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Systematic revision of the genus *Cerocoma* Geoffroy, 1762 (Coleoptera: Meloidae: Cerocomini)

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Table of contents

Abstract

The taxonomy of the Palaearctic genus *Cerocoma* is revised using a classical morphological approach. A catalogue to species with current synonyms, type information and repositories is provided as well as diagnostic keys to species (male and female) and subspecies (only male), illustrations of male dimorphic and diagnostic characters and detailed distribution data, including literature and collection records. The biology of *Cerocoma* is summarised, based on available literature and original field observations.

Three new species are described and figured: *Cerocoma confusa* **sp.n.** (= *C. syriaca* Auctorum), *C. longiseta* **sp.n.** and *C. martae* **sp.n.** New status is assessed for two taxa: *C. latreillei sterbai* **stat.n.** and *C. marginiventris* **stat.n.** New synonymies are proposed as follows: *C. syriaca* Abeille de Perrin, 1880 = *C. barthelemyi* Baudi, 1878 **syn. nov.**; *C. latreillei schah* Kaszab, 1968 = *C. latreillei sterbai* Mařan, 1944 **syn. nov.**; *C. scovitzi mirabilis* Dvořák, 1993 = *C. scovitzi intermedia* Mařan, 1944 **syn. nov.**

Adult morphological characters and molecular datasets (nuclear ITS2 and mitochondrial 16S) are used, separately and combined, to carry out the first attempt to elucidate the *Cerocoma* phylogeny, using Maximum Parsimony and Bayesian Inference. The resulted phylogeny supports the arrangement of *Cerocoma* into five subgenera: *Cerocomina*, *Mesocerocoma* and *Metacerocoma* as previously defined; the nominate subgenus, restricted to the species group of *C. schaefferi* Linnaeus, 1758; and *Meloides* Piller & Mitterpacher, 1783, recently resurrected on morphological data only.

Key words: new species, *Cerocomina*, *Meloides*, *Mesocerocoma*, *Metacerocoma*, taxonomy, phylogeny, morphology, DNA, 16S, ITS2, key, distribution, biology

Introduction

Meloidae are phytophagous tenebrionoid beetles, also known as blister beetles for the toxic and vesicant properties of the cantharidin present in the haemolymph (Bologna 1991; Bologna *et al*. 2010). Four subfamilies were recognised based on morphological and biological datasets, namely Eleticinae, Meloinae, Tetraonycinae and Nemognathinae, but more recent analyses based also on molecular data sank Tetraonycinae into the more diverse Meloinae (Bologna & Pinto 2001; Bologna *et al.* 2008).

The meloine Old World tribe Cerocomini is characterised by a striking sexual dimorphism, mostly related to male head, antennae, maxillary palpi and fore legs (Di Giulio *et al.* 2002; Turco *et al.* 2003; 2006; Turco & Bologna 2007; 2008). The monophyly of Cerocomini is supported by larval characters, firstly recognised in *Cerocoma* (Bologna & Pinto 2001; Di Giulio *et al.* 2002) and subsequently confirmed in *Diaphorocera* (Turco *et al.* 2006) and by adult synapomorphies, such as antennal position (sockets distant from eyes, placed below or on the frontal suture), epigamic modifications of male (head, antennae, maxillary palpi and fore legs), labrum elongate and longitudinally canaliculated or carinate, fringed galea and bidentate endophallus (Bologna 1991; Turco *et al.* 2003). Despite the phylogenetic studies on the family based on biological, morphological (larval and adult) and more recently molecular data, the placement of Cerocomini within the Meloinae remains uncertain (Bologna and Pinto 2001; Bologna *et al.* 2008). The tribe comprises six genera: *Anisarthrocera* Semenov, 1895 (1 species), *Rhampholyssodes* Kaszab, 1983 (1 species), *Rhampholyssa* Kraatz, 1863 (2 species), *Somalarthrocera* Turco & Bologna, 2008 (2 species), *Diaphorocera* Heyden, 1863 (8 species) and *Cerocoma* Geoffroy, 1762 (29 species).

Cerocoma is a Palaearctic genus, distributed from the Iberian Peninsula to western China (hotspot of diversity in eastern Mediterranean countries, Greece and Turkey), with one species (*C. vahli* Fabricius, 1787) in Northern Africa. These beetles live in open habitats, primarily steppe ecosystems, feeding on pollen (see Biology) and often in quite large numbers. Indeed, aggregation enhances the warning message carried by their conspicuous metallic colours, usually green, sometimes fading into bronze or blue.

Within the tribe, *Cerocoma* is placed as sister-group to the remaining genera and is defined by having nine antennomeres, the first raised in male to form a dorsal keel, and short mouthparts, especially stipes and galeae (Turco & Bologna 2008). The genus is characterised by an amazing diversification driven by sexual selection (Turco *et al.* 2003), leading to dimorphic features of male antennae, head, maxillary palpi, fore legs and, in subgenus *Metacerocoma*, last abdominal sternite (Figs 1–7), greatly variable in shape and size.

As a consequence of this high diversity, *Cerocoma* presents a complex taxonomy at subgenus, species and infraspecies level, also fueled by the attractiveness of these conspicuous beetles that arose the interest of several European entomologists (Motschoulsky 1872; Baudi 1878a; 1878b; Reitter 1885; 1913; Mařan 1944; Kaszab

1951; Dvořák 1989; 1990; 1993; 1996). Indeed, this taxonomic activity led to a plethora of species, subspecies and other infraspecific forms, often associated only with colour variability. Yet, the main taxonomic debate was related to the organisation of species into subgenera. The first attempt was by Kaszab (1951) who recognised, based on adult morphological characters, four subgenera (*Cerocoma*, *Cerocomina*, *Mesocerocoma* and *Metacerocoma*) and three species complexes within the nominate subgenus: *C. adamovichiana* (Piller & Mitterpacher, 1783) group, *C. kunzei* Frivaldsky, 1835 group and *C. schaefferi* (Linnaeus, 1758) group. Later Dvořák (1989; 1990) proposed to combine the former two groups into a fifth subgenus, resurrecting the name *Meloides* Piller & Mitterpacher, 1783 and leaving the *C. schaefferi* group in the nominate subgenus. However, Dvořák's inclusion of a fifth subgenus was not accepted by subsequent authors (Bologna 1991; 1994; Di Giulio *et al.* 2002).

In order to clarify *Cerocoma* systematics we will first disentangle genus taxonomy with a classical morphological approach, providing a catalogue to species, current synonyms, type information, diagnostic keys to species (male and female) and subspecies (only male), illustrations of male dimorphic and diagnostic characters and distribution data (with a detailed locality catalogue in Appendix 1). We will then use adult morphological characters and molecular datasets (nuclear ITS2 and mitochondrial 16S) to carry out the first attempt to *Cerocoma* phylogeny, using Maximum Parsimony and Bayesian analyses, and solve the current uncertainty on subgeneric arrangement.

Material and methods

Taxonomy. Approximately 4500 specimens, including 172 types, representing the 29 known species of *Cerocoma* were examined for the taxonomic review, to score the morphological matrix for the phylogenetic analysis, to develop diagnostic keys and to collect distribution information (see Appendix 1). All taxonomic and nomenclatural decisions follow the rules of the latest version of the International Code of Zoological Nomenclature (ICZN 2000). The following museums or private collections (with acronyms as used in the text) provided the specimens:

BAS = Bulgarian Academy of Sciences, Sofia, Bulgaria; BIE = Dipartimento di Scienze e Tecnologie Agroambientali, Università di Bologna, Bologna, Italy; BMNH = Natural History Museum, London. U.K.; CA = F. Angelini, Francavilla Fontana, Brindisi, Italy; CB = M. A. Bologna, Università "Roma Tre", Rome, Italy; CBA = J. Batelka, Prague, Czech Republic; CBR = S. Bruschi, Rome, Italy; CC = S. Cafaro, Rome, Italy; CCAS = L. Casset, Paris, France; CCE = P. Cerretti, Verona, Italy; CCO = J. Cooter, Hereford Museum, Hereford, U.K.; CD = M. Dvořák, Prague, Czech Republic; CF = F. Frank, Korb, Germany; CFR = late H. Freude, Falconara, Ancona, Italy; CG = G. Gobbi, Rome, Italy; CH = J. Hajek, Prague, Czech Republic; CHA = J. Hamon, Gaillard, France; CI = S. Iacovone, Atessa, Chieti, Italy; CK = S. Krejcik, Unicov, Czech Republic; CL = A. Liberto, Rome, Italy; CLO = J. Lodé, Prague, Czech Republic; CM = B. Mälkin, Warsaw, Poland; CMA = J. Mantič, Czech Republic; CMAC = Macchi, Rome, Italy; CMAL = L. Malmusi, Modena, Italy; CME = C. Meloni, Cagliari, Italy; CMI = E. Migliaccio, Rome, Italy; CNM = Czech National Museum, Department of Entomology, Prague, Czech Republic; CP = J. D. Pinto, University of California, Riverside, U.S.A.; CPR = G. Proscia, Prepotto, Udine, Italy; CR = G. Rallo, Venice, Italy; CS = L. Saltini, Modena, Italy; CSA = G. Sama, Cesena, Italy; CSE = D. Sechi, Cagliari, Italy; CW = P. F. Whitehead, Pershore, U.K.; FSAG = Faculté de Sciences Agronomiques de Gembloux, Belgium; HNHM = Hungarian Natural History Museum, Budapest, Hungary; IAA = Istituto Agronomico di Acireale, Catania, Italy; ISR = Institut Sciéntifique, Rabat, Morocco; MCNV = Museo Civico di Storia Naturale, Venice, Italy; MFSN = Museo Friulano di Storia Naturale, Udine, Italy; MGEN = Muséum d'Histoire Naturelle, Genève, Switzerland; MHNM = Museo Nacional de Ciencias Naturales, Madrid, Spain; MNHN = Muséum National d'Histoire Naturelle, Paris, France; ML = Museo di Storia Naturale, Livorno, Italy; 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; MSNV = Museo Civico di Storia Naturale, Verona, Italy; MTR = Museo Tridentino di Scienze Naturali, Trento, Italy; MUA = Dipartimento di Scienze Ambientali, Università de L'Aquila, L'Aquila, Italy; MUB = Museo Zoologico, Università di Bologna, Bologna, Italy; MUF = Museo Zoologico de "La Specola", Università di Firenze, Florence, Italy; MUH = Zoological Museum of the University, Haifa, Israel; MULL = Universidad de La Laguna, Tenerife, Spain; MUN = Museo Zoologico dell'Università "Federico II", Napoli and Istituto di Entomologia Agraria, Portici, Italy; MUR = Museo Zoologico dell'Università di Roma "Sapienza", Rome, Italy; MZR = Museo Civico di Zoologia, Rome, Italy; NHMW = Naturhistorisches Museum, Wien, Austria; OUM = Oxford University Museum, Oxford, U.K.; PPT = Plant Pests and Diseases Research Institute, Taxonomy Research Department, Tehran, Iran; SMNS = Staatliches Museum fur Naturkunde, Stuttgart, Germany; SMTD =

Staatliches Museum für Tierkunde, Dresden, Germany; UCD = University of California Museum, Davies, U.S.A.; ZEI = Department of Zoology and Entomology, Ege Universitesı, Izmir, Turkey; ZMB = Museum für Naturkunde, Humboldt Universität, Berlin, Germany; ZMS = Zoologische Staatssammlung, Munich, Germany; ZMUC = Zoological Museum, University of Copenhagen, Denmark; ZMUP = Museo Zoologico, Università di Padova, Padua, Italy.

Genus and subgenus characters are given in separate diagnoses in the text; they are not repeated in species descriptions, which therefore comprise only specific characters.

A 'Distribution' paragraph is also given for each species with a list of countries where the taxon occurs. A more detailed catalogue of localities from literature and collection specimens is in Appendix 1 (countries arranged west to east, north to south and localities in each country in alphabetical order).

Phylogeny

Taxon sampling, morphological dataset, DNA sequencing and alignment. The morphological dataset comprises 53 characters for the 29 ingroup taxa (representing all known and new species). Characters are scored from state 0 to 3, with question marks representing inapplicable characters or character states. Two representatives of another Cerocomine genus have been chosen as outgroups (*Diaphorocera hemprichi* Heyden, 1863 and *D. chrysoprasis* Fairmaire, 1863). Morphological matrix and related list of characters are in Appendixes 2 and 3.

Specimens suitable for DNA extraction were not available for all species, therefore we used *D. hemprichi* as outgroup and the 14 species available for the ingroup, representing all traditional subgenera and groups of species recognised by previous literature, including two new species. A list of species analysed is reported in Table 1, with collection data and EMBL accession numbers.

Total genomic DNA was extracted from metathoracic muscles, dissected from alcohol 95% fixed specimens. DNA was extracted and purified by standard phenol-chloroform-ethanol methods (Hillis *et al.* 1990) with some modifications (Oliverio and Mariottini 2001). Partial sequences of the 16S rDNA mitochondrial region (3' end) were amplified by PCR with primers 16sar-L and 16sbr-H (as per Bologna *et al.* 2005). A portion of the nuclear ribosomal cluster, including the 3' end of the 5.8S (~128 bp), the entire ITS2 spacer, and the 5' end of 28S (~67 bp), was amplified by the primers its-3d and its-4r, complementary to conserved regions of the 5.8S and 28S rDNA sequences (Oliverio and Mariottini 2001). PCR products were sequenced by an automated sequencer (Hitachi 3100 Genetic Analyzer) at ENEA laboratories (La Casaccia, Rome), and all sequences have been deposited at EMBL (Table 1). Alignment for each marker was performed by ClustalX 1.83 (Thompson *et al.* 1997), and then corrected for ITS2 to match the secondary structure proposed for this spacer sequence (Bologna *et al.* 2008).

Analyses. Five datasets were analysed: (a) adult morphological characters; (b) 16S sequence data; (c) ITS2 sequence data; (d) combined molecular dataset (16S + ITS2); and (e) combined morphological + molecular dataset. The analyses were carried out via maximum parsimony (MP) and Bayesian inference (BI), using the following software: PAUP* v. 4b10 (Swofford 2002), TreeRot v. 2 (Sorenson 1999), JModeltest v. 0.1.1 (Posada & Crandall 1998), MrBayes v. 3.1.2 (Ronquist & Huelsenbeck 2003).

Maximum parsimony analyses were performed by PAUP* using Branch and Bound searches with ACCTRAN optimization, gaps coded as missing, and TBR branch swapping. All morphological characters were treated as unordered and equally weighted. Gaps within the molecular dataset were coded as missing data. To estimate branch support we ran 10000 parsimony non-parametric bootstrap replicates under TBR branch swapping (except for the morphological dataset). Bremer Support values (BS) for the morphological dataset, and Partitioned Bremer Support values (PBS) for data partitions in combined analyses were calculated by TreeRot and PAUP.

Bayesian analyses (BI) were performed to obtain Bayesian posterior probabilities (bpp) for nodes by MrBayes. Separate analyses were first performed on each dataset (morphology, 16S and ITS2), then combined datasets were analysed, molecular (16S + ITS2) and total (morphology + molecular), maintaining for each character partition its own model of evolution as per JModelTest evaluation. For the morphological dataset we followed Lewis (2001), adopting the Mk model for DNA, with a variable number of states and a gamma distribution. A four chain (1 cold) Monte Carlo analysis was run twice in parallel for at least 10^7 generations, and trees were sampled every 100 generations (burn-in = 0.25). In all the cases we stopped the analyses as the final average standard deviation of split frequencies was less than 0.002 (Ronquist & Huelsenbeck 2003).

The strict consensus derived from the most parsimonious trees as well as those obtained via Bayesian analyses from morphological, molecular and combined datasets are presented (Figs 8, 9).

TABLE 1. Taxon samples for molecular analyses, with collection data and EMBL accession numbers. Asterisks represent different groups of species within the subgenus *Meloides*: * = group of *C. adamovichiana*; ** = group of *C. kunzei*.

Species	*Subgenus*	Collection data	EMBL accession numbers and sequence length			
			16S	bp	ITS2	bp
Diaphorocera hemprichi Heyden, 1863	OUTGROUP	United Arab Emirates, road E11, Airport Al Jazīrat Al Hamrā 11.03.2005, M. Bologna & F. Turco *leg.*	AM712123	550	AM712366	533
Cerocoma turcica Pardo Alcaide, 1977	*Meloides**	Turkey, Vil. Eskişehir, 36 Km W Sivrihisar, 980 m 20.06.2005, M. & M. Bologna & F. Turco *leg.*	FM165485	547	FM203368	611
C. longiseta **sp.n.**	*Meloides**	Turkey, Vil. Ankara, Yenidoğan, 10 Km E Polatlı, 880 m 21.06.2005, M. & M. Bologna & F. Turco *leg.*	FM165486	547	FM203369	611
C. graeca Mařan, 1944	*Meloides**	Greece, Trikala prov., Hani, 325 m 08.06.1999, M. Bologna, F. Turco, P. De Salvo & M. Zapparoli *leg.*	AJ633671	549	AJ635262	609
C. confusa **sp.n.**	*Meloides**	Turkey, Vil. Çanakkale, 7 Km S Ayvacık, 390 m 30.06.2005, M. & M. Bologna & F. Turco *leg.*	FM202140	546	FM205016	620
C. macedonica Mařan, 1944	*Meloides***	Turkey, Vil. Konya, 4,2 Km N Beyşehir, 1125 m 28.06.2005, M. & M. Bologna & F. Turco *leg.*	FM201783	548	FM203370	616
C. dahli Kraatz, 1863	*Cerocoma*	Turkey, Vil. Kayseri, 2 Km E Güzelöz, 1580 m 23.06.2005, M. & M. Bologna & F. Turco *leg.*	FM201784	547	FM203371	608
C. bernhaueri Pardo Alcaide, 1977	*Cerocoma*	Syria, muh. Dimashq, 1 Km E Burqush, 1140 m 29.04.2005, A. Podlussány *leg.*	FM201785	547	FM203372	609
C. schaefferi (Linnaeus, 1758)	*Cerocoma*	Italy, Calabria, Montescuro Pass, 1350 m 08.07.2006, F. Turco & M. Giulianini *leg.*	FM202141	548	FM205017	611
C. scovitzi Faldermann, 1837	*Mesocerocoma*	Iran, Fars, Firouzabad, 40 Km SE Kazeroun, 750 m 08.05.2004, M. Bologna *leg.*	FM202142	548	FM205018	667
C. vahli Fabricius, 1787	*Cerocomina*	Morocco, Marrakech prov., 50 Km E Marrakech on road P31 25.05.2004, F. Turco & M. Giulianini *leg.*	FM202143	549	FM205019	607
C. prevezaensis Dvořák, 1993	*Metacerocoma*	Greece, Nom. Preveza, Kanali, 20-30 m 03.06.1999, M. Bologna, F. Turco, P. De Salvo & M. Zapparoli *leg.*	FM202144	547	FM205020	605
C. schreberi Fabricius, 1781	*Metacerocoma*	Italy, Latium, Roma prov., Maccarese 25.06.1999, F. Turco, P. Bombi & L. Papa *leg.*	AM712122	548	AM712365	604
C. festiva Faldermann, 1837	*Metacerocoma*	Iran, Fars, Firouzabad, 20 Km E Farāsband, 1100 m 08.05.2004, M. Bologna *leg.*	FM202145	548	FM205021	590
C. ephesica Reitter, 1885	*Metacerocoma*	Turkey, Vil. Kayseri, 2 Km E Güzelöz, 1580 m 23.06.2005, M. & M. Bologna & F. Turco *leg.*	FM202146	547	FM205022	590

Results

1. Biology

The biology of Cerocomini is poorly known with the exception of scattered notes on host plants (Bologna 1991; Turco & Bologna 2007), larval host data for a few *Cerocoma* species (see Bologna 1991 for a synthesis, and Di Giulio *et al.* 2002), and the sexual behaviour of *Cerocoma* (Turco *et al.* 2003).

The genus occurs in open habitats (including forest clearings), in Mediterranean climates as well as in steppe and semi-deserts, from sea level to about 2000 meters a.s.l. Eggs are laid in holes dug by the female in the ground as in other Meloinae. First-instar larvae ("triungulins") are not phoretic, but actively search for host nests where they develop to adults. Triungulins feed on eggs and larvae of some Hymenoptera Aculeata as well as on stored honey or insect prey (Bologna 1991). The cerocomine first-instar larva is known for six *Cerocoma* species (Di Giulio *et al*. 2002) and one *Diaphorocera* species (Turco *et al.* 2006).

Cerocoma adults primarily feed on Apiaceae (particularly *Daucus*) and some Asteraceae (mainly *Achillea* and allied genera), and rarely on Lamiaceae, Scrophulariaceae, Brassicaceae and Cistaceae (Table 2). Some records report *C. graeca* Mařan, 1944 in Greece occurring on *Quercus frainetto* Ten. and *C. dahli* Kraatz, 1863 in Jordan on *Quercus* sp. (Table 2), but the presence on these plants is most probably due to a few individuals occasionally coming from clearings nearby. *Cerocoma* species are mostly active between April and August (Table 3), with some specimens recorded in March (i.e. *C. azurea* Reitter, 1913*, C. bernhaueri* Pardo Alcaide, 1977*, C. dahli, C. kunzei, C. prochaskana* Reitter, 1896 and *C. scovitzi* Faldermann, 1837 in the Near East and *C. vahli* in Maghreb), September (*C. adamovichiana* and *C. dahli* in Greece and Turkey, and *C. vahli* in Tunisia) and infrequently in October (*C. schaefferi* and *C. schreberi* in Spain and Italy). These temporal outliers are likely due to exceptionally warm weather conditions.

TABLE 2. Known host plants for the genus *Cerocoma*, from literature review and original field observations. Al: Algeria; Fr: France; Ge: Germany; Gr: Greece; Ir: Iran; It: Italy; Jo: Jordan; Mo: Morocco; Sp: Spain; Tk: Turkey; Tu: Tunisia. MB = M.A. Bologna unpublished data from field observation; FT = F. Turco unpublished data from field observation; for other acronyms see list given on pags 5-6. Information extracted from Bologna 1991 on host plants of *C. muehlfeldi, C. schaefferi* and *C. schreberi* refer to the whole distribution range for each species.

Species	Country	Host Plant	Datum source
C. adamovichiana	Gr	*Daucus carota* (Apiaceae)*, Achillea* sp. (Asteraceae)	MB & FT
		Daucus sp., *Mentha* sp. (Lamiaceae)	Bologna 1994
C. albopilosa	Tk	Asteraceae	MB & FT
C. azurea	Jo	*Chrysanthemum* sp. (Asteraceae)*, Alchemilla* sp. (Rosaceae)	MB
C. confusa	Tk	*Daucus carota*, *Daucus* sp. and other Apiaceae, *Achillea* sp.	CH; MB; MB & FT
	Gr	*Daucus carota*	MB & FT
		Convolvulus sp. (Convolvulaceae), Apiaceae	Bologna 1994
C. dahli	Tk	*Achillea millefolium*, *A. biebersteinii*	Ozbek & Szaloki 1998
		Achillea sp., *Carduus* sp., *Anthemis* sp.	MB; MB & FT
	Jo	*Quercus* sp. (Fagaceae)	CK
C. ephesica	Tk	*Mentha longifolia*	Ozbek & Szaloki 1998
		Daucus carota	MB & FT
	Gr	*Thymus* sp. (Lamiaceae)	CL
C. festiva	Ir	Apiaceae	MB

.....continued next page

TABLE 2. (continued)

Species	Country	Host Plant	Datum source
C. graeca	Gr	*Quercus frainetto*	MUA; CB
		Thymus sp. *Daucus carota*	CB; CL; MB & FT
		Anthemis sp., *Achillea* sp.	MB & FT
		Mentha sp.	Bologna 1994
C. kunzei	Tk	*Achillea biebersteinii*, *A. millefolium*	Ozbek & Szaloki 1998
		Daucus sp.	MB
C. longiseta	Tk	*Achillea* sp., *Daucus carota*	MB & FT
C. macedonica	Tk	*Achillea* sp.	MB & FT
C. malatyensis	Gr	*Achillea* sp.	MB
C. muehlfeldi		*Daucus* sp. (Apiaceae); *Xeranthemum* sp. (Asteraceae); *Knautia* sp. (Dipsacaceae)	Bologna 1991
	Gr	Apiaceae	Bologna 1994
C. prevezaensis	Gr	*Thymus* sp.	CB, MB & FT; Bologna 1994
		Verbascum sp. (Scrophulariaceae)	CL
		Cistus incanus (Cistaceae)	CW
		Daucus carota, *Anthemis* sp.	MB & FT
C. schaefferi		*Achillea* sp., *Anthemis* sp., *Chrysanthemum* sp., *Santolina* sp., *Helichrysum* sp., *Cirsium* sp. (Asteraceae); *Daucus* sp., *Orlaya* sp. (Apiaceae); *Cistus* sp. (Cistaceae); *Euphorbia* sp. (Euphorbiaceae); *Rosa* sp. (Rosaceae)	Bologna 1991
	Ge	*Sisymbrium altissimum* (Brassicaceae) *Daucus carota* *Achillea millefolium*	Saure 1996
	Gr	*Daucus carota*	MB
	Sp	*Achillea* sp.	MB & FT
		Asteraceae Liguliflorae, Apiaceae	Bologna 1994
		Achillea filipendulina *Helichrysum* sp. (Asteraceae)	MB; M. García-París, J. Lodé (personal communication)
	It	*Achillea* sp. and other Asteraceae *Daucus carota*	CMI CB
C. schreberi		*Daucus carota*, *Seseli* sp., *Eryngium* sp. (Apiaceae); *Mentha* sp. (Lamiaceae); *Achillea* sp., *Chrysanthemum* sp., *Anthemis sp. Matricaria* sp. (Asteraceae); *Euphorbia* sp. (Euphorbiaceae); *Knautia* sp. (Dipsacaceae)	MB & FT; Bologna 1991
	Tk	*Matricaria* sp. (Asteraceae)	Bologna 1979; ZEI
	Fr	*Daucus carota*	MB
	Gr	Apiaceae	Bologna 1994
C. scovitzi	Tk	*Daucus* sp.	MB
	Ir	*Daucus carota* and other Apiaceae	MB
C. turcica	Tk	*Convolvulus* sp., *Achillea* sp.	MB & FT
C. vahli	Al	*Helychrysum* sp., *Anthemis* sp.	MB
		Hypericum repens (Clusiaceae)	Chevrolat 1838
		Daucus sp., *Ammi* sp. (Apiaceae)	Bedel 1892
	Mo	*Malva italica* (Malvaceae)	Sumakov 1934
	Tu	*Daucus carota*	MB

TABLE 3. Phenology of *Cerocoma* species, from literature and collection records. Altitudinal ranges refer to available phenological records. We consider "peak" the period of time for which a majority of data are recorded, when clearly recognisable (see Biology for details).

Species	Phenology	Peak	Altitudinal range
C. adamovichiana	Apr–Sep	May–Aug	100–2000
C. albopilosa	Apr		0–800
C. azurea	Mar–May		1000
C. barthelemyi	May–Jul		1600–2000
C. bernhaueri	Mar–Jul	Apr–May	200–2200
C. bodemeyeri	Apr–Aug	May	1300–2200
C. confusa	Apr–Aug	May–Jun	30–2200
C. dahli	Mar–Sep	May–Jun	400–2100
C. ephesica	Jun–Aug	Jul	150–1400
C. festiva	Apr–Aug	Jun–Jul	900–1300
C. gloriosa	Apr–Jun		1000
C. graeca	Jun–Jul		0–1700
C. kunzei	Mar–Jul	Jun	200–1600
C. latreillei	Apr–Jun	May	0–2000
C. longiseta	Jun–Jul		200–1500
C. macedonica	May–Jul	May–Jun	1100–1900
C. malatyensis	May–Jul		700–1000
C. marginiventris	Jun–Jul		1300
C. martae	Apr–Jul	Jul	0–300
C. muehlfeldi	May–Aug	Jun–Jul	500–2200
C. prevezaensis	May–Jul	Jun	0–200
C. prochaskana	Mar–Apr		200
C. rapillyi	May–Jun		1100–2300
C. schaefferi	Apr–Oct	May–Jul	300–1900
C. schreberi	Apr–Oct	Jun–Jul	0–600
C. scovitzi	Mar–Aug	Jun–Jul	100–1600
C. simplicicornis	May–Jul		900–1000
C. turcica	Jun–Jul		700–1500
C. vahli	Mar–Sep	May–Jun	100–2200

2. Systematics

Genus *Cerocoma* Geoffroy, 1762

Cerocoma Geoffroy, 1762: 357.
Type species. *Meloe schaefferi* Linnaeus, 1758: 420, by subsequent monotypy (Fabricius, 1775).

Genus diagnosis. Head green metallic, or black in the subgenus *Mesocerocoma*; in several species the middle portion of frons or the anterior half of head (including male frontal calli, partially or completely) is orange. Frons of male with two almost smooth calli, just behind the antennae, scarcely or moderately raised over the head (see Fig. 5). Mouthparts (labrum, mandibles, and maxillae) elongate, variously coloured, often orange. Antennae 9-seg-

mented, inserted on the fronto-clypeal suture, subclavate in female, from scarcely (three species of the nominate subgenus only) to extremely modified in male; mostly orange, antennomere I orange, black or dark green metallic, in some cases antennomere IX (or rarely V–IX) dark, almost black. Maxillary palpomeres simple in female, variously modified in male.

Pronotum usually subrectangular and slightly narrowed in the anterior third, rarely subquadrate or moderately transverse, not distinctly elongate as in other representatives of the tribe; with two oblique, lateral impressions on the anterior third in males; most commonly metallic (green, blue or bronze), rarely black (subgenus *Mesocerocoma*) or orange. Elytra flattened, metallic (green, blue or bronze); wings normally developed. Coxae and trochanters most commonly metallic, rarely orange; femora and tibiae metallic or orange; male protibiae always orange, usually largely modified, dorso-ventrally flattened or with a dorsal keel variously shaped, in few species scarcely or not modified; tarsomeres not modified or, in some species, slightly enlarged, male tarsomere II with a dorsal bulge in the subgenus *Meloides*; tarsomeres orange or the apical one or two dark.

Abdomen most commonly metallic (green, blue or bronze), in some species totally or partially orange-red, rarely black; posterior margin of last visible abdominal sternite rounded in females, emarginate in males, in four species of the subgenus *Metacerocoma* prolonged in two laminar expansions visible also in dorsal view. Male external genitalia: aedeagus with two distinct hooks, directed backwards and usually subequal in size; endophallus with sclerotised double-hooked apex; gonostyli slender with apical lobes quite distinct.

FIGURE 1. *Cerocoma schreberi*. Male and female (from left to right), on *Achillea* sp. (Asteraceae) (photo S. Krejcik, www.meloidae.com).

