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Taxonomy, Bionomics and Faunistics of the Nominate Subgenus of *Mylabris* Fabricius, 1775, with the description of five new species (Coleoptera: Meloidae: Mylabrini)

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Abstract

The nominate subgenus of the mylabrine genus *Mylabris* is revised: five new species, *M.* (*M.*) *alpicola* **sp.n.**, *M.* (*M.*) *cernyi* **sp.n.**, *M.* (*M.*) *mediorientalis* **sp.n.**, and *M.* (*M.*) *pseudoemiliae* **sp.n.**, are described and figured; *M.* (*M.*) *apiceguttata* **sp.n.**, is provisionally refered to the nominate subgenus. *M.* (*M.*) *rishwani* Makhan, 2012 is synonymized with *M.* (*M.*) *quadripunctata* (Linnaeus, 1767). The other 20 species are characterized by short descriptions and figures, and a key to the species is provided. Tentatively, *M. barezensis* and *M. batnensis* are placed in the nominate subgenus. The bionomics of the species is summarized in tables including information on phenology, elevation, habitat preference, host plants, larval biology, and host insects. Zoogeographic analysis of the subgenus was carried out on the basis of all available faunistic records from literature and collections which are summarized in Appendix.

Key words: Blister beetles, new species, dichotomous key, distribution, zoogeography, biology

Introduction

Mylabrini is the most speciose tribe of Meloidae, with approximately 750 described species being assigned to 11 genera. The tribe, as defined in the recent literature (Bologna, 1991a; Bologna & Pinto, 2002; Bologna *et al.*, 2005, 2008a, 2008b, 2010; Pan *et al.*, 2013), is restricted to the Old World. Morphological and molecular studies of Meloidae (Bologna, 1991a; Pinto & Bologna, 1999; Bologna & Pinto, 2001, 2002; Bologna *et al.*, 2008b) confirmed the monophyly of the tribe Mylabrini. The complex synonymy of the genera was clarified by using morphology (Bologna, 1978, 1991a; Bologna & Pinto, 2001, 2002), while phylogenetic relationships have recently been confirmed by molecular studies (Bologna *et al*., 2005, 2008b; Pan *et al.*, 2013), albeit with three small genera, namely *Lydoceras* Marseul, *Semenovilia* Kuzin, and *Xanthabris* Kaszab, excluded.

Revisions of the following mylabrine genera have been published: *Croscherichia* Pardo Alcaide (Bologna & Coco, 1991), *Mimesthes* Marseul (Bologna, 2000), *Actenodia* Laporte de Castelnau (Bologna *et al.*, 2008a), *Lydoceras* Marseul (Bologna *et al.*, 2011), *Pseudabris* Fairmaire (Pan *et al.*, 2013).

The genus *Mylabris* was described by Fabricius (1775), so as to include some species which now refer to other mylabrine genera. This beetle genus has been well known since the classical period, at least in the Mediterranean area, due to its relevance to traditional medicine, owing to cantharidin production (see Bologna, 1991a for a synthesis).

Research into subgenera of *Mylabris* Fabricius, one of the most speciose genera of this tribe, are in progress, using both morphological and molecular approaches. In this framework, we first focused on the definition and relationships of the 14 recognized subgenera (Pan *et al*., unpublished). The nominate subgenus, previously tested, proved to be monophyletic (Bologna *et al*., 2005).

The aim of the present paper is to revise taxonomically the nominate subgenus of *Mylabris* (Fig. 1), a group widely distributed in the southern Palaearctic region (Bologna, 2008), to describe five new species, to propose a dichotomous key, and finally summarize the genus bionomics and zoogeography. This subgenus has never been revised and only partly studied. In the recent Palaearctic Catalogue, Bologna (2008) listed 17 species, and another three were afterwards described by Bologna & Turco (2007), Bologna (2009), and Serri *et al*. (2012). Three species (which are marked by *), one of which is described here (*M. apiceguttata*) are tentatively refered to the nominate subgenus but their taxonomic position needs to be clarified by molecular analyses.

Material and methods

Almost 9000 adult specimens of *Mylabris* (*Mylabris*) were examined for this study: 14 *alpicola* (holotype and 13 paratypes MAB, CC, HMIM), 22 *amorii*, 20 *apiceguttata** (holotype and 19 paratypes, HMIM, MAB), 70 *apicenigra*, 7 *barezensis** (including holotype and 5 paratypes, HMIM, MAB), 94 *batnensis** (including holotype, MNHN), 97 *cernyi* (including holotype and 31 paratypes, MAB), 37 *ciliciensis*, 8 *concolor* (including holotype, MNHN), 1 *desertica* (holotype, BMNH), 24 *emiliae* (including type and 1 possible syntype, NHMTR), 361 *guerini*, 118 *kodymi* (including holotype and 25 cotypes, MAB, NMPC), 49 *madani* (including 3 syntypes, MNCN), 19 *madoni* (including holotype and 1 possible syntype, as well as syntypes of some infraspecific forms, MNHN), 92 *mediorientalis* (including holotype and 20 paratypes, MAB), 244 *olivieri*, 3 *parumpicta* (holotype and 2 paratypes, ZMHB), 11 *poggii* (including holotype and 8 paratypes, MSNG, MAB), 8 *pseudoemiliae* (holotype and 7 paratypes, IRSNB, MAB), 3886 *quadripunctata*, 414 *schreibersi,* 9 *tauricola* (including lectotype and 2 paralectotypes, MNHN), 315 *tricincta*, 2948 *variabilis* (including syntypes, UUZM).

The following abbreviations used in the text, represent the studied collections: BAS = Bulgarian Academy of Sciences, Sofia, Bulgaria; BMNH = Natural History Museum, London, United Kingdom; CA = F. Angelini, Francavilla Fontana, Brindisi, Italy; CAR = A. Carapezza, Palermo, Italy; CBV = C. Baviera, Messina, Italy; CC = L. Černý, Praha, Czech Republic; CCA = S. Cafaro, Rome, Italy; CCAS = L. Casset, Paris, France; CCO = J. Cooter, Hereford Museum, Hereford, U.K.; CF = F. Frank, Korb, Germany; CFO = P. Fontana, Casalino di Pergine Valsugana, Trento, Italy; CFR = late H. Freude, Falconara, Ancona, Italy; CG = G. Gobbi, Rome, Italy; CGR = M. Grottolo, Brescia, Italy; CGU = I. Gudenzi, Gatteo, Forlì-Cesena, Italy; CHA = J. Hamon, Gaillard, France; CJ = N. Jansson, Linköping, Sweden; CK = S. Krejcik, Unicov, Czech Republic; CL = A. Liberto, Rome, Italy; CLE = P. Leo, Cagliari, Italy; CM = B. Mälkin, Warsaw, Poland; CMAL = L. Malmusi, Modena, Italy; CME = C. Meloni, Cagliari, Italy; CMI = E. Migliaccio, Rome, Italy; CMO = G. Moraguès, Marseille, France; CO = M. Olmi, Viterbo,

Italy; CP = J. D. Pinto, University of California, Riverside, U.S.A.; CPA = A. Pace, Verona, Italy; CPP = R. Papi, Castelfranco di Sopra, Arezzo, Italy; CPR = late J. Probst, Wien, Austria; CR = J.-C. Ringenbach, Pau, France; CRU = N. Rulli, Campomarino, Italy; CS = L. Saltini, Modena, Italy; CSC = J. Scheuern, Germany; CSE = D. Sechi, Cagliari, Italy; CV = V. Viglioglia, Rome, Italy; CW = P. Weill, Pau, France; CZ = S. Zoia, Milan, Italy; DEI = Senckenberg Deutsches Entomologisches Institut Müncheberg, Germany; FSAG = Faculté de Sciences Agronomiques de Gembloux, Belgium; HBUM = Hebei University Museum, Baoding, China; HMIM = Hayk Mirzayans Insect Museum, Iranian Research Institute of Plant Protection, Teheran, Iran; HNHM = Hungarian Natural History Museum, Budapest, Hungary; IAA = Istituto Agronomico di Acireale, Catania, Italy; IRSNB = Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium; MAB (and MABa) = M. A. Bologna coll., Università degli studi Roma Tre, Rome, Italy (the material preserved in alcohol 95% = MABa); MCNC = Museo civico di Storia naturale, Carmagnola, Torino, Italy; MCNV = Museo Civico di Storia Naturale, Venice, Italy; MCZR = Museo Civico di Zoologia, Rome, Italy; MFNB = Museo Friulano di Storia Naturale, Udine, Italy; MHNG = Muséum d'Histoire Naturelle, Geneva, Switzerland; MNCN = Museo Nacional de Ciencias Naturales, Madrid, Spain; MNHN = Muséum National d'Histoire Naturelle, Paris, France; MRSN = Museo Regionale di Storia Naturale, Torino, Italy; MSNG = Museo Civico di Storia Naturale "G. Doria", Genoa, Italy; MSNM = Museo Civico di Storia Naturale, Milan, Italy; MSNT = Museo Regionale di Storia Naturale, Terrasini, Palermo, Italy; MSNV = Museo Civico di Storia Naturale, Verona, Italy; MUA = Dipartimento di Scienze Ambientali, Università de L'Aquila, L'Aquila, Italy; MUH = Zoological Museum of the Haifa University, Haifa, Israel; MUM = Mashhad University Museum, Mashhad, Iran; MUP = Museo Zoologico, Pisa University, Pisa, Italy; MUPA = Entomological Museum, Padova University, Padua, Italy; MZFN = Museo Zoologico and Istituto di Entomologia Agraria, "Federico II" University, Naples, Italy; MZUB = Museo Zoologico, Università di Bologna, Bologna, Italy; MZUF = Museo Zoologico de "La Specola", Università di Firenze, Florence, Italy; MZUR = Museo Zoologico, Roma "La Sapienza" University, Rome, Italy; NHMTR = Museum of Natural History and Archaeology, University of Trondheim, Trondheim, Norway; NHMW = Naturhistorisches Museum, Wien, Austria; NKUM = Nankai University, Tianjin, China; NMPC = Czech National Museum, Department of Entomology, Prague, Czech Republic; OMPB = Entomological collection, Osservatorio per le Malattie delle Piante per la Regione Emilia-Romagna, Bologna, Italy; MUH = Staatliches Museum fur Naturkunde, Stuttgart, Germany; TAU = Tel Aviv University Museum, Tel Aviv, Israel; TMNH = Tianjin Museum of Natural History, Tianjin, China; TMU = Tarbiat Modares University, Tarbiat, Iran; UE = University of Erzurum, Erzurum, Turkey; USDA = the late laboratory of the USA Dept. of Agricolture, Rome, Italy; UUZM = Uppsala University, Museum of Evolution, Zoology section Linnean Society, Uppsala, Sweden; XJUM = Xinjiang University, Ürümqi, China; ZIN = Museum of the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia; ZMHB = Museum für Naturkunde der Humboldt Universität, Berlin, Germany; ZSM = Zoologische Staatssammlung, Munich, Germany.

Figures of morphological details were drawn by hand, using a stereomicroscope Olympus SZX12 equipped with a camera lucida. Photographs of habitus were taken using a stereomicroscope Leica Z16APO equipped with a camera Leica DFC420 and Leica application suite 3.7.

All published and collection's records are listed in the faunistic Appendix, and the distribution is summarized in the section of each species. Ecological information (altitude, phenology, host plants, larval biology and insect hosts), assembled from both collection material and literature, is summarized in three tables.

In the species account section, we have listed the most relevant citations (relevant taxonomic contributions and catalogues), type locality and specimens, and a synthesis of distributional and bionomical information. The new species are described and figured, while those previously known are described only with a brief diagnosis furnished with figures.

Results

1. Biology

Phenology. The information concerning adult activity, inferred from the literature, collection labels and field activities (MAB, PZ), is summarized in Table 1 and 2. All species are active in spring and summer, and most records were concentrated between May and July. The peaks of activity are shown in the tables by their percentage of records. In the species widely distributed, the phenology is directly related to the altitudinal distribution and latitude, and can vary greatly in different areas; for this reason, phenology of three species (*M. olivieri*, *M.*

quadripunctata, and *M. variabilis*) was detailed in some main geographic districts. In general, the phenology is later (August and September) at high elevation (the maximum in Morocco, eastern Turkey, and Iran), and earlier at low elevation (in south Mediterranean and Levant).

Behaviour. Very little information on sexual behaviour of *Mylabris* (*Mylabris*) is available in the literature (Paoli, 1937; Bologna, 1991a, 1991b). Our field observations (*M. guerini*, *M. mediorientalis*, *M. olivieri*, *M. quadripunctata*, *M. tricincta*, and *M. variabilis*) concern a preliminary posterior male courtship, usually including short and repeated lateral movements of fore portion of its body on both sides of female body, and a prolonged "linear" copulation (Fig. 2), this being the typical modality in the subfamily Meloinae (Bologna, 1991a for a synthesis).

Cleaning activities of antennae through the mouthparts were observed in the field and in rearing boxes in both *M. quadripunctata* and *M. variabilis*. The oviposition behaviour previously described by Paoli (1932, 1937) in *M. variabilis*, our own study observed in the field, both in this species and in *M. quadripunctata*.

Altitudinal distribution. The available information on altitudinal distribution is summarized in Tables 1 and 2. Several species show a wide range of distribution, mostly from the sea level or hilly areas to high elevation which exceeds 3000 m a.s.l. in Morocco, Anatolia, Iran, and Central Asia [*M. alpicola* (3500 m), *M. quadripunctata* (3980 m), *M. tricincta* (3200 m), *M. variabilis* (3200 m)]. Few species appear strictly related to Anatolian and Iranian plateaux or mountain ranges, such as *M. alpicola*, *M. barezensis*, *M. emiliae*, *M. pseudoemiliae*, and *M. tauricola.* In contrast, *M. madoni* endemic to Cyprus, seems distributed only at low elevation, and *M. mediorientalis* ranges from altitude under the sea level (-100 m), in the Dead Sea depression, to middle elevation (ca. 1000 m a.s.l.) in the neighbouring hilly region.

Food plants of adults. The available information on host plants, concerning 13 species, is summarized in Table 3. As in several other blister beetle genera, most species appear to be polyphagous; however, according to our own experience in the filed, they are locally monophagous or oligophagous. Twenty three families of Angiospermae were recognized as food, even if most species feed on Compositae and secondly on Caprifoliaceae, Leguminosae and Apiaceae.

Ecological remarks. Like most blister beetles, *Mylabris* (*Mylabris*) is a typical element of open ecosystems. Most species are related to different steppe habitats, both Mediterranean and Turanian, in some cases also characterized by subdesertic conditions (*M. guerini*, *M. madani*, *M. mediorientalis*, *M. parumpicta*, and *M. poggii*). Some species are mostly related to Mediterranean and secondary pastures (e.g. *M. amorii*, *M. cernyi*, *M. guerini*, *M. poggii*, and *M. tricincta*), and one of them seems to be strictly close to mountain pastures (*M. alpicola*). Two exceptions are represented by *M. batnensis* and *M. desertica*, being specialized to sand dune deserts, respectively in the western portion of Sahara and in central Arabian Peninsula.

Larval biology and hosts. The scarce information concerning grasshopper hosts, all referable to the family Acridiidae, is summarized in Table 3. The complete larval development of one species, *M. variabilis*, was extensively studied by Paoli (1932, 1937), who described the typical developmental cycle in this species predator of grasshopper eggs (see Bologna 1991a for a synthesis). A synthesis of this developmental cycle is reported in Fig. 3 (Paoli, 1938).

Biogeography. The nominate subgenus is a typical Central Asiatic-Mediterranean element, distributed from Western Mediterranean to Xinjiang (see Vigna Taglianti *et al.*, 2000 for chorotypes definition). Only three species have a wide distribution, all referable to Central Asiatic-Mediterranean or Turanian-Mediterranean chorotypes: *M. olivieri*, from the southern Balkans to Central Asia; *M. quadripunctata*, from Portugal to northwestern China; *M. variabilis*, from Spain to Central Asia. Most species have narrower ranges or are greatly restricted to small areas to which they are endemic. In the first group we can include: (a) *M. batnensis*, a W-Saharan element; (b) *M. amorii*, *M. guerini*, *M. madani*, *M. schreibersi*, and *M. tricincta*, all W-Mediterranean elements, even if more or less restricted to northern or southern portions of the West Mediterranean; (c) *M. cernyi*, E-Mediterranean; (d) *M. emiliae*, Armeno-Anatolian; (e) *M. apicenigra* and *M. concolor*, Irano-Anatolian; (e) *M. mediorientalis*, Palestino-Mesopotamian. Among the strictly endemic species we can include: *M. alpicola*, N-Iranian; *M. apiceguttata*, E-Iranian; *M. barezensis*, E-Iranian; *M. madoni*, Cypriot; *M. kodymi*, Cretan; *M. ciliciensis*, Central Anatolian; *M. desertica*, N-Arabian; *M. poggii*, N-Cyrenaican; *M. parumpicta*, S-Turkmenian; *M. pseudoemiliae*, W-Iranian.

In summary, except for three widely distributed species, great radiations occurred particularly around the Mediterranean Basin, in all their sectors, particularly in Northern Africa, Anatolia, Levant, and in adjacent Iranian plateaux. Future phylogenetic studies (Pan *et al.*, unpublished) could better clarify the relations among species and this subgenus's biogeographic history.

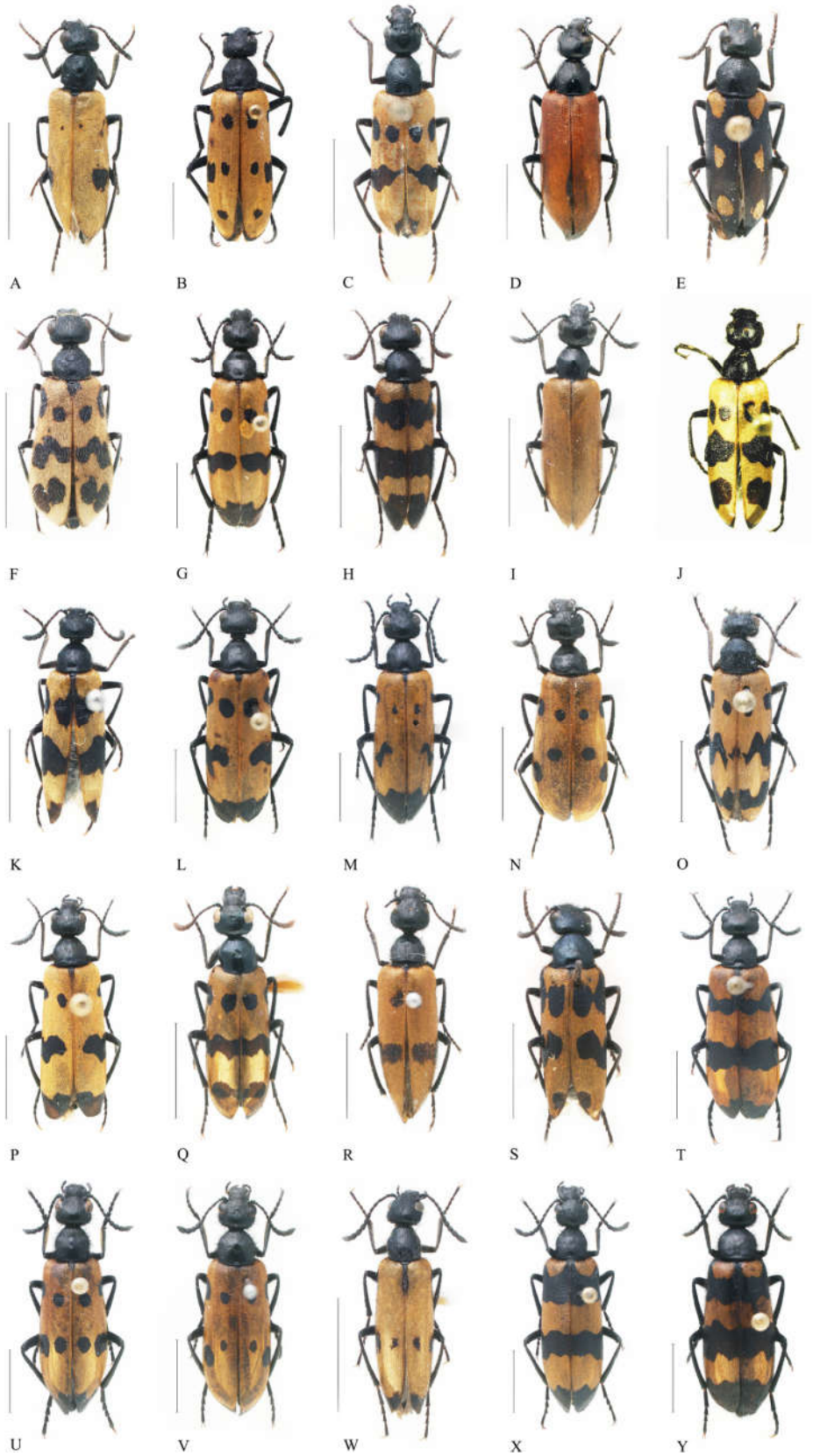

FIGURE 1. Habitus of the *Mylabris* (*Mylabris*) spp., dorsal view: A. *M. alpicola*, ♂; B. *M. amorii*, ♀; C. *M. apiceguttata*, ♂; D. *M. apicenigra*, ♂; E. *M. barezensis*, ♂; F. *M. batnensis*, ♂; G. *M. cernyi*, ♂; H. *M. ciliciensis*, ♂; I. *M. concolor*, ♂; J. *M. desertica*, ♀; K. *M. emiliae*, ♂; L. *M. guerini*, ♂; M. *M. kodymi*, ♂; N. *M. madani*, ♂; O. *M. madoni*, ♂; P. *M. mediorientalis*, ♂; Q. *M. olivieri*, ♂; R. *M. parumpicta*, ♀; S. *M. poggii*, ♂; T. *M. pseudoemiliae*, ♂; U. *M. quadripunctata*, ♂; V. *M. schreibersi*, ♂; W. *M. tauricola*, ♂; X. *M. tricincta*, ♂; Y. *M. variabilis*, ♂. Scale bar = 5 mm.

FIGURE 2. Linear copulation in *Mylabris* (*Mylabris*) *variabilis* (Potenza province, Episcopia, Sinni River) (Photo L. Vignoli).

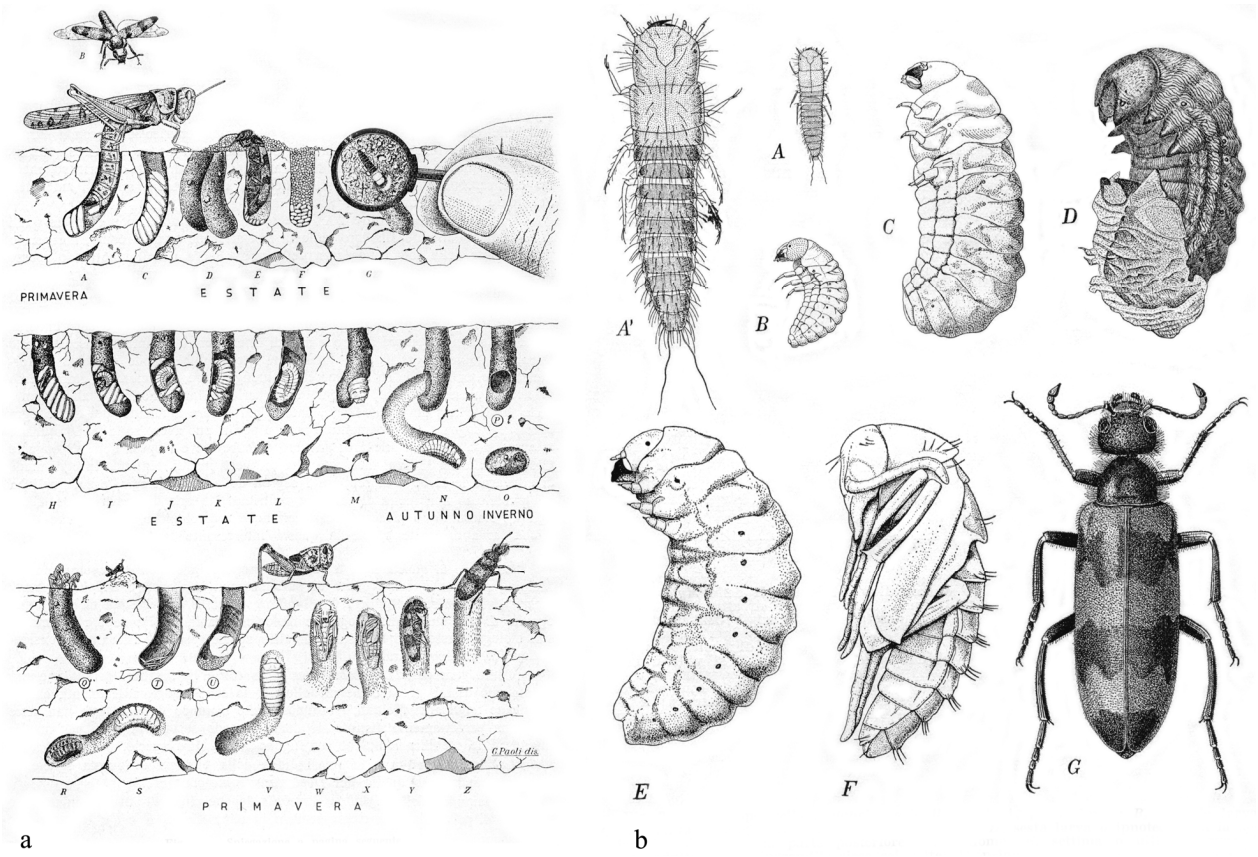

FIGURE 3. Developmental cycle of *Mylabris* (*Mylabris*) *variabilis*: **3a.** Oviposition near the grasshopper ootheca; **3b.** Development cycle: A. first instar larva; B. second instar larva; C. fourth instar larva (as similar as third and fifth instar larvae); D. sixth instar larva or ipnoteca; E. seventh or last instar larva; F. pupa; G. adult; (all figures magnified about six times) A'. first instar larva, magnified about 16 times (from Paoli, 1938).

TABLE 1. Phenology and altitudinal distribution of *Mylabris* (*Mylabris*) species (literature, museum and field records). Data for species marked by * are detailed in Table 2.

Species	Phenology	Altitudinal distribution
M. alpicola	June	2300–3500 m
M. amorii	July	10–1200 m
M. apiceguttata	Apr.–May	1450 m
M. apicenigra	May–Aug. (mainly in June, 75.00%)	450–2850 m
M. barezensis	May–June	1730–2027 m
M. batnensis	Apr.–June (mainly in May, 66.67%)	85–1280 m
M. cernyi	Mar.–Aug. (mainly in June, 44.44%)	10–1380 (2240) m
M. ciliciensis	May–July (mainly in June, 62.50%)	500–1400 m
M. concolor	May–July (mainly in June, 42.86%)	700–1910 m
M. desertica	Apr.	1015 m
M. emiliae	June–July (mainly in June, 80.00%)	930–1900 m
M. guerini	Apr.–July (mainly in May, 36.00%, and June, 44.00%)	10–1900 m
M. kodymi	May–July (mainly in May, 62.50%)	50–1100 m
M. madani	Mar.–May (mainly in Apr., 35.00%, and May, 60.00%)	490–1700 m
M. madoni	May–June	1–200 m
M. mediorientalis	Mar.–Aug. (mainly in Apr., 68.18%)	100 u.s.l.–1000 m
M. olivieri *	June–Sep. (mainly in July, 57.89%)	250–2600 m
M. parumpicta	-	-
M. poggii	Mar.–May (mainly in Apr., 60.00%)	100–620 m
M. pseudoemiliae	June	3000 m
M. quadripunctata *	Apr.–Sept. (mainly in June, 34.06%, and July, 41.81%)	1–3980 m
M. schreibersi	Apr.–Sept. (mainly in May, 35.96%, and June, 40.35%)	1–2160 m
M. tauricola	June	1300–1900 m
M. tricincta	Apr.–Aug. (mainly in May, 71.26%)	1000–3200 m
M. variabilis *	Apr.–Oct. (mainly in June, 33.94%, and July, 43.02%)	1–3200 m

2. Taxonomy

Genus *Mylabris* Fabricius, 1775

Type species. The definition of the type species of this genus, and consequently of the nominate subgenus, is still being debated. According to Selander (1991) and other authors, the type species of the genus is *Meloe cichorii* Linnaeus, 1758, by subsequent designation (Latreille, 1810: 430). However, in the present paper we agree with the considerations published by Bologna & Pinto (2002: 2066) (see also Bologna, 2008). The fact that *Meloe cichorii* is the type species of *Mylabris* is problematic. Kuzin (1954) ignored the Latreille's designation and transferred *cichorii* to *Hycleus* [as *Mylabris* (*Euzonabris*), a synonym of *Hycleus*]; its placement has been adopted by other workers (e.g. Bologna, 1991a: 207). Following Kuzin's definition of *cichorii*, will result in extensive nomenclatural disruption in these two most speciose genera of Mylabrini. However, a recent examination of the type series of *Meloe cichorii* (UUZM and the beetle collection of the Linnean Society of London) shows that *M. cichorii* is mixed and includes not only *Hycleus cichorii* as defined by recent authors, but also *Mylabris variabilis* (Pallas) and other mylabrine species belonging to different genera. Consequently there are two options for preserving current generic definitions: (a) Designation of the representative of *M. variabilis* as lectotype of *Mylabris cichorii*; or (b) petition the International Commission of Zoological Nomenclature to set aside the designation of *Meloe cichorii* as type species and accept the designation of *Meloe quadripunctata* Linné. The latter was inappropriately designated the type species by Pardo Alcaide (1954a), but is in accordance with the modern definition of *Mylabris* (Kuzin, 1954; Bologna, 1991a).

TABLE 2. Phenology and altitudinal distribution of *M. olivieri*, *M. quadripunctata*, and *M. variabilis* from different geographical regions refer to literature and collection records

Region	*M. olivieri*		*M. quadripunctata*		*M. variabilis*	
	Phenology	Altitudinal distribution	Phenology	Altitudinal distribution	Phenology	Altitudinal distribution
Iberian Peninsula, S France & S Switzerland	-	-	Apr.–Aug. (mainly July, 44.62%)	1–2100 m	May–Sept. (mainly July, 50.00%)	1–2100 m
Italy	-	-	Apr.–Aug. (mainly June, 35.29%, and July, 50.00%)	10–1700 m	Apr.–Oct. (mainly July, 42.36%)	1–1900 m
Balkan Peninsula, Ukraine & S Russia	June–July (mainly July, 83.33%)	340–1100 m	Apr.–Sep. (mainly June, 33.03%, and July, 41.63%)	1–2350 m	Apr.–Sep. (mainly June, 39.31%, and July, 42.77%)	1–2200 m
Caucasian Region, Anatolia, Levant	June–Sept. (mainly July 57.78%)	770–1900 m	Mar.–Sep. (mainly June, 42.60%, and July, 39.01%)	10–2600 m	May–Sept. (mainly June, 43.24%, and July, 41.89%)	10–2300 m
Iran	June–Aug. (mainly June and July, both 40.00%)	260–1970 m	May–Aug. (mainly June, 35.48%, and July, 45.16%)	800–3000 m	May–Aug. (mainly June, 64.71%)	100–3200 m
Central Asia	June	395 m	May–Aug. (mainly July, 33.93%, and Aug., 33.93%)	429–3980 m		

TABLE 3. Adult host plants and larval host grasshoppers of *Mylabris* (*Mylabris*) species (literature and field records)

Species	Adults		Larvae	
	Host Plants	Datum source	Host Grasshoppers	Datum source
M. apicenigra	Poaceae	MAB	-	-
M. batnensis	Compositae	MAB	-	-
M. ciliciensis	Caprifoliaceae (*Knautia*)	MAB	-	-
M. guerini	Brassicaceae; Cistaceae (*Cistus*); Compositae (*Achillea*, *Anthemis*, *Hieracium*, *Scolymus*); Convolvulaceae (*Convolvulus*); Leguminosae (*Astragalus*, *Calicotome*, *Lotus*, *Ononis*, *Spartium*); Scrophulariaceae (*Scrophularia*)	Bologna, 1991a; MAB	-	-
M. kodymi	Caprifoliaceae (*Knautia*); Poaceae	MAB	-	-
M. madani	Compositae	MAB	-	-
M. mediorientalis	Caprifoliaceae; Compositae (*Achillea*, *Hieracium*); Leguminosae (*Ononis*); Poaceae	MAB	-	-
M. olivieri	Apiaceae (*Eryngium*); Caprifoliaceae (*Knautia*); Compositae (*Achillea*, *Artemisia austriaca*, *Carduus*, *Centaurea*, *Cirsium*); Poaceae	Marseul, 1870; Bologna, 1991a; MAB	Acrididae: *Calliptamus italicus*	Roepke, 1917
M. quadripunctata	Anacardiaceae (*Pistacia*); Apiaceae (*Daucus carota*, *Echinops*, *Eryngium*, *Falcaria vulgaris*, *Ferula orientalis*, *Malabaila graveolens*, *Pastinaca*); Boraginaceae (*Anchusa strigosa*); Brassicaceae (*Sinapis*); Butomaceae (*Butomus umbellatus*); Campanulaceae (*Jasione*); Caprifoliaceae (*Knautia*, *Scabiosa*); Compositae (*Achillea micranthoides*, *Achillea nobilis*, *Carduus uncinatus*, *Carthamus tenuis*, *Centaurea diffusa*, *Centaurea ruthenica*, *Centaurea scabiosa*, *Chondrilla juncea*, *Cichorium intybus*, *Cirsium*, *Crepis*, *Cynara*, *Dittrichia viscosa*, *Galactites tomentosa*, *Helichrysum*, *Hieracium pilosella*, *Inula britannica*, *Jurinea multiflora*, *Klasea erucifolia*, *Lapsana*, *Picnomon*, *Santolina chamaecyparissus*, *Senecio jacobaea*, *Tragopogon brevirostris*, *Tripleurospermum maritimum*); Convolvulaceae (*Convolvulus*); Euphorbiaceae (*Euphorbia seguieriana*);	Mayet, 1903; Bodenheimer, 1934; Medvedev & Levtshinskaja, 1962; Valladares & Salgado, 1983; Buchelos, 1989; Bologna, 1991a; MAB	Acrididae: *Calliptamus italicus*, *Dociostarurus maroccanus*, *Locusta migratoria*, *Podisma pedestris*	Portchinsky, 1894; Roepke, 1917; Zakhvatkin, 1931; Greathead, 1963; Bologna, 1991a

.....continued on the next page

TABLE 3. (Continued)

Species	Adults		Larvae	
	Host Plants	Datum source	Host Grasshoppers	Datum source
	Fagaceae (*Quercus*); Hypericaceae (*Hypericum*); Lamiaceae (*Phlomis viscosa*, *Salvia fruticosa*); Leguminosae (*Cytisus scoparius*, *Genista florida*, *Ononis spinosa antiquorum*, *Ononis spinosa spinosa*, *Psoralea*); Malvaceae (*Malva*); Nitrariaceae (*Peganum harmala*); Plantaginaceae (*Linaria*); Poaceae (*Avena sterilis*, *Leymus ramosus*, *Phleum pratense*, *Triticum*); Scrophulariaceae (*Verbascum*)			
M. schreibersi	Apiaceae; Brassicaceae (*Erysimum*); Cistaceae (*Helianthemum helianthemoides*); Compositae (*Anthemis*, *Carduus*, *Cichorium intybus, Hieracium*, *Leontodon*, *Pallenis*, *Scolymus hispanus*); Convolvulaceae (*Convolvulus*); Leguminosae (*Ononis*); Malvaceae (*Malva*); Poaceae	Bologna, 1991a; MAB	Acrididae: *Dociostaurus maroccanus*; *Schistocerca peregrina*	Bologna, 1991a
M. tauricola	Brassicaceae (*Alyssum*); Lamiaceae (*Salvia*)	MAB	-	-
M. tricincta	Cistaceae (*Helianthemum helianthemoides*); Compositae (*Hieracium*); Leguminosae; Poaceae; Xanthorrhoeaceae (*Asphodelus*)	Iablokoff, 1954; MAB	-	-
M. variabilis	Apiaceae (*Daucus carota*, *Falcaria vulgaris*); Brassicaceae (*Sinapis*); Caprifoliaceae (*Knautia*, *Scabiosa columbaria*, *Succisa*); Cistaceae (*Helianthemum helianthemoides*); Compositae (*Achillea salicifolia*, *Anthemis ruthenica*, *Cynara*, *Carduus*, *Carlina*, *Centaurea*, *Chrysanthemum*, *Cichorium*, *Cirsium arvense*, *Galactites*, *Hieracium*, *Hypochaeris*, *Inula britannica*, *Jurinea multiflora*, *Notobasis*, *Picnomon*, *Scolymus*, *Senecio jacobaea*, *Tripleurospermum maritimum*); Convolvulaceae (*Convolvulus*); Euphorbiaceae (*Euphorbia*); Lamiaceae (*Phlomis tuberosa*, *Stachys*, *Teucrium*, *Thymus*); Leguminosae (*Anthyllis*, *Lotus*, *Ononis*, *Spartium*, *Trifolium*); Plantaginaceae (*Plantago*); Poaceae; Rosaceae (*Rosa*); Rubiaceae (*Galium*); Scrophulariaceae (*Verba*scum densiflorum)	Paoli, 1932; Stäger, 1951; Iablokoff, 1954; Medvedev & Levtshinskaja, 1962; Valladares & Salgado, 1983; Buchelos, 1989; Bologna, 1991a; MAB	Acrididae: *Arcyptera microptera*; *Calliptamus italicus*; *Dociostaurus maroccanus*	Portchinsky, 1914; Roepke, 1917; Paoli, 1932; Jannone, 1935; Bologna, 1991a

Subgenus *Mylabris* Fabricius, 1775

Mylabris Fabricius, 1775: 261. **Type species.** *Meloe cichorii* Linnaeus, 1758 (pars), by subsequent designation (Latreille, 1810: 430), but see note above.

Zonabris Harold, 1879: 134. **Type species.** *Meloe cichorii* Linnaeus, 1758 (pars), by fixation as type species of *Mylabris* Fabricius. Invalid replacement name for *Mylabris* Fabricius.

Megabris Des Gozis, 1881: 113. **Type species.** *Meloe cichorii* Linnaeus, 1758 (pars), by fixation as type species of *Mylabris* Fabricius. Invalid replacement name for *Mylabris* Fabricius.

Mesopunctata Pardo Alcaide, 1954b: 74. **Type species.** *Meloe quadripunctata* Linnaeus, 1767, by original designation; originally proposed by Pardo Alcaide (1950) without designation of a type species.

Diagnosis. This subgenus is easily distinguishable from all other *Mylabris* subgenera by the synapomoprhic condition of the fore modified portion of the mesosternum, usually named "scutum" in the specialized literature (e.g. Bologna, 1991a; Bologna & Pinto, 2002), and which is characterized in its posterior central part by dense, longer setae, these setae, emerging from deep setigerous pits, are differently long in each species, but distinct from other mesosternal setae and clearly visible in both ventral and lateral view. The combination of the following other characters, which are variously assembled in other subgenera, supports the diagnosis of the subgenus: body integument black, without metallic reflexion (only some mountain populations of *M. tricincta*, previously described as *nigrosuturata*, have slightly blue metallic reflexion; see below); red single frontal spot present (in most species or only in some populations) or absent; middle antennomeres, IX–XI not asymmetrically wider than long; pronotum without a middle longitudinal furrow, with more or less distinct fore and middle depressions; mesosternal suture usually complete and well visible; elytra brown-red with or without black spots or fasciae; ventral side of dorsal blade of claws smooth. The aedeagal distal hook is apical or subapical in position, usually not very far from apex; exceptions are *M. apiceguttata*, *M. barezensis*, and *M. batnensis* (all marked by * in the text), in which the distal hook is far from the apex. For this character and other discussed in the remarks section of each species, they are tentatively referred to the nominate subgenus, but taxonomic changes could be possible after molecular phylogenetic analyses.

Distribution. Mediterranean countries and southern Europe, Near and Middle East, from Central Asia to western China (Xinjiang).

Key to the species

1 Elytra unicolour yellow-brown or only with a narrow black apex 2

1' Elytra with apex black or brown but with other black spots or fasciae 3

2 Elytra unicolour yellow-brown, without black spots or fasciae; body short (11–13 mm); punctures on head and pronotum sparse; antennomere III ca. twice as long as IV (Fig. 12A); pronotum with an anterior transverse depression; "scutum" of mesosternum small and short posteriorly (Fig. 12B); gonoforceps less than two times as long as gonocoxal plate (Fig. 12C); proximal hook of aedeagus relatively close to the distal one (Fig. 12E). Turkey, Armenia, Azerbaijan, Syria, Iran, Turkmenistan (?) . . . . . ***concolor*** Marseul, 1870

2' Elytra unicolour brown, but with an apical narrow or wide fascia (Fig. 7B); body longer than above (12–16 mm); punctures on head and pronotum dense; antennomere III ca. 1.5 times as long as IV (Fig. 7A); pronotum without anterior depression; "scutum" of mesosternum wide and elongate posteriorly (Fig. 7C); gonoforceps almost twice as long as gonocoxal plate (Fig. 7D); proximal hook of aedeagus relatively far from the distal one (Fig. 7F). Turkey, N Syria, Iran, S Turkmenistan . . . . . ***apicenigra*** Sumakov, 1915

3 Elytral black apical fascia reduced to a subtriangular spot on the inner apex (Fig. 6B). E Iran . . . . ***apiceguttata*** Pan & Bologna

3' Elytral black apical fascia present or absent, but never as subtriagonally shaped 4

4 Body setae yellow and black, at least on ventral side 5

4' Body setae only black, except on legs. 7

5 Elytra with a black, oval humeral spot, a black narrow margin at base extended along the scutellum and the basal part of inner margin, without a complete middle fascia, but with two middle irregular spots and a wide apical fascia (Fig. 26B). Central and SE Turkey . . . . . ***tauricola*** Marseul, 1870

5' Elytral black pattern not as above, with a middle complete and sinuate fascia, apical fascia very narrow or absent 6

6 Apical four antennomeres evidently and progressively widened, XI slightly longer than wide (Fig. 9A); elytral black pattern very distinctive, usually with a very narrow apical fascia along the inner margin, absent in few cases, the external fore spot longitudinal, longer and wider than inner one, two subequal rounded spots obliquely positioned (Fig. 9B); "scutum" of mesosternum yellow-brown; distal hook of aedeagus relatively far from apex (Fig. 9F). Morocco and Algerian Sahara . . . . . ***batnensis*** Marseul, 1870

6' Apical antennomeres only slightly widened, XI ca. twice as long as wide (Fig. 18A); elytral black pattern without apical fascia,

with two subequal sub-rounded spots on the basal third, one subapical bisinuate fascia not obliquely disposed (Fig. 18B); mesosternum black, without yellow spot; distal hook of aedeagus close to apex (Fig. 18F). Cyprus .. ***madoni*** Marseul, 1883

7 Elytral black apical fascia narrow or absent 8

7' Elytral black apical fascia wide. 15

8 Elytral black apical fascia very narrow, extended along the suture to the transverse subapical fascia, which not reach the external margin (Fig. 20B); antennomeres III–X reddish (particularly VII–X), but last one brownish. From southern Balkans east to Tajikistan. . . . . ***olivieri*** Billberg, 1813

8' Elytral pattern not as above; antennomeres usually black (almost reddish only in few specimens of *M. amorii*, or III–VI dark reddish in *M. parumpicta*) 9

9 Elytra with four (2:2) or three (2:1) black spots and one apical narrow fascia. 10

9' Elytral black pattern not as above 13

10 Elytra without black apical fascia and with four (2:2) parallel spots (Fig. 17B); fore transverse depression of pronotum evident; setated posterior portion of the mesosternal "scutum" widely extended on the whole posterior half of "scutum" (Fig. 17C). Morocco . . . . . ***madani*** (Escalera, 1909)

10' Elytra with a black apical narrow fascia, if absent, the elytral pattern includes three (2:1) spots, the posterior one much bigger than anterior two (Figs. 4B, 22A, 25B); pronotum without fore depression; setated portion of the mesosternal "scutum" of mesosternum not so extended 11

11 Body short (9.5–12 mm); elytra whitout apical narrow fascia, with three spots, two small basal and subrounded, one posterior, irregularly shaped and bigger than basal spots (Fig. 4B). W Iran . . . . . ***alpicola*** Pan & Bologna

11' Body longer (10–20 mm); elytra with an apical narrow fascia and four spots (2:2) (Fig. 22A, 25B) 12

12 Elytral black apical fascia extended laterally to both margins, forming one subrounded extension on inner margin (Fig. 22A); posterior apex of mesosternum yellow; pronotum with a deep and wide middle depression; distal hook of aedeagus close to apex and smaller than proximal one (Fig. 22C). Cyrenaica (Libya). . . . . ***poggii*** Bologna, 2009

12' Elytral apical black fascia very narrow and not extended laterally (Fig. 25B); mesosternum completely black; pronotal middle depression shallow; distal hook of aedeagus slightly far from apex and similar in size to the proximal one (Fig. 25F). Morocco, Algeria, Tunisia, Sicily (Italy). . . . . ***schreibersi*** Reiche, 1866

13 Elytra (Fig. 5B) only with five black spots (2:2:1) and one narrow apical fascia; punctures on head and pronotum relatively dense. S Iberian Peninsula. . . . . ***amorii*** Graells, 1858

13' Elytra at least with one fascia in the middle; punctures on head and pronotum relatively sparse 14

14 Elytra (Fig. 21B) with two series of black spots and fasciae: two basal black spots and one middle fascia extended to both external and inner margins; pronotum without anterior transverse depression. N Iran, S Turkmenistan (?) . . . . . ***parumpicta*** (Heyden, 1883)

14' Elytra (Fig. 13A) with three series of black spots and fasciae: two basal black spots, one middle fascia not extended to the suture, and one subapical fascia also not extended to the suture; pronotum with one evidently anterior transverse depression. N Saudi Arabia . . . . . ***desertica*** Bologna, 2007

15 Pronotum with a shallow but visible anterior transverse depression 16

15' Pronotum without anterior transverse depression. 19

16 Head with a red spot on frons; pronotal punctures wide, deep, very contiguous or confluent, especially on the fore third; gonoforceps slender in lateral view; apodeme of the *spiculum gastrale* and 10th sternum clearly distinct by a membranous tissue (Figs. 15G, 27G). Maghrebian species 17

16' Head usually without frontal red spot (except most *M. quadripunctata* from Italy, few from S France, Spain, and central Balkans; and one single record of *M. cernyi* from Israel); pronotal punctures small, relatively deep, never confluent; gonoforceps very wide in lateral view; apodeme of the *spiculum gastrale* and 10th sternum completely approacehed and without an intermediate membranous tissue (Figs. 10G, 24G). From S Europe east to Central Asia 18

17 Antennomere III ca. 1.5 as long as IV (Fig. 15A); anterior transverse depression of pronotum deeper; mesosternal suture generally indistinct or obliterated (Fig. 15C); distal hook of aedeagus positioned at apex and differently inclined vs. the proximal one, only subobliquely to the aedeagal axis (Fig. 15F). N and E Morocco, N Algeria, N Tunisia . . . . ***guerini*** Chevrolat, 1840

17' Antennomere III clearly more than 1.5 times as long as IV (Fig. 27A); anterior depression of pronotum shallower; mesosternal suture more or less visible in its entire length (Fig. 27C); distal hook of aedeagus relatively far from apex and with same inclination of the proximal one, oblique to the aedeagal axis (Fig. 27F). S Spain (?), Morocco, N Algeria. . . . . ***tricincta*** Chevrolat, 1840

18 Apical lobe of gonoforceps subelongate and slightly curved forward in lateral view (Fig. 24E), gonoforceprs apically clearly sloping, in both lateral and ventral views (Figs. 24D, E); distal hook of aedeagus clearly smaller than proximal one, and differently inclined vs. the proximal one (Fig. 24F). Widely distributed in southern Europe and Asia, from Iberian Peninsula to NW China (Xinjiang) . . . . . ***quadripunctata*** (Linnaeus, 1767)

18' Apical lobe of gonoforceps very short and not curved forward in lateral view (Fig. 10E), gonoforceps slightly sloping in both lateral and ventral views (Figs. 10E, F); distal hook of aedeagus similar in size and inclination to the proximal one (Fig. 10F). Mediterranean Turkey, Lebanon, Israel-Palestine, Jordan, N Pakistan (?) . . . . . ***cernyi*** Pan & Bologna

19 Elytra black pattern very extended with reduced yellow-brown surface as in Fig. 8B; gonoforceps fused ventrally to the apical third (Fig. 8D); distal hook of aedeagus positioned far from apex (Fig. 8F). E Iran . . . ***barezensis*** Serri, Pan & Bologna, 2012

19' Elytral black pattern not as above; gonoforceps fused ventrally only in basal half (Figs. 11D, 14D, 16D, 19D, 23D, 28D); distal hook of aedeagus positioned almost at apex (Figs. 11F, 14F, 16F, 19F, 23F, 28F) 20

20 Anterior margin of elytral apical black fascia with one single protrusion on the inner side (Figs. 14B, 23B); both aedeagal hooks at apex (Figs. 14F, 23F) 21

20' Anterior margin of elytral apical black fascia with two protrusions (Figs. 11B, 16B, 19B, 28B); aedeagal hooks variously positioned 22

21 Elytral black pattern (Fig. 14B) including two irregularly shaped spots on basal third, more or less fused, the inner one extended along the suture, one middle fascia wide in the middle and narrowed on both sides, a wide suboblique apical fascia; antennae and legs usually dark reddish; gonoforceps fairly wide in both ventral and lateral view, apical lobe short and relatively straight (Figs. 14D, E); aedeagus relatively stocky (Fig. 14F). Armenia, Turkey, N Syria . . . . ***emiliae*** (Escherich, 1899)

21' Elytral black pattern (Fig. 23B) including one fascia on basal third never extended to the external margin, one middle fascia wide and not narrowed on sides, a wide suboblique apical fascia; antennae and legs black; gonoforceps slender in both ventral and lateral view, apical lobe shorter and slightly curved (Figs. 23D, E); aedeagus much slender than above (Fig. 23F). W Iran . . . . . ***pseudoemiliae*** Pan & Bologna

22 Antennae slender, last antennomeres only slightly widened, XI more than twice as long as wide (Figs. 16A, 19A); elytral black pattern (Figs. 16B, 19B) including two basal rounded spots, similar in size, and one middle fascia strongly sinuose, not extended on sides 23

22' Last antennomeres evidently widened, XI less than twice as long as wide (Figs. 11A, 28A); elytral black pattern (Figs. 11B, 28B) including an anterior fascia, which is commonly fragmented, and one middle fascia usually reaching both the external margin and the suture, if this fascia is fragmented (as the Sicilian populations of *M. variabilis*), the external spot of basal series, is clearly wider than inner one 24

23 Head and pronotum punctures relatively small and sparse; elytral apical black fascia very wide, extended on ca. 20% of the whole elytral surface (Fig. 16B); gonoforceps in lateral view slender and only slightly curved before the apical lobe (Fig. 16E); aedeagal distal hook clearly distanced from the proximal one (Fig. 16F). Crete (Greece). . . . . ***kodymi*** Mařan, 1944

23' Head and pronotum punctures wide and dense; elytral black apical fascia wide, but narrower than above and extended on ca. 10–12% of the whole elytral surface (Fig. 19B); gonoforceps in lateral view relatively wide and clearly curved before the apical lobe (Fig. 19E); aedeagal distal hook approached to the proximal one (Fig. 19F). Israel-Palestine, Jordan, Iraq, W Iran . . . . . ***mediorientalis*** Pan & Bologna

24 Body relatively short (10–14.5 mm); frontal red spot small; antennomeres usually dark reddish; elytral black inner basal spot clearly wider than the external one, which never extends to the base along the suture, external spot distanced from the elytral margin, and only rarely fused to the inner spot (Fig. 11B); mesosternal "scutum" rounded on sides (Fig. 11C); gonoforceps in lateral view clearly curved before the apical lobe (Fig. 11E); apodeme of the *spiculum gastrale* elongate and wide (Fig. 11G). S and E Turkey . . . . . ***ciliciensis*** (Escherich, 1899)

24' Body relatively long (8–20 mm); frontal red spot wide; antennommeres usually black; elytral black pattern very variable (Fig. 28B), but the first black series never as above and, if composed by a fascia, it always extends to the base along the suture, if fragmented, the external spot wider or subequal to inner one; mesosternal "scutum" subtriangularly shaped (Fig. 28C); gonoforceps in lateral view only slightly curved before the apical lobe (Fig. 28E); apodeme of the *spiculum gastrale* small and narrow (Fig. 28G). Widely distributed in southern Europe, Near and Middle Asia, from the Iberian Peninsula to eastern Russia and central Kazakhstan . . . . . ***variabilis*** (Pallas, 1782)

Species accounts

Mylabris (*Mylabris*) *alpicola* Pan & Bologna n. sp.

