādī Iyadar		Akākūs /Fazzān
Wādī al Kūf ('Umar al Mukhtar)		Cyrenaica
Wādī Labeter		Tripolitania
Wādī Ti-n-Sharūma		Messāk Sattafet /Fazzān
Wādī Tiksatfn		Messāk Sattafet /Fazzān

### Discussion

Our literature search revealed 24 species of Cerambycidae known to occur in Libya. Literature records of *Aegosoma scabricorne*, *Hylotrupes bajulus*, *Phymatodes testaceus*, *Plagionotus arcuatus* and *Chlorophorus figuratus* are most likely based on observations of introduced specimens. These species, as well as *Xylotrechus antilope* (examined at MCSNT), can not be therefore regarded as part of the Libyan fauna. The present contribution, which includes all literature records and our own observations, lists 35 species; 16 of them (with *C. ringenbachi*) (marked with an asterisk) are new records for the fauna of Libya.

Our knowledge of Libyan Cerambycidae is far from complete. Further species of Cerambycidae, belonging to both the Mediterranean and the Saharan ecoregions, like *Anthracocentrus arabicus* (Thomson, 1877), known from all Saharan countries from Egypt to Western Sahara, *Gracilia minuta* (Fabricius, 1781) and *Poecilium lividum* (Rossi, 1794), all common species widespread throughout the Mediterranean area, will likely to be recorded in the future.

Systematics, ecology and bionomics of Cerambycidae of Libya will be more extensively treated and illustrated in the next volume of the Atlas of the Cerambycidae of Europe and Mediterranean area (Sama, in preparation); this volume will deal with all known species of Cerambycidae occurring in northern Africa from Egypt (including Sinai) to Morocco and in the Atlantic Isles.

Colour pictures of both prepared and living specimens of all Libyan Cerambycidae collected by J.-C. Ringenbach are presented in the web site "Beetles and Rock Art in Libya" (<http://jcringenbach.free.fr/>). Some of these pictures can be also found on the web site "Longhorn beetles (Cerambycidae) of the West Palaearctic region" by M. Hoskovec and M. Rejzek <http://www.uochb.cas.cz/~natur/cerambyx/index.htm>.

ACKNOWLEDGMENTS. – Authors are grateful to Dr. A. Colla, Museo Civico di Storia Naturale, Trieste (MCSNT), R. Poggi, Museo Civico di Storia Naturale G. Doria, Genova (MCSNG), for enabling one of us (GS) to study material in their charge, and Pr. Mustafa J. Salem who did the English transliteration of Libyan names.