Key to the species

Males (Figs 2–7)

1. Head with a depressed and densely punctured area above the eyes (subgenus *Metacerocoma*) . . . . . 2.
- Head without a depressed area above the eyes . . . . . 6.
2. Last protarsomere narrow and with parallel sides. . . . . 3.
- Last protarsomere expanded on the internal side. . . . . 4.
3. Expansion on antennal segment VI very long; apical portion of dorsal keel on protibiae straight and directed forward; external side of meso- and metatibiae with black setae; integument blue or blue-green. . . . . *festiva*
- Expansion on antennal segment VI short; apical portion of dorsal keel on protibiae curved and directed outwards; external side of meso- and metatibiae with yellow setae; integument green . . . . . *martae*
4. Last abdominal sternite without visible laminar expansions . . . . . *schreberi*
- Last abdominal sternite with laminar expansions, clearly visible in dorsal view . . . . . 5.
5. Laminar expansions of last abdominal sternite very long, about as long as the whole last abdominal segment; medial line on pronotum long and deep. . . . . *ephesica*
- Laminar expansions of last abdominal sternite shorter, about half length of last abdominal segment; medial line on pronotum short and shallow. . . . . *prevezaensis*
6. Head, pronotum and thoracic sternites black or partially orange, never metallic; protibiae dorso-ventrally flattened and anteriorly enlarged; protibial spur flattened and apically rounded (subgenus *Mesocerocoma*). . . . . 7.
- Head, pronotum and thoracic sternites metallic or partially orange, never black; protibiae variously shaped but never dorso-ventrally flattened; protibial spur cylindrical and apically pointed. . . . . 8.
7. Head partially yellow; external sides of frontal calli, just anterior to eyes, weakly depressed; mouthparts, including maxillary palpi, yellow; metatarsomeres enlarged. . . . . *latreillei*
- Head completely black; external sides of frontal calli not depressed; mouthparts, including maxillary palpi, black; metatarsomeres subcylindrical. . . . . *scovitzi*
8. Frontal area between calli absent; external side of protibiae with a long and deep depression . . . . . *vahli*
- Frontal area between calli present; protibiae without a depression on the external side . . . . . 9.
9. Protarsomere II distinctly bulged dorsally; head partially orange . . . . . 10.
- All protarsomeres widened but never bulged dorsally; head completely metallic (subgenus *Cerocoma*) . . . . . 25.
10. Dorsal edge of protibial keel straight; anterior edge of protibial keel with an angular bulge, visible in lateral view (subgenus *Meloides*, *C. kunzei* group) . . . . . 11.
- Dorsal edge of protibial keel curved; anterior edge of protibial keel without angular bulge (subgenus *Meloides*, group of *C. adamovichiana*). . . . . 16.
11. Last antennomere rounded; internal side of antennomere III with a pointed, spine-like appendix, clearly visible in dorsal view. . . . . *gloriosa*
- Last antennomere transverse; antennomere III with an blunt appendix on the inner side . . . . . 12.
12. Maxillary palpomere IV apically widened, securiform . . . . . 13.
- Maxillary palpomere IV with subparallel sides . . . . . 14.
13. Abdomen completely red-orange . . . . . *rapillyi*
- Abdomen metallic green, with red-orange sides. . . . . *marginiventris*
14. Abdomen red-orange with last two segments both metallic green . . . . . *bodemeyeri*
- Abdomen unicolor metallic, green or red-bronze . . . . . 15.
15. Maxillary palpomere IV with parallel sides; head and pronotum transverse; body metallic red-bronze . . . . . *macedonica*
- Maxillary palpomere IV gradually widening from base to apex; head and pronotum not transverse; body metallic green . . . . . *kunzei*
16. Protarsomere III about as long as V, excluding claws. . . . . 17.
- Protarsomere III distinctly shorter than V, excluding claws . . . . . 21.
17. Protarsi longer than protibiae; prothorax narrow. . . . . *graeca*
- Protarsi about as long as protibiae; prothorax wide. . . . . 18.
18. Maxillary palpomere IV slender, with subparallel sides; antennomere VI with long, dense dark setae on ventral side. . . . . 19.
- Maxillary palpomere IV triangular, abruptly widening from base to apex; antennomere VI without dark setae. . . . . 20.
19. Abdomen red-orange. . . . . *malatyensis*
- Abdomen metallic green . . . . . *barthelemyi*
20. Setae under antennomere VI very long; external portion of antennomere VIII pointed; external side of maxillary palpomere III enlarged and rounded, clearly visible in dorsal view. . . . . *longiseta*
- Setae under antennomere VI short; antennomere VIII completely rounded; external side of maxillary palpomere III only slightly enlarged and rounded . . . . . *albopilosa*
21. Antennomere VI glabrous; maxillary palpomere IV very slender with parallel sides . . . . . *muehlfeldi*
- Antennomere VI with long yellowish setae; maxillary palpomere IV widened apically. . . . . 22.
22. Maxillary palpomere IV abruptly widened on one side, securiform; protibial keel very high and dorsal edge strongly rounded. . . . . 23.
- Maxillary palpomere IV evenly widened on both sides, not securiform; protibial keel less high and and dorsal edge weakly rounded . . . . . 24.

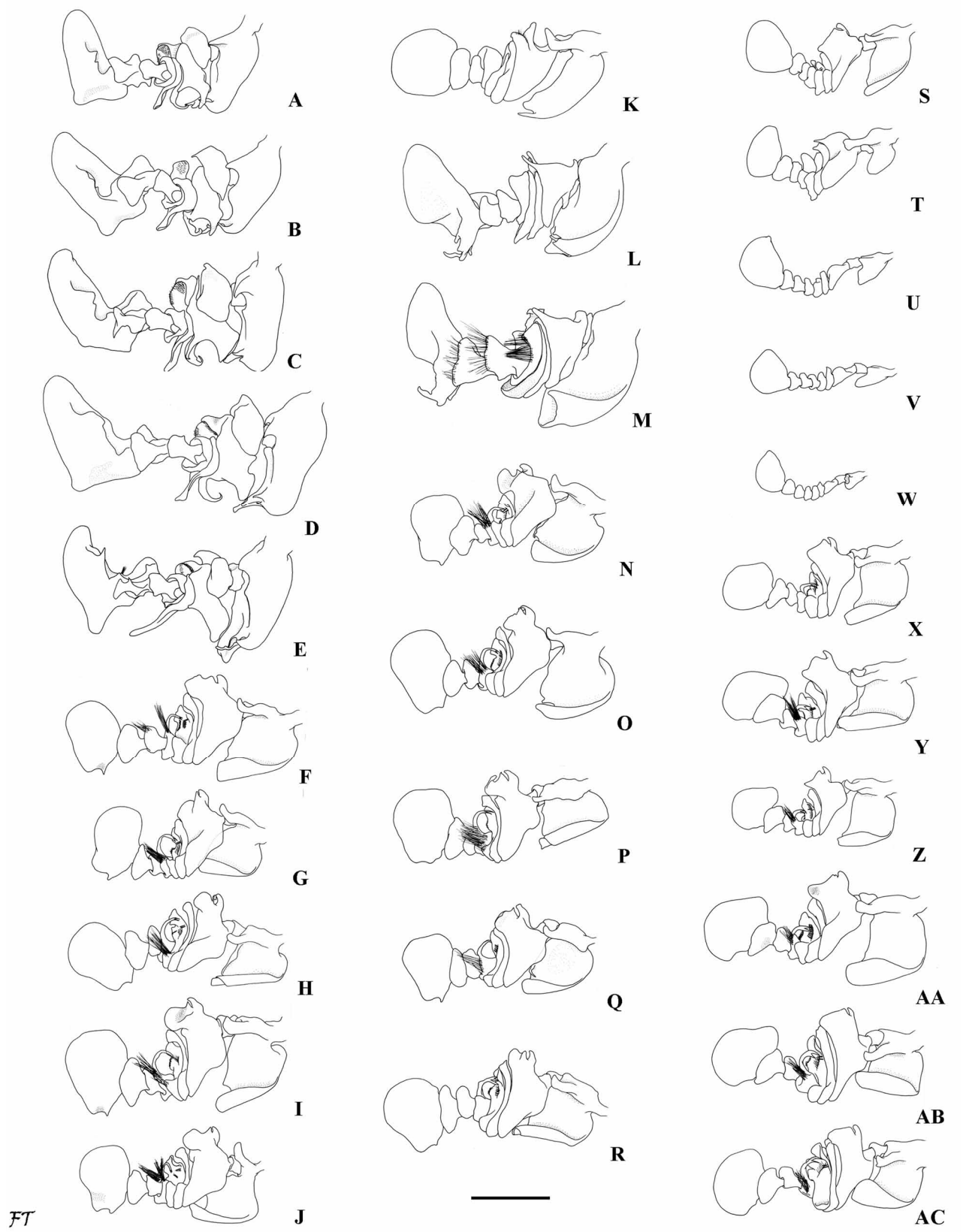

FIGURE 2. Male right antenna, lateral view: A, *C. schreberi*; B, *C. martae*; C, *C. ephesica*; D, *C. prevezaensis*; E, *C. festiva*; F, *C. graeca*; G, *C. malatyensis*; H, *C. albopilosa*; I, *C. longiseta*; J, *C. barthelemyi*; K, *C. vahli*; L, *C. scovitzi*; M, *C. latreillei*; N, *C. adamovichiana*; O, *C. confusa*; P, *C. azurea*; Q, *C. turcica*; R, *C. muehlfeldi*; S, *C. schaefferi*; T, *C. prochaskana*; U, *C. dahli*; V, *C. bernhaueri*; W, *C. simplicicornis*; X, *C. gloriosa*; Y, *C. rapillyi*; Z, *C. marginiventris*; AA, *C. macedonica*; AB, *C. kunzei*; AC, *C. bodemeyeri*. Scale bar = 1 mm.

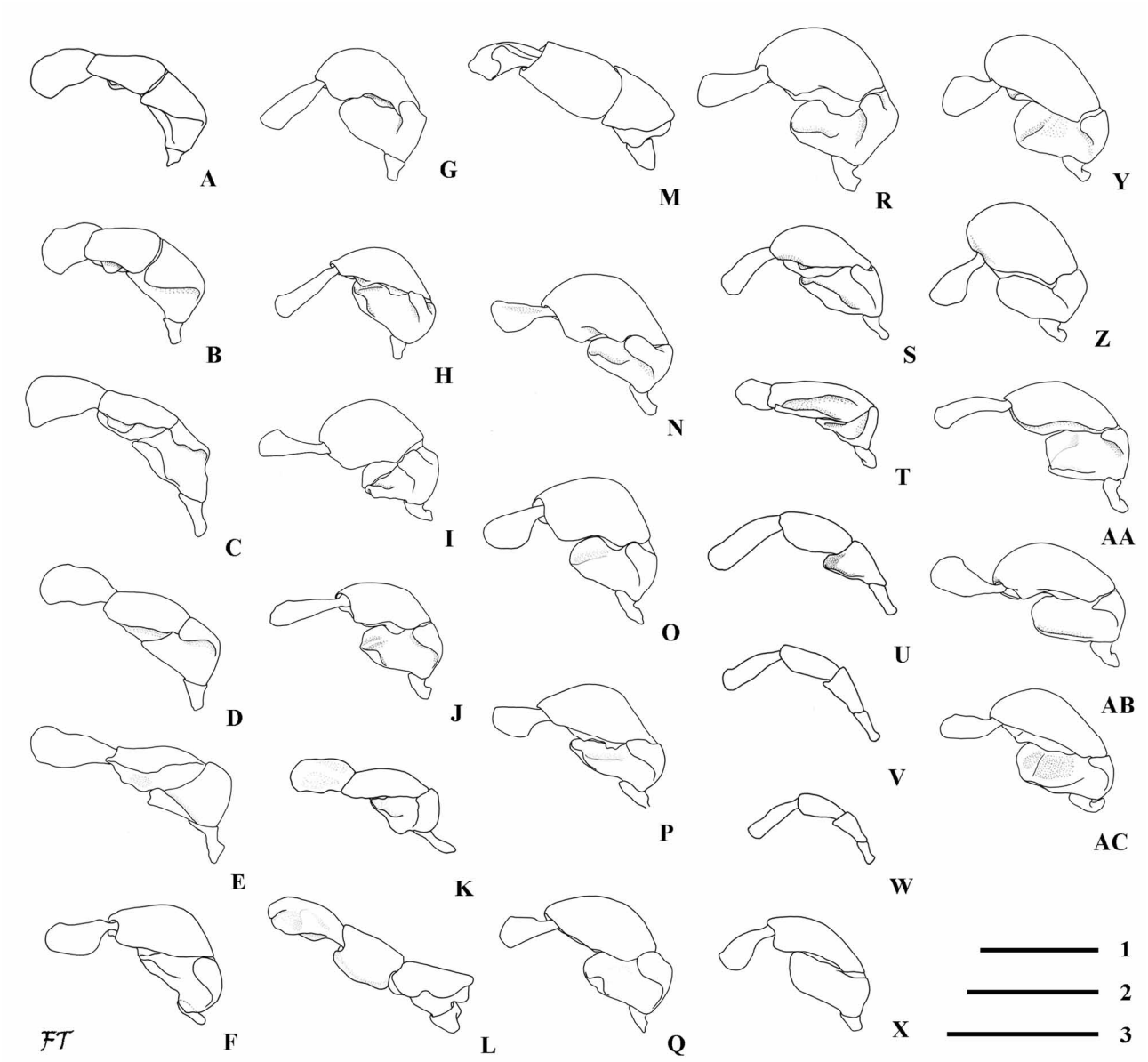

FIGURE 3. Male right maxillary palp, dorsal view: for lettering refer to caption to Fig. 1. Scale bars = 1 mm (1: C–E, G–J, L–R, Y, AA–AC; 2: B, F, K, S–T, X, Z; 3: A, U–W).

23. Last antennomere rounded, particularly at apex; anterior portion of dorsal edge of protibial keel, slightly sloping, in lateral view (maximum height about in the middle of keel); integument azure; elytral setation dark. . . . . *azurea*
- Last antennomere transverse and only slightly rounded at apex; anterior portion of dorsal edge of protibial keel not distinctly sloping (maximum height at the anteriormost part of keel); integument green; elytral setation yellow. . . . . *confusa*
24. Maxillary palpomere IV abruptly widened and apically rounded; protibial keel high and slightly rounded. . . . . *adamovichiana*
- Maxillary palpomere IV slender, only slightly widening from base to apex; protibial keel low and almost straight . . . . *turcica*
25. Maxillary palpomere II and III strongly widened; antennae visibly modified . . . . . 26.
- Maxillary palpomere II and III only weakly widened; antennae only slightly modified . . . . . 27.
26. Apical four antennomeres black; protarsomeres I–III widened, IV–V very narrow; legs dark, only the apical half of pro- and mesofemora, protibiae and protarsomeres I–II yellow. . . . . *prochaskana*
- Apical four antennomeres yellow; all protarsomeres uniformly widened; legs yellow . . . . . *schaefferi*
27. Antennae apparently not modified, antennomeres IV–VI very weakly transverse; apical antennomere slightly longer than wide and weakly pointed; protibiae shorter than the first three protarsomeres together. . . . . *simplicicornis*
- Antennae scarcely modified, antennomeres IV–V slightly transverse; apical antennomere rounded; protibiae longer than the first three protarsomeres together. 28
28. Ventral side of antennomere IV with a pointed expansion; external side of protibiae with an oblique depression . . . *bernhaueri*
- Ventral side of antennomere IV with a rounded expansion; external side of protibiae convex . . . . . *dahli*

Females

1. Antennal club as long as the preceding 5–6 antennomeres combined; antennae and legs dark, abdomen partially orange . . . 2.
- Antennal club shorter than the preceding 4 antennomeres combined; antennae, legs and abdomen variously coloured . . . . . 6.
2. Legs with dark setae. . . . . *festiva*
- Legs with yellowish setae . . . . . 3.
3. Last two abdominal segments metallic . . . . . 4.
- Last three last abdominal segments completely or partially metallic . . . . . 5.
4. Temples parallel. . . . . *prevezaensis*
- Temples enlarged. . . . . *ephesica*
5. Third last abdominal segment completely metallic, as well as sometimes part of the fourth last. . . . . *schreberi*
- Third last abdominal segment orange on sides and on its basal portion. . . . . *martae*
6. Head and thorax black or partly orange, not metallic . . . . . 7.
- Head metallic or with an orange frontal spot; thorax metallic (except for uncommon specimens of *C. malatyensis*). . . . . 8.
7. Head wholly or partly orange . . . . . *latreillei*
- Head black. . . . . *scovitzi*
8. Base of last antennomere slightly narrower than the apex of the preceding, subquadrate; antennomeres and legs completely dark . . . . . *vahli*
- Last antennomere distinctly narrower at the base; antennomeres and legs completely or partially orange (except for *C. prochaskana*, which has completely black antennomeres) . . . . . 9.
9. Antennomeres black, legs and abdomen metallic . . . . . *prochaskana*
- Antennomeres and legs completely or partly yellow, in a few species femora completely black . . . . . 10.
10. Abdomen at least partly orange. . . . . 11.
- Abdomen wholly metallic . . . . . 15.
11. Frons with orange sides and a wide orange longitudinal strip in the middle . . . . . *malatyensis*
- Frons with only a small orange spot in the middle . . . . . 12.
12. Abdomen orange, except the last segment and part of the penultimate segment, which are metallic green . . . . . 13.
- Abdomen metallic green, except orange sides . . . . . 14.
13. Elytra bluish; last two tarsomeres dark, mostly on pro- and mid legs . . . . . *rapillyi*
- Elytra green; tarsomeres yellowish . . . . . *bodemeyeri*
14. Tarsomeres yellowish; head and pronotum subopaque; punctures on pronotum dense and contiguous . . . . . *gloriosa*
- Tarsomeres dark; head and pronotum more shiny; punctures on pronotum dense but not contiguous . . . . . *marginiventris*
15. Head without any orange frontal spot, short and transverse; apical external angle of protibiae digitiform and pointed . . . . . 16.
- Head with orange frontal spot (with only few exceptions), subquadrate; apical external angle of protibiae only slightly pointed. . . . . 19.
16. Last antennomere wide and ovate, sharply narrowing at apex; legs and mouthparts dark (in some cases femoro-tibial joint yellowish). . . . . *simplicicornis*
- Last antennomere not so ovate and rounded at apex; tibiae yellowish, at least on fore legs . . . . . 17.
17. Penultimate antennomere slightly transverse, almost rounded. . . . . *schaefferi*
- Penultimate antennomere very transverse. . . . . 18.
18. Punctures on head and pronotum regular and dense. . . . . *dahli*
- Punctures on head and pronotum more irregular and spaced . . . . . *bernhaueri*
19. Last antennomere almost rounded. . . . . *muehlfeldi*
- Last antennomere ovate. . . . . 20.
20. Pronotum narrow, sides distinctly rounded anteriorly; antennomere I usually orange. . . . . *graeca*
- Pronotum wide, sides widely rounded anteriorly; antennomere I usually black (except in *C. barthelemyi* and *C. kunzei*) . . 21.
21. Frons depressed; antennomere I orange . . . . . *barthelemyi*
- Frons convex; antennomere I completely or partially dark (except in *C. kunzei*) . . . . . 22.
22. Elytra purple, head and pronotum green-bluish; body setation very long and dense . . . . . *macedonica*
- Elytra usually green, purple only in some specimens of *C. adamovichiana* (which have always a shorter and less dense setation), blue-violet in *C. azurea* or bluish in some specimens of other species; body setation various . . . . . 23.
23. Elytra dark blue-violet; dorsal setation dark . . . . . *azurea*
- Elytra green, rarely bluish; dorsal setation whitish. . . . . 24.
24. Body setation very long and dense . . . . . *longiseta*
- Body setation shorter, more spaced and not lanuginous (except on head and pronotum of *C. albopilosa*) . . . . . 25.
25. Antennomere I orange. . . . . *kunzei*
- Antennomere I at least partially dark . . . . . 26.
26. Setae on head and pronotum strong and dense . . . . . *albopilosa*
- Setae on head and pronotum thin and less dense . . . . . 27.
27. Last antennomere ovate and elongate, slightly narrower at apex; maximum width about equal to combined length of antennomeres VI–VIII . . . . . *confusa*
- Last antennomere ovate and short, widely rounded at apex; maximum width about equal to combined length of antennomeres VII–VIII . . . . . 28.
28. Balkan Peninsula (North up to Hungary) and western Anatolia. . . . . *adamovichiana*
- Central and eastern Anatolia, Transcaucasia, Iran and possibly S Russia . . . . . *turcica*

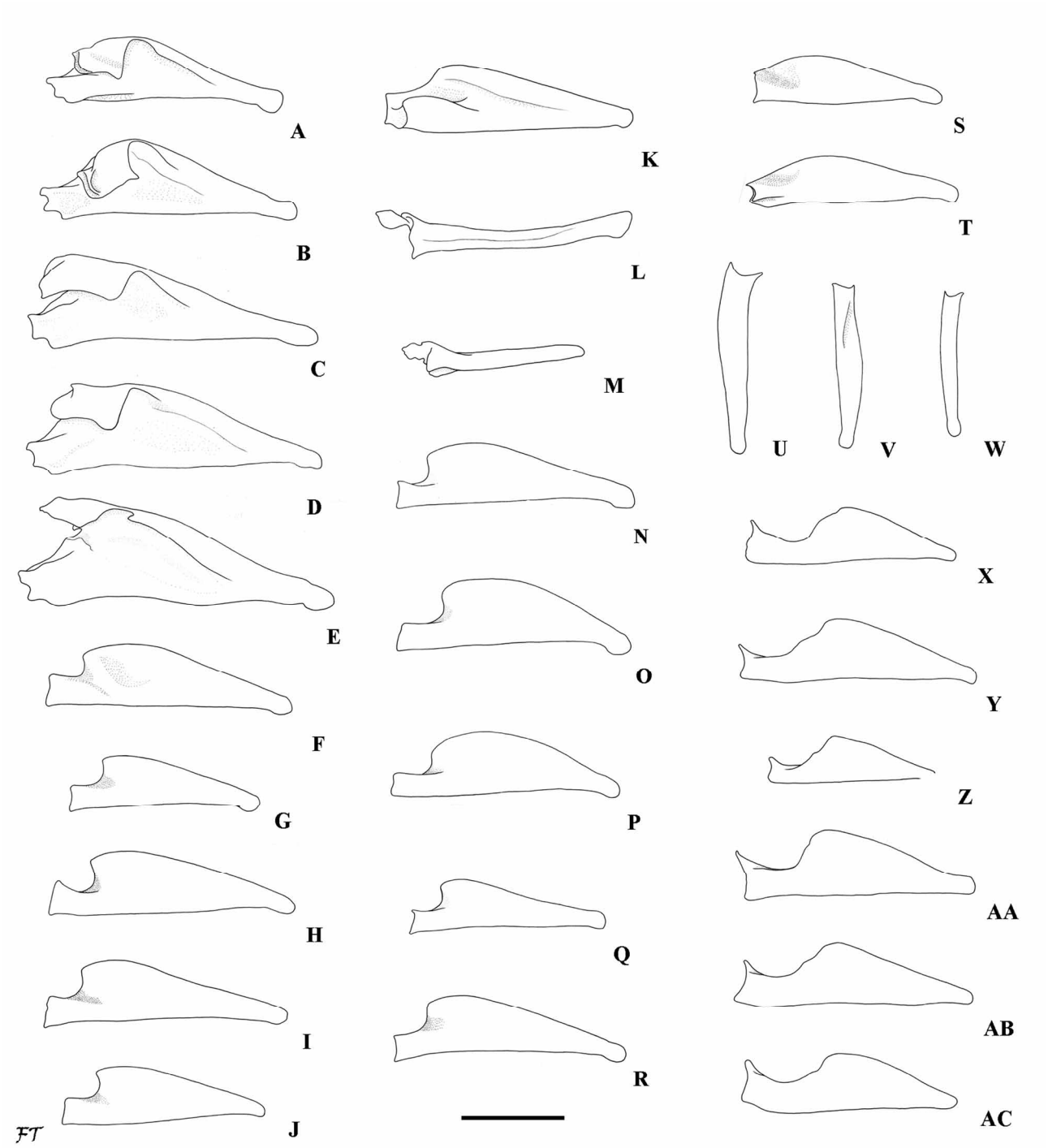

FIGURE 4. Male right protibia, lateral view: for lettering refer to caption to Fig. 1. Scale bar = 1 mm.

Phylogeny

Morphological dataset. MP analysis of morphological data recovered two most parsimonious trees (MPTs, length = 79) whose strict consensus is presented in Fig. 8A. In this consensus a separate clade is represented by the subgenus *Cerocomina* (*C. vahli*) and the well-supported *Mesocerocoma* (*C. scovitzi*-*C. latreillei*, BS = 7) in a sister group relationship. The *Metacerocoma* clade (*C. festiva*-*C. martae*-*C. schreberi*-*C. prevezaensis*-*C. ephesica*) then diverges from the *Cerocoma* clade *sensu* Kaszab, 1951 with a support value of 5 (BS). The tree shows a split within the subgenus *Cerocoma*, between the *C. schaefferi* group - equivalent to the nominate subgenus as restricted by

Dvořák (1989) - and the clade including *C. adamovichiana* and *C. kunzei* groups, which is equivalent to the subgenus *Meloides* as resurrected by Dvořák (1989). These two last groups of species are both not completely resolved at species level.

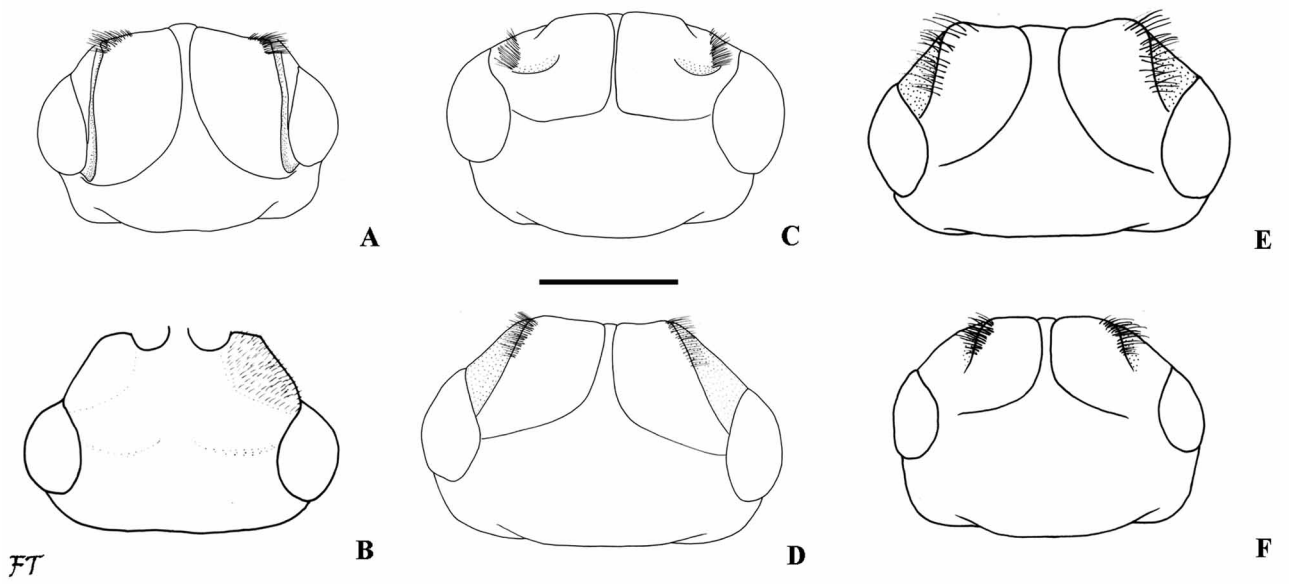

FIGURE 5. Male head, dorsal view: A, *C. schreberi*; B, *C. scovitzi*; C, *C. vahli*; D, *C. adamovichiana*; E, *C. kunzei*; F, *C. schaefferi*. Scale bar = 1 mm.

This tree topology is similar to the one obtained from BI analysis (Fig. 8B), showing again a clear distinction between the subgenera *Meloides* (bpp = 100) and *Cerocoma* (bpp = 69), in agreement with Dvořák (1989). However, in this case the species level relationships within *Meloides* are even less resolved, particularly the group of *C. kunzei*.

Molecular datasets. MP analysis of the combined molecular dataset (ITS2 + 16S) recovered 2 MPTs (length = 550) whose strict consensus is presented in Fig. 9A. Two lineages are recognisable; one strongly supported (BS = 17; Bootstrap = 99) including *Meloides* and *Cerocoma sensu* Dvořák, 1989, and another clade (BS = 2; Bootstrap = 100) including *Mesocerocoma* (represented by *C. scovitzi*), *Cerocomina* (*C. vahli*) and *Metacerocoma* (represented by *C. schreberi-C. prevezaensis-C. ephesica*). *Metacerocoma* is particularly well supported (BS = 27; Bootstrap = 100). The clade *Meloides* does not show a good overall support value because of a contrasting signal from the two markers, with 16S positively supporting the branch (see PBS values in Fig. 9A). Indeed, separate analyses were run for 16S and ITS2 confirming this behaviour (trees not shown). On the other hand, the nominate subgenus is a very strong clade (BS = 20; Bootstrap = 100) with ITS2 particularly supporting (PBS: 16.5 versus 3.5 for 16S).

BI analysis resulted in a different tree topology (Fig. 9B), with *Cerocomina* diverging from the rest of the ingroup and *Mesocerocoma* sister to the clade including *Meloides* and the nominate subgenus. Subgenera *Metacerocoma* and *Cerocoma* were always well supported in all the analyses (bpp = 100).

Combined morphological + molecular datasets. MP analysis of the combined dataset (morphological + molecular) recovered 2 MPTs (length = 618) whose strict consensus is presented in Fig. 9C. Two lineages are evident, one strongly supported (BS = 17; Bootstrap = 100) including *Meloides* and *Cerocoma* and the other weakly supported (BS = 1; Bootstrap = 54) with *Mesocerocoma*, *Cerocomina* and *Metacerocoma*, the last subgenus being particularly strong (BS = 31; Bootstrap = 100). The *Meloides* and *Cerocoma* clades also have good support values: *Meloides* (BS = 9; Bootstrap = 98); *Cerocoma* (BS = 19; Bootstrap = 100). The monophyly of *Meloides* is weakly supported by 16S in comparison with morphological and ITS2 datasets (PBS: 0.5 for 16S versus 5.25 for morphology and 3.25 for ITS2). On the other hand, the nominate subgenus is strongly corroborated by molecular datasets with a weak contrasting signal from morphological data (PBS: -1 for morphology versus 15.5 and 4.5 for ITS2 and 16S respectively). This may be due to the presence in this subgenus of several homoplastic morphological characters, possibly reversals. Indeed, subgenus *Cerocoma* is characterised by very simple (or even virtually absent) male sexual dimorphism that may resemble plesiomorphic states and may correlate it to unmodified (or scarcely modified) outgroups, thus biasing phylogenetic results.