Figs. 1A, 4A–G

Type locality. "Iran, Elburs mts.". Elburs represents a northern Iranian mountain range parallel to the southern side of the Caspian Sea.

Type specimens. Holotype male (MAB), "Iran, Elburs-g., 3500 m, 23–26.6.74, Müting (?) lgt." (white, handwritten); Paratype male (CC), "Iran, Avaj, 2300–2600 mnm, 11.06.2005, lgt. V. Bureš, N35 33 50–E49 07 34" (white, printed and handwritten); 7 male and 5 female paratypes (HMIM), "Tehran prov., Fasham, Ahar, 2200 m, 18.06.2004, S. Serri lgt." (white, handwritten). All types have additional labels "Holotypus (and Paratypus, respectively), *Mylabris* (*Myl.*) *alpicola* n. sp. Z. Pan & M. Bologna det. 2013 (red, rectangular, printed and handwritten).

Description. Male: body uniformly black, but elytra (Fig. 4B) yellow with three sub-round spots, two very small on basal third, and one bigger, positioned in the middle of posterior third; the holotype only with a vanished track of narrow black apical fascia, this is clearly visible in the paratype. Setation uniformly black, but ventral side of foretibiae and foretarsi with golden setae, forming a small pad under the pro- and mesotarsomeres; setae long and suberect both dorsally and ventrally; setae denser on head and pronotum, sparser on elytra. Body length: 9.5–11 mm.

Head slightly longer than wide at temple level, wider at eyes than at temple; punctures wide, irregular, and relatively shallow, surface among punctures wrinkled; head capsule sub-oval, temple subparallel and scarced curved posteriorly, longitudinally shorter than eye; frons flat, with one vanished dark red spot on center, and

posteriorly to the red spot, with a vanished longitudinal carina; clypeus transverse, slightly convex, and with anterior and lateral margins slightly rounded, fore third depressed and smooth, fronto-clypeal suture clearly visible; labrum only slightly shorter and narrower than clypeus, anterior margin emarginate, longitudinally depressed in the middle; mandibles robust, almost straight at the basal half, turned suddenly at the point beside labrum, in lateral view longer than clypeus and labrum together; maxillary palpomere II with long setae on posterior side, last maxillary palpomere apically thickened and truncate at apex; antennae (Fig. 4A) extending almost to basal margin of pronotum, uniformly black or antennomeres III–VII slightly refescent in the holotype; antennomere I more than twice as long II, which is subglobular, antennomere III elongate and ca. 1.6 times as long as IV, IV and V similar in length and width, VI similar in length to IV and V but slightly widened apically, VII–X progressively more elongate and apically widened, X subcylindrical, XI elongate and narrowed in the apical half, evidently less than twice as long as wide.

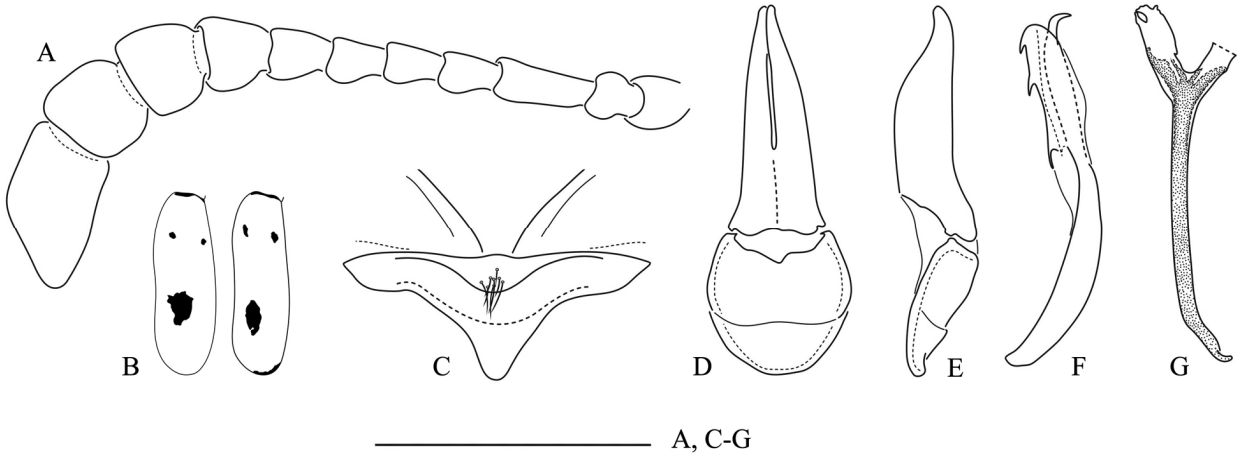

FIGURE 4. *Mylabris* (*M.*) *alpicola* Pan & Bologna **sp. n.**: A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Pronotum almost as long as wide, narrowed on fore third, convex, sides of basal two thirds almost parallel, at middle slightly wider than at base; a subtransverse depression at base, and anteriorly more or less subdepressed; basal margin straight; punctures similar to on head, and almost confluent on anterior third. Elytral pattern as in Fig. 4B; setae similar in length to on head and pronotum, but sparser, erect on anterior third, suberect and sligtly shorter on the remaining surface. Mesosternum longitudinally elevated in the middle, with a clearly modified anterior section ("scutum"), which has a slightly depressed oval area with dense and slightly long setae (Fig. 4C); mesepisterna depressed along the anterior margin, which consequently appears to be raised. Legs black, pro- and mesotibial spurs both pointed and similar in shape, the inner metatibial spur stick-like and the external one pointed (mesotibiae sligthly modified in the holotype, see remarks); femoral setae mixed short and long, robust and more elongate on tibiae and tarsi; foretibiae ventrally with mixed golden and black short and dense setae, setation on external side a little longer than that on inner side; pro- and mesotarsomeres with ventral golden setae forming tarsal pads, those of mesotarsomeres smaller.

Posterior margin of male sternite VIII deeply emarginated in the middle. Male genitalia as in Figs. 4D–G: in lateral view (Fig. 4E) the basal part of gonoforceps slender, apical lobe relatively short, slightly less than half of total length of gonoforceps; gonoforceps (Fig. 4D) fused ventrally in basal third; aedeagus (Fig. 4F) with two dorsal hooks which with the same inclination, distal hook almost at apex, but the proximal one positioned far from apex, slightly bigger and curved. The apodeme of the *spiculum gastrale* slender, as in Fig. 4G.

Female. Unknown.

Etymology. The name of the new species refers to its ecological specialization to alpine habitats in the Iranian mountains.

Taxonomic remarks. Only three other species (*M. barezensis*, *M. concolor*, and *M. tauricola*) have the body short, but *M. alpicola* easily differentiated from them and the other species of the subgenus by the unique elytral black pattern (Fig. 4B).

The holotype has the antennae slightly refescent, the pronotum more depressed at center, and the middle tibiae slightly folded preapically. We consider this last modification to be possibly due to the manipulation of the not completely hard specimen.

Distribution. W and N Iran.

Mylabris (*Mylabris*) *amorii* Graells, 1858

Figs. 1B, 5A–G

Mylabris amorii Graells, 1858: 76; Marseul, 1870: 94; 1872: 512; Baudi di Selve, 1878b: 1134; Gorriz y Muñoz, 1882: 102; Beauregard, 1890: 521; Sumakov, 1915: 25; 1930: 41; Borchmann, 1917: 25; Mader, 1927: 858; García-París & Ruiz, 2005: 234, 236, 239, 240, 243, 245.

Zonabris amori, Escherich, 1899: 91; Rodriguez López Neyra, 1914: 467.

Zonabris korbi Escherich, 1891: 53; 1892: 124; 1899: 91; Reitter, 1906: 447.

Mylabris korbi, Borchmann, 1917: 40; Mader, 1927: 858.

Mylabris amori m. *korbi*, Sumakov, 1930: 42.

Mylabris (*Mylabris*) *amori*, Pardo Alcaide, 1950: 76; Kuzin, 1954: 357; Pérez-Moreno *et al.*, 2003: 207; García-París *et al.*, 2006: 349; Bologna, 2008: 397.

Type locality. "in agris cordubensis …", "Cordóba ... cerca da Santo Domingo y los Lagares" (Graells, 1858). Cordóba is a town of Andalucia, southern Spain.

Type specimens. Not examined; preserved probably at MNCN.

Description. Body relatively long (18–22 mm); setae only black, mixed black and golden on tibiae; antennomeres black, antennomere III ca. 1.5 times as long as IV, XI ca. twice as long as wide (Fig. 5A); pronotum without evident fore transverse depression; elytra (Fig. 5B) with five black spots (2:2:1) and a narrow apical fascia, the middle external spot subcordiform and much bigger than the inner one; mesosternum as in Fig. 5C; male gonoforceps slender in lateral view (Fig. 5E), fused ventrally in basal two-fifths (Fig. 5D); both aedeagal dorsal hooks closed to apex, the proximal one clearly longer and more curved than the distal one (Fig. 5F).

Taxonomic remarks. Antennomeres are reddish in a single specimen, probably due to the conservation method. This species is phenetically highly distinct from others because of the elytral pattern and larger size.

In several studies, this species has been erroneously cited as *amori*. See García-París & Ruiz (2005) and García-París *et al*. (2010) for the discussion of this nomenclatioral aspect and of the synonymy with *Zonabris korbi* Escherich, 1891.

Distribution. S Portugal, S Spain.

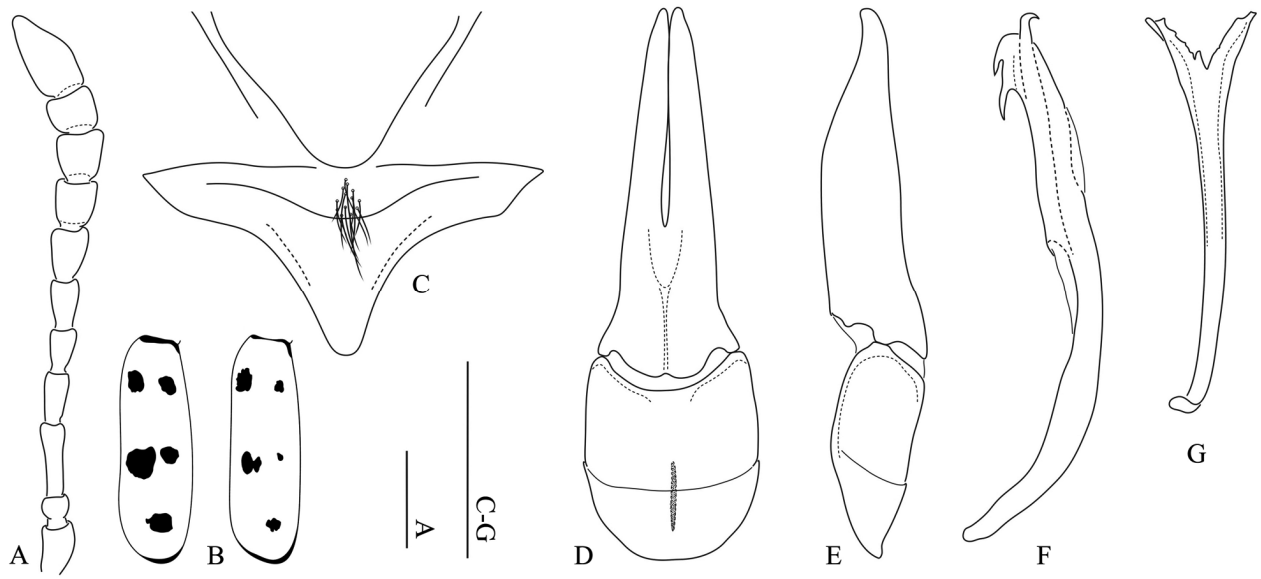

FIGURE 5. *Mylabris* (*M.*) *amorii* Graells: A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Mylabris* (*Mylabris*) *apiceguttata* Pan & Bologna sp. n.
Figs. 1C, 6A–G

Mylabris guerini, Mirzayans, 1970: 30 (nec Chevrolat, 1840).

Type locality. "Iran, Kerman, Birjand". Birdjand, as wrote on the label, is the Romanized name of Birjand, and represents the capital of the Iranian South Khorasan province, close to the Afghanistan border. This city has a dry continental climate.

Type specimens. Holotype male (HMIM) and 14 male and 4 female paratypes (HMIM, 1 male MAB) with the following labels: "Birdjand, 21.4.65, Safavi; 752" (white, printed and handwritten). One male paratype (HMIM) labelled: "Birdjand, 17.v.49, Mir. Salavatian; 123; *Mylabris* sp. aff. *guerini* Chevr., Dr. Z. Kaszab det., 1966" (white, printed and handwritten). Types have the additional label "Holotypus (and Paratypus, respectively), *Mylabris* (*Myl.*) *apiceguttata* n. sp. Z. Pan & M. Bologna det. 2013 (red, rectangular, printed and handwritten). Holotype has left antenna glumed on a separe label together with genitalia; one paratype as male genitalia and fore and middle legs glumed in a separte label.

Description. Male: body black, but antennomeres III–XI and legs reddish, and elytra yellow with the following black pattern (Fig. 6B): two separated or fused subrounded spots on basal third, one irregular transverse fascia just after the middle, and one sub-triangular spot on the inner side of apex. Setation uniformly black, but ventral side of foretibiae and foretarsi with golden setae, forming a small pad under the pro- and mesotarsomeres; setation evidently longer ventrally than dorsally; setae denser on head and pronotum, sparser on elytra. Body length: 10.0–12.5 mm.

Head capsule subquadrate, wider at eyes than at temple; punctures wide, relatively shallow and dense, surface among punctures shagreened, shiny on vertex, wrinkled on frons; temple parallel, not clearly curved posteriorly, subequal in length to the longitudinal length of eye; frons flat, with one middle red spot, more or less divided posteriorly, and posteriorly to red spot slightly depressed; clypeus transverse, convex, with slightly rounded anterior and lateral margins, anteriorly slightly depressed and smooth, fronto-clypeal suture clearly visible; labrum only slightly shorter and narrower than clypeus, anterior margin slightly emarginate, longitudinally depressed in the middle; mandibles robust, almost straight at basal half, curved suddenly in apical third, slightly longer than clypeus and labrum together; maxillary palpomere II with long setae on the posterior side, last maxillary palpomere apically thickened and truncate at apex; antennae (Fig. 6A) relatively long, slightly extending over the basal margin of pronotum, antennomere I and II black, III–XI reddish, I approximately twice as long as II, which is semi-globular; antennomere III elongate, ca. 1.5 times as long as IV, IV and V similar in length and width, VI similar in length to IV and V but widened apically, VII–IX similar in length but progressively more widened apically, X subcylindrical, XI sub-lanceolate, elongate and narrowed in the last half, ca. twice as long as wide.

Pronotum slightly longer than width, narrowed anteriad, convex, maximum width at middle; with a shallow fore transverse depression and another deeper in the middle of base; basal margin straight, lateral sides more or less evidently bordered; punctures wide and irregular, almost confluent, particulalrly on anterior third, surface among punctures shagreened. Elytral black pattern as in Fig. 6B; setation shorter and sparser than that on head and pronotum, erect on the anterior third, subrecet and shorter on the remaining surface. Mesosternum longitudinally elevated in the middle, with a clearly modified anterior section ("scutum"), with a slightly depressed oval area with dense and slightly long setae (Fig. 6C); mesepisterna depressed along the anterior margin, which consequently appears to be raised. Legs dark reddish to black, pro- and mesotibial spurs all similar in shape and pointed, both metatibial spurs stick-like, the inner one more narrowed at apex; femora with mixed short and long setae; setae robust and longer on tibiae and tarsi; foretibiae ventrally with mixed golden and black short and dense setae, setation on external side of foretibiae and foretarsomeres slightly longer than that on inner side; pro- and mesotarsomeres with ventral golden setae forming tarsal pads, those of mesotarsomeres smaller.

Posterior margin of male sternite VIII deeply emarginated in the middle. Male genitalia as Figs. 6D–G: gonoforceps in lateral view (Fig. 6E) with basal part slender, and apical lobe relatively short, slightly less than 0.5 the total length of gonoforceps; gonoforceps (Fig. 6D) fused ventrally in the basal third; aedeagus (Fig. 6F) with two dorsal hooks both positioned far from apex with same inclination; distal hook almost at apex, the proximal one slightly longer and more curved than distal one, endophallic hook small, relatively straight. The apodeme of the *spiculum gastrale* slender, as in Fig. 6G.

Female. Unknown.

Etymology. The name of this species refers to the unusual black spot present on the apical inner margin of elytra.

Taxonomic remarks. Mirzayans (1970) cited this specie as *M. guerini*, on the basis of the specimens we examined at HMIM, which were previously identified by Kaszab as "*M.* aff. *guerini*". Some citations of *M. parumpicta* from Iran possibly refer to this new species.

This species greatly differs from most *Mylabris* (*Mylabris*) species because of the following characters: the shape of the ventral blade of claws is more similar, even if not completely the same, of that of the subgenus *Calydabris*, in which the ventral blade is shorter and fused at base with the dorsal one, differently than in the nominate subgenus. Also the aedeagal distal hook evidently differs from that of other species. Moreover, *Calydabris* has in common with the nominate subgenus, the presence of a tuft of setae on the scutum of mesosternum, never pointed out in the literature, which probably caused some taxonomic confusion, and is heterogeneous as concerns the shape of antennae, pronotum and claws. In conclusion, we posited this species refer to the nominate subgenus in this paper, because another species (*M. barezensis*), which is very similar with this species on above morphological characters, was published in this subgenus by Serri *et al.* (2012).

Distribution. E Iran.

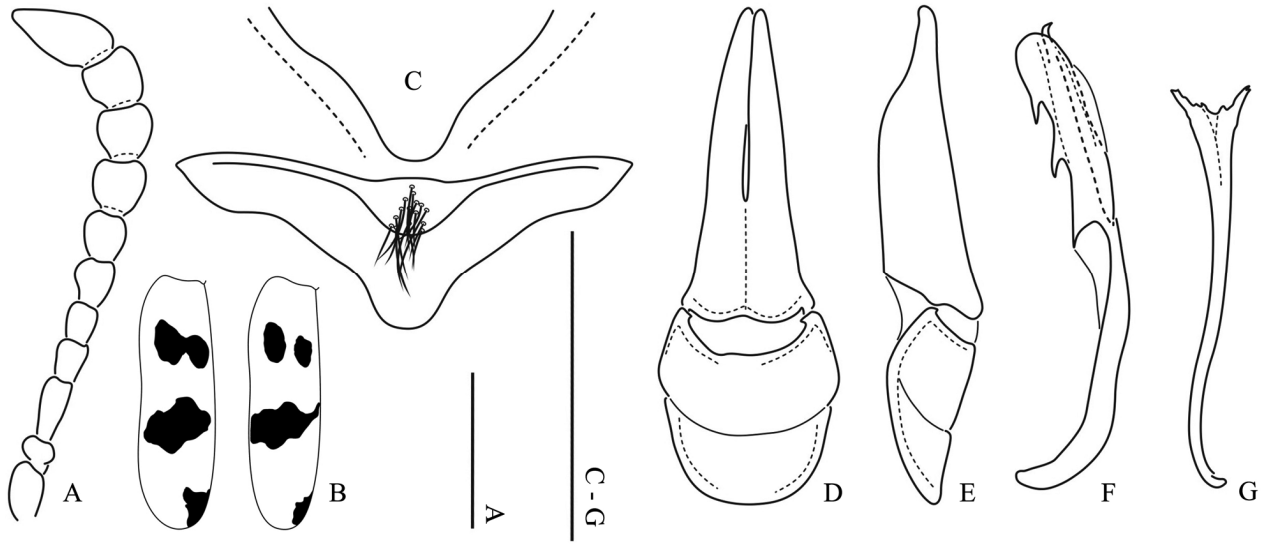

FIGURE 6. *Mylabris* (*M.*) *apiceguttata* Pan & Bologna **sp. n.**: A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Mylabris (*Mylabris*) *apicenigra* Sumakov, 1915

Figs. 1D, 7A–G

Mylabris quadripunctata apicenigra Sumakov, 1915: 24; 1930: 38; Mader, 1927: 858; Reichardt, 1934: 215, 230.
Mylabris (*Mylabris*) *apicenigra*, Kuzin, 1954: 354; Bologna, 2008: 397.

Type locality. "Perse, Turkestan (?), Asie Min." (Sumakov, 1915).

Type specimens. Not examined but probably preserved at ZIN. Sumakov (1915: 24, note 39) cited 6 specimens of this species received by Bodemeyer under the name of *M. apicenigra* Escherich, which actually is a *nomen in litteris*, and consequently that of Sumakov is the first description.

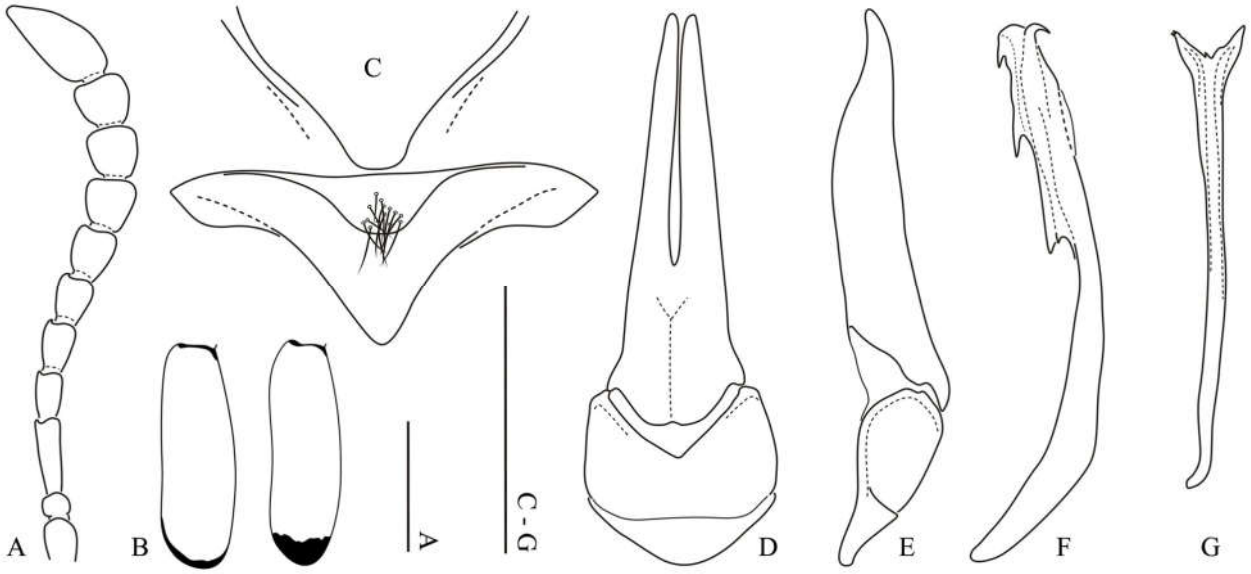

FIGURE 7. *Mylabris* (*M.*) *apicenigra* Sumakov: A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Description. Body length: 12–16 mm; setae uniformly black, but mixed golden and black on legs; frontal red spot posteriorly bilobed; antennomeres uniformly black, III ca. 1.5 times as long as IV, XI slightly more than twice as long as wide (Fig. 7A); pronotum without evident fore transverse depression; elytra yellow only with one black apical fascia, variable in width (very narrow to wide) (Fig. 7B); pronotal punctures middle in size, well distinct posteriorly and almost confluent in fore third; mesosternum as in Fig. 7C; male gonoforceps very slender in lateral view (Fig. 7E), and fused ventrally in basal third (Fig. 7D); aedeagal (Fig. 7F) distal hook closed to apex, the proximal one positioned relatively far from apex, and bigger than the distal one; endophallic hook evidently curved.

Distribution. Iran, Syria, Turkey.

Taxonomic remarks. This species was sometimes confused with *Mylabris* (*Micrabris*) *inculta* (Escherich, 1899), which has gray or golden body setation, while *M. apicenigra* has only black setae. It could be confused also with *M.* (*Mylabris*) *concolor* Marseul, 1870, from which is easily distinct by the characters indicated in the key (see above).

Distribution. S and E Turkey, N Syria, Iran, S Turkmenistan.

Mylabris (*Mylabris*) *barezensis* Serri, Pan & Bologna, 2012*

Figs. 1E, 8A–G

Mylabris (*Mylabris*) *barezensis* Serri *et al.*, 2012: 82.

Type locality. "Iran, Dehbakri" (Serri *et al.*, 2012). This Iranian locality of Kerman Province, is positioned south of Bam, along the Jebal Barez, a mountain range.

Type specimens. Holotype male (HMIM), 3 males and 1 female paratypes with the following labels: "Holotypus (and Paratypus respectively) *Mylabris* (*Myl.*) *barezensis* n. sp. S. Serri, Z. Pan & M. Bologna det. 2012" (red, printed and handwritten), "Kerman, Dehbakri, N 29.0539°–E 57.9131°, 2027 m, 6.5.1969" (white, printed) (2 HMIM; 2 MAB).

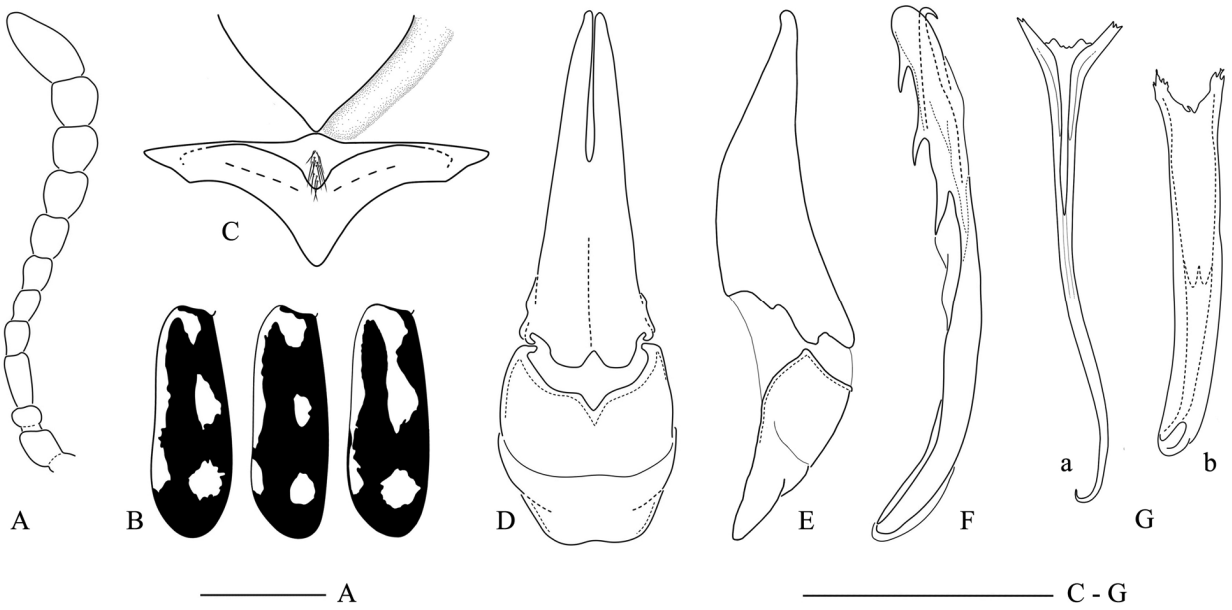

FIGURE 8. *Mylabris* (*M.*) *barezensis* Serri, Pan & Bologna: A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. variation of the *spiculum gastrale*, dorsal view. Scale bar = 1 mm. (from Serri *et al.*, 2012).

Description. Body length: 10–15 mm; setae uniformly black, but mixed golden and black on legs; antennomeres uniformly black, III ca. twice as long as IV, XI slightly more than twice as long as wide (Fig. 8A); pronotum without fore transverse depression; elytral pattern (Fig. 8B) characterized by reduced yellow-brown surface and large extension of black colouration everywhere; mesosternum as in Fig. 8C; male gonoforceps slender in lateral view (Fig. 8E), and fused ventrally until the apical third (Fig. 8D); distal hook of aedeagus positioned far from apex, proximal hook slightly longer than the distal one, endophallic hook evidently curved (Fig. 8F); the apodeme of the *spiculum gastrale* variable: most males have this sclerite slender in the middle and clearly narrowed and elongate in the last portion (Fig. 8Ga), but in a single male it is widened medially (Fig. 8Gb).

Taxonomic remarks. Immediately distinguishable from all species of the subgenus by the unique elytral pattern characterized by reduced brown-orange surface and the large extension of black colouration everywhere as in Fig. 8B. Mesosternum (Fig. 8C) narrowed posteriorly and the setae on its anteriorly modified section are longer than usual. Male gonoforceps slender in lateral view (Fig. 8E).

This species was included in the nominate subgenus by Serri *et al*. (2012). It is similar to *M. apiceguttata* because of the shape of the ventral blade of claws and the aedeagal distal hook, far from apex. As discussed for *M. apiceguttata*, possible affinities with *Calydabris* are represented by the presence of a tuft of setae on the scutum of mesosternum, never pointed out in the literature. In conclusion, we tentatively include this species into the nominate subgenus but we are waiting for molecular evidences to support its phylogenetic position.

Distribution. E Iran.

Mylabris (*Mylabris*) *batnensis* Marseul, 1870*

Figs. 1F, 9A–G

Mylabris batnensis Marseul, 1870: 121; 1872: 523; Baudi di Selve, 1878a: 376; 1878b: 1115; Beauregard, 1890: 522; Sumakov, 1915: 47; 1930: 79; Borchmann, 1917: 26; Mader, 1927: 862.

Zonabris batnensis, Pic, 1897: 127; Escherich, 1899: 90.

Mylabris (*Tigrabris*) *batnensis*, Kuzin, 1954: 365.

Mylabris (*Mylabris*) *batnensis*, Pardo Alcaide, 1954b: 74; Bologna, 2008: 397.

Type locality. "Algérie, Batna" (Marseul, 1870). This locality is in northern Algeria, on the southern border of the Algerian Atlas, in a transizional zone between steppe and mountain Mediterranean habitats and desert.

Type specimens. One type, which must be considered the holotype, was briefly examined at the MNHN (Marseul's collection).

Description. Body length: 7.5–12 mm; setae long, and yellow with only few mixed black setae, particulalry on elytra; antennae usually black, but antennomeres III–VII reddish in few specimens, III almost twice as long as IV, apical four antennomeres evidently and progressively widened, XI slightly longer than wide (Fig. 9A); pronotum without fore transverse depression; elytral black pattern very distinctive (Fig. 9B): one black spot around the scutellum, one external fore longitudinal spot longer and wider than inner one, one zig-zag middle fascia, two subequal rounded spots obliquely positioned, and usually a very narrow apical fascia along the inner margin, rarely absent; "scutum" of mesosternum yellow-brown, setae short and sparse (Fig. 9C); male gonoforceps slender in lateral view (Fig. 9E), and fused ventrally in the basal third (Fig. 9D); both aedeagal dorsal hooks small, the distal one far from apex (Fig. 9F).

Taxonomic remarks. As previously evidenced, this species is extremely distinct from all other species of the nominate subgenus, because of the body setation colour, the elytral pattern, the mesosternum colouration and the aedeagal distal hook, positioned far from apex. The present position of *M. batnensis* in the nominate subgenus is uncertain and we are waiting for molecular evidences to define better its phylogenetic relationships.

Distribution. S Morocco, S Algeria.

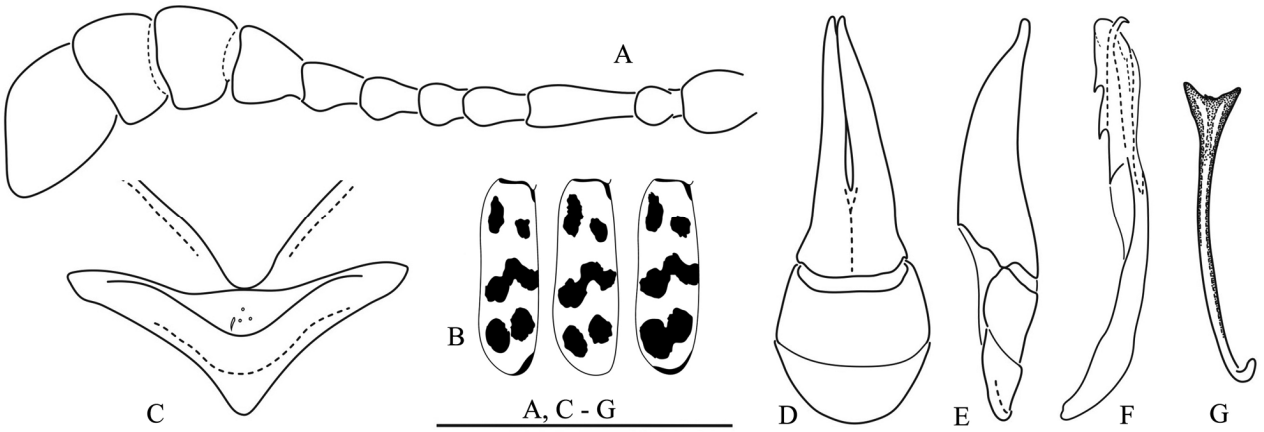

FIGURE 9. *Mylabris* (*M.*) *batnensis* Marseul: A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Mylabris (*Mylabris*) *cernyi* Pan & Bologna sp. n.

Figs. 1G, 10A–G

Type locality. "Turecko [= Turkey] (Adana) Hamidia near Pozanti".

Type specimens. Holotype male with the following label: "Turecko [= Turkey] (Adana) Hamidia near Pozanti, Šobotnik lgt. 23.7.1998" (MAB, 1 CC); 5 male paratypes with the same label of the holotype; 6 male paratypes labelled: "Turchia [= Turkey] v. [= province] Antakya, 17. Topboğazi, m 1110, 11.6.1986 M. Bologna" (MAB, 1 CC); 8 male paratypes labelled: "Turchia [= Turkey] v. [= province] Adiyaman, 21. Gölbasi dint. [= env.], m 500, 14.6.1986, M. Bologna" (MAB); 3 male paratypes labelled: "Turkey: Vil. [= province], Içel, m 700, 29.vi.1999, Çamliyayla-Gülek, N37.15750°–E34.77396°, M. & M. Bologna, F. Turco" (MAB); 1 male paratype labelled: "Turkey, Vil. Adana, 15 km W Bahce, m 500, N37.16694°–E36.43947°, 25.vi.2005, M. & M. Bologna, F. Turco" (MAB); 2 male paratypes labelled: "Turchia, Içel, dint. di Mut, 3/6.6.2011, Padovani Malmusi leg." (MAB); 1 male paratype labelled: "Antalya, 18.6.86 Y. Ot" (MAB); 2 male paratypes labelled: "Turquie [= Turkey] Antalya, Cirali, 195 m, 21.5.1995 tige de *Senecio*, L. Casset" (MAB); 2 male paratypes labelled: "Turchia, Manavgat, 6.90, Rauchenstrach" (MAB). Types have an additional label "Holotypus ♂ (and paratypus ♂, respectively) *Mylabris* (*Myl.*) *cernyi* n. sp. Z. Pan & M. Bologna det. 2013" (red, rectangular, printed and handwritten).

Other material examined. Turkey: 1 ex. Çanakkale, 10 km S Çanakkale (MAB); 1 ex. Çanakkale, Truva (MAB); 2 exx. Adana, Amanus Mts., Yarpuz (MAB); Adana, Nurdağı geç. (MSNM). **Lebanon:** 1 ex. Chouf, Ain Zhalta (MAB). **Israel-Palestine:** 1 ex. Mevo Shilo (MUH); 1 ex. Nahariya (CP); 1 ex. Kfar Shmu'el (TAU); 1 ex. Jerusalem, Mishor Adummim (MAB). **Jordan:** 2 ex. Jarash, Burma env., Al Huna (CC; MAB); 2 exx. Al Karak, Sarfa env. (CC; MAB). **Pakistan:** 2 exx. Gilgit-Baltistan, Dassu (CC; MAB); the last locality is very doubtful and need to confirm, even if the validity of record was confirmed by the collector.

Description. Male: body black, but elytra brown-reddish with the following black pattern completely similar to that of *M. quadripunctata* (Fig. 10B): two irregular spots on basal third, rarely fused to form a fascia, only in one case extended along the suture to the base; one middle transverse fascia with fore margin almost straight, posterior margin sinuate in the middle, in few specimens divided to two spots; one wide apical fascia sinuate on fore margin. Setation uniformly black, but ventral side of foretibiae and foretarsi with golden setae, forming a small pad under the pro- and mesotarsomeres; length of setation on dorsum subequal to that on venter; setae denser on head and pronotum, sparser on elytra. Body length: 14.0–21.0 mm.

Head evidently longer than wide at temple level, width at eyes and temple levels subequal; punctures dense, small, relatively deep, surface among punctures shiny on vertex, wrinkled on frons; head capsule subrectangular, temple largely curved posteriorly and subequal in length to the longitudinal length of eye; frons almost flat, with one shallow depression on center, sometimes with one posteriorly bilobed red spot in the middle; clypeus transverse, convex, with slightly rounded anterior and lateral margins, anteriorly depressed and smooth, fronto-clypeal suture clearly visible; labrum only slightly shorter and narrower than clypeus, anterior margin slightly emarginate, longitudinally depressed in the middle; mandibles robust, almost straight at base, turned suddenly anteriorly in dorsal view, and little longer than clypeus and labrum together; maxillary palpomere II with long setae on the posterior side, last maxillary palpomere apically thickened and truncate at apex; antennae (Fig. 10A) relatively long, clearly extending over the posterior margin of pronotum, antennomere I approximately twice as long as II, which is semi-globular; antennomere III elongate, ca. 1.5 times as long as IV, IV and V similar in length and width, VI similar in length to IV and V, but widened apically, VII–X similar in length but progressively more apically widened, X subcylindrical, last antennomere elongate and sub-lanceolate, slightly less than twice as long as wide.

Pronotum slightly longer than wide, narrowed anteriad, convex, widest at middle; with a shallow anterior transverse depression and a small basal middle depression; posterior margin straight; punctures relatively wider and denser than on head, not confluent on anterior third, surface among punctures shiny. Elytral black pattern as in Fig. 10B; setae shorter and sparser than on head and pronotum, erect on anterior third, recumbent and shorter on the remaining surface. Mesosternum longitudinally elevated in the middle, with a clearly modified anterior section ("scutum"), with a slightly depressed triangular area with dense and slightly long setae (Fig. 10C); mesepisterna depressed along the anterior margin, which consequently appears to be raised. Legs black, pro- and mesotibial spurs all similar in shape and pointed, both metatibial spurs stick-like; femora with mixed short and long setae, setae robust and more elongate on tibiae and tarsi; foretibiae ventrally with mixed golden and black short and dense setae; pro- and mesotarsomeres with ventral golden setae forming tarsal pads, those of mesotarsomeres smaller.

Posterior margin of sternite VIII deeply emarginated in the middle. Male genitalia as in Figs. 10D–G: in lateral view (Fig. 10E) the basal part of gonoforceps wide, apical lobe of gonoforceps very short, evidently shorter than half length of the whole gonoforceps; gonoforceps (Fig. 10D) fused ventrally in basal third; aedeagus (Fig. 10F) with two big similar dorsal hooks, distal hook closed to the apex, the proximal one slightly bigger and more curved, endophallic hook relatively small; apodeme of the *spiculum gastrale* and 10th sternum completely approached and without an intermediate membranous tissue, as in Fig. 10G.

Female. Similar to male, but with relatively shorter antennae; setae on external side of protibiae and protarsomeres I–IV mixed short, much longer than on innner side; posterior margin of sternite VIII almost straight.

Etymology. This species is named after Ladislav (Lada) Černý, a skillful Czech entomologist, who pointed out this new species to one of us some years ago and who supported our revision by sending us rich and very interesting material, including also other new species.

Taxonomic remarks. This species is phenetically very similar to *M. quadripunctata*, and only males are easily to distinguish according to the genitalia structure: apical lobe of gonoforceps very short and not curved forward

(Fig. 10E), gonoforceps slightly sloping in both lateral and ventral views (Figs. 10D, E); distal hook of aedeagus similar in size and inclination to the proximal one (Fig. 10F). Another character distinct in male of these species (even if some specimens have overlapping measures) is the ratio between antennomeres III and IV: in *M. cernyi* (n = 32) it is 1.432; in *M. quadripunctata* (n = 15) it is 1.548. Females of *M. cernyi* are almost impossible to distinguish from those of *M. quadripunctata* of the Turkish phenotypes with intermediate elytral fascia. For this reason we did not tested the antennomeres ratio in this sex.

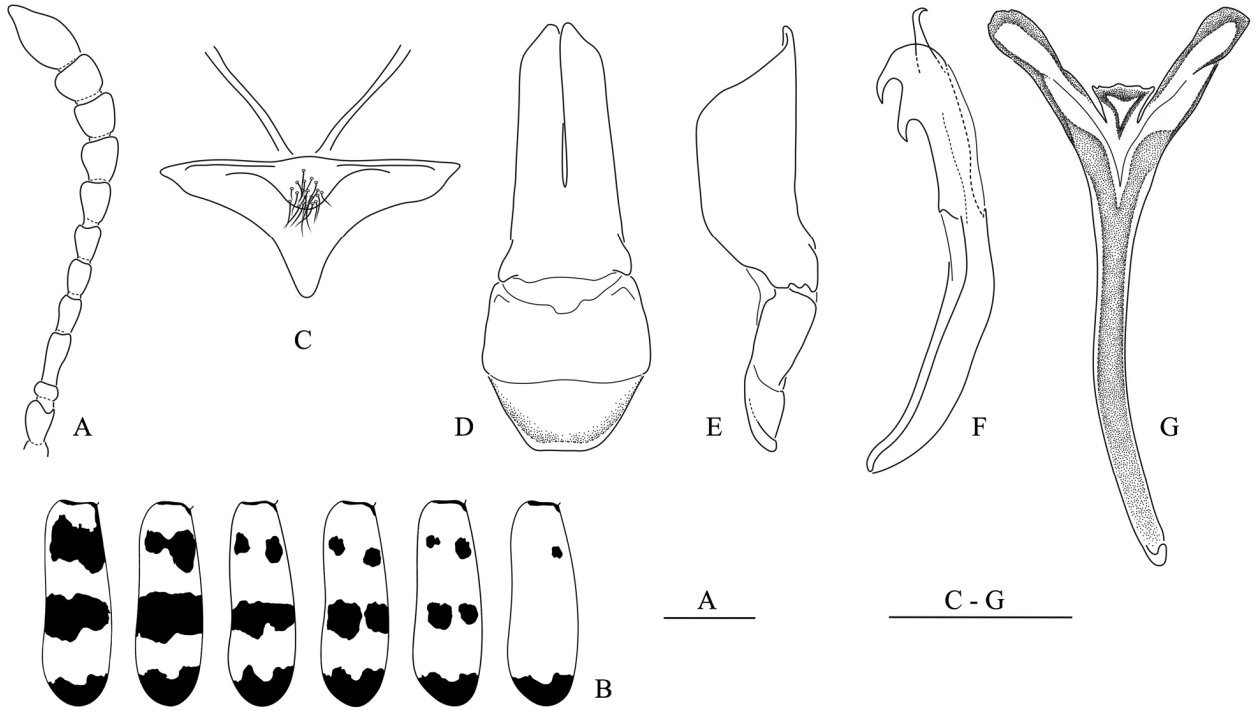

FIGURE 10. *Mylabris* (*M.*) *cernyi* Pan & Bologna **sp. n.**: A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

The elytral pattern is variable but specimens with middle fascia are more common than those with this fascia divided into two spots; in one specimen are present only one inner spot on basal third and the apical fascia. The variation of elytral black pattern is represented in Fig. 10B.

The new species is sympatric and locally syntopic with *M. quadripunctata* along the Mediterranean areas of Turkey and in the Levant; and surely in the museum collections, some specimens were erroneously identified. We examined one specimen from southern Turkey, Toros Dağlari, Sertavul geçidi, which is probably a hybrid with *M. quadripunctata*, due to the intermediate characters of male genitalia.

Distribution. Mediterranean Turkey, Israel and Palestine, Jordan. One record from northern Pakistan (Dessu) needs to be confirmed.

***Mylabris* (*Mylabris*) *ciliciensis* (Escherich, 1899)**

Figs. 1H, 11A–G

Zonabris ciliciensis Escherich, 1899: 106.

Mylabris ciliciensis, Sumakov, 1913: 306; 1915: 21; 1930: 40; Borchmann, 1917: 30; Mader, 1927: 857; Kaszab, 1968a: 445; Özbek & Szaloki, 1998: 29.

Mylabris (*Mylabris*) *ciliciensis*, Kuzin, 1954: 354; Bologna, 1979: 153; 2008: 397.

Type locality. "Asia min. (Taurus cilic.) … Gülek" (Escherich, 1899). This locality, the present complete name of which is "Gülek Boğazı", is in the southern Turkey, Içel province, 50 km North of Tarsus, on the southern slope of the Toros Dağlari.

Type specimens. Escherich (1899) recorded eigth types; they were not examined and probably are preserved at the NHMTR in the Escherich's collection. At MNHN we examined one specimen with the following labels; "Syrie" (white, printed); "*Zonabris Delagrangei* n.sp." (white, hanwritten by M. Pic); "type" (red, printed); "*Mylabris ciliciensis* Escherich Pardo Alcaide det. 1967" (handwritten by A. Pardo Alcaide). *Delagrangei* is is a *nomen in litteris*. At MNHN we also examined one specimen labelled "n.sp. Esch. Vid. Syrie Akbès C.D.1891", "var. *caroli* Pic", which is greatly damaged by dermestids. This infraspecific variation is probably a *nomen in litteris.*

Description. Body length: 10–14.5 mm; setae uniformly black, but mixed golden and black on legs; antennomeres usually dark reddish, rarely completely black, III ca. 1.5 times as long as IV, apical antennomeres evidently progressively widened, XI less than twice as long as wide (Fig. 11A); pronotum without fore transverse depression; elytral black pattern as in Fig. 11B: inner basal spot clearly wider than the external one and never extended along the suture to the base, external spot distanced from the elytral margin, and only rarely fused to the inner spot; mesosternum as in Fig. 11C; male gonoforceps in lateral view clearly curved before the apical lobe (Fig. 11E), and fused ventrally in basal third (Fig. 11D); distal hook of aedeagus positioned almost at apex (Fig. 11F).

Taxonomic remarks. This species is similar to *M. variabilis* and commonly confused with it, being distinguished from it by the characters listed in the key. The elytral variability is reduced and concerns the possible fragmentation in two spots of the fore black fascia; the inner spot can be more or less approached along the suture to the specular one of the other elytron.