## REFERENCES

- BECCARI F. & GERINI V., 1976. – *Catalogo della collezione entomologica*. II. Coleoptera. Istituto agronomico per l'Oltremare, Firenze: 170 p.
- BOSELLI F.B., 1930. – Elenco delle specie d'insetti dannosi ricordati per la Libia fino al 1926. *Annali del regio Istituto superiore agrario*, Portici (3), 3: 281-307.
- BREUNING S. & VILLIERS A., 1960. – Coléoptères Cérambycides récoltés au Tibesti par Ph. Bruneau de Miré. *Bulletin de l'Institut français de l'Afrique noire*, série A, 22 (4): 1298-1305.
- BYTINSKI-SALZ H., 1956. – The Cerambycidae of Israel. *Bulletin of the Research Council of Israel*, 5 B: 207-226.
- CHAVANON G., 1989. – Contribution à la connaissance des Cerambycidae du Maroc nord-oriental, de leur biologie et de leur écologie. *L'Entomologiste*, 45 (4-5): 261-271.
- COBOS A., 1958. – Misión científica J. Mateu al Sahara frances. Coleopteros: Cicindelidae, Malachidae, Dasytidae, Elateridae, Meloidae, Rhipiphoridae, Alleculidae, Tenebrionidae, Cerambycidae y Chrysomelidae. *Tamuda*, 6 (2): 341-354.
- COCQUEMPOT C. & SAMA G., 2003. – L'expansion circumméditerranéenne de *Phoracantha recurva* Newman, 1840. *L'Entomologiste*, 59 (5-6): 209-214.
- DODERO A., 1922. – Missione zoologica del Dott. E. Festa in Cirenaica. V. Coleotteri. *Bollettino del Museo di Zoologia e Anatomia comparata dell'Università di Torino* (N.S.), 37, n° 743: 1-7.
- 1925. – Missione zoologica del dr. E. Festa in Cirenaica. *Bollettino del Museo di Zoologia e Anatomia comparata dell'Università di Torino* (N.S.), 39 (23): 1-31.
- FALZONI A., 1923. – Coleotteri di Cirenaica raccolti dal prof. Alessandro Ghigi nella escursione organizzata dal Touring Club Italiano, 15-24 aprile 1920. *Atti della Società italiana di Scienze naturali*, 62: 83-90.
- FIORI G., 1956. – Risultati delle missioni entomologiche dei dottori G. Fiori ed E. Mellini nel Nord Africa. IX. Appunti ecologici ed etologici su l'entomofauna estiva della Hamada El-Hamra". *Bollettino dell'Istituto di Entomologia dell'Università di Bologna*, 21: 277-296.
- GOURVÈS J., 1987. – Captures de quelques Cérambycides marocains. *L'Entomologiste*, 43 (2): 95-98.
- GRIDELLI E. 1930. – Risultati zoologici della missione inviata dalla R. Società geografica italiana per l'Esplorazione dell'oasi di Giarabub (1926-1927). Coleotteri. *Annali del Museo civico di Storia naturale di Genova*, 54, 487 p. (Cerambycidae: 340-342).
- 1931. – Spedizione scientifica all'Oasi di Cufra (Marzo-Luglio 1931). Coleotteri. *Annali del Museo civico di Storia naturale di Genova*, 56: 155-258.
- 1933. – Missione scientifica del Prof. Zavattari nel Fezzan (1931). Coleotteri. *Bollettino della Società entomologica italiana*, 65 (4): 70-90.
- 1937. – Coleotteri raccolti dal Prof. G. Scortecci nel Fezzan (Missione R. Società geografica 1934). *Atti della Società italiana di Scienze Naturali*, 86: 17-54
- 1939. – Coleotteri del Fezzan e dei Tassili d'Agger. Missione Scortecci 1936. *Atti della Società italiana di Scienze Naturali*, 78: 385-456.
- HOLZSCHUH C., 1993. – Cerambycidae (Coleoptera) of Saudi Arabia: Part II, Prioninae and Cerambycinae. *Fauna of Saudi Arabia*, 13: 110-129.
- KOCHER L., 1958. – Catalogue commenté des Coléoptères du Maroc, VIII. Phytophages. *Travaux de l'Institut Scientifique Chérifien*, Zoologie: 172 p.
- KOCHER L. & REYMOND A., 1954. – Entomologie. In Les Hamada sud marocaines. *Travaux de l'Institut Scientifique Chérifien* (sér. gén.), 2: 281 p.
- KRÜGER H.G., 1931. – Insectes nuisibles en Cyrénaïque. *Monitor Int. Protect. Plantes*, 5 (1): 5-6.
- LAMEERE A., 1912. – Révision des Prioniens, 21. Prionines VII. *Annales de la Société entomologique de Belgique*, 56: 185-260.
- 1913. – Cerambycidae, Prioninae. In: Junk & Schenkling (eds.), *Coleopterorum Catalogus*, 52: 108 p.
- MATEU J., 1954. – Cerambycidos del Sahara Espanol. *Tamuda*, 2 (1): 110-120.
- 1964. – Notes sur la biologie de *Plocaederus caroli* Leprieur. *Vie et Milieu*, vol. Jubil. G. Petit: 394-401.
- 1965. – Notes sur quelques Cérambycides, Lyctides et Bostrichides de la région de Béni-Abbès (Sahara nord-occidental). *L'Entomologiste*, 21 (6): 103-114.
- 1972. – Les insectes xylophages des Acacia dans les régions sahariennes. *Publicações do Instituto de Zoologia "Dr A. Nobre"*, Faculdade de Ciências do Porto, 116: 714 p.
- MELLINI E., 1956a. – Risultati delle missioni entomologiche dei dottori G. Fiori ed E. Mellini nel Nord Africa. VIII. La vita entomica nell'oasi e nella piana di Mizda. *Bollettino dell'Istituto di Entomologia dell'Università di Bologna*, 21: 213-242.