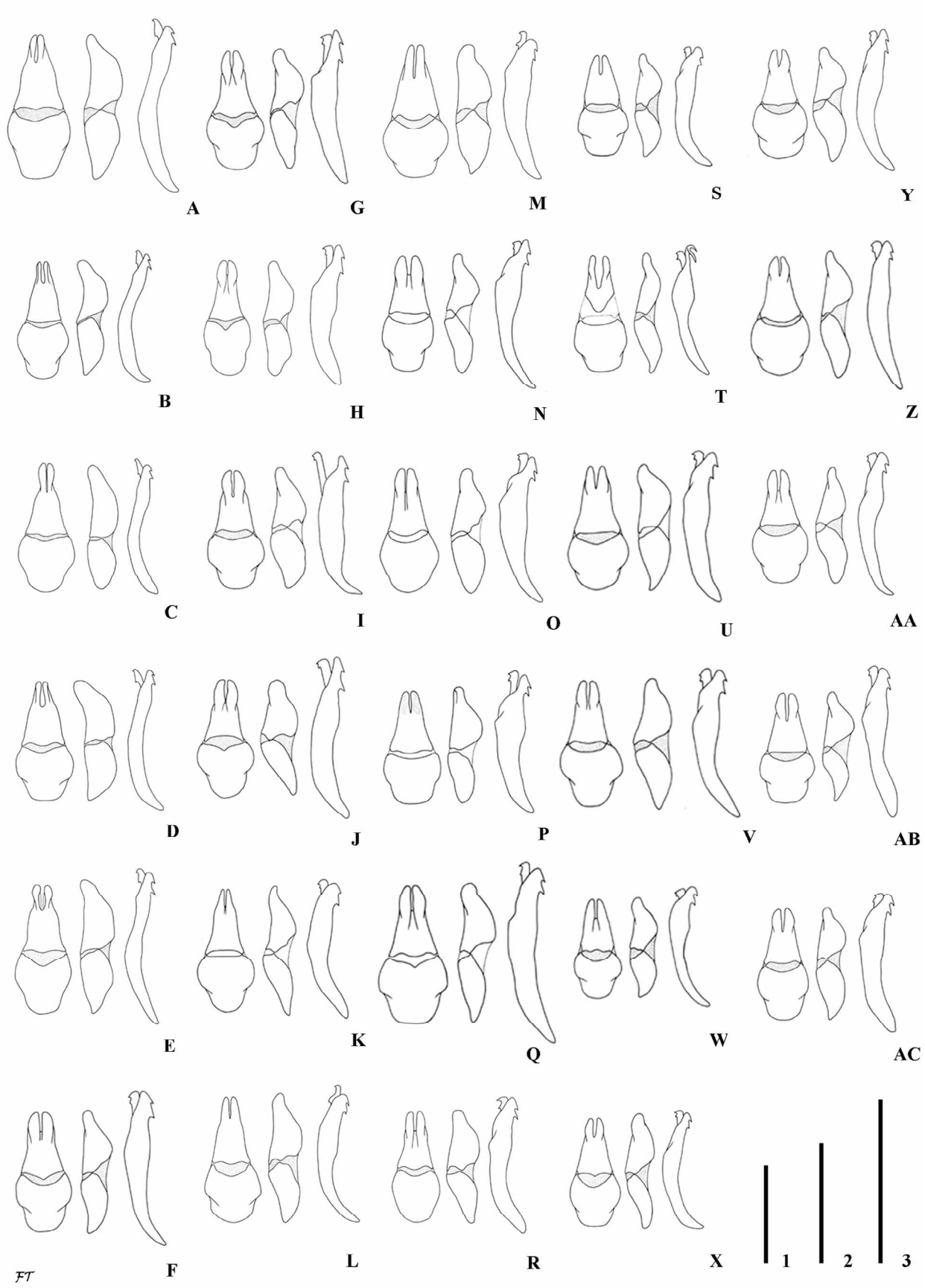

FIGURE 6. Male external genitalia (from left to right: tegmen, dorsal and lateral views; aedeagus, lateral view): for lettering refer to caption to Fig. 1. Scale bars = 1 mm (1: A–E, H, L–M, R; 2: F–G, I–K, N–P, S–T, X–Y, AA–AC; 3: Q, U–W, Z).

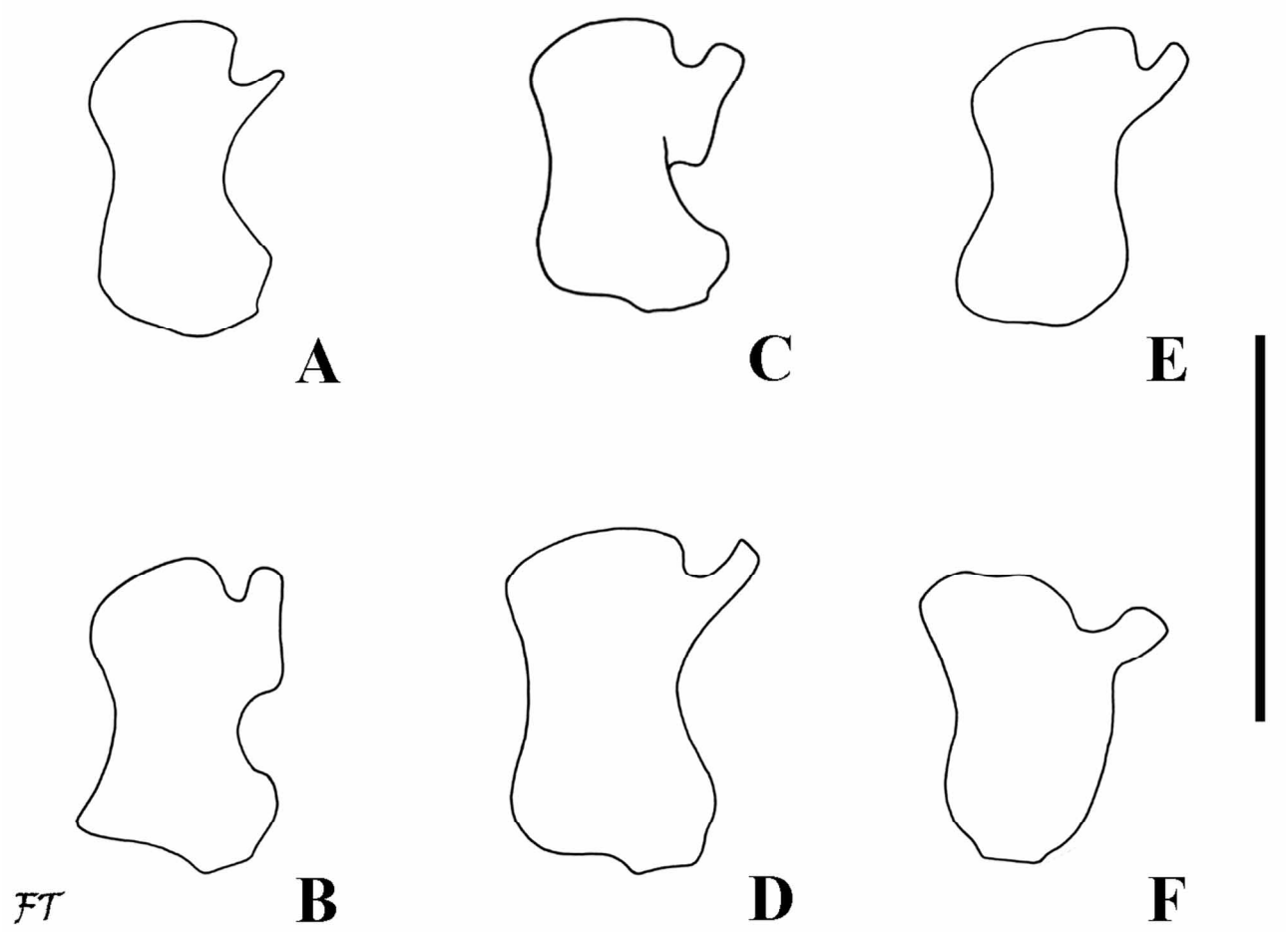

FIGURE 7. Male antennomere III, dorsal view: A, *C. gloriosa*; B, *C. rapillyi*; C, *C. marginiventris*; D, *C. macedonica*; E, *C. kunzei*; F, *C. bodemeyeri*. Scale bar = 1 mm.

According to BI analysis the subgenus *Cerocomina* diverges from the other *Cerocoma* (Fig. 9D). *Metacerocoma* is strongly supported (bpp = 100) and diverges from the remaining species, even though the sister group relationship between *Mesocerocoma* and the clade *Meloides*-*Cerocoma* is weak (bpp = 68). On the other hand, both subgenera *Meloides* and *Cerocoma* are very distinct and strongly supported (bpp = 100).

Phylogenetic remarks. According to our preferred phylogeny for *Cerocoma* species reconciling morphological and molecular characters (Fig. 9D), and in agreement with Dvořák's proposal based on morphological characters with no phylogenetic support (1989), we recognise five subgenera: *Cerocoma* Geoffroy, 1762, *Cerocomina* Kaszab, 1951, *Meloides* Piller & Mitterpacher, 1783, *Mesocerocoma* Kaszab, 1951 and *Metacerocoma* Kaszab, 1951.

In all analyses carried out, *Metacerocoma* diverges from the *Meloides*-*Cerocoma* lineage, with these two subgenera always in a sister-group relationship. On the other hand, *Mesocerocoma* and *Cerocomina* show an unstable placement: a) they form a separate clade diverging from the rest of the genus according to morphological data (Fig. 8); b) they group with *Metacerocoma* in a separate clade according to combined data (ITS2+16S and morphology+ITS2+16S) under MP (Fig. 9A and C); c) *Cerocomina* diverges from the rest of the ingroup while *Mesocerocoma* is sister to the lineage *Meloides*-*Cerocoma* based on combined data (ITS2+16S and morphology+ITS2+16S) under BI (Fig. 9B and D).

Cerocomina is a monotypic subgenus (*C. vahli*) and is the only representative of *Cerocoma* in northwestern Africa; it is morphologically defined by male protibiae scarcely extended dorsally and with an evident lateral depression (ch. 42, state 2; Fig. 4K).

Adult males of the subgenus *Mesocerocoma* are characterised by part of the head integument black (ch. 1, state 1), presence of a slight depression in the middle of occiput (ch. 4, state 1), frontal calli distinctly raised in lateral view (ch. 12, state 1), presence of a deep hollow dorsally on antennomere IX (ch. 35, state 1; Fig. 2L–M), palpom-

ere IV distinctly flattened and convolute (ch. 36, state 1; Fig. 3L–M), thorax not metallic (ch. 39, state 1) but partially or completely orange (ch. 40, state 1), and protibiae dorso-ventrally flattened and anteriorly enlarged (ch. 42, state 3; Fig. 4L–M). This subgenus, represented by both its species (*C. latreillei*-*C. scovitzi*) in analyses based on morphological data, proved to be a very well-supported clade (Fig. 8A, BS = 7; Fig. 8B, bpp = 100).

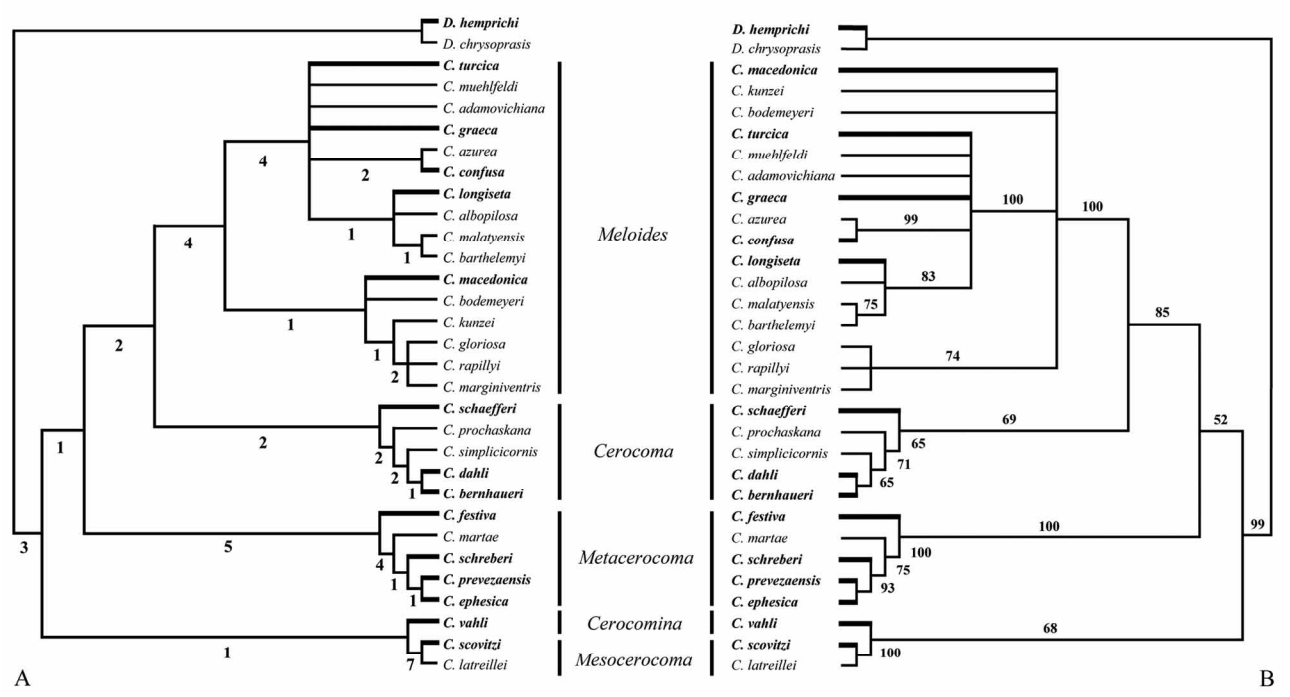

FIGURE 8. Cladograms derived from morphological dataset: A, Strict consensus of two MPTs with Bremer support values indicated below the branches [Length (*L*) = 79, Consistency index (*CI*) = 0.734, Homoplasy index (*HI*) = 0.266, Retention index (*RI*) = 0.918, Rescaled consistency index (*RC*) = 0.674]; B, Bayesian consensus tree with numbers above branches representing posterior probabilities. Bold lines highlight species used in the molecular analysis.

Metacerocoma is a distinct and well characterised subgenus, with the following male characters: external sides of frontal calli depressed and densely punctured over the eyes (ch. 6, state 1; Fig. 5A), frontal calli subequal or longer than the eyes (ch. 13, state 1; Fig. 5A), lateral margin of frontal calli raised and protruding over the eye in dorsal view (ch. 16, state 1; Fig. 5A), and the presence of a laminar and sinuate expansion along the outer side of antennomere IX (ch. 34, state 1; Fig. 2A–E). This subgenus is revealed to be a separate and strongly supported clade in every analysis carried out (Figs 8 and 9).

As to the remaining species, both morphological and molecular data support the splitting of *C. schaefferi* species group from the others, thus confirming its validity as a separate subgenus (*Cerocoma*) and grouping *C. adamovichiana* and *C. kunzei* species groups in the subgenus *Meloides*, as previously proposed by Dvořák (1989; 1990) based on morphological evidence only. Indeed, the subgenus *Meloides* is characterised by the presence of a dorsal bulge on male protarsomere II (ch. 49, state 1), and the partially orange head (ch. 2, state 1). On the other hand, the nominate subgenus is characterised by: labrum distinctly longer than clypeus (ch. 3, state 1), male frontal calli length less than half the length of eye (ch. 14, state 1; Fig. 5F), and male protibiae without a distinct dorsal keel (ch. 42, state 0; Fig. 4S–W). According to the placement of the nominate subgenus in a derived clade within the phylogeny of the genus, it is reasonable to assume that the lacking or reduction of male sexual modifications in this group is to be considered as a secondary loss rather than a plesiomorphic condition.

Subgenera and species accounts

The following section is organised according to the phylogeny herein proposed and includes diagnoses of the subgenera, with species listed in alphabetical order within each subgenus. For each species the following data are pre-

sented: (a) synonymies and relevant taxonomic citations; (b) type locality; (c) type specimens, including those of synonyms; (d) brief species redescription; (e) taxonomic remarks; (f) distribution. Three new species, *C. confusa, C. longiseta* and *C. martae*, are described; new synonymies and new taxonomic statuses are also proposed.

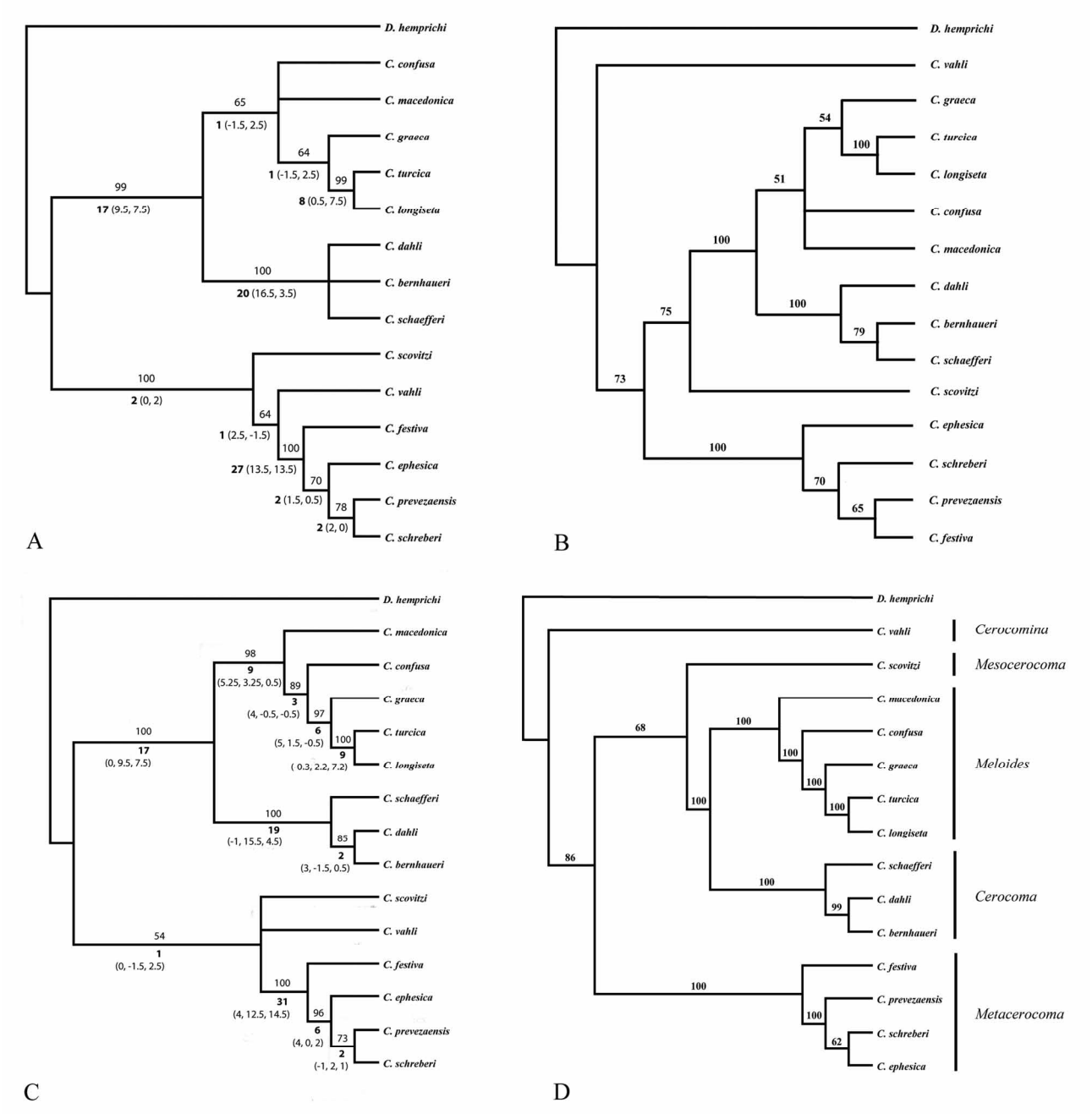

FIGURE 9. Cladograms derived from molecular and combined datasets: A, Strict consensus of two MPTs from molecular dataset (ITS2 + 16S) [Length (*L*) = 550, Consistency index (*CI*) = 0.7691, Homoplasy index (*HI*) = 0.2309, Retention index (*RI*) = 0.7997, Rescaled consistency index (*RC*) = 0.6150] with Bootstrap support values above the branches and Bremer Support values below, in brackets Partitioned Bremer Support values (ITS2, 16S); B, Bayesian consensus tree from combined molecular dataset (16S+ITS2), numbers represent posterior probabilities; C, Strict consensus of two MPTs from the combined morphological and molecular dataset [Length (*L*) = 618, Consistency index (*CI*) = 0.770, Homoplasy index (*HI*) = 0.230, Retention index (*RI*) = 0.804, Rescaled consistency index (*RC*) = 0.620] with Bootstrap support values above the branches and Bremer Support values below, in brackets Partitioned Bremer Support values (morphology, ITS2, 16S); D, Bayesian consensus tree from the combined morphological and molecular dataset, numbers represent posterior probabilities.

Subgenus *Cerocoma* Geoffroy, 1762

Cerocoma Geoffroy, 1762: 357; Kaszab, 1951: 255; Dvořák, 1990: 1; Bologna, 1991: 144.
Type species. *Meloe schaefferi* Linnaeus, 1758: 420, by subsequent monotypy (Fabricius, 1775).

Subgenus diagnosis. Males of this subgenus are scarcely modified in comparison with other subgenera.

Body length: 8–11 mm. Male frontal calli scarcely developed and raised over the head, with a frontal area well visible between them (Fig. 5F). Male antennae from scarcely modified: antennomere I with a dorsal keel variously shaped and developed, in few cases with a pointed and curved expansion on external side; II always simple and subcylindrical; III enlarged and swollen, in some species only scarcely enlarged and with a weak incision on external side; IV enlarged and variously shaped; V–VIII usually simple and cup-like, in few cases antennomeres V–VI ventrally enlarged and flattened; IX variously shaped but always swollen. Male maxillary palpi poorly modified, in *C. simplicicornis* almost not modified: palpomere I always simple and slender; II–III in two species (*C. dahli* and *C. bernhaueri*) only weakly enlarged, in *C. schaefferi* and *C. prochaskana* distinctly enlarged and flattened; IV variously shaped but usually slender and stick-like. Male protibiae not modified or only slightly swollen dorsally in *C. schaefferi* and *C. prochaskana*.

Cerocoma (*Cerocoma*) *bernhaueri* Pardo Alcaide, 1977

Figs 2V, 3V, 4V, 6V

Cerocoma bernhaueri Pardo Alcaide, 1977: 64.

Type locality. "N. Iran, 56 km NW. Qazvin" (Pardo Alcaide 1977).

Type specimens. Not examined.

Description. Male. Body metallic green with short and sparse setae; legs yellow with last protarsomere, meso- and metatarsi dark; mouthparts, including maxillary palpi, and antennae yellow.

Head transverse with very shallow frontal calli and slightly protruding eyes. Maxillary palpi very simple, only palpomeres II and III slightly widened; IV elongate (Fig. 3V). Antennae very weakly modified with the antennomere I bearing a short and narrow dorsal keel; III at least twice length of II; IV and V weakly expanded ventrally, the IV with a pointed expansion on the ventral side; IX rounded dorsally and pointed ventrally (Fig. 2V).

Legs slender with protibiae very weakly modified with an oblique, long and shallow concavity on the external side (Fig. 4V). Protarsomeres dorso-ventrally flattened.

Gonostyli, in lateral view, straight, with apical lobes directed forward; apical lobes, in dorsal view, swollen and parallel. Apex of aedeagus rounded; aedeagal hooks subequal in size (the subapical slightly larger). Sclerotised hooks of endophallus small and very close from each other, equal in size, the apical pointing outwards and the subapical backwards (Fig. 6V).

Female. Not distinctly modified. Refer to key for diagnostic characters.

Taxonomy. This species is very similar and closely related to *C. dahli*, with which in the past it has probably been confused. These two species are recognisable by: (a) male protibiae, with a weak depression on the external side in *C. bernhaueri*, almost convex in *C. dahli*; (b) male antennomere IV, rounded in *C. bernhaueri*, pointed in *C. dahli*. These species have almost a vicariant distribution ranges, slightly overlapping in southeastern Turkey and northwestern Iran, *C. bernhaueri* being a more eastern element.

Distribution. E Turkey, Syria, Lebanon, Israel-Palestine, Jordan, Azerbaijan, Iran.

Cerocoma (*Cerocoma*) *dahli* Kraatz, 1863

Figs 2U, 3U, 4U, 6U

Cerocoma dahli Kraatz, 1863: 112; Reitter, 1913: 193; Mařan, 1944: 86; Pardo Alcaide, 1977: 62, 65.
Cerocoma (*Cerocoma*) *dahli*, Kaszab, 1951: 265, 268, 272; Bologna, 1979: 186, 187.
Cerocoma dahli var. *nigrivestis* Muche, 1963: 13 (invalid name).

Type locality. "Rumelien" (Kraatz 1863). The Rumelia is a region of southern Bulgaria, between the Balkan and Rhodope Mts., but in the second half of the XIX century this name denoted the Balkan possessions of the Ottoman Empire, particularly Thrace and Macedonia (excluding Albania and Bosnia). According to the actual distribution of this species, the type locality can be restricted to the Bulgarian Rumelia.

Type specimens. Not examined.

Description. Male. Body metallic green with sparse and rather long yellowish setae; legs yellow with last four protarsomeres, meso- and metatarsomeres and metafemora dark; mouthparts, including maxillary palpi, and antennae yellow.

Head transverse with very shallow frontal calli and slightly protruding eyes. Maxillary palpi very simple, only palpomeres II and III slightly widened; II featuring a flattened narrow expansion on the internal side; IV elongate (Fig. 3U). Antennae very weakly modified with the antennomere I bearing a short and narrow dorsal keel; III at least twice length of II; IV and V slightly expanded on the ventral side, the IV with a rounded expansion on the ventral side; IX rounded dorsally and pointed ventrally (Fig. 2U).

Legs slender with protibiae very weakly modified, subcylindrical (Fig. 4U). Protarsomeres slightly dorso-ventrally flattened.

Gonostyli, in lateral view, slightly curved, with apical lobes dorsally directed; apical lobes, in dorsal view, swollen and slightly diverging. Apex of aedeagus rounded; aedeagal hooks subequal in size (the apical slightly larger). Sclerotised hooks of endophallus small and very close from each other, subequal in size (the apical slightly larger), the apical pointing outwards and the subapical backwards (Fig. 6U).

Female. Not distinctly modified. Refer to key for diagnostic characters.

Taxonomy. See discussion on the previous species.

Distribution. Bulgaria, Greece, Romania, Turkey, Georgia. Records from Armenia, Azerbaijan, Syria, Lebanon, Israel-Palestine, Jordan and Iran need confirmation and possibly some of them could be referred to *C. bernhaueri*. An old citation from Austria (Baudi di Selve 1878) is probably erroneous.

Cerocoma (*Cerocoma*) *prochaskana* Reitter, 1896

Figs 2T, 3T, 4T, 6T

Cerocoma prochaskana Reitter, 1896: 267; Reitter, 1913: 193; Mařan, 1944: 85.
Cerocoma (*Cerocoma*) *prochaskana*, Kaszab, 1951: 264, 266, 272; Dvořák, 1989: 6, 10.

Type locality. "Akbès, in Obersyrien" (Reitter 1896). Akbèz is a village of SE Turkey, Hatay Province, along the eastern slope of the Amanus Mts., close to the Turkish-Syrian border.

Type specimens. Reitter's collection is currently divided in two parts, preserved respectively in Budapest (HNHM: general collection) and Paris (MNHN: Chobaut's collection). Two syntypes of *C. prochaskana* at HNHM have been labeled respectively as holotype ♂ and allotype ♀, probably subsequently by Dr Z. Kaszab, Director of the Budapest Museum and specialist of Meloidae when he worked on his revision of the genus (Kaszab 1951), without publishing their designation. These specimens, together with the third male syntype (MNHN), have been examined. We accept Kaszab's selection and we herein designate his holotype as lectotype and his allotype, together with the syntype in MNHN, as paralectotypes.

Lectotype ♂: Akbes (white, handwritten) // Holotypus 1896 / *Cerocoma* ♂ / *Prochaskana* / Reitter (white with red frame, printed and handwritten) // *C. Prochaskana* / m Akbes (white, handwritten, turned upside down) // LECTOTYPE ♂ / *Cerocoma prochaskana* / Reitter, 1896 / Turco & Bologna des. 2009 (red, printed) (HNHM). Between the specimen and the first label there is a small (3 by 3 mm) white empty card. The specimen is badly damaged and head and prothorax are missing.

1 paralectotype ♀: Akbes (white, handwritten) // Allotypus 1896 / *Cerocoma* ♀ / *Prochaskana* / Reitter (white with red frame, printed and handwritten) // PARALECTOTYPE ♀ / *Cerocoma prochaskana* / Reitter, 1896 / Turco & Bologna des. 2009 (red, printed) (HNHM). Protarsi and right metatarsus are slightly damaged.

1 paralectotype ♂: Akbès / H^{te} Syria (white, handwritten) // *Cerocoma* / *prochaskana* / m. Akesch. / ♂ (white, handwritten) // *Cerocoma / Prochaskana* / Reitter (white, handwritten) // MUSEUM PARIS / 1942 / COLL. D^{R}. A. CHOBAUT (white, printed) // PARALECTOTYPE ♂ / *Cerocoma prochaskana* / Reitter, 1896 / Turco & Bologna des. 2009 (red, printed) (MNHN).

Description. Male. Body metallic green with sparse and long yellowish setae; legs dark except for the protibiae, protarsomeres I–II and the apical half of pro- and mesofemora yellow; mouthparts black, except for the dorsal side of mandibles; antennae yellow, except for last four antennomeres and last maxillary palpomere dark.

Head transverse with protruding eyes and frontal calli raised over the head, bearing a tuft of yellowish setae on the external side. Maxillary palpi wide; palpomere II triangular; III expanded, flattened and curved; IV short and wide (about 1.5x as long as wide) with its base partially covered by the curved palpomere III (Fig. 3T). Antennae modified with antennomere I bearing a long and narrow dorsal keel, as well as a very narrow and long expansion on the external side; III–VI with long ventral expansions, those of III and IV pointed, V and VI rounded; IX transverse (Fig. 2T).

Protibiae slightly expanded dorsally in a short keel (Fig. 4T). Protarsomeres I–III dorso-ventrally flattened, IV–V subcylindrical.

Gonostyli, in lateral view, slightly curved, with apical lobes dorsally directed; apical lobes, in dorsal view, long, slightly swollen and distinctly diverging. Apex of aedeagus rounded; aedeagal hooks very long, thin and curved, subequal in size (the subapical slightly longer). Sclerotised hooks of endophallus equal in size, both pointing outwards (Fig. 6T).

Female. Not distinctly modified. Refer to key for diagnostic characters.

Taxonomy. This species is clearly distinct from the others within the nominate subgenus in the antennomeres being visibly modified, as in *C. schaefferi*. It differs from this last species by the last four antennomeres being black, the last two protarsomeres very thin, and the legs mostly dark.

Distribution. SE Turkey, Syria, Israel-Palestine, Jordan, Iraq, S Iran.

Cerocoma (*Cerocoma*) *schaefferi* (Linnaeus, 1758)

Figs 2S, 3S, 4S, 5F, 6S

Meloe schaefferi Linnaeus, 1758: 420.
Cerocoma schaefferi, Fabricius, 1781: 331; Reitter, 1913: 193.
Cerocoma viridis Fourcroy, 1785: 163.
Cerocoma schraderi Baudi, 1878a: 1041–1042 (nec Kraatz 1863).
Cerocoma schaefferi var. *affinis* Baudi, 1878b: 358.
Cerocoma schaefferi var. *obscuripes* Reitter, 1885: 14 (after Motscholsky).
Cerocoma schaefferi var. *viridula* Reitter, 1885: 14.
Cerocoma schaefferi var. *orensis* Reitter, 1913: 193.
Cerocoma (*Cerocoma*) *schaefferi*, Kaszab, 1951: 264–265, 268, 272; Dvořák, 1989: 6, 10; Bologna, 1991: 149.
Cerocoma (*Cerocoma*) *schaefferi orensis*, Kaszab, 1951: 264, 268, 272.
Cerocoma (*Cerocoma*) *schaefferi viridula*, Kaszab, 1951: 265, 268, 272.

Type locality. "Germania" (Linnaeus 1758).

Type specimens. No types of the nominate form have been examined. As explained for *C. prochaskana*, we accept the unpublished selection of Reitter's types, probably made by Kaszab, and we designate them lectotype and paralectotypes. The lectotype of *C. schaefferi viridula* has been studied, as well as lectotype and paralectotype of *C. schaefferi orensis*.

Lectotype ♂: Rhilo Dagh. (white, handwritten) // Holotypus 1885 / *Cerocoma Schäfferi* / v. *viridula* ♂ / Reitter (white with a red frame, printed and handwritten) // LECTOTYPE ♂ / *Cerocoma schaefferi* / v. *viridula* Reitter, 1885 / Turco & Bologna des. 2009 (red, printed) (HNHM). Right last palpomere is missing.