Distribution. Central and southern Turkey.

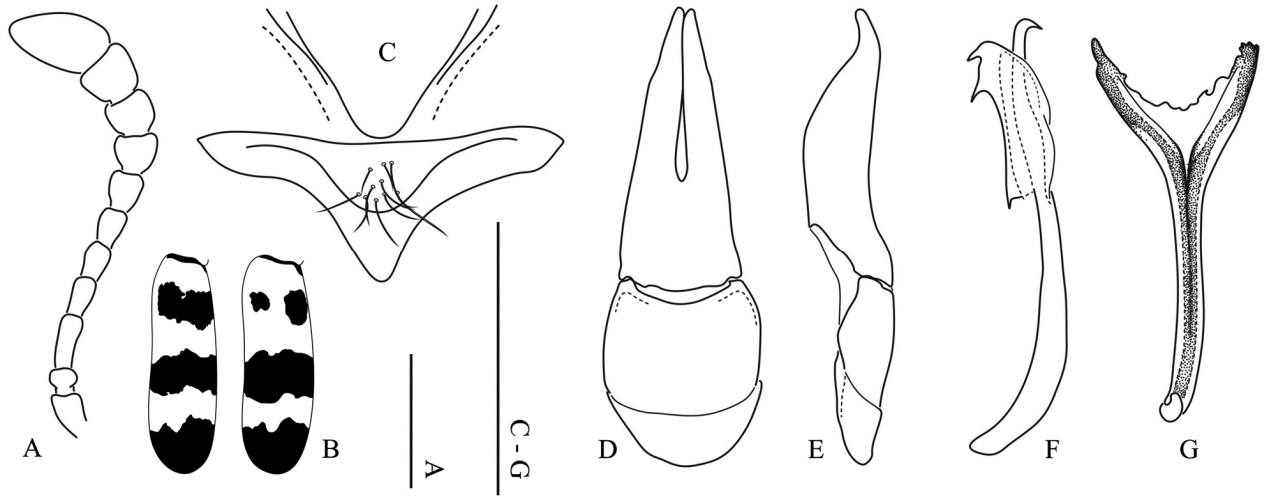

FIGURE 11. *Mylabris* (*M.*) *ciliciensis* (Escherich): A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Mylabris (*Mylabris*) *concolor* Marseul, 1870

Figs. 1I, 12A–F

Mylabris concolor Marseul, 1870: 112; 1872: 126; Gemminger & Harold, 1870: 2135; Beauregard, 1890: 524; Sumakov, 1915: 13; 1930: 19; Borchmann, 1917: 30; Mader, 1927: 856; Reichardt, 1934: 214, 229; Zaitseva, 1960: 38; Mandl, 1964: 19; Kaszab, 1968a: 445; Mirzayans, 1970: 30; Iablokoff-Khnzorian, 1983: 66; Modarres Awal, 1997: 179; Özbek & Szaloki, 1998: 29.

Zonabris concolor, Escherich, 1897: 44; 1899: 91; Reitter, 1913: 661.

Mylabris (*Mylabris*) *concolor*, Kuzin, 1954: 354; Bologna, 1979: 154; 2008: 397.

Type locality. "Asie Mineure" (Marseul, 1870). Name, used in the old literature, represents the Anatolian Peninsula.

Type specimens. The single type (which must be considered the holotype) of this species was examined at MNHN, in the Marseul's collection.

Description. Body length: 11–13 mm; setae uniformly black, but mixed golden and black on legs; antennomeres mostly black, or III–VI dark reddish, III ca. twice as long as IV, XI slightly more than twice as long as wide (Fig. 12A); pronotum with an evident fore transverse depression, clearly narrowed on fore third; elytra unicolour yellow-brown, without any black spots or fasciae; "scutum" of mesosternum small and short posteriorly (Fig. 12B); male gonoforceps slender in lateral view (Fig. 12D), and fused ventrally in basal half (Fig. 12C); aedeagal distal hook relatively far from apex, proximal hook relatively close to the distal one (Fig. 12E).

Taxonomic remarks. This species is phenetically similar to *Mylabris* (*Micrabris*) *unicolor* Faldermann, 1837, which has similar body size and unicolour brown-reddish elytra. But *M. unicolor* differs in the following subgeneric features: frons usually with two small red spots which can lack; pronotum more convex; "scutum" of mesosternum smooth, without any setae; apical lobe of male gonoforceps relatively long; aedeagal distal hook far from apex. Usually in *M. unicolor*, elytra have faint tracks of black spots visible only at microscope; we observed very scanty tracks of the external fore spot only in one *M. concolor* specimen.

Distribution. Azerbaijan, Armenia, Turkey, Iran, Turkmenistan.

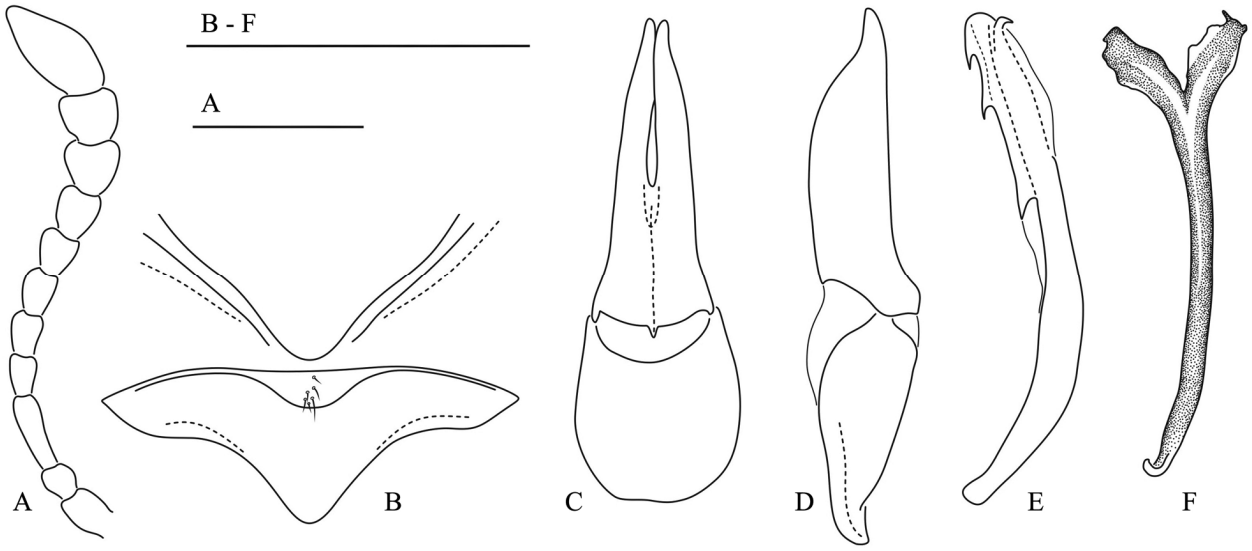

FIGURE 12. *Mylabris* (*M.*) *concolor* Marseul: A. antenna; B. mesosternum; C. tegmen, ventral view; D. tegmen, lateral view; E. aedeagus, lateral view; F. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Mylabris (*Mylabris*) *desertica* Bologna, 2007

Figs. 1J, 13A, B

Mylabris (*Mylabris*) *desertica* Bologna, in Bologna & Turco, 2007: 12.

Type locality. "Saudi Arabia, Ha'il, Ghazzālah" (Bologna & Turco, 2007). Ghazzālah (named also Al Ghazalah, Al Ghazālah, Al-Razale, Ghazzala, Ghazzalah), is a town of the Ha'il province, in the northern desert of Saudi Arabia, positioned at 26°48'0" N–41°19'0" E, 106 m a.s.l.

Type specimens. Holotype female with the following labels: "Saudi Arabia, Hā'il, Ghazzālah, 11.iv.1944, A. R. Waterston coll." (BMNH); "Holotypus *Mylabris* (*Mylabris*) *desertica* ♀ n.sp. M. Bologna det. 2006".

Description. Body length: 13.4 mm; setae only black, but mixed golden and black on legs; antennomeres uniformly black, III more than 1.5 times as long as IV; pronotum with an evident fore transverse depression; elytra with two fore spots, one middle wide spot, forming almost a transverse stripe, one subapical wide and transverse

spot, almost forming a stripe, and a very narrow apical margin (Fig. 13A); mesosternum as in Fig. 13B. Male unknown.

Taxonomic remarks. This species is highly distinct because of the elytral black pattern, which includes a transverse incomplete fascia in apical third; a similar black spot is present only in *M. madoni* and *M. olivieri,* being easily distinguished from it by the antennal and setae colour (see below).

Distribution. N Saudi Arabia.

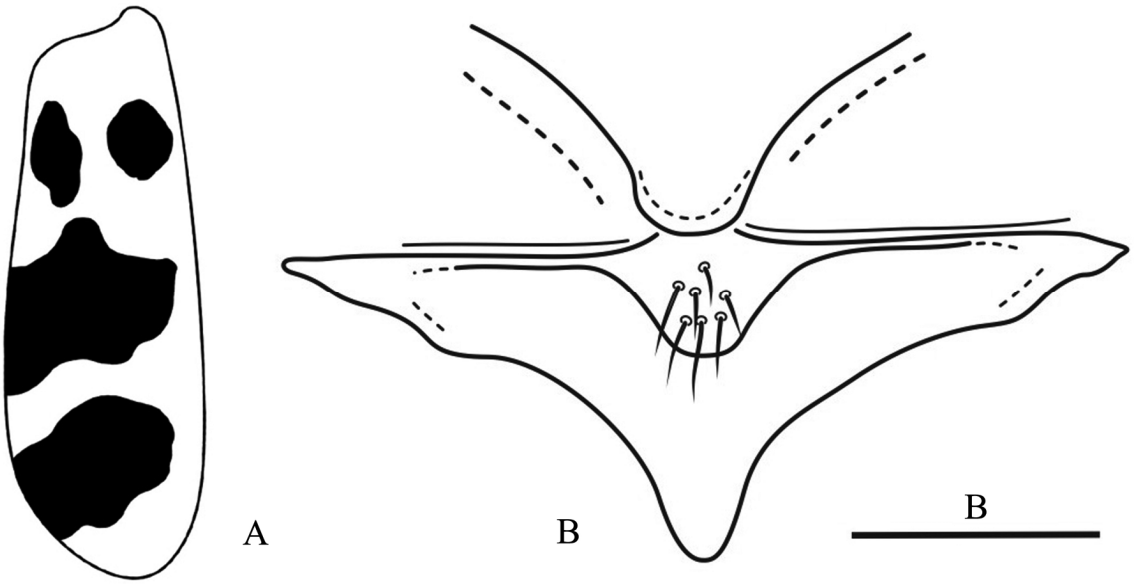

FIGURE 13. *Mylabris* (*M.*) *desertica* Bologna: A. elytral pattern; B. mesosternum. Scale bar = 1 mm. (from Bologna & Turco, 2007).

Mylabris (*Mylabris*) *emiliae* (Escherich, 1899)

Figs. 1K, 14A–G

Zonabris steppensis, Escherich, 1897: 42 (nec Dokhtoruroff, 1889:137).
Zonabris emiliae Escherich, 1899: 105.
Mylabris quadripunctata emiliae, Sumakov, 1915: 23; Mader, 1927: 858.
Mylabris emiliae, Borchmann, 1917: 34; Mařan, 1944: 36.
Mylabris quadripunctata m. *emiliae*, Sumakov, 1930: 37.
Mylabris (*Mylabris*) *emiliae*, Bologna, 2008: 397.

Type locality. "Asia Minor, Caucasus … Angora [= Ankara] … Kaukasus [= Caucasus] ... Erivan [= Yerevan]" (Escherich, 1899). After the Lectotype designation, the restricted type locality is here defined as "Angora" (= Ankara), the capital of Turkey.

Type specimens. We examined ten syntypes in the Escherich's collection (NHMTR), five among them from "Angora". According to Escherich (1897, as "*Zonabris steppensis*"), another five syntypes from "Angora" were examined by Escherich (1899); they are probably preserved in other collections (such as NMPC) or missing.

We designed as Lectotype one male syntype (NHMTR), labelled: "Angora Escherich 1895" (white, rectangular, small, printed), without identification label; we selected this specimen as lectotype because of its better conservation status. The Paralectotypes are: (a) two males and two females labelled "Angora Escherich 1895" (white, rectangular, small, printed), without identification label, but one male with the label "*Zonabris steppensis* Dokht." (white, rectangular, handrwritten), the erroneous name used by Escherich (1897) before the description of the new species (Escherich, 1899). (b) One male and one female (NHMTR) labelled "Eriwan 1888 Korb" (white, rectangular, small, printed); the male specimen is the first of the entire set and has an additional identification label "*Emiliae* mihi" (white, rectangular, middle sized, handwritten). (c) Two females (NHMTR), labelled "Caucasus Staunding." (white, rectangular, handwritten), but without identification label. (d) One male labelled "a.8.6"

(white, rectangular, handwritten by pencil). The last paralectotypes lacks abdomen, other are more or les damaged and most lack one or both antennae.

We added the following labels to all types: "Lectotypus (and Paralectotypus respetively) ♂ (or ♀), *Zonabris emiliae* Escherich Z. Pan & M. Bologna des. 2013" (red, rectangular, printed and handwritten); "*Mylabris* (*Mylabris*) *emiliae* (Escherich), Z. Pan & M.Bologna det. 2013" (white, rectangular, printed and handwritten).

Description. Body length: 10–17.5 mm; setae only black, but mixed golden and black on legs; antennomeres usually dark reddish or black, III ca. 1.5 times as long as IV, XI ca. twice as long as wide (Fig. 14A); pronotum without fore transverse depression; elytral black pattern (Fig. 14B) including two spots, irregular in shape, on basal third, more or less fused, the inner one extended along the suture to the scutellum, one middle fascia widened in the middle and narrowed on both sides, a wide sub-oblique apical fascia; mesosternum as in Fig. 14C; gonoforceps fairly wide in lateral view (Fig. 14E), apical lobe short and relatively straight; gonoforceps fused ventrally in basal half (Fig. 14D); aedeagus relatively stocky (Fig. 14F), distal hook almost at apex and proximal hook very close to the distal one, and greatly longer.

Taxonomic remarks. This species is probably strictly related to *M. pseudoemiliae*, because of the aedeagus structure, and is also phentically similar because of the elytral pattern.

Distribution. Armenia, Syria, Turkey, and generically recorded from Caucasus.

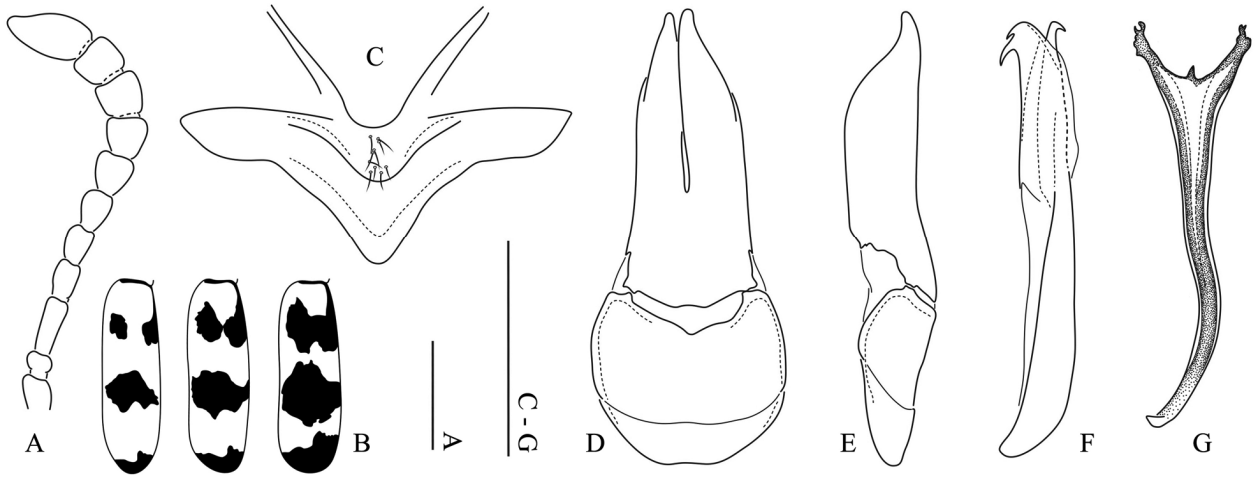

FIGURE 14. *Mylabris* (*M.*) *emiliae* (Escherich): A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Mylabris (*Mylabris*) *guerini* Chevrolat, 1840

Figs. 1L, 15A–G

Mylabris guerini Chevrolat, 1840: 271; Kocher, 1954: 273; 1956: 54
Mylabris rubripennis Chevrolat, 1840: 270; Lucas, 1849: 387 (uncertain synonymy).
Mylabris tricincta var. *guerini*, Reiche, 1866: 635.
Mylabris variabilis var. *guerini*, Marseul, 1870: 69; 1872: 492; Gemminger & Harold, 1870: 2144; Baudi di Selve, 1878b: 1162; Borchmann, 1917: 57.
Mylabris variabilis var. *rubripennis*, Gemminger & Harold, 1870: 2145; Marseul, 1872: 492; Baudi di Selve, 1878b: 1162; Borchmann, 1917: 57.
Mylabris quadripunctata tricincta m. *guerini*, Sumakov, 1915: 24; 1930: 39.
Mylabris quadripunctata var. *guerini*, Mader, 1927: 858.
Mylabris quadripunctata ab. *normandi* Pic, 1936: 155.
Mylabris (*Mylabris*) *guerini*, Pardo Alcaide, 1950: 75; 1954b: 76; Bologna, 1991a: 223; 2008: 397.
Zonabris variabilis var. *lambaesis* Pic, 1953: 499.

Type locality. "Bône" (Chevrolat, 1840). This is the late French name of the town of Annāba, along the eastern coasts of Algeria.

Type specimens. We checked for types of Chevrolat at MNHN, but all of them seem to be lost.

Description. Body length: 10.5–20 mm; setae only black, but mixed golden and black on legs; antennomeres usually uniformly black, rarely III–VI dark reddish, III ca. 1.5 as long as IV (Fig. 15A), XI ca. twice as long as wide; pronotal punctures wide, deep, very contiguous or confluent, especially on fore third, fore transverse depression deep; elytral black pattern very variable, as in Fig. 15B, with an apical fascia wide; mesosternal suture generally indistinct or obliterated (Fig. 15C); male gonoforceps slender in lateral view (Fig. 15E), fused ventrally in basal half (Fig. 15D); distal hook of aedeagus positioned at apex and differently inclined vs. the proximal one, sub-oblique to the aedeagal axis (Fig. 15F).

Taxonomic remarks. Chevrolat (1840) described in the same paper three species from Algeria (*M. guerini*, *M. rubripennis*, and *M. tricincta*), the types of which are missing (see above), characterized by a very similar elytral pattern. For this reason, at present it is impossible to define what these species are. Pardo Alcaide (1950), referred respectively to *M. guerini* (and considered *M. rubripennis* as its synonym) and *M. tricincta*, the two northern African morpho-species, which are well distinct by the male genitalia characters, but have with similar elytral pattern. It being impossible to define the species by the types examination, we considered their definitions, synonymies, and characters according to Pardo Alcaide (1950).

Distribution. N Morocco, N Algeria, N Tunisia.

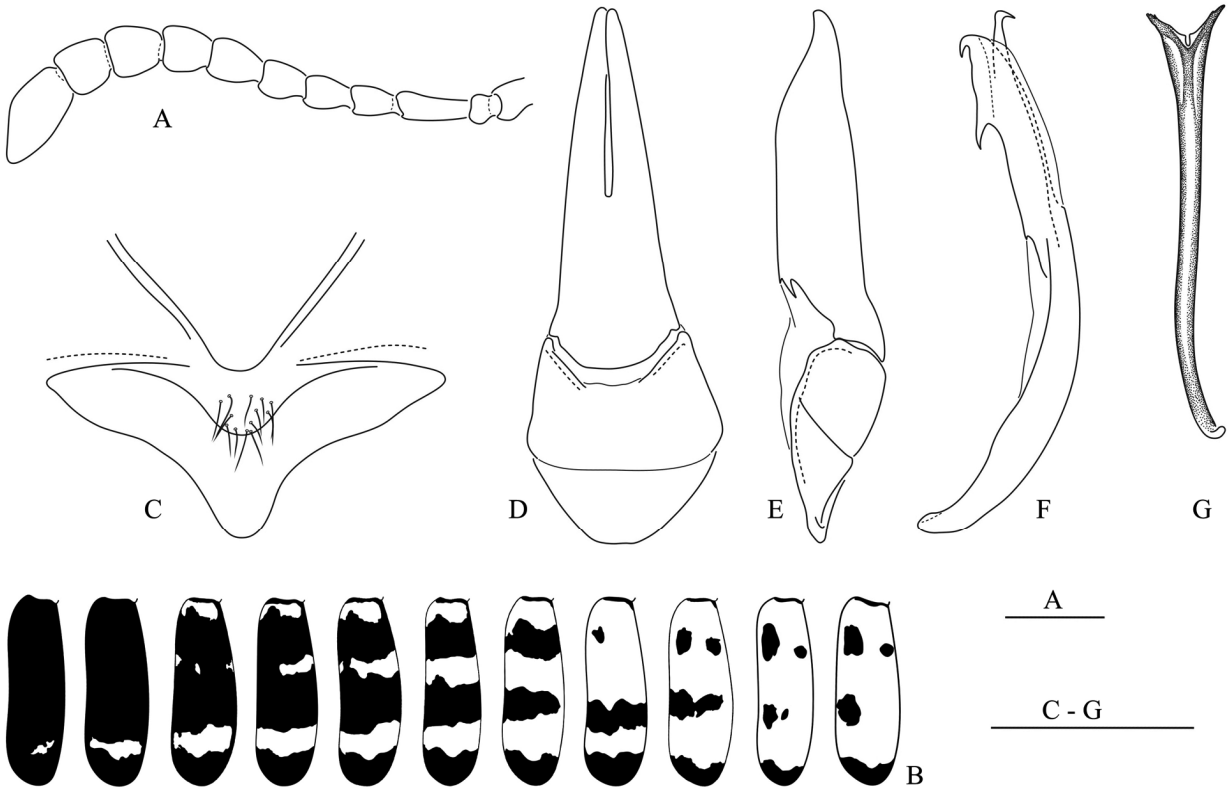

FIGURE 15. *Mylabris* (*M.*) *guerini* Chevrolat: A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Mylabris (*Mylabris*) *kodymi* Mařan, 1944

Figs. 1M, 16A–G

Mylabris kodymi Mařan, 1944: 37; Bologna, 1986: 441.
Mylabris (*Mylabris*) *kodymi*, Bologna, 1994: 40; 2008: 397.
Mylabris kodymi ab. *stepaneki* Mařan, 1944: 38.
Mylabris kodymi ab. *toborskyi* Mařan, 1944: 38.

Type locality. "*Ghazi, in vitinitate oppidi Herakléion*" (Mařan, 1944). Ghazi is a village few kilometres southwest of Iraklio, in Crete Island (Greece). The Ghazi area is now greatly urbanized and disturbed and few residual natural habitats are still present.

Type specimens. Mařan (1944) indicated 33 Types, 25 of them belonging to the nominate form and those remaining belonging to two variations of elytral colour (two of which from "Sphakia"). Holotype and paratypes were examined at NMPC, and one paratype, labeled "Ghazi, 1934" at MAB.

Description. Body length: 10.5–19.5 mm; setae only black, but mixed golden and black on legs; antennae uniformly black, antennomere III ca. 1.5 times as long as IV, apical antennomeres only slightly widened, XI more than twice as long as wide (Fig. 16A); pronotum without fore transverse depression; elytral black pattern (Fig. 16B) with two basal rounded spots, similar in size, and one middle fascia strongly sinuose, incomplete on both sides, the apical black fascia very wide, extended on ca. 20% of the whole elytral surface; mesosternum as in Fig. 16C; male gonoforceps in lateral view slender and only slightly curved before the apical lobe (Fig. 16E), fused ventrally in basal third (Fig. 16D); aedeagal distal hook positioned almost at apex and clearly distanced from the proximal one (Fig. 16F).

Taxonomic remarks. This species has an elytral black pattern very similar to that of *M. variabilis* Sicilian populations (Italy). It differs from these populations in the following characters: antennae only slightly widened in last segments, XI more than twice as long as wide; elytral two basal spots similar in size, and the apical fascia slightly wider; aedeagal proximal hook relatively far from the distal one compared to that of *M. variabilis. M. kodymi* consistently differs from *M. quadripunctata* and *M. emiliae*, to which it was compared by Mařan (1944), because of male genitalia structure (both aedeagus and gonoferceps). The validity of the species was confirmed by preliminary molecular data using the gene marker COI (Pan *et al.*, unpublished).

Distribution. Endemic to Crete Island (Greece).

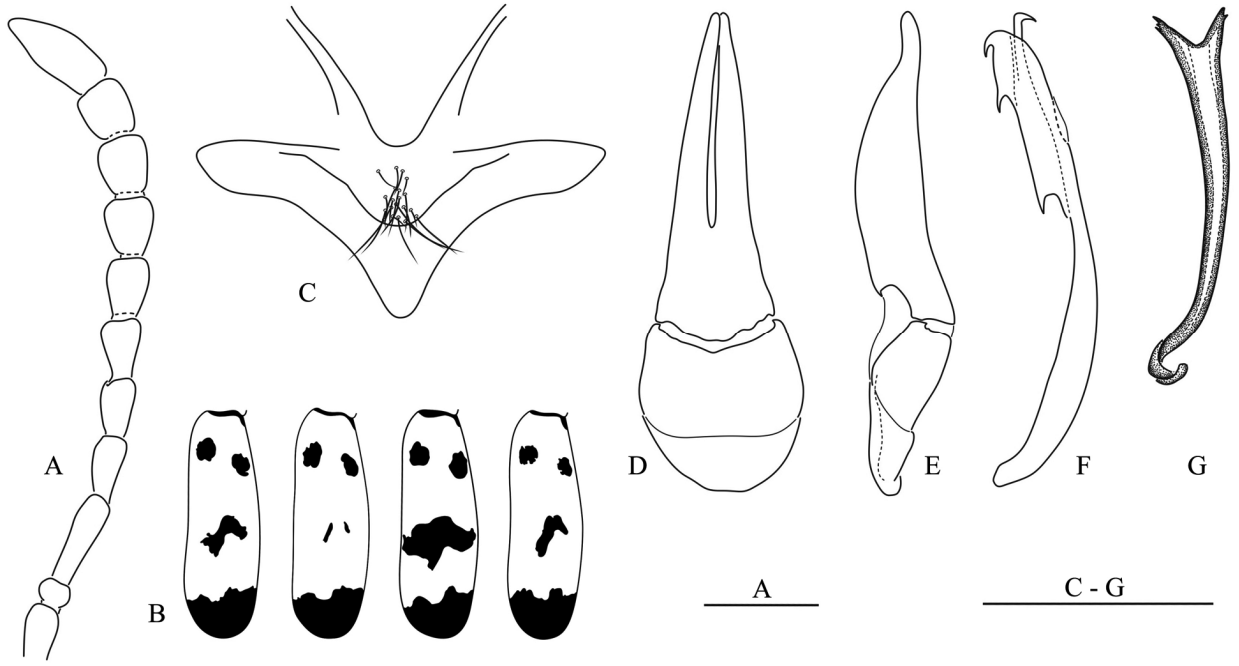

FIGURE 16. *Mylabris* (*M.*) *kodymi* Mařan: A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

***Mylabris* (*Mylabris*) *madani* (Escalera, 1909)**

Figs. 1N, 17A–G

Zonabris madani Escalera, 1909: 246; 1914: 396.
Zonabris tahari Escalera, 1909: 246; 1914: 396.
Zonabris madani var. *transversalis* Escalera, 1914: 396.
Mylabris madani, Sumakov, 1915: 25; 1930: 40; Borchmann, 1917: 41; Mader, 1927: 858.
Mylabris tahari, Sumakov, 1915: 25; 1930: 40; Mader, 1927: 858.
Mylabris variabilis var. *tahari*, Borchmann, 1917: 57.
Mylabris madani ab. *transversalis*, Mader, 1927: 858; Sumakov, 1930: 40.

Mylabris (*Mylabris*) *madani*, Kuzin, 1954: 355; Pardo Alcaide, 1954a: 341; 1954b: 74; Bologna, 2008: 397.
Mylabris tahari ab. *transversa* Kaszab, 1958b: 190.

Type locality. "Marráques" (Escalera, 1909). The type locality is a town of central Morocco.

Type specimens. Types of this species and of its synonym *M. tahari* (also described from "Marráques"), previously studied by Pardo Alcaide (1954a), were re-examined at MNCN.

Description. Body length: 9.5–16 mm; setae only black, but mixed golden and black on legs; antennomeres uniformly black, III almost twice as long as IV, XI less than twice as long as wide (Fig. 17A); pronotum clearly narrowed anteriorly and with evident fore transverse depression; elytra without black apical fascia and with four (2:2) parallel spots (Fig. 17B); setated posterior portion of the mesosternal "scutum" widely extended on the whole posterior half of "scutum" (Fig. 17C); male gonoforceps in lateral view slender (Fig. 17E), fused ventrally in basal two-fifths (Fig. 17D); aedeagal distal hook slightly far from apex and clearly distanced from the proximal one (Fig. 17F).

Taxonomic remarks. This species was sometimes confused with *M. schreibersi*, which is sympatric in Morocco, and has a similar elytral pattern. It differs from *M. schreibersi* in the following features: body relatively shorter; antennomere III ca. twice as long as IV, XI less than twice as long as wide; elytra without black apical narrow fascia; setated posterior portion of the mesosternal "scutum" widely extended on the whole posterior half of "scutum".

The variation of elytral black pattern is represented in Fig. 17B. One uncommon form with very elongate inner posterior spot was erroneously described as a distinct species (*tahari*), but its synonymy was defined by Pardo Alcaide (1954a).

Distribution. Morocco.

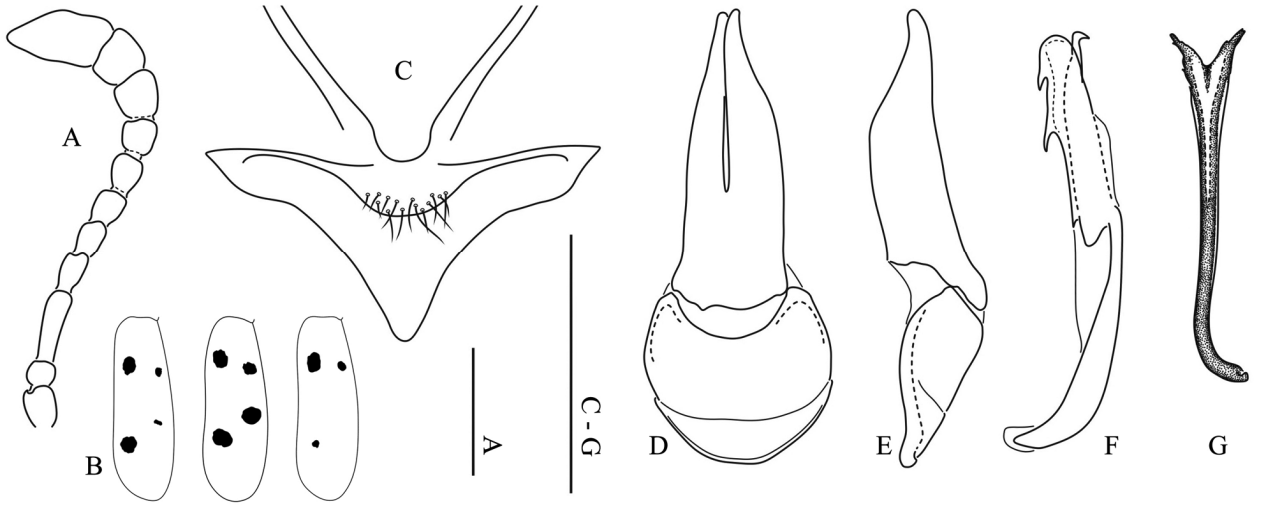

FIGURE 17. *Mylabris* (*M.*) *madani* Escalera: A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Mylabris (*Mylabris*) *madoni* Marseul, 1883

Figs. 1O, 18A–G

Mylabris madoni Marseul, 1883: 178; Beauregard, 1890: 531; Sumakov, 1915: 44; 1930: 76; Borchmann, 1917: 41; Mader, 1927: 862; Bologna & Marangoni, 1990: 354.
Zonabris madoni, Escherich, 1899: 91.
Zonabris madoni var. *lividiana* Pic, 1911: 178.
Mylabris madoni var. *lividiana*, Borchmann, 1917: 41.
Mylabris madoni ab. *lividiana*, Mader, 1927: 862; Sumakov, 1930: 76.
Mylabris (*Mylabris*) *madoni*, Kuzin, 1954: 355; Bologna, 2008: 397.

Type locality. "Chypre" (Marseul, 1883).

Type specimens. Lectotype male (MNHN), with the following labels: "Chypre, coll. de Marseul 2842-90" (white, rectangular, printed); "*Mylabris Madoni* Mars Type" (white, rectangular, handwritten by S. de Marseul); "Escherich vid. 1899" (white, rectangular, handwritten by K. Escherich); "Museum Paris coll. De Marseul 1890" (white, rectangular, printed); "Lectotypus *Mylabris madoni* Marseul, M. Bologna des. 1987" (red, rectangular, handwritten by M. A. Bologna); "*Mylabris* (*s.str.*) *madoni* Marseul, M. Bologna det. 1987" (white, rectangular, handwritten by M. A. Bologna).

Paralectotype, 1 male (MNHN), with the following labels: "*Mylabris Madoni*, Chypre, Ms. 83" (yellow, round); Museum Paris coll. De Marseul 2842-1890 (white, printed); "Museum Paris coll. De Marseul 1890" (white, rectangular, printed); "Paralectotypus *Mylabris madoni* Marseul, M. Bologna des. 1987" (red, rectangular, handwritten by M. A. Bologna); "*Mylabris* (*s.str.*) *madoni* Marseul, M. Bologna det. 1987" (white, rectangular, handwritten by M. A. Bologna).

We examined at MNHN the type of the unvalid form *lividiana*, which was clearly described as an aberration, and one specimen with the identification label "*Mylabris trarmenias*", which represents a *nomen in litteris*.

Description. Body length: 11–15.5 mm; setation of head, pronotum, and ventral side mixed yellow and black, that of elytra almost completely black; antennomeres reddish, VIII–XI almost brown-orange, antennomere III less than 1.5 times as long as IV, apical antennomeres only slightly widened, XI ca. twice as long as wide (Fig. 18A); pronotum without fore transverse depression; elytral black pattern (Fig. 18B) without apical fascia, with two subequal sub-rounded spots on basal third, one middle greatly sinuous narrow fascia and one subapical bisinuate wider fascia; mesosternum as in Fig. 18C; male gonoforceps slender in lateral view (Fig. 18E), fused ventrally in basal half (Fig. 18D); distal hook of aedeagus relatively close to apex, proximal hook relatively far from the distal one (Fig. 18F).

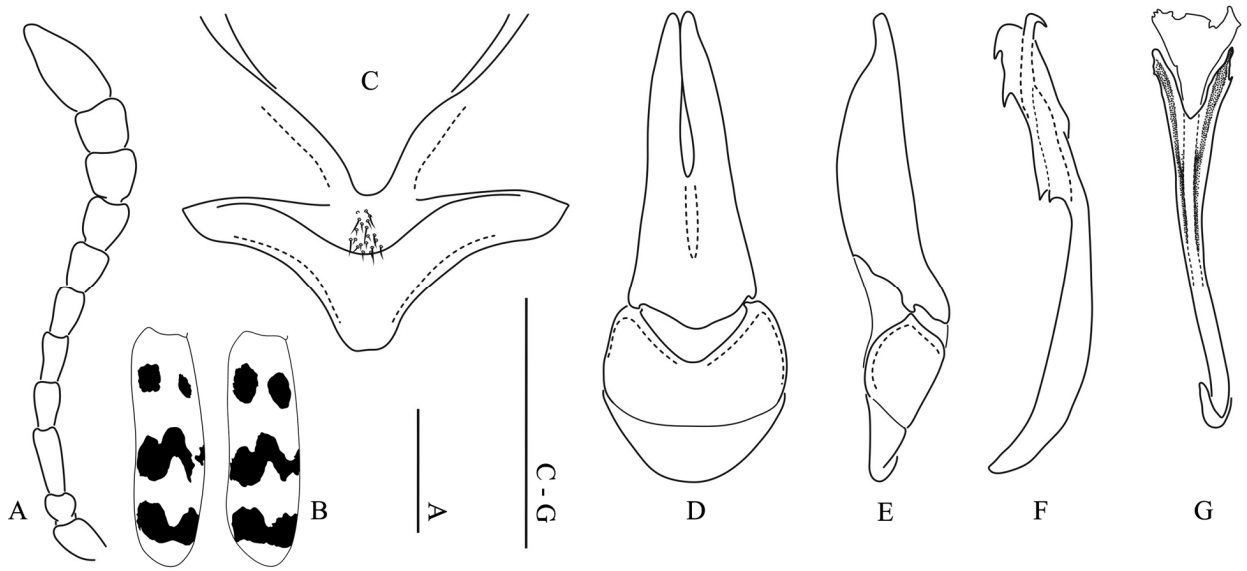

FIGURE 18. *Mylabris* (*M.*) *madoni* Marseul: A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Taxonomic remarks. Probably related to *M. olivieri* because of male genitalia structure, reddish apical antennomeres, and elytral black pattern.

Distribution. Endemic to Cyprus Island.

***Mylabris* (*Mylabris*) *mediorientalis* Pan & Bologna sp. n.**

Figs. 1P, 19A–G

Mylabris husseini, Bologna, 1988: 30; 1991a: 226 (nec Redtenbacher, 1850).
Mylabris (*Mylabris*) *parumpicta*, Bologna, 2008: 397 (pars)(nec Heyden, 1883).

Type locality. "Israel (Jerusalem) Mishor Adummim".

Type specimens. Holotype male (MAB), 10 males and 9 females paratypes (MAB; 1 male and 1 female MZUR), labelled: "Israel (Jerusalem) Mishor Adummim, m. 200, 27.III/03.IV-1989, leg. Baiocchi & Zerunian" (white, printed); "Holotypus (and Paratypus respectively) *Mylabris* (*Myl.*) *mediorientalis* n.sp. Z. Pan and M. Bologna det." (red, printed and handwritten).

Other material examined. Lebanon. 10 exx. Chtaura and env. (NMPC). **Israel-Palestine**: 4 exx. Kurnuba (MUH); 2 exx. Maalah Haraumim, (MUH); 1 ex. Aloon, m 150, 31°49.308'N–35°21.195'E (MABa); 1 ex. Yericho (MUH); 11 exx. Mizpe Yeriho 900 m (CA); 1 ex. Tel Jerusalem (CP); 6 exx. Jerusalem (MAB; MNHN; MUH; NMPC); 1 ex. Lehavim (MUH); 1 ex. Nihal Yelim (MUH); 5 exx. Lahav (MABa); 3 exx. North Negev, Dvira (CA); 2 exx. Arad (MUH); 2 exx. Sede Boqer (MUH); 1 ex. Yerucham Lake (MUH). **Jordan**: 1 ex. Jarash, Burma env., Al Huma (MAB); 3 exx. Zarqa vall., Gharisa (MAB); 3 exx. Irbid, Zarqa Riv. valley (CC); 1 ex. Wadi Zarqa, Ataruz (MAB); 1 ex. Balqa, Al Karamah (MSNG); 2 exx. Balqa, Wadi i-Kafrain (CSC); 1 ex. 18 km N Suwailih (MAB); 1 ex. Wadi Kafrein, 5 km SW Wair (MAB); 3 Wadi El Mujib (NMPC); 1 ex. Wadi Shueib (MAB); 1 ex. Es Salt 19 km NW of Nablus (MAB); 1 ex. 5 km E Gisr 'Abdullah (CSC); 4 exx. Jordan Mt. Nebo, 31°45N, 35°44E, 668 m (CA; CSE). **Iraq**: 7 exx. Mosul (MAB; ZMHB); 2 exx. Assur (ZMHB). **Iran**: 1 ex. Mehran (HMIM); 3 exx. Mehran, Javi (HMIM, MAB); 1 ex. Mazandaran, Amol, Ramsar, Bheshahr (MAB).

Description. Male: body uniformly black, elytra yellow-brown with the following black pattern (Fig. 19B): two subround oblique spots on basal third, one middle transverse incomplete and sinuate fascia, and one wide apical fascia sinuate on fore margin, not widely extended anteriorly. Setation uniformly black, but clypeus, ventral side of foretibiae and foretarsi with golden setae, forming a small pad under the pro- and mesotarsomeres; setation slightly longer on venter than dorsally; setae denser on head and pronotum, sparser on elytra. Body length: 11.5–19.8 mm.

Head evidently longer than wide at temple level, slightly wider at eyes than at temple; punctures relatively wide, shallow and dense, surface among punctures shiny on vertex, slightly wrinkled on frons; head capsule subrectangular, temple widely curved posteriorly, slightly shorter than the longitudinal length of eye; frons almost flat, on center with one subtriangular red spot; clypeus transverse, convex, with slightly rounded anterior and lateral margins, anteriorly depressed and shiny, fronto-clypeal suture clearly visible; labrum only slightly shorter and narrower than clypeus, anterior margin almost straight, with a middle depression at base; mandibles robust, almost straight at basal half, turned suddenly anteriorly in dorsal view, slightly longer than clypeus and labrum together; maxillary palpomere II with long setae on the posterior side, last maxillary palpomere apically thickened and truncate at apex; antennae (Fig. 19A) uniformly black, relatively long, extending over the posterior margin of pronotum, antennomere I approximately twice as long as II, which is semi-globular; antennomere III elongate, ca. 1.5 times as long as IV, IV and V similar in length and width, VI slightly shorter than IV and V, but widened apically, VIII–X similar in length but progressively more widened apically, X subcylindrical, last antennomere elongate and narrowed in the last half, almost straight on one side, slightly more than twice as long as wide.

Pronotum almost as long as wide, narrowed anteriad with maximal width anteriorly, convex and only with a shallow transverse basal depression, fore depression vanishing; posterior margin almost straight; punctures wide, denser than on head, almost confluent on anterior third, surface among punctures shiny; elytral pattern as in Fig. 19B, two subround spots obliquely disposed on basal third, one middle transverse incomplete and sinuate fascia, and one wide apical fascia sinuate on fore margin; elytral setation shorter and sparser than on head and pronotum, erect on humeri and near the scutellum, recumbent and slightly shorter on the remaining surface; mesosternum longitudinally elevated in the middle, with a clearly modified anterior section ("scutum"), with a slightly depressed triangular area with dense and slightly elongate setae (Fig. 19C), the apex of mesosternum and "scutum" less sclerotized and almost brown, except of setated area, which is black; mesepisterna depressed along the anterior margin, which consequently appears to be raised; legs black, rarely dark reddish, pro- and mesotibial spurs similar in shape and pointed, both metatibial spurs stick-like; femora with mixed short and long setae, setae robust and more elongate on tibiae and tarsi; foretibiae ventrally with mixed golden and black short and dense setae; pro- and mesotarsomeres with ventral golden setae forming tarsal pads, those of mesotarsomeres smaller.

Posterior margin of sternite VIII deeply emarginated in the middle. Male genitalia as in Figs. 19D–G: in lateral view (Fig. 19E) the basal part of gonoforceps slender, apical lobe of gonoforceps short, evidently less than half the total length of gonoforceps; in ventral view, gonoforceps (Fig. 19D) fused in basal two-fifths; aedeagus (Fig. 19F) with two dorsal hooks, both positioned very close to apex with the same inclination, distal hook small, the proximal one longer and more curved; endophallic hook large and almost right inclined. The apodeme of the *spiculum gastrale* slender, with relatively wide lateral arms (Fig. 19G).

Female. Similar to male, but with slightly shorter antennae, setation on external side of protibiae and protarsomeres I–IV with mixed short and long setae, much longer than on the inner side, and posterior margin of sternite VIII almost straight.

Etymology. The name of this new species refers to its area of distribution (in Latin "*mediorientalis*" = from the Middle East).

Taxonomic remarks. This species was repeatedtly confused in the literature with *M. variabilis* and *M. quadripunctata*. Bologna (1988, 1991a) named it as *M. husseini*, or identified it in some collections as *M. parumpicta* (also in Bologna, 2008).

Records of *M. parumpicta* from western Iran (Sumakov, 1930) probably refer to *M. mediorientalis*.

Distribution. Lebanon, Israel-Palestine, Jordan, Iraq, W Iran.

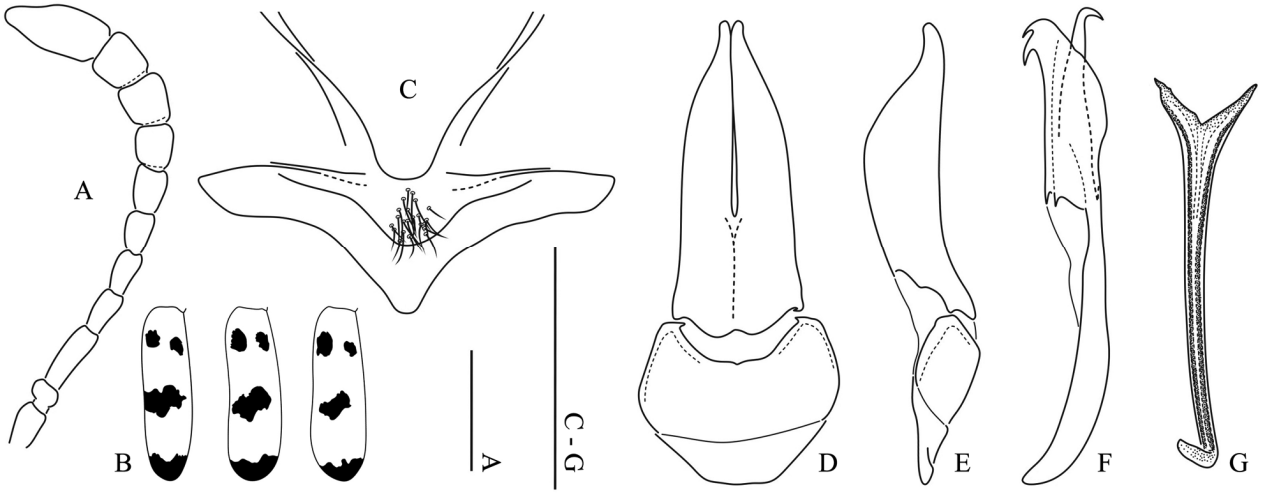

FIGURE 19. *Mylabris* (*M.*) *mediorientalis* Pan & Bologna **sp. n.**: A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Mylabris (*Mylabris*) *olivieri* Billberg, 1813

Figs. 1Q, 20A–G

Mylabris olivieri Billberg, 1813: 71; Sumakov, 1924: 83; 1929: 7; 1930: 26; Kolov, 2003: 163.
Mylabris caspia Ménétriés, 1832: 206.
Mylabris grisescens Reiche, 1866: 638; Marseul, 1870: 119; 1872: 522.
Mylabris impar Baudi di Selve, 1878a: 372, 375; 1878b: 1141; Beauregard, 1890: 529; Sumakov, 1915: 22; Borchmann, 1917: 39; Mader, 1927: 858; Reichardt, 1934: 216, 230.
Zonabris impar, Heyden *et al.*, 1883: 144; Escherich, 1899: 91.
Zonabris impar var. *impexa* Escherich, 1899: 107.
Zonabris impar var. *kopetensis* Pic, 1930: 2.
Mylabris olivieri ab. *impexa*, Kaszab, 1941: 676; 1959: 86.
Mylabris (*Mylabris*) *olivieri*, Kuzin, 1953: 125; 1954: 354; Kaszab, 1959: 86; 1968b: 759; Bologna, 1979: 156; 1991a: 233; 1994: 41; 2008: 397; Nikolaev & Kolov, 2005: 63; Serri *et al.*, 2012: 85.

Type locality. Billberg (1813) did not define the type locality.

Type specimens. We did not examine types of this species, which probably are missing. The type of *M. olivieri* is not cited in the list of beetle specimens of the Swedish Museum of Natural History, Stockholm, where the Billberg's collection is preserved.

Description. Body length: 9–14 mm; setae only black, but mixed golden and black on legs; antennomeres III–X reddish (particularly VII–X), XI brownish, III ca. 1.5 times as long as IV, last antennomeres clearly widened, XI ca. 1.5 times as long as wide (Fig. 20A); pronotum without fore transverse depression; elytral black pattern as in Fig. 20B, two fore spots, rarely confluent, one middle sinuous and complete fascia, a transverse subapical fascia, which not reach the external and usually extended along the inner suture to the very narrow apical fascia; mesosternum as in Fig. 20C; male gonoforceps slender in lateral view (Fig. 20E), fused ventrally in basal half (Fig. 20D); aedeagal distal hook positioned almost at apex, proximal hook far from the distal one (Fig. 20F).

Taxonomic remarks. The synonymy of *M. impar* and *M. caspia* with *M. olivieri*, accepted in the recent literature, was not confirmed by types examination and it was considered doubtful by Sumakov (1924). Escherich (1899) described a variety (*impexa*) from eastern Turkey (Erzurum) with unicolour red-brown elytra; we never examined specimens with this elytral pattern and the validity of this form needs confirmation.

Distribution. Macedonia, Greece, Romania, Ukraine, Russia (Central and South European Territory), Armenia, Georgia, Turkey, Syria, Iran, Turkmenistan, Kazakhstan.