- MELLINI E., 1956b. – Risultati delle missioni entomologiche dei dottori G. Fiori ed E. Mellini nel Nord Africa. IX. Aspetti estivi della entomofauna dello Uadi Sofeggin e suoi affluenti. *Bollettino dell'Istituto di Entomologia dell'Università di Bologna*, **21**: 243-276.
- 1976a. – Risultati delle missioni entomologiche dei dottori G. Fiori ed E. Mellini nel Nord Africa. XXXII. Attività della entomofauna nelle oasi di Mizda e di El-Ghéria Esc-Scherghia in primavera avanzata. *Bollettino dell'Istituto di Entomologia dell'Università di Bologna*, **33** (1976-1977): 55-114.
- 1976b. – Risultati delle missioni entomologiche dei dottori G. Fiori ed E. Mellini nel Nord Africa. XXXIII. Etologia degli insetti dello Uadi Sofeggin ed altri Uidian della Ghibla nel mese di maggio. *Bollettino dell'Istituto di Entomologia dell'Università di Bologna*, **33** (1976-1977): 115-214.
- MELLINI E., FIORI G., 1954. – Risultati delle missioni entomologiche dei dottori G. Fiori ed E. Mellini nel Nord Africa. I. Ricerche di ecologia e di etologia sulla entomofauna dello "Uadi Sofeggin" (Tripolitania). *Bollettino dell'Istituto di Entomologia dell'Università di Bologna*, **20**: 29-51.
- PEYERIMHOFF P., 1931. – Mission scientifique du Hoggar, Coléoptères. *Mémoires de la Société d'Histoire naturelle de l'Afrique du Nord*, **2**: 172 p.
- 1936. – Mission au Tibesti (1930-1931), dirigée par M. Dalloni, professeur à la Faculté des Sciences d'Alger. Coléoptères (avec la description d'un genre nouveau et de deux espèces nouvelles). *Mémoires de l'Académie des Sciences de l'Institut de France*, **62**: 78.
- 1948. – Mission scientifique du Fezzan (1944-1945). V. Insectes, Coléoptères. *Mémoires de l'Institut des Recherches Sahariennes*, Alger: 84 p.
- PIC M., 1900. – Notes diverses. *Matériaux pour servir à l'étude des Longicornes*, **3** (1): 6-7.
- 1912. – Addenda et corrigenda au Coleopterorum Catalogus. *Matériaux pour servir à l'étude des Longicornes*, **8** (2): 7-14.
- REYMOND A., 1950. – Notes de capture et observations éthologiques sur quelques Cérambycides sahariens. *Longicornia*, **1**: 563-576.
- SAGLIOCCO J.-L., 2000. – The insect fauna associated with horehound (*Marrubium vulgare* L.) in western Mediterranean Europe and Morocco: potential for biological control in Australia. *Plant Protection Quarterly*, **15** (1): 21-25.
- SAMA G., 1987. – Note préliminaire pour une faune des longicornes de l'Afrique du Nord. *Bioscisme mésogéen*, **4** (1): 43-64.
- 2002. – *Atlas of the Cerambycidae of Europe and the Mediterranean Area. I: Northern, Western, Central and Eastern Europe, British Isles and Continental Europe from France (excl. Corsica) to Scandinavia and Urals*. Kabourek, Zlin: 173 p., 36 col. plates.
- 2004. – Description de *Chlorophorus ringenbachi* nouvelle espèce de Clytini de Libye. *Quaderno di Studi e Notizie di Storia naturale della Romagna*, **19**: 147-152.
- SAMA G. & BOCCINI R., 2003. – *Phoracantha recurva* (Newman, 1840), prima segnalazione per la fauna italiana. *Quaderno di Studi e Notizie di Storia naturale della Romagna*, **18**: 168.
- SCHATZMAYR A., 1937. – Cicindelidae, Carabidae, Paussidae e Cerambycidae della Tripolitania. Aggiunte al "Prodomo della Fauna della Libia" di F. Zavattari. *Pubblicazioni del Museo Entomologico P. Rossi, Duino*, **2**: 265-284.
- 1938. – Coleotteri raccolti dal dott. E. Moltoni durante le sue missioni ornitologiche in Libia. *Atti della Società italiana di Scienze naturali*, **77**: 28-29.
- VILLIERS A., 1946. – *Faune de l'Empire Français. V. Coléoptères de l'Afrique du Nord*. Ed. du Muséum, Paris, 153 p., 275 fig.
- 1961. – A propos d'une série de *Polyarthron* récoltés au Sahara par F. Pierre. *Bulletin de l'Institut français d'Afrique noire, série A*, **23**, 1: 63-82.
- 1967. – Coléoptères Cérambycides de l'île de Chypre. *L'Entomologiste*, **23** (3): 63 - 64.
- 1978. – *Encyclopédie Entomologique*. XLII: *Faune des Coléoptères de France*. I: Cerambycidae. Ed. Lechevalier, Paris, 611 p., 1802 fig.
- VIVES E., 2000. – Insecta, Coleoptera, Cerambycidae. In: Ramos M. A. et al. (eds.), *Fauna Iberica*, vol. 12. Museo nacional de Ciencias naturales. CSIC. Madrid: 724 p.
- ZANON V., 1922. – Contributo alla conoscenza della fauna entomologica di Bengasi. *Memorie della Società entomologica italiana*, **1**: 112-139.
- 1924. – Contributo alla conoscenza della entomofauna entomologica di Bengasi (Coleotteri di Bengasi). *Memorie della Pontificia Accademia delle Scienze Nuovi Lincei*, serie seconda, Vol. VII: 229-249.
- ZAVATTARI E., 1934. – *Prodomo della Fauna della Libia*. Tip. già Cooperativa, Pavia: VIII + 1234 p.