Lectotype ♂: Sierra de Queija / Prov. Orense / A. KRICHELDORFF (white, printed) // Holotypus 1919 / *Cerocoma Schäfferi* / v. *orensis* ♂ / Reitter (white with a red frame, printed and handwritten) // LECTOTYPE ♂ / *Cerocoma schaefferi* / v. *orensis* Reitter, 1913 / Turco & Bologna des. 2009 (red, printed) (HNHM). Kaszab wrote on the label "1919" instead of "1913", the correct date of description.

1 paralectotype ♀: Sierra de Queija / Prov. Orense / A. KRICHELDORFF (white, printed) // Allotypus 1919 / *Cerocoma Schäfferi* / v. *orensis* ♀ / Reitter (white with a red frame, printed and handwritten) // PARALECTOTYPE ♀ / *Cerocoma schaefferi* / v. *orensis* Reitter, 1913 / Turco & Bologna des. 2009 (red, printed) (HNHM). Kaszab wrote on the label "1919" instead of "1913", the correct date of description. Right metatibia and metatarsomeres are missing.

Description. Male. Body metallic green with sparse and long yellowish setae, denser on head and thorax; legs dark yellow with base of mesofemora and the entire metafemora dark; antennae and mouthparts, including maxillary palpi, yellow.

Head transverse with slightly protruding eyes and frontal calli raised over the head, bearing a tuft of yellowish setae on the external side (Fig. 5F). Maxillary palpi wide with palpomeres II–III flattened and curved (particularly the III); IV elongate and slightly bent (Fig. 3S). Antennae modified with antennomere I bearing a very narrow and long expansion on the external side and dorsal keel very high and flattened, with a slightly curved dorsal edge; III–VI ventrally expanded; III widely expanded and with a deep incision on its ventral edge; IX swollen and rounded (Fig. 2S).

Pronotum slightly transverse. Protibiae slightly expanded dorsally in a short keel (Fig. 4S). Protarsomeres slightly dorso-ventrally flattened.

Gonostyli, in lateral view, straight, with apical lobes directed forward; apical lobes, in dorsal view, slightly swollen and parallel. Apex of aedeagus rounded; aedeagal hooks equal in size. Sclerotised hooks of endophallus small and very close to each other, equal in size, both pointing outwards (Fig. 6S).

Female. Not distinctly modified. Refer to key for diagnostic characters.

Taxonomy. The four available infraspecific names described by Baudi di Selve (1878b) and Reitter (1885; 1913) were considered in the range of the species variability without subspecific value. They represent forms with dark setation distributed in part of the Iberian Peninsula (f. *orensis*), or with dark legs and setation, common from S Italy, Balkans and S Russia (f. *affinis*, f. *viridula*). Preliminary molecular studies (García-París, unpublished), support these conclusions. The infraspecific form *obscuripes* was referred by Kaszab (1951) to *C. dahli*, but we did not confirm this placement because the holotype was not examined.

Distribution. Portugal, Spain, France, S Italy (and possibly extinct in S Tyrol), Belgium, Netherlands, Switzerland, Germany, Latvia, Czech Republic, Slovakia, Austria, Hungary, Slovenia, Croatia, Bosnia-Herzegovina, Serbia, Montenegro, Macedonia, Bulgaria, Greece, Romania, Belarus, Ukraine, S Russia, Turkey, Armenia, Azerbaijan, Syria, Kazakhstan. Possibly extinct in Latvia. Records from Israel-Palestine and Iran need confirmation.

Cerocoma (*Cerocoma*) *simplicicornis* Reitter, 1913

Figs 2W, 3W, 4W, 6W

Cerocoma dahli var. *simplicicornis* Reitter, 1913: 193.
Cerocoma dahli ab. *aeneipes* Reitter, 1913: 193.
Cerocoma dahli ab. *aeneiceps*, Mařan, 1944: 86 (*lapsus calami*).
Cerocoma (*Cerocoma*) *simplicicornis*, Kaszab, 1951: 265, 268, 272; Dvořák, 1989: 6, 12.

Type locality. "Araxes" (Reitter 1913). The Transcaucasian valley of the Araxes River runs across North East Turkey, Armenia and Azerbaijan, and the type locality cannot be better defined.

Type specimens. As explained for *C. prochaskana*, we accept the unpublished selection of Reitter's types, probably made by Kaszab, and we designate them lectotype and paralectotypes. The lectotype and one paralectotype have been examined, together with the lectotype of *C. dahli* ab. a*eneipes*, which was considered as a synonym according to Kaszab's identification label (see below).

Lectotype ♂: Caucasus. / Araxesthal. / Leder. Reitter. (white with black frame, printed) // Holotypus 1913 / *Cerocoma Dahli* / v. *simplicicornis* / Reitter (white with red frame, printed and handwritten) // *Dahli* v. / *simplicicor / nis* m. type (white, handwritten, turned upside down) // *Cerocoma* ♂ / *simplicicornis* Rtt. / det. Dr. Kaszab (white, printed and handwritten) // LECTOTYPE ♂ / *Cerocoma simplicicornis* / Reitter, 1913 / Turco & Bologna des. 2009 (red, printed) (HNHM).

1 paralectotype ♂: Caucasus. / Araxesthal. / Leder. Reitter. (white with black frame, printed) // Paratypus 1913 ♂ / *Cerocoma Dahli* / v. *simplicicornis* / Reitter (white with red frame, printed and handwritten) // *Cerocoma* ♂ / *simplicicornis* Rtt. / det. Dr. Kaszab (white, printed and handwritten) // PARALECTOTYPE ♂ / *Cerocoma simplicicornis* / Reitter, 1913 / Turco & Bologna des. 2009 (red, printed) (HNHM). Left antenna is missing (only two antennomeres remain).

Lectotype ♀: Caucasus. / Araxesthal. / Leder. Reitter. (white with black frame, printed) // Holotypus 1913 ♀ / *Cerocoma Dahli* / ab. *aeneipes* / Reitter (white with red frame, printed and handwritten) // *Dahli* v. / *aeneipes* m.

(white, handwritten, turned upside down) // *Cerocoma* ♂ / *simplicicornis* Rtt. / det. Dr. Kaszab (white, printed and handwritten) // LECTOTYPE ♀ / *Cerocoma dahli* / ab. *aeneipes* Reitter, 1913 / Turco & Bologna des. 2009 (red, printed) (HNHM). Left metatarsus is missing.

Description. Male. Body metallic dark green with short, sparse pubescence; legs, antennae and mouthparts, including maxillary palpi, dark yellow.

Head transverse with slightly protruding eyes and extremely shallow frontal calli. Maxillary palpi very weakly modified and only palpomere II bears a very short apical expansion on the internal side; IV very long and slender (Fig. 3W). Antennae scarcely modified with antennomere I bearing only a bulge on the external side and a more obvious bulge dorsally; III about 1.5x as long as II; IV–VI only slightly expanded ventrally, IV with a pointed expansion; IX rounded dorsally and distinctly pointed ventrally (Fig. 2W).

Legs scarcely modified with protibiae simply cylindrical (Fig. 4W), protarsomeres distinctly longer the protibiae and only slightly dorso-ventrally flattened.

Gonostyli, in lateral view, slightly curved, with apical lobes dorsally directed; apical lobes, in dorsal view, swollen and parallel. Apex of aedeagus rounded; aedeagal hooks equal in size. Sclerotised hooks of endophallus small and very close to each other, equal in size, both pointing outwards (Fig. 6W).

Female. Not distinctly modified. Refer to key for diagnostic characters.

Taxonomy. This species has the least modified male antennae, tarsi and legs in the genus.

Distribution. Turkey, Armenia, Azerbaijan, Iran.

Subgenus *Cerocomina* Kaszab, 1951

Cerocomina Kaszab, 1951: 259; Bologna, 1991: 145.
Type species. *Cerocoma vahli* Fabricius, 1787: 217, by original designation.

Subgenus diagnosis. Body length: 11–13 mm. Male frontal calli very close to each other in the middle of frons, and only slightly raised over the head (Fig. 5C). Male antennae modified: antennomere I dorsally expanded to form a high and narrow keel and with a pointed and curved expansion on external side; II simple, small and subcylindrical; III swollen, with a deep depression associated with a pointed expansion on external side; IV–V enlarged, flattened and very close to each other; VI distinctly swollen; VII–VIII slightly swollen and cup-like, VIII larger than VII; IX distinctly swollen and roughly circular. Male maxillary palpi distinctly modified: palpomere I slender, about 3 times as long as wide; II–III enlarged, flattened and curved; IV flattened, slender and subrectangular, about twice as long as wide. Male protibiae with a deep incision on external side and a weak dorsal keel; apically enlarged and swollen.

Cerocoma (*Cerocomina*) *vahli* Fabricius, 1787

Figs 2K, 3K, 4K, 5C, 6K

Cerocoma vahli vahli Fabricius, 1787:
Cerocoma vahli Fabricius, 1787: 217; Reitter, 1913: 191.
Cerocoma wahli, Mařan, 1944: 84.
Cerocoma vahli var. *chalybeiventris* Chevrolat, 1838: 268.
Cerocoma vahli var. *wagneri* Küster, 1844: 32.
Cerocoma (*Cerocomina*) *vahli*, Kaszab, 1951: 262, 266, 271.

Cerocoma vahli tarudanti Martinez de la Escalera, 1913:
Cerocoma vahli ssp. *tarudanti* Martinez de la Escalera, 1913: 55.
Cerocoma (*Cerocomina*) *vahli* var. *tarudanti*, Kaszab, 1951: 262, 266, 271.

Type locality. *Cerocoma vahli vahli*: "Barbariae" (Fabricius 1787). *Cerocoma vahli tarudanti*: "Tarudant, Aderdori, Dar el Caid, Hida Nmues" (Martinez de la Escalera 1913); Taroudant is in southwestern Morocco.

Type specimens. We examined photographs of a female in ZMUC. This specimen was considered as possible type of *C. vahli* but it is *C. schreberi*, a species not occurring in North West Africa ("Barbariae"). The designation of this type being uncertain, we do not consider it as holotype of *C. vahli*.

Description. Male. Body metallic dark green with a very short and sparse yellowish pubescence; abdomen dark green metallic (ssp. *vahli*) or partially orange (subspecies *vahli* and *taroudanti*); mouthparts, including maxillary palpi, yellow-orange; fore legs yellow-orange except for the base of femora and the last two tarsomeres dark, meso- and hind legs dark, except for the base of mesofemora yellowish.

Head transverse with protruding eyes (Fig. 5C). Maxillary palpi wide, flattened and curved (particularly palpomere III); palpomere IV flattened and stout, about twice as long as wide (Fig. 3K). Antennae distinctly modified with antennomere I bearing a narrow, long and bent protrusion on the external side and dorsal keel very high and narrow, incised on the apical edge; III–VI expanded ventrally, III with a very curved expansion bearing a tuft of short setae; IX rounded (Fig. 2K).

Pronotum slightly elongate. Protibiae with a short and shallow dorsal keel and dorso-ventrally flattened particularly widened in the external side of apical half (Fig. 4K). Protarsomeres wide and weakly flattened.

Gonostyli, in lateral view, straight, with apical lobes directed forward; apical lobes, in dorsal view, narrow and parallel; in lateral view, pointed. Apex of aedeagus rounded; aedeagal hooks equal in size. Sclerotised hooks of endophallus subequal in size (the apical slightly larger), both pointing outwards (Fig. 6K).

Female. Not distinctly modified. Refer to key for diagnostic characters.

Taxonomy. *Cerocoma vahli* is the only representative of the subgenus *Cerocomina*, and it is a polytypic species with two identified subspecies:

(a) *C. vahli vahli*, with an elongate dark spot at the apex of antennomere IX, the distal margin of protibiae distinctly curved, green metallic abdomen, or only the first two segments orange. It is distributed in northern and central Morocco, northern Algeria, and Tunisia.

(b) *C. vahli tarudanti*, without apical spot on antennomere IX, the apex of protibiae with a straight margin, orange abdomen being only the apical two segments metallic. It is endemic to southwestern Morocco, Sous Valley.

Motschoulsky (1872), in his key to the *Cerocoma* species, mentioned *C. pectinata* from Egypt distinct from *C. vahli*, which is the only known *Cerocoma* species from northern Africa (except for an unconfirmed record of *C. ephesica* from Egypt). Indeed, *C. pectinata* seems to be a *nomen nudum*, and we could not locate any type or description for this species. Our suggestion is that this taxon could be *Diaphorocera hemprichi*, another cerocomine with pectinate antennae occurring in Egypt.

Distribution. Morocco, N Algeria, N Tunisia.

Subgenus *Meloides* Piller & Mitterpacher, 1783 stat. resurr.

Meloides Piller & Mitterpacher, 1783: 39.
Cerocoma (*Meloides*), Dvořák, 1990: 2.
Type species. *Meloides adamovichiana* Piller & Mitterpacher, 1783: 39, by monotypy.

Subgenus diagnosis. Body length: 9–11 mm. Male frontal calli only slightly raised over the head and not very close to each other, frontal area clearly visible between them (Fig. 5D–E). Male antennae strongly modified: antennomere I dorsally expanded to form a high and large keel, usually with a pointed and curved expansion on external side; II small and subcylindrical; III strongly enlarged and swollen, with a deep incision on external side; IV–V enlarged, flattened and very close to each other; VI subcylindrical with a pointed and curved expansion, starting apically on external side and directed backwards; VII–VIII slightly swollen and cup-like, VIII larger than VII; IX variously shaped, but always very swollen and enlarged. Male maxillary palpi distinctly modified: palpomere I usually small and slender; II enlarged, flattened and slightly curved; III enlarged and swollen; IV variously shaped. Male protibiae with a high dorsal keel, variously shaped and not directed outwards, as in the subgenus *Metacerocoma* (see below).

Cerocoma adamovichiana Group

Cerocoma (*Meloides*) *adamovichiana* (Piller & Mitterpacher, 1783)
Figs 2N, 3N, 4N, 5D, 6N

Meloides adamovichiana Piller & Mitterpacher, 1783: 39.
Cerocoma schraderi Kraatz, 1863: 111.
Cerocoma muehlfeldi var. *cuprea* Baudi, 1878b: 359. **syn. n.**
Cerocoma muehlfeldi var. *schraderi*, Reitter, 1885: 13; Reitter, 1913: 192.
Cerocoma muehlfeldi ssp. *schraderi*, Mařan, 1944: 91.
Cerocoma muehlfeldi ab. *imitatrix* Mařan, 1944: 91, 100.
Cerocoma (*Cerocoma*) *adamovichiana*, Kaszab, 1951: 263, 267, 271; Bologna, 1991: 158 (*pars*).
Cerocoma (*Meloides*) *adamovichiana*, Dvořák, 1990: 2.

Type locality. "Slavonia" (Piller & Mitterpacher 1783). This is an old name for eastern Croatia.

Type specimens. Types of *C. adamovichiana* were not found and may be lost; types of *C. schraderi* were also not examined. Five type specimens of the synonyms *C. muehlfeldi* var. *cuprea* (4 syntypes, herein designated as lectotype and paralectotypes) and *C. muehlfeldi imitatrix* (the holotype) have been studied.

Lectotype ♂: ♂ (white, handwritten) // *C. Muhlfeldii* / var. *cuprea* / Dahl. (white, handwritten) // LECTOTYPUS / *Cerocoma* / *muehl-* / *feldi* var. *cuprea* / Baudi / M. Bologna des. 2007 (red, printed and handwritten) // *Cerocoma* / *adamovichiana* / (Piller & Mitterpacher, 1783) / Federica TURCO det. 2005 (white, printed and handwritten) (MRSN ex coll. Baudi).

1 paralectotype ♀: ♀ (white, handwritten) // PARALECTOTYPUS / *Cerocoma* / *muehl-* / *feldi* var. *cuprea* / Baudi / M. Bologna des. 2007 (red, printed and handwritten) (MRSN ex coll. Baudi).

1 paralectotype ♀: PARALECTOTYPUS / *Cerocoma* / *muehl-* / *feldi* var. *cuprea* / Baudi / M. Bologna des. 2007 (red, printed and handwritten) (MRSN ex coll. Baudi).

1 paralectotype ♀: PARALECTOTYPUS / *Cerocoma* / *muehl-* / *feldi* var. *cuprea* / Baudi / M. Bologna des. 2007 (red, printed and handwritten) // *Cerocoma* / *adamovichiana* / (Piller & Mitterpacher, 1783) / Federica Turco det. 2005 (white, printed and handwritten) (MRSN ex coll. Baudi).

Holotype ♂: Petrič Mac. / Vil. Mař. Táb. (white, printed) // TYPUS (pink, printed) // *Cerocoma* / *mühlfeldi* ab. / *imitatrix* / Dr. Mařan det. m. (white, printed and handwritten) // *Cer. Adamovichi-* / *ana* Pill. Mitt. / det. M. Dvořák, 87 (white, printed) (CNM). Genitalia on a separate card. Last abdominal segment missing.

Description. Male. Body metallic green with long, sparse, yellowish setae, denser on head and thorax; legs, antennae and mouthparts, including maxillary palpi, yellow-orange; frontal calli metallic green, except for the anteriormost internal margins orange; narrow orange spot in the area between frontal calli, wider posteriad.

Head transverse with slightly protruding eyes (Fig. 5D). Maxillary palpi modified with palpomeres II–III particularly widened, II flattened and curved, III swollen and rounded on the external side; IV narrow at base and then abruptly widened at apex (Fig. 3N). Antennae obviously modified with antennomere I bearing a long, narrow and bent expansion on the external side and dorsal keel very wide and high, apically curved; III–VI bear long and variously shaped ventral expansions; V with short setae on distal face of ventral laminar expansion; VI with a tuft of very long and erect yellowish setae on ventral side and a very long, narrow and curved expansion on ventral side; IX transverse, apically rounded, dorsally slightly flattened and dorsal edge weakly bilobate (Fig. 2N).

Pronotum elongate. Protibiae with high and slightly rounded dorsal keel (Fig. 4N). Protarsomeres slightly dorso-ventrally flattened; II with an obvious dorsal bulge; protarsomere III shorter than V, excluding claws.

Gonostyli, in lateral view, slightly curved, with apical lobes dorsally directed; apical lobes, in dorsal view, swollen and parallel. Apex of aedeagus pointed; aedeagal hooks equal in size. Sclerotised hooks of endophallus subequal in size (the apical slightly larger), both pointing outwards (Fig. 6N).

Female. Not modified. Refer to key for diagnostic characters.

Taxonomy. The elytral colouration of this species is slightly variable, with some specimens from Greece showing cupreous reflections.

Distribution. Czech Republic, Slovakia, Austria, Hungary, Croatia, Serbia, Bosnia-Herzegovina, Albania, Macedonia, Bulgaria, Greece, Romania, Turkey (also Thrace), Georgia.

Cerocoma (*Meloides*) *albopilosa* Dvořák, 1993

Figs 2H, 3H, 4H, 6H

Cerocoma albopilosa Dvořák, 1993: 7.

Type locality. "Iran mer. or., 30 km N Bampur" (Dvořák 1993).

Type specimens. Holotype, allotype, and 3 paratypes have been studied:

Holotype ♂: SE Iran / 30 Km N Bampur / 12–13.4.1973 (white, printed) // Loc. no.159 / Exp. Nat. Mus./Praha (white, printed) // holotypus (red, printed) // *Cerocoma/albopilosa* **sp. n.**/det. M. Dvořák, 92 (white, printed) (CNM). Last three left protarsomeres missing.

Allotype ♀: same labels as holotype, except for the third: allotypus (red, printed) (CNM). Right antenna missing, except for the first two antennomeres.

Three paratypes, 2 ♀♀ and 1 ♂: same labels as holotype, except for the third: paratypus (red, printed) (CNM). One female has only 2 left and 4 right antennomeres remaining; the other has only 2 antennomeres of both antennae reamining. Male last left antennomere is missing, as well as left protarsomeres and the last three left metatarsomeres.

Description. Male. Body metallic dark green; legs, antennae and mouthparts, including maxillary palpi, yellow-orange; frontal calli (except for internal and posterior margins) and area between calli orange.

Head transverse with slightly protruding eyes. Maxillary palpi (Fig. 3H) very wide with palpomere II very flattened and curved; III only slightly swollen and rounded on the external side; IV very long, slender and parallel-sided (about 4.5x as long as wide). Antennae modified with antennomere I bearing a long, narrow and sinuate expansion on the external side and dorsal keel very high and curved; III–VI expanded ventrally and variously shaped; V with a tuft of very long and erect yellow setae and with short setae on distal face of ventral laminar expansion; VI with short yellow setae and a very long, narrow and curved expansion on ventral side; VIII completely rounded; IX transverse and rounded apically, swollen ventrally and slightly flattened dorsally (Fig. 2H).

Protibial dorsal keel short and slightly rounded in lateral view (Fig. 4H). Protarsomeres weakly dorso-ventrally flattened; II with an obvious dorsal bulge; protarsomere III about as long as V, excluding claws.

Gonostyli, in lateral view, straight, with apical lobes directed forward; apical lobes, in dorsal view, swollen and converging. Apex of aedeagus pointed; aedeagal hooks equal in size. Sclerotised hooks of endophallus subequal in size (the apical larger), the apical pointing outwards and the subapical backwards (Fig. 6H).

Female. Not distinctly modified. Refer to key for diagnostic characters.

Taxonomy. For taxonomic remarks see the discussion on *C. longiseta* (below).

Distribution. SW Turkey, SW Iran. The apparently disjunct distribution of *C. albopilosa* may be due to a lack of sampling in the intermediate area.

Cerocoma (*Meloides*) *azurea* Reitter, 1913

Figs 2P, 3P, 4P, 6P

Cerocoma azurea Reitter, 1913: 192; Mařan, 1944: 92.
Cerocoma (*Cerocoma*) *syriaca* var. *azurea*, Kaszab, 1951: 263, 267, 271.
Cerocoma syriaca ab. *humilis* Muche, 1963: 12 (invalid name)
Cerocoma syriaca coeruleotincta Muche, 1963: 13.
Cerocoma (*Meloides*) *azurea*, Dvořák, 1990: 4.

Type locality. "Syrien: Jaffa" (Reitter 1913). Jaffa is a coastal town currently of Israel.

Type specimens. As explained for *C. prochaskana*, we accept the unpublished selection of Reitter's types, probably made by Kaszab, and we designate them lectotype and paralectotypes. Lectotype and two paralectotypes, labeled as *C. syriaca* ab. *azurea*, have been examined:

Lectotype ♂: Jaffa Syrien (white, handwritten) // Holotypus 1913 / *Cerocoma* ♂ / *azurea* / Reitter (white with red frame, printed and handwritten) // *Cerocoma* ♂ / ab. *Azurea* Rtt. / det. dr. Kaszab (white, printed and handwritten) // LECTOTYPE ♂ / *Cerocoma azurea* / Reitter, 1913 / Turco & Bologna des. 2009 (red, printed) (HNHM).

1 paralectotype ♂: Syrien / v. *Schraderi* (white, handwritten) // Allotypus 1913 / *Cerocoma* ♂ / *azurea* / Reitter (white with red frame, printed and handwritten) // *Cerocoma* ♂ / *ab. Azurea* Rtt. / det. dr. Kaszab (white, printed and handwritten) // PARALECTOTYPE ♂ / *Cerocoma azurea* / Reitter, 1913 / Turco & Bologna des. 2009 (red, printed) (HNHM).

1 paralectotype ♂: Syrien / Kaifa. / Reitter. (white with black frame, printed) // Rahol. / Jaffa (white, handwritten) // Paratypus 1913 / *Cerocoma* ♂ / *azurea* / Reitter (white with red frame, printed and handwritten) // *Cerocoma*

♂ / *ab. Azurea* Rtt. / det. dr. Kaszab (white, printed and handwritten) // PARALECTOTYPE ♂ / *Cerocoma azurea* / Reitter, 1913 / Turco & Bologna des. 2009 (red, printed) (HNHM). Claws of left hind leg and last three right antennomeres are missing.

Description. Male. Body metallic azure-blue with yellowish pubescence, except on elytra dark; legs, antennae and mouthparts, including maxillary palpi, yellow-orange; anterior and external portions of frontal calli orange; narrow orange line in the area between frontal calli, triangularly widened posteriad.

Head transverse with slightly protruding eyes. Maxillary palpi modified with palpomere II wide, flattened and curved; III very swollen and rounded on the external side; IV hatchet-shaped, narrow at base and then one edge straight and the other abruptly widened (Fig. 3P). Antennae strongly modified with antennomere I bearing a short, narrow and only slightly bent expansion on the external side and dorsal keel very wide, high and apically curved; III–VI very modified and ventrally expanded; V with short setae on distal face of ventral laminar expansion; VI with a very long, narrow and curved expansion on ventral side; V–VI bearing each a tuft of long and erect setae, especially on VI; IX slightly transverse, apically rounded and dorsally slightly flattened (Fig. 2P).

Protibial dorsal keel with apex rounded and distally sloping in lateral view, maximum height is about in the middle of keel (Fig. 4P). Protarsomeres weakly flattened; II with an obvious dorsal bulge; protarsomere III shorter than V, excluding claws.

Gonostyli, in lateral view, straight, with apical lobes directed forward; apical lobes, in dorsal view, slightly swollen and parallel. Apex of aedeagus pointed; aedeagal hooks equal in size. Sclerotised hooks of endophallus equal in size, the apical pointing outwards and the subapical backwards (Fig. 6P).

Female. Not distinctly modified. Refer to key for diagnostic characters.

Taxonomy. *Cerocoma azurea* is very similar and closely related to *C. confusa* from which it can be recognised because of: (a) male protibiae dorsal keel with a slightly sloping anterior edge, very high and not sloping in *C. confusa*; (b) antennomere IX long and subsquared, more transverse in *C. confusa*; (c) presence of a dense tuft of black setae below antennomere VI, absent or extremely scarce in *C. confusa*.

Distribution. Cyprus, Syria, Lebanon, Israel-Palestine, Jordan, Iran.

Cerocoma (*Meloides*) *barthelemyi* Baudi, 1878

Figs 2J, 3J, 4J, 6J

Cerocoma barthelemyi Baudi, 1878b: 358.
Cerocoma syriaca Abeille de Perrin, 1880: 235. **syn. n.**
Cerocoma (*Cerocoma*) *barthelemii*, Kaszab, 1951: 262, 267, 271.
Cerocoma (*Cerocoma*) *barthelemii* var. *haifensis* Kaszab, 1951: 262, 268.
Cerocoma (*Meloides*) *barthelemii*, Dvořák, 1990: 2, 9.

Type locality. "Syria" (Baudi 1878b). During the Ottoman Empire, the name Syria was used to indicate the whole Levant as well as the Turkish Hatay province and surrounding areas. Note that no locality label is attached to the specimen from Baudi's series, here designated as lectotype.

Type specimens. Two syntypes have been examined and designated as lectotype and paralectotype, as well as the holotype of the variety *haifensis*. Seven syntypes of the synonym *C. syriaca* have been also examined but we decided to designate only the first specimen as lectotype because of the extremely poor condition of the remaining specimens (see below):

Lectotype ♂: m (white, handwritten) // nov. sp. (white, handwritten) // *C. Muhlfeldi*/Sch. var. (white, handwritten) // LECTOTYPUS / *Cerocoma* / *barthelemyi* / Baudi / M. Bologna des. 2007 (red, printed and handwritten) // *Cerocoma* / *barthelemyi* Baudi / M.A. Bologna det. 2007 (white, printed and handwritten) (MRSN ex coll. De Breme).

1 paralectotype ♀: f (white, handwritten) (MRSN ex coll. De Breme) // PARALECTOTYPUS / *Cerocoma* / *barthelemyi* / Baudi / M. Bologna des. 2007 (red, printed and handwritten).

Holotype ♂: Syrien / Haifa / Reitter. (white with black frame, printed) // Rahol. / Jaffa (white, handwritten) // Holotypus 1951 ♂ / *Cerocoma Barthelemii* / ab. *Haifensis* / Kaszab (white with red frame, printed and handwritten) (HNHM). The last three left mesotarsomeres and the last three right antennomeres are missing.

Lectotype ♂: Nazareth (handwritten) // (type) *Syriaca* (handwritten) // Ab. **n. sp.** (handwritten) // Nazareth (handwritten) // LECTOTYPE ♂ / *Cerocoma syriaca* / Abeille de Perrin, 1880 / Turco & Bologna des. 2009 (red, printed) (MNHN ex coll. Abeille de Perrin). Right protibia and tarsomeres are missing.

The following syntypes were not designed as paralectotypes:

1 specimen (sex indeterminate): Ouad (white, handwritten) // MUSÉUM PARIS / 1919 / COLL. A. DE PERRIN (azure, handwritten) (MNHN ex coll. Abeille de Perrin). The specimen is damaged and only elytra, wings, ventral side of thorax and part of the abdomen are left.

1 ♂: same labels as previous specimen (MNHN ex coll. Abeille de Perrin). The specimen is damaged and only elytra, wings, abdomen, left mid leg and right hind leg are left.

1 ♀: same labels as previous specimen (MNHN ex coll. Abeille de Perrin). Left fore leg, left last mesotarsomere, left metatarsomeres and last two right metatarsomeres are missing.

1 ♀: MUSÉUM PARIS / 1919 / COLL. A. DE PERRIN (azure, handwritten) (MNHN ex coll. Abeille de Perrin). Specimen damaged: head, right fore leg (coxa, trochanter and part of the femur still present), right mesotarsomeres and part of the mesotibia are missing.

1 ♂: TBD (white, handwritten) // MUSÉUM PARIS / 1919 / COLL. A. DE PERRIN (azure, handwritten) (MNHN ex coll. Abeille de Perrin). Only elytra, wings and part of the legs are left.

1 specimen (impossible to specify the sex because of the few parts left, see below): ZBD (white, handwritten) / / MUSÉUM PARIS / 1919 / COLL. A. DE PERRIN (azure, handwritten) (MNHN ex coll. Abeille de Perrin). Only elytra, wings, hind legs (femora badly damaged) and part of the ventral side of thorax are left.

Description. Male. Body green metallic with yellow setae, particularly long and dense on head and pronotum; legs, antennae and mouthparts, including maxillary palpi, yellow-orange; frontal calli and area between calli orange.

Head transverse with slightly protruding eyes. Maxillary palpi (Fig. 3J) modified with palpomere II wide, flattened and curved; III swollen and weakly rounded on the external side; IV very elongate only slightly widened apically (about 4.5x as long as wide). Antennae modified with antennomere I bearing a long, narrow and bent expansion on the external side and dorsal keel very wide and high, slightly curved apically; III–VI variously shaped and expanded ventrally; V with short setae on distal face of ventral laminar expansion; VI with 2 tufts of long setae ventrally and a very long, narrow and curved expansion on ventral side; IX transverse, apically rounded, dorsally slightly flattened and dorsal edge bilobate (Fig. 2J).

Protibia with dorsal keel straight and only slightly rounded apically in lateral view (Fig. 4J). Protarsomeres weakly dorso-ventrally flattened; II with an obvious dorsal bulge; protarsomere III about as long as V, excluding claws.

Gonostyli, in lateral view, straight, with apical lobes directed forward; apical lobes, in dorsal view, swollen and diverging. Apex of aedeagus pointed; aedeagal hooks subequal in size (the subapical only slightly larger). Sclerotised hooks of endophallus small and very close from each other, subequal in size (the subapical slightly larger), the apical pointing outwards and the subapical backwards (Fig. 6J).

Female. Not modified. Refer to key for diagnostic characters.