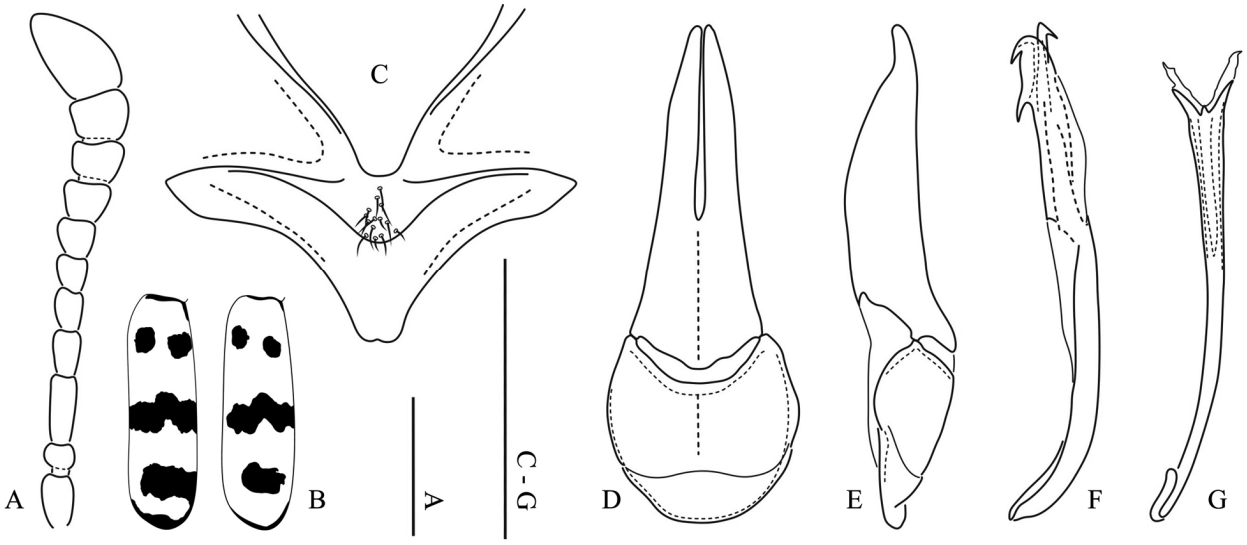

FIGURE 20. *Mylabris* (*M.*) *olivieri* Billberg: A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Mylabris (*Mylabris*) *parumpicta* (Heyden, 1883)

Figs. 1R, 21A–C

Zonabris parumpicta Heyden, 1883: 353; Escherich, 1899: 82.
Mylabris parumpicta, Beauregard, 1890: 533; Sumakov, 1930: 40; Reichardt, 1934: 216.
Mylabris quadripunctata parumpicta, Sumakov, 1915: 23; Mader, 1927: 858.
Mylabris (*Mylabris*) *parumpicta*, Kuzin, 1954: 355; Serri *et al*., 2012: 85.

Type locality. "*Persia borealis*" (Heyden, 1883). According with the labels of types, we consider as the restricted type locality "Schakuh", a village of north eastern Iran, now named Schaku, positioned between Gorgan (the late Astrabad), in the Golestan province) and Shahrud (also Romanized as Shāhrūd, Shahrood, Shahroud, and Shārūd), in Semnan Province.

Type specimens. The three female syntypes of this species were examined (DEI). We designed as Lectotype, one female, with the following labels: (silver, squared, small); "*parumpicta* orig!. Heyd." (white, rectangular, handwritten probably by L. von Heyden,); "Syntypus" (red, rectangular, handwritten, not original); (orange, squared, small, without writing); "DEI coll. Von Heyden" (white, rectangular, printed); "DEI Muncheberg col. 02803" (green, rectangular, printed); "*Zonabris parumpicta* Heyd." (white, rectangular, handwritten, not original).

Paralectotype: 1 female with the following labels: paper label with extracted genitalia; "Schakuh Staudgr." (white, rectangular, handwrittem); "DEI coll. Von Heyden" (white, rectangular, printed); "DEI Muncheberg col. 02804" (green, rectangular, printed). Paralectotype: 1 female, with the following labels: "Schakuh Staudgr." (white, rectangular, handwrittem); "167" (white, squared, small, handwritten); "DEI coll. Von Heyden" (white, rectangular, printed); "DEI Muncheberg col. 02805" (green, rectangular, printed); (orange, squared, small, without writing).

We added the following labels to all types: "Lectotypus (and Paralectotypus respetively) ♀, *Zonabris parumpicta* Heyden, Z. Pan & M. Bologna des. 2013" (red, rectangular, printed and handwritten); "*Mylabris* (*Mylabris*) *parumpicta* (Heyden), Z. Pan & M. Bologna det. 2013" (white, rectangular, printed and handwritten).

Description. Body length: 14.5–15.5 mm; setae uniformly black, but mixed golden and black on legs; antennomeres I–II black, III–VI dark reddish, antennomere III less than twice as long as IV, XI slightly less than twice as long as wide (Fig. 21A); pronotum without fore transverse depression; elytra with two basal black spots, one complete middle fascia, with sub-rectilinear margins, and usually one narrow apical fascia (Fig. 21B); mesosternum as Fig. 21C.

Taxonomic remarks. No recent specimens of this species are available and only types were examined.

Distribution. N Iran, S Turkmenistan (?).

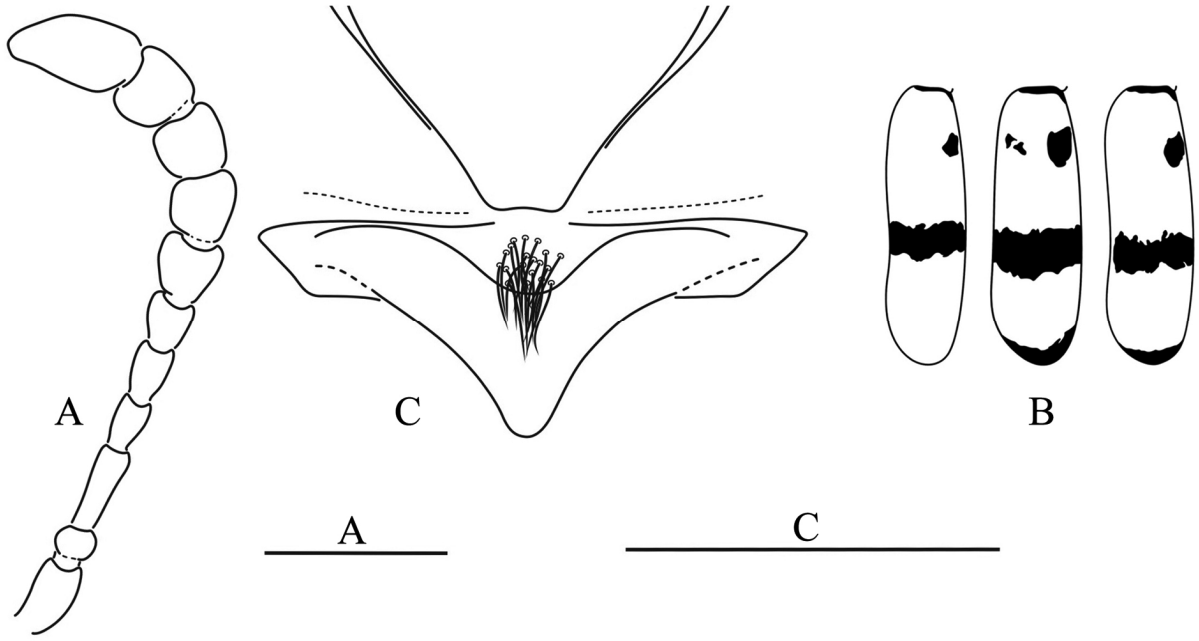

FIGURE 21. *Mylabris* (*M.*) *parumpicta* (Heyden): A. antenna; B. elytral pattern; C. mesosternum. Scale bar = 1 mm.

Mylabris (*Mylabris*) *poggii* Bologna, 2009

Figs. 1S, 22A–C

Mylabris (*Mylabris*) *poggii* Bologna, 2009: 353.
Zonabris nigriplantis, Zanon, 1922: 128.
Zonabris schreibersi, Falzoni, 1923: 87.
Zonabris quadripunctata, Dodero, 1925: 11.
Mylabris sinuata, Gridelli, 1930: 170; Zavattari, 1934: 463; Koch, 1939: 252; Bologna, 1979: 151.
Zonabris quadripunctata, Boselli, 1930: 304.
Libycisca nigriplantis, Kuzin, 1954: 370.

Type locality. "Ain Mara" (Bologna, 2009). This locality (in Arabic Ayn Marrah) is in Cyrenaica, Libya.

Type specimens. Holotype male (MSNG), with the following labels: "R. U. Agrario [= Royal Agriculture Office], 7827, Ain Mara IV.1926 Geo C. Krüger" (white, printed); "*Zonabris 4 punctata* ssp. nov. *Gridellii*" (white, handwritten by M. Pic); "*Zonabris 4-punctata* ssp. *gridellii* nov. *Teste* M. Pic" (white, printed and handwritten by R. Poggi); "*sinuata* Illig. det. E. Gridelli" (white, printed and handwritten); "*Mylabris sinuata* Illig. det E. Gridelli" (white, printed and handwritten by R. Poggi); "Museo civico di Genova" (green, printed); "Holotypus *Mylabris* (*s.str.*) *poggii* n.sp. M. Bologna des. 2004" (red, printed and handwritten). The right metatarsi and male genitalia are glued on a distinct label; the distal aedeagal hook is slightly damaged.

Paratypes 2 males and 2 females (MSNG) and 1 male (MAB), with the same labels as the Holotype, but made by Pic and Gridelli, and with labels "7757" (MAB), "7829", "7826", "7832", "7833" (MSGN); "Paratypus *Mylabris* (*s.str.*) *poggii* n.sp. M. Bologna des. 2004". The specimen "7833" has an additional label "var. nob. *Krugeri*".

Paratype 1 female (MSNG): "Cirene [= Cyrene] 1928 Bolsi"; "*Mylabris sinuata* det. E. Gridelli" (white, printed and handwritten by R. Poggi); "Museo civico di Genova" (green, printed); "Paratypus *Mylabris* (*s.str.*)

poggii n.sp. M. Bologna des. 2004". Paratype 1 male (MSNG), with the same labels, but "VIII.1928, Anti leg." and "Paratypus *Mylabris* (*s.str.*) *poggii* n.sp. M. Bologna des. 2004".

Description. Body length: 11.5–17.9 mm; setae only black, but mixed golden and black on legs; antennomeres uniformly black, III ca. 1.5 times as long as IV, XI less than twice as long as wide; pronotum without fore transverse depression; elytral black pattern as in Fig. 22A, with two series of two spots inversely oblique, and an apical narrow semilunar fascia, extended laterally on both sides and forming a subrounded extension on the inner margin; mesosternum as Fig. 22B, posterior apex lighter; male gonoforceps relatively wide in lateral view (Fig. 22C); distal hook of aedeagus close to apex, and smaller than proximal one (Fig. 22C).

Taxonomic remarks. Gridelli (1930) was compared this species to *M. schreibersi* Reiche 1866, which also has a very narrow black apical border. However, the aedeagal hooks' structure, e.g. the position of distal hooks, is similar to other Maghrebian species, specifically *M. guerini* Chevrolat 1840 and *M. tricincta* Chevrolat 1840. Both these species have highly variable elytral patterns, including forms with four spots as in *M. poggii*, but with a wider black fascia at apex, gonoforceps slender and aedeagal hooks different in shape (Pardo Alcaide, 1954; Bologna, 1991a).

Distribution. E Libya (northern Cyrenaica).

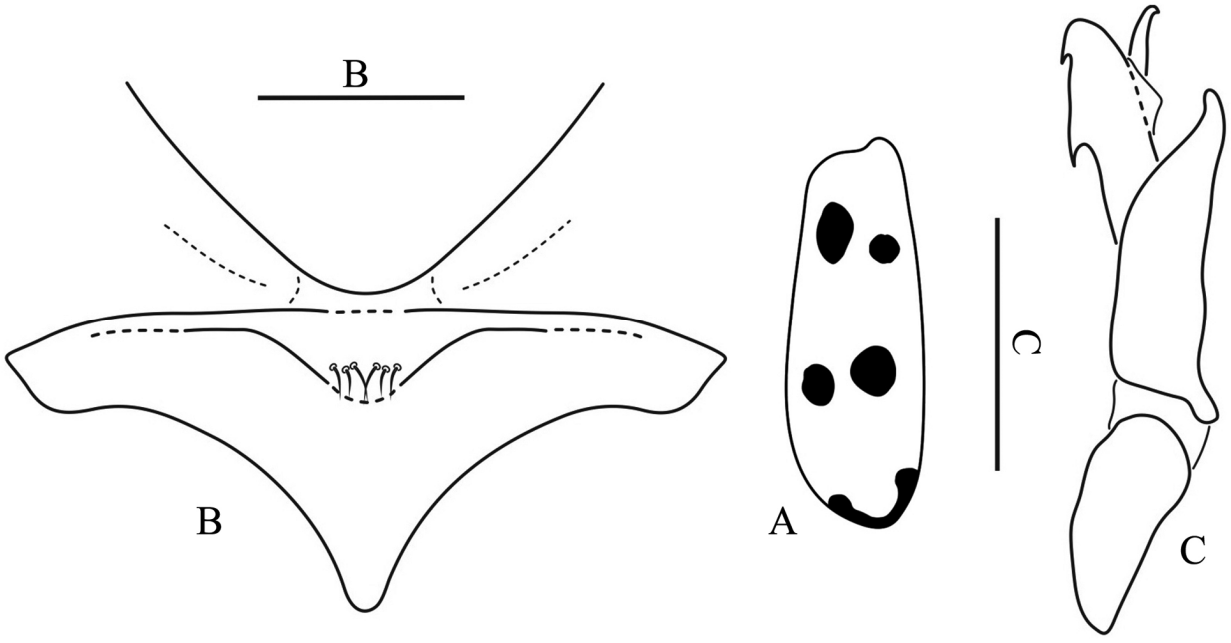

FIGURE 22. *Mylabris* (*M.*) *poggii* Bologna: A. elytral pattern; B. mesosternum; C. male genitalia, lateral view. Scale bar = 1 mm. (from Bologna, 2009).

***Mylabris* (*Mylabris*) *pseudoemiliae* Pan & Bologna sp. n.**
Figs. 1T, 23A–G

Type locality. "Iran, Zagros Mts., Fereidun Shar".

Type specimens. Holotype male (IRSNB) and 6 male and 1 female Paratypes with the following labels: "Holotypus (and Paratypus respectively) *Mylabris* (*Myl.*) *pseudoemiliae* n.sp. Z. Pan and M. Bologna det. 2013" (red, rectangular, printed and handwritten); "Esfahan, Zagros Mts., Fereidun Shar, 3000 m, N32°54.43'–E50°06.40', 15/17.6.2010" (5 IRSNB, 2 MAB).

Description. Male: body uniformly black, but elytra brown-ochre with the following black pattern (Fig. 23B): one fascia on fore third, not extended to the external margin, but to the scutellum along the inner suture; one middle transverse wide and slightly sinuate fascia, and one quite wide apical fascia sinuate anteriorly. Ventral and dorsal setation uniformly black, but ventral side of foretibiae and foretarsi with golden setae, forming a small pad under the pro- and mesotarsomeres; setae denser on head and pronotum, sparser on elytra, where they are erect on the basal third and recumbent on the remaining surface. Body length: 15.0–18.5 mm.

Head slightly longer than wide at temple level, width at eyes level and temple subequal; punctures relatively small, shallow and dense, surface among punctures shiny on vertex, wrinkled on frons; head capsule subrectangular, temple widely curved posteriorly and subequal in length to the longitudinal length of eye; frons flat, on center with one dark red spot, bilobed posteriorly; clypeus transverse, convex, with slightly rounded anterior and lateral margins, anteriorly depressed and smooth, fronto-clypeal suture clearly visible; labrum only slightly shorter and narrower than clypeus, anterior margin slightly emarginate, longitudinally slightly depressed in the middle; mandibles robust, almost straight at base, curved suddenly after the middle, slightly longer than clypeus and labrum together; maxillary palpomere II with long setae on the posterior side, last maxillary palpomere apically thickened and truncate at apex; antennae (Fig. 23A) relatively long, extending over the posterior margin of pronotum, antennomere I approximately twice as long as II, which is semi-globular; antennomere III elongate, slightly less than 1.5 times as long as IV, IV and V similar in length and width, VI similar in length to IV and V, but widened apically, VII–X similar in length but progressively more widened apically, X subcylindrical, last antennomere ca. twice as long as wide, elongate and narrowed in apical half, one side almost straight.

Pronotum almost as long as wide, convex, sides on basal half almost parallel, anteriorly widely curved; anteriorly not evidently depressed, but with a shallow transverse depression in the middle of base; posterior margin straight; punctures relatively wide, denser than on head, not distinctly confluent on anterior third, surface among punctures shiny; elytral black pattern as in Fig. 23B (see above); mesosternum longitudinally elevated in the middle, with a clearly modified anterior section ("scutum"), with a slightly depressed triangular area with dense and slightly long setae (Fig. 23C); mesepisterna depressed along the anterior margin, which consequently appears to be raised; legs black, pro- and mesotibial spurs pointed, similar in shape, both metatibial spurs stick-like; femora with mixed short and long setae, setae robust and more elongate on tibiae and tarsi; foretibiae ventrally with mixed golden and black short and dense setae; pro- and mesotarsomeres with ventral golden setae forming tarsal pads, those of mesotarsomeres smaller.

Posterior margin of sternite VIII deeply emarginated in the middle. Male genitalia as in Figs. 23D–G: in lateral view (Fig. 23E) the basal part of gonoforceps slender, apical lobe of gonoforceps very short, evidently shorter than 0.5 the total length of gonoforceps; gonoforceps fused ventrally in basal two-fifths (Fig. 23D); aedeagus (Fig. 23F) with two dorsal hooks both positioned very close to apex and with same inclination, distal hook small and straight, almost at apex, the proximal one longer and more curved; endophallic hook relatively large, subrectangularly inclined. The apodeme of the *spiculum gastrale* slender, with relatively wide lateral arms, as in Fig. 23G.

Female. Similar to male, but with relatively shorter antennae, setation on external side of protibiae and protarsomeres I–IV with mixed short and long setae, much longer than that on internal side, and the posterior margin of sternite VIII almost straight.

Etymology. The name of the new species refers to its great similarity with *M. emiliae*.

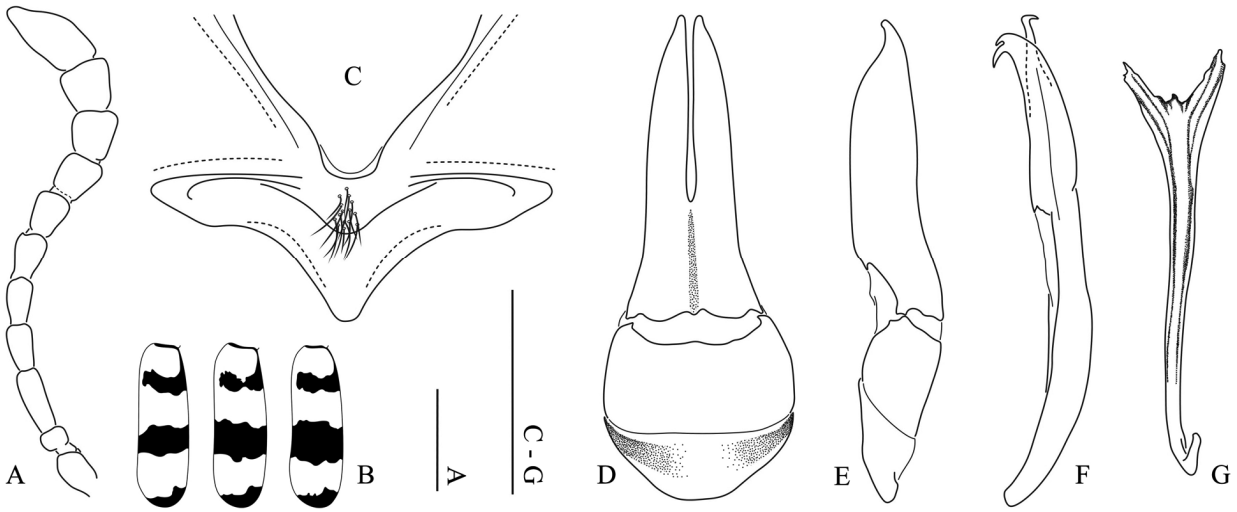

FIGURE 23. *Mylabris* (*M.*) *pseudoemiliae* Pan & Bologna **sp. n.**: A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Taxonomic remarks. This species is very close and similar to *M. emiliae*. It differs because of the shape of male gonoforceps: slender in both ventral and lateral view, the apical lobe shorter and slightly curved (Fig. 23D, E), and the aedeagus more slender and with distinct distal hook (Fig. 23F).

To date, only few specimens of both specis are known, and the variability of aedeagal characters cannot be tested. Moreover the distribution of these species seems vicariant, *M. emiliae* distributed in central and eastern Anatolia and the Caucasian area, and *M. pseudoemiliae* in the Iranian Zagros Mts. For these reasons we prefer to consider these two *Mylabris* as distinct species, while awaiting new available material and molecular research to support their taxonomic status.

Distribution. W Iran.

Mylabris (*Mylabris*) *quadripunctata* (Linnaeus, 1767)

Figs. 1U, 24A–G

Meloe quadripunctata Linnaeus, 1767: 680.
Mylabris decempunctata Fabricius, 1781: 331; 1787: 216; 1792: 89; 1801: 84; Olivier, 1795: 12; 1803: 308; Latreille, 1804: 369; 1807: 216; 1818: 128; Illiger, 1804: 173.
Meloe melanura Pallas, 1782: 86.
Mylabris quadripunctata, Fabricius, 1787: 217; 1792: 89; 1801: 84; Billberg, 1813: 27; Mulsant, 1857: 125; Reiche, 1866: 636; Marseul, 1870: 71; 1872: 132; Gemminger & Harold, 1870: 2141; Baudi di Selve, 1878a: 364; 1878b: 1162; Gorriz y Muñoz, 1882: 96; 1902: 182; Beauregard, 1890: 534; Sumakov, 1913: 304; 1915: 22; 1930: 34; Borchmann, 1917: 47; Mader, 1927: 858; Reichardt, 1934: 215, 229; Magistretti, 1943: 48; Mařan, 1944: 36; Pardo Alcaide, 1948: 494; García-París & Ruiz, 2005: 233–246.
Mylabris melanura, Petagna, 1787: 27.
Mylabris octopunctata Olivier, 1811: 95.
Mylabris adamsii Fischer von Waldheim, 1823: 224.
Mylabris fasciatopunctata Adams, in Fischer von Waldheim, 1823: 224.
Mylabris armeniaca Faldermann, 1837: 125; Marseul, 1870: 70.
Mylabris floralis var. *adamsii*, Dejean, 1837: 244.
Mylabris mutans var. *quadripunctata*, Gaubil, 1849: 230.
Mylabris hispanica Motschulsky, 1849: 132.
Mylabris husseini Redtenbacher, 1850: 49; Gemminger & Harold, 1870: 2138; Marseul, 1870: 53; 1872: 473; Baudi di Selve, 1878a: 376; 1878b: 1165; Beauregard, 1890: 529; Sumakov, 1930: 58; Borchmann, 1917: 38; Mader, 1927: 860; Bologna, 1986b: 30.
Mylabris maldinesi Chevrolat, 1865: 393.
Mylabris quadripunctata var. *adamsii*, Marseul, 1870: 71; 1872: 492; Beauregard, 1890: 534; Ganglbauer, 1905: 259; Borchmann, 1917: 48; Reichardt, 1934: 229.
Mylabris quadripunctata var. maldinesi, Marseul, 1870: 73; 1872: 492; Gemminger & Harold, 1870: 2141; Baudi di Selve, 1878b: 1163; Beaurgard, 1890: 534; Borchmann, 1917: 48.
Mylabris variabilis var. *armeniaca*, Marseul, 1872: 492; Gemminger & Harold, 1870: 2144; Beauregard, 1890: 539; Borchmann, 1917: 57; Reichardt, 1934: 229.
Mylabris quadripunctata var. *melanura*, Baudi di Selve, 1878b: 1163; Beauregard, 1890: 534.
Zonabris quadripunctata, Heyden, 1881a: 152; Dokhtouroff, 1889: 23; Escherich, 1899: 92; Rodriguez López Neyra, 1914: 467; Sainte-Claire Deville, 1937: 310.
Zonabris variabilis var. *armeniaca*, Heyden, 1881a: 152.
Zonabris quadripunctata var. *adamsii*, Heyden & Kraatz, 1883: 356.
Zonabris quadripunctata var. maldinesi, Heyden *et al*., 1883: 143.
Zonabris quadripunctata var. *melanura*, Heyden *et al.*, 1883: 143.
Zonabris armeniaca, Reitter, 1889: 120.
Mylabris quadripunctata var. *fasciatopunctata*, Beauregard, 1890: 534.
Mylabris quadripunctata var. hispanica, Beauregard, 1890: 534.
Mylabris quadripunctata var. *octopunctata*, Beauregard, 1890: 534.
Mylabris quadripunctata var. *tetraspilota* Wellman, 1910: 23; Borchmann, 1917: 48.
Mylabris quadripunctata var. *antefasciata* Sumakov, 1913: 304 Borchmann, 1917: 48.
Mylabris quadripunctata var. *vareillesi* Chobaut, 1914: 280.
Mylabris quadripunctata ab. *adamsii*, Mader, 1927: 858.
Mylabris quadripunctata ab. *armeniaca*, Mader, 1927: 858; Sumakov, 1930: 37.
Mylabris quadripunctata ab. maldinesi, Mader, 1927: 858; Sumakov, 1930: 37; Magistretti, 1943: 49.
Mylabris quadripunctata ab. *tetraspilota*, Mader, 1927: 858.

Mylabris quadripunctata ab. *chobautiana* Sumakov, 1930: 37.
Mylabris variabilis ab. *armeniaca*, Magistretti, 1943: 48.
Mylabris (*Mylabris*) *quadripunctata*, Pardo Alcaide, 1950: 75; Kuzin, 1953: 124; 1954: 354; Bologna, 1979: 151; Nikolaev & Kolov, 2005: 61; García-París *et al.*, 2006: 349; Serri *et al.*, 2012: 85.
Mylabris (*Mylabris*) *quadripunctata mesoasiatica* Kuzin, 1953: 124; Bologna, 1991a: 226; 2008: 397; Nikolaev & Kolov, 2005: 62.
Mylabris (*Sphenabris*) *husseini*, Kuzin, 1954: 362.
Mylabris (*Mylabris*) *quadripunctata* ab. a*damsii*, Kaszab, 1968b: 759.
Mylabris (*Mesopunctata*) *quadripunctata armeniaca*, Axentiev, 1985: 246.
Mylabris (*Mesopunctata*) *quadripunctata*, Sadykov, 1989: 26.
Mylabris (*Mylabris*) *quadripunctata quadripunctata*, Bologna, 1991a: 226; 2008: 397.
Mylabris rishwani Makhan, 2012: 1. **syn. nov.**

Type locality. "*Europa*" (Linnaeus, 1767).

Type material. Types are preserved at UUZM.

Description. Body length: 9–21 mm; setae uniformly black, but mixed golden and black on legs; head usually without frontal red spot (except most individuals from Italy, few from S France, Spain, and central Balkans); antennomeres uniformly black, III slightly more than 1.5 times as long as IV, XI evidently less than twice as long as wide (Fig. 24A); pronotum with a shallow but visible fore transverse depression, punctures small, relatively deep, never confluent; elytral black pattern very variable (Fig. 24B) (see below), basically with four spots (2:2) on basal third and middle, and one wide apical fascia; mesosternum as in Fig. 24C; gonoforceprs very wide in lateral view with apical lobe sub-elongate and slightly curved forward in lateral view (Fig. 24E), gonoforceps in ventral view fused in basal third (Fig. 24D), and apically clearly sloping in both lateral and ventral views (Figs. 24D, E); distal hook of aedeagus positioned almost at apex, clearly smaller than the proximal one, and differently inclined than the proximal one (Fig. 24F); apodeme of the *spiculum gastrale* and 10th sternum completely approached and without an intermediate membranous tissue (Fig. 24G).

Taxonomic remarks. Recently, Makhan (2012) described *Mylabris rishwani* from Iran. According to the photos of body and male genitalia, this species actually represents the phenotype of *M. quadripunctata* with the two middle spots forming a fascia, very common in Turkey, Caucasus, Iran and Central Asia. Consequently, we propose here the following taxonomic act: *Mylabris rishwani* Makhan, 2012 = *Mylabris quadripunctata* (Linnaeus, 1767) **n. syn**.

According to the previous literature, Bologna (2008) divided provisionally *M. quadripunctata* in four subspecies: the nominate one, *angustata* Soumakov, 1915, *mesosasiatica* Kuzin, 1953 and *restricta* Motschulsky, 1849. Actually, none of these subspecies is valid for the following reasons: (a) *M. q. angustata*: After the examination of the type (ZIN), *M. angustata* must be referred to the subgenus *Micrabris*. (b) *M. q. mesosasiatica*: After the examination of undreds of specimens from several countries from Central Asia, it represents the common form of *quadripunctata* (variously named in the literature), characterized by the elytral black fascia, widely spread from eastern Turkey to southwestern Mongolia. (c) *M. q. restricta*: According to García-París & Ruiz (2008) and García-París *et al*. (2010), *M. restricta* is distinct from *M. quadripunctata* and refers to the subgenus *Micrabris*; the same holds for *M. beauregardi* Gorriz y Muñoz, 1884, erroneously included by Bologna (2008) among the synonyms of *M. quadripunctata*, and which is a distinct *Mylabris* (*Micrabris*) species.

The intraspecific variation in the elytral pattern of this species is wide: Usually the populations from the Iberian Peninsula and southern France have narrower apical fascia than others; the populations from Near, Middle and Central Asia have wide apical fascia and middle spots fused to form a wide fascia. The variation of elytral black pattern is represented in Fig. 24B.

Distribution. From Portugal to S France and possibly W Liguria (Italy), S Italy, S Balkan Peninsula, Romania, Ukraina, Russia, from the southern European territories east to Siberia, Near East, Levant, Middle East, Central Asia (from Turkmenistan to Tadzhikistan), Afghanistan, W China (Xinjiang).

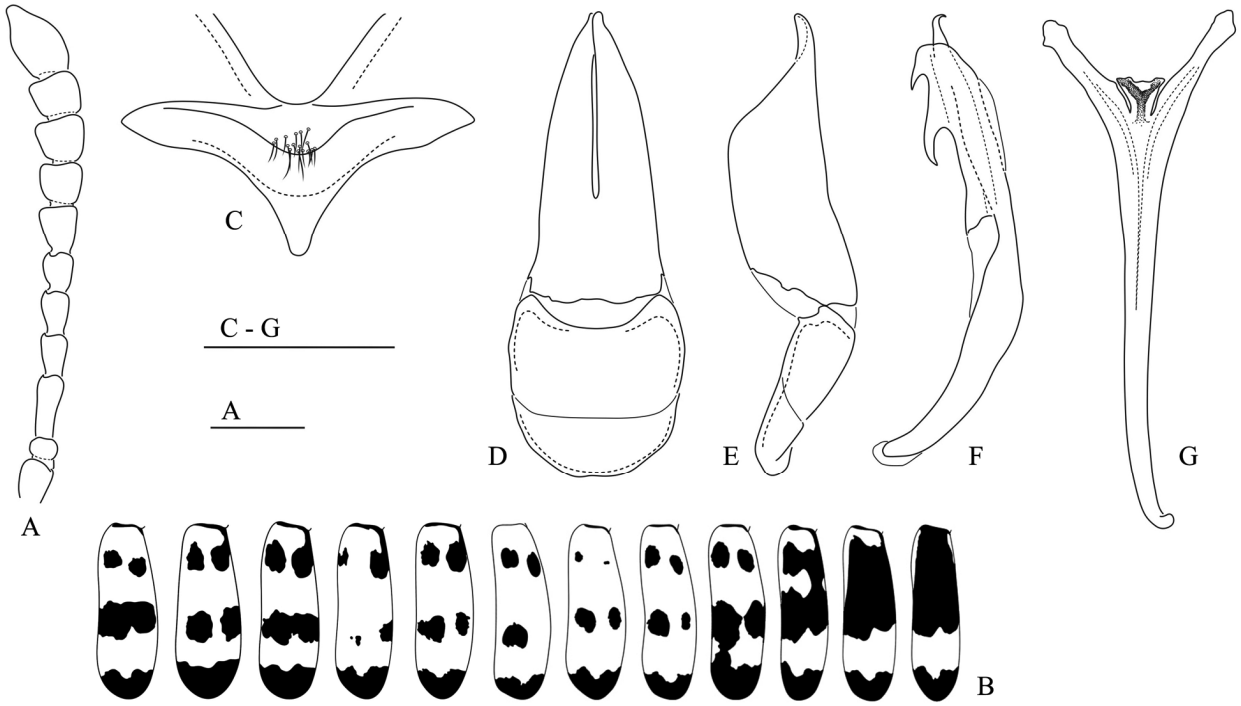

FIGURE 24. *Mylabris* (*M.*) *quadripunctata* (Linnaeus): A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Mylabris (*Mylabris*) *schreibersi* Reiche, 1866

Figs. 1V, 25A–G

Mylabris terminata Chevrolat, 1840: 276 *nomen praeoccupatum*; Reiche, 1860: 725.
Mylabris schreibersi Reiche, 1866: 636; Marseul, 1870: 74; 1872: 133; Gemminger & Harold, 1870: 2142; Baudi di Selve, 1878b: 1136; Beauregard, 1890: 535; Sumakov, 1915: 25; 1930: 40; Borchmann, 1917: 50; Mader, 1927: 858; Gridelli, 1930: 170; Porta, 1934: 40; Magistretti, 1943: 49; 1963: 318; Kocher, 1956: 53.
Zonabris schreibersi, Heyden, 1887b: 443; Bedel, 1892: 240; Escherich, 1899: 92; Ragusa, 1898: 216; Reitter, 1906: 448; Escalera, 1909: 246; 1914: 396.
Mylabris (*Mylabris*) *schreibersi*, Pardo Alcaide, 1950: 76; 1954b: 76; Bologna, 1991a: 230; 2008: 397; García-París & Ruiz, 2005: 232.
Mylabris schreibersi ab. *parumpunctata* Magistretti, 1943: 35.
Mylabris schreibersi ab. *unifasciata* Magistretti, 1943: 35.
Mylabris (*Eumylabris*) *schreibersi*, Kuzin, 1954: 356.
Mylabris schreibersi ab. *unifasciatella* Kaszab, 1958b: 190.

Type locality. "Alger, Bône, Oran" (Chevrolat, 1840). All these localities are positioned along the northern Algerian coasts. Actually, the name *M. schreibersi* was proposed by Reiche (1866) to substitute that of *M. terminata* Chervolat, 1840, preoccupied by the homonym species described by Illiger. Reiche (1866) recorded *M. schreibersi* from Sicily.

Type material. Types of both Chevrolat and Reiche are missing at MNHN. Being the definition of the species clear, according to the ICZN, we prefer do not designate a neotype.

Description. Body length: 10–20 mm; setae uniformly black, but mixed golden and black on legs; antennomeres uniformly black, III ca. 1.5 times as long as IV, XI ca. twice as long as wide (Fig. 25A); pronotum without fore transverse depression; elytra black pattern (Fig. 25B) with four (2:2) spots, apical black fascia very narrow and not extended laterally; mesosternum as in Fig. 25C; male gonoforceps relatively wide in lateral view (Fig. 25E), fused ventrally in basal third (Fig. 25D); distal hook of aedeagus slightly far from apex and similar in size to the proximal one (Fig. 25F).

Taxonomic remarks. The length of mesosternal apex is variable: It is slender in Sicilian populations and relatively short in the Moroccan and Algerian populations; in Tunisian populations, the length varies between the two conditions.

Distribution. N Morocco, N Algeria, N Tunisia, Sicily (Italy).

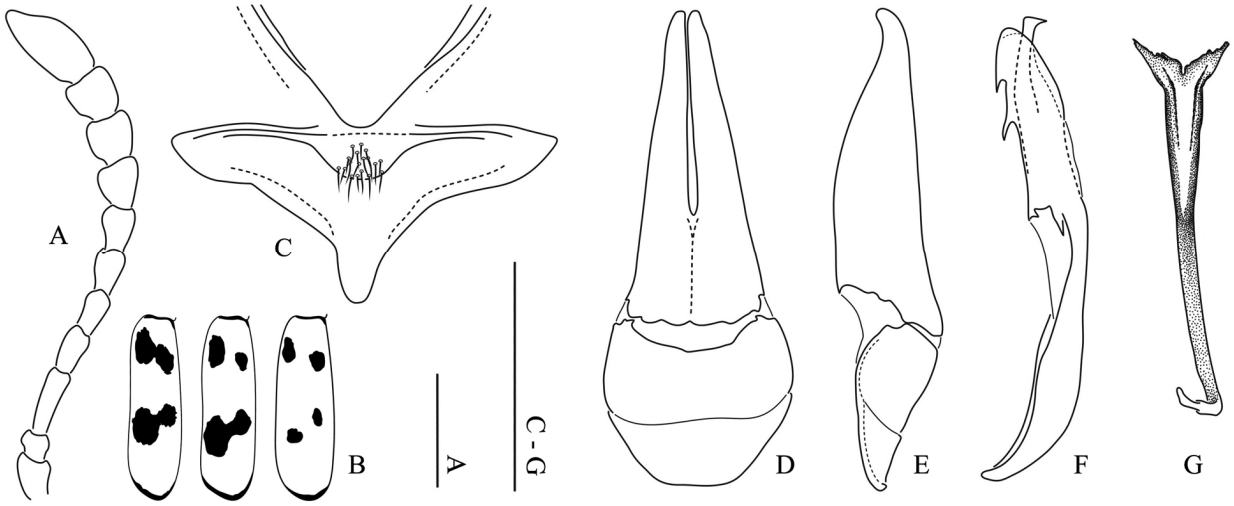

FIGURE 25. *Mylabris* (*M.*) *schreibersi* Reiche: A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Mylabris (*Mylabris*) *tauricola* Marseul, 1870

Figs. 1W, 26A–G

Mylabris tauricola Marseul, 1870: 73; 1872: 133; Gemminger & Harold, 1870: 2143; Baudi di Selve, 1878b: 1158; Beauregard, 1890: 537; Sumakov, 1915: 26; 1930: 41; Borchmann, 1917: 53; Mader, 1927: 858.
Zonabris tauricola, Escherich, 1899: 90.
Mylabris (*Micrabris*) *tauricola*, Kuzin, 1954: 352.
Mylabris (*Mylabris*) *tauricola*, Bologna, 2008: 397.

Type locality. "Syrie, Taurus". Taurus is a mountain range of southern Turkey (in Turkish Toros Dağlari), parallel to the Mediterranean Sea. This chain extends along a curve from Lake Eğirdir in the west to the upper reaches of the Euphrates and Tigris rivers in the east. Most entomological records from Taurus were published in C XIX and early C XX, and concern specimens collected in the central area of this mountain range, near the towns of Mersin and Adana. During the Ottoman Empire, until the First World War, that part of the Ottoman Empire was considered as "Syria" together with the Hatay province and most of the Levant, although in reality these mountains are in Turkey.

Type specimens. Lectotype male (MNHN), with the following labels: label with male genitalia glumed (white, rectangular, added by A. Pardo Alcaide); "77" (light blue, squared, printed); "*Mylabris tauricola* Ol., Taurus 1867" (yellow, round, handwritten by Marseul); "Museum de Paris, coll. De Marseul 2842-90" (white, rectangular, printed); "*Mylabris tauricola* Mars. Type" (white, rectangular, handwritten by S. de Marseul); "Pardo Alcaide vid. 1955" (white, rectangular, handwritten by A. Pardo Alcaide); "Museum Paris, coll. De Marseul, 1890" (white, rectangular, printed); "Lectotypus *Mylabris tauricola* Marseul, M. Bologna des. 1987" (red, rectangular, handwritten by M. A. Bologna); "*Mylabris* (*s.str.*) *tauricola* Marseul, M. Bologna det. 1987" (white, rectangular, handwritten by M. A. Bologna). This specimen has the right elytron damaged.

Two paralectotypes females (MNHN), with the following labels: "*Mylabris tauricola* Taurus Leder 67" (one "68") (yellow, rounded, handwritten); "Museum de Paris coll. De Marseul 1890" (white, rectangular, printed); "Paralectypus *Mylabris tauricola* Marseul, M. Bologna des. 1987" (red, rectangular, handwritten by M. A. Bologna); "*Mylabris* (*s.str.*) *tauricola* Marseul, M. Bologna det. 1987" (white, rectangular, handwritten by M. A. Bologna).

Description. Body length: 8.5–11 mm; setae yellow and black; antennomeres uniformly black, III ca. 1.5 times as long as IV, XI ca. twice as long as wide (Fig. 26A); pronotum narrow and clearly narrowed in front, with one shallow fore transverse depression; elytral black pattern (Fig. 26B) composed by an oval humeral spot, a black narrow margin at base extended along the scutellum and the basal part of the inner margin, two subrounded spots in the middle, the external one wider, and a wide apical fascia; mesosternal "scutum" narrow (Fig. 26C); male gonoforceps relatively wide in lateral view (Fig. 26E), fused ventrally in basal half (Fig. 26D); aedeagal distal hook positioned almost at apex, proximal hook relatively far from the distal one (Fig. 26F).

Taxonomic remarks. This *Mylabris*'s general shape resembles some species of the subgenus *Micrabris* (such as *M. pusilla*), because of the small size, the shiny integument, and the unique elytral pattern.

Distribution. Central-eastern and southern Turkey.

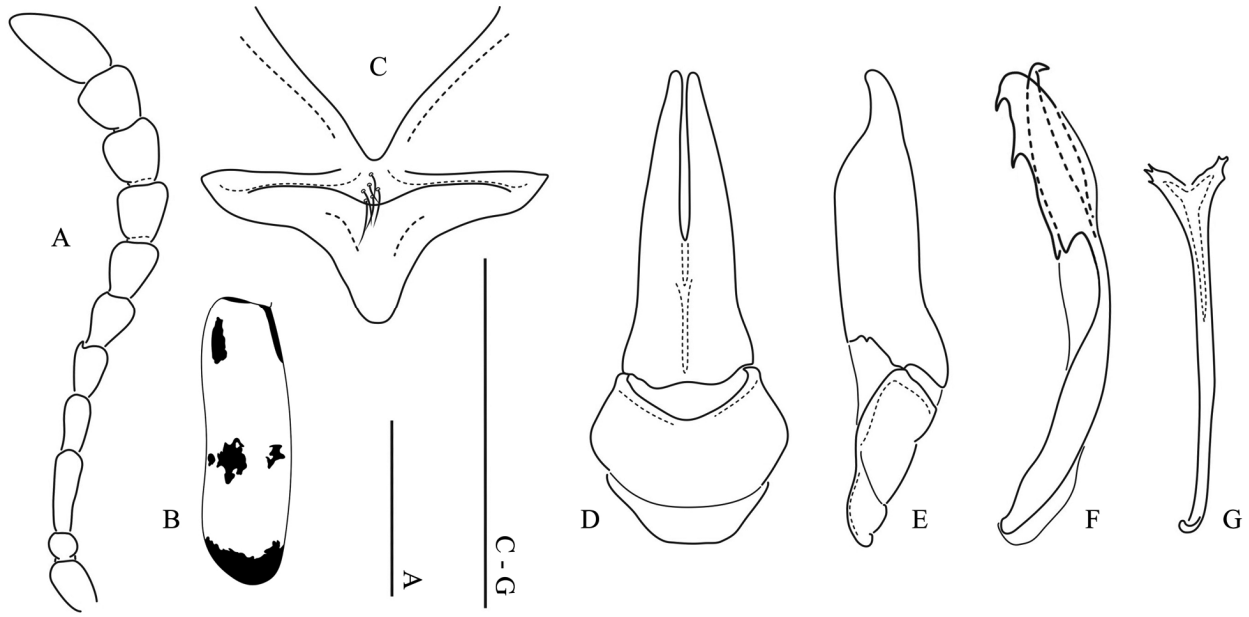

FIGURE 26. *Mylabris* (*M.*) *tauricola* Marseul: A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Mylabris (*Mylabris*) *tricincta* Chevrolat, 1840

Figs. 1X, 27A–G

Mylabris tricincta Chevrolat, 1840: 270; Reiche, 1866: 635; Kocher, 1956: 54.
Mylabris variabilis var. *tricincta*, Marseul, 1870: 69; 1872: 132; Gemminger & Harold, 1870: 2145; Baudi di Selve, 1878a: 363; 1878b: 1161; Beauregard, 1890: 539; Borchmann, 1917: 57.
Zonabris variabilis var. *tricincta*, Escalera, 1914: 398.
Zonabris tricincta, Escherich, 1899: 92; Escalera, 1909: 245.
Zonabris nigrosuturata Escalera, 1914: 397.
Mylabris quadripunctata tricincta, Sumakov, 1915: 24; 1930: 39; Mader, 1927: 858.
Mylabris variabilis ab. *nigrosuturata*, Mader, 1927: 857.
Zonabris brevevittata Pic, 1935a: 159; 1935b: 4.
Mylabris (*Mylabris*) *tricincta*, Pardo Alcaide, 1950: 74; 1954b: 76; Bologna, 2008: 397.
Mylabris (*Mylabris*) *tricincta nigrosuturata*, Pardo Alcaide, 1954b: 77.
Mylabris tricincta var. *nigrosuturata*, Kocher, 1956: 55.

Type locality. "... environs de Tanger, d'Oran et d'Alger ..." (Chevrolat, 1840).

Type material. Types of this species, like others described by Chevrolat (1840) (see above), are missing at MNHN.

Description. Body length: 8–21 mm; setae black, but mixed golden and black on legs; antennomeres uniformly black, III evidently more than 1.5 times as long as IV, XI less than twice as long as wide (Fig. 27A); pronotum with a shallow but visible fore transverse depression, pronotal punctures wide, deep, very contiguous or

confluent, especially on the fore third; elytral black pattern variable (Fig. 27B), usually with one fascia on basal third, one on the middle and an apical fascia wide; mesosternal suture more or less visible on its entire length (Fig. 27C); male gonoforceps slender in lateral view (Fig. 27E), fused ventrally in basal two-fifths (Fig. 27D); distal hook of aedeagus relatively far from apex and with same inclination of the proximal one, oblique to the aedeagal axis (Fig. 27F).

Taxonomic remarks. We discussed above (see *M. guerini*) the difficulty in identifying this species, the types being missing. For this reason we have adopted the Pardo Alcaide (1950, 1954b) definition of *M. tricincta*.

The Moroccan mountain populations of *M. tricincta* have smaller body length, slightly blue metallic reflexions, and sparser punctures on head and protonum. Pardo Alcaide (1954b) considered this morphotype as a subspecies: *Mylabris tricincta nigrosuturata*, described by Esclaera (1914) as a distinct species. Actually, we did not find discontinuity in character variation among the hundreds of examined Moroccan specimens, while in mountain populations we found mixed specimens with blue or regularly black integuments. Our preliminary molecular phylogenetic studies (Pan *et al*., unpublished) on specimens from throughout Morocco, including some of its mountain areas, produced no evidence of distinct clades. Consequently, we consider these morphotypes as a variation of *M. tricincta*.

Distribution. S Spain (?), Morocco, N Algeria.

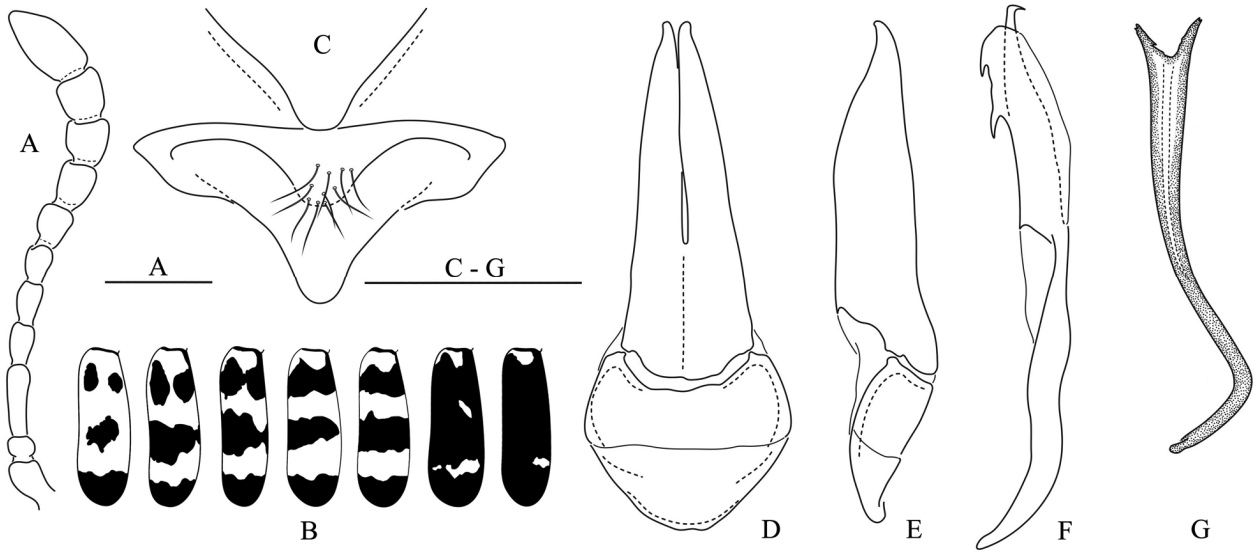

FIGURE 27. *Mylabris* (*M.*) *tricincta* Chevrolat: A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

Mylabris (*Mylabris*) *variabilis* (Pallas, 1782)

Figs. 1Y, 28A–G

Meloe variabilis Pallas, 1782: 81.

Mylabris variabilis, Olivier, 1795: 10; 1811: 95; Billberg, 1813: 25; Mulsant, 1857: 120; Reiche, 1866: 635; Marseul, 1870: 67; 1872: 491; Gemminger & Harold, 1870: 2144; Baudi di Selve, 1878a: 363; 1878b: 1158; Gorriz y Muñoz, 1882: 88; Beauregard, 1890: 539; Sumakov, 1915: 21; 1930: 31; Borchmann, 1917: 56; Mader, 1927: 857; Reichardt, 1934: 215, 229; Porta, 1934: 39; Kaszab, 1981: 160; Mirzayans, 1970: 35; Geisthardt, 1989: 93; García-París & Ruiz, 2005: 234.

Mylabris lacera Fischer, 1827: 6.

Mylabris mutans Guérin-Méneville, 1837: 554.

Mylabris hypocrita Mulsant, 1857: 125.

Mylabris similaris Mulsant, 1857: 125.

Mylabris variabilis var. *lacera*, Marseul, 1870: 70; Gemminger & Harold, 1870: 2144; Baudi di Selve, 1878a: 364; 1878b: 1159; Beauregard, 1890: 539; Borchmann, 1917: 57.

Mylabris variabilis var. *mutabilis*, Marseul, 1870: 70; Gemminger & Harold, 1870: 2144; Baudi di Selve, 1878a: 364; 1878b: 1160; Beauregard, 1890: 539; Borchmann, 1917: 57.

Mylabris variabilis var. *similaris*, Gemminger & Harold, 1870: 2145; Beauregard, 1890: 539; Borchmann, 1917: 57.

Mylabris variabilis var. *sturmi* Baudi di Selve, 1878a: 364; Borchmann, 1917: 57.
Mylabris variabilis var. *disrupta* Baudi di Selve, 1878b: 1160; Beauregard, 1890: 539; Bochmann, 1917: 57.
Zonabris variabilis, Heyden, 1881a: 152; Bedel, 1892: 240; Schilsky, 1892: 203; Escherich, 1899: 92; Rodriguez López Neyra, 1914: 466; Pic, 1935c: 7; Sainte-Claire Deville, 1937: 209.
Zonabris variabilis var. *mutabilis*, Reitter, 1906: 448.
Zonabris variabilis var. *disrupta*, Reitter, 1906: 448.
Zonabris variabilis var. *lacera*, Reitter, 1906: 448.
Zonabris erivanica Pic, 1901: 77.
Zonabris variabilis var. *sturmi*, Reitter, 1906: 448.
Mylabris variabilis ab. *disrupta*, Mader, 1927: 857.
Mylabris variabilis var. *erivanica*, Mader, 1927: 857.
Mylabris variabilis ab. *lacera*, Mader, 1927: 857.
Mylabris variabilis ab. *mutabilis*, Mader, 1927: 857.
Mylabris variabilis ab. *similaris*, Mader, 1927: 857.
Mylabris variabilis ab. *sturmi*, Mader, 1927: 857.
Mylabris (*Zonabris*) *variabilis*, Kantardjièva, 1929: 37.
Zonabris variabilis ab. *mariei* Pic, 1939: 22.
Mylabris variabilis ab. *guerini* Magistretti, 1943: 34 (nec Chevrolat, 1840).
Mylabris variabilis ab. *leonii* Magistretti, 1943: 35.
Mylabris (*Mylabris*) *variabilis*, Pardo Alcaide, 1950: 76; Kuzin, 1953: 123; 1954: 354; Kaszab, 1973: 280; Bologna, 1991a: 218; 1991b: 53; 1994: 44; 2008: 398; Valladares & Salgado, 1983: 86; Nikolaev & Kolov, 2005: 60; García-París *et al.*, 2006: 349; Serri *et al.*, 2012: 85.
Mylabris variabilis ab. *medioluteoabrupta* Kaszab, 1956a: 151.
Mylabris variabilis ab. *medioexterneconjuncta* Kaszab, 1956a: 152.
Mylabris variabilis ab. *apicenigroconjuncta* Kaszab, 1956a: 152.
Mylabris variabilis ab. *medioluteobipunctata* Kaszab, 1956a: 152.
Mylabris variabilis ab. *medioluteotripunctata* Kaszab, 1956a: 153.
Mylabris variabilis ab. *italiana* Kaszab, 1958b: 190.
Mylabris variabilis lacera, Modarres Awal, 1997: 182.

Type locality. "... *australibus Russiae atque totius Sibiriae … rarius in Europa occidentaliore …* " (Pallas, 1782).

Type material. The Pallas' collection is probably missing and consequently we did not examine types.

Description. Body length: 8–20 mm; setae uniformly black, but mixed golden and black on legs; antennommeres black, rarely partially dark reddish, III ca. 1.5 times as long as IV, apical antennomeres clearly widened, XI less than twice as long as wide (Fig. 28A); pronotum without fore transverse depression; elytral black pattern very variable (Fig. 28B), if the basal series composed by a fascia, it always extends to the base along the suture, if it fragmented in spots, the external spot wider or subequal to the inner one, the apical fascia wide; mesosternal "scutum" sub-triangularly shaped (Fig. 28C); gonoforceps in lateral view only slightly curved before the apical lobe (Fig. 28E), fused ventrally in basal third (Fig. 28D); distal hook of aedeagus positioned almost at apex, proximal hook close to the distal one (Fig. 28F).

Taxonomic remarks. This species shows a great variability of elytral pattern (Fig. 28B), this including large variation of fore and middle black spots and fasciae. In particular, the Sicilian populations are phenetically well distinct because of the middle fascia narrower and clearly sinuous. The variation of elytral black pattern is represented in Fig. 28B.

Distribution. Southern Europe (from the Iberian Peninsula to southern Russia), Caucaus and Transcaucasia, Near East and northern Levant, Middle East and Central Asia (from Iran and S Turkmenistan to central Kazakhstan and N Afghanistan), West and East Siberia. Recorded from W China erroneously (see Appendix for details).

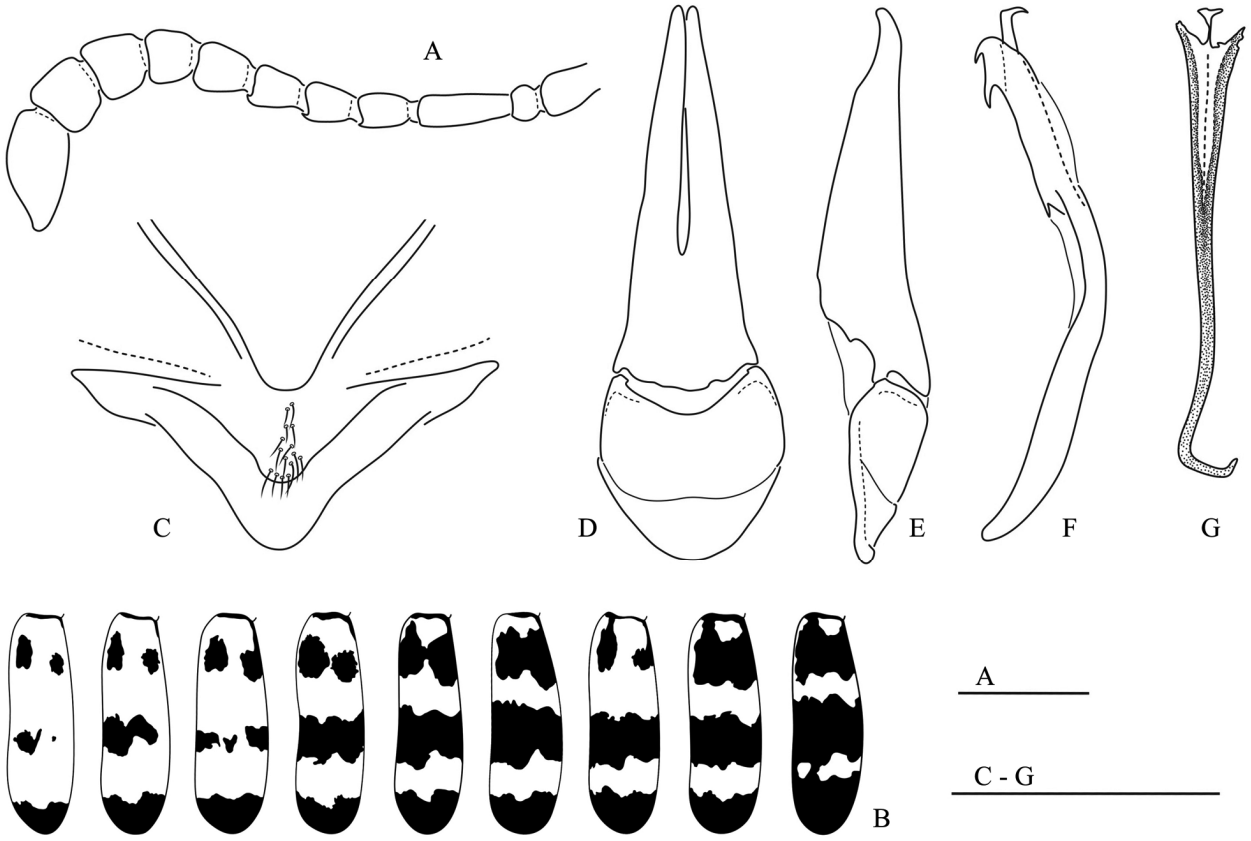

FIGURE 28. *Mylabris* (*M.*) *variabilis* (Pallas): A. antenna; B. elytral pattern; C. mesosternum; D. tegmen, ventral view; E. tegmen, lateral view; F. aedeagus, lateral view; G. *spiculum gastrale*, dorsal view. Scale bar = 1 mm.

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APPENDIX

List of localities from literature and Museum collections (see Material and Methods). Records are listed in alphabetic order; localities are ordered from W to E, N to S, and divided according to administrative districts.

Mylabris alpicola

Iran: Elburs Mts. (MAB); Avaj, N 35 33 50 – E 40 07 34 (CC).

Mylabris amorii

Cited generically from the Iberian Peninsula (Sumakov, 1915; Pardo Alcaide, 1950; Kuzin, 1954) or only its southern portion (Pardo Alcaide, 1950).

Portugal: Portugal (Baudi di Selve, 1878b); Faro, Mertola (IRSNB); Béja, Sagres (IRSNB).

Spain: Spain (Marseul, 1870, 1872; Baudi di Selve, 1878b; Heyden *et al*., 1883; Reitter, 1906; Sumakov, 1915; Borchmann, 1917; Mader, 1927); Andalucia (Gemminger & Harold, 1870; Marseul, 1870, 1872; Beauregard, 1890; Reitter, 1906; Borchmann, 1917); Sierra Morena (Martínez Sáez, 1883, see García-París & Ruiz, 2005); Lugo, Castroverde (IRSNB); Granada, Guadix (MNCN); Granada, Puebla de D. Fadrigue (MAB); Cordoba (Marseul, 1870; Górriz y Muñoz, 1882; Rodriguez López Neyra, 1914; De la Fuente, 1933; Torres Sala, 1962; Pérez-Moreno *et al.*, 2003); Cordoba, Inmediaciones del ex convento Scala Coeli (Amor Mayor, 1860, see García-París & Ruiz, 2005); Cordoba, Desierto de Nuestra Señora de Belén (Amor Mayor, 1860, see García-París & Ruiz, 2005); Cordoba, Sierra de Córdoba (Gorriz y Muñoz, 1882); Huelva, La Rábida (Medina, 1895, see García-París & Ruiz, 2005); Huelva (De la Fuente, 1933); Albacete, Sierra Segura (MNCN); Albacete, Ventas de Alcolea (Amor Mayor, 1860, see García-París & Ruiz, 2005); Albacete, Horna (Pérez-Moreno *et al*., 2003); Alicante, La Sagra (MNCN); Bejar (Champion, 1903); La Rioja, Santo Domingo (IRSNB); Castilla (Reitter, 1906); Ciudad Real (De la Fuente, 1933); Madrid (Sumakov, 1930; De la Fuente, 1933; García-París *et al*., 2006); Madrid, Villa de Posadas (Amor Mayor, 1860, see García-París & Ruiz, 2005); Cuenca (Escherich, 1891; Rodriguez López Neyra, 1914; Sumakov, 1930; De la Fuente, 1933; García-París & Ruiz, 2005); Cuenca, Canizares (MNCN); Cuenca, Santa Cruz de Moya (FSAG); La Rioja, Santo Domingo, Los Lagares (Graells, 1858; García-París & Ruiz, 2005); Valencia, Enguera-Ayora (MAB); Valencia, Navalon de Arriba (FSAG); Valencia, Aras de Alpuente (MAB; FSAG); Barcelona, Mataró (Salvañá Comas, 1870, see García-París & Ruiz, 2005; Rodriguez López Neyra, 1914; García-París & Ruiz, 2005). Spanish localities not identified: Yesta (MNCN); La Arhizafa (Amor Mayor, 1860, see García-París & Ruiz, 2005).

***Mylabris apiceguttata* ***

Iran: Kerman, Birjand (HMIM; MAB).

Mylabris apicenigra

Turkey: Anatolia (Sumakov, 1915; Mader, 1927); Tunceli (Özbek & Szaloki, 1998); Tunceli, Pülümür geç. N slope, GPS123 N39.53109 E39.90332 (MABa); Tunceli, Ovacik (Kaszab, 1968a); Konya, Ereğli (MAB; ZMHB); Konya, Gaybi nr. Ereğli (Kaszab, 1968a); Içel, Çamliyayla (CMAL; MAB); Hatay, Hassa, Akbèz (MNHN); Malatya (ZMHB); Malatya,

Resadiye geç. (CS); Bingöl (Özbek & Szaloki, 1998); Bingöl, Kuruca (Kaszab, 1968a); Muş, Buğlan geç. (CS); Van, btw Gevas and Tatvan (MAB); Urfa, 10 km W Urfa (MAB); Hakkari, Kolbaşi (CA; MAB).

Syria: Alep (MAB).

Iran: Iran (Sumakov, 1915); Luristan (Sumakov, 1930; Kuzin, 1954; Özbek & Szaloki, 1998); Tehran (Mirzayans, 1970; Morrades Awal, 1997; Fekrat & Morrades Awal, 2012); Teheran, Alborz (Mirzayans, 1970); Teheran, Karaj, Arangeh (HMIM); Theran, Pass N of Gachsar (CA); Teheran, Fasham, Ahār (HMIM); Teheran, Tāleghān, Kalānak (HMIM); Teheran, Firozkuh (HMIM); Teheran, Zayegan (MAB); Isfahan (Mirzayans, 1970; Morrades Awal, 1997; Fekrat & Morrades Awal, 2012); Khorasan (Mirzayans, 1970); Mashhad, Torghabeh (Fekrat & Morrades Awal, 2012); Birjand, Ferdows (MUM); Birjand, Nehbandan (Fekrat & Morrades Awal, 2012); Fars (Mirzayans, 1970; Fekrat & Morrades Awal, 2012); Fars, Descht-e-Arjan (MAB); Fars, illegible (CA).

Turkmenistan: Recorded uncertainly from "Turkestan" (Sumakov, 1915); Pereval Gaudan (Reichardt, 1934).

***Mylabris barezensis* ***

Iran: Kerman, Dehbakri, 29.0539°N–57.9131°E, (Serri *et al*., 2012; HMIM; MAB); 1 Kerman, Kuh-e-Jebel Barez, Sirjan, Balvard eoj (CK).

***Mylabris batnensis* ***

Morocco: Agadir, Ouarzazate (CL; CLE); Tafilalet (Kocher, 1956); Alnif (Kocher & Reymond, 1954; Kocher, 1956); Tata (Kocher & Reymond, 1954; Kocher, 1956); Figuig, Djebel Grouz (MAB; SMNS); Skoura env. on road P32, 31,08830°N–6,46682°W (MAB; MABa); Rich env. N, on P21, 32,33881N–4,54440W (MAB); Moroccan Sahara (Pardo Alcaide, 1954b).

Algeria: Algeria (Beauregard, 1890; Sumakov, 1915; Borchmann, 1917; Mader, 1927; Kuzin, 1954); Batna (Marseul, 1870; Gemminger & Harold, 1870) Batna, Lambèse (IRSNB; MAB); Biskra (Baudi di Selve, 1878b; Sumakov, 1930; IAA; IRSNB; MAB; MCZR; MRSN); Ain Sefra, 29 km S (MAB).

Mylabris cernyi

Turkey: Çanakkale, 10 km S Çanakkale (MAB); Çanakkale, Truva (MAB); Antalya, Cirali (MAB); Antalya (MAB); Antalya, Manavgat (MAB); Içel, Sertavul geç., N36.81401°–E33.32409° (MAB: this specimen is probably one hybrid with *M. quadripunctata*); Içel, env. Mut (CA; MAB); Içel, Çamliyayla-Gülek, N37.15750°–E34.77396° (MAB); Adana, Hamidia nr. Pozanti (CC; MAB); Adana, 15 km W Bahce, N37.16694°–E36.43947° (MAB); Adana, Amanus Mts., Yarpuz (MAB); Adana, Nurdağı geç. (MSNM); Antakya, Topboğazi (MAB); Adiyaman, Gölbasi env. (MAB).

Lebanon: Chouf, Ain Zhalta (MAB).

Israel-Palestine: Mevo Shilo (MUH); Nahariya (CP); Kfar Shmu'el (MAB); Jerusalem, Mishub Adummim (MAB).

Jordan: Jarash, Burma env., Al Huna (CC; MAB); Al Karak, Sarfa env. (CC; MAB).

Pakistan: Gilgit-Baltistan, Dassu (CC; MAB). This locality is very doubtful and need to confirm, even if the validity of record was confirmed by the collector.

Mylabris ciliciensis

Turkey: Anatolia (Sumakov, 1915; Mader, 1927; Kuzin, 1954); Sivas, Iokun, rd Sivas to Usak (MABa); Muğla, 6 km E Karakuyu Köyü (CA); Niğde (Özbek & Szaloki, 1998); Uşak, 10 km NW Sivaslı (CA; MAB); Konya, Gaybi nr. Ereğli (Kaszab, 1968a); Toros Dağlari, Alihoca (Kaszab, 1968a; HNHM); Toros Dağlari (Borchmann, 1917); Içel, Gülek (HNHM); Içel, Güuzeloluk (CS); Adana, Karatepe (MAB; MCNV); Adana, Amanus Mts, Yarpuz (MAB); Kahramanmaraş (HNHM); Diyarbakır (Özbek & Szaloki, 1998); Dyarbakır, Araş (Bologna, 1979; MAB). Turkish localities not identified: Tachakit valley (Sumakov, 1913, 1930).

Mylabris concolor

Recorded generically from Trancaucasia (Sumakov, 1915, 1930; Kuzin, 1954; Bologna, 1979) or Caucasus (Reichardt, 1934; Iablokoff-Khnzorian, 1983)

Armenia: Sumakov (1930).

Turkey: Anatolia (Marseul, 1870, 1872; Beauregard, 1890; Sumakov, 1915; Borchmann, 1917; Mader, 1927; Reichardt, 1934; Kuzin, 1954; Iablokoff-Khnzorian, 1983); Giresun, Şebinkarahisar (BMNH); Ankara, Elma-Dagh (Sumakov, 1930); Konya, Ereğli (Özbek & Szaloki, 1998); Tunceli, Pülümür geç. (MAB); Elazig (Özbek & Szaloki, 1998); Elazig, Gözeli (Bologna, 1979; MAB); Gaziantep, Halfeti, Euphrates River (CK); Gaziantep, 10 km E Gaziantep (MAB); Mardin, Mardin Hop geç. (MAB).

Syria: Syria (Gemminger & Harold, 1870). Probably this record refers to south-eastern Turkey.

Iran: Iran (Bologna, 1979; Iablokoff-Khnzorian, 1983); Kordestan, 25 km S Saqqez (MSNG); Teheran (Morrades Awal, 1997); Bojnurd, Kopet Dag (Kuzin, 1954).

Turkmenistan: Turkmenistan (Iablokoff-Khnzorian, 1983); Transcaspia (Bologna, 1979); Gaudan (Sumakov, 1930; Reichardt, 1934), Missune (Sumakov, 1930; Reichardt, 1934).

Mylabris desertica

Saudi Arabia: Ha'il, Ghazala (Bologna & Turco, 2007; BMNH).

Mylabris emiliae

Recorded generically from Caucasus (Reitter, 1906; Sumakov, 1915; Borchmann, 1917; Özbek & Szaloki, 1998; MAB; MNHN; NHMTR).

Armenia: Yerevan (NHMTR).

Turkey: Anatolia (Sumakov, 1915; Borchmann, 1917; Mader, 1927; Özbek & Szaloki, 1998); Ankara (Escherich, 1899; NHMTR); Konya, Ereğli (MAB; ZMHB); Karaman, Karadja dağ (ZMHB); Erzurum (Özbek & Szaloki, 1998; MAB).

Syria: Syria (Özbek & Szaloki, 1998; IRSNB). Possibly these records should refer to southeastern Turkey.

Mylabris guerini

Recorded erroneously from Sicily (Bertolini, 1904; Messina, Portella dell'Arena: Vitale, 1905; Ragusa: Gridelli, 1960) and Lampedusa Island (Ragusa, 1898), but these records actually refer to *M. variabilis* (see Bologna, 1991a). Heyden (1890) cited it from Tripolis (Libya), but this record needs confirmation (see Bologna, 2009). Erroneously recorded from Iran by Mirzayans (1970), but this record refers to *M. apiceguttata*.

Morocco (and Spanish Moroccan territories): Smir (IRSNB); (Spain) Ceuta env. (MSNM); Rif, Bab Taza (MAB); (Spain) Melilla (MCZR); (Spain) Melilla, Mxmoart (MCZR); (Spain) Melilla and surrounding area (Kocher, 1956); northeastern Morocco (Bologna, 1991a); middle Moulouya valley (Kocher, 1956).

Algeria: Algeria (Chevrolat, 1840; Beauregard, 1890; Sumakov, 1915; Borchmann, 1917; Mader, 1927; BMNH); northern Algeria in the plateaux region (Bologna, 1991a); Tlemcen (IRSNB); Sebdou (IRSNB); Saïda (MAB); Saïda, 20 km N Saïda, Sidi Amar (MAB); Frenda (IRSNB); Mostaganem, Khadra, 20 km E Picard (MCZR); Miliana, Theniet El Had (MSNV); Médea, env. Beni Slimane (Souk El Arb) (MAB); Chrea (IRSNB); SW Kasr El Boukhari (BMNH); Tizi Ouzou, Ej Jemaa (Ain El Hammam) (MAB); Tizi Ouzou, Yakouren (IRSNB; MAB); Tizi Ouzou, Yakouren, Jebel Dayrem (IRSNB, MAB); Tizi Ouzou, Djurdjura, Tikjda (MAB; MSNV); Sétif, Djebel Babor (MSNV); Sétif, Djemila env. (MAB); Sétif, Amoucha (MAB); W of Bouira, Taourirt (MZUR); Bouira, El Esnam (MAB); Bordj bou Arreridj, btw. Mchedallah and Bordj bou Arreridj (MAB); Bordj bou Arreridj, El Achir (MAB); Kabylie (IRSNB); Batna, 10 km N Batna (MAB); Batna, Col de Telmet (MAB); Batna, Telmet (IRSNB); Batna, Touffana env. (MAB); Batna, Djebel Aurès (IRSNB; MSNV); Batna, Ain Touta (IRSNB); Batna, El Kantara (IRSNB; MSNV); Batna, Lambèse (IRSNB); Biskra (MCNV); Béjaja, Oued Marsa (IRSNB); Skikda, Ben Azouz (MSNV); Annaba (Gemminger & Harold, 1870); Annaba, Drean (MAB); Tebessa, 15 km NW Bou Chebka (MAB); El Kala (IRSNB). Recorded also from Béchar, Beni Ounif (SMNS), but this Saharan record needs to confirm.

Tunisia: Tunisia, south to Gafsa (Bologna, 1991a); Ain Draham (CS); Ain-Draham, Jendouba (CMAL; CS); Ain Draham, Djebel Bou Goutrena (MAB); Tunis (Heyden, 1890); Le Kef, Sakiet Sidi Youssef, 8-10 Km NE, rd to Touiref (CA); Siliana, Gaâfour, 15 Km S, rd to Siliana (CA); Siliana, 20 km SW El Fahs, Mt. Mansour, rd, to Siliana (CA); Siliana, Bou Saadia (MAB); Makhtar (CMAL); Bizerte, Cap Serrat, 3 km S, rd to Sejenane (CA); Kasserine, Haidra (MAB); Kasserine, Thala, Djebel Moreno (MAB); Kasserine, Sbeitla env. (MAB).

Mylabris kodymi

Greece (Crete Island): Crete (Mařan, 1944; Kaszab, 1967; Bologna, 1986; Bologna & Marangoni, 1990); Chania, Laki, Omalos (MAB); Palaechora (ZMHB); Mt. Lefka, Omalos plain (CSE); Sfakia (CA); Rethymnon, Sèlia, Plakias (MAB); Rethymnon, Moni Preveli, Letargia (MAB); Krousonas, Ep. Malevisin (ZMHB); 5 km S Agia Varvara (MABa); southern Crete, Agia Galini (MAB); Phaestos (MAB; MCNV); Phaestos, rd to. Agia Triada (MAB; MABa); rd Neapoli-Tzermiado nr. Exo Potami (CSE); Ghazi (MAB); Lassithi (CS); Sitia (MAB; ZMHB); Lassithi, Agios Nikolaos env. (IRSNB). See also *M. quadripunctata* and *M. variabilis*.

Mylabris madani

Morocco: Morocco (Mader, 1927; Cros, 1939; Kuzin, 1954; CK); Morocco central and south-west from Oued until Beht Under (Taroudant, loc. Cl - Tiznit) makes up mountain 1500 m (Azrou) (Kocher, 1956); 30 Km W Guercif on rd P1, 34,23656°N–3,69266°W (MABa); Meknès, Khenifra, (MAB; MSNV); Meknès, Azrou (MSNV); Meknès, M'rirt (MAB); Rabat, Ain El Auda (IRSNB); Beni Mellal, Fkih Ben Salah, Oued Oum er Rbia (MAB); Beni-Mellal, Zaouia-Temga env. (MAB); Marrakech (Borchmann, 1917; Sumakov, 1930; MAB; MSNV); Marrakech, 30 km N (MAB); Marrakech, 50 km E Marrakech, Taferiate (MAB); Marrakech, ca. 50 km E Marrakech, on rd P31, 31,54439°N–7,53240°W (MAB); Marrakech, 50 km N (MAB); Marrakesch, Haut Atlas, N31.71672 W6.99672 (MABa); Marrakech, Asni env. on rd S501, 31,22353°N–8,02949°W (MAB; MABa); Morocco, N31°39'16.94" E7°15'40.55" (MABa); Morocco, N31°46'48.59" E007°01'28.12" (MABa); Morocco, N31°59'55" E006°44'09" (MABa); Agadir, Argana (CK); Agadir, rd Argana-Tanaute (CA); Taroudant, Aoulouz (MAB); Tarudant, Ait-Agia (Sumakov, 1930).

Mylabris madoni

Cyprus: Cyprus (Sumakov, 1915, Borchmann, 1917; Mader, 1927; Sumakov, 1930; Kuzin, 1954; HNHM; MAB; MNHN); Limassol (HNHM; MSNG); Limassol, Konmklia (CCAS; MAB); Limassol, Mouttagiaka (CK); Stavrouni (HNHM); Nicosia (MNHN); Larnaka (NMPC).

Mylabris mediorientalis

Israel-Palestine: Kurnuba (MUH); Maalah Haraumim (MUH); Aloon, 31°49.308'N–35°21.195'E (MABa); Es Salt 19 km NW of Nablus (MAB); Yericho (MUH); Mizpe Yeriho (CA; MAB; TAU); Jerusalem (MAB; MNHN; SMNS); Jerusalem, Mishub Adummim (MAB; MZUR); Tel Jerusalem (CP); Lehavim (MUH); Nihal Yelim (MUH); Lahav (MABa); North Negev, Dvira (CA); Arad (MUH); Sede Boqer (MUH); Yerucham Lake (MUH).

Jordan: Irbid, Zarga Riv. valley (CC; MAB); Wadi Zarqa, Ataruz (MAB); Zarqa Riv., Gharisa (MAB); Balqa, Al Karamah (MSNG); Balqa, Wadi i-Kafrain (CSC); Suwailih 18 km N (MAB); Wadi Kafrein, 5 km SW Wair (MAB); Es Salt 19 km NW of Nablus (MAB); Wadi Shueib (MAB); Jarash, Burma, Al Huna (MAB); Gisr Abdullah 5 km E (CSC); Mt. Nebo, N31°45'–E35°44' (CA; CSE; MAB).

Iraq: Mosul (ZMHB); Assur (ZMHB).

Iran: Mehran (HMIM); Mehran, Javi (MAB, HMIM); Mazandaran, Amol, Ramsar, Bheshahr (MAB).

Mylabris olivieri

Recorded erroneously from Sicily by Baudi di Selve (1878b), Ragusa (1898) and Sumakov (1930) (see Bologna, 1991a), and from Tajikistan (Özbek & Szloki, 1998). Recorded generically from eastern Russia and Siberia by Marseul (1870; 1872), Borchmann (1917), Mader (1927), and Sumakov (1930); these citations probably refer to Central Asian regions (see also Kuzin, 1953, 1954; Pripisnova, 1987; Özbek & Szloki, 1998; Kolov, 2003). Cited generically from Balkans (Bologna, 1979; Kolov, 2003; Nicolaev & Kolov, 2005) and Transcaucasia (Ganglbauer, 1905; Kuzin, 1954; Kaszab, 1968b; Bologna, 1979, 1991a; Özbek & Szloki, 1998; Kolov, 2003; Nicolaev & Kolov, 2005).

Macedonia: Macedonia (Bologna, 1991a); Skopje, Vardar valley (MAB; ZSM); Gevgelija (MFNB).

Greece: Greece (Kaszab, 1967, 1968b; Bologna, 1986, 1991a); W Greece (Bologna, 1986); Ionian islands (Bologna, 1986); Ioannina (Bologna, 1994; CF); Trikala, Asprokklisia (Bologna, 1994; CMI); Trikala, rd Kalambaka-Kozani, 1 km Agios Dimitros 34 S 545120 4403649 (MAB); Trikala, Hani env., 39°47'N–21°31'E (MAB); Thessalia (Bologna, 1986); Pieria, Olympus Mt., Asprokklisia (MAB); Parnassos Mt. (Bologna, 1994; NHMW); Livadia, Parnassos Mt., 4 km NW Arahova, 34 S 635409 4263317 (MABa).

Romania: Romania (Bologna, 1991a).

Ukraina: Ukraina (Bologna, 1991a; Kolov, 2003; Nicolaev & Kolov, 2005); Crimea (Bologna, 1991a); Odessa (Sumakov, 1930).

Russia: southern Russia (Fischer, 1827; Reiche, 1866; Marseul, 1870, 1872; Heyden *et al.*, 1883; Beauregard, 1890; Ganglbauer, 1905; Borchmann, 1917; Roepke, 1917; Mader, 1927; Kuzin, 1953, 1954; Kaszab, 1968b; Bologna, 1979, 1991a; Pripisnova, 1987; Özbek & Szloki, 1998; IRSNB); Saratov (Sumakov, 1930); Caucasus (Marseul, 1870, 1872; Beauregard, 1890; Sumakov, 1930; Kuzin, 1954; Kaszab, 1968b; Pripisnova, 1987; Bologna 1991a; Özbek & Szloki, 1998; Kolov, 2003; Nicolaev & Kolov, 2005); Elisavetpol (Sumakov, 1930).

Georgia: Batum (Sumakov, 1930); Tiflis, Mzchet (Sumakov, 1930).

Armenia: Armenia (Baudi di Selve, 1878b); Armenian Mts. (MNHN); Yerevan (Reitter, 1906; Sumakov, 1930; MNHN); Araler (CS).

Turkey: Turkey (Bologna, 1979); Anatolia (Sumakov, 1915; Mader, 1927; Kuzin, 1954; Kaszab, 1968b; Pripisnova, 1987; Bologna, 1991a; Nicolaev & Kolov, 2005); Bilecik (Özbek & Szloki, 1998); Bilecik, Bözüyük (MAB); Eskişehir (Özbek & Szloki, 1998; MNHN); Eskişehir, Dorylaion (MNHN); Eskişehir, 19 km W Sivrihişar (MAB); Çorum (BMNH); Giresun, 4 km NE of Sebinkarahisar, N40 18 57.7 E38 27 04.6 (MABa); Bayburt (Özbek & Szloki, 1998); Erzurum (Escherich, 1899; Mader, 1927); Erzurum, Pasinler (MAB); Ardahan, nr. Göle (ZSM); Ardahan, 20 km N Ardahan (ZSM); Kars, btw. Kars and Ardahan (CFR); Isparta, S Sarki Karaağaç, pass on rd to Kireli (MABa); Ankara (Ganglbauer, 1905; Sumakov, 1930; Kaszab, 1941; Özbek & Szloki, 1998); Ankara, 20 km N Şerefilokoçhisar, Kürükutepe (CK); Ankara, Yenidoğan 10 Km E Polatlı, 39,68728°N–32,26473°E (MABa); Ankara, Elam dag (Escherich, 1897); Ankara, Bâla, Gyaur dağlari (Kaszab, 1959); Kirşehir (MAB); Kırşehir, Balaban bridge (Bytinski-Salz, 1956); Kirşehir, rd to Boztepe 3 km NE, N39.18123 E34.20654 (MABa); Sivas, 15 km W Mazıkıran geç., N38.73092 E37.09994 (MABa); Sivas, 5 km E Irmali (MAB); Konya (MNHN); Konya (Özbek & Szloki, 1998); Konya, 4 km S Hadim (MABa); Konya, Seydişehir, Teke geç. (CK); Konya, 20 Km E Beyşehir, dint. Üçpinar, 37,83840°N–31,85504°E (MABa); Nevşehir, 15 km E Ürgup, N38.60346 E34.98688 (MABa); Nevşehir, 1 km NE, N38.63149 E34.75633 (MABa); Nevşehir, Ürgüp, Topuzdağı geç. (CA; MABa); Nevşehir, rd btw. Ürgüp and Develi, N38°31'18.8"–E34°59'00.3" (MAB); Kayseri, 10 km NW Kayseri, (MAB); Kayseri, 5 km S Sarız, N38.42338 E36.46996 (MABa); Malatya (Özbek & Szloki, 1998; MCNV); Malatya, Eskimalatya (MAB); Malatya, Sultansuju Hara (Kaszab, 1941); Elazig (Özbek & Szloki, 1998); Elazig, Gözeli (MAB); Elazig, Kurucu geç. (MAB); Bingöl, 8 km NE rd to Erzurum, N38.93945 E40.63694 (MABa); Muş, Buğlan geç. (CS); Van, Van Lake (ZSM); Van, rd to Çatak after Gorentah Köyu (MNHN); Adana, nr. jct. Develi-Tufanbeyli (CA); Adana, 10 km E Tufanbeyli, N38.20261 E36.05783 (MABa); Adana, E slope Küçükgezbeli geç., N38.53534 E35.51755 (MABa); Kahramanmaraş, 29 and 26 km N Göksun (CA); Kahramanmaraş, 7 km S Tufanbeyli rd to Göksun (MABa); Kahramanmaraş, 1 km N Göksun, N38.06319 E36.47049 (MABa); Diyarbakır (Kaszab, 1941).

Syria: Al Harrah (ZMHB).

Iran: Iran (Pic, 1930; Bologna, 1979; Özbek & Szloki, 1998; Kolov, 2003; Nicolaev & Kolov, 2005); norther Iran (Bologna, 1991a); Azerbaijan (Mirzayans, 1970); eastern Azerbajan (Morrades Awal, 1997), Azerbajan, Bazargan (MAB); Azerbajan, Talysh Mts., Zouvant (Ménétriés, 1832); Maku, Qaraziaodin, 39°20'N–44°25'E (MABa; TMU); coast of Caspian Sea, nr Béchebarmak (Ménétriés, 1832); Mazandaran (Mirzayans, 1970; Morrades Awals, 1997); Mazandaran, Bastani

(Kaszab, 1968a); Mazandaran, Haraz to Baladeh, 9 km E Baladeh, N 36 12 12–E 51 52 27.6 (HMIM); Golestan (Mirzayans, 1970); Gilan, Rudbār (HMIM); Luristan (MNHN); Kerman (Morrades Awals, 1997); Bojnurd, Sepid, btw. Bojnurd and Tappenye (NHMW). Reichardt (1934) cited this species from Turkmenistan, Sulukly. Probably, this locality refers to Suluklu, near Bojnurd, in northern Iran, close to the Turkmenian border.

Turkmenistan: Transcaspia (Kaszab, 1968b; Bologna, 1979; Özbek & Szloki, 1998); Repetek (Sumakov, 1930). Recorded from the Caspian, see Borchmann (1917): this record refers to both northern Iran and western Turkmenian regions.

Kazakhstan: Kazakhstan (Kuzin, 1953, 1954; Pripisnova, 1987; Bologna, 1991a; Özbek & Szloki, 1998); north-western, eastern and southern western Kazakhstan (Kolov, 2003); Kazakhstan (Nicolaev & Kolov, 2005); Uralsk (Sumakov, 1930); Astrachan (Sumakov, 1930); Ayakoz River., bridge near Qopa village, 29 km NNW Aqtoghaiy, N 47,11° E79,31° (MABa); Kostanai (Nicolaev & Kolov, 2005); Atyrau (Kuzin, 1953; Nicolaev & Kolov, 2005); Aris (Kuzin, 1953; Nicolaev & Kolov, 2005); Zaisan (Kuzin, 1953; Nicolaev & Kolov, 2005); Oral (Kuzin, 1953).

Mylabris parumpicta

Recorded generically as "Turkestan" by some authors (Borchmann, 1917; Mader, 1927; Sumakov, 1930), but probably these citations refer to southern Turkmenistan, close to the border of Iran.

Iran: Iran (Beauregard, 1890; Mader, 1927; Kuzin, 1954; Serri *et al.*, 2012); northern Iran (Sumakov, 1915); Gorgan, Shaku (Heyden, 1883; Sumakov, 1930). Records from Lorestan (Sumakov, 1930) and Kermanshah (Morrades Awal, 1997) must be confirmed and refer probably to *M. mediorientalis*.

Mylabris poggii

Libya (Cyrenica): Cyrenaica (Bologna, 2009; MNHN); Ayn Marrah (Bologna, 2009; MSNG); Al Bayda' (Bologna, 2009; MAB); Cyrene (Bologna, 2009; MSNG); Jardas al' Abid (CR); Wadi al Kuf (Bologna, 2009; CW); El Fuhat (Zanon, 1922; Bologna, 2009); El-Fetejah (Flazini, 1923); Tulmeitha (Falzoni, 1923; Bologna, 2009); Darnah (Falzoni, 1923; Bologna, 2009); Al Marj (Dodero, 1925; Bologna, 2009); Benghazi (Dodero, 1925; Bologna, 2009).

Mylabris pseudoemiliae

Iran: Esfahan, Zagros Mts., Fereidun Shar, N32°54.43'–E50°06.40' (IRSNB; MAB).

Mylabris quadripunctata

Recorded erroneously from the Cape of Good Hope (Thnunberg, 1791), Timor Island (Olivier, 1811). Other erroneous citations concern Algeria (Reiche, 1866; Magenta: Sumakov, 1930), Tunisia (Kairouan: Fairmaire, 1875), Egypt (Borchmann, 1917 as *husseini*), northern Africa (Marseul, 1870, 1872; Baudi di Selve, 1878b; Sumakov, 1930; Marcuzzi & Turchetto Lafisca, 1981, both probably referring to *M. guerini*), and northeastern Italy (South Tyrol: Horion, 1956, probably referring to *M. variabilis*). The citations from Germany (Kuzin, 1954; Clausthal in the Lüneburg: Schilsky, 1891; Limburg: Reitter; 1911; Hannover: Sumakov, 1930), Austria (Marseul, 1870, 1872; Kuzin, 1954; Tirol: Sumakov, 1930), Hungary (Baudi di Selve, 1878b) are erroneous or probably refer to *M. variabilis*.

Cited generically from Europe, particularly from its southern portion (Linnaeus, 1767; Gemminger & Harold, 1870; Baudi di Selve, 1878b; Heyden *et al.*, 1883; Beauregard, 1890; Reitter, 1906; Borchmann, 1917; Mader, 1927; Kuzin, 1953, 1954; Horion, 1956; Marcuzzi & Turchetto Lafisca, 1981; Propisnova, 1987; Sadykov, 1989; Özbek & Szaloki, 1998; Kolov, 2003; Nicolaev & Kolov, 2005).

Portugal: Portugal (Dahl, 1823; Baudi di Selve, 1878b; Oliveira, 1893, 1899; Sumakov, 1930; De la Fuente, 1933; García-París & Ruiz, 2005; Bologna, 2008; HNHM); Cascais, Tires (Aguiar & Serrano, 1995); Serra da Estrela, Guarda, Gouveia (CSE); Serra da Estrela, Guarda,Torre (MSNV; MAB); Serra da Estrela, Guarda, Aldeia (FSAG); Guarda, Pousada (MNHN); Serra da Estrela, Bujedo (De la Fuente, 1933; García-París & Ruiz, 2005); da Estrella, Castelo Branco, Covilha (MNHN); Castelo Branco, S. Fiel (MNHN); Beira Alta (De la Fuente, 1933); Aveiro, Luso (FSAG); Aveiro, Vila Nova btw. Luso and Anadia (FSAG).

Spain (and Gibraltar, UK): Spain (Billberg, 1813; Fischer, 1827; Chevrolat, 1865; Gemminger & Harold, 1870; Marseul, 1870, 1872; Baudi di Selve, 1878b; Heyden *et al.*, 1883; Beauregard, 1890; Reitter, 1906; Macho Bariego, 1909; Rodriguez López Neyra, 1914; Borchmann, 1917; De la Fuente, 1933; Pardo Alcaide, 1950; Bologna, 1991b, 2008); Galicia (Chapman & Champion, 1907); Neda (López Seoane, 1856, see García-París & Ruiz, 2005); Ourense (Recalde *et al.*, 2002); Ourense, Casayo (Chapman & Champion, 1907; García-París & Ruiz, 2005); Lugo (Recalde *et al.*, 2002); Lugo, Samos (MAB); provincia de León (Valladares & Salgado, 1983; Valladares, 1984); León (Chapman & Champion, 1907; Pérez-Moreno *et al.*, 2003); León, Ponferrada (MCNV); Cacéres (Recalde *et al.*, 2002); Cacéres, Valverde del Fresno, 5 Km N-NE (CA); Zamora (Recalde *et al.*, 2002); Zamora, Rio negro del Puente (CF); Andalucia (Horion, 1956); Cádiz (Sumakov, 1930; Recalde *et al.*, 2002; García-París & Ruiz, 2005); Sevilla (Medina, 1895, see García-París & Ruiz, 2005); Sevilla, Cazalla (Medina, 1895, see García-París & Ruiz, 2005); Sevilla, Constantina (Medina, 1895, see García-París & Ruiz, 2005); Sevilla, Utrera (Medina, 1895, see García-París & Ruiz, 2005); Gibraltar (Champion, 1891, see García-París & Ruiz, 2005); Malaga, Benaoján Cueva del Gato (Heyden, 1870, see García-París & Ruiz, 2005); Malaga, Loma de El Dalre (Cobos, 1954); Cordoba (Amor Mayor, 1860, see García-París & Ruiz, 2005; Gorriz y Muñoz, 1882; García-París & Ruiz, 2005); Cordoba, Hornachuelos (Medina, 1895, see García-París & Ruiz, 2005); Cordoba, Sierra Morena (Martínez Sáez, 1883, see García-París & Ruiz, 2005); Jaén (Recalde *et al.*, 2002); Granada (Rosenhauer, 1856; Medina, 1895, see García-París & Ruiz, 2005;

Sumakov, 1930; Ruiz *et al*., 1992; García-París & Ruiz, 2005); Granada, Diezma (SMNS); Granada, Puebla de Fadrique (MNHN); Granada, Puerto de la Arora (MAB); Almeria (Ruiz *et al.*, 1992); Almería, dint. Níjar (MAB); Almeria, Sierra de los Filabres (MZUF); Jaen, Sierra de Cazorla, Nacin del Gaudal (MSNV); Salamanca, Peña de Francia, rd 203 km 72 (CMI); Salamanca, Baños de Montemayor hacia Garganta de Béjar (Rivas Mateos, 1897, see García-París & Ruiz, 2005); Salamanca, Riscos del Tejadillo (Rivas Mateos, 1897, see García-París & Ruiz, 2005), Salamanca, Sierra de Béjar (Rivas Mateos, 1897, see García-París & Ruiz, 2005; IRSNB); Salamanca (Champion, 1903; García-París & Ruiz, 2005); Salamanca, Béjar (Champion, 1903; García-París & Ruiz, 2005); Salamanca, btw Arapiles and Pelagarcía (Redondo, 1915, see García-París & Ruiz, 2005); Avila (Champion, 1903; García-París & Ruiz, 2005; IRSNB); Avila, Sierra de Gredos, env. Navatalgordo (CMI); Avila, Sierra de Gredos, env. Hoyos de l'Espino (CMI); Avila, Sierra de Gredos (MAB); Avila, Piedralaves (Champion, 1903; García-París & Ruiz, 2005); Valladolid (Chevrolat, 1865; García-París & Ruiz, 2005); Madrid (Amor Mayor, 1860, see García-París & Ruiz, 2005; Gorriz y Muñoz, 1882; De la Fuente, 1933; Pérez-Moreno & Cabrero Sañudo, 2001; García-París & Ruiz, 2005); Madrid, 29 km W Madrid, Brunete env. (CMI); Madrid, Sierra de Guadarrama, Puerto de Los Cotos (MAB); Madrid, Sierra de Guadarrama, Cercedillas (NHMW); Madrid, Montarco (NHMW); Madrid, El Escorial (MRSN); Madrid, Aranjuez, El Ampurdán (Gorriz y Muñoz, 1882; García-París & Ruiz, 2005); Comunidad de Madrid (García-París *et al*., 2006); Guadalajara, Brihuega (Navás, 1902a, see García-París & Ruiz, 2005); Toledo (Recalde *et al*., 2002); Toledo, Lominchar (Gómez Carrasco, 1895, see García-París & Ruiz, 2005); La Mancha (SMNS); Ciudad Real (De la Fuente, 1933; Recalde *et al*., 2002); Ciudad Real, Venta de Cardeñas (Heyden, 1870, see García-París & Ruiz, 2005); Murcia (De la Fuente, 1933); Murcia, Cartagena env. (Motschulsky, 1849; García-París & Ruiz, 2005); Valencia, Terrateig (FSAG); Valencia, Real de Montroi (MAB); Valencia, Montserrat (Cuní Martorell, 1879, see García-París & Ruiz, 2005);Valencia, 25 km SW Real de Montroi (MAB); Valencia, Xativa (FSAG); Valencia, Enguera (FSAG); Valencia, Ademuz (FSAG); Valencia, Burjasot (Moróder Sala, 1921, see García-París & Ruiz, 2005); Castellón ?, Canales (Champion, 1904, see García-París & Ruiz, 2005); Burgos (MCNV); Burgos, Soria, Pineda de la Sierra (MAB); Cuenca (Martínez Sáez, 1873, see García-París & Ruiz, 2005; Gorriz y Muñoz, 1882; Sumakov, 1930; Valladares & Salgado, 1983; García-París & Ruiz, 2005); Cuenca, Tragacete (Champion, 1902, see García-París & Ruiz, 2005); Cuenca, Poyatos (FSAG); Palencia (Recalde *et al.*, 2002); Burgos (Gorriz y Muñoz, 1882; Recalde *et al*., 2002; García-París & Ruiz, 2005); Burgos, Tardajos (Gorriz y Muñoz, 1882; García-París & Ruiz, 2005); Burgos, Aranda de Duero (Gorriz y Muñoz, 1882; García-París & Ruiz, 2005); Burgos, Lerma (Gorriz y Muñoz, 1882); Burgos, Soria (Champion, 1904, see García-París & Ruiz, 2005; Champion & Chapman, 1904; Pérez-Moreno *et al*., 2003); Navarra (Gorriz y Muñoz, 1882, 1902; Recalde *et al*., 2002); Pamplona, Pueyo (Asso del Río, 1784, see García-París & Ruiz, 2005); Logroño, La Rioja (Champion & Chapman, 1904; Pérez-Moreno & Cabrero Sañudo, 2001; Recalde *et al.*, 2002); Logroño, Ortigosa de Cameros (Vicente, 1902, see García-París & Ruiz, 2005; Pérez-Moreno & Cabrero Sañudo, 2001); Logroño, Ribabellosa, (Pérez-Moreno & Cabrero Sañudo, 2001); Logroño, Villarroya (Pérez-Moreno & Cabrero Sañudo, 2001); Logroño, Yerga (Pérez-Moreno & Cabrero Sañudo, 2001); Logroño, Milagro (Gorriz y Muñoz, 1881, 1882, 1902; García-París & Ruiz, 2005); Logroño, Milagro de Navarra, término de San Juan (Gorriz y Muñoz, 1884; García-París & Ruiz, 2005); Zaragoza (Gorriz y Muñoz, 1882, 1902; Champion & Chapman, 1904; Navás, 1904a; Recalde *et al.*, 2002; Ruiz *et al.*, 2002; García-París & Ruiz, 2005); Zaragoza, Teruel (Recalde *et al*., 2002); Zaragoza, Teruel, Puerto de Orihuela (MAB); Zaragoza, Teruel, Sierra de Griegos (MAB); Zaragoza, Cariñena (Gorriz y Muñoz, 1882, 1902; García-París & Ruiz, 2005); Zaragoza, Moncayo (Champion, 1904, see García-París & Ruiz, 2005; Navás, 1904a; CPR); Zaragoza, Pinar de Zuera (CPR); Zaragoza, Bujaraloz (FSAG); Huesca (Macho Bariego, 1909; Recalde *et al*., 2002; Pérez-Moreno *et al*., 2003); Huesca, Berbegal (FSAG); Huesca, Plan (MAB); Huesca, Binefa (FSAG); Huesca, Almunia (FSAG); Huesca, Azamiy (FSAG); Huesca, Mounzon (FSAG); Huesca, El Run (Macho Bariego, 1909; García-París & Ruiz, 2005); Huesca, Plan (MAB); Huesca, Sierra de Guara (Navás, 1904b; García-París & Ruiz, 2005); Lérida (Recalde *et al.*, 2002); Lérida, Valencia de Aneu (MAB); Lérida, Sort-Seu de usell (MAB); Lérida, Frega (FSAG); Lérida, Sierra del Cadi, N42°18'21" E001°34' (MAB); Lérida, Reus, Sierra del Montsant (MAB); Lérida, Valencia de Aneu (MAB); Lérida, nr. Esterri d'Aneu (MAB); Lérida, nr. Sort (MAB); Cataluña (Martorell y Peña, 1879; Gorriz y Muñoz, 1882); Tarragona (Recalde *et al*., 2002); Barcelona (Gorriz y Muñoz, 1882; Recalde *et al*., 2002; García-París & Ruiz, 2005; MAB); Barcelona, Olèrdola (MAB); Barcelona, Río Llobregat (Lagar Mascaró, 1971); Barcelona, Sarriá (Cuní Martorell & Martorell Peña, 1876 and Cuní Martorell, 1888, see García-París & Ruiz, 2005; Gorriz y Muñoz, 1882); Barcelona, Horta (Cuní Martorell & Martorell Peña, 1876 and Cuní Martorell, 1888, see García-París & Ruiz, 2005; Gorriz y Muñoz, 1882); Barcelona, La Garriga (Cuní Martorell, 1883, see García-París & Ruiz, 2005); Barcelona, Santa Coloma de Besós (Cuní Martorell & Martorell Peña, 1876 and Cuní Martorell, 1888, see García-París & Ruiz, 2005; Gorriz y Muñoz, 1882); Barcelona, Calella (Cuní Martorell, 1897, see García-París & Ruiz, 2005); Barcelona, Mongat (Cuní Martorell & Martorell Peña, 1876, see García-París & Ruiz, 2005; Gorriz y Muñoz, 1882); Girona, Malgrat (IRSNB); Girona (Recalde *et al*., 2002); Girona, Arbucias (Cuní Martorell, 1880, see García-París & Ruiz, 2005); Girona, Silsa (FSAG); Girona, Costa Brava (SMNS); Girona, Costa Brava, Guadix (SMNS); Girona, Playa de Aro (SMNS); Girona, Sierra de las Gabarras (CMAL); Girona, Caldas de Malavella (Cuní Martorell, 1885, see García-París & Ruiz, 2005); Girona, Ripoll (Ferrer Dalmau, 1903, see García-París & Ruiz, 2005); Girona, Llanaa (FSAG). Spanish localities not identified: Sabrosa (Barros, 1896, see García-París & Ruiz, 2005).