Taxonomy. After the examination of types of *C. syriaca* Abeille de Perrin, 1880, this species resulted a synonym of *C. barthelemyi* (**syn. n.**). Type material was damaged, but one male was still sufficiently preserved to make possible the recognition of the species as synonym of *C. barthelemyi*.

Distribution. Turkey, Armenia, Syria, Israel-Palestine, N Iran. Citations from Greece (Dvořák, 1989, 1990) need confirmation.

Cerocoma (*Meloides*) *confusa* sp. n.

Figs 2O, 3O, 4O, 6O

Cerocoma muehlfeldi, Reitter, 1913: 192 (*pars*) (nec Gyllenhall, 1817).

Cerocoma (*Cerocoma*) *syriaca*, Kaszab, 1951: 263, 267; Pardo Alcaide, 1977: 60; Bologna, 1979: 187 (nec Abeille de Perrin, 1880).

Cerocoma (*Meloides*) *syriaca*, Dvořák, 1990: 10 (nec Abeille de Perrin, 1880).

Type locality. "Turkey, vilayet Izmir, 7 km S Altinova". This is an Aegean coastal locality of northwestern Turkey, north of Bergama, characterised by xeric pastures with scattered individuals of *Eryngium* sp. and *Daucus carota* (Apiaceae). All specimens were collected on wild carrot.

Type specimens. Holotype ♂ (CB) and 22 paratypes, 14 ♂♂ (13 CB, 1 BMNH) and 8 ♀♀ (7 CB, 1 BMNH), with the following labels: Holotypus ♂ (and respectively Paratypus ♂ or ♀) / *Cerocoma* (*Meloides*) *confusa* **n. sp.** / F. Turco & M. Bologna des. 2009 (red, printed and handwritten) // TK 18 - Turkey - vil. Izmir / 7 km S Altinova, m 30, 30.vi.2005 / 39.15380°N–26.85080°E / M. & M. Bologna & F. Turco (white, printed).

Other material examined. This species is common in museums and private collections and we examined hundreds of specimens, in addition to types. Consequently we prefer to give here only general information on its distribution (see below) and refer to the faunistic catalogue (Appendix 1) for details.

Diagnosis. A *Cerocoma* belonging to the subgenus *Meloides* as defined in the present paper, in particular to the group of *C. adamovichiana*, according to the shape and colour of male antennae, head capsule and fore legs (tibiae and tarsomeres), and close to *C. azurea.* It differs from all other species of this group by the combination of the following male characters: antennal setation yellowish, setae under antennomere VII very long, last antennomere subtransverse and apically rounded; maxillary palpomere III in dorsal view very enlarged, rounded externally, IV distinctly asymmetrically enlarged from the base to apex, securiform in shape; protarsomere III distinctly shorter than V, without claws; protibial keel in lateral view very wide and high, not curved on its anterior margin, the maximum height almost in the most anterior portion.

Description. Body metallic green, paler on elytra; antennae (except for female antennomere I, black), maxillary and labial palpi, labrum, part of mandibles, frons and male frontal calli (except the inner portion, metallic), legs (except coxae and trochanters in both sexes and the basal sides of metafemora in female, metallic) orange; frons of female with a very small and narrow orange spot, sometimes extremely weak. Body setation pale yellow, quite long, spaced and thin, not lanuginose. Body length: 9–13 mm.

Head distinctly transverse, without a depressed area over the eyes, frontal area between calli present (as in *C. adamovichiana*, see Fig. 5D), frons convex in female, eyes slightly bulged, inner portion of frontal calli completely metallic and densely punctate as the remaining surface of head, the external almost smooth; temples very short, converging in male. Male antennae extremely modified as in Fig. 2O, setation yellowish; antennomere I bearing a long, narrow and bent expansion on the external side and a dorsal keel very wide, high and apically curved; III–VIII more or less transverse and variously modified; V with short setae on distal face of ventral laminar expansion; VI with a tuft of long, erect setae and a very long, narrow and curved expansion on ventral side; IX transverse, apically rounded, dorsally slightly flattened and dorsal edge very weakly bilobate. Female antennae not modified, antennal club shorter than the preceding four antennomeres together, last antennomere elongate, slightly narrower at apex, maximum width about as long as the length of VI–VIII combined. Male maxillary palpomere III in dorsal view very enlarged, swollen and rounded externally, IV securiform, distinctly widened from the base to apex, particularly on one side (Fig. 3O); female palpomeres slender.

Pronotum wide, sides almost parallel and progressively curved anteriorly just after the middle, in male with two deep and wide oblique dimples on the anterior third, with a short and narrow longitudinal middle furrow. Male protibiae not depressed dorso-ventrally, in female the apical external angle only slightly pointed; protibial keel (Fig. 4O) in lateral view very wide and high, slightly curved on its anterior margin, the maximum height almost at the most anterior portion, without any angular prominence anteriorly; protibial spur pointed. Male protarsomere II with an apical dorsal bulge; III distinctly shorter than V, without claws. Meso- and metatibiae and tarsomeres not modified in both sexes; metatibial spurs different in shape: external spatulated, internal narrow and pointed.

Last male abdominal sternite not modified, posterior margin V-emarginate. Gonostyli, in lateral view, straight with apical lobes directed forward; apical lobes, in dorsal view, swollen and parallel. Apex of aedeagus pointed; aedeagal hooks subequal in size (the subapical slightly larger). Sclerotised hooks of endophallus small and very close to each other, subequal in size (the apical slightly larger), both pointing outwards (Fig. 6O).

Etymology. The name of this species (from latin, *confusus* = confused, mistaken) refers to its erroneous identification in both literature and collections as *C. syriaca* Abeille de Perrin.

Taxonomic remarks. As indicated above, *C. syriaca* Abeille de Perrin, 1880 is a synonym of *C. barthelemyi*. Indeed, after Abeille de Perrin's description (1880), another undescribed species was always erroneously identified as *C. syriaca* by subsequent authors, including main taxonomic studies on the genus (Kaszab 1951; Pardo Alcaide 1977; Dvořák 1990). Consequently, this species needs a new name and a formal description. *Cerocoma barthelemyi* and *C. confusa* **n. sp.** are clearly distinct because of many characters: (a) protibial dorsal keel distinctly higher

in *C. confusa*; (b) protarsomere V subequal to III in *C. barthelemyi*, but distinctly longer in *C. confusa*; (c) a very dense tuft of black setae below antennomere VI in *C. barthelemyi*, almost or completely absent in *C. confusa*.

Distribution. Bulgaria, Greece, Turkey, S Russia, Georgia, Armenia, Azerbaijan, Syria, Lebanon, Israel-Palestine, Jordan, Iran. Doubtful records from Slovakia need confirmation.

Cerocoma (*Meloides*) *graeca* Mařan, 1944

Figs 2F, 3F, 4F, 6F

Cerocoma graeca Mařan, 1944: 99.
Cerocoma (*Cerocoma*) *adamovichiana*, Kaszab, 1951: 263, 267, 271 (*pars*).
Cerocoma (*Meloides*) *graeca*, Dvořák, 1990: 4.
Cerocoma (*Cerocoma*) *graeca*, Bologna, 1994: 23.

Type locality. "Veluchi bei Karpenission. (Griechenland)" (Mařan 1944). This mountainous area is located in central Greece.

Type specimens. The type and 3 cotypes, here designated respectively as lectotype and paralectotypes, have been examined:

Lectotype ♂: Veluchi / Graecia (white, printed) // TYPUS (pink, printed) // *Cerocoma* / *graeca* m. / Dr. Mařan det. (white, printed and handwritten) // LECTOTYPE ♂ / *Cerocoma graeca* / Mařan, 1944 / Turco & Bologna des. 2009 (red, printed) (CNM). Left metatarsomeres III–IV are missing.

1 paralectotype ♂: Kreta: / Xyloskala / Rwr. Lg. VI.26 (white, printed) // COTYPUS (pink, printed) // J. Fleischer / Mus, Praha (white, printed) // *Cerocoma* / *graeca* m. / Dr. Mařan det. (white, printed and handwritten) // PARALECTOTYPE ♂ / *Cerocoma graeca* / Mařan, 1944 / Turco & Bologna des. 2009 (red, printed) (CNM).

1 paralectotype ♂: Athos / (Macedonien) / A. Schatzmayr (white, printed) // COTYPUS (pink, printed) // *Cerocoma* / *graeca* m. / Dr. Mařan det. (white, printed and handwritten) // PARALECTOTYPE ♂ / *Cerocoma graeca* / Mařan, 1944 / Turco & Bologna des. 2009 (red, printed) (CNM). Protarsomeres and left maxillary palp are missing.

1 paralectotype ♂: Veles Serbia / Coll. Purkyně (white, printed and handwritten) // COTYPUS (pink, printed) / / *Cerocoma* / *graeca* mař. / Dr. Mařan det. (white, printed and handwritten) // PARALECTOTYPE ♂ / *Cerocoma graeca* / Mařan, 1944 / Turco & Bologna des. 2009 (red, printed) (CNM). Genitalia and last abdominal segment on a separate card. Right antenna is missing (antennomere I still present).

Description. Male. Body metallic green with long and sparse yellowish setae; legs, antennae and mouthparts, including maxillary palpi, orange; frontal calli (except for internal and posterior margins) and area between calli orange.

Head transverse with slightly protruding eyes. Maxillary palpi modified with palpomere II wide, flattened and curved; III swollen, long and slightly rounded on the external side; IV stout (about 2x as long as wide) and flattened with on edge abruptly widened and the other slightly sinuate (Fig. 3F). Antennae very modified with antennomere I bearing a long, narrow and bent expansion on the external side and dorsal keel wide, high and distally curved; III–VI very modified and ventrally expanded with antennomere; V with short setae on distal face of ventral laminar expansion; VI featuring a very long, narrow and curved expansion and a tuft of long and erect setae on ventral side; VII weakly expanded ventrally and with a less dense tuft of shorter setae on ventral side; IX transverse, apically rounded, dorsally slightly flattened and dorsal edge bilobate (Fig. 2F).

Pronotum elongate. Protibial keel short and slightly rounded in lateral view (Fig. 4F). Protarsi distinctly longer than protibiae and dorso-ventrally flattened with protarsomere II featuring an obvious dorsal bulge; protarsomere III about as long as V, excluding claws.

Gonostyli, in lateral view, straight, with apical lobes directed forward; apical lobes, in dorsal view, swollen and parallel. Apex of aedeagus pointed; aedeagal hooks subequal in size (the subapical slightly larger). Sclerotised hooks of endophallus subequal in size (the apical slightly larger), both pointing backwards (Fig. 6F).

Female. Not modified. Refer to key for diagnostic characters.

Taxonomy. This species was confused with *C. adamovichiana* in most literature (e.g. Kaszab 1951; Bologna 1986), but it is distinct from that species, which can be syntopic, at least by the elongate pronotum and protarsomere III as long as V.

Distribution. S Albania, Macedonia, Greece.

***Cerocoma* (*Meloides*) *longiseta* sp. n.**
Figs 2I, 3I, 4I, 6I

Type locality. "Turkey, vil. Ankara, Gordion". Gordion (Yassihöyük, in Turkish) was the capital of the Phrygian Kingdom during the eighth century BC. It is located about 100 km West of Ankara on the Sakarya River. This archaeological site includes a 16 meters high tumulus near which the types of *Cerocoma longiseta* were collected, together with specimens of *C. turcica*, on yellow inflorescence of *Achillea* sp. in a xeric continental steppe.

Type specimens. Holotype ♂ (CB) and 4 paratypes, 2 ♂♂ (1 CB, 1 BMNH) and 2 ♀♀ (CB), with the following labels: Holotypus ♂ (and respectively Paratypus ♂ or ♀) / *Cerocoma (Meloides*) *longiseta* **n. sp.** / F. Turco & M. Bologna des. 2009 (red, printed and handwritten) // TK 5 - Turkey - vil. Ankara / Gordion, m 730, 21.vi.2005 / 39.65087°N-32.00267°E / M. & M. Bologna & F. Turco (white, printed).

Four paratypes, 3 ♂♂ and 1 ♀ (CB): Paratypus ♂ (or ♀ respectively) / *Cerocoma* (*Meloides*) *longiseta* **n. sp.** / F. Turco & M. Bologna des. 2009 (red, printed and handwritten) // TK 6 - Turkey - vil. Ankara, Yenidogan / 10 Km E Polatli, m 880, 21.vi.2005 / 39.68728°N–32.26473°E / M. & M. Bologna & F. Turco (white, printed).

Three paratypes, 2 ♂♂ and 1 ♀ (CB): Paratypus ♂ (or ♀ respectively) / *Cerocoma* (*Meloides*) *longiseta* **n. sp.** / F. Turco & M. Bologna des. 2009 (red, printed and handwritten) // TK 15 - Turkey - vil. Konya / 4.2 Km N Beysehir, m 1125, 28.vi.2005 / 37.72938°N–31.70397°E / M. & M. Bologna & F. Turco (white, printed).

Five paratypes, 2 ♂♂ and 3 ♀♀ (CB): Paratypus ♂ (or ♀ respectively) / *Cerocoma (Meloides*) *longiseta* **n. sp.** / F. Turco & M. Bologna des. 2009 (red, printed and handwritten) // TK 2 - Turkey - vil. Bilecik, SS 580 / 1.5 Km NE Bözüyük, m 740 / 39.92305°N–30.00100°E, 20.vi.2005 / M. & M. Bologna & F. Turco (white, printed).

1 paratype ♂ (CB): Paratypus ♂ / *Cerocoma* (*Meloides*) *longiseta* **n. sp.** / F. Turco & M. Bologna des. 2009 (red, printed and handwritten) // TK 19 - Turkey - vil. Çanakkale / 7 Km S Ayvacik, m 390, 30.vi.2005 / 39.58298°N–26.49736°E / M. & M. Bologna & F. Turco (white, printed).

Other material examined. Bulgaria: Lozenec, 2.VII.1982 (CK). **Turkey:** Turkey, Taurus (CNM); Adana (CNM); Çeyhan, VI.1937, Dr. Vasvari (HNHM); Edirne, Opogar, 16.VI.2001, J. Hajek (CH); Isparta, Karakus Dagi Centr., 11.VII.2006, M. Kadlecova (CB); between Kirşehir and Nevşehir (CB); Kou Merşlik (CNM); Küzülü Köyu (HNHM); Makri (MSNG); Seydi Şehir Teke Geç., 1.VII.2000 (CK); Söke, Bafa Lake (CB; FSAG); Toprakkale, 10–11.VI.1973 (CNM).

Diagnosis. A *Cerocoma* belonging to the subgenus *Meloides* as defined in the present paper, in particular to the *C. adamovichiana*, according to the shape and colour of male antennae, head capsule and fore legs (tibiae and tarsomeres), and close to *C. albopilosa.* It differs from all other species of this group by the combination of the following male characters: antennal setation yellowish, setae under antennomere VI very long, antennomere VIII pointed on one side; maxillary palpomere III in dorsal view very enlarged and rounded externally, IV triangular, evenly enlarged from base to apex; prothorax wide; protarsomeres short, about as long as protibiae, with the first two tarsomeres together longer than the remaining three, protarsomere III about as long as V, without claws.

Description. Body metallic green, paler on elytra, antennae (except female antennomere I, partly or wholly black), labial and maxillary palpi (female last maxillary palpomere sometimes partially infuscate), labrum, part of mandibles, frons and part of male frontal calli, legs (except coxae and trochanters, metallic) orange; frons of female with a very small and narrow orange spot, sometimes extremely vague. Body setation pale yellow, very long, dense, lanuginose. Body length: 10–13 mm.

Head distinctly transverse, without a depressed area over the eyes, frontal area between calli present (as in *C. adamovichiana*, see Fig. 5D), frons convex in female, eyes slightly bulged, inner portion of frontal calli more or less extensively orange; templa very short, converging in male. Male antennae extremely modified as in Fig. 2I, setation yellowish; antennomere I bearing a long, narrow and slightly sinuate expansion on the external side and a dorsal keel very wide, high and apically curved; III–VIII more or less transverse and variously modified; V–VI each with a tuft of very long yellow setae; V with short setae on distal face of ventral laminar expansion; VI with a very long, narrow and distinctly curved expansion on ventral side; VIII pointed on one side; IX transverse, apically rounded, dorsally slightly flattened and dorsal edge bilobate (posterior lobe particularly pointed). Female antennae not modified, antennal club shorter than the preceding four antennomeres combined, last antennomere narrow at base, ovate. Male maxillary palpomere III in dorsal view very swollen and rounded externally, IV triangular, gradually widened from base to apex (Fig. 3I); female palpomeres slender.

Pronotum wide, almost parallel in the basal half and progressively curved anteriorly, in male with two deep and wide oblique dimples on the anterior half, with a narrow longitudinal middle furrow; in female sides widely rounded anteriorly. Male protibiae not depressed dorso-ventrally, in female the apical external angle only slightly pointed; protibial keel (Fig. 4I) high, progressively higher from base to apex, slightly curved anteriorly, without any angular prominence anteriorly; protibial spur pointed. Male protarsi short, about as long as protibiae, with the first two tarsomeres together longer than the remaining three, protarsomere II with an apical dorsal bulge, III about as long as V, without claws. Meso- and metatibiae and tarsomeres not modified in both sexes; metatibial spurs different in shape: external sub-spatuliform and obtuse at apex, internal narrow and pointed.

Last male abdominal sternite not modified, posterior margin V-emarginate. Gonostyli, in lateral view, straight with apical lobes directed forward; apical lobes, in dorsal view, swollen and parallel. Apex of aedeagus pointed; aedeagal hooks equal in size. Sclerotised hooks of endophallus small and very close to each other, equal in size, the apical pointing outwards and the subapical backwards (Fig. 6I).

Etymology. The name of this species refers to the long setae on antennomere VI, which discriminate it from *C. albopilosa*.

Taxonomic remarks. *Cerocoma longiseta* is very similar and closely related to *C. albopilosa* from which it can be recognised by the following characters: (a) yellowish setae below the antennomere VI distinctly longer; (b) antennomere VIII slightly pointed (rounded in *C. albopilosa*); (c) maxillary palpomere III wider and more rounded. These two species show partially overlapping ranges with *C. longiseta* distributed from Bulgaria to the southeastern Turkey and *C. albopilosa* occurring in southeastern Turkey (Adana and Osmanyie provinces) and south Iran. These species are syntopic along the southeastern coast of Turkey.

Distribution. E Bulgaria, Turkey.

Cerocoma (*Meloides*) *malatyensis* Kaszab, 1951

Figs 2G, 3G, 4G, 6G

Cerocoma muehlfeldi ab. *malatyensis* Kaszab, 1941: 679 (invalid description).
Cerocoma (*Cerocoma*) *malatyensis* Kaszab, 1951: 262, 266, 271.
Cerocoma (*Meloides*) *malatyensis*, Dvořák, 1990: 2, 9.

Type locality. "Klein-Asien: Malatya, Sultansuju Hara" (Kaszab 1941).

Type specimens. Type specimens of this species are dated 1941 when Kaszab first described it as an aberration of *C. muehlfeldi*; types are still valid but the name has to be attributed to Kaszab 1951 who elevated it to species. Holotype, allotype, and 1 paratype have been examined:

Holotype ♂: Sultansuyu, Hara, / Malatya, VI.–VII. (white, printed) // leg. / dr. Vasvári (white, printed) // Holotypus 1941 / *Cerocoma Mühlfeldi* / ab. *malatyensis* / ♂ Kaszab (white with red frame, printed and handwritten) // *Cerocoma* ♂ / *malatiensis* Kasz. / det. dr. Kaszab (white, printed and handwritten) (HNHM).

Allotype ♀: Sultansuyu, Hara, / Malatya, VI.–VII. (white, printed) // leg. / dr. Vasvári (white, printed) // Allotypus 1941 ♀ / *Cerocoma Mühlfeldi* / ab. *malatyensis* / Kaszab (white with red frame, printed and handwritten) // *Cerocoma* ♀ / *malatiensis* Kasz. / det. dr. Kaszab (white, printed and handwritten) (HNHM).

1 paratype ♂: Sultansuyu, Hara, / Malatya, VI.–VII. (white, printed) // leg. / dr. Vasvári (white, printed) // Paratypus 1941 ♂ / *Cerocoma Mühlfeldi* / ab. *malatyensis* / Kaszab (white with red frame, printed and handwritten) // *Cerocoma* ♂ / *malatiensis* Kasz. / det. dr. Kaszab (white, printed and handwritten) (HNHM).

Description. Male. Body metallic dark green, except for the abdomen orange, with a dense yellowish pubescence; frons with sides and a wide medial strip orange; legs, antennae and mouthparts, including maxillary palpi, orange. Body colour can be variable (see taxonomic remarks).

Head transverse with slightly protruding eyes. Maxillary palpi (Fig. 3G) modified with palpomere II wide, flattened and slightly curved; III swollen, long and weakly rounded on the external side; IV long, slender and parallel-sided (about 4x as long as wide). Antennae very modified with antennomere I bearing a long, narrow and bent expansion on the external side and dorsal keel wide, high and apically curved; III–VI very modified and ventrally expanded; V with short setae on distal face of ventral laminar expansion; VI with a dense tuft of long and erect setae and a very long, narrow and curved expansion on ventral side; IX transverse, ventrally swollen, dorsally slightly flattened and dorsal edge bilobate (Fig. 2G).

Protibial keel short and only weakly rounded at apex in lateral view (Fig. 4G). Protarsomeres slightly dorso-ventrally flattened; II with an obvious dorsal bulge; protarsomere III about as long as V, excluding claws.

Gonostyli, in lateral view, slightly curved, with apical lobes dorsally directed; apical lobes, in dorsal view, swollen and diverging. Apex of aedeagus pointed; aedeagal hooks equal in size. Sclerotised hooks of endophallus equal in size, both pointing outwards (Fig. 6G).

Female. Not distinctly modified. Refer to key for diagnostic characters.

Taxonomy. *Cerocoma malatyensis* is known from only few localities and specimens. It seems extremely close (and possibly an intraspecific form of) to *C. barthelemyi* from which it differs seemingly only in abdominal colour. On the other hand, the scarce available specimens of *C. malatyensis* are rather variable in colour, making this character possibly unreliable. Moreover, the study of type material of both species raised doubts over some diagnostic characters which have been proposed (Kaszab 1951). Herein, we consider these species as distinct, waiting for new material to be collected.

Distribution. E Turkey. Recorded also from Caucasus area, with no detailed locality information.

Cerocoma (*Meloides*) *muehlfeldi* Gyllenhal, 1817

Figs 2R, 3R, 4R, 6R

Cerocoma muehlfeldi Gyllenhal, 1817: 13; Reitter, 1913: 192 (*pars*).
Cerocoma micans Ménétries, 1832: 206.
Cerocoma faldermanni Laporte de Castelnau, 1840: 267.
Cerocoma gonocera Motschoulsky, 1872: 49.
Cerocoma kunzei, Mařan, 1944: 90 (*pars*) (nec Frivaldsky, 1835).
Cerocoma (*Cerocoma*) *muehlfeldi*, Kaszab, 1951: 263, 267, 272; Bologna, 1979: 185; Bologna, 1991: 184.
Cerocoma (*Meloides*) *muehlfeldi*, Dvořák, 1990: 10.

Type locality. "Austria" (Gyllenhal 1817).

Type specimens. The type of this species was not examined.

Description. Male. Body metallic dark green with short yellow pubescence; legs, antennae and mouthparts, including maxillary palpi, orange; frontal calli metallic green, except for the anteriormost internal margins orange; narrow orange spot in the area between frontal calli, wider posteriad.

Head transverse with slightly protruding eyes. Maxillary palpi (Fig. 3R) modified with palpomere II very wide, flattened and curved; III swollen and rounded on the external side; IV elongate and parallel-sided (about 2.5x as long as wide). Antennae modified (Fig. 2R) with antennomere I bearing a long, narrow and apically bent expansion on the external side and dorsal keel wide, high and curved at apex; III–VI very modified and ventrally expanded; V with a line of short setae on distal face of ventral laminar expansion; VI completely glabrous and with a very long, narrow and curved expansion on ventral side; IX slightly transverse, apically rounded, dorsally slightly flattened and dorsal edge weakly bilobate (posterior lobe particularly small).

Protibial keel short and straight in lateral view (Fig. 4R). Protarsomeres weakly dorso-ventrally flattened; II with an obvious dorsal bulge; protarsomere III shorter than V, excluding claws.

Gonostyli, in lateral view, straight, with apical lobes directed forward; apical lobes, in dorsal view, swollen and parallel. Apex of aedeagus pointed; aedeagal hooks equal in size. Sclerotised hooks of endophallus subequal in size (the apical larger), the apical pointing outwards and the subapical backwards (Fig. 6R).

Female. Not modified. Refer to key for diagnostic characters.

Taxonomy. *Cerocoma muehlfeldi* is very similar to *C. turcica* in some features, such as the low protibial dorsal keel and the maxillary palpomere IV very narrow and slender. On the other hand, the last four antennomeres are completely glabrous in *C. muehlfeldi*, whereas in *C. turcica* yellowish setae of variable length are present on at least antennomeres VI–VII.

Distribution. Austria, Hungary, Croatia, Serbia, Bosnia-Herzegovina, Montenegro, Albania, Macedonia, Bulgaria, Greece, Romania, S Ukraine, S Russia, Turkey, Syria, Israel-Palestine, Georgia, Armenia, Azerbaijan, Iraq, Iran, Turkmenistan. Records from Poland, Germany, Czech Republic and Slovakia need confirmation. Citations from Cyprus refer to *C. azurea*.

Cerocoma (*Meloides*) *turcica* Pardo Alcaide, 1977

Figs 2Q, 3Q, 4Q, 6Q

Cerocoma adamovichiana ssp. *turcica* Pardo Alcaide, 1977: 60.
Cerocoma (*Meloides*) *turcica*, Dvořák, 1990: 3.

Type locality. "O. Turkei, Ö. Solhan (ö Bingöl)" (Pardo Alcaide 1977).

Type specimens. Types, preserved in the Pardo Alcaide's collection (MULL), were not examined.

Description. Male. Body metallic green with yellowish setation, particularly dense and long on head and pronotum; legs, antennae and mouthparts, including maxillary palpi, orange; frontal calli metallic green, except for the anteriormost internal margins orange; narrow orange spot in the area between frontal calli, wider posteriad.

Head transverse with slightly protruding eyes. Maxillary palpi modified with palpomere II wide, flattened and curved; III swollen, long and rounded on the external side; IV long and gradually widened from base to apex (Fig. 3Q). Antennae modified with antennomere I bearing a short, narrow and bent expansion on the external side and dorsal keel wide, high and apically curved; III–VI very modified and ventrally expanded; V with short setae on distal face of ventral laminar expansion; VI with a very long, narrow and curved expansion on ventral side; VI–VII each with a tuft of long and erect setae on ventral side; IX transverse, rounded apically, dorsally slightly flattened and dorsal edge deeply bilobate (Fig. 2Q).

Protibial keel short and straight in lateral view (Fig. 4Q). Protarsomeres weakly dorso-ventrally flattened; II with an obvious dorsal bulge; protarsomere III shorter than V, excluding claws.

Gonostyli, in lateral view, slightly curved, with apical lobes dorsally directed; apical lobes, in dorsal view, swollen and parallel. Apex of aedeagus pointed; aedeagal hooks subequal in size (the subapical slightly larger). Sclerotised hooks of endophallus subequal in size (the apical slightly larger), the apical pointing outwards and the subapical backwards (Fig. 6Q).

Female. Not modified. Refer to key for diagnostic characters.

Taxonomy. For taxonomic remarks on *C. turcica* see the discussion on *C. muehlfeldi*.

Distribution. Macedonia, Bulgaria, N Greece, SE Romania, S Russia, Turkey, Georgia, Armenia, NW Iran. A single record from Slovakia is probably erroneous.

Cerocoma kunzei group

Cerocoma (*Meloides*) *bodemeyeri* Reitter, 1909

Figs 2AC, 3AC, 4AC, 6AC, 7F

Cerocoma bodemeyeri Reitter, 1909: 103; Reitter, 1913: 191.
Cerocoma gloriosa bodemeyeri, Mařan, 1944: 89.
Cerocoma (*Cerocoma*) *kunzei* ab. *bodemeyeri*, Kaszab, 1951: 264, 266, 272.
Cerocoma (*Meloides*) *bodemeyeri*, Dvořák, 1990: 7.

Type locality. "Persien. Luristan" (Reitter 1909).

Type specimens. As explained for *C. prochaskana*, we accept the unpublished selection of Reitter's types, probably made by Kaszab, and we designate them lectotype and paralectotypes. Lectotype and two paralectotypes have been examined:

Lectotype ♂: v. Bodemeyer / Persien / Luristan (white, printed) // Holotypus 1909 / *Cerocoma* ♂ / *Bodemeyeri* / Reitter (white with red frame, printed and handwritten) // *Bodemeyeri* / m. Persien / 1909 (white, hand written, turned upside down) // *Cerocoma* ♂ / ab. *Bodemeyeri* Rtt. / det. dr. Kaszab (white, printed and handwritten) // LECTOTYPE ♂ / *Cerocoma bodemeyeri* / Reitter, 1909 / Turco & Bologna des. 2009 (red, printed) (HNHM). Some parts of the specimen are missing: right antenna (except for the first two antennomeres), metatarsomeres, and right mesotarsomeres.

1 paralectotype ♀: v. Bodemeyer / Persien / Luristan (white, printed) // Allotypus 1909 / *Cerocoma* ♀ / *Bodemeyeri* / Reitter (white with red frame, printed and handwritten) // *Cerocoma* ♀ / ab. *Bodemeyeri* Rtt. / det. dr. Kaszab (white, printed and handwritten) // PARALECTOTYPE ♀ / *Cerocoma bodemeyeri* / Reitter, 1909 / Turco & Bologna des. 2009 (red, printed) (HNHM). Metatarsi, right mesotarsomeres and left metatibia are missing.

1 paralectotype ♂: v. Bodemeyer / Persien / Luristan (white, printed) // Paratypus 1909 / *Cerocoma* ♂ / *Bodemeyeri* / Reitter (white with red frame, printed and handwritten) // *Cerocoma* ♂ / ab. *Bodemeyeri* Rtt. / det. dr. Kaszab (white, printed and handwritten) // PARALECTOTYPE ♂ / *Cerocoma bodemeyeri* / Reitter, 1909 / Turco & Bologna des. 2009 (red, printed) (HNHM).

Description. Male. Body metallic dark green with sparse yellow setae; frons with a central orange spot; abdomen orange, except for the last two segments dark green metallic; legs, antennae and mouthparts, including maxillary palpi, yellow-orange.

Head transverse with slightly protruding eyes. Maxillary palpi modified with palpomere II very wide, flattened and slightly curved; III long and swollen with rounded external side; IV elongate (about 2.5x as long as wide), parallel-sided and weakly bent near base (Fig. 3AC). Antennae modified with antennomere I bearing a narrow and apically bent expansion on the external side and dorsal keel wide, high and apically curved; III–VI very modified and ventrally expanded; III, in dorsal view, sinuate on the external side and rounded on the internal side, with a short and broad appendix on the internal apex (Fig. 7F); V with short setae on distal face of ventral laminar expansion; VI with a tuft of long and erect setae and a very long, narrow and distinctly curved expansion on ventral side; IX slightly transverse and rounded (Fig. 2AC).

Protibial keel extended to proximal 2/3 of the length of tibia, with dorsal edge straight and anterior edge bearing an angular bulge, visible in lateral view (Fig. 4AC). Protarsomeres weakly enlarged; II with an obvious dorsal bulge.

Gonostyli, in lateral view, straight, with apical lobes directed forward; apical lobes, in dorsal view, swollen and slightly diverging. Apex of aedeagus slightly pointed; aedeagal hooks equal in size. Sclerotised hooks of endophallus equal in size, both pointing backwards (Fig. 6AC).

Female. Not modified. Refer to key for diagnostic characters.

Distribution. Iraq, Iran. Doubtful records from W Turkey and Syria.

Cerocoma (*Meloides*) *gloriosa* Mulsant, 1857

Figs 2X, 3X, 4X, 6X, 7A

Cerocoma gloriosa Mulsant, 1857: 103; Mařan, 1944: 89 (*pars*).
Cerocoma vasvarii Kaszab, 1941: 675, 680.
Cerocoma (*Cerocoma*) *gloriosa*, Kaszab, 1951: 264, 267, 272.
Cerocoma (*Cerocoma*) *gloriosa* var. *jodina* Kaszab, 1951: 264, 268.
Cerocoma pseudogloriosa Muche, 1963: 14.
Cerocoma (*Meloides*) *gloriosa*, Dvořák, 1990: 6.

Type locality. "France" (Mulsant 1857). The locality is erroneous, as assessed by Mulsant himself, since this species does not belong to the European blister beetle fauna. The mistake is probably due to mislabeling. We designate herein "Çeyhan" as type locality, a town in southeastern Turkey, close to Adana.

Type specimens. Types of this species are probably preserved in the Lyon Museum; they were not examined. The holotype of the aberration *jodina* and of synonym *C. vasvarii*, labeled by Kaszab as "Monotypus", have been studied:

Holotype ♂: Ceyhan / 937.VI. (white, printed) // leg. dr. Vasvári (white, printed) // Monotypus 1941 / *Cerocoma* ♂ / *Vasvárii* / Kaszab (white with red frame, printed and handwritten) // *Cerocoma* / *gloriosa* Muls. / det. dr. Kaszab (white, printed and handwritten) (HNHM). The last abdominal segment and genitalia are preserved on a clear plastic card pinned with the specimen. Protarsomeres and left metatarsomeres are damaged.

Holotype ♂: Syrien / Lederer (white, printed) // Holotypus 1951 ♂ / *Cerocoma gloriosa* / ab. *jodina* / Kaszab (white with red frame, printed and handwritten) (HNHM). Right metatarsomeres are slightly damaged.

Holotype and allotype of *C. pseudogloriosa* preserved at the Dresden Museum, were examined several years ago by one of us (MAB) to investigate the taxonomic validity of the species, but conservation status of specimens and a detailed description of labels are not available.

Description. Male. Body metallic green with sparse yellowish pubescence, denser on head and pronotum; frons with a central orange spot; abdomen orange on sides and dorsally, metallic green ventrally; legs, antennae and mouthparts, including maxillary palpi, yellow-orange.

Head transverse with protruding eyes. Maxillary palpi modified with palpomere II wide and flattened; III slightly swollen and rounded on the external side; IV with narrow base and then distinctly widened to apex, especially on the internal edge (Fig. 3X). Antennae modified with antennomere I bearing a narrow, short and apically bent expansion on the external side and dorsal keel wide, high and apically slightly curved; III–VI very modified and ventrally expanded; III in dorsal view sinuate on both sides and with a long and pointed appendix on the internal apex (Fig. 7A); V with short setae on distal face of ventral laminar expansion; VI with a very long, narrow and curved expansion on ventral side; IX rounded (Fig. 2X).

Protibial keel extended to proximal 2/3 of the length of tibia, with dorsal edge straight and anterior edge bearing an angular bulge, visible in lateral view (Fig. 4X). Protarsomeres slightly enlarged; II with an obvious dorsal bulge.

Gonostyli, in lateral view, straight, with apical lobes directed forward; apical lobes, in dorsal view, swollen and slightly diverging. Apex of aedeagus slightly pointed; aedeagal hooks equal in size. Sclerotised hooks of endophallus small and very close from each other, equal in size, both pointing outwards (Fig. 6X).

Female. Not modified. Refer to key for diagnostic characters.

Distribution. Turkey, Armenia, Azerbaijan, Syria. Erroneously recorded from Greece.

Cerocoma (*Meloides*) *kunzei* Frivaldsky, 1835

2AB, 3AB, 4AB, 5E, 6AB, 7E

Cerocoma kunzei Frivaldsky, 1835: 265; Reitter, 1913: 192; Mařan, 1944: 90.
Cerocoma mühlfeldi var. *patelligera* Baudi, 1878b: 358.
Cerocoma mühlfeldi var. *kunzei*, Reitter, 1885: 13.
Cerocoma mühlfeldi var. *patkaii* Kaszab, 1941: 679.
Cerocoma gloriosa ab. *kaszabi* Mařan, 1944: 96.
Cerocoma (*Cerocoma*) *kunzei*, Kaszab, 1951: 264, 266, 272; Bologna, 1991: 160.
Cerocoma kunzei ab. *violacea* Kaszab, 1951: 264, 269.
Cerocoma kunzeni iranica Muche, 1963: 11.
Cerocoma kunzeni palaestinensis Muche, 1963: 11.
Cerocoma (*Meloides*) *kunzei*, Dvořák, 1990: 7.

Type locality. In the original description (Frivaldsky 1835) "Turquie" is indicated as type locality. The holotype identified by Kaszab in the HNHM and here designated as lectotype is labeled "Smyrna", which indeed must be considered as the restricted type locality. Late Greek name of Smyrna refers to the town of Izmir on the Aegean cost of Turkey.

Type specimens. Kaszab mentioned types of *Cerocoma kunzei* (holotype, allotype and paratypes) being preserved at the HNHM (Kaszab 1951, p. 258), without describing the specimens and commenting on their type status. Kaszab's identification of Frivaldsky's types has been accepted in our study. Therefore, holotype, allotype, and 2 paratypes were examined and are here designated respectively as lectotype and paralectotypes. We also examined the holotype of the infraspecific form *violacea*, together with the holotype and one paratype of *C. muehlfeldi* ab. *patkaii*:

Lectotype ♂: Balkan / Smyrna (white, handwritten) // Friv. / 8405 (white with black frame, printed and handwritten) // Holotypus 1835 / *Cerocoma* ♂ / *kunzei* / E. Frivaldszky (white with red frame, printed and handwritten) // LECTOTYPE ♂ / *Cerocoma kunzei* / Frivaldsky, 1835 / Turco & Bologna des. 2009 (red, printed) (HNHM). Left metataromeres are missing.

1 paralectotype ♀: Balkan / Smyrna (white, handwritten) // 1846 / F. 72 (white, handwritten) // Allotypus 1835 / *Cerocoma* ♀ / *kunzei* / E. Frivaldszky (white with red frame, printed and handwritten) // PARALECTOTYPE ♀ / *Cerocoma kunzei* / Frivaldsky, 1835 / Turco & Bologna des. 2009 (red, printed) (HNHM). Right procoxa, central portion of abdomen and hind legs are damaged by dermestids.

2 paralectotypes ♂: Balkan / Smyrna (white, handwritten) // Friv. / 8405 (white with black frame, printed and handwritten) // Paratypus 1835 / *Cerocoma* ♂ / *kunzei* / E. Frivaldszky (white with red frame, printed and handwritten) // PARALECTOTYPE ♂ / *Cerocoma kunzei* / Frivaldsky, 1835 / Turco & Bologna des. 2009 (red, printed) (HNHM). One specimen is damaged by dermestids (part of frontal calli, left eye, left portion of meso- and metathorax, right metacoxa, left procoxa and hind leg).

Holotype ♂: Kchakich / 9.7.85 (white, handwritten) // Holotypus 1951 ♂ / *Cerocoma kunzei* / ab. *violacea* / Kaszab (white with red frame, printed and handwritten) (HNHM).

Holotype ♀: Sultansuyu, Hara, / Malatya, VI.–VII. (white, printed) // leg. / dr. Vasvári (white, printed) // Holotypus 1941 / *Cerocoma Mühlfeldi* / v. *Pátkaii* ♀ / Kaszab (white with red frame, printed and handwritten) // *Cerocoma* ♀ / ab. *Pátkaii* Kasz. / det. dr. Kaszab (white, printed and handwritten) (HNHM). Last two right metatarsomeres are missing.

1 paratype ♀: Sultansuyu, Hara, / Malatya, VI.–VII. (white, printed) // leg. / dr. Vasvári (white, printed) // Paratypus 1941 / *Cerocoma Mühlfeldi* / v. *Pátkaii* ♀ / Kaszab (white with red frame, printed and handwritten) // *Cerocoma* ♀ / ab. *Pátkaii* Kasz. / det. dr. Kaszab (white, printed and handwritten) (HNHM).

Types of *C. kunzeni iranica* and *C. kunzeni palaestinensis* preserved at the Dresden Museum, have been studied several years ago by one of us (MAB), but a detailed description of specimens and labels is not available.

Description. Male. Body metallic dark green with sparse yellowish pubescence; legs, antennae and mouthparts, including maxillary palpi, yellow-orange.

Head transverse with slightly protruding eyes (Fig. 5E). Maxillary palpi (Fig. 3AB) modified with palpomere II wide, flattened and curved; III slightly swollen and rounded on the external side; IV with narrow base and then gradually and distinctly widened to apex (about 2x as long as wide at apex). Antennae modified with antennomere I bearing a narrow, long and weakly bent expansion on the external side and dorsal keel wide, high and apically curved; III–VI very modified and ventrally expanded; III in dorsal view sinuate on both sides and with a short and broad appendix on the internal apex (Fig. 7E); V with short setae on distal face of ventral laminar expansion; VI with a very long, narrow and curved expansion and a tuft of long and erect setae on ventral side; IX transverse and apically rounded (Fig. 2AB).

Protibial keel extended to proximal 2/3 of the length of tibia, with dorsal edge straight and anterior edge bearing an angular bulge, visible in lateral view (Fig. 4AB). Protarsomeres weakly enlarged; II with an obvious dorsal bulge.

Gonostyli, in lateral view, slightly curved, with apical lobes dorsally directed; apical lobes, in dorsal view, swollen and parallel. Apex of aedeagus slightly pointed; aedeagal hooks subequal in size (the subapical slightly larger). Sclerotised hooks of endophallus small and very close from each other, equal in size, the apical pointing outwards and the subapical backwards (Fig. 6AB).

Female. Not modified. Refer to key for diagnostic characters.

Taxonomy. The synonymy with *C. mühlfeldi* var. *patelligera* Baudi, 1878 must be confirmed. Types of this form were not found in the MRSN.

Distribution. Croatia? (Istria), Serbia, Albania, Macedonia, Bulgaria, Greece, Turkey, Georgia, Armenia, Syria, Israel-Palestine, Jordan, Iran, E Turkmenistan. Records from Hungary are uncertain.

Cerocoma (*Meloides*) *macedonica* Mařan, 1944

Figs 2AA, 3AA, 4AA, 6AA, 7D

Cerocoma macedonica Mařan, 1944: 98; Pardo Alcaide, 1977: 64, 66.
Cerocoma (*Cerocoma*) *kunzei* ab. *macedonica*, Kaszab, 1951: 264, 266, 272.
Cerocoma (*Meloides*) *macedonica*, Dvořák, 1990: 8.

Type locality. "Petrič in Südbulgarien" (Mařan 1944).

Type specimens. Two syntypes have been examined, designated herein as lectotype and paralectotype respectively according to the type locality originally published:

Lectotype ♂: Petrič Mac. / Vil Mař. Táb. (white, printed) // TYPUS (pink, printed) // *Cerocoma* / *macedonica* / Mař. / Dr. Mařan det. (white, printed and handwritten) // LECTOTYPE ♂ / *Cerocoma macedonica* / Mařan, 1944 / Turco & Bologna des. 2009 (red, printed) (CNM). Genitalia as well as the last abdominal segment are on a separate card.

1 paralectotype ♂: MUS. PRAGENSE / Ič. 4109 (white, printed) // SKOPLJA / Serb. Mer. VI. / Dr. Purkyně 1930 (white, printed) // TYPUS (pink, printed) // *Cerocoma* / *macedonica* / Dr. Mařan det. m. (white, printed and handwritten) // PARALECTOTYPE ♂ / *Cerocoma macedonica* / Mařan, 1944 / Turco & Bologna des. 2009 (red, printed) (CNM). Right hind leg is missing (coxa and trochanter still present).

Description. Male. Body metallic dark red with a dense and short yellowish pubescence; legs, antennae and mouthparts, including maxillary palpi, yellow-orange.

Head transverse with slightly protruding eyes. Maxillary palpi (Fig. 3AA) modified with palpomere II wide, flattened and curved; III slightly swollen and rounded on the external side; IV very long, slender and bent (about 4.5x as long as wide). Antennae modified with antennomere I bearing a short, narrow expansion on the external side and dorsal keel wide, high and apically curved; III–VI very modified and ventrally expanded; III in dorsal view sinuate on both sides and with a long and broad appendix on the internal apex (Fig. 7D); V with short setae on distal face of ventral laminar expansion; VI with a very long, narrow and curved expansion and a tuft of long and erect setae on ventral side; IX transverse, apically rounded and sinuate at base (Fig. 2AA).

Pronotum distinctly transverse. Protibial keel extended to proximal 3/4 of the length of tibia, with dorsal edge straight and anterior edge bearing an angular bulge, visible in lateral view (Fig. 4AA). Protarsomeres slightly enlarged; II with an obvious dorsal bulge.

Gonostyli, in lateral view, straight, with apical lobes directed forward; apical lobes, in dorsal view, swollen and parallel; in lateral view, narrow. Apex of aedeagus slightly pointed; aedeagal hooks equal in size. Sclerotised hooks of endophallus small and very close to each other, equal in size, both pointing outwards (Fig. 6AA).

Female. Not modified. Refer to key for diagnostic characters.

Distribution. Serbia, Bosnia-Herzegovina, Macedonia, Bulgaria, Greece, W and central Turkey.

Cerocoma (*Meloides*) *marginiventris* Reitter, 1889 stat. n.

Figs 2Z, 3Z, 4Z, 6Z, 7C

Cerocoma mühlfeldi var. *marginiventris* Reitter, 1889: 34.
Cerocoma mühlfeldi var. *pictiventris* Reitter, 1890: 174. **syn. n.**
Cerocoma muehlfeldi var. *gloriosa*, Reitter, 1913: 191. (nec Mulsant, 1857)
Cerocoma gloriosa ab. *marginiventris*, Mařan, 1944: 89.
Cerocoma (*Cerocoma*) *kunzei* ab. *marginiventris*, Kaszab, 1951: 264, 266, 272.

Type locality. "Araxesthal" (Reitter 1889). As for other species, this generic locality (the Araxes River valley) could refer to North East Turkey, Armenia or Azerbaijan.

Type specimens. As explained for *C. prochaskana*, we accept the unpublished selection of Reitter's types, probably made by Kaszab, and we designate them lectotype and paralectotypes. Only exception is a female specimen of *C. muehlfeldi* v. *pictiventris* identified by Kaszab as the holotype. We prefer to designate as lectotype a male specimen preserved at the MNHN and leave the female in Budapest as a paralectotype.

Lectotype and one paralectotype of this species have been examined, together with the lectotype of *C. muehlfeldi* var. *pictiventris* and 2 syntypes (one at HNHM and one in the Chobaut's collection at MNHN) that we designate as paralectotypes:

Lectotype ♂: Caucasus. / Araxesthal. / Leder. Reitter. (white with black frame, printed) // Coll. Reitter (white, printed) // Holotypus 1889 / *Cerocoma Mühlfeldi* / v. *marginiventris* / ♂ Reitter (white with red frame, printed and handwritten) // LECTOTYPE ♂ / *Cerocoma muehlfeldi* / v. *marginiventris* / Reitter, 1889 / Turco & Bologna des. 2009 (red, printed) (HNHM). Last left palpomere and last two right antennomeres are missing.

1 paralectotype ♀: Caucasus. / Araxesthal. / Leder. Reitter. (white with black frame, printed) // Coll. Reitter (white, printed) // Allotypus 1889 ♀ / *Cerocoma Mühlfeldi* / v. *marginiventris* / Reitter (white with red frame, printed and handwritten) // PARALECTOTYPE ♀ / *Cerocoma muehlfeldi* / v. *marginiventris* / Reitter, 1889 / Turco & Bologna des. 2009 (red, printed) (HNHM). Some parts of the specimen are missing: part of both eyes, last two right antennomeres, left antenna (except for the first two antennomeres) and the last two left protarsomeres.

Lectotype ♂: Caucasus. / Araxesthal. / Leder. Reitter. (white with black frame, printed) // *C. Mühlfeldi* / var. *picti-* / *ventris* m 1890 (white, handwritten) // *C. Muhlfeldi* / v. *pictiventris* / Rttr. (white, handwritten) // MUSEUM PARIS / 1942 / COLL. D^{R}. A. CHOBAUT (white, printed) // LECTOTYPUS / *Cerocoma mühlfeldi* / var. *pictiventris* / Reitt. F. Turco & / M. Bologna des. 2007 (red, printed and handwritten) // *Cerocoma* / *marginiventris* / Reitter, 1889 / Federica TURCO det. 2005 (white, printed and handwritten) (MNHN).

1 paralectotype ♀: Caucasus. / Araxesthal. / Leder. Reitter. (white with black frame, printed) // Holotypus 1890 / *Cerocoma Mühlfeldi* ♀ / v. *pictiventris* / Reitter (white with red frame, printed and handwritten) // *Cerocoma kun-*

zei / ab. *marginiventris* Rtt. / det. dr. Kaszab (white, printed and handwritten) // PARALECTOTYPE ♀ / *Cerocoma muehlfeldi* / v. *pictiventris* Reitter, 1890 / Turco & Bologna des. 2009 (red, printed) (HNHM).

1 paralectotype ♀: Caucasus. / Araxesthal. / Leder. Reitter. (white, printed) // v. *pictiventris* Reitt. (white, printed) // MUSEUM PARIS / 1942 / COLL. D^{R}. A. CHOBAUT (white, printed) // PARALECTOTYPE ♀ / *Cerocoma muehlfeldi* / v. *pictiventris* Reitter, 1890 / Turco & Bologna des. 2009 (red, printed) (MNHN).

Description. Male. Body metallic green with short and sparse yellowish setae; frons with a central orange spot; abdomen green metallic, orange on sides and dorsally; antennae and mouthparts, including maxillary palpi, yellow-orange; legs yellow-orange except for metatarsi dark.

Head transverse with slightly protruding eyes. Maxillary palpi modified with palpomere II wide, flattened and slightly curved; III very swollen and rounded on the external side; IV with narrow base and then very distinctly widened to apex, especially on the internal edge (Fig. 3Z). Antennae modified with antennomere I bearing a narrow, long and very slightly curved expansion on the external side and dorsal keel wide, high and weakly curved apically; III–VI very modified and ventrally expanded; III, in dorsal view, slightly sinuate on the external side and with a very deep incision on the internal side and a short and broad appendix on the internal apex (Fig. 7C); V with short setae on distal face of ventral laminar expansion; VI with a very long, narrow and curved expansion and a tuft of long and erect setae on ventral side; IX weakly transverse and apically rounded (Fig. 2Z).

Protibial keel extended to proximal 2/3 of the length of tibia, with dorsal edge straight and anterior edge bearing an angular bulge, visible in lateral view (Fig. 4Z). Protarsomeres slightly enlarged; II with an obvious dorsal bulge.

Gonostyli, in lateral view, straight, with apical lobes directed forward; apical lobes, in dorsal view, swollen and parallel. Apex of aedeagus slightly pointed; aedeagal hooks equal in size. Sclerotised hooks of endophallus equal in size, both pointing outwards (Fig. 6Z).

Female. Not modified. Refer to key for diagnostic characters.

Taxonomy. This species has undergone various taxonomic changes. It was described as a variety of *C. muehlfeldi* by Reitter (1889) and was then considered as an aberration of *C. gloriosa* by Mařan (1944) and of *C. kunzei* by Kaszab (1951). *C. marginiventris* is similar to *C. rapillyi* in the shape of maxillary palpomere IV, large and securiform. It is clearly recognisable for the completely orange abdomen in *C. rapillyi*, compared to green metallic with orange sides in *C. marginiventris* and for the shape of antennomere III in dorsal view (Figs 7B and C).

Distribution. E Turkey, Armenia, Azerbaijan, NW Iran.

Cerocoma (*Meloides*) *rapillyi* Pardo Alcaide, 1977

Figs 2Y, 3Y, 4Y, 6Y, 7B

Cerocoma rapillyi Pardo Alcaide, 1977: 61.
Cerocoma (*Meloides*) *rapillyi*, Dvořák, 1990: 9.

Type locality. "Iran, Magsud-beik" (Pardo Alcaide 1977).

Type specimens. 13 paratypes have been examined:

6 paratypes, 3 ♀♀ and 3 ♂♂: PARATIPO (red, black printed) // *Cerocoma* ♂ / *rapillyi* Pardo / Pardo Alcaide det. 1974 (red, printed and handwritten) // IRAN Magsud-Beik / 20.V.1969 / M. Rapillyi leg. (white, handwritten) (MNHN). The second label is "*Cerocoma* ♀" for the three females. Several specimens lack part of the legs and one female lacks left antenna.

1 paratype ♀: IRAN Shah / Reza 20.V.69 / M. Rapillyi réc. (white, handwritten) // PARATIPO (red, black printed) // *Cerocoma* ♀ / *rapillyi* Pardo / Pardo Alcaide det. 1974 (red, printed and handwritten) (MNHN).

3 ♂♂ paratypes pinned together: Iran Maqsud beik / 29.V.1969 / M. Rapilly leg. (white, handwritten) // coll. Pardo Alcaide (yellow, printed) // PARATYPUS / A. Pardo (red, printed) // *Cerocoma* / *rapillyi* Pardo (pink, handwritten) (MULL). Protarsomeres of two specimens are damaged.

3 ♂♂ paratypes pinned together: Maqsud beik / 20.V.67 (white, handwritten; 3 identical labels repeated) // Iran / M. Rapilly leg. (white, handwritten) // coll. Pardo Alcaide (yellow, printed) // PARATYPUS / A. Pardo (red, printed) // *Cerocoma* / *rapillyi* Pardo (pink, handwritten) (MULL). One male lacks the head and another specimen lacks left protarsomeres.

Description. Male. Body metallic dark green with short and sparse yellowish setae; frons with a central orange spot; abdomen orange, except for last two segments, metallic green; legs, antennae and mouthparts, including maxillary palpi, yellow-orange.

Head transverse with slightly protruding eyes. Maxillary palpi modified with palpomere II wide, flattened and curved; III very swollen and rounded on the external side; IV with narrow base and then very distinctly widened to apex, especially on the internal edge (Fig. 3Y). Antennae modified with antennomere I bearing a narrow, long and apically curved expansion on the external side and dorsal keel wide, high and apically curved; III–VI very modified and ventrally expanded; III, in dorsal view, slightly sinuate on the external side and with a wide and shallow incision on the internal side and a short and broad appendix on the internal apex (Fig. 7B); V with short setae on distal face of ventral laminar expansion; VI with a very long, narrow and curved expansion and a tuft of long and erect setae on ventral side; IX transverse and apically rounded (Fig. 2Y).

Protibial keel extended to proximal 2/3 of the length of tibia, with dorsal edge straight and anterior edge bearing an angular bulge, visible in lateral view (Fig. 4Y). Protarsomeres slightly enlarged; II with an obvious dorsal bulge.

Gonostyli, in lateral view, straight, with apical lobes directed forward; apical lobes, in dorsal view, swollen and slightly diverging. Apex of aedeagus slightly pointed; aedeagal hooks subequal in size (the subapical only slightly larger). Sclerotised hooks of endophallus equal in size, the apical pointing outwards and the subapical backwards (Fig. 6Y).

Female. Not modified. Refer to key for diagnostic characters.

Taxonomy. For its relationships, see discussion on *C. marginiventris*.

Distribution. Iraq, Iran. Erroneously recorded from Bulgaria.

Subgenus *Mesocerocoma* Kaszab, 1951

Mesocerocoma Kaszab, 1951: 259; Bologna, 1991: 145.
Type species. *Cerocoma scovitzi* Faldermann, 1837: 117, by original designation.

Subgenus diagnosis. Body length: 12–13 mm. Head, pronotum, and thoracic sternites black or partially orange, never metallic. Male frontal calli well developed and raised over the head, without any lateral depression over the eyes; very close to each other in the middle of frons (Fig. 5B). Male antennae strongly modified: antennomere I dorsally expanded to form a high and large keel; II small and subcylindrical; III swollen and with a pointed expansion directed outwards; IV–VI enlarged, flattened and very close to each other; VII small and slightly enlarging from base to apex; VIII slightly swollen; IX subtriangular and extremely swollen, with a pointed and curved expansion on inner side. Male maxillary palpomeres modified: palpomere I slightly short and swollen; II–III enlarged, flattened and curved; IV elongate and slightly enlarged, flattened and curved.

Male protibiae dorso-ventrally flattened and anteriorly enlarged, without any dorsal keel.

Cerocoma (*Mesocerocoma*) *latreillei* Baudi, 1878

Figs 2M, 3M, 4M, 6M

Cerocoma latreillei latreillei Baudi, 1878:
Cerocoma latreillei Baudi, 1878b: 359.
Cerocoma (*Mesocerocoma*) *latreillei*, Kaszab, 1951: 261, 265, 271.

Cerocoma latreillei sterbai Mařan, 1944 **stat. n.**:
Cerocoma sterbai Mařan, 1944: 95.
Cerocoma (*Mesocerocoma*) *sterbai*, Kaszab, 1951: 261, 265, 271.
Cerocoma (*Mesocerocoma*) *latreillei schah* Kaszab, 1968: 750; Dvořák, 1996: 160. **syn. n.**

Type locality. *Cerocoma latreillei latreillei*: "Unknown" (Baudi 1878b). Based on the distribution of the nominate subspecies, we define here "Baghdad" as restricted type locality. *Cerocoma latreillei sterbai*: "Keredj" (Mařan 1944).

Type specimens. The holotype of this species was not found in the MRSN. In a box in Baudi's collection one card states that this type was sent for study to Zoltan Kaszab in Budapest, but it was not found at the HNHM either. The holotypes of *Cerocoma sterbai* and *C. latreillei schah* have been studied:

Holotype ♀: Keredj / Iran / Dr Kargl (white, printed) // TYPUS (red, printed) // Mus. Nat. Pragae / Inv. 18230 (pink, printed and handwritten) // *Cerocoma* ♀ / *štèrbai* m.n. / Dr. Mařan det. (white, printed and handwritten) (CNM).

Holotype ♂: Firouzabad / 11-IV-53 / Kachkouli (white, handwritten) // Holotypus 1967 ♂ / *Cerocoma Latreillei* / *schach* / Kaszab (white with red frame, printed and handwritten) // Cerocoma latreillei / schach Kasz. / Dr Z. Kaszab det., 1968 (white, printed and handwritten) (HNHM). The specimen lacks apical two left protarsomeres, right fore leg (except for the coxa), right meso- and metatarsi. Note that the published name "*schah*", differs from that on the label, "*schach*".

Description. Male. Body yellow-orange, except for thoracic sternites sometimes partially black; elytra metallic dark green, with short and sparse setae; posterior portion of head, behind eyes and around foramen, black; legs, antennae and mouthparts, including maxillary palpi, yellow-orange.

Head transverse with slightly protruding eyes. External sides of frontal calli, anterior to eyes, weakly concave. Maxillary palpi modified with palpomeres II–III wide, flattened and curved; IV flattened and curved and with base partially concealed by the apical edge of IV (Fig. 3M). Antennae strongly modified with antennomere I bearing a very wide and high dorsal keel partially curved at apex; III–VIII variously expanded and shaped; VI–VIII with rows of long and erect setae along the apical edge on ventral side; IX transverse with a deep dorsal concavity (Fig. 2M).

Pronotum transverse. Protibiae dorso-ventrally flattened and distally widened on the external side (Fig. 4M). Pro- and metatarsomeres slightly enlarged.

Gonostyli, in lateral view, straight, with apical lobes directed forward; apical lobes, in dorsal view, swollen and parallel. Apex of aedeagus rounded; aedeagal hooks equal in size. Sclerotised hooks of endophallus equal in size, both pointing backwards (Fig. 6M).

Female. Not modified. Refer to key for diagnostic characters.

Taxonomy. *Cerocoma latreillei* is a polytypic species with two subspecies: (a) *C. latreillei latreillei*, with male frontal calli anteriorly not raised, orange pronotum, protarsomere II longer than the III, and external side of protarsomeres curved (Iran, Iraq); (b) *C. latreillei sterbai*, with male frontal calli anteriorly raised, black pronotum, protarsomere II about as long as the III, and external side of protarsomeres less curved (Iran). After examining the holotype, we refer *Cerocoma latreillei schah* Kaszab, 1968 to the latter subspecies representing a colour variation (posterior portion of head, behind posterior margin of eyes, black).

Distribution. Iraq, Iran.

Cerocoma (*Mesocerocoma*) *scovitzi* Faldermann, 1837

Figs 2L, 3L, 4L, 5B, 6L

Cerocoma scovitzi scovitzi Faldermann, 1837:
Cerocoma scovitzi Faldermann, 1837: 117.
Cerocoma scovitzi var. *lateralis* Reitter, 1890: 174.
Cerocoma scovitzi var. *rufiventris* Reitter, 1890: 173; Reitter, 1913: 191; Mařan, 1944: 83.
Cerocoma scovitzi ab. *obscuriventris* Mařan, 1944: 83, 93.
Cerocoma scovitzi ab. *maculicollis* Mařan, 1944: 83, 93.
Cerocoma (*Mesocerocoma*) *scovitzi scovitzi*, Kaszab, 1951: 261, 266, 271.
Cerocoma scovitzi ab. *mirabilis* Kaszab, 1968: 751 (invalid name).
Cerocoma scovitzi mirabilis Dvořák, 1993: 7. **syn. n.**

Cerocoma scovitzi intermedia Mařan, 1944:
Cerocoma scovitzi intermedia Mařan, 1944: 84, 94.
Cerocoma scovitzi jureceki Mařan, 1944: 84, 94. **syn. n.**
Cerocoma (*Mesocerocoma*) *scovitzi intermedia*, Kaszab, 1951: 261, 266, 271; Bologna, 1979: 185.
Cerocoma (*Mesocerocoma*) *scovitzi jureceki*, Kaszab, 1951: 261, 266, 271.
Cerocoma (*Mesocerocoma*) *scovitzi marani* Kaszab, 1951: 262, 266, 271. **syn .n.**

Type locality. *Cerocoma scovitzi scovitzi*: "Transcaucasia" (Faldermann 1837); *C. scovitzi intermedia*: "Kleinasien, Ak-Chehir" (Mařan 1944).

Type specimens. The following type material has been examined: lectotype and 14 paralectotypes of *C. scovitzi intermedia*; lectotype and 2 paralectotypes of *C. scovitzi jureceki*; holotype, allotype, and 1 paratype of *C. scovitzi marani*; holotype and allotype of *C. scovitzi* ab. *mirabilis* (invalid name, see Taxonomy); the lectotype and 4 paralectotypes of *C. scovitzi* ab. *lateralis*; holotype and 5 other types of *C. scovitzi* var. *rufiventris*.

Cerocoma scovitzi intermedia. Five males and ten females, all showing the same labels as follows, except for the inventory number on third label (increasing from 18231 to 18245) and the symbol for the gender on fourth (CNM). From the type series we designate herein the lectotype and 14 paralectotypes as follows:

Lectotype ♂: Anatolien / Ak-Cheir / 1900. Korb. (white, printed) // Cotypus (pink, handwritten) // Mus. Nat. Pragae / Inv. 18231 (pink, printed and handwritten) // *Cerocoma scov.* ♂ / *intermedia* m. / Dr. J. Mařan det. 1944 (white, printed and handwritten) // LECTOTYPE ♂ / *Cerocoma scovitzi* / *intermedia* Mařan, 1944 / Turco & Bologna des. 2009 (red, printed). Left mesotarsomeres and right metatarsomeres are missing.

Other specimens' inventory numbers, sex and missing or damaged parts: 18232, ♂, last three abdominal segments (genitalia glued on a separate card); 18233, ♂; 18234, ♂, left protarsomere V and right mid leg; 18235, ♂, right metatarsomeres; 18236, ♀, right protarsomeres II–V; 18237, ♀; 18238, ♀; 18239, ♀, left mesotarsomeres IV–V and right mesotarsomeres; 18240, ♀, right metatarsomeres III–IV, part of left coxae and femora and part of the head; 18241, ♀, right antenna; 18242, ♀, right eye and left mesofemur; 18243, ♀; 18244, ♀; 18245, ♀, left labial palp and antenna. All specimens have been added with the following label: PARALECTOTYPE / *Cerocoma scovitzi* / *intermedia* Mařan, 1944 / Turco & Bologna des. 2009 (red, printed).

Cerocoma scovitzi jureceki. Three cotypes were examined (CNM), now designated as lectotype and paralectotypes as follows:

Lectotype ♂: Akbes / Syrien / Em. Reitter (white, printed) // J. Fleischer / Mus. Praha (white, printed) // Cer. Scowitzi (white, handwritten) // COTYPUS (pink, handwritten) // Mus. Nat. Pragae / Inv. 18228 (pink, printed and handwritten) // *Cerocoma scovitzi* ♂ / *jureceki* Mařan / Dr. J. Mařan det. 19 (white, printed and handwritten) // LECTOTYPE ♂ / *Cerocoma scovitzi* / *jureceki* Mařan, 1944 / Turco & Bologna des. 2009 (red, printed). Left mesotarsomeres II–V are missing.

1 paralectotype ♂: Akbes / Syrien / Em. Reitter (white, printed) // COTYPUS (pink, handwritten) // Mus. Nat. Pragae / Inv. 18227 (pink, printed and handwritten) // *Cerocoma scovitzi* ♂ / *jureceki* Mař. / Dr. J. Mařan det. 19 (white, printed and handwritten) // PARALECTOTYPE ♂ / *Cerocoma scovitzi* / *jureceki* Mařan, 1944 / Turco & Bologna des. 2009 (red, printed). Genitalia are on a separate card. Abdomen is partially damaged, right protarsomere V and right and left apical mesotarsomeres are missing.

1 paralectotype ♀: same data as the first specimen, except for "18229" on the third label, "♀" on the fourth and the paralectotype label.

Cerocoma scovitzi marani. The holotype, allotype and 1 paratype were examined.

Holotype ♂: Bagdad 1913. / Mattanovich (white, printed) // Holotypus 1951 ♂ / *Cerocoma Scovitzi* / *Mařani* / Kaszab (white with red frame, printed and handwritten) (HNHM).

Allotype ♀: Bagdad 1913. / Mattanovich (white, printed) // Allotypus 1951 ♀ / *Cerocoma Scovitzi* / *Mařani* / Kaszab (white with red frame, printed and handwritten) (HNHM). The following parts are missing in the allotype: antennae (except for the first two right antennomeres), left protibia and tarsomeres, left meso- and metatarsomeres, right fore leg (except for coxa and trochanter), last two right mesotarsomeres, right metatarsomeres, and part of the abdomen.

1 paratype ♂: Bagdad 1913. / Mattanovich (white, printed) // Paratypus 1951 ♂ / *Cerocoma Scovitzi* / *Mařani* / Kaszab (white with red frame, printed and handwritten) (HNHM). Part of the abdomen is missing.

Cerocoma scovitzi ab. *mirabilis*. As previously indicated, the name *mirabilis* Kaszab, 1968, described as infraspecific form, is invalid, whereas the subspecies designation made by Dvořák (1993) based on Kaszab's types is valid; the ssp. *mirabilis* is indeed a synonym of the nominate subspecies. Holotype and allotype were examined:

Holotype ♂: Bandar Abbas / 6.IV.49 / Fassiki (white, handwritten) // 336 (white, printed) // Holotypus 1967 ♂ / *Cerocoma scovitzi* / ab. *mirabilis* / Kaszab (white with red frame, printed and handwritten) // *Cerocoma scowitzi* / ab. *mirabilis* Kasz. / Dr Z. Kaszab det., 1968 (white, printed and handwritten) (HNHM). The following parts are missing: both antennae (except for the first two antennomeres), protarsomeres (first tarsomere still present on both legs; right protarsus glued on the first label), left mesotarsomeres, right metatarsomeres, and last two left metatarsomeres.

Allotype ♀: Firouzabad / 11-IV-53 / Kachkouli (white, handwritten) // 336 (white, printed) // Allotypus 1967 ♀ / *Cerocoma scovitzi* / ab. *mirabilis* / Kaszab (white with red frame, printed and handwritten) (HNHM). The specimen lacks both antennae (except for the first two antennomeres), right stipe (including palpus), left protarsomeres, and last two protarsomeres of right leg.

As explained for *C. prochaskana*, we accept the unpublished selection of Reitter's types, probably made by Kaszab, and we designate them lectotype and paralectotypes, leaving other syntypes preserved at MNHN as paralectotypes.

Cerocoma scovitzi ab. *lateralis*: Lectotype ♂: Caucasus. / Araxesthal. / Leder. Reitter. (white with black frame, printed) // Holotypus 1890 / *Cerocoma Skowitzi* / v. *lateralis* ♂ / Reitter (white with red frame, printed and handwritten) // *Scovitzi* / v. *lateralis* / m. 1890. (azure, handwritten, turned upside down) // LECTOTYPE ♂ / Cerocoma scovitzi / v. lateralis Reitter, 1890 / Turco & Bologna des. 2009 (red, printed) (HNHM).

1 paralectotype ♂: Caucasus. / Araxesthal. / Leder. Reitter. (white with black frame, printed) // *Scovitzi* / v. *lateralis* m / 1890 (white, handwritten) // v. *lateralis* Reitt. (white, printed) // C. Scovitzi / v. lateralis / Rttr // MUSEUM PARIS / 1942 / COLL. D^{R}. A. CHOBAUT (white, printed) // PARALECTOTYPUS / *Cerocoma scovitzi* / var. *lateralis* Reitt. / F. Turco & M. Bologna des. 2007 (red, printed and handwritten) // *Cerocoma (Mesoc.) / scovitzi scovitzi* Fald. / M.A. Bologna det. 2007 (white, printed and handwritten) (MNHN).

At MNHN 2 additional males and 1 female paralectotypes are also preserved, and labeled as follows: Caucasus. / Araxesthal. / Leder. Reitter. (white with black frame, printed) // MUSEUM PARIS / 1942 / COLL. D^{R}. A. CHOBAUT (white, printed) // PARALECTOTYPE ♂ (or ♀) / Cerocoma scovitzi / v. lateralis Reitter, 1890 / Turco & Bologna des. 2009 (red, printed) (MNHN).

Cerocoma scovitzi var. *rufiventris*: Lectotype ♂: Caucasus. / Araxesthal. / Leder. Reitter. (white with black frame, printed) // Holotypus 1890 / *Cerocoma Skowitzi* / v. *rufiventris* ♂ / Reitter (white with red frame, printed and handwritten) // *Scovitzi* / v. *rufiventris* (white, handwritten, turned upside down) // *Cerocoma* ♂ / ab. *rufiventris* Rtt. / det. dr. Kaszab (white, printed and handwritten) // LECTOTYPE ♂ / *Cerocoma scovitzi* / v. *rufiventris* Reitter, 1890 / Turco & Bologna des. 2009 (red, printed) (HNHM). Left fore leg is missing, except for the coxa.

The following other five paralectotypes are preserved in the MNHN (Chobaut's collection).

1 ♂: Caucasus. / Araxesthal. / Leder. Reitter. (white with black frame, printed) // *Scovitzi.* / v. *rufiventris* / m. 1889 (azure, handwritten) // v. *rufiventris* Reit (white, long and folded, printed) // *C. Scovitzi* / v. *rufiventris* / Rttr. / / MUSEUM PARIS / 1942 / COLL. D^{R}. A. CHOBAUT (white, printed) // PARALECTOTYPUS / *Cerocoma scovitzi / var. rufiventris* Reitt. / F. Turco & M. Bologna des. 2007 (red, printed and handwritten) // *Cerocoma (Mesoc.) / scovitzi scovitzi* Fald. / M.A. Bologna det. 2007 (white, printed and handwritten) (MNHN).

1 ♀: Caucasus. / Araxesthal. / Leder. Reitter. (white with black frame, printed) // Scovitzi / v. rufiventris / m. 1889. (azure, handwritten) // v. rufiventris Reit (white, printed) // C. Scovitzi / v. rufiventris / Rttr. (white, handwritten) // MUSEUM PARIS / 1942 / COLL. D^{R}. A. CHOBAUT (white, printed) // PARALECTOTYPE ♀ / *Cerocoma scovitzi* / v. *rufiventris* Reitter, 1890 / Turco & Bologna des. 2009 (red, printed) (MNHN).

2 ♀♀: Caucasus. / Araxesthal. / Leder. Reitter. (white with black frame, printed) // MUSEUM PARIS / 1942 / COLL. D^{R}. A. CHOBAUT (white, printed) // PARALECTOTYPE ♀ / *Cerocoma scovitzi* / v. *rufiventris* Reitter, 1890 / Turco & Bologna des. 2009 (red, printed) (MNHN). Left antenna is missing on one specimen (except for the first two antennomeres).

1 ♂: Caucasus. / Araxesthal. / Leder. Reitter. (white with black frame, printed) // 2 (white, printed) // v. rufiventris Rttr. (white, handwritten) // MUSEUM PARIS / 1937 / COLL. CH. DEMAISON (white, printed) // PARALECTOTYPE ♂ / *Cerocoma scovitzi* / v. *rufiventris* Reitter, 1890 / Turco & Bologna des. 2009 (red, printed) (MNHN).

Description. Male. Body yellow-orange, except for thoracic sternites sometimes partially black; elytra metallic green; head, usually antennomeres V–VI (partially) and IX (entirely), mouthparts, meso- and metatarsi black.

Head distinctly transverse with protruding eyes (Fig. 5B). Maxillary palpi modified with palpomeres II–III wide, flattened and distinctly curved; IV flattened and curved and with base partially concealed by the apical edge of IV (Fig. 3L). Antennae strongly modified with antennomere I bearing a very wide and high dorsal keel partially curved at apex; III–VIII variously expanded and shaped; IX transverse with a deep dorsal concavity (Fig. 2L).

Pronotum transverse. Protibiae dorso-ventrally flattened and distally widened on the external side (Fig. 4L). Protarsomeres slightly enlarged, I–II in particular.

Gonostyli, in lateral view, straight, with apical lobes directed forward; apical lobes, in dorsal view, narrow and parallel. Apex of aedeagus rounded; aedeagal hooks equal in size. Sclerotised hooks of endophallus subequal in size (the subapical larger), both pointing backwards (Fig. 6L).

Female. Not distinctly modified. Refer to key for diagnostic characters.

Taxonomy. *Cerocoma scovitzi* is characterised by a great morphological variability, especially in relation to body colouration, leading to the description of several infraspecific forms, most of which resulted to be not taxonomically valid. Nevertheless, the species is still recognised in this revision as polytypic, being represented by two subspecies, clearly distinguished by the shape of male protarsomeres:

(a) *C. scovitzi scovitzi*: pronotum from completely black (Caucasus and north Iran) to partially or completely orange (central and south Iran); protarsomeres III–IV narrow and with subparallel sides, II 1.5 times as wide as III–IV and IV about as long as III; abdomen from completely black (Transcaucasia) to completely orange (south Iran), with intermediate conditions.

As briefly indicated above, Dvořák (1993) proposed a new subspecies *mirabilis*, drawing on an invalid name proposed by Kaszab (1968) as *aberratio*; this subspecies resulted a synonym to the nominate (**syn.n.**). The specimens described as ab. *keyseri*, an invalid name used by Kaszab (1963), are also referable to the nominate subspecies

(b) *C. scovitzi intermedia*: pronotum black; protarsomeres III–IV wider and slightly enlarged from base to apex, II only slightly wider than III and IV distinctly shorter than III; abdomen black (Anatolia and Near East) or orange (Arabian Peninsula).

Distribution. S Russia, Turkey, Armenia, Azerbaijan, Syria, Israel-Palestine, Iraq, Iran, Saudi Arabia. The record from Greece (Evia island) is erroneous and that from Egypt probably refers to Sinai Peninsula.

Subgenus *Metacerocoma* Kaszab, 1951

Metacerocoma Kaszab, 1951: 259; Bologna, 1991: 145.
Type species. *Cerocoma schreberi* Fabricius, 1781: 331, by original designation.

Subgenus diagnosis. Body length: 12–14 mm. Male frontal calli close to each other in the middle of frons; laterally distinctly depressed forming a deep groove just over the eyes, densely punctured (Fig. 5A). Male antennae strongly modified: antennomere I dorsally expanded to form a high and large keel with various apical pointed and curved expansions; II small and subcylindrical; III distinctly swollen; IV–VI flattened with evident laminar and pointed expansions; VII subcylindrical, only slightly swollen, and with an apical incision on dorsal side; VIII slender, about twice as long as the previous; IX subtriangular and extremely swollen with a thin and curved keel on dorsal side. Male maxillary palpomeres modified: palpomere I simple and slender, about 2.5 times as long as large; II–III wide, flattened and curved; IV about twice as long as large, gradually enlarged from base to apex. Male protibiae with a well developed dorsal keel curved outwards.

Male last visible abdominal sternite in some species with two lateral narrow laminar expansions, variable in length but always visible in dorsal view.

Cerocoma (*Metacerocoma*) *ephesica* Reitter, 1885

Figs 2C, 3C, 4C, 6C

Cerocoma ephesica Reitter, 1885: 12; Reitter, 1913: 190; Mařan, 1944: 87.
Cerocoma (*Metacerocoma*) *ephesica*, Kaszab, 1951: 261, 265, 270; Bologna, 1979: 184; Dvořák, 1993: 5.

Type locality. "Ephesus" (Reitter 1885). This locality is an archaeological site in the northwestern Turkey on the Aegean coast, near Selçuk. The holotype label, "Amasia/Ephesus", is ambiguous but, in agreement with the original description (Reitter 1885) and the specific name, we consider Ephesus as type locality.

Type specimens. As explained for *C. prochaskana*, we accept the unpublished selection of Reitter's types, probably made by Kaszab, and we designate them lectotype and paralectotypes. The lectotype and one paralectotype from HNHM have been analysed:

Lectotype ♂: Amasia / Ephesus (white, handwritten) // Holotypus 1885 / *Cerocoma* / *ephesica* ♂/Reitter (white with red frame, printed and handwritten) // LECTOTYPE ♂ / *Cerocoma ephesica* / Reitter, 1885 / Turco & Bologna des. 2009 (red, printed) (HNHM). The specimen lacks left mesotarsal claws, right mesotarsomeres, and right last metatarsomere.

1 paralectotype ♀: Amasia (white, handwritten) // Allotypus 1885 / *Cerocoma* / *ephesica* ♀ / Reitter (white with red frame, printed and handwritten) // PARALECTOTYPE ♀ / *Cerocoma ephesica* / Reitter, 1885 / Turco & Bologna des. 2009 (red, printed) (HNHM). The specimen lacks right maxillary palpomeres (except for the palpomere I) and antennae (except antennomeres I–II).

Description. Male. Body metallic green with a short yellowish pubescence, denser on pronotum; abdomen orange with last segment and apex of penultimate dark green metallic; antennae and mouthparts, including maxillary palpi, yellow-orange; fore legs yellow-orange; meso- and hind legs black.

Head sub-squared with protruding eyes. Maxillary palpi modified with palpomeres II–III wide, flattened and curved; IV stout (about 2x as long as wide), weakly flattened and gradually widened from base to apex (Fig. 3C). Antennae strongly modified with antennomere I bearing a short and pointed protrusion on the external side and dorsal keel narrow and very high, apically fringed; II–VIII variously expanded and shaped; IV with a narrow, long and curved expansion on dorsal side; V with a long and narrow expansion on dorsal side; IX very swollen and transverse (Fig. 2C).

Pronotum elongate with a long and deep medial line. Protibiae modified with a very high and flattened dorsal keel, apically curved (Fig. 4C). Protarsomeres dorso-ventrally flattened; I–IV widened on the external side; V distinctly angularly widened on the internal side.

Last abdominal sternite bearing two very long laminar expansions, about as long as the whole last abdominal segment. Gonostyli, in lateral view, slightly curved, with apical lobes dorsally directed, swollen and close to each other in dorsal view. Apex of aedeagus rounded; aedeagal hooks equal in size. Sclerotised hooks of endophallus small and distant from each other, equal in size, the apical pointing outwards and the subapical backwards (Fig. 6C).

Female. Not distinctly modified. Refer to key for diagnostic characters.

Distribution. Macedonia, Bulgaria, Greece, European and Asiatic Turkey, Armenia, Azerbaijan, Iran. The old citation from Egypt (Reitter 1913) was not confirmed and is particularly doubtful.

Cerocoma (*Metacerocoma*) *festiva* Faldermann, 1837

Figs 2E, 3E, 4E, 6E

Cerocoma festiva Faldermann, 1837: 118; Reitter, 1913: 190; Mařan, 1944: 87.
Cerocoma (*Metacerocoma*) *festiva*, Kaszab, 1951: 260, 265, 270; Dvořák, 1993: 5.

Type locality. "Transcaucasia" (Faldermann 1837).

Type specimens. The location of Faldermann's types is uncertain. The material studied by this Russian entomologist was not examined for this study.

Description. Male. Body metallic dark blue or blue-green with short and sparse yellowish setae, black on the external side of meso- and metatibiae; abdomen orange with last segment and the posterior margin of penultimate (usually including the middle area) dark; antennae and mouthparts, including maxillary palpi, yellow-orange; legs black, except for protibiae and protarsomeres yellow-orange.

Head sub-squared with protruding eyes. Maxillary palpi modified with palpomeres II–III wide, flattened and slightly curved; IV long (about 2.5x as long as wide) and weakly flattened and sinuate on both sides (Fig. 3E). Antennae strongly modified with antennomere I bearing a narrow and very high dorsal keel apically fringed; II–VIII variously expanded and shaped; V with a very long and narrow expansion on dorsal side; IX very swollen and transverse (Fig. 2E).

Pronotum elongate. Protibiae modified with a very high and flattened dorsal keel, with apex only slightly curved and directed forward (Fig. 4E). Protarsomeres uniformly dorso-ventrally flattened.

Gonostyli, in lateral view, slightly curved, with apical lobes dorsally directed; apical lobes, in dorsal view, swollen and diverging. Apex of aedeagus rounded; aedeagal hooks equal in size. Sclerotised hooks of endophallus small and distant from each other, equal in size, both pointing backwards (Fig. 6E).

Female. Not distinctly modified. Refer to key for diagnostic characters.

Distribution. Turkey, Armenia, Azerbaijan, Iraq, Iran, S Turkmenistan, S Kazakhstan, S Uzbekistan.

***Cerocoma* (*Metacerocoma*) *martae* sp. n.**
Figs 2B, 3B, 4B, 6B

Type locality. "Turquie, Denizli, Pamukkale". Pamukkale (= the cotton castle, in Turkish) is the late Ellenistic-Roman town of Hierapolis, an amazing archaeological Turkish site, with calcareous springs depositing brightly white concretions. The habitat around the ruins is characterised by cultivations and Mediterranean pastures.

Type specimens. Holotype ♂ (CB) and 15 paratypes, 5 ♂♂(1 CB, 4 FSAG) and 10 ♀♀ (1 CB, 9 FSAG), with the following labels: Holotypus ♂ (and respectively Paratypus ♂ or ♀) / *Cerocoma (Metac.*) *martae* **n. sp.** / F. Turco & M. Bologna des. 2009 (red, printed and handwritten) // Turquie, Denizli, Pamukkale, 15.7.67 (white, printed).

1 paratype ♂ (FSAG): Paratypus ♂ *Cerocoma (Metac.*) *martae* **n. sp.** F. Turco & M. Bologna des. 2009 (red, printed and handwritten) // Turquie, Denizli, Pamukkale, 17.7.65 (white, printed).

1 paratype ♂ (FSAG): Paratypus ♂ *Cerocoma (Metac.*) *martae* **n. sp.** F. Turco & M. Bologna des. 2009 (red, printed and handwritten) // Turquie, Söke, Menderes, 12.7.65 (white, printed).

1 paratype ♂ (FSAG): Paratypus ♂ *Cerocoma (Metac.*) *martae* **n. sp.** F. Turco & M. Bologna des. 2009 (red, printed and handwritten) // Turquie, Söke, Lac Bafa, 12.7.65 (white, printed).

Some paratypes have antennae and legs slightly damaged.

Other material examined. One male specimen from Macedonia: Jaratock / Est de Monastir / III.IV.1918 // S.-Lt Dyot / Armee d'Orient // Museum Paris // Cerocoma (Metac) / schreberi F. / M. Bologna det. 1986 (MNHN, Demaison coll.).

Diagnosis. A *Cerocoma* belonging to the subgenus *Metacerocoma* as defined in the present paper, according to the shape and colour of male antennae, head capsule, fore legs (tibiae and tarsomeres), and last visible abdominal sternite, closely related to *C. schreberi.* It differs from this species by the shape of last male protarsomere which is parallel, without angulated expansion on the internal side; a similar character is found only in *C. festiva*, which is immediately distinct by its blue integument and the shape of male antennomeres and protibiae, and the colour of setae on the external side of meso- and metatibiae, black in *C. festiva* and yellow in *C. martae*. *C. martae* is easily recognisable from the remaining two species of *Metacerocoma* (*C. ephesica* and *C. prevezaensis*) by the absence of elongate laminar expansions on the last visible sternite of male, as well as by the shape of male antennae and protibiae (Figs 2B, 4B).

Description. Body metallic green, paler on elytra; male with antennae, maxillary and labial palpi, labrum, clypeus, legs (except coxa, trochanters and basal external portion of metafemora) orange, and female with antennae, mouthparts (except orange galeae), tibiae and tarsomeres black; abdomen orange, in male last urite and almost the whole penultimate sternite metallic, in female last two urites metallic, third last orange on sides and on its basal portion, the remaining metallic. Body setation pale yellow, also on legs, quite long and dense, erect, not lanuginose. Body average length: 13 mm.

Head transverse, with a narrow depressed area over the eyes on the external part of frontal calli, frons more or less convex in female, flat in male; eyes distinctly bulged in male, less in female; frontal calli very large (as in *C. schreberi*, see Fig. 5A), surface micropunctate, with a tuft of white robust setae on the antero-lateral margin on the external side, external portion depressed, shagreened; templa very short, extremely converging in male, sub-parallel in female. Male antennae extremely modified as in Fig. 2B, with yellowish setation; antennomere I bearing a short and pointed protrusion on the external side and a narrow and very high dordal keel, apically fringed; III–VIII more or less transverse and variously modified; IV with a narrow, long and curved expansion on dorsal side; V with a long and narrow expansion on dorsal side; VI with a short expansion, wide, foliaceous and depressed, and with very long setae underneath; VIII pointed on one side; IX swollen and transverse. Female antennae not distinctly modified, antennal club longer than the preceding four antennomeres combined, last antennomere narrow at base, ovate. Male maxillary palpi as in Fig. 3B, palpomere III very enlarged, IV subtriangular, widened from base to apex; female palpomeres slender.

Pronotum elongate, sides parallel in the posterior portion (2/3 of the whole length), then obliquely converging in front, with two deep and wide oblique dimples on the anterior third and a fine longitudinal middle line; in female wider, sides slightly more rounded anteriorly, with two small slight depressions sub-oblique on the anterior third. Male protibiae strongly modified as in Fig. 4B, with the apical portion of dorsal keel very curved and directed outwards; in female the apical external angle sub-digitiform; protibial spurs pointed in both sexes. Male protarsomeres

short, about as long as protibiae, with the first two tarsomeres together longer than the remaining three, protarsomere I slightly depressed and subtriangular, II longer than I and sub-trapezoidal, III depressed, almost twice as long as II and wider, externally enlarged, IV 0.5 as long as III, only slightly expanded externally, V almost as long as III–IV together, sides parallel without angulated expansion on the inner side. Meso- and metatibiae and tarsomeres not modified in both sexes; metatibial spurs different in shape: external one sub-spatuliform but not widened, obtuse at apex, internal one narrow, slender and pointed. Elytral surface sub-rugose.

Male last abdominal sternite without laminar expansion, posterior margin V-emarginate. Gonostyli, in lateral view, distinctly curved, with apical lobes dorsally directed; apical lobes, in dorsal view, narrow and parallel. Apex of aedeagus rounded; aedeagal hooks subequal in size (the subapical slightly larger). Sclerotised hooks of endophallus small and distant from each other, equal in size, both pointing backwards (Fig. 6B).

Etymology. This species is named after Marta Bologna, daughter of one of the authors, for her invaluable help and her lovely enthusiasm during field-work in Turkey in summer 2005, and for the relevant participation to some field expeditions in southern Africa and in the Mediterranean area, aimed to collect blister beetles.

Taxonomic remarks. This species is very similar and closely related to *C. schreberi* (see below), with which most probably in the past it has been confused. Muche (1964) in a short note cited one male specimen from eastern Bulgaria as an unnamed aberration of *C. schreberi*. According to the figured last protarsomere, this specimen probably belongs to *C. martae*.

Males of the two species, both lacking abdominal laminar expansions, are easily recognisable by the following characters:

C. martae: furrows on pronotum extended to the anterior half of pronotum itself; protarsomere V with parallel sides; protibiae less high; sides of the penultimate abdominal segment half orange and half metallic dark green (also in female);

C. schreberi: furrows on pronotum shorter, extended to the anterior third of pronotum itself; protarsomere V subtriangular, with an angulated laminar extension on internal side; protibiae higher; sides of the penultimate abdominal segment almost completely orange.

Distribution. E Bulgaria, S Macedonia, W Turkey.

Cerocoma (*Metacerocoma*) *prevezaensis* Dvořák, 1993

Figs 2D, 3D, 4D, 6D

Cerocoma (*Metacerocoma*) *prevezaensis* Dvořák, 1993: 4; Bologna, 1994: 29.

Type locality. "Graecia occ., Preveza env., Ag. Thomas" (Dvořák 1993).

Type specimens. 8 paratypes have been examined:

Two paratypes, 1 ♂ and 1 ♀: Gr. Occ., Preveza / St. Thomas / 10–21.6.1991 / Old. Kapler lgt. (white, printed) // PARATYPUS (red, printed) // *Cerocoma* sp.n. / *prevezaensis* / det. M. Dvořák, 91 (white, printed) (HNHM). Left protibia and protarsomeres are missing in the male, and female's left meso- and metatarsomeres are slightly damaged.

1 paratype ♂: Gr. occ., Preveza / Agios Thomas / 10–17.6.1991 / Mir. Dvořák lgt. (white, printed) // PARATYPUS (red, printed) // *Cerocoma* sp.n. / *prevezaensis* / det. M. Dvořák, 91 (white, printed) (CNM). Last two right protarsomeres are missing.

1 paratype ♀: same labels as previous specimen, except for "11.6.1992" on the first label (CNM). Right metatarsomeres are missing.

1 paratype ♂: Gr. occ., Preveza / Agios Thomas / 10–21.6.1991 / Old. Kapler lgt. (white, printed) // PARATYPUS (red, printed) // *Cerocoma* sp.n. / *prevezaensis* / det. M. Dvořák, 91 (white, printed) (CNM). Last three left protarsomeres are missing.

1 paratype ♀: same labels as previous specimen (CNM). Right hind leg is missing (coxa still present).

1 paratype ♂: Gr. occ., Preveza / Agios Thomas / 11.6.1992 / Mir. Dvořák lgt. (white, printed) // PARATYPUS (red, printed) // *Cerocoma* / *prevezaensis* sp. / n. / det. M. Dvořák 92 (white, printed) (CK).

1 paratype ♀: Gr. Occ., Preveza / Agios Thomas / 11.6.1992 / Mir. Dvořák lgt. (white, printed) // PARATYPUS (red, printed) // *Cerocoma* sp.n. / *prevezaensis* / det. M. Dvořák, 92 (white, printed) (CK).

Description. Male. Body metallic green with a short yellowish pubescence, denser on pronotum; abdomen orange with last two segments dark green metallic; legs dark, except for protibiae and protarsomeres yellow-orange; antennae, galeae and maxillary palpi yellow-orange as clypeus and labrum; other mouthparts dark to black.

Head sub-squared with protruding eyes. Maxillary palpi modified with palpomeres II–III wide, flattened and slightly curved; IV stout (about 2x as long as wide), weakly flattened and sinuate on both sides (Fig. 3D). Antennae strongly modified with antennomere I bearing a very short and pointed protrusion on the external side and dorsal keel narrow and very high, apically fringed; II–VIII variously expanded and shaped; IV with a narrow, long and curved expansion on dorsal side; V with a long and narrow expansion on dorsal side; IX very swollen and transverse (Fig. 2D).

Pronotum elongate with a short and shallow medial line. Protibiae modified with a very high and flattened dorsal keel, apically curved (Fig. 4D). Protarsomeres dorso-ventrally flattened; I–IV widened on the external side; V angularly widened on the internal side.

Last abdominal sternite bearing two laminar expansions about as long as the half of last abdominal segment. Gonostyli, in lateral view, distinctly curved, with apical lobes dorsally directed; apical lobes, in dorsal view, narrow and slightly converging. Apex of aedeagus rounded; aedeagal hooks subequal in size, the subapical one slightly larger. Sclerotised hooks of endophallus small and distant from each other, equal in size, the apical pointing outwards and the subapical backwards (Fig. 6D).

Female. Not distinctly modified. Refer to key for diagnostic characters.

Distribution. W Albania, W and S Greece.

Cerocoma (*Metacerocoma*) *schreberi* Fabricius, 1781

Figs 2A, 3A, 4A, 5A, 6A

Cerocoma schreberi Fabricius, 1781: 331; Reitter, 1913: 191; Mařan, 1944: 87.
Cerocoma (*Metacerocoma*) *schreberi*, Kaszab, 1951: 261, 265, 271; Bologna, 1991: 163; Dvořák, 1993: 5.

Type locality. "Europa australiori" (Fabricius 1781).

Type specimens. We examined photographs of Fabricius' types (one male and one female) preserved at ZMUC.

Description. Male. Body metallic green with a short yellowish pubescence, denser on pronotum; abdomen orange with last two segments dark green metallic; antennae and mouthparts, including maxillary palpi, yellow-orange; legs yellow-orange, except for meso- and metatarsomeres dark.

Head sub-squared with protruding eyes (Fig. 5A). Maxillary palpi modified with palpomeres II–III wide, flattened and distinctly curved; IV stout (about 2x as long as wide), weakly flattened and sinuate on both sides (Fig. 3A). Antennae strongly modified with antennomere I bearing a short and pointed protrusion on the external side and dorsal keel narrow and very high, apically fringed; II–VIII variously expanded and shaped; IV with a narrow, long and curved expansion on dorsal side; V with a long and narrow expansion on dorsal side; IX very swollen and transverse (Fig. 2A).

Pronotum elongate. Protibiae modified with a very high and flattened dorsal keel, apically curved (Fig. 4A). Protarsomeres dorso-ventrally flattened; I–IV widened on the external side; V angularly widened on the internal side.

Gonostyli, in lateral view, slightly curved, with apical lobes dorsally directed; apical lobes, in dorsal view, slightly swollen and converging. Apex of aedeagus rounded; aedeagal hooks subequal in size (the subapical slightly larger). Sclerotised hooks of endophallus small and distant from each other, equal in size, the apical one pointing outwards and the subapical backwards (Fig. 6A).

Female. Not distinctly modified. Refer to key for diagnostic characters.

Distribution. Portugal, Spain, S France, Italy, S Germany, Czech Republic, Slovakia (possibly extinct in the last three countries), Austria, Hungary, Slovenia, Croatia, Bosnia-Hercegovina, Serbia, Montenegro, Albania, Macedonia, Bulgaria, Greece, Romania, Ukraine, S Russia, European and Asiatic Turkey, Syria, Israel-Palestine, Georgia, Azerbaijan, Kazakhstan, Turkmenistan, Uzbekistan, Kyrgyzstan, Tajikistan, Afghanistan, W China. Record from northwestern Africa is erroneous and those from S Poland and Iran (Fars) need confirmation.

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References

Abeille de Perrin, E. (1880) Contribution à la faune coléoptèrologique de la Méditerranée. *Bulletin de la Société d'Histoire Naturelle de Toulouse*, 14, 233–262.

Aberlenc, H.-P. (1996) Coléoptères de l'Ardèche. Deuxième supplement à l'inventaire de J. Balazuc (1984). *Bulletin mensuel de la Société Linnéenne de Lyon,* 65, 113–152.

Alexandrovitch, O.R., Lopatin, I.K., Pisanenko, A.D., Tsinkevitch, V.A. & Snitko, S.M. (1996) *A Catalogue of Coleoptera (Insecta) of Belarus*. Minsk (In Belarusian).

Alfieri, A. (1976) The Coleoptera of Egypt. *Mémoires de la Société Entomologique d'Egypte*, 5, XVI + 362 pp.

Angelov, P. (1965) I- Erste Beitrag zur Kenntnis der Coleopteren-Arten aus Rodopi- Gebirge. *Travaux Scientifiques de l'École normale supérieure, Plovdiv, Biol.*, 3, 129–138.

Angelov, P. (1968) Untersuchungen über Käfer vom Balkan Gebirge (Coleoptera). *Travaux Scientifiques de l'École normale supérieure, Plovdiv, Biol.*, 6, 141–146.

Apfelbeck, V. (1902) Bericht über eine entomologische Forschungreise nach der Türkei und Griechenland im Jahre 1900. *Wissenschaftliche Mittheilungen aus Bosnien und der Hercegovina*, 8, 447–469.

Baudi, F. (1878a) Meloidae in Coleotteri Eteromeri esistenti nelle collezioni del R. Museo Zoologico di Torino ed in altre italiane. *Atti dell'Accademia delle Scienze di Torino*, 13, 841–866, 1027–1183.

Baudi, F. (1878b) Heteromera in Catalogo Dejeani. Pars sexta. *Deutsche Entomologische Zeischrift*, 22, 337–376.

Baudi, F. (1894) Viaggio del Dr. E. Festa in Palestina, nel Libano e regioni vicine. VIII. Coleotteri. *Bollettino dei Musei di Zoologia ed Anatomia comparata della R. Università di Torino*, 9 (173), 1–13.

Beauregard, H. (1890) *Les Insectes Vésicants*. Félix Alcan, Paris.

Bedel, L. (1892) Reinseignements sur les moeurs et le développement des Meloidae. *L'Abeille*, 27, 235–250.

Bivort, M. A. (1899) Matériaux pour la faune entomologique de la province de Hainaut. *Annales de la Société entomologique de Belgique*, 42, 202–207.

Blaud, Ch. (1894) Contribution à la Faune entomologique de l'Ouest. Coléoptères de la Vandée. *Revue des Sciences naturelles de l'Ouest*, 5, 1–8.

Bodemeyer, E. von (1906) Beiträge zur Käferfauna von Klein-Asien. *Deutsche entomologische Zeitung*, 1906, 417–434.
Bologna, M.A. (1973) Alcuni interessanti reperti di Coleotteri Meloidi italiani (Coleoptera Meloidae). *Bollettino dell'Associazione romana di Entomologia,* 28, 41–46.
Bologna, M.A. (1979) Meloidae di Turchia. I. Contributo (Coleoptera). *Fragmenta Entomologica*, 15, 143–149.
Bologna, M.A. (1986) Données faunistiques et zoogéographiques sur les Meloidae (Coleoptera) de Grèce. *Biologia Gallo-hellenica*, 12, 409–419.
Bologna, M.A. (1988) Il popolamento delle aree di transizione zoogeografica: i Meloidae (Coleoptera) della regione siro-palestinese. *Biogeographia*, 12, 27–47.
Bologna, M.A. (1991) *Coleoptera Meloidae. Fauna d'Italia. XXVIII.* Calderini, Bologna.
Bologna, M.A. (1994) I Meloidae della Grecia (Coleoptera). *Fragmenta Entomologica,* 25*,* (*suppl*.), 1–119.
Bologna, M.A. (2001) Meloidae, Oedemeridae, Mycteridae e Pyrochroidae della Tenuta Presidenziale di Castelporziano (Coleoptera, Tenebrionoidea). *Bollettino dell'Associazione romana di Entomologia*, 56, 327–336.
Bologna, M.A. & Marangoni, C. (1990) Dispersal, dispersion and phoresy in blister beetles fauna (Coleoptera, Meloidae) of Eastern Mediterranean and other islands. *Accademia nazionale dei Lincei, Atti dei Convegni Lincei "Biogeographical Aspects of Insularity"*, 85, 345–366.
Bologna, M.A. & Pinto, J.D. (2001) Phylogenetic studies of the Meloidae (Coleoptera), with emphasis on the evolution of phoresy. *Systematic Entomology*, 26, 33–72.
Bologna, M.A., D'Inzillo, B., Cervelli, M., Oliverio, M. & Mariottini, P. (2005) Molecular phylogenetics of the Mylabrini blister beetles (Coleoptera, Meloidae). *Molecular Phylogenetics and Evolution*, 37, 306–311.
Bologna, M.A., Oliverio, M., Pitzalis, M. & Mariottini, P. (2008) Phylogeny and evolutionary history of the blister beetles (Coleoptera, Meloidae). *Molecular Phylogenetics and Evolution*, 48, 679–693.
Bologna, M.A., Turco, F., & Pinto, J.D. (2010) Meloidae. *In*: R.A.B. Leschen & R.G. Beutel (Eds), *Handbook of Zoology/ Handbuch der Zoologie Coleoptera* II. Walter de Gruyter, Berlin/New York, pp. 681-693.
Borchmann, F. (1917) Pars 69: Meloidae, Cephaloidae. *In*: W. Junk & S. Schenkling (Eds), *Coleopterorum catalogus*. Junk, Berlin.
Brullé, C.A (1831) Coup d'oeil sur l'Entomologie de la Morée. *Annales de Sciences naturelles, Zoologie*, 23, 244–267.
Brullé, C.A. (1832) *Expédition scientifique en Morée*. Levrault, Paris.
Bytinski-Salz, H. (1956) Coleoptera and Hymenoptera from a journey through Asia Minor. I. *Istanbul Univ. Fen. Fakult. Mecmuasi*, 21, 211–229.
Caillol, H. (1914) Meloidae. *In*: Catalogue des Coléoptères de Provence. D'après des documents recueillis et groupés. 3e partie. *Memoires de la Société Linnéenne de Provence, Marseille,* 272–288.
Capote, L. & García-París M. (2001) Distribución geográfica de los Cerocomini ibéricos (Coleoptera: Meloidae). *Boletin de la Asociación española de Entomologia*, 25, 31–44.
Chevrolat, A. (1838) Description de Mylabrides de Barbarie. *Revue Entomologique de G. Silbermann*, 5 (1837), 266–279.
Chikatunov, V. (1999) Catalogue of the beetles (Coleoptera) of Israel and adjacent areas. PhD Thesis - Department of Zoology, George S. Wise Faculty of Life Sciences, Tel Aviv University, 1–88.
Clermont, J. (1904) Liste de Coléoptères récoltés en Transcaucasie par M. Louis Mesmin. *Miscellanea Entomologica*, 17, 1–6.
Conev, I. (1958) Prilog poznavanju faune familije Meloidae Jugoslavije (izuzev Slovenije). *Godisnjak bioloskog Instituta u Sarajevu*, 11, 3–30.
Cros, A. (1939) Les Meloidae des possessions francaises de l'Afrique du Nord - étude biogéographique. B*ulletin et Annales de la Société Entomologique de Belgique*, 79, 247–265.
Csiki, E. (1901) Bogarak. Coleopteren. *In*: G. Horváth (Ed), *Zoologische Ergebnisse der Dritte Asiatische Forschungsreise des Grafen Eugen Zichy.* Band II. Hornyánszky & Hiersemann, Budapest-Leipzig, pp. 75–90.
Csiki, E. (1940) Coleoptera (Bogarak). Exploratione zoologicae ab E. Csiki in Albania peractae. *Magyar Tudományos Akadémia Kut. Tu. Ered*., 1, 208–288
Dahl, G. (1823) *Coleoptera und Lepidoptera. Ein systematisches Verzeichniss, mit beygesetzten Preisen der Vorräthe.* Akkermann, Wien.
Dalla Torre, K.W. (1880) *Die Käferfauna von Oberösterreich. Systematisches Verzeichniss der in Oberösterreich bisher beobachtungen Käfer.* Der Verein für Naturkunde, Linz.
Desbrochers des Loges, G. (1899) Faunule des Coléoptères de la France et de la Corse. *Le Frelon*, 7, 89–150.
Di Giulio, A., Turco, F. & Bologna, M.A. (2002) Larval morphology of the genus *Cerocoma* and phylogenetic implications (Coleoptera, Meloidae). *Entomologica Fennica*, 13, 105–112.
Dokhtouroff, W. (1889) Faune Coléoptérologique Aralo-Caspienne. XIII partie. Meloides et Cantharides (Mylabrides). *Horae Societatis Entomologicae Rossicae,* 24, 121–192.
Dvořák, M. (1983a) Majkoviti brouci Ceskoslovenska - Coleoptera, Meloidae. *Zpravy Ceskoslovenske spolecnosti entomologické pri CSAV*, 4, 1–40.
Dvořák, M. (1983b) Drei neue Arten und einige Bemerkungen zur Familie Meloidae (Coleoptera). *Acta Entomologica Bohemoslovaca*, 80, 441–450.
Dvořák, M. (1989) KORUNOROZCI Tribus majkovitych brouku CEROCOMINI (Coleoptera, Meloidae, Meloinae). *Zpravy Ceskoslovenske spolecnosti entomologické pri CSAV*, 8, 1–20.
Dvořák, M. (1990) Taxonomische Bemerkungen zur Gattung *Cerocoma* Geoffroy (Coleoptera, Meloidae, Cerocomini). *Anno-*

tationes Zoologicae et Botanicae, 199, 1–12.
Dvořák, M. (1993) Einige neue paläarktische Meloiden- Arten (Coleoptera). *Annotationes Zoologicae et Botanicae*, 212, 1–10.
Dvořák, M. (1996) Ergänzung zum Bestimmungschüssel der Tribus Cerocomini (Coleoptera: Meloidae). *Klapalekiana*, 32, 159–162.
Escherich, K. (1897) Zoologische Ergebnisse einer von Dr. K. Escherich und L. Kathariner nach Central-Kleinasien unternommen Reise. IV. Theil. Coleopteren. *Entomologische Zeitung herausgegeben von dem entomologische Vereine zu Stettin*, 58, 1–69.
Everts, E. (1903) Der neue „Catalogus Coleopterorum Europae, caucasi et Armeniae Rossicae", Auctoribus Dr. L. v. Heyden, E. Reitter u. J: Weise, editio secunda 1906 und die Coleopteren-Fauna der Niederlande. *Deutsche Entomologische Zeitschrift*, 1907, 369–376.
Everts, E. (1922) *Coleoptera Neerdlandica. De Schildvlengelige Insecten van Nederland en het aangrenzend gebied.* 3. Martinus Nijhoff, Gravenhage.
Fabricius J. C. (1775) *Systema entomologiae, sistens Insectorum classes, ordines, genera, species, adjectis synonymis, locis, descriptionibus, observationibus.* Kortius, Flensburgi et Lipsiae.
Fabricius, C. (1781) *Species Insectorum exhibentes eorum differentias specificas, synonyma, Auctorum, loca natalia, metamorphosin, adjectis observationibus, descritionibus*. Bonii, Hamburgi et Kilonii.
Fabricius, C. (1787) *Mantissa Insectorum*. Proft, Hafniae.
Fabricius, C. (1801) *Systema Eleutheratorum secundumm ordines, genera, species adiectis synonymis, locis, observationibus, descriptionibus*. Impensis Bibliopolii Academici Novi, Kiliae.
Faldermann, F. (1837) Fauna entomologica Transcaucasica, Coleoptera. *Nouvelles Mémoires de la Société de Moscou*, 5, 1–433.
Fauconnet, L. (1887) *Catalogue raisonné des Coléoptères de Saone-&-Loire*. Société des Sciences Naturelles de Saone-et-Loire. Martet, Creusot.
Fischer von Waldheim, G. (1842) *Catalogus Coleopterorum in Sibiria Orientali a Cel. Gregorio Silide Karelin collectorum.* Moscou.
Fischer von Waldheim G. 1820–1851: *Entomographia Imperii Rossici. Genera Insectorum systematicae exposita et analysi iconographica instructa*. Semen, Moscou.
Fleischer, A. (1933) Přehled bronků fauny Československe republiky. *Acta Musei Moraviae*, 28–29 (1931–1932), 1–2288.
Fourcroy, A. F. de (1785) *Entomologia Parisiensis, sive Catalogus Insectorum quae in agro Parisiensi reperientur; secundum methodum Geoffroeanam in sectiones, genera & species distributus: cui addita sunt nomina trivialia & fere trecentæ novæ species.* Via et aedibus Serpentineis, Paris.
Frivaldszky, E. (1835) Köczlések a Balkány vidékén tett termèszettudomanyi utazásrd. *A Magyar Tudós Társasag Evkönyvei, Budan*, 2, 235–276, 7 pls.
Fuente De La, J. M. (1933) Catálogo sistemático geográfico de los Coleópteros observados en la Península Ibérica, Pirineos propiamente dichos y Baleares. *Boletín de la Sociedad entomológica de España*, 16, 18–32, 45–49.
Gallois, J. (1890) Catalogue des Coléoptères de Maine-et- Loire. *Bulletin de Société scientifique d'Angues*, 20, 77–129.
Ganglbauer, L. (1905) Coleoptera. *In*: A. Penther & E. Zederbauer (Eds), *Ergenisse einer naturwissenschaftlichen reise zum Erdschias-dagh*. Annalen der K.K. Naturhistorischen Hofmuseums, Wien, 20, 99–290.
García-París, M & Ruiz, J.L. (2005) Bibliografia y registros ibero-baleares de Meloidae (Coleoptera) publicados hasta la aparición del "Catalogo sistematico geográfico de los Coleopteros observados en la Península Ibrica, Pireneos propriamente dichos y Baleares" de J.M. De la Fuente (1933). *Graellsia*, 61, 225–255.
García-París, M., Trotta-Moreau, N., & Capote L. (2006) Estado de conocimiento actual y problemas de conservación de los Meloidae (Coleoptera) de la Comunidad de Madrid. *Graellsia*, 62 (num. extra.), 333–370.
Gavoy, L. (1893) *Faunule coléoptèrologique du Mont Alaric (Aude)*. Gabelle, Bonnafous et Cie, Carcassonne.
Geisthardt, M. (1989) Daten zur Meloiden-Fauna des südlichen Balkans und der Ägäis (Coleoptera). *Mitteilungen des Internationalen Entomologischen Vereins e.V. Frankfurt a.M.*, 13, 89–104.
Geoffroy, E. L. (1762) *Histoire abrégée des insectes que se trouvent aux environs de Paris: dans laquelle ces animaux sont rangés suivant un ordre methodique.* Durand, Paris.
Germar, E.F. (1824) *Cerocoma mühlfeldi*, Tab. 10. *In*: *Fauna Insectorum Europae*, IX. Kümmeli, Halae.
Gorriz Muñoz, R. J. (1882) *Ensayo para la Monografía de los Coléopteros Melóidos indigenas con Aplicación a las Ciencias médicas.* Zaragoza: Sanz y Navarro, 201 pp., 2 pls.
Grenier, A. (1863) *Catalogue des Coléoptères de France*. Toinon, Paris.
Gyllenhal, L. (1817) Appendix. T.1, part.3. Sistens descriptiones novarum specierum. *In*: C. J. Schoennher (Ed), *Synonymia Insectorum*. Lerverentziana, Scarsi.
Hauser, F. (1894) Beitrag zur Coleopteren-Fauna von Transcaspien und Turkestan. *Deutsche Entomologische Zeitschrift*, 1894, 17–74.
Heyden, L. von (1887) XI. Beiträge zur Coleopteren-Fauna von Turkestan. *Deutsche Entomologische Zeitschrift*, 31, 305–336.
Heyden, L. von & Kraatz, G. (1882) Käfer um Samarkand, gesammelt von Haberhauer. *Deutsche Entomologische Zeitschrift*, 26, 297–338.
Hillis, D.M., Larson, A., Davis, S.K. & Zimmer, E.A. (1990) Nucleic Acids III: sequencing. *Molecular Systematics* (ed. by D.M. Hillis & C. Moritz). Sinauer Associates, Sunderland, Massachusetts, USA.

Horion, A. (1956) Meloidae. *In*: *Faunistik der Mitteleuropäische Käfer. 5. Heteromera. Entomologische Arbeiten aus dem Museum G. Frey*, 93–119.
Iablokoff-Khnzoryan, S. M. (1983) Fauna Armenia SSR. Meloidae and Alleculidae. *Akademia Nauk Armeniskoye SSR, Institut Zoologii*, 5, 1–155.
ICNZ, 2000. International Code of Zoological Nomenclature. Fourth Edition. http://www.nhm.ac.uk/hosted-sites/iczn/code/
Ieniştea, M. I. (1968) Ord. Coleoptera (pars). *In*: L'Entomofaune de l'Île de Letea (Delta du Danube). *Travaux du Muséum d'Histoire naturelle " G. Antipa"*, 9, 97–114.
Ieniştea, M. I. (1974) Contributions à la conmnaissance des Coléoptères du delta du Danube (Le "grind" Caraormaan). *Travaux du Muséum d'Histoire naturelle " G. Antipa"*, 14, 239–249.
Jelinek, J. (ed.) (1993) Check-list of Czechoslovak Insects IV (Coleoptera), Seznam československých brouků. *Folia Heyrovskyana*, Suppl. 1, 1–172.
Kantardjièva, S. (1929) Die Arten der Familien Meloidae (Coleopt.) in Bulgarien (Nach der Sammlung der Königlischen Entomologische Station in Sofia). *Travaux de la Société bulgare des Sciences naturelles*, 14, 17–56 (In Bulgarian).
Kaszab, Z. (1941) Zoologische Ergebnisse der Ersten (VI.–X.1936.) und Zweiten (V.–VIII.1937) forschungsreise n. Vasvári's in Kleinasien. IV. Meloidae. *Mathametischer und Naturwissenschaftlicher Anzeiger des Ungarischen Akademie der Wissenschaften*, 60, 674–681.
Kaszab, Z. (1951) Revision der Cerocominen. *Acta biologica Academiae Scientiarum Hungaricae,* 2, 255–274.
Kaszab, Z. (1963) Studien über Meloiden (Coleoptera). *Annales Historico-Naturales Musei Nationalis Hungarici, Pars Zoologica*, 55, 335–346.
Kaszab, Z. (1968a) Contribution à la faune de l'Iran, 8. Coléoptères Meloidae. *Annales de la Société Entomologique de France*, 4, 749–776.
Katbeh-Bader, A. (1996) Contribution to the knowledge of Meloidae of Jordan (Coleoptera). *Bollettino della Società entomologica di Genova*, 128, 137–142.
Kiesenwetter, E.A.H. (1861) Beiträge zur Käferfauna Griechenlands. Siebentes Stück: Tenebrionidae, Cistelidae, Lagriiariae, Pedilidae,Anthicidae, Mordellonae, Meloidae, Oedemeridae. *Berliner Entomologische Zeitschrift*, 1861, 221–252.
Kieseritzky, V. (1912) Contribution à la faune des Coléoptères de la province des Cosaques du Don. *Revue russe d'Entomologie*, 12 : 81–94 (In Russian).
Klima, A. (1902) *Catalogus insectorum faunae bohemiccae. VI. Die Käfer (Coleoptera).* Verhandlungen des Gesellschaft der Physiokratischen, Prag.
Kocher, L. (1954) Variations de *Cerocoma Vahli* F. (Col., Meloïdae) au Maroc. *Comptes rendus des séances mensuelles de la Societé des Sciences naturelles et physiques du Maroc*, 7, 173.
Kosanin, N. (1904) *Index Coleopterorum in Museo Historico-Naturali Serbico.* Beograd (In Serbian).
Kowalczyk, J.K. & Watała, C. (1988) Interesting blister-beetles (Coleoptera, Meloidae) in Łodź Upland. *Przeglad Zoologiczny*, 32: 397–400 (In Polish).
Kraatz, G. (1863) Revision der Cerocomiden-gruppe. *Berliner Entomologische Zeitschrift*, 1863, 109–115.
Kraloslava Schlossera J. (1878) Fauna Kornjašah Trodjedne Kraljevine. *Jugoslavenska Akademija Znanosti i Umjetnosti*, Zagreb, 2, 343–726.
Küster, H.C. (1844) *Die Käfer Europas. Nach der Natur beschrieben. Mit Beiträge meherer Entomologen (Apetz, Erichson, Kisenwetter).* Bauer & Raspe, Nürnberg, 1.
Laporte de Castelnau, F.L. (1840) *Histoire naturelle des insectes*. *Coléoptères*. Duménil, Paris, 2.
Lebner, K. (1871) Verzeichniss der Käfer Schlesiens. *Zeitschrift für Entomologie, Breslau*, 1871, i–xxiv, 1–328.
Legakis, A. (1990) The Zoological Museum of the University of Athens. 4. The collection of Coleoptera from Greece. Part II. *Biologia Gallo-Hellenica*, 17, 59–96.
Levtshinskaja, G.S. (1964) Blister beetles (Coleoptera, Meloidae) of the Crimea. *Revue d'Entomologie de l'URSS*, 43: 5587–591 (In Russian).
Lewis, P.O. (2001) A likelihood approach to estimating phylogeny from discrete morphological character data. *Systematic Biology*, 50, 913–925.
Linnaeus, C. (1758) *Systema naturae per regna tria naturae, secumdum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis. Editio decima riformata.* Salvi, Holmiae, 1.
Lucas P. (1849) *Exploration scientifique de l'Algérie pendant les années 1840, 1841, 1842, publié par ordre du Gouvernement et avec les concour d'une commission. Histoire naturelle des animaux articulés. II. Coléoptères.* Nationale, Paris.
Lückmann, J. & Niehuis, M. (2009) Die Ölkäfer in Rheinnland-Pfalz und im Saarland. Gnor, Mainz, 479 pp.
Lutshnik V. (1921) On the Meloidae of the government of Stavropol. *Acta Instituti Agronomici Stavrapolitani* (Zoologia), 10, 31–34 (In Russian).
Mader, L. (1927) Coleopterologische Notizen. *Entomologischer Anzeiger*, 7, 193–197.
Mařan, J. (1944) Vorarbeiten für eine monographische Bearbeitung der Gattung *Cerocoma* Geoffr. Coleoptera Meloidae. *Vestnik Ceskoslovenske Spolecnosti Zoologicke,* 9, 78–101.
Martinez de la Escalera, M. (1913) Una campaña entomologica en el Suy y descripción de los Coleópteros recogido en ella. *Trabajos del Museo Nacional de Ciencias Naturales, Zoologica*, 8, 1–56.
Matthes, D. (1970) Der Meloide *Cerocoma schäfferi* (L.). *Entomologische Blätter*, 66, 33–40.
Medveded, S.I. & Levshinskaja, G.N. (1962) Blister beetles (Coleoptera, Meloidae) of the different types of steppes of the Left

Bank Ukraine. *Revue d'Entomologie de l'URSS,* 41, 142–147 (In Russian).
Ménétriés, E. (1832) *Catalogue raisonné des objects de Zoologie recuillis dans un voyage au Caucase et jusqu'aux frontières actuelles de la Perse entrépris par ordre de S.M. l'Empéreur*. Imprimérie de l'Académie Impériale des Sciences, St. Petersburg.
Ménétries, E. (1838) *Catalogue des insectes récuillis entre Constantinople et le Balkan*. Imprimerie de l'Academie Imperiale des Sciences, St. Petersbourg.
Mikšic, R. (1977) Neue beiträge zur kenntnis des bestandes der Coleopteren-Fauna des Künstenlandes der Crna-Gora. *Glanik Republika Zavoda Zašt. Prirode- Prirodnjačkog Muzeja, Titograd,* 10, 37–40.
Mirzayans, H. (1970) Contribution à la connaisance de la faune des clerides et meloides de l'Iran. *Entomologie et Phytopathologie Appliquées,* 29, 25–37.
Modarres Awal, M. (1997) *List of agricultural pests and their natural enemies in Iran.* Ferdowsi University of Mashhad, Publication n. 147. Ferdowsi University Press: Mashhad.
Motschoulsky, V. von (1872) Enumération des nouvelles espèces de Coléoptères rapportés de ses voyages. *Bulletin de la Société Imperiale des Naturalistes de Moscou*, 45, 23–53.
Muche, W. H. (1963) Beitrag zur kenntnis der Genus *Cerocoma* Geoffr. (Coleoptera, Meloidae, Cerocomini). *Reichenbachia*, 2, 11–15.
Muche, W. H. (1964) Über die Lamellicornia, Alleculidae und Meloidae von Nessebar (Bulgarien) (Coleoptera). *Entomologische Abhandlungen*, 32, 61–68.
Mulsant, E. (1857) *Histoire naturelle de Coléoptères de France. Vésicants*. Magnin & Blanchard et Cie, Paris.
Nikolaev, G.V. & Kolov, S.V. (2005) *Blister Beetles of Kazakhstan*. Kazakh University Publishing, Almaty (In Russian).
Normand, H. (1936) Contribution au Catalogue des Coléoptères de la Tunisie. *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord*, 27, 144–164.
Novak, P. (1952) Kornjaši jadranskog primorja. Zagreb, 215–218.
Oertzen, E. von. (1886) Verzeichniss der Coleopteren Griechenlands und Cretas, nebst einigen Bemerkungen uber ihre geographische Verbreitung und 4 die Zeit de Vorkommens einiger Arten betreffend Sammelberichten. *Berliner entomologische Zeitschrift*, 30, 189–293.
Oliveira, P. De (1893) *Catalogue des insectes du Portugal*. Imprensa da Universidade, Coimbra.
Oliveira, P. De (1899) *Catalogue des Coléoptères du Portugal de la collection du Dr. M. Paulino de Oliveria*. Imprensa Academica.
Oliverio, M. & Mariottini, P. (2001) Contrasting morphological and molecular variation in *Coralliophila meyendorfii* (Muricidae, Coralliophilinae). *Journal of Molluscan Studies*, 67, 243–246.
Özbek, H. & Szaloki, D. (1998) A contribution to the knowledge of the Meloidae (Coleoptera) fauna of Turkey along with new records. *Turkish Journal of Zoology*, 22, 23–40.
Palm, T. (1965) Koleopterologiska exkursioner på Korfu. *Entomologisk Tidskrift*, 86, 1–20.
Pardo Alcaide, A. (1950) Contribución al conocimiento de la fauna entomológica marroquí III. *Instituto General Franco de Estudios e investigación Hispano-Arabe. Publicaciones fuera de series*, 1–70.
Pardo Alcaide, A. (1977) Études sur les Meloidae (Col.). XXIII. Trois nouvelles taxa de *Cerocoma* Geoffroy d'Iran et Turquie d'Asie. *Nouvelle Revue d'Entomologie*, 7, 59–66.
Pérez-Moreno, I., San Martín Moreno, A. F. & Recalde Irurzun, J. I. (2003) Aportaciones corológicas y faunísticas sobre meloidos ibéricos (Coleoptera: Meloidae). *Boletin de la Sociedad Entomologica Aragonesa,* 33, 195–217.
Pic, M. (1935) Schwedisch-chinesische wissenschaftliche Expeditione nach dem Nordwestichen Provinzen Chinas. 16 - Coleoptera. 2. Helmidae, Dermestidae, Anobiidae, Cleridae, Malacodermata, Dascillidae, Heteromera (ex. p.), Bruchidae, Cerambycidae, Phytophaga (ex. p.). *Arkiv för Zoologi*, 27, 1–14.
Piller, M. & Mitterpacher, L. (1783) *Iter per Poseganam Slavoniae provinciam mensibus Junio et Julio 1782 susceptum.* Tuppis Regiae Universitatis, Budae.
Posada, D. & Crandall, K.A. (1998) Modeltest: testing the model of DNA substitution. *Bioinformatics*, 14, 817–818.
Pripisnova, M. G. (1987) Fauna and Ecology of the Meloid Beetles (Coleoptera, Meloidae) of Tazhik SSR. *Entomologicheskoye Obozreniye,* 66, 555–571.
Redtenbacher, L. (1858) *Fauna Austriaca. Die Käfer*. Gerald, Wien.
Redtenbacher, L. (1874) *Fauna Austriaca. Die Käfer, nach der analytischen Methode bearbeitet.* Ed. III. C. Gerold's Sohn, Wien. 571 pp.
Reichardt, A. N. (1934) Bestimmungstabelle und Liste der Plasterkäfer Turkmeniens. Akademiia nauk SSR. Soviet po izucheniiu proizvoditel'nykh sil SSSR. Trudy. Seriia turkmenskaia, 6, 205-239.
Reitter, E. (1885) Übersicht der Arten der Gattung *Cerocoma*. *Deutsche Entomologische Zeitschrift*, 29, 12–14.
Reitter, E. (1889) Coleopterologische Ergebnisse der in Jahre 1886 und 1887 in Transcaspien von Dr. G. Radde, A. Weter, A. Konchin, augefürther Expedition. *Verhandlungen des Naturforschenden Vereins in Brünn*, 27(1888), 95–133.
Reitter, E. (1890) Neue Coleopteren aus Europa, den angrenzenden Ländern und Sibirien, mit Bemerkungen über bekannte Arten. *Deutsche entomologische Zeitschrift*, 34, 145–176.
Reitter, E. (1896) Achter beitrag zur Coleopteren-fauna von Europa und den angrenzenden Ländern. *Wiener Entomologischen Zeitung*, 15, 265–272.
Reitter, E. (1909) Neun neue Coleopterenarten und Varietäten aus der paläarktischen Fauna. *Wiener Entomologischen Zeitung*,

27, 99–103.
Reitter, E. (1911) *Fauna Germanica. Die Käfer des deutschen reiches. Nach der analytischen methode Bearb.*, 3, 1–436, 48 pls.
Reitter, E. (1913) Zweite Übersicht der Arten der Gattung *Cerocoma* Geoffr. (Col. Meloidae). *Berliner Entomologischen Zeitschrift*, 58, 190–193.
Ronquist, F. & Huelsenbeck, J.P. (2003) MrBayes 3: Bayesian phylogenetic inference under mixed models. *Bioinformatics*, 19, 1572–1574.
Roşca, A. (1976) Ord. Coleoptera (pars). *In:* Entomofaune du Nord de la Dobrogea, la zone Mačin-Tulcea