France: France (Mulsant, 1857; Bologna, 2008); Lyonnais (Desbrochers des Loges, 1899); southern France (Olivier, 1811; Dejean, 1821, 1837; Gemminger & Harold, 1870; Beauregard, 1890; Desbrochers des Loges, 1899; Sainte-Claire Deville, 1937; Horion, 1956); Gers, Dufort (IRSNB); Pyrénées or., Vernet les Bains and env. (MNHN); Pyrénées or., Opoul (CHA); Pyrénées or., Prats de Mollo (CHA); Pyrénées or., Collioure (IRSNB); Pyrénées or., Céret (MAB); Pyrénées or., Mont Louis (CA); Pyrénées or., Banyuls (CHA); Pyrénées or., Collioure (Mayet, 1903); Pyrénées or., Sériziat (Mayet, 1903);

Pyrénées or., Perpignan, Leucat marsh (IRSNB); Aude, Pennautier (MSNG); Aude, Carcassonne (MSNG); Aude, Leucate and env. (CHA); Aude, Treibles (CHA); Aude, Gruisseau (CHA); Aude, Montagne d'Alaric (Gavoy, 1893; CHA); Lot, Les Ramounets les Cahors (FSAG); Aveyron, Rodez (MNHN); Aveyron, Rodez, La Bastide, Pradines (MAB); Clermont Ferrand, Puy de Dôme, Chatel Guyon (Sainte-Claire Deville, 1937; MNHN); Tarn, Albi à Saint-Quentin (Gavoy, 1893, 1909); Tarn, Puygouzon (Gavoy, 1893, 1909); Ardèche, St. Vincent de Barrès (FSAG); Ardèche, Boulieu lès Anonnay (Balazuc, 1984); Ardèche, Saint Didier sous Aubenas (Balazuc, 1984); Ardèche, Lentillères (Balazuc, 1984); Ardèche, Rosières (Balazuc, 1984); Ardèche, Ruoms (Balazuc, 1984); Ardèche, Sampzon (Balazuc, 1984); Ardèche, Larnas (Balazuc, 1984); Ardèche, Vallon (Balazuc, 1984); Ardèche, Malbosc (Balazuc, 1984); Hérault, Montpellier (Fairmaire, 1857); Hérault, Castanet-le Haut (IRSNB); Hérault, Bezièrs, 14 km SW (SMNS); Hérault, Cap Agde (CM); Hérault, St. Guilhem (MNHN); Hérault, St. Pous de Thoumiers, Lizarne (CZ; MAB); Hérault, Vie de la Gardiole (CM); Drôme, Montjoux (FSAG); Gard, Rochefort du Gard (SMNS); Orange, Bollène (MAB); Rhône-Alpes, Pilat (Schaefer, 1949); Rhône-Alpes, Gorges de Malleval (Schaefer, 1949); Rhône-Alpes, Pélussin (Schaefer, 1949); Rhône-Alpes, Chassagny (Schaefer, 1949); Vaucluse, Avignon, Villaneuve (FSAG); Vaucluse, La Roque sur Perna (SMNS); Vaucluse, St. Remy, (FSAG); Vaucluse, Faucon (IRSNB); Bouches du Rhône, Fontvieille (IRSNB); Bouches du Rhône, Aix en Provence (CSC; MRSN); Bouches du Rhône, Massif des Alpilles (MNHN); Bouches du Rhône, Bédoin env. (FSAG); Bouches du Rhône, Camargue, Le Crau (SMNS); Bouches du Rhône, Marseille, Fos du mer (CZ); Bouche du Rhône, Marseille, La Couronne, N43°19'44"–E05°03'03" (MABa); Hautes Alpes, Briançon (CMAL); Alpes des Haute Provence, St. Michel l'Observatoire (CHA); Alpes de Haute Provence, Sisteron (MAB); Alpes de Haute Provence, Les Mees (Mitter, 1978); Alpes des Haute Provence, Digne (FSAG; SMNS); Var, Méounes lès Montrieux (MNHN); Var, Toulon (MCZR); Var, Hyères (IRSNB); Var, Ile de Porqueroles (IRSNB); Var, Ile de Levant (IRSNB); Var, Borme les Mimosas (FSAG); Var, le Lavandou (MAB); Var, Busson (IRSNB); Var, Agay (MNHN); Var, Cavalaire (Fleischer, 1928; MAB); Var, Gonfaron (FSAG); Var, Brignoles (MRSN); Var, Val d'Arn (MSNG); Var, Ramatuelle (FSAG); Var, les Issambres (FSAG); Var. Fréjus (MAB); Var, Roquebrune sur Argens (MAB); Var, Verignon (CPP); Var, Draguignan (IRSNB; MCZR); Var, Massif des Maures, Col de Gratteloup (CZ; MAB); Var, Esterel (IRSNB); Var, Esterel, Mandelleu (MAB); Var, Tanneron (CS); Alpes Maritimes, Pégomas (IRSNB); Alpes Maritimes, Cannes (IRSNB); Alpes Maritimes, Antibes (IRSNB). Recorded erroneously from Corse (Marseul, 1870, 1872; Baudi di Selve, 1878b; Sumakov, 1930). One record from northern France needs confirmation: Sarthe, Forêt de Perseigne (Sainte-Claire Deville, 1937).

Italy: Italy (Fabricius, 1801; Marseul, 1870, 1872; Beauregard, 1890; Reitter, 1906; Bologna, 2008) and Southern Italy (Fischer, 1827; Baudi di Selve, 1878b; Bologna, 1991b). Liguria (Baudi di Selve, 1878b; Luigioni, 1929; Porta, 1934; Marcuzzi & Turchetto Lafisca, 1981; IRSNB); Imperia, Oneglia (Ghiliani, 1887; Bologna, 1991a; MRSN; MZUB); Latina, Minturno (MAB); Campania (Magistretti, 1943; Bologna, 1973, 1991a); Benevento, Fragnetum (Bologna, 1991a; MAB); Puglia (Luigioni, 1929; Bologna, 1991a); Foggia, Monte Sant'Angelo, Foresta Umbra (Bologna, 1991a; MUA); Bari, Bitonto (Bologna, 1991a; MAB; MCNV); Bari, Giovinazzo (Marcuzzi & Turchetto Lafisca, 1981; Bologna, 1991a); Bari (CMAL; MCZR); Bari, Grumo Appulo (Bologna, 1991a); Bari, Alte Murge, 1 km SW Castel del Monte (MABa); Bari, Alte Murge, 3 km E Gravina in Puglia rd to Matera (MABa); Lecce (Magistretti, 1943; Bologna, 1973, 1991a); Lecce, Santa Maria di Leuca (MAB); Matera (Bologna, 1991a); Potenza, Calvello (CA); Potenza, Viggiano, M. Sant'Eroc (MABa); Potenza, Terranova Pollino (Bologna, 1991a); Potenza, P.N. Pollino, Toppo di Vuturo (Bologna, 1991a; CG; CL); Potenza, P.N. Pollino, sopra Campotense, N29°53'–E16°07' (MABa); Potenza, Campotenese (Bologna, 1991a; MAB); Calabria (Gemminger & Harold, 1870; Bertolini, 1904; Luigioni, 1929; Sumakov, 1930; Porta, 1934; Bologna, 1991a); Cosenza, Foresta La Mula (Bologna, 1991a; MAB); Cosenza, Castrovillari, Colloreto (MAB); Cosenza, Taverna (Bologna, 1991a; MZFN); Cosenza, rd 107, jct to San Pietro in Guarano (MAB); Cosenza, Sila, Camigliatello Silano (Bologna, 1991a; MAB); Cosenza, San Giovanni in Fiore (Bologna, 1991a; MAB); Cosenza, Sila, Serra Candela (MCZR); Cosenza, Sila grande, Camere Chiuse (Bologna, 1991a; MCZR); Cosenza, Sila, Arvo Lake (Bologna, 1991a; MCNV); Cosenza, Sila, Ampollino Lake (Bologna, 1991a; CA); Cosenza, Ampollino Lake, rd ENEL (MAB); Cosenza, Sila, Croce Magara (CA); Cosenza, Sila, Botte Donato Mt. (Bologna, 1991a; MAB); Cosenza, Sila, Gariglione Mt. (Bologna, 1991a; MAB); Cosenza, Sila, Campana (Bologna, 1991a; CG); Cosenza, Sila, Bosco Pirillo (Bologna, 1991a; CG); Cosenza, Sila, nr. Bocchigliero, Laurenzana River (CG); Lamezia Terme, Sambiase (Bologna, 1991a; MCNV); Catanzaro (Bologna, 1991a; MRSN); Reggio di Calabria, Capo Spartivento (Magistretti, 1960; Bologna, 1973, 1991a); Reggio di Calabria, Brancaleone (Petagna, 1787); Reggio di Calabria, San Luca (MAB); Reggio di Calabria, Piani di Lopa (Magistretti, 1960; Bologna, 1991a); Reggio di Calabria, Aspromonte (Bologna, 1973, 1991a).
Recorded erraneously from Piedmont (Luigioni, 1929; Porta, 1934; Marcuzzi & Turchetto Lafisca, 1981), Lombardy (Bertolini, 1904; Luigioni, 1929; Porta, 1934; Marcuzzi & Turchetto Lafisca, 1981), Tuscany (Bertolini, 1904; Luigioni, 1929; Marcuzzi & Turchetto Lafisca, 1981; Vallombrosa, Cecconi, 1897), Latium (Roma, Magistretti, 1943), Abruzzi (L'Aquila, Sumakov, 1930), Sicily (Bertolini, 1872; Baudi di Selve, 1878b; Ragusa, 1898; Luigioni, 1929; Porta, 1934; Messinese, Vitale, 1905; Palermo, Ragusa, 1873), Sardinia (Luigoni, 1929; Porta, 1934); all these records actually refer to *M. variabilis* (see Bologna, 1991a).

Croatia: Zadar, Iz Island, Izmali (MAB).

Serbia: Serbia and Montenegro (Bologna, 2008 as Yugoslavia); Rečica (Conev, 1958); Radoševac (Conev, 1958); Zatonje (Conev, 1958); Kragujevac (Conev, 1958); Požarevac (Conev, 1958); Raška (Conev, 1958).

Macedonia: Macedonia (Kantardjèva, 1929; Horion, 1956; Bologna, 1986, 2008; Fekrat & Morrades Awal, 2012; MAB; MCNV); Ohrid, Galicica (CS; MAB); Bogdanci (Kantardjèva, 1929; Conev, 1958; Bologna, 1994); Mavrovi Hanovi (Conev, 1958); Demir Kapija (Conev, 1958; Bologna, 1994); Gevgelija (Kantardjèva, 1929; Conev, 1958; Bologna, 1994); Kavadarci (Conev, 1958; Bologna, 1994); Ohrid (Conev, 1958; Bologna, 1994).

Albania: Albania (Kaszab, 1967; Bologna, 2008; Fekrat & Morrades Awal, 2012; HNHM); Tirana, Botanical garden (MAB); Kurkës, Krumë, 12 km N Kurkës, N42°12' E20°25' (CFO); Vlöre, Skrofotin (Schatzmayr, 1943); Tropöje (Csiki, 1940); Ploštan (Csiki, 1940).

Greece: Most records here listed were previously cited by Bologna (1994), who revised also all previous literature. For the sake of brevity, these citations and the previous ones were not reported in the present catalogue, which includes only all known localities with collection acronims and the literature after Bologna (1994).

Kastoria, Mt. Vernon (MSNV); Florina, Microlimni Prespa Lake (CM); Florina 15 km N (MRSN); Florina (MNHN); Florina, Meliti, Achlada (CFR); Grevena (MSNV); Grevena, Smolikas Mt. (MAB); Grevena, Kalambaka (MAB); Tesprotia, Filiátes (CFR); Tesprotia, Pedes (MSNV); Thesfrotia, Platagia (MAB); Ioannina, Konitsa (MSNV); Konitsa, 3-4 km N Konitsa, N40°03'–E20°44' (MABa); Konitsa, Tymphi-Drakolimni Mts. (MSNV); Ioannina, Polidoro (CL); Ioannina, Agia Paraskevi (MAB); Ioannina, Kalivia (MAB); Ioannina, Dodoni (CM; MSNV); Ioannina (CG; MAB; MRSN; MSNG; MSNM); Ioanina, Vrossina (CA); Ioannina, Monodendri (CGR; CS); Ioannina, Zagoria, Missahorion (CM); Ioannina, Zagoria, Kipi (CM); Ioannina, Zagoria, Dilofo (MAB); Ioannina, Zagori, Negades (MAB); Ioannina, Itea-Petra (CG); Ioannina, Kourento, dint Hinka (CG); Ioannina, Metsovo (CS; MUA); Ioannina, Pindos, Katara Pass (MAB; MUA; MSNV); Ioannina, Pindos Mts., Peristeri Mt. (MSNV); Tríkala, Pindos Mts., Pevzi (MUA); Tríkala, Hani env., N39°47'–E21°31' (MAB); Tríkala, Pindo Mts., Vutonasi (CAR); Tríkala, Pindos Mts., btw. Kranià and Milea (CG); Tríkala, Panagià (CS); Tríkala (MSNG); Tríkala, Kalambaka (MSNV); Tríkala, Kalambáka, Trigona (MUA); Préveza, Platistoma (MUA); Tríkala, near Hani, 5 Km N jct to rd. Ioanina-Tríkala N39°47'–E21°31' (MABa); Tríkala, rd Kalambaka-Kozani, 1 km Agios Dimitros (MABa); Préveza, Pogonia (MUA); Arta, Menía, Amvrakikó Kolpos (MAB); Arta (CME); Imathia, Vergina (CGR); Kilkis, Políkastro (MCNV); Thessaloniki (MAB); Thessaloniki, Rendina (MAB); Thessaloniki, Karasouri (BMNH); Thessaloniki, Langadás env. (CSC); Haklkidiki, Polygiros, Olimbiada to Varvara (MAB); Halkidiki, Koupos (MAB); Halkidiki, Kassandra (ZSM); Halkidiki, Sithonia (CMAL); Halkidiki, Koufos (MAB); Halkidiki, Agios Nicolaos (CPR); Halkidiki, rd Tessaloniki - Ouranopoli, Km 101.300 (CMI); Halkidiki, Athos Mt. (IRSNB; MRSN); Elefterski monastira Kavala (Kantardjeva, 1929); Kavala, Tassos Is. (BAS); Alexandroupoli (MAB); Evros, 25 km NW Alexandroupoli (CFR); Evros, Samotraki Is., Paleopolis (CM); Evros, Essimi (NHMW); Evros, Didimothicho (NHMW); Pieria (MHNG); Pieria, Korinós (MSNV); Pieria, Olimpos Mt. (MSNM); Pieria, Litohoro (MSNM); Pieria, Leptokaria (MCNC); Pieria, Eginio (MAB); Larisa, Larisa (MAB); 2 Larisa, Ossa Mt. (MAB); Larissa, Ossa Mt. Spilà env., N39°49'–E22°39' (CA; MAB); Larissa, Ossa Mt., Anatoli env. (CG; MFNB); Larisa, Ossa Mt., Ambelakia (MAB); Fthiotida, Lamia (MCNV); Fhtiotida, Lamia, Bralos pass (MAB; MABa); Fthiotidia, Bralos (MAB); Fthiotidia, Antinitsis Monastery, Stena Fourkas, N39°00'–E22°23' (MAB); Fthiotida, Domokos env. (Metalleio), N39°04'–E22°19' (MAB); Fthiotida, Paleohori (MCNC); Aetolia, Gavalou (MSNV); Aetolia, Potamoula, Agrimio River (CGU); Aetolia, Arandhori (MUA); Evia Is. (MAB); Evia Is., btw. Prokopi and Pilio (MSNV); Evia Is., Politiká env. (CL); Evia Is., Dirfi Mt. (MSNV); Evia Is., Agion Mt. (MSNV); Evia Is., Karistos (CS); Khalkis, Aulis (IRSNB); Ionian Is., Lefkada Is. (MUA); Ionian Is., Lefkada Is., Sivota (MUA); Ionian Is., Lefkada Is., Agios Nikolaos, Niras (MUA); Ionian Is., Lefkada Is., Karya (MUA); Ionian Is., Lefkada Is., Platistoma (MUA); Ionian Is., Zakinthos Is. (CS); Akarnania, Stratos, Akheloos River (MAB); Fokida, Stromi, Pirgos (CS); Fokida, Parnassos Mt., 4 km S Eptalofou (CM); Fokida, Parnassos Mt., Lilaea (MSNV); Fokida, Parnassos Mt., Akhladokampos, Arakhovis (MAB); Fokida, Parnassos Mt., Arahova (MRSN); Fokida, Delfi, (CME; MSNM); Fokida, Arahora (MSNM); Attiki (IAA); Attiki, Athens (MABa); Attiki, Agia Sotirà (MCNC); Attiki, Mt. Parnitha (CL); Attiki, Thimari (CL); Attiki, Legrena (CG; CL); Attiki, Virkira (MAB); Atiki, Athinai (MAB); Attiki, Lavrio (CL); Attiki, Sounio Cap (CL); Attiki, Aegina Is., Afera area (CM); Ahaia, Patra (MCNC); Achaia, Patra, Stige valley (MAB); Achaia, Patra, Kalanos (MAB); Achaia, Kalandritsa (MAB); Achaia, Patra, Kelmos Mts., Kalavrita (MAB); Achaia, Kato Vlasia (MAB); Ahaia, Patra, Artakos (MUA); Ahaia, Patra, Kalamos (MAB); Ahaia, Patra, N Erimanthos Mts, pass above Kato Vlassia (MABa); Ahaia, Erimanthos Mts., Agia Triada (MUA); Ahaia, Erimanthos (MSNV); Ahaia, Katò Vlasià (CM); Ahaia, Kalavrita, Krastoni Vouraikos valley (CMI); Ahaia, Kalavrita (CA; CM); Ahaia, Kelmos Mts. (MSNV); Ahaia, Kelmos Mts., Parnos (MSNV); Ahaia, Kelmos Mts., Zaroubale (MSNV); Ahaia, Kelmos Mts., Kerokambos (CL); Achaia, 1 km SE Karpini, N38°04'–E22°06' (MABa); Korinthia, Killini Mts. (CS; MSNV); Korinthia, Mossià (MCNV); Korinthia, Kallani (MAB); Korintia, Stimfalia Lake (CMAL; CS); Ilia, Pirgos, Oros Foloi, N37°44'–E21°46' (MAB); Argolida, Epidavros (CMO); Arkadia, 10 km N Vitina, Melanon Mt. (CMI; SMNS); Arkadia, Vitina, Menalon Mt., rd to Levidi (CMI; MAB); Arkadia, Vitina (CAR; CM; MAB; MNHN); Arkadia, Camp Dimitri Mitroupolos, 11 km E Vitina (CM); Arkadia, Tripoli, 7/8 km W Langadia, N37°39'–E22°04' (MAB); Arkadia, Tripoli (CAR); Arkadia, Tripoli, rd Tripoli-Sparti, jct. Pigadakia (MABa); Arkadia, Parnon Mt., southern slope (CL); Messinia, Kalamata (MAB; MUA); Messinia, pass btw. Sparti and Kalamata (CM; MAB); Messinia, 1.5 km S Pylos, (MAB); Lakonia, Sparti, Taigetos Mts, Refuge Taigetos above Anogia (MABa); Lakonia, Mistras (CMI); Lakonia, Taigetos, Poliana (MAB; MSNV); Lakonia, Taygetos S.Elia Mt. (MAB); Lakonia, Panaitinaikos Mt., Gregore, Agios Joannnes (MUA); Lakonia, Monemvasia (CFR); Cyclades Is. (HNHM); Sporades Is., Samos Is., Valiouthes Valley nr. Agios Kostantinos (CM); Sporades Is., Kos Is. (MHNG); Sporades Is., Lipsi Is. (MAB); Sporades Is., Rodos Is. (Bologna & Marangoni, 1990); Crete Is. (Lucas, 1854; Kisenwetter, 1861a; Oertzen, 1886; Sumakov, 1930; Horion, 1956; Bologna, 1994; MAB); only two specimens from Crete were examined and possibly old citations refer to *M. kodymi* (see Bologna, 1994).

Bulgaria: Bulgaria (Sumakov, 1930; Kaszab, 1967; Bologna, 2008; Fekrat & Morrades Awal, 2012; HNHM); Blagoevgrad, Maleshevska, Planina Gorno, Breznitsa, nr. Manastir (CMI); Blagoevgrad, Maleshevska Planina, SE Tsaparevo (CMI); Blagoevgrad, Maleshevska Planina, W Mikrevo (CMI); Blagoevgrad, Struma River bank, Kresna env. (CMI); Blagoevgrad, Struma valley, from Kresna to Simitli, 7 km to Simitli (CMI); Blagoevgrad, Simitli (MAB); Blagoevgrad, Kresna

(BAS); Blagoevgrad, Struma valley, 2 Km S Kamenitsa (CMI); Blagoevgrad, Pirin Mts. (ZMHB); Blagoevgrad, Pirin (MCZR); Blagoevgrad, Gara Pirin (ZMHB); Bansko-Piringeb (Horion, 1956); Blagoevgrad, Bansko, Pirin N.P., from Bunderitsa to Vihren (CMI); Blagoevgrad, Bansko, Pirin N.P., Mt.Vihren (CMI); Blagoevgrad, S Pirin, Mts. SE Sveti Ilia Hill, nr. Kalimantsi (CMI); Svilengrad (Kaszab, 1959); Slivena (Kantardjièva, 1929); Stara Zagora (Kantardjièva, 1929); Kazanlaka (Kantardjièva, 1929); forest Panagyurishte Central Rhodope-Lzhdzhene (Kantardjièva, 1929); Chepino Belyovo (Kantardjièva, 1929); Lower-bath Bachkovo Monastery in Stanimaka Rila Mountain Dupnitsa Radomira (Kantardjièva, 1929); Rila monastira (Kantardjièva, 1929); Kyustendila Sofia (Kantardjièva, 1929); Svrge (Kantardjièva, 1929); Pancherevo (Kantardjièva, 1929); Struma River valley, Peio-Iavorov nr. station (CMI); Plovdiv, Midheaven Maritza (Angelov, 1960); Pazardzhik, Velingrad, Batak Lake (CMI); Haskovo, Svilengrad env. (BAS; CK); Rodopi, Velingrad and Gore (Angelov, 1965); Varna (MAB); Nessebar (Muche, 1964); Burgas (Kantardjièva, 1929); Burgas, Sosopol, (ZMHB); Burgas, Strandza, nr. Gramatikovo (BAS).

Romania: Romania (Bologna, 2008; Fekrat & Morrades Awal, 2012); N Dobrogea, area Macin-Tulcea-Niculitel (Rosca, 1976).

Ukraine: Ukraine (Kolov, 2003; Nikolaev & Kolov, 2005; Bologna, 2008; Fekrat & Morrades Awal, 2012); Podolia (Lomnicki, 1913, see Horion, 1956; Sumakov, 1930); Kiev (Sumakov, 1930); Odesa (Sumakov, 1930); Nicolaev (Sumakov, 1930); Cherson (Sumakov, 1930); Crimea (HNHM; MAB); Crimea: Aivazovsky, Blue Bay, Alupka, Castropol, Fishing, Simferopol env., Fruit, Alma, Karadag, Krasnoselovka, Castel, Alushta env., Alushta Dept. Res., Mizhhirya, Kacha, Zagorje (Levtshinskaja, 1964); Crimea, Eupatoria Tauria, Alupka (Sumakov, 1930); Poltava (Sumakov, 1930); Ukraine, Left Bank: Askania Nova; Dnieper; Old-Berdyansk; W Cairo; Dornburg; Black Valley; Ivanovo-Rybalskaya forest cottage; Korsun, Ivanovka; Yagorlytsky Peninsula; Rekopsky shaft; Churyuk; Zavadovka; Solenoozenaya timber cottage on the Kinburn Spit (Medvedev & Levtshinskaja, 1962).

Russia: Recored generically from Russia (Pallas, 1782; Fabricius, 1801; Oliver, 1811; Marseul, 1870, 1872) or European Russia (also as S Russia) (Latreille, 1804; Billberg, 1813; Fischer von Waldheim, 1823; Fischer, 1827; Dejean, 1837; Gemminger & Harold, 1870; Baudi di Selve, 1878b; Heyden *et al*., 1883; Beauregard, 1890; Reitter, 1906; Sumakov, 1915, 1930; Borchmann, 1917; Roepke, 1917; Kuzin, 1953, 1954; Iablokoff-Khnzorian, 1983; Pripisnova, 1987; Sadykov, 1989; Özbek & Szaloki, 1998; Nikolaev & Kolov, 2005; Bologna, 2008) or from large regions of southern Russia [Volgam & Iaïcum (Pallas, 1782); Steppe of Cossacks on Don River (Kieseritzky, 1912); Caucasus (Reiche, 1866; Heyden & Kraatz, 1889; Reitter, 1906; Sumakov, 1915; Borchmann, 1917; Kuzin, 1953, 1954; Iablokoff-Khnzorian, 1983; Pripisnova, 1987; Sadykov, 1989; Kolov, 2003; Nikolaev & Kolov, 2005; MNHN)] or from Siberia (Fischer von Waldheim, 1823, 1842; Gebler, 1829; Sumakov, 1915). European Russia: Charkov; Ekaterinoslav; Voronezh; Rostov; Uralsk; Tzaritzyn; Saratov; Samara; Orenburg (Sumakov, 1930); Novorossijsk (MNHN); Volgograd (NHMW); Astrakhan (Sumakov, 1930; MCZR); Astrakhan, Bogdo nr. Volga River (SMNS); Raddevka na Amurl (ZIN). Caucasus: Aksu; Tarstschai (Schneider & Leder, 1878); Pyatigorsk, Beshtau (Sumakov, 1930); Karabak (Sumakov, 1930); Cecenia, Groznyy (Sumakov, 1930). Not identified Caucasian localities cited by Sumakov (1930) are: Aljat, Dzhevat, Geok-topa, Kodzhary, Manglis. Siberia: Bologna (2008); Enisejsk; Omsk; Tomsk; Kolyvan; Loktevsk; Minusinsk; Semipalatinsk; lac Zajsan-nor Ajaguz (Sumakov, 1930); Loktewsk and Irtysch River nr. Buchtarminsk (Gebler, 1830).

Georgia: Georgia (Bologna, 2008; Fekrat & Morrades Awal, 2012); Borshom (Schneider & Leder, 1878); Azkhur (Schneider & Leder, 1878); Tbilisi (Sumakov, 1913, 1930); Lisi Lake (Sumakov, 1930); Shirakis vabe Vashlovanis Res., N41°12'38.0", E046°26'10.6" (MAB); Gomboris K'edi Khashmi, Zalieti, N41°44'57.5", E045°08'24.1" (MAB); Gomboris, Norio (MAB); Gomboris, K'edi btw. Gombori and Talavi, 863 m, N41°51'36.3"–E045°14'21.7" (MAB); Mtzchet (Sumakov, 1930); Elisabetpol (Schneider & Leder, 1878; Sumakov, 1930); Elizabetpol, Geogtana, Arexes valley (ZIN).

Armenia: Armenia (Gemminger & Harold, 1870; Borchmann, 1917; Iablokoff-Khnzorian, 1983; Bologna 2008; Fekrat & Morrades Awal, 2012); Yerevan (Sumakov, 1913, 1930); Ararat, Ararat plain NE (MNHN); Ararat, Gorovan desert (CS); Ara-Ler, (CS); Arzhakan (MCNV); Garni, Gherand Monastery (MCNV); Meghri region, Tkhkut (CS); Zachkadzor (MAB); Djurakani (MAB); Khosrov (MAB).

Azerbajan: Azerbajan (Bologna, 2008); Muganskaja steppe (Sumakov, 1930); Lenkoran (Ménétriés, 1832; Sumakov, 1930).

Turkey: Turkey (Bologna, 1991b, 2008; Fekrat & Morrades Awal, 2012); Anatolia (Baudi di Selve, 1878b; Borchmann, 1917; Mader, 1927; Kuzin, 1954; Horion, 1956; Marcuzzi & Turchetto Lafisca, 1981; Geisthardt, 1989); European Turkey (Waltl, 1838; Mader, 1927; Sumakov, 1930; Kaszab, 1967; Bologna, 2008); Edirne (Kaszab, 1959; Özbek & Szaloki, 1998); Edirne, Ipsala (Bologna, 1979); Tekirdağ, Saray (Bologna, 1979); Gelibolu (ZMHB); Çanakkale (Özbek & Szaloki, 1998); Çanakkale, Alanköy, 10 km E vs. Can (MABa); Çanakkale, Truva (Bologna, 1979; CM; MAB); Çanakkale, 7 km S Ayvacik, N39.58298°–E26.49738° (MAB); Çanakkale, Intepe, 10 km S Çanakkale, N40.04135°–E26.34933° (MAB); Istanbul (Özbek & Szaloki, 1998; BMNH); Istanbul, Buldere (BMNH); Istanbul, Kadi Keni (MCZR); Istanbul, Resadiye env., Alemdağ (Bologna, 1979; MAB); Bursa, Ülu dağ (CFR; ZMHB; ZSM); Bursa, Hasanköy (MAB); Bursa, Karacabey (Kaszab, 1941); Adapazari (Özbek & Szaloki, 1998); Adapazari, Kocaeli (CS); Adapazari (BMNH); Adapazari, Sapanca (Bologna, 1979); Çankırı, Cerkes (CS); Çankırı, Ilgaz (BMNH); Çankırı, Ilgaz Corgun (CS); Kastamonu, Ilgaz Dağlari N, river 5 km N of Sümenler, N41 04 30.9, E33 18 59.3 (MABa); Sinop, Küre Dağlari, 3 km S of Çakildak, Dranaz Geçidi N, N41 44 40.5, E34 55 20.4 (MABa); Sinop, Durağan, Km 10 SE, rd to Vezirkoprii (CA); Sinop (Özbek & Szaloki, 1998; BMNH); Sinop, Dranaz Dağ (Bologna, 1979; MAB); Çorum (Bologna, 1979; BMNH; MAB); Çorum, Süngürlü (MAB); Samsun (CMAL); Amasya, Saraycık env. (MAB); Amasia (MAB; MNHN); Tokat, Almuş (MAB); Tokat (Sumakov, 1930; MNHN); Trabzon, Zigana geç, (CS); Ordu (Özbek & Szaloki, 1998); Ordu, Ünye (Bologna, 1979); Giresun, 4 km NE of Sebinkarahisar, N40 18 57.7 E38 27 04.6

(MABa); Gümüshane, 10/20 km NW Bayburt (MAB); Gümüşhane (CA); Artvin (Sumakov, 1930; Özbek & Szaloki, 1998); Daratshitshag (Sumakov, 1930); Artvin, nr. Yusufeli (CMAL; CS); Artvin, Ardanuç env. (Bologna, 1979; MAB); Kars, btw Kars and Ardahan (CFR); Kars, 20 km N Ardahan (ZSM); Kars, nr Göle (ZSM); Kars, Selim (UE); Kars, 20 km SW Sarikamiş (MAB); Kars, Sarikamiş (MAB); Kars, Sarikamiş, Ormanli (UE); Kars, Igdır, 20 km W, Aras Valley (SMNS); Balıkesir, Deninkapı (MAB); Bursa, Gemlik env. (MAB); Bilecik (Özbek & Szaloki, 1998); Bilecik, Osmnaneli (Bologna, 1979); Bilecik, Pazarryeri (Bologna, 1979); Bilecik, 1.5 km NE Bozüyuk, N39.92305°–E30.00100° (MAB); Bilecik, Zemzemye, 15 km E Bozüyuk, N39.88461°–E30.26712° (MAB); Bilecik, rd 605, 1.5 km N Bilecik, N40.18471°–E29.96996° (MAB); Kütahya (Bytinski-Salz, 1956; Bologna, 1979); Kütahya, Simav (MRSN); Kütahya, 15 km S vs Afyon (MABa); Kütahya, 10 km S Simav, rd to Usak (CA); Eskişehir (Özbek & Szaloki, 1998); Eskişehir, 19 km W Sivrihisar (Bologna, 1979; MAB); Ankara, Gordion, N39.65087–E32.00267 (MAB); Ankara, Sereflikoçhisar (MSNM); Ankara, Yenidoğan, 10 km E Polatli, N39.68728–E32.26473 (MAB); Ankara, 15 km W Bahce, N37.16694°–E36.43947° (MAB); Ankara (Sumakov, 1930; Kaszab, 1941; Özbek & Szaloki, 1998); Ankara, Baraj (Kaszab, 1959); Ankara, Ankara airport (Bologna, 1979; MAB); Ankara, Moğan gölü (Kaszab, 1959); Ankara, Kalecik (Bologna, 1979); Ankara, Kazan (Bologna, 1979); Ankara, Gorum (Bologna, 1979); Ankara, 5/15 km S Kaikik (MAB); Ankara, Sincan (MAB); Ankara, Kızılkahama (NHMW); Ankara, Bala (Kaszab, 1959); Ankara, 2 Km SE Bala (to Kirşehir), 39,53500°N–33,14891°E (MABa); Ankara, Garipaşa (BMNH); Ankara, Beynan, S of Ankara (BMNH); Kırıkkale, btw Kırıkkale and Kalecik (CS); Kırsehir (Bytinski-Salz, 1956); Kırsehir, btw Kırsehir and Nevsehir (CS); Kirşehir, rd to Boztepe 3 km NE, N39.18123 E34.20654 (MABa); Kirşehir, rd Yerkoy to Kirşehir, N39°24’36”–E34°15’11” (MAB); Kirşehir rd to Boztepe 3 km NE, N39.18123 E34.20654 (MABa); Yozgat (Bologna, 1979; Özbek & Szaloki, 1998); Sivas (IRSNB); Sivas, 20.5 km NE Zara, N39.95830 E37.94251 (MABa); Sivas, 35 km S Sivas Yağdomduran geç., N39.32280 E37.13527 (MABa); Sivas, Köse Dağlari, 4 km NE of Şarköy, N40 02 12.8, E38 02 09.0 (MABa); Sivas, Ak Dağ (Sumakov, 1930); Erzincan (Kaszab, 1968a; Özbek & Szaloki, 1998; MAB); Erzincan, 5 km W Alaküse (MAB); Erzincan, nr. Pelitli, N39°36’07”–E39°56’67” (MAB); Erzincan, Iliç (UE); Erzurum, Vican nr. Tercan (ZSM); Erzurum, Kopdağı geç. (Bologna, 1979); Erzurum, SE Horasan, nr. Yukai, Tahiorhak, 39°52’N–42°15’E (CPR); Erzurum (Bologna, 1979; Özbek & Szaloki, 1998); Erzurum ca 20 km S Çat, N39.59642 E40.92266 (MABa); Erzurum, 38 km S Çat, N39.39109 E41.01530 (MAB); Erzurum, Ispir (CS); Erzurum, 10 km N Tortum (MAB); Erzurum, 6 km E Altunbeni? (MAB); Erzurum, 2 km NW Aşkale vs Bayburt, N39.94143 E40.63210 (MABa); Izmir (Gadeau de Kerville, 1939; Bologna, 1979; Özbek & Szaloki, 1998; MAB; MSNV); Izmir, Bornova (Bologna, 1979; MAB); Izmir, Gaziemir (MAB); Izmir, Narlidere (Bologna, 1979); Izmir, Kelmapaşa (Bologna, 1979); Izmir, Gümüssuyu (Bologna, 1979); Izmir, Doğanlar (Bologna, 1979); Izmir, Selçuk (MSNM); Izmir, Selçuk, Maryemane (Bologna, 1979; CMAL); Aydin, Kuşadasi (SMNS; ZSM); Aydin, Milet (CM); Aydin, Söke (FSAG); Denizli, Pamukkale, N37.92359°–E29.11583° (MAB); Denizli, nr. Pamukkale (CMAL); Denizli, Pamukkale, Hierapolis (CM); Denizli (SMNS); Denizli, Kazikbeli geç.(MABa); Aydin, Kusadasi (IRSNB); Aydin, 20 km W Pinarcik (MAB); Manisa (Bologna, 1979; Özbek & Szaloki, 1998); Manisa, Osmancali (Bologna, 1979); Manisa, Akhisar (Bologna, 1979); Manisa, Boz Dağ (MSNV); Manisa, Kula (MAB); Isparta (Bologna, 1979; Özbek & Szaloki, 1998; MAB); Isparta, Eğridir (Bologna, 1979; MAB); Konya, Sultan Dağ (Bologna, 1979; MAB); Konya, 4 km S Hadim, rd to Ermenek (CA); Konya, 20 Km W di Ermenek (CA); Konya 43 km SE (USDA); Konya, 30 km W Bozkır (CA); Konya, Kireli (MAB); Konya, Bozkir 30 km W, Sorkum (MABa); Konya, 6 km E of Kösere, gorge near Çakillar, N37 23 33.8 E34 18 37.5 (MABa); Konya, Tüz Gölü, Baykan (MAB); Konya (Bytinski-Salz, 1956; Bologna, 1979; Özbek & Szaloki, 1998; MAB); Konya, Sultandağ, Akşehir (MAB); Konya, Kadinhani (MAB); Konya, Meram (Kaszab, 1968a); Konya, Kizilören (Bologna, 1979); Konya, btw Konya and Beyşehir, N37.87948°–E32.29121° (Bologna, 1979; MAB); Konya, Üçpinar, 15 km E Beyşehir, N37.83840°–E31.85504° (MAB); Konya, 5.6 km W Konya to Bevshevi, N37.88299°–E32.35537° (MAB); Konya, Ereğli, Gaybi (Kaszab, 1968a); Niğde (Özbek & Szaloki, 1998); Nidğe, Bor (Bologna, 1979); Niğde, Çiftehan (MAB); Kavac, Hacilar geç. (CMAL); Nevşehir, W Topkapi, N39.00613°–E34.80914° (MAB); Nevşehir, 5 km E Urgüp (MAB); Kayseri, Bakırdağı, Gezbeli geç. (CA); Kayseri, 5 km S Sarız, N38.42338 E36.46996 (MABa); Kayseri (Özbek & Szaloki, 1998; ZMHB); Kayseri, Erciyes Dağ (Ganglbauer, 1905); Kayseri, Talas (Kaszab, 1968a); Kayseri, btw Kayseri and Adana (SMNS); Tunceli (Kaszab, 1968a; Özbek & Szaloki, 1998); Tunceli, btw Tunceli and Ovacik (Kaszab, 1968a); Tunceli, Pülümur geç. (Bologna, 1979; MSNV); Tunceli, Pülümür, Pülümür geç. N slope, N39.53109 E39.90332 (MABa); Tunceli, Pülümür geç. 4 km south (MSNM); Tunceli (Özbek & Szaloki, 1998; MAB); Malatya (Özbek & Szaloki, 1998); Malatya: Sultansuju Hara (Kaszab, 1941); Malatya, btw. Malatya und Darende (Kaszab, 1968a); Adiyaman, Gölbasi env. (MAB); Adiyaman, Küyücak (MAB); KaramanMaraş, W Göksun, N38.13310°–E36.68208° (MAB); Kahramanmaraş (Kaszab, 1968a; Özbek & Szaloki, 1998); Kahramanmaraş, 29 km N Göksun (CA); Kahramanmaraş, 7 km S Tufanbeyli vs. Göksun (MABa); Kahramanmaraş, 1 km N Göksun, N38.06319 E36.47049, (MABa); Kahramanmaraş, 17 km NW Nurhak, upper valley slope N Nurhak Dağlari, N38.04531 E37.40934 (MABa); Bitlis, Kuzkunkiran geç. (MAB); Bingöl, 8 km NE vs Erzurum, N38.93945 E40.63694 (MABa); Muş, Buğlan geç. (CS); Muş (UE); Van, Yucari Narica (CS); Van, nr Tevakli (CPR); Van, along Van Lake (ZSM); Van, Kavusçahap dağ., Koşat env. (MSNG); Van, Muradiye-Yeniköy, N390308.4 E434541.7 (MABa); Van, rd to Çatak after Gorentah Köyu (MNHN); Muğla, Fethye, Okaccöy (C. Whitehead); Burdur, Gölhisar, 120 km W Antalya, 7 km SW Altinavavla N36° 57’40”–E 29°27’53” (CJ); Muğla, Marmaris (Bologna, 1979; MAB); Muğla (Özbek & Szaloki, 1998); Muğla, Köyfegiz (Bologna, 1979); Muğla, Fethiye (Bologna, 1979); Muğla, Kemer (MAB); Antalya (Özbek & Szaloki, 1998); Antalya, 120 km W Antalya, 7 km SW Altinyayala, N36°57’40”–E29°27’53” (MAB); Antalya, Finike (Kaszab, 1968a); Antalya, Elmali (ZSM); Antalya, Termessos, nr. Korkuteli (SMNS); Karaman (FSAG); Akseki, Bell geç. (MAB); Akseki, Cevirlı (MAB); Içel, Sertavul geç. N36.80401–E33.32409 (MAB); Içel, Mut (CA; MAB); Içel, Silifke, btw Ortagoren and Mut (CS); Içel, Gedik, 3 km N Mut, N36.67494°–E33.48186° (MAB); Içel. Büyückeceli (MAB); Içel, Anamur, Kalediran (CFR);

Içel, Silifke, Göksü Canyon (CK); Içel, Güzeloluk (CS); Içel, Çamlyayla (CMAL; CS; MSNV); Içel, btw Çamliyayaa nd Gülek, N37.15750°–E34.77396 (MAB); Içel, btw Tarsus and Çamlyayla (CS); Içel, Mersin (MAB); Içel, Bulgar Dağlari (Sumakov, 1930; Kaszab, 1968a); Adana (Özbek & Szaloki, 1998; MNHN); Adana, nr Pozanti (CS); Adana, Pozanti (Bologna, 1979; MAB); Adana, Gülek, (Bologna, 1979; MAB); Adana, Saimbeyli (MCNC); Adana, Aspendos (MCNV); Adana, nr Hetimova, N18°15–E36°25' (CPR); Adana, 10 km E Tufanbeyli, N38.20261 E36.05783 (MABa); Adana, slope E Küçükgezbeli geç, N38.53534 E35.51755 (MABa); Adana, 42 km from Adana (IRSNB); Adana, Ceyhan (Kaszab, 1941); Hatay (Kaszab, 1968a; Özbek & Szaloki, 1998); Hatay, Akbèz (MNHN); Hatay, Gavur dağlari (Kaszab, 1959); Gaziantep (IRSNB); ŞanlıUrfa (Özbek & Szaloki, 1998); ŞanliUrfa, Ceylanpinar (Bologna, 1979); Diyarbakır (Kaszab, 1941; Bologna, 1979); Cizre (Kaszab, 1968a); Mardin (Özbek & Szaloki, 1998); Mardin, Midyat (Bologna, 1979); Hakkari, 30 km N of Hakkari (SMNS); Hakkari, Habur Deersi valley, S of Beytyşşebap (ZSM).

Lebanon: Bmehraya, Chouf (MAB); Baaalbek, El Nahle (MAB).

Syria: Syria (Marseul, 1870, 1872; Baudi di Selve, 1878b; Sumakov, 1915, 1930; Geisthardt, 1989; Bologna, 2008); Alep (MNHN); Jabal ad Duruz (CA; MAB); Damascus, 20 km NW (NHMW).

Israel-Palestine: Israel (Bologna, 2008). We examined some specimens several years ago, and identified as *M. quadripunctata*. It was impossible for us to check them again, so we are unable to define that they belong to *M. quadripunctata* or to *M. cernyi*. At least, two localities of northern Israel (Hermon Mt.; Golan), where these specimens have been collected, are characterized by more mesic habitats where also *M. quadripunctata* could exists. Bodenheimer (1934) recorded it from Kiryath Anavim and Chikatunov (1999) quoted this species from the following Israeli and Palestinian localities, but probably most of these records refer to *M. mediorientalis* and *M. cernyi*: Upper Galilee, Lower Galilee, Golan Heights, Mount Hermon, Carmel Ridge, Northern Coastal Plain, Central Coastal Plain, Judean Hills, Northern Negev, and Central Negev.

Jordan: Jordan (Katbeh-Bader, 1996; Bologna, 2008). Also the citations from Jordan could be referring to *M. cernyi*.

Iraq: Iraq (Derwesh, 1965; Pripisnova, 1987; Sadykov, 1989; Bologna, 2008); Mesopotamia (Baudi di Selve, 1878b; Sumakov, 1930; Kuzin, 1954). Mosul, Sulaimaniya (Al-Ali, 1977); Al-Sulaymaniyya, Penjwin (BMNH). Possibly some of the above citations refer to other species, such as *M. cernyi* and *M. mediorientalis*.

Iran: Iran (Dejean, 1837; Gemminger & Harold, 1870; Beauregard, 1890; Borchmann, 1917; Mader, 1927; Sumakov, 1930; Horion, 1956; Marcuzzi & Turchetto Lafisca, 1981; Iablokoff-Khnzorian, 1983; Pripisnova, 1987; Sadykov, 1989; Özbek & Szaloki, 1998; Bologna, 2008; Serri *et al*., 2012). Mārsābad, Aslanduz (Sumakov, 1930); Azarbajgian (Kuzin, 1953); E Azarbaijan (Morrades Awal, 1997; Fekrat & Morrades Awal, 2012); Azarbajgian, Sharghi (HMIM); Maku, Qaraziaodin 39°20'N–44°25'E (MABa; TMU); 2 Urmia, Mts nr Rezayeh (NHMW); Takhab, N36°32'–E46°48' (CS); Tabriz (CFR); Gilan, Deilaman (CA); Kermanshah (Morrades Awal, 1997; Fekrat & Morrades Awal, 2012); Hamedan (IRSNB); Teheran (Morrades Awal, 1997; Fekrat & Morrades Awal, 2012); Teheran, Elburz Mts., Ov Zanak-Ski, 11 km N Ab Ali (MCNV); Teheran, Elburz Mts., Pardakan (NHMW); Teheran, Elburz Mts., Karag, N36°14'–E51°19 (CS); Teheran, Elburz, Taleghan (MABa); Teheran, Elburz Mts., valley E of Fasham (Axentiev, 1985); Teheran, Golhak (MSNV); Teheran, Firozkuh rd to Namroud (HMIM); Teheran, Damavand (HMIM); Teheran, Ahar (HMIM); Teheran, Hashtgerd (HMIM); Theran, Pass N Gachsar (CA); Teheran, Elburz Mts, Ab-Ali (Kaszab, 1957; MAB); Teheran, Elburz, S of Chalus (MAB); Mazandaran (Morrades Awal, 1997; Fekrat & Morrades Awal, 2012); Mazandaran, Demavend Mt., Rine (= Reiné, Reyneh), Damavand (MAB); Mazandaran, Haraz to Baladeh, 9 km E Baladeh, N36 12 12–E51 52 27.6 (HMIM); Mazandaran, Elburz Mts., Marzanabad, 800 m, N36°26'–E51°17' (CS); Mazanderan, Bastam (Kaszab, 1968b); Semnan, Damghan, Ahvanu (Makhan, 2012); Golestan (Fekrat & Morrades Awal, 2012); Golestan, Bojnurd, Sepid btw. Bojnurd and Tappenye (NHMW); Esfahan (Morrades Awal, 1997); Esfahan, Fereyduonshahr, Kamaran, N32 44 27.2–E50 00 43.3 (HMIM); Fars, Shiraz, Dast-e-Arzhan, 7-15 km W, 20-26.6.03 (CK); Golestan, Bojnurd, Chamanbid, 1500 m, 29.6.2003 (CA); 4 Mashad, Fazel, 9 km W Mashad (MCNV); Khorasan, Mashhad (MABa); Khorasan Razavi, Sabzevar (Fekrat & Morrades Awal, 2012); S Khorasan, Ferdos (MABa); Fars, Firouzabad, Chalus (Kaszab, 1968b); Fars, Shiraz, Zenjun, 40 km W Shiraz (MCNC); Fars, Descht-e-Arjan (MAB); Fars, Quli, Qush Pass (MAB); Balouchestan (Morrades Awal, 1997; Fekrat & Morrades Awal, 2012); this last record needs confirmation. One locality not identified is Tchicht cherif (Kaszab, 1973).

Turkmenistan: Turkmenistan (Kaszab, 1973; Bologna, 2008; Fekrat & Morrades Awal, 2012). Transcaspia (Borchmann, 1917; Kaszab, 1973): River Sumbar (Reichardt, 1934); Ashkhabad (Reitter, 1889; Hauser, 1894; Sumakov, 1930); Tekke (Heyden & Kraatz, 1883; Heyden, 1893); Beum-basch (Reitter, 1889; Heyden, 1893; Sumakov, 1930); Chodzhakala (Reitter, 1889; Sumakov, 1930); Chodzchakent (Hauser, 1894); Kara Kala (Reichardt, 1934); Geok-Tepe (Hauser, 1894); Kizyl-Arwat (Hauser, 1894). Other not identified localities from Turkmenistan are: Caracal, Bagir, Firyuza, Sulukly (Reichardt, 1934).
Recorded generically from Central Asia or Turkestan (a late region which included the present states of Central Asia) (Heyden, 1881b, 1887a; Dokhtouroff, 1889; Sumakov, 1915; Zakhvatkin, 1931; Horion, 1956; Marcuzzi & Turchetto Lafisca, 1981; Geisthardt, 1989).

Kazakhstan: Kazakhstan (Pripisnova, 1987; Sadykov, 1989; Kolov, 2003; Nicolaev & Kolov, 2005; Bologna, 2008; Fekrat & Morrades Awal, 2012); S Kazakhstan (Kuzin, 1954); W Kazakhstan (Kuzin, 1953); Zhetysu (= Semiretshje) (Sumakov, 1930); Viernyj (Sumakov, 1930); Kopal (Sumakov, 1930); Shymkent, 25 km S Shymkent, on M39 rd (CCO); Shymkent, Aksu-Dzhabagle, Itate N.R., Aksu Gorge (CCO); Taraz, Zambyl, Karatar Mts, 900 m, Kuyuk pass (CCO); Taraz, Zambyl, Ters Lake (CCO); Quokishbay-Topar, N44°00–E75°22' (MAB); Ayakoz R. bridge near Qopa village, 29 km NNW Aqtoghaiy N47,11°–E79,31° (MABa); Bati kul (CCA; CMI); Malowodnoje (Heyden, 1893); Äulieköl, Thorgay, Tandò station (Sumakov, 1930).

Uzbekistan: Uzbekistan (Kaszab, 1973; Bologna, 2008; Fekrat & Morrades Awal, 2012; HNHM); Buchara, Hissar Mts.,

Kshtur (Sumakov, 1930); Margelan (Heyden, 1881a, 1893; Sumakov, 1930); Jizzakh (Sumakov, 1930); Terskejò Samarkand (Sumakov, 1930); Samarqand, Aman-Kutan (CFR); Samarqand, Jampi Aryk (CFR); Samarqand, Aktash, ca. 60 km NE Taskent (CFR); 2 Samarqand, Zevavshan pass (CA); Derbent (MAB); 3 Anan-Kutan, 20.5.1974 (MAB); Tashkent (Heyden, 1893); Tashkent, Mt. Chingan W slope, 75 km NE Tashkent (MZUF); Tashkent, Zingan-ca, 80 km NE Tashkent (CFR); Syrdarya, Talas Riv (Sumakov, 1930); Kizylkum desert: Kara-Mulla and Kajdak, Tshimkent, jugum Alexandri; Mujun-kum desert: Akur-tjube, Tashkent (Sumakov, 1930). Locality not identified: Tashlauò Soch (Sumakov, 1930).

Tajikistan: Tajikistan (Zaripova, 1972; Kaszab, 1973; Bologna, 2008; MCNV).

Afghanistan: Afghanistan (Iablokoff-Khnzorian, 1983; Pripisnova, 1987; Özbek & Szaloki, 1998; Bologna, 2008; Fekrat & Morrades Awal, 2012). Central Afghanistan (Kaszab, 1973). Herat, 150 km E, Tchicht Cherif (Kaszab, 1973); Qubeh, 20 km S, Darren-Gazak (Kaszab, 1973); Toulak (Kaszab, 1973).

Pakistan: This species is recorded from Pakistan by Iablokoff-Khnzorian (1983), but this citation is doubtful.

Kyrghizistan: Kyrghizistan (Heyden, 1881a; Bologna, 2008); Ur-Maral (Sumakov, 1930); Ala-kul Lake (Sumakov, 1930); Djalalabad, 15 km N Sovietskoil (MAB); Tien Shan, Chimgan Mts. (Hauser, 1894); Tian Shan Mts., Kirghizzskj range, 100 km S of Frunze, Sosnovka (MAB); Chatkal reserve Besh Aral; Suusamyr hr., Gorge. Sary-Bulak, Naryn, Kara-Kol, Przhevalsk, tract Karasaz; Teploklyuchenka; Sary Jaz, p. Inylchek p. Small Taldysuu, Osh Province., Suzak, Uzgen, Chui dollars., Gorge Kegety (Sadykov, 1989). Pic (1935c) recorded the species from "Tien-shan, Uteh-bozau", a locality not identified.

Mongolia: SW Mongolia (Pripisnova, 1987; Sadykov, 1989; Özbek & Szaloki, 1998; Nikolaev & Kolov, 2005); Kosogol (Sumakov, 1930).

China (Xinjiang): China (Pripisnova, 1987; Sadykov, 1989); Xinjiang (Kuzin, 1954; Iablokoff-Khnzorian, 1983; Du *et al.*, 1997; Kolov, 2003; Nicolaev & Kolov, 2005; Bologna, 2008); Dushanzi, S of Junggar (CR); Mu-Lei County, Diwopu, N43°48.165 E90°24.345 (MABa); Mori County (NKUM); Xinjiang, Mori County, Diwopu, N43°48.165–E090°24.345 (HBUM); Mori County, Querenxiang, N44°08.038, E090°08.026 (HBUM); Western Mori County, N43°50.154–E090°16.099 (HBUM); Kaba County (NKUM); Kaba County (NKUM); Kaba County, Tiereketixiang (NKUM), Kaba County, Xiao Baiyanggou (XJUM); Changji (HBUM; XJUM); Changji, Jimsar County, Wucaiwan (HBUM); Ili, Huocheng County, Guozigou (HBUM); Ili, Guozigou (HBUM); Fuyun County (HBUM); Wenquan County (HBUM); 10 Km W of Beitunzhen (HBUM); Tokkuztara, Kuerdening (HBUM); Tokkuztara, Aga'ersenxiang, N43°25.448–E082°28.056 (HBUM); Qapqal, Qiongbola, N43°32.570–E081°00.495 (HBUM); Xinyuan, Ku'ersayicun, N43°24.575–E083°15.780 (HBUM); Gulja, Upper Hudiyayuzicun, N43°56.459–E081°26.685 (HBUM); Gulja, third middle school, N43°58.476–E081°29.829 (HBUM); Nilka, Nilekezhen, N43°46.654–E082°31.031 (HBUM); Qitai, Xibeiwanxiang, N44°11.301–E089°33.037 (HBUM); Qitai, Biliuhexiang, N43°42.199–E089°35.309 (HBUM); Fuhai, Kalamagaixiang, N46°41.762–E087°45.338 (HBUM); Burqin, Raibow Beach, N47°48.334–E086°43.733 (HBUM); Burqin, N48°30.438–E087°08.351 (HBUM); Tacheng, Baketu Port, N46°40.989–E082°47.917 (HBUM); Tacheng, Kamusite, N46°55.766–E082°56.514 (HBUM); Yumin, 161 tuanchang liulian, N46°07.801–E082°41.595 (HBUM); Yumin, N46°23.832–E082°51.134 (HBUM); Yining, Ining H-Shien, 44'06"SS–81'56" (MAB); Yining (Ballion, 1878; Sumakov, 1930; Pic, 1935c); Sairam (Ballion, 1878; Heyden, 1881a; Sumakov, 1930); Soutcheou Kausu (TMNH).

Mylabris schreibersi

As discussed by Bologna (1991a) it was erroneously recorded from Egypt (Marseul, 1870, 1872; Sumakov, 1915; Kuzin, 1954; Alfieri, 1976), Syria (Sumakov, 1915, 1930; Mader, 1927; Kuzin, 1954), Libya, Cyrenaica (Falzoni, 1923), Israel (Dead Sea Area: Chikatunov, 1999), Spain (Sumakov, 1915; Mader, 1927; Pardo Alcaide, 1950), and Sardinia (Sumakov, 1930; Kuzin, 1954). Generically cited from Northern Africa (also as Barbaria) (Gemminger & Harold, 1870; Borchmann, 1917; Roepke, 1917).

Morocco (and Spanish Moroccan territories): Morocco (Pardo Alcaide, 1950, 1954; Kocher, 1956; Kuzin, 1954; Bologna, 1991a); Rif, Ketama (FSAG); (Spain) Melilla (Escalera, 1914; Sumakov, 1930; MCNV; MCZR); (Spain) S of Melilla, Mt. Aroui (CF); Nador, Selouane (MAB); Guercif, ca. 30 km W Guércif on rdP1 34,23668N–3,69266E, (MAB); Oujda (Sumakobv, 1930); Moyen Aytlas (MCZR); Meknès, Volubilis (MSNV); Meknès, Foret de Jaaba (MAB); Oued Tizguit, Ifrane (Iablokoff-Khnzorian, 1954); Meknès, Azrou (Sumakov, 1934; MAB; MSNV); Meknès, rdAzrou-Sidi Ali, 40 km S Azrou (CS); Meknès, nr. Khénifra (CS); Meknès, Aguelmane, Sidi Ali (CSE); Meknès, S Timahdite (CR); Meknès, ca. 34 Km SE Meknès on rd P21, btw. Meknès and El Hajeb (MABa); Beni-mellal, Tilougguitte (MAB); Rabat (Sumakov, 1934); Meknès, Beni-Mguild (Escalera, 1914; Sumakov, 1930); Casablanca (Sumakov, 1934); Marrakech (Escalera, 1909; Sumakov, 1930); Marrakech, Glaoui (Escalera, 1914; Sumakov, 1930); Haut Atlas, Taroudant, NE Missirat 30,771787N–8,854877E (MABa); Tizi-n-Tichka N-7,3684733333 E31,308308333 (MABa); Haut Atlas, Ait Sarghint (MAB); Haut Atlas, Azilal, Ar M'Hammed, Ifri n'Tourya env. (MAB); Atlas Mts. (Cros, 1939).

Algeria: Algeria (Marseul, 1870, 1872; Baudi di Selve, 1878b; Beauregard, 1890; Sumakov, 1915; Falzoni, 1923; Kuzin, 1954; Bologna, 1991a; BMNH; IRSNB); Oran (Chevrolat, 1840); Tlemcem (IRSNB); Frenda (IRSNB); Médea, SW Ksar El Boukari (BMNH); Médea, Beni Slimane env., Souk El Arb (MAB); Ghardaia, El Goléa (BMNH); Batna (MAB); Batna, Hodna (CMO); Batna, Ain Touta (IRSNB); Batna, Djebel Aurès (MRSN; MCZR); Batna, 10 km N Batna (MAB); Batna, Merouna env. (MAB); Batna, Col de Telmet (MAB; IRSNB); Batna, El Khantara (MSNV); Biskra (IRSNB); Monts de Belezma (MAB); Tizi Ouzou, Yakouren, Jebel Dayrem (IRSNB); Tizi Ouzou, Yakouren (Sumakov, 1930; IRSNB); Béjaja (IRSNB); Kabylie, btw. Mchdallah and Bordj-bou-Arreridj (MAB); Bordj-Bou-Arreridj (MSNV); Bordj-bou Arreridj, El Achir (MAB); Sétif, Ain

Azel (MAB); Sétif, env. Djemila (MAB); Costantine (MSNG); Alger (Chevrolat, 1840); Annaba (Chevrolat, 1840); Tebessa, 15 km W Bou-Chebka (MAB).

Tunisia: Tunisia (Sumakov, 1930; Kuzin, 1954); northern Tunisia, S to Fériana (Bologna, 1991a); Ain-Draham, Jendouba (CMAL); Tunis (MSNG); Sousse (Lefèvre, 1883); Monastir (Lefèvre, 1883); Siliana, Al Ksour, El Fek (CS); Siliana, Maktar (CMAL); El Kef, rd btw Thala to El Kef (P17), about 12,5 Km Thala N35,67147° E8,59291° (MABa); Kasserine, 15 km SE Bou Chabka (MAB); Kasserine, Feriana env. (MAB); Kasserine, rd P15 btw. Feriana and Bou Chebka, ca. 4 Km after crossroad to Bou Chebka N35,01340° E8,58072° (MABa); Kasserine 10 km N, Oued El Hateb (CAR; CZ); Kasserine, Oued el Hatab (MAB); Kasserine, Thala, 10 Km W on rd to Haidra (CA).

Italy (extreme S Calabria and Sicily): Reggio di Calabria (Bologna, 1991a; MZFN); Reggio di Calabria, Palizzi calabro (Bologna, 1991a); Sicily (Gaubil, 1849; Reiche, 1860, 1866; Marseul, 1870, 1872; Gemminger & Harold, 1870; Bertolini, 1872; Baudi di Selve, 1878a, 1878b; Heyden, 1887b; Ragusa, 1898; Bertolini, 1904; Reitter, 1906; Sumakov, 1915, 1930; Borchmann, 1917; Falzoni, 1923; Mader, 1927; Porta, 1934; Kuzin, 1954; Bologna & Marangoni, 1990; Bologna, 1991a; Arnone, 1992; IRSNB; MAB); Trapani, Castelluzzo beach, N38°07'32.8" E12°43'47.6" (MABa); Trapani, San Vito Lo Capo (MAB); Trapani, Santa Ninfa (Bologna, 1991a); Trapani, Golfo Celano (Bologna, 1991a); Trapani, Campobello di Mazara (Bologna, 1991a; MAB); Trapani, Castelvetrano, Trinità (MSNT); Trapani, Castelvetrano (Bologna, 1991a; MCZR; MRSN; MZFN); Trapani, Selinunte (Bologna, 1991a); Palermo, Zingaro (CBV); Palermo, Villagrazia di Carini (Bologna, 1991a; MAB); Palermo, Partinico (MSNT); Palermo, Corleone (Bologna, 1991a; MSNT); Palermo, Balestrate (Bologna, 1991a; IAA); Palermo, Carini (MSNT); Palermo, Villagrazia di Carini (MSNT); Palermo, Isola delle Femmine (Bologna, 1991a; MSNT); Palermo, Gallo Mt. (Bologna, 1991a; MCZR); Palermo, Terrasini (Bologna, 1991a); Palermo, Bellolampo (Bologna, 1991a; MAB); Palermo, Mondello (Bologna, 1991a; IAA; MCZR); Palermo (Ragusa, 1898; Luigioni, 1929; Sumakov, 1934; Bologna, 1991a); Palermo town (MAB); Palermo, Albera (MRSN); Palermo, San Martino delle Scale (Bologna, 1991a; MSNT); Palermo, Mt. Cuccio, Val Paradiso (Bologna, 1991a; MSNT); Palermo, Ficuzza (Magistretti, 1943; Bologna, 1991a); Palermo, Rocca Busambra (Bologna, 1991a; MAB); Palermo, Bompietro (Bologna, 1991a); Palermo, Marosa (MAB); Palermo, Belmonte mezzagno (MSNT); Palermo, Piana degli Albanesi (MAB); Palermo, Bagheria (MSNT); Palermo, San Mauro Castelverde (Bologna, 1991a; MAB); Palermo, Lercara Friddi (MSNT); Palermo, Castelbuono (Magistretti, 1943, 1963; IRSNB; MAB); Palermo, Collesano (Bologna, 1991a; MAB); Palermo, Godrano, Cannitello (MSNT); Palermo, Cerda (MRSN); Palermo, Madonie Mts. (IRSNB; MSNT); Palermo, Gibilmanna (Magistretti, 1963; Bologna, 1991a); Palermo, Castelbuono (Magistretti, 1943; Bologna, 1991a; MRSN); Palermo, Gratteri (Magistretti, 1963; Bologna, 1991a); Palermo, Pollina Riv. (Bologna, 1991a; MAB); Palermo, Geraci siculo (Magistretti, 1963; Bologna, 1991a; MSNV); Enna, Nicosia (MSNV); Enna, Troina (MSNT; MSNV); Enna, Troina, Bosco di Troina (MSNT); Enna, Piazza Armerina (Bologna, 1991a; IAA); Caltanissetta (Magistretti, 1943; Bologna, 1991a; MZUB); Messina (Vitale, 1905; Bologna, 1991a); Messina, Milazzo (Magistretti, 1963; Bologna, 1991a; MAB); Messina, Rometta (Sumakov, 1934; Bologna, 1991a); Messina, Scuderi Mt., 1100 m (CBV); Messina, Biviere di Monte Soro (Magistretti, 1943; Bologna, 1991a); Agrigento (Magistretti, 1943; Bologna, 1991a; MCZR; MZUF); Agrigento, Sciacca (Bologna, 1991a; IAA); Catania, Taormina (Bologna, 1991a); Catania, Paternò, Contrada Petulenti (MAB); Catania, Randazzo (Bologna, 1991a); Ctania, Linguaglossa (Bologna, 1991a); Catania, Lentini (Bologna, 1991a; MRSN); Catania, Ramacca (Bologna, 1991a; MCZR); Catania, Caltagiorne Bosco San Pietro (Bologna, 1991a); Siracusa (Magistretti, 1943); Ragusa, San Pietro, Bosco (CBV); Siracusa, Noto (Assenza, 1891; Luigioni, 1929); Siracusa, Palazzolo Acreide (Bologna, 1991a; MSNV); Siracusa, Agusta (MAB); Siracusa, Agusta, Tauro Mt. (MAB); Siracusa, Sortino (MAB); Siracusa, Pachino (Magistretti, 1943; Bologna, 1991a).

Mylabris tauricola

Turkey: Turkey (Chikatunov, 1999); Anatolia (Sumakov, 1915; Mader, 1927); Tunceli, 18 km N Pülümür (MSNM); Tunceli, Pülümür geç., northern slope (MAB); Taurus Mts. (Marseul, 1870, 1872; Gemminger & Harold, 1870; Borchmann, 1917; Sumakov, 1930; Kuzin, 1954; MNHN); Adana, Pozanti (CC). Records from Syria (Marseul, 1870, 1872; Beauregard, 1890; Sumakov, 1915, 1930; Borchmann, 1917; Mader, 1927; Kuzin, 1954; Chikatunov, 1999) actually refer to southern Turkish Mts.

Mylabris tricincta

Recorded generically from northern Africa (Sumakov, 1915; Mader, 1927).

Spain: Algeciras (Sumakov, 1934; Pardo Alcaide, 1950). This record needs to confirm. Cited erroneously from Spain (Castilia), by Sumakov (1930).

Morocco: Morocco (Pardo Alcaide, 1950, 1954b; Kocher, 1956); Tanger (Dejean, 1837; Gemminger & Harold, 1870; Beauregard, 1890; Escalera, 1909; Borchmann, 1917; Sumakov, 1930); Tanger, Larache (Escalera, 1909; Sumakov, 1930; Kocher, 1956); Tetouan, Rif, Tatla Ketama (MAB); Tetouan, Rif, 10 km W Ketama (MAB); Tetouan, Rif, Bab Berred (MAB); Tetouan, Rif, rd btw. Al Hoceima and Midar, 10 km W Talamagait (MAB); Tetouan, Smir-Restinga (FSAG); Tetouan, Smir (IRSNB); Taza, Bab-bou-Idir (MAB); Taza, Jebel Tazzeka N.P., N34,02657° W–4,08063° (MABa); Rabat (Sumakov, 1934; MCNV); Rabat, Foret de Mamora (MAB); Izsaoura (MAB); Fes, Mischliffen (MAB; CLE); Meknès, 5 km S of El Hajeb (SMNS); Meknès, Foret de Jaaba (MAB); Meknès, Azrou (Sumakov, 1934; CSE; MAB); Meknès, Foret des Cedres, nr. Azrou (CS); Meknès, Azrou env. (CS); Meknès, Timahdite (Kocher, 1956); Meknès, Ifrane (CK; CPA; MAB); Oued Tizguit & Ifrane (Iablokoff-Khnzorian, 1954); Meknès, Volubilis (Kocher, 1956); Meknès, nr. Mischlifen, N33.40851 W5.10825 WGS 84, rd P7231, 1895 m, 19.5.2012 (MABa); Meknès, Imouzzèr, rd P5016, N33.64553 W4.98020 WGS 84 (MABa); Meknès,

Aguelmane, Sidi Ali (CSE); Meknès, Ain-Leuh env. (CS); Meknès, Khenifra (CS; MSNV); Meknès, Ain-Aicha (CF); Meknès, 20 km W Midelt vs Cirque de Jaffar N32,57947167 E-4,8557167 (MABa); Marrakesch, nr. Skhour-des-Radama (CF); Meknès, rd N8 ca. 10 km N of Khenifra, N32.99591 W5.65042 WGS 84 (MABa); Meknès, Khenifra 15 Km E (CA); Moyen Atlas, Ras-el-Ma (Sumakov, 1934); Moyen Atlas, Mrirt, (MAB); Beni Mellal, Tilouguitte, Sortie E de Tanga, N32.00206°–W06.10311° (MAB); Beni Mellal, Tilouguitte env. (MAB); Beni Mellal, El Had env., N32,069646–E5,911049 (MABa); Beni-Mellal, env. Zaouia-Temga, 19.v.1979 (MAB); Essaouira, Talmest (Kocher, 1956); Korifla (Kocher, 1956); Marrakech, Asni (CK); Marrakech, Haut Atlas, Imlil and Rifuge Netner (MSNV); Haut Atlas, Talas n'Tazart (MAB); Haut Atlas, Ait Sarghint (MAB); Haut Atlas, Tizi-n-Test (CS; CSE; MAB; MSNV); Marrakech (Escalera, 1909); Marrakech, Reraïa (Sumakov, 1934); Marrakech, Haut Atlas, Tizi-n-Test, Imerguene (MSNV); Marrakech, Haut Atlas, Tizi-n-Test, Arhbar (MSNV); Marrakech, Hat Atlas, Tizi-n-Test ca. 3 Km N to pass, N30,88327° W8,34676° (MABa); Marrakech, S of Taddert rd N9, N31.29064 W7.38161 WGS 84 (MABa); Marrakech, Haut Atlas, Oukaimeden and various localities env. (CS; MAB; MABa; MSNV); Marrakech, Haut-Atlas, Djebel Anngour (ZSM); Marrakesch, Haut Atlas central, N31.30059 W7.39149, (MABa); Marrakech, Jbel Siroua, nr. Tizi-n-Melloul N30,780838333 W7,64356 (MABa); Marrakech, Jbel Siroua, track to peak 20 km S-W Tachokchte, N30,742860 W7,609675 (MABa); Marrakech, Glaui (Escalera, 1909; Sumakov, 1934); Marrakech, Haut Atlas, rd Marrakech-Ouarzazate, Tizi-n-Tichka env. (CK; CS); Marrakech, nr. Tizi-n-Tichka, N31,308308333 W7,3684733333 (MABa); Marrakeck, Imi-n'Tanut (Escalera, 1909; Sumakov, 1930); Marrakech, Amismiz (Escalera, 1909; Sumakov, 1930, 1934); Ouarzarzate, M'Goun (Kocher, 1956); Agadir, Anti Atlas, Igheren (CM); Agadir, Taroudant, Haut Atlas, N30.83628 W8.87182 (MABa); Agadir, Taroudant, NE Missirat, N30,771787 W8,54877 (MABa); Taroudant, Jebel Siroua, trail to the peak, 20 km SW Tachokchte, N30.74286 W6.09675 (MAB).

Algeria: Algeria (Reiche, 1866); Tlemcen (Sumakov, 1934); Sétif, Djemila env. (MAB); Sétif, Ain Azel (MAB); Kabylie (Sumakov, 1934); Batna, 10 km N Batna (MAB); Batna, Col de Telmet (MAB); Marcounna (MAB); Biskra (IRSNB); Bou Saada (IRSNB).

Mylabris variabilis

Recorded generically from southern Europe (Gemminger & Harold, 1870; Baudi di Selve, 1878b; Beauregrad, 1890; Reitter, 1903, 1911; Sumakov, 1915; Borchmann, 1917; Mader, 1927; Schatzmayr, 1941; Kuzin, 1953, 1954; Živojinović, 1950; Dvořák, 1964; Dajoz, 1965; Kaszab, 1968b; Geisthardt, 1989; Kolov, 2003; Nikolaev & Kolov, 2005), eastern Europe (Baudi di Selve, 1878b; Kuzin, 1953, 1954), Caucasus (Ménétriés, 1832; Reitter, 1903; Sumakov, 1915; Borchmann, 1917; Mader, 1927; Schatzmayr, 1941; Kuzin, 1953, 1954; Dvořák, 1964; Novak, 1964; Dajoz, 1965; Iablokoff-Khnzorian, 1983; Geisthardt, 1989; Kolov, 2003; Nikolaev & Kolov, 2005).

Cited erroneously from northern Africa (Sumakov, 1915; Schatzmayr, 1941; Kuzin, 1953, 1954; Geisthardt, 1989; Nikolaev & Kolov, 2005) or Algeria (Mader, 1927); these citations probably refer to *M. tricincta* or *M. guerini*.

Spain: Recorded from the whole Iberian Peninsula (Rodriguez López Neyra, 1914), or its northern portion (Pardo Alcaide, 1950; Pérez-Moreno *et al*., 2003), but no detailed records from Portugal have been known. Spain (Dejean, 1821, 1837; Gemminger & Harold, 1870; Baudi di Selve, 1878b; Beauregard, 1890; Borchmann, 1917; López Colon, 1991); Pontevedra (Recalde *et al*., 2002); Salamanca (Sumakov, 1930; De la Fuente, 1933; Recalde *et al*., 2002; Pérez-Moreno *et al*., 2003; García-París & Ruiz, 2005); Salamanca, Béjar, Baños de Montemayor hacia Garganta (Rivas Mateos, 1897, see García-París & Ruiz, 2005); Salamanca, btw Arapiles and Pelagarcía (Redondo, 1915, see García-París & Ruiz, 2005); Léon province (Valladares & Salgado, 1983; Pérez-Moreno *et al*., 2003); Léon, Armunia (Valladares, 1984); Léon, Astorga (Valladares, 1984); Léon, Bárcena (Valladares, 1984); Léon, Felmín (Valladares, 1984); Léon, Gete (Valladares, 1984); Léon, Jiménez de Jamuz (Valladares, 1984); Léon, La Baña (Valladares, 1984); Léon, La Candamia (Valladares, 1984); León (Valladares, 1984); Léon, Lorenzana (Valladares, 1984); Léon, Matallana (Valladares, 1984); Léon, Ribaseca (Valladares, 1984); Léon, Sta. M del Condado (Valladares, 1984); Léon, Sta. M del Páramo (Valladares, 1984); Léon, Santibáñez (Valladares, 1984); Léon, Serrilla (Valladares, 1984); Léon, Valdela (Valladares, 1984); Léon, Vegacervera (Valladares, 1984); Léon, Velilla de la Reina (Valladares, 1984); Léon, Villanueva del Condado (Valladares, 1984); Léon, Villaobispo (Valladares, 1984); Léon, Villar de Mazarife (Valladares, 1984); Léon, Virgen del Camino (Valladares, 1984); Zamora (Recalde *et al*., 2002); Jaén (Ruiz & Avila, 1993; Pérez-Moreno *et al*., 2003); Granada (Ruiz & Avila, 1993; Pérez-Moreno *et al*., 2003); Granada, Puebla de Don Fadrique (MNHN); Valladolid (De la Fuente, 1933; Pérez-Moreno *et al*., 2003); Ávila, Sierra de Gredos (MAB); Burgos (Recalde *et al*., 2002); Palencia (Recalde *et al*., 2002); Segovia (López Colon, 1991; Pérez-Moreno *et al*., 2003); Madrid (Recalde *et al*., 2002; Pérez-Moreno *et al*., 2003; García-París *et al*., 2006); Madrid province (Graells, 1853, see García-París & Ruiz, 2005; Gorriz y Muñoz, 1882); Madrid, Sierra de Guadarrama, Cercedillas (NHMW); Madrid, El Escorial (Górriz y Muñoz, 1882; Sumakov, 1930; García-París & Ruiz, 2005); Madrid, Navacerrada, carretera de Cercedilla (Gómez Carrasco, 1888, see García-París & Ruiz, 2005); Ciudad Real (De la Fuente, 1933; Recalde *et al*., 2002; Pérez-Moreno *et al*., 2003); Cuenca (Martínez Sáez, 1873, see García-París & Ruiz, 2005; Gorriz y Muñoz, 1882; López Colon, 1991; Recalde *et al*., 2002; Pérez-Moreno *et al*., 2003); Cuenca, Tragacete (Champion, 1902, see García-París & Ruiz, 2005); Teruel (Recalde *et al*., 2002); Teruel, Tramacastilla, rd. to Albarracín (Navás, 1905, see García-París & Ruiz, 2005); Albacete, Sierra Segura, Molinicos (MNHN); Castellón (Torres Sala, 1962; Pérez-Moreno *et al*., 2003); Castellón, Canales (Champion, 1904, see García-París & Ruiz, 2005); Logroño province (De la Fuente, 1933; García-París & Ruiz, 2005); La Rioja (Champion & Chapman, 1904; De la Fuente, 1933; Pérez-Moreno & Cabrero Sañudo, 2001; Recalde *et al*., 2002; Pérez-Moreno *et al*., 2003); La Rioja, Calahorra (De la Fuente, 1933); La Rioja, Ribabellosa (De la Fuente, 1933); Soria (Champion, 1904, see García-París & Ruiz, 2005; Champion & Chapman, 1904; Pérez-Moreno *et al*., 2003); Navarra (Recalde *et al*., 2002; Pérez-Moreno *et al*., 2003); Navarra, Milagro (Gorriz y

Muñoz, 1881, 1882, 1902; García-París & Ruiz, 2005); Zaragoza (Gorriz y Muñoz, 1882; Champion & Chapman, 1904; Navás, 1904a; Melic & Blasco-Zumeta, 1999, see García-París & Ruiz, 2005; Recalde *et al*., 2002; Pérez-Moreno *et al*., 2003); Zaragoza, nr. Lecinena (MABa); Zaragoza, Cariñena (Gorriz y Muñoz, 1882, 1902; García-París & Ruiz, 2005); Zaragoza, Moncayo (Champion, 1904, see García-París & Ruiz, 2005; Navás, 1904a); Pirineos Mts. (Cuní Martorell & Martorell Peña, 1876 and Martorell Peña, 1879, see García-París & Ruiz, 2005; Gorriz y Muñoz, 1882; Pérez-Moreno *et al*., 2003); Huesca (Recalde *et al*., 2002); Huesca, Alcolea del Cinca (Navás, 1905, see García-París & Ruiz, 2005); Huesca, Barbastro (FSAG); Huesca, Berbegal (FSAG); Huesca, Sierra de Guara (Navás, 1904b; Gorriz y Muñoz, 1882; García-París & Ruiz, 2005); Huesca, Monzon (FSAG); Huesca, Almunia (FSAG); Huesca, Azamy (FSAG); Lérida (Recalde *et al*., 2002); Lérida, Almacelles (FSAG); Lérida, Fraga (FSAG); Lérida, Sierra del Cadi, N42°18'21"–E001°34' (MAB); Barcelona, Mataró (Salvañá Comas, 1870, see García-París & Ruiz, 2005); Girona, Sils (FSAG); Girona, Torroella de Montgri (SMNS); Girona, Ripoll (Ferrer Dalmau, 1903, see García-París & Ruiz, 2005); Girona, Rosas (Cuní Martorell, 1885, see García-París & Ruiz, 2005); Girona, Castelló d'Empúries (Cuní Martorell, 1885, see García-París & Ruiz, 2005); Girona, Cadaqués (Cuní Martorell, 1885, see García-París & Ruiz, 2005). The record from Cadiz (Sumakov, 1934; Pérez-Moreno *et al*., 2003) is doubtful and could be referring to the Maghrebian species *M. tricincta* or *M. guerini*.

France: France (Grenier, 1863; Gorriz y Muñoz, 1882); central and southern France, S of the line Le Croisic, Fontainebleau, Verdun (Sainte-Claire Deville, 1937; Dajoz, 1965); southern France (Olivier, 1811; Dejean, 1821, 1837; Gaubil, 1849; Baudi di Selve, 1878a); Bretagne: Ille-et-Vilaine: Bourg-des-Comptes (Houlbert & Betis, 1913); Morbihan: Taslé (Houlbert & Betis, 1913); Maine-et-Loire (Gallois, 1891); Maine-et-Loire: Aubigné; Montreuil-Bellay; Le Coudray-Macouard; Environs de Saumur; Environs de Rablay (Houlbert & Betis, 1913); Vendée (Houlbert & Betis, 1913); Bourbonnais (Desbrochers des Loges, 1899); Midi-Pyrénées, Tarn (Gavoy, 1909); Pyrénés or., Vernet les Bains (MNHN); Pyrénées or., Etang du canet (CHA); Pyrénées or., Banyuls sur Mer (CHA); Pyrénées or., Saint Nazare (CHA); Prénées or.: Argelès and Collioure (Mayet, 1903); Aude, Pennautier (MCNV; MSNG); Aude, Carcassonne (Gavoy, 1872); Aude, Leucate (CHA); Aude, Treilles Ruisseau du Malet (CHA); Aude, Barbaira (CHA); Aude, Rennes les Bains (CMAL); Languedoc, Mont Alaric (Gavoy, 1893); Aveyron, St. Georges de Luzençon (FSAG); Aveyron, Redez, La Bastide, Pradinos (MAB); Ardèche, St. Jean Le Centenair (FSAG); Ardèche: Coux; Vallon; Aubenas; Boulogne; Montagne de Berg; Vinezac; Rosières; Chauzon; Ruoms; Larnas (Balazuc, 1984); Hérault, Cap Agde (CM); Hérault, St. Guilhem (MNHN); Hérault, Vie de la Gardiole (CM); Hérault, St. Pous de Thoumiers, Lizarne (CZ); Hérault, Beziers, 14 km SW (SMNS); Hérault, Montepellier, 3 km N Mireval (MAB); 20+2 Drôme, Le Poet Laval (FSAG); Drôme, Saon (FSAG); Drôme, Montjoux (FSAG); Drôme, Dieulafit (FSAG); Drôme, Beaumont du Ventoux (CHA); Vaucluse, Saignan (CHA); Vaucluse, Lacoste (CHA); Vaucluse, St. Saturnin d'Apt (FSAG); Vaucluse, La Roque sur Perna (SMNS); Vaucluse, Orange (FSAG); Vaucluse, southern slope of Ventoux Mt., Rolland forest (MAB); Lyon (MCZR); Grad, Saint-Gille, P. Marie (Pic, 1939); Gard, Vallée Gardon (IRSNB); Bouches du Rhône, Massif des Alpilles (MNHN); Bouches du Rhône, Les Baux de Provence (MAB); Bouches du Rhône, Aigues mortes (MRSN; Bouches du Rhône, Camargue, Le Crau (CFR; SMNS); Bouches du Rhône, Camargue (MNHN); Bouches du Rhône, Marseille env. (MAB); Lyonnais (Desbrochers des Loges, 1899); Alpes de Haute Provence, Peyresq (FSAG); Alpes de Haute Provence, St.Michel, l'Observatoire (CHA); Alpes deHaute Provence, Villeneuve env. (FSAG); Alpes de Haute Provence, Lavagne (MCZR); Alpes de Haute Provence, nr Aupos (SMNS); Alpes de Haute Provence, Le Mées, 3km SSW (Mitter, 1978; MAB; SMNS); Alpes de Haute Provence, Verignion (CPP); Var, Toulon (MCZR); Var, Hyères isl. (Bologna & Marangoni, 1990); Var, Porqueroles Isl. (IRSNB); Var, Port Cros Isl., Fort de l'Estissac (MAB); Var, Levant Isl. (IRSNB; ZSM); Var, Massif des Maures, Col de Gratteloupe (CZ); Var, Brignoles (MRSN); Var, Le Luc (CPR); Var, Saint Tropez, La Croix Val Mer (FSAG); Var, Flauose (FSAG); Var, Gaufaron (FSAG); Var, Meounnes (MNHN); Var, St. Raphael (IRSNB; MCNC); Var, Bagnols (IRSNB); Var, Ciotat (IRSNB); Var, Fréjus (MAB); Var, env. Fréjus-Roquebrune sur Argens (MAB); Var, Puget sur Argens (MAB); Var, Cavalaire (MAB); Var, Ramatuelle (FSAG; IRSNB); Var, Le Lavandou (IRSNB); Var, Esterel, Mandelieu (MAB); Var, Agay (MNHN); Var, Estérel, Rivière d'Agay (IRSNB); Alpes Maritimes, Juan les Pinsa (FSAG); Alpes Maritimes, Grasse, 2.3 Km N Pré du Lac (MABa); Alpes Maritimes, Val Roya (Caillol, 1914; Bologna, 1991a); Alpes Maritimes, Rossilon, Tinée valley (Caillol, 1914; Bologna, 1991a); Alpes Maritimes, Nice (Caillol, 1914; Bologna, 1991a); Alpes Maritimes, La Napoule (Caillol, 1914; Bologna, 1991a); Alpes Maritimes, Fontan (Caillol, 1914; Bologna, 1991a); Corsica (Bologna, 1975, 1991a; Bologna & Marangoni, 1990; Bonfils *et al*., 1980); Corsica N, Cap Corse, Macinaggio (MAB); Corsica N, Nonza (MAB); Corsica N, St. Florent (MAB); Corsica N, rd Bastia/St. Florent, 1.5 km Bargaggio (MAB); Corsica N, Patrimonio (MABa); Corsica N, Taglio Isolaccio (CHA); Corsica N, Bastia (MCNV); Corsica, Bastia, Poggio di Oletta (CGU); Corsica N, Bastia, Pineto (MSNV); Corsica N, Capu Russu (MABa); Corsica N, Cateri (CHA); Corsica N, Lozari (CS); Corsica N, Calvi, Madonna della Sezza (MAB); Corsica N, Calvi (Maes & Huether, 2007; SMNS; CHA); Corsica N, Algajola (MAB); Corsica N, Casta, Campu Castingu (MSNV); Corsica N, Casta (MSNV); Corsica N, 14 km ENE Asco (CSC); Corsica N, Mt Cinto (MSNV); Corsica N, Ponte Leccia (CZ; MAB; MFNB); Corsica N, btw Belgodere and Ponte Leccia (CV); Corsica N, Ponte Leccia (Schaefer, 1964); Corsica N, Palasca, mouth Ostriconi R. (MAB); Corsica N, Speloncato, Colle della battaglia (MAB); Corsica N, Calacuccia, Calsina (MSNV); Corsica N, Biguglia marsh (MAB); Corsica N, Alistro env. (MAB); Corsica N, Anghione (IRSNB); Corsica N, 2 and 5 km S Corte (CSC; MAB); Corsica N, Vivario, Col de Serra (MZUF); Corsica N, Baia de Criovani, N42°28'–E8°41' (CZ); Corsica N, Monte di Oro, Puzzatelli (MAB); Corsica N, Vizzavona (MAB; MSNM; MSNV); Corsica N, Venaco (MAB); Corsica N, nr. Aleria (CS); Corsica S, Evisa (MABa); Corsica S, Serriera (CHA); Corsica S, Evisa, Forêt d'Aitone (CMAL; MSNV); Corsica S, Santa Lucia di Portovecchio, Pinarellu (MAB); Corsica S, Bonifacio (CA).

Switzerland*:* Switzerland (Billberg, 1813; Baudi di Selve, 1878a; Dvořák & Vrabec, 2007); southern Switzerland

(Schatzmayr, 1941); Valais, Saxon les Bains (MCNV); Valais, Savièse (MHNG); Valais, Siders, Finges (HNHM); Valais, Siders, Sierre (MHNG); Valais, Blatten (FSAG); Valais, Susten, Pfynwald (MHNG); Valais, Rosa Mt. (Kiesenwetter, 1861b); Valais, Brig, Ganter tal (MHNG); Turgovia, Aadorf, Fyn (MHNG).

Italy: Italy (Dejean, 1821, 1837; Gemminger & Harold, 1870; Bertolini, 1872, 1904; Beauregard, 1890; Borchmann, 1917; Porta, 1934); Alps (Baudi di Selve, 1878a); Valle d'Aosta (Focarile, 1974); Aosta, Courmayeur (Bologna, 1991a); Aosta, Saint Nicolas (MAB); Aosta, Saint Nicolas, Vetant (Bologna, 1991a; MAB); Aosta, Ozein-Sesnan (MAB); Aosta, Ozein (Bologna, 1991a; MAB; MSNM); Aosta, St. Vincent (Magistretti, 1943; Bologna, 1991a); Aosta, St. Denis (MAB); Aosta, Prè Saint Didier (Magistretti, 1943; Bologna, 1991a; MFNB; MSNV); Aosta, Vieyes (MSNV); Aosta, Epinel, 7.1966 (MSNV); Aosta, Cogne (MSNV); Aosta, Valnontey (MSNV); Aosta, Runaz, Ravoire (Magistretti, 1943; Bologna, 1991a; MFNB); Aosta, S.Nicolas (MFNB); Aosta, Pila (MSNM); Piemonte (Baudi di Selve, 1978a; Porta, 1934; Magistretti, 1943; MRSN); Torino (Baudi di Selve, 1878a; Ghiliani, 1887; Bologna, 1991a); Torino, Musinè Mt. (Ghiliani, 1887; Bologna, 1991a); Torino, Valle di Susa (Ghiliani, 1887; Luigioni, 1929; Bologna, 1991a); Asti, San Desiderio (Bologna, 1991a); Asti, Casale Monferrato (Bologna, 1991a); Cuneo, Sambuco (Bologna, 1991a; MAB); Liguria (Porta, 1934; Magistretti, 1943; IRSNB); Ligurian Apennines (Bertolini, 1904; Luigioni, 1929; Bologna, 1991a); Imperia, Porto Maurizio (Bologna, 1991a); Savona, Sassello (CZ); Savona, Sassello, Erro (MABa); Genova, Staglieno (Bologna, 1991a); La Spezia, Passo del Bracco (MSNM); La Spezia, Ponzano Magra (Bologna, 1991a; IAA; MZUB); Lombardia (Magistretti, 1943); Lombardia, Mantova, Goito (MSNV); Bolzano, Alto Adige (Reitter, 1911; Luigioni, 1929); Bolzano, Chiusa, Val di Funes (C. Nardi); Bolzano, Chiusa (SMNS); Bolzano, Bressanone (Gredler, 1866; MCNV); Bolzano, Bressanone, Waldheim (MZUR); Bolzano, Merano (Gredler, 1866; Bologna, 1991a); Bolzano, San Leonardo (Bologna, 1991a); Bolzano, Lagarina valley (Halbherr, 1894; Bologna, 1991a); Bolzano, Campodazzo (Gredler, 1866; Bologna, 1991a); Bolzano (Gredler, 1866; Schilsky, 1892; HNHM; MCZR); Bolzano, Calvario Mt. (Liebmann, 1955); Bolzano, Appiano (MCZR); Bolzano, Renon (Bologna, 1991a); Bolzano, Siusi (Bologna, 1991a); Bolzano, Gries (MCZR); Bolzano, Collalbo (Bologna, 1991a; MCZR); Trentino (Porta, 1934); Trento (Bologna, 1991a); Trento, Ronchi Valsugana (MZUR); Trieste, ESE Sgonico, Mt. Lenaro, N45°43'59"–E13°45'15" (MAB); Verona, Lessini Mts. (Bologna, 1991a); Venezia Giulia (Magistretti, 1943); Udine, Tarcento (Bologna, 1991a); Trieste, nr. Basovizza, M.te Cocusso, N45°38'23"–E13°52'23" (MAB); Trieste, M. Spaccato (CZ); Trieste, Gabrovizza, N45°43'55"–E13°44'00" (MABa); Trieste, NW of Duino, N45°48'09"–E13°35'15" (MAB); Ravenna, Pineta di Classe (Zangheri, 1969; Bologna, 1991a); Ravenna, Baronessa (Bologna, 1991a); Ravenna, Fosso Ghiaia (Bologna, 1991a); Forlì, Carpineto, Lama (MZUF); Forli, Romagna (Zangheri, 1969); Pesaro-Urbino, Catria Mt. (Bologna, 1991a; MAB); Macerata, Sibillini Mts., Vettore Mt. (Bologna, 1991a; MAB); Macerata, Macereto (MAB); Toscana (Luigioni, 1929; Porta, 1934; Magistretti, 1943; Bologna, 1991a); Pisa (MCZR); Pisa, Bientina (MUP); Firenze, Vallombrosa (Cecconi, 1897; MFNB); Firenze, Santa Margherita (MFNB); Arezzo, Garganza (MFNB); Arezzo, Val d'Ambra, Pietraviva (CPP); Arezzo, Bagnoro (MFNB); Siena (MCZR); Siena, Arbia River (MAB); Siena, Amiata Mt. (MCZR); Grosseto, Roccalbegna, Triana (MRSN); Grosseto, Massa Marittima (MFNB); Grosseto, Castiglion della Pescaia (MAB; MSNV); Grosseto (MUP); Grosseto, San Rocco (MFNB); Grosseto, nr Roccalbegna, Roghiniccioni N42 46 23.6–E11 29 36.8 (MABa); Grosseto, P.N. Maremma, Torre Colle lungo (CPP); Grosseto, P.N. Maremma, Lo Scoglietto (MFNB); Grosseto, Uccellina Mts. (CS); Grosseto, Pitigliano (CMAL); Umbria (Magistretti, 1943); Perugia, Città di Castello, Uppiano (MABa); Perugia, Scheggia and Pescelupo, Il Marchigiano (MABa); Perugia, Sant'Egidio (Bologna, 1991a); Perugia, San Feliciano (Bologna, 1991a); Perugia, Leri (Bologna, 1991a); Perugia, Cascia, Avendita (CL); Lazio (Luigioni, 1929; Porta, 1934; Magistretti, 1943; Bologna, 1991a); Rieti, Cittaducale (MAB); Rieti, Vallemare (MAB); Rieti, Corvaro (MAB); Rieti, rd to Valle Cupola 2,6 km from jct. to Longone N33354,56–E4682837,13 (MABa); Rieti, Vallecupola env., N33314,56–E4682837,13 (CV); Viterbo, Ischia di Castro, ponte San Pietro (MAB); Viterbo, Tuscania (MSNG); Viterbo (MAB); Viterbo, Blera, stazione Monteromano (MZUR); Roma, Monti della Tolfa (MAB); Roma, Monti della Tolfa, il Quartaccio (MAB); Roma, Tolfa Mts., Acqua Tosta (CMI); Roma, Tolfa, rd. Santa Severa-Tolfa (MABa); Roma, Tolfa, Lenta River, Seccareccio (MABa); Roma, Santa Marinella (MRSN); Roma, Bracciano (CMAL); Roma, Lago Martignano southern side (MABa); Roma, Palidoro (MCZR); Roma, Maccarese (MCZR); Roma, Sacrofano (MAB); Roma (Bologna, 1997a; IRSNB; MCZR); Roma Boccea (MCZR); Roma Magliana (MCZR); Roma Sughereta (MCZR); Roma Viale Carso (CMI); Roma Quadraro (MCZR); Roma, Nettuno (MCZR); Roma, Gerano (MRSN); Latina, Minturno (MAB); Abruzzo (Magistretti, 1943; Bologna, 1991a); L'Aquila, Forca di Penne (C. Cenci); L'Aquila, Gran Sasso, Fonte Cerreto (Bologna *et al*., 1988; MABa); L'Aquila, Gran Sasso Campo Imperatore, refuge nr lake (MABa); L'Aquila, San Sisto (MAB); L'Aquila, Rojo (MUA); L'Aquila, Barisciano (MAB; MUA); L'Aquila, Barisciano, rd 17 km 53, Torfona (MUA); L'Aquila, Navelli (MAB); L'Aquila, Colla Sassa (MAB); L'Aquila, San Giuliano (MAB; MUA); L'Aquila, Cardalecce (MUA); L'Aquila, Forme, Fonte sanguisuga (MABa); L'Aquila, S. Gregorio (MUA); L'Aquila, La costa grande Mt. (MAB); L'Aquila, San Demetrio Forconese (MAB); L'Aquila, San Demetrio de' Vestini (MAB); L'Aquila, Casamanna (MAB); L'Aquila, Capestrano, S. Pelagia (MUA); L'Aquila, Capestrano (MAB); L'Aquila, Sirente Mt. (MAB; MUA); L'Aquila, Sirente-Mt., Prati del Sirente (MABa); L'Aquila, Rocca di Mezzo (MUA); L'Aquila, Velino Mt., Ovindoli, San Iona (MAB); L'Aquila, Velino Mt., Massa d'Albe (MABa); L'Aquila, Mt. Velino, Vallone di Sevice (CV); L'Aquila, Ovindoli, Monte Freddo (MAB); L'Aquila, Majella N.P., Canzano, Colle Cisternola (MAB); L'Aquila, Majella N.P., Campo di Giove (MAB); L'Aquila, Tagliacozzo, piccola Svizzera (MAB); L'Aquila, Fucino plain, Collelongo, Valle canale (MAB); L'Aquila, Villavallelonga (MUA); L'Aquila, Collelongo, loc. La cascina (MUA); L'Aquila, Scanno, Frattura (CMI); L'Aquila, P.N. Abruzzo (MAB); L'Aquila, PN Abruzzo, Petroso Mt. (MAB); Pescara, Capo Pescara (Bologna, 1997b; MUA); Pescara, Majella N.P., Orfento valley, Guado Sant'Antonio (MAB); Chieti, Majella N.P., Colle Bandiera (MAB); Chieti, San Buono (MAB); Chieti, bridge on Treste Riv. nr. S.Buono (MABa); Molise (Bologna, 1991a); Campobasso, Campomarino, Selva del Campo (CRU; MAB); Isernia, Bosco di Collemeluccio (CG);

Campania (Luigioni, 1929; Bologna, 1991a); Benevento, Fragnetum (MAB); Napoli, islands of Naples Gulf (Bologna & Marangoni, 1990); Salerno, Cava (MCZR); Salerno, Santa Maria di Castellabate, loc. Punta Tresina (CPA); Salerno, Padula (MAB); Puglia (Porta, 1934; Magistretti, 1943; Bologna, 1991a); Foggia, Tremiti Is. (Cecconi, 1908; Luigioni, 1929; Porta, 1934; Bologna, 1991a; MUPA); Foggia, Tremiti Is., San Domino Is. (Bologna & Marangoni, 1990; MAB); Foggia, Tremiti Is., San Nicola Is. (Bologna & Marangoni, 1990); Foggia, Tremiti Is., Caprara Is. (Bologna & Marangoni, 1990); Foggia, Lesina lake (MZUB); Foggia, Gargano Mt. (CF); Foggia, Gargano Mt., 7 km E S.Giovanni Rotondo, jct. Bosco Quarto (MABa); Foggia, Monte Gargano (Holdhaus, 1911; Faggioli, 1956); Foggia, Gargano Mt.: Bosco Ginestra, Jacotenente, Mandrione (Gridelli, 1949); Foggia, Manfedonia (MRSN); Foggia (CO; MRSN; MZFN); Foggia, San Pasquale (MZUF); Foggia, Spinale (CMAL); Bari (Baudi di Selve, 1878b); Bari, Barchetta (MFNB); Bari, Alte Murge, 1.5 km S Monte Caccia, Masseria Ciminiero (MABa); Bari, Alte Murge 3 km E Gravina in Puglia rd to Matera (MABa); Bari, Altamura (CA; MAB; MZFN); Taranto, Laterza (MCZR); Taranto, Palagiano (Leoni, 1907); Brindisi, Francavilla Fontana (CA); Brindisi, San Vito dei Normanni (MZFN); Brindisi, Iazzo San Giovanni (CA); Lecce (MZFN); Lecce, Tricase (MZUB); Lecce, Leuca env. (MAB); Lecce, Otranto (Baudi di Selve, 1878b); Basilicata (Magistretti, 1943; Bologna, 1991a); Potenza, Vulture Mt. (MAB); Potenza, Viggiano (CA; MAB); Potenza, Madonna di Viggiano (CL); Potenza, Montemurro, Lago Pertusillo (MAB); Potenza, Tramutola env. (MAB); Potenza, Pietrapertosa (CA); Potenza, Serra Riofreddo (CA); Potenza, Abriola, Timpa del Gioco (CA); Potenza, Calvello (CA; MCZR); Potenza, Latronico (MAB); Potenza, Sinni river, Episcopia (MAB); Potenza, Francavilla sul Sinni (MAB); Potenza, Fiumara del Sarmento jct. S.Costantino-Cercosimo (MABa); Potenza, terranova (Magistretti, 1955); Potenza, Pollino N.P., Piano di Ruggio (MAB); Potenza, P.N. Pollino, Colle Gaudolino (Angelini, 1986); Potenza, P.N. Pollino, Anticristo (Angelini, 1986); Potenza, Pollino P.N., Viggianello, Bosco Magnano (MABa); Potenza, Pollino N.P., Sparviere Mt. (CG); Matera, Accettura, Gallipoli (CA); Matera, Basentana valley (MAB); Matera, San Giuliano lake (CA); Matera, Laterza (CA); Matera, Policoro (Angelini & Montemurro, 1986); Potenza, Maratea Hotel Pianetamaratea, 350 m, 1998 (CBV); Calabria (Baudi di Selve, 1878b; Costa, 1882; Beauregard, 1890; Borchmann, 1917; Porta, 1934; Magistretti, 1943; Bologna, 1991a); Cosenza, jct. Rotonda-Momanno (MABa); Cosenza, Colloreto and Vallone Santicelli (Magistretti, 1955; MABa; MSNV); Cosenza, Castrovillari convento Colloreto (MABa); Cosenza Morano/Castrovillari hgwy exit (MAB); Cosenza, Orsomarso Mts., Argentino River (CA; CG); Cosenza, Orsomarso Mts., La Mula (MAB); Cosenza, Papasidero (CS); Cosenza, Verbicaro, Pellegrino Mt. (CA); Cosenza, Paleparto Mt. (Magistretti, 1960); Cosenza, Corigliano calabro (MZFN); Cosenza, Tarsia (MSNV); Cosenza, Paola, Catena costiera (CA); Cosenza (SMNS); Cosenza, Camigliatello silano (Schatzmayr, 1941; Magistretti, 1960; Angelini, 1991; MAB; MZUB); Cosenza, 3.5 km E Camigliatello Silano old rd to Silvana Mansio (MABa); Cosenza, rd to Camigliatello Silano, Croce Magara (MABa); Cosenza, San Giovanni in Fiore (CA; MAB); Cosenza, Botte Donato Mt. (Angelini, 1991; CA; CAR; MAB; MSNV); Cosenza, Ampollino lake (CA; MAB; MCNV); Cosenza, Mottafallone (MAB); Cosenza, Cecita lake (MAB); Cosenza, Gariglione Mt. (Angelini, 1991; MAB); Cosenza, Sila Piccola, Buturo (MSNM); Cosenza, Campana (CG); Cosenza, Sila Grande, Serra Candela (MCZR); Cosenza, Croce Magara (CA); Cosenza, Sila (Magistretti, 1962a); Catanzaro, Pecoraro Mt. (Magistretti, 1962a); Catanzaro, Sila, Chiaravalle (Magistretti, 1962a); Cosenza, Sila, Montenero (CA); Catanzaro, Sambiase (CZ); Catanzaro, Cirò (MZFN); Catanzaro (Magistretti, 1962a); Catanzaro, Nicastro (MZFN); Catanzaro, mouth of Corace River (Magistretti, 1962a); Catanzaro, mouth of Amato River (Magistretti, 1962a); Catanzaro, Soveria Mannelli (Magistretti, 1962a); Crotone (Schatzmayr, 1941; Magistretti, 1962a); Crotone, Punta alice (Magistretti, 1962b); Crotone, Strongoli (Schatzmayr, 1941; Magistretti, 1962a); Crotone, Lese R., Cuccuri, rd Cucciuri-Verzino (MABa); Reggio di Calabria, Capo Spartivento (Magistretti, 1960); Reggio di Calabria, Piani di Lopa (Magistretti, 1960); Reggio di Calabria, Nucarelle (Magistretti, 1960); Reggio di Calabria, Santa Eufemia (Magistretti, 1960); Reggio di Calabria, Aspromonte, rd 183 km 37, Bagalodi (CMI); Reggio di Calabria, Aspromonte, Polsi (CA); Reggio di Calabria (MZFN); Reggio di Calabria, San Luca (MAB); Sicilia (Romano, 1849; Reiche, 1860; Pincitore Marott, 1873; Steck, 1887; Ragusa, 1898; Borchmann, 1917; Luigioni, 1929; Porta, 1934; Magistretti, 1943; Bologna & Marangoni, 1990; Bologna, 1991a, 1995b; Arnone, 1992); Trapani, Scopello (MUPA); Trapani, Castelvetrano (MZFN); Trapani, Santo Stefano di Quisquiana (MAB); Palermo, Bellolampo (MAB; MSNV); Palermo, Piana degli Albanesi (MSNT); Palermo, Alia (MSNT); Palermo, San Martino (MSNT); Palermo, Busambra Mt. (MAB); Palermo, Bosco della Ficuzza (CA; MCZR; MSNV); Palermo, Ficuzza, Alpe Cucco (MAB); Palermo, Collesano (MAB); Palermo, Castelbuono (MAB); Palermo, Madonie Mts., Passo Canale (MAB); Palermo, Madonie Mts, Petralia, Gorgo nero (MAB); Palermo, Madonie Mts., Piano Battaglia (Magistretti, 1963; MSNM; MSNT); Palermo, Madonie Mts. Contrada Quacella (MABa); Palermo, Madonie Mts., San Mauro Castelverde (CAR); Palermo, Madonie Mts., Portella Colla (CAR); Palermo, Madonie Mts., Punta Antenna (MSNT); Palermo, Madonie Mts., Collesano (MSNT); Palermo, Madonie Mts., Montaspro (MSNT; MUPA); Palermo, Madonie Mts.: Portella dei Bifolchi, Geraci Siculo, Portella Polizzi, Gratteri, Gibilmanna (Magistretti, 1963); Palermo, Lercara Friddi, Pattineo (MSNT); Palermo, Lercara Friddi (MSNT); Palermo, Geraci siculo (MAB; MSNT; MSNV); Messinese (Vitale, 1905); Messina, Bosco Caronia (MAB); Messina, Caronia, Badessa S. Domenica (MAB); Messina, Caronie, Pizzo di Pagano (MAB); Messina, Nebrodi Mts., env. Cesarò (MAB; MCNV; MSNV); Messina, Nebrodi Mts, Portella di Femmina morta (Magistretti, 1963; MSNV); Messina, Nebrodi Mts.: Floresta, Castell'Umberto, San Fratello, Lago di Ancipa, Mistretta (Magistretti, 1963); Messina, Portella Cerasa, Malabotta env. (CA); Messina, Tripi, Malabotta (CA); Messina, Nebrodi Mts., Soro Mt. (MAB; MSNV); Messina, Peloritani Mts., M. Polverello (MAB); Messina, Piano Torre (MAB); Messina, Scuderi Mt. (CBV); Messina (Magistretti, 1963; MCNV; SMNS); Agrigento, Lampedusa Is. (Ragusa, 1898; Luigioni, 1929; Porta, 1934; Bologna & Marangoni, 1990; Bologna, 1991, 1995a; Goggi, 2004; IAA); Caltanissetta (MCZR); Enna, Troina (MSNT; MSNV); Enna, Troina, Giotto (MSNT); Enna, Troina, Bosco di Troina (MSNT); Enna, Piazza Armerina (MSNT); Enna (MAB); Enna, Nicosia (CO; IAA; MAB); Siracusa, Iblei Mts., Palazzolo Acreide (MSNV); Siracusa, Noto (Assenza, 1891); Sardegna (Magistretti,

1943: this is a strange citation, before the species was introduced in the island; Crovetti, 1967; Bologna, 1975, 1983, 1991, 1995b; Bologna & Marangoni, 1990; Baccetti *et al*., 1990); Sassari, Isola Rossa (CPP); Sassari, Alghero, 20 km Cala Bona, Rio Bona (SMNS); Sassari, Alghero (MSNV); Sassari, Logudoro, Bànari, loc. Sa Tancasa (MAB); Sassari, Pattada (MAB); Sassari, Costa Paradiso (MAB); Sassari, Tempio Pausania (CA; MAB); Sassari, Tempio Pausania, btw Piciattu Mt. and Lu Pinu Mt. (MAB); Sassari, Gallura (CS); Sassari, S. Teresa di Gallura, La Ficaccia (MABa); Sassari, Mara, Su Ferru Sugaddu (MAB); Sassari, Barchidda, Rio Bader (MAB); Sassari, Cugnana Mt. (MAB); Sassari, S. Andria Pru, Bonorva (MAB); Sassari, Tula (CA); Sassari, Liscia lake (MSNV); Sassari, Limbara Mt. (CAR; CS; MSNV); Sassari, Olbia, San Teodoro Cala Brandinchi 32T N4520264 E557728 (MABa); Sassari, Telti Monti (CM); Sassari, Burgos, Merchidale (MAB); Sassari, Burgos (MABa); Sassari, Posada River (CZ); Sassari, Coghinas (MAB); Nuoro (MAB); Nuoro, Ortobene Mt. (MAB); Nuoro, Villanova di Strissaili (MAB); Nuoro, Posada, lake, 3 km E, Concas (CZ); Nuoro, Macomer (MCNV; MRSN); Nuoro, Silanus (CM); Nuoro, M. Albo slope S (MABa); Nuoro, nr Siniscola, Albo Mt. (MSNV); Nuoro (CS); Nuoro, Gole di Gorropu, 7.7.1977 (CAR); Nuoro, Gennargentu (CMAL); Nuoro, Gennargentu Mts. (MAB); Nuoro, Gennargentu Mt., 1200 m, Arzana, Is Ruinas (MUA); Nuoro, rd SS 389 km 125, btw Mammoiada and Fonni (MABa); Nuoro, Fonni, Bruncuspina (MABa); Nuoro, Fonni (MFNB); Nuoro, Fonni, M. Spada (MFNB); Nuoro, Desulo, Arcu Tascusì (MRSN); Nuoro, Belvì, Rio Occile (MFNB); Nuoro, Aritzo panoramic rd (MFNB); Nuoro, Urzulei (MSNV); Nuoro, Talana, Mt. Olinie (MUA); Nuoro, Tortolì (MSNV); Nuoro, Cantoniera d'Arcueri, Seni (MUA); Nuoro, Tonneri (MUA); Oristano, Albagiara (MUA); Oristano, Montresta (MAB); Oristano: S. Vero Milis, Riola Sardo, Cabras, Capo S. Marco, San Giov. Sinis, Torre del Sevo, Mari Ermi, Is Benas (Piras *et al*., 1970); Cagliari, Castiada, Rio de sa Figu (MAB); Cagliari: S. Pietro Is., S. Antioco Is., Punta Pino, Punta Botte, Matzaccara Punta Vesme, S. Miai Mt. (Piras & Pisano, 1972).

Germany: recorded from Germany (Billberg, 1813) and southern Germany (Tauscher, 1812). No specimens from Germany were examined and possibly these old citations refer to Austrian or Czech areas.

Austria: Austria (Kaszab 1969; Dvořák & Vrabec, 2007; HNHM); Tyrol (Baudi di Selve, 1878a; HNHM); Oberweiden-Marchfeld (Horion, 1956); Vienna env. (Horion, 1956); Podersdorf (Horion, 1956); Wienerwald-Untertullnerbach (Horion, 1956); Villach, Gobanz (Horion, 1956); Eberndorf (Horion, 1956); Gazarka-Südhang nr. Unterberg (Horion, 1956); Authal (Horion, 1956).

Hungary: Hungary (Baudi di Selve, 1878a; Fleischer, 1933; Dvořák & Vrabec, 2007); Pannonian depression (Kaszab, 1969); Bohemia (Fleischer, 1933); Budapest (IRSNB); Budapest, Jsaszegh (ZMHB); Pest, Szigetszentmiklós, N47°22'12.2"–E19°05'56.0" (MABa); Pest, Szentendre, Kada-csúcs hill, N47°41'50.58"–E19°04'24.21" (MABa); Bács-Kiskun, Városföld, N46°48'29.30"–E19°47'13.0" (MABa); Hazánkban gyakori, A törzsfaj között nagyon ritka (Kaszab, 1942a); Aporka, Bihar-m., Budaörs, Budapest, Cegléd, Dobogókő, Dömsöd-Apaj, Isaszeg, Hajós, Harta, Kalocsa, Káposztásmegyer, Kecskemét, Kiskunfélegyháza, Makó, Máriabesnyő, Örszentmiklós, Ötházhuta, Pécel, Pilish., Pusztapeszér, Rákoskeresztúr, Szada, Szeged, Sződ, Tiszaalpár, Tiszakeszi, Visegrád, Zagyvafalva; Esztergom, Győr, Kisapostag, Öszöd, Simontornya, Tarcsa; Nagysalló, Pozsony; Szomotor, Ungvár; Gyeke, Nagycsür, Szelindek; Deliblát, Kisszállás, Marosaszó, Perjámos, Medak, Radue (Kaszab, 1942b); Budapest, Caillebere; Szeged, Makó, Dömsöd, Apajpuszta, Érd, Siófok; Máriabesnyó (Kaszab, 1956a); Bugacmonostor, Daba, Dömsöd: Apajpuszta, Dunaföldvár, Kalocsa, Kecskemét, Martonvásár, Makó, Siófok; Ócsa: Nagyerdő, Őrszentmiklós, Szada, Szeged, Szigetcsép, Tarcsa, Velencei tó: Velencei rét, Dinnyés: vasut mellett; Dunaharaszti; Bugac; Csepelsziget; Debrecen, Deliblát, Dunaharaszti, Hercegfalva, Kalocsa, Kecskemét, Martonvásár, Ötházhuta, Rákoskeresztur, Rákospalota, Siófok, Székesfehérvár, Tabajd, Tiszakeszi, Ürbő, Velencei tó: Dinnyés: vasut, Lepsény; Győr; Budapest Szépvölgy: Svábhegy: Törökvész: Irhásárok: Guggerhegy: Hűvösvölgy: Budatétény, Csopak, Érdliget; Budaörs, Csillebérc, Kecskehegy, Csiki hegyak: Kamaraerdő: Hármashatárhegy: Guggerhegy: Ujlaki hegy: Kecskehegy: Szabadsághegy: Farkasvölgy, Csór: Gusztuspuszta, Budatétény, Esztergom, Herend: Pilis hegység, Somod, Hidegkut, Várpalota: Baglyashegy: Tábormező, Velencei hegység: Nadap: Meleghegy: Templomhegy, Sukoró: Dögállási hegy, Veszprém; Érd; Pilisborosjenő: Nagykevély, Vértes hegység: Szár, Törökbálint, Várpalota: Tábormező; Öszöd, Simontornya; Bánkut: Gerennavár, Eger: Hámor), Isaszeg, Pécel, Mátra: Kékestető: Galyatető, Máriabesnyő, Legénd (Tóth, 1973).

Czech Rep.: Czech Rep (Dvořák, 1964; Dvořák & Vrabec, 2007); Moravia incl. Silesia (Jelínek, 1993).

Slovakia: Slovakia (Dvořák, 1983; Jelínek, 1993; Dvořák & Vrabec, 2007); Hosszuszó (Tóth, 1973).

Slovenia: Poderose (MAB); Vipava, W slope Mt. Nanos, 45°47'36"N, 14°00'10"E (MAB); border Slovenia-Italy, Vrhovlje env., N45°43'28"–E13°49'56" (MAB); Kamnik, Podgorie (CR).

Croatia: Croatia (Baudi di Selve, 1878a; Schlosser Klekovski, 1878; Kaszab, 1967); Slavonia (Kaszab, 1967); Istria (Kovačević & Balarin, 1960; Geisthardt, 1989); Istria, Rovinj/Rovigno (Conev, 1958; Bologna, 1991a; MAB; SMNS); Istria, Klostar (FSAG); Istria, Poreć/Parenzo (FSAG; MAB); Istria, Pola/Pula (Magistretti, 1943; Geisthardt, 1989; Bologna, 1991a; HNHM; MSNV); Rijeka/Fiume (Germar, 1817; Depoli, 1938; Kaszab, 1942a; 1942b; Bologna, 1991a); Rijeka, Cres/Cherso Is. (Luigioni, 1929; Porta, 1934; Bologna, 1991a; MCNV); Rijeka, Cres/Cherso Is., nr Martinshiza (CS); Rijeka, Plavnik/Plauno Is. (Geisthardt, 1989); Rijeka, Krk/Veglia Is. (Porta, 1934; Conev, 1958; Bologna & Marangoni, 1990; Bologna, 1991a; CMAL); Rijeka, Krk/Veglia Is., Baska (Bologna & Marangoni, 1990; MFNB); Rijeka, Losinj/Lussino Is. (Müller, 1923; Luigioni, 1929; Porta, 1934; Depoli, 1938; Bologna & Marangoni, 1990; Bologna, 1991a; MCNV; MFNB); Rijeka, Unije/Unie Isl. (Depoli, 1938; Bologna, 1991a); Rijeka, Rab/Arbe is. (Bologna & Marangoni, 1990); Zengg (Kaszab, 1942b; Tóth, 1973); Senj (Conev, 1958); Karin (MAB); Grižane, Vinodol (Conev, 1958); Velebit Mts. (Tóth, 1973); Velebit Mts., Ostarije (IRSNB); Gospić, Smiljan (Conev, 1958); Dalmatia (Gemminger & Harold, 1870; Beauregard, 1890; Cecconi, 1909; Conev, 1958); Zadar, Pag Is. (Conev, 1958; Bologna & Marangoni, 1990); Zadar, Pag Is., Stara Portjana (SMNS); Zadar (OMPB); Zadar, Ugljan Is., Preko (FSAG); Bibinje (Conev, 1958); Brusane (Kaszab, 1942b; Tóth, 1973); Knin (Conev, 1958); Ocestvo (Conev,

1958); Sibenik, Prvic (FSAG); Split (Küster, 1846; FSAG); Split, Lis Is. (Bologna & Marangoni, 1990); Hrvace (Novak, 1964); Solin (Conev, 1958); Dubrovnik (Küster, 1846).

Serbia: Coka (Conev, 1958); New Kneževac (Conev, 1958); Zemun (Conev, 1958); Bela Palanka (Conev, 1958); Grgovci (Conev, 1958); Priboj (Conev, 1958); Prizren (Conev, 1958); Negotin (Conev, 1958); Miroč Mt. (Košanin, 1904); Jasikova (Košanin, 1904).

Bosnia-Herzegovina: Bosnia-Herzegovina (Kaszab, 1967); Mostar (SMNS); Visingrad (IRSNB); Troglav (Conev, 1958); Prolog (Conev, 1958); Volujak (Apfelbeck, 1896); Drežnica Diva Grabovica Prenj (Conev, 1958); Heric (Conev, 1958); Buna (Conev, 1958); Domanovići (Conev, 1958); Stolac (Conev, 1958).

Montenegro: Montenegro (Kaszab, 1967); Titograd (Conev, 1958; Novak, 1964); Bar (Conev, 1958); Sutorman (Conev, 1958).

Albania: Albania (Kaszab, 1967; MAB); Shkodër, Kopilku (MSNG); Shkodër (MSNG); Tropojë (Csiki, 1940); Durrës, Urimm, 5 km N Durrës, N41°22'–E19°27' (CFO); Durrës, Sukht, N41°23'–E19°31' (CFO); Polican W of Tomor Mt. (Kaszab, 1967); Iba nr. Krrabe (Kaszab, 1967); Dajti Mt. (Kaszab, 1967); Bizë nr. Shëngjergji (Kaszab, 1967); Mesaplik (Kaszab, 1967); Lushnjë (Schatzmayr, 1943); Stičen (Csiki, 1940); Plštan (Csiki, 1940); Skrofotinë (Schatzmayr, 1943).

Macedonia: Macedonia (MAB; MCNV); Skopje (MCNV); Skopje env. (MSNV); Veles, Titov Veles (CF); Demir Kapija (SMNS); Geveglija (Conev, 1958; Geisthardt, 1989; Bologna, 1994; MFNB); Belovodica (Conev, 1958); Dojran (Conev, 1958; Bologna, 1994); Ohrid, Kavadarci (Conev, 1958; Bologna, 1994); Strumica (Conev, 1958; Bologna, 1994).

Greece: Greece (Kiesenwetter, 1861a; Marseul, 1870; Sumakov, 1930; Kaszab 1967; Bologna, 1991a); western and eastern Greece (Bologna, 1986); Florina 15 km N (MRSN); Florina (Bologna, 1994; MNHN); Grevena (Bologna, 1994); Kozani (Bologna, 1994; MSNV); Kozani, Veria (MAB); Kastoria, Verno Mt. (CA); Ioanian Isl. (Bologna, 1986); Kérkyra Is. (Bologna & Marangoni, 1990; Bologna, 1994); Kérkyra Is., Strongili (CGU); Kérkyra Is., N39°25'38"–E19°58'59" (MABa); Kérkyra Isl., Sidari (Bologna, 1994; MAB); Epirus (Stierlin, 1861); Thesphrotia, Igoumenitsa, nr. Parapotamos (MAB); Thesphrotia, Igoumenitsa, rd to Peramithia, Saloniki (MSNG); Thesprotia, Morfi env. (CZ); Thesphrotia, btw Igoumenitsa and Ioannina (Bologna, 1994; MHNG); Ioannina, Konitsa (MSNV); Ioannina, Konitsa, W Timfi 1 km W Pápigo, 34S 474271 4423169 (MABa); Ioannina, Konitsa, 3-4 km N Konitsa, N40°03'–E20°44' (MABa); Ioannina, Konitsa 9 km N (CFR); Ioannina, Oros Kourento, Hinka (Bologna, 1994); Ioannina, Polidoro (Bologna, 1994; CL); Ioannina, Dodoni (Bologna, 1994; CGR; MSNV); Ioannina, Monodendri (CGR); Ioannina, Zagoria, Kipi (Bologna, 1994; MAB); Ioannina, Zagoria, Dilofo (Bologna, 1994; MAB); Ioannina, Agia Paraskevi (Bologna, 1994; MAB); Ioannina (Stierlin, 1861; Geisthardt, 1989; Bologna, 1994; CG; CMAL; MAB; MSNM); Ioannina, Pindos, Petra (Bologna, 1994; CG); Ioannina, Vrossina (Bologna, 1994; CA; MSNV); Ioannina, Pindos, Kourento, dint Hinka (CG); Ioanina, Pérama, Oros Mitsikéli (Apfelbeck, 1902; Bologna, 1994); Ioannina, Metsovo (MUA); Ioannina/Trikala, Katara Pass (Bologna, 1994; CGR; CS; MSNV; MUA); Ioannina, Katara Pass eastern slope (MAB); Ioannina, Pindos Mts., Peristeri (MSNV); Ioannina, Pindos Mts. (MAB); Ioannina, Pindos Mts., rd E92 btw. Perama and Ligiades (MAB); Ioannina, Aristi, Vikos gorge (Bologna, 1994; MAB); Tríkala, Pindo Mts., Kranià (Bologna, 1994; CG); Trikala, rd Kalambaka-Kozani, 1 km Agios Dimitros, 34S 545120 4403649 (MABa); Trikala, Kastanea (CS); Trikala, Pinìas (Bologna, 1994; CL); Trikala, nr Hani, 5 Km N jct. national rd Ioanina-Trikala, N39°47'–E21°31' (MAB; MABa); Trikala, Meteora (Bologna, 1994; MCNC; MSNV); Trikala (Bologna, 1994); Trikala, Kalambaka (Bologna, 1994; CL; MAB); Karditsa, Itéa (Bologna, 1994); Préveza (Apfelbeck, 1902; Bologna, 1994); Préveza, Platistoma (MUA); Imathia, Vergina (Bologna, 1994); Greek Makedonia (Bologna, 1986; Geisthardt, 1989); Kilkis, Kateres env., N40°56'–E23°07' (MAB); Kilkis, Políkastro (Bologna, 1994; MCNV); Thessaloniki (Bologna, 1994); Thessaloniki, Langada env. (CSC); Thessaloniki, Apollonia (Bologna, 1994; MAB); Thessaloniki, Rendina (Bologna, 1994; MAB); Halkidiki, Olimbiada to Varvara (Bologna, 1994); Halkidiki, Arnea (Bologna, 1994; MSNV); Halkidiki, Holomandas Mts. (Geisthardt, 1989; Bologna, 1994); Kavala, Pangeo Mt. (Geisthardt, 1989; Bologna, 1994; MAB); Kavala, Pangeo Mt., Akrovouinin (MRSN); Kavala, Eleftheuropoli (Bologna, 1994); Kavala, Zigós (Bologna, 1994); Kavala, Tassos Is. (Bologna & Marangoni, 1990; BAS); Kavala, Tassos Is., Limena (Karnožickij, 1959; Bologna, 1994); Thessalia (Bologna, 1986); Pieria, Olympos Mt. (Bologna, 1994; MSNM); Pieria, Olympos Mt., Agia Dionissios (Bologna, 1994); Pieria, Olympos Mt., Stavros Prioni (IRSNB); Pieria, Olympos Mt., nr. Petra, Pagochora (MAB); Pieria, Korinós (MSNV); Pieria, Eginio (MAB); Pieria, Litohoro (Geisthardt, 1989; Bologna, 1994; MSNM); Larisa, Kokkino Nero (Bologna, 1994); Larisa, Ossa Mt. (Bologna, 1994; CS; MAB; MCNC); Larissa, Ossa Mt. Spilà env., N39°49'–E22°39' (MAB; MABa); Larissa, Ossa Mt., Anatoli env. (CG); Larissa, Ossa Mt., Stromio (Bologna, 1994; CA); Magnissia, Batsí E of Volos (Bologna, 1994); Northern Sporades (Bologna, 1986); Northern Sporades Is., Skiathos Is. (Geisthardt, 1989; Bologna, 1994); Northern Sporades Is., Skiathos Is., Troullos (Geisthardt, 1989; Bologna, 1994); Northern Sporades Is., Skopelos Is., Glossa (Geisthardt, 1989; Bologna, 1994); Aetholia-Akarnania, Stanos, Amvrakia lake (Bologna, 1994; MAB); Fthiotida, Lamia (Bologna, 1994; MCNV); Fthiotida, Lamia, pass on rd Lamia-Bralos, 34S 626151 4292464 (MABa); Fthiotidia, Bralos (MAB); Fthiothida, Parnassos Mt. (Bologna, 1994); Fthiotida, Ithea (MSNM); Fthiotidia, Antinitsis Monastery, Stena Fourkas, N39°00'–E22°23' (MAB); Fthiotida, Domokos env. (Metalleio), N39°04'–E22°19' (MAB); Evia is. (Bologna, 1986; Buchelos, 1989; Geisthardt, 1989; Bologna & Marangoni, 1990; Bologna, 1994); Evia Is., btw Procopi and Pilio (Bologna, 1994; MSNV); Evia, Limni (Geisthard, 1989; Bologna, 1994); Evia Is., Dirfi Mt. (Bologna, 1994; MSNV); Evia Is., Agion Mt. (Bologna, 1994; MSNV); Evia Is., Steni (Bologna, 1994; MSNV); Attiki (Bologna, 1986, 1994; Legakis, 1990); Attiki, Gramatikò (Bologna, 1994; MCNC); Attiki, Drosia (BMNH); Fokida, Amfissa Pirgos (CS); Peloponissos (Brullé, 1832; Oertzen, 1886; Horion, 1956; Bologna, 1986, 1994); Achaia, Patra, Stige valley (MAB); Achaia, Patra, Kalamandritsa (Bologna, 1994; MAB); Ahaia, Erimanthos Mts. (MSNV); Ahaia, Patra, 30 km W Patra, rd Tripoli-Patra, 34S 562049 4209489 (MABa); Ahaia, Patra, 3 km W Kalavrita, 34S 593551 4209559 (MABa); Ahaia,

Kalavrita (MAB); Ahaia, Kalavrita, Erymanthos Mts. eastern slope (Bologna, 1994; MAB); Ahaia, Kelmos Mts., Parnos (MSNV); Ahaia, Zarouhla (Bologna, 1994); Ahaia, Panos (Bologna, 1994); Ahaia, Kelmos Mts., Zarouble (MSNV); Ahaia, Drosiá (Bologna, 1994); Ahaia, Kalendzi (Bologna, 1994); Korinthia, Killini Mts. (Bologna, 1994; CS); Korinthia, Killini Mts., Lutra (Bologna, 1994; MSNV); Korinthia, Korinthos, Kaliani (CA; MAB); Korinthia, Stimfalia Lake (CMAL; CS); Korinthia, nr. Stilia (CS); Polygiros, btw Olimbiada and Varvara (MAB); Arkadia (Buchelos, 1989; Bologna, 1994); Arkadia, Megalopoli (Bologna, 1994); Arkadia, Tripoli, Dara env. (MAB); Arkadia, Tripoli, 7/8 km W Langadia, N37°39'–E22°04' (MAB); Arkadia, Tripoli, 4 km E Tripoli, 34S 627954 4150803 (MABa); Arkadia, Davia (Bologna, 1994); Arkadia, Menalon Mt., Kardaras (Bologna, 1994); Arkadia, Menalon Mt., rd Vitina-Tripoli (1 Km cross to Fteri) (CMI; MAB); Arkadia, Vitina (Bologna, 1994; CAR); Arkadia, Vitina, Camp Dimitri MItroupolos (Bologna, 1994); Lakonia, Sparti, env. Eurotas river (Bologna, 1994; MAB); Lakonia, Sparti (Bologna, 1994; CFR); Lakonia, Psari (Bologna, 1994); Lakonia, Taigetos Mt. eastern slope (CZ); Lakonia, Taygetos Mt., Poliana (Bologna, 1994; MAB); Lakonia, Taigetos Mt. (Bologna, 1994; MSNV); Lakonia, Taygetos Mt., Poliana (MSNV); Lakonia, Panaitinaikos Mt., Gregore, Agios Joannnes (MUA); Lakonia, Skala (CMI); Lakonia, Gerolimeas (Bologna, 1994); Messinia, Taygetos Mt., rd S. Elia Mt (Bologna, 1994; CV; MAB); Messinia, Kalamata (MAB); Crete Is. (Cecconi, 1895; MAB; MSNM); Crete, Chania, Elos (Bologna, 1994; MAB). The citations from Crete and Agioi Theodoroi Is., nr. Platanias (Cecconi, 1895) possibly refer to M. kodymi (see Bologna, 1994).

Bulgaria: Bulgaria (Angelov, 1960; Kaszab, 1967); Blagoevgrad, Maleshevska, Planina, Gorno Breznitsa nr Manastir (CMI); Blagoevgrad, Maleshevska Planina, SE Tsaparevo (CMI); Blagoevgrad, Kresna (BAS); Blagoevgrad, Struma River bank, Kresna env. (CMI); Blagoevgrad, Struma valley, 2 Km S from Kamenitsa (CMI); Blagoevgrad, Pirin (MCZR); Blagoevgrad, South Pirin Mts., SE Sveti Ilia Hill near Kalimantsi (CMI); Blagoevgrad, Pirin Nat. Park, from Bunderitsa to Vihren (Bansko) (CMI); Blagoevgrad, Simitli (MAB); Pazardzhik, from Velingrad to Surnitsa (cross to Grashevo) (CMI); Pazardzhik, Batak lake (Velingrad) (CMI); from Velingrad to Bachkovo (Angelov, 1965); Bratsigovo (Angelov, 1965); Strandja Mts. (Kantardjièva, 1929); Sofia, Osoitsa (Kantardjièva, 1929); Lyulina (Kantardjièva, 1929); Knyazhevo (Kantardjièva, 1929); Svoge Pancherevo (Kantardjièva, 1929); Tsaribroda (Kantardjièva, 1929); Svishtov (Kantardjièva, 1929); Ruse and Nikopola (Kantardjièva, 1929); Srydna forest (Kantardjièva, 1929); Rila Mountain (Kantardjièva, 1929); Dupnitsa (Kantardjièva, 1929); Plovdiv, Assenovgrad, Bachkovo Monastery (CMI); Plovdiv, rd Pazardzhik to Plovdiv, Govedare (CMI); Pazardzhik (Kantardjièva, 1929); Slivena (Kantardjièva, 1929); Haskovo, Svilengrad (BAS); Lozenec (MAB); Nessebar (Muche, 1964); Varna (Kantardjièva, 1929); Burgas (Kantardjièva, 1929); Burgas, Sosopol (ZMHB); Burgas, Malko Tarnovo, N42°08'–E27°25' (CA; MAB); Central Rhodopes (Kantardjièva, 1929).

Romania: Romania (Kaszab, 1967; Rosca, 1976); Transilvania (Schatzmayr, 1941); Resicabánya; Vallis Misid; Mehádia; Kazan (Kaszab, 1942b; Tóth, 1973); Dobrudja (HNHM); Mangalia, Hagieni, Comarova, Canaraua Fetei (Negru & Rosca, 1967).

Ukraine: Ukraine (Kolov, 2003; Nikolaev & Kolov, 2005); Volhynia (Baudi di Selve, 1878a); Tauria (Baudi di Selve, 1878a); Crimea (Gemminger & Harold, 1870; Beauregard, 1890); Crimea, Feodosia, Kara dagh (MAB); Crimea: Yalta; Aivazovsky; Simferopol env.; Alma; Frui; Krasnoselovka; Karadag; Grushevka; Kerch (Levtshinskaja, 1964); Askania Nova (Medvedev & Levtshinskaja, 1962); Old-Berdyansk forest cottage (Medvedev & Levtshinskaja, 1962); Korsun (Medvedev & Levtshinskaja, 1962); Zavadovka (Medvedev & Levtshinskaja, 1962).

Russia: southern Russia (Billberg, 1813; Baudi di Selve, 1878a; Sumakov, 1915; Roepke, 1917; Kolov, 2003); southern Russia, north to Moscow and east to Omsk (Nikolaev & Kolov, 2005); eastern Russia (Roepke, 1917; Sumakov, 1930); from southern Russia to Siberia (Kuzin, 1953; Kaszab, 1968b); Saratow (Tauscher, 1812); Volgograd (NHMW); eastern Siberia (Fischer von Waldheim, 1842); Omsk region (Logachev, 1949, see Nikolaev & Kolov, 2003):

Georgia: Caucasus, Ananuri, N42°08'51.3"–E044°44'19.5" (MAB); Mts 'khet' a Cross Monastery, N41°50'17.7" - E044°44'03.9" (MAB); Shirakis vabe Vashlovanis Res., N41°12'38.0"–E046°26'10.6" (MAB); Tblisi env., Uzbah, Turtle Lake, N41°42'04.3"–E044°45'12.8", 4.7.2003 (MAB); Tblisi, Geographical Station, 5.vii.2003 (MAB); Tblisi, Uzbah, Turle Lake, N41°42'04.3"–E044°45'12.6" (MAB); Gomboris, Norio (MAB); Gomboris, k'edi Khashmi, Zalieti, N41°44'57.5"–E045°08'24.1" (MAB); Gomboris, k'edi btw. Gombori and Talavi, N41°51'36.3"–E045°14'21.7" (MAB); Tarstschai and Borshom (Schneider & Leder, 1878); Gardabani, Martkopi (MAB); Shirakis, Kverno kedi, rd Pantishara canyon to Kashrist's (MAB); Shirakis vabe, 25 km SE Kverno kedi, N41°12'31.6"–E046°21'26.9", border Georgia-Azerbajan, end of Pantishara canyon (MAB).

Armenia: Armenia (Iablokoff-Khnzorian, 1983); Sevan (CK); Yerevan (Pic, 1901; Mader, 1927); Garni, rd Garni-Gherand (CS); Meghri region, Tkhkut (CS); Goris, Khndzoresik (CS); Zangezur Mts., Shvanidzor (CS); Khosrov (MAB); Bjurakhanl (MAB); Gechard (MAB).

Azerbaijan: Akstafa (Schneider & Leder, 1878); Lenkoran (MAB). Schneider & Leder (1878) cited two additional Caucasian localities not identified: Katschora and Assuret valley. Kuzin (1954) cited generically this species from the Transcaucasia.

Turkey: Anatolia (Olivier, 1811; Baudi di Selve, 1878b; Escherich, 1897; Sumakov, 1915; Kuzin, 1953, 1954; Dvořák, 1964; Kolov, 2003; Nikolaev & Kolov, 2005); European Turkey (Kaszab, 1967); Kırklarelı, 24 km W of Çorlu (BMNH); Kırklarelı, Demirköy (CS); Edirne (Kaszab, 1959; Özbek & Szaloki, 1998); Tekirdağ, 24 km Malkara-Inecik rd (BMNH); Tekirdağ, Ulas (ZSM); Tekirdağ (MSNV); Tekirdağ, Rodosto (Kaszab, 1941); Istanbul (Olivier, 1811; Özbek & Szaloki, 1998; BMNH); Istanbul, Belgrad forest (Kaszab, 1968a); Resadiye env., Alemdağ (Bologna, 1979; MAB); Istanbul, Alacali (BMNH); Duzce, Kaynaşlı (Kaszab, 1959); Bolu dağlari (Kaszab, 1959); Bolu, Abant Mt. northern slope (CA); Bolu, Gerede (Kaszab, 1959); Çanakkale, Lapseki env. (Bologna, 1979; MAB); Çanakkale, Truva (FSAG); Çanakkale, Koru dağ (CS); Bursa, Ülü dağ (Bologna, 1979; ZSM); Karacabey (Kaszab, 1941); Bursa (Özbek & Szaloki, 1998; MAB); Balıkesir (Özbek &

Szaloki, 1998); Balıkesir, Yaricakag and Gönen (Bologna, 1979); Kütahya (Bytinski-Salz, 1956); Eskisehir (Bologna, 1979); Kırşehir (Bytinski-Salz, 1956); Izmit, Karamürsel (Bologna, 1979); Izmit, Kocaeli (Özbek & Szaloki, 1998); Çankırı (Özbek & Szaloki, 1998); Çankiri, Korguni Dikenli Köyü (Bologna, 1979); Sinop (BMNH); Sinop, Küre Dağlari, 3 km S of Çakildak, Dranaz geç., N41 44 40.5–E34 55 20.4 (MABa); Amasia (UE); Sivas, 20.5 km NE Zara, N39.95830–E37.94251 (MABa); Gümüshane, 10/20 km NW Bayburt (MAB); Erzincan, Vican nr. Tercan (ZSM); Erzurum, Pazaryolu-Göyurt geç. (CMAL); Erzurum, 2 km NW Aşkale vs Bayburt, N39.94143–E40.63210 (MABa); Erzurum, SE Horasan, nr. Yukai, Tahiorhak, N39°52'–E42°15' (CPR); Erzurum, ca 20 km S Çat, N39.59642–E40.92266 (MABa); Artvin, Demirkent/Salekor (MAB); Kars, 17 km SW Sarikamiş (ZSM); Kars, 20 km SW Sarikamiş (MAB); Kars, Sarikamiş (MAB; MCNC); Kars, Sarikamiş, Ormanali (UE); Kars 1 km SW Karaurgan, N40.21563–E42.23881 (MABa); Kars, Selim (UE); Kars, Pasli geç. (CS); Izmir, Selçuk (MSNM); Denizli, Pamukkale (ZSM); Denizli (ZSM); Ankara, Airport of Ankara (Bologna, 1979; MAB); Ankara, Kızılcahaman (MSNM); Ankara, Beynam (BMNH); Konya, 6 km E of Kösere, gorge near Çakillar, N37 23 33.8–E34 18 37.5 (MABa); Konya, 10 Km N Beysehir (CA); Konya, 4.2 km N Beyşehir, N37.72938°–E31.70397° (MAB); Konya, Beyshehir 10 km N (CA); Konya, Karapınar (Bytinski-Salz, 1956); Konya, Ereğli (Özbek & Szaloki, 1998; ZMHB); Konya, Ayranci SW of Ereğli (Kaszab, 1968a); Konya, Gaybi nr Ereğli (Kaszab, 1968a); Akseki, Bell geç. (MAB); Akseki, Çevirlı (MAB); Niğde Bor (BMNH); Tunceli, Ovacik (Kaszab, 1968a); Tunceli (Özbek & Szaloki, 1998); Antalya, Irmasan geç. (CS); Antalya, Alanya (MCNV); Içel, btw. Erdemlıand Güzeloluk (CS); Içel, Camliyayla-Gülek, N37.15750°–E34.77396° (MAB); Adana (Özbek & Szaloki, 1998); Adana, Pozanti (MAB); Adana, Ceyhan (Kaszab, 1941); Adana, Amanus Mts., Yarpuz (MAB); Adana (MNHN); Hatay, Akbez (Fairmaire, 1884); Malatya, Resadiye geç. (CS); Muş, Buğlan geç. (CS); Muş, 14 km S Muş, jct to Varto (MAB); Van, rd Çatak after Gorentah Köyu (MNHN); Hakkari, Kolbaşı (MAB).

Syria: Syria (Baudi di Selve, 1878a; Sumakov, 1915). These citations probably refer to the southern-eastern regions of Turkey (mostly Adana and Iskederun provinces), which in the past were consiederd as Syria, but the presence of the species in Hatay supports the possibility of its distribution in coastal Syria.

Israel: Chikatunov, 1999 recorded *M. variabilis* from the following Israel-Palestinian localities, but these records probably refer to *M. mediorientalis*: Central Coastal Plain; Judean Hills; Dead Sea Area; Judean Desert; Southern Coastal Plain; Northern Negev; Central Negev.

Iran: Iran (Baudi di Selve, 1878a; Kuzin, 1953; Iablokoff-Khnzorian, 1983; Kolov, 2003; Nikolaev & Kolov, 2003; Serri *et al*., 2012); eastern Azarbaijan (Morrades Awal, 1997); Mazandaran (Morrades Awal, 1997); Mazandaran, Elburz Mts. northern slope, N36°30'–E51°19' (CS); Mazandaran, Polour (HMIM); Mazandaran, Bobolsar (CFR); Mazandaran, Sari (IRSN); Mazandaran, Schalom Valley (MSNV); Mazandaran, Elburz Mts., 23 km NE late Kendevan tunnel (MAB); Mazandaran, Elburz Mts., Kendevan Pass (MAB); Teheran, Elburz Mts., Pardakan (NHMW); Teheran, Karaj, Kalhaaa (HMIM); Teheran (Morrades Awal, 1997; HMIM); Gorman, forêt de Golestan (Kaszab, 1968b); Golestan, Azadshahr (MABa); Golestan, Fazelabad to Mohammadabad, N36°42'52.6"–E54°48'14.3" (HMIM); Gorgan (Morrades Awal, 1997); Gorgan, Gonbad-Qabus (Kaszab, 1957); Bojnurd, Sepid, betw. Bojnurd and Tappenye (NHMW); Bojnurd, Moh. Rheza Shah Wildlife Park, btw. Shah Pasand and Bojnurd (NHMW); Khorasan (Morrades Awal, 1997); Khorasan, Atrek (Kaszab, 1957); Khorasan, Mashhad (MABa); Khorasan, Sabzevar (Fekrat & Modaress Awal, 2012); Lorestan, Zage-Ye-Bala (MAB); Kermanshah (Morrades Awal, 1997); Hamedan, Nahavand County (Nikbakhtzadeh & Tirgari, 2002); Esfahan, Zagros Mts., Fereidun Shar, N32°54.43'–E50°06.40' (IRSNB); Fars, Firouzabad, Chalus (Kaszab, 1968a). Records from Balouchestan (Morrades Awal, 1997) are doubtful.

Turkmenistan: Turkmenistan (Kuzin, 1953; Kaszab, 1973; Kolov, 2003; Nikolaev & Kolov, 2005); Chodzchakent, Tschimgan W of the Kyndyr-Tan (Hauser, 1894); from Caracal to Chakan-Kala (Reichardt, 1934); Sumbar River (Reichardt, 1934); Aşgabat (Reitter, 1889); Chandyr, Kertyk in the Kopetdag (Reichardt, 1934); Pass Gaudan (Reichardt, 1934).

Kazakhstan: Kazakhstan (Kuzin, 1953); W Kazakhstan (Kuzin, 1954); western and northwestern Kazakhstan (Kolov, 2003; Nikolaev & Kolov, 2005). Records from Syr Darya are doubtful (see Nikolaev & Kolov, 2005).

Afghanistan: Cited generically from Afghanistan (Borchmann, 1917; Mader, 1927; Schatzmayr, 1941, 1943; Dvořák, 1964; Novak, 1964; Kaszab, 1968b; Iablokoff-Khnzorian, 1983; Kolov, 2003; Nikolaev & Kolov, 2005), from northwestern regions [Hari-rud valley (Waterhouse, 1889; Kaszab, 1958a) and Khorassan (Kaszab, 1958a)]. Records from Nurestan (Borchmann, 1936; Kaszab, 1958a) actually refer to *M.* (*Micrabris*) *nuristanica subalpestris* (see Kaszab, 1981).

Recorded from Pakistan (Iablokoff-Khnzorian, 1983; Kolov, 2003; Nikolaev & Kolov, 2005), and from Kyrgyzstan (Bar: Heyden, 1881a), but these records need to confirm. Recorded from China, Xinjiang by Du *et al*. (1997a, b); in 2010, one of us (Z. Pan) checked the collection of Prof. Huang R. X., co-author of those papers, but all specimens which were identified as *M. variabilis* refer to other *Mylabris* species. This record must be considered erroneous. Moreover, Pic (1935c) cited erroneously this species from northern China, Gansu, and Kaszab (1973) cited it from Manchuria (NE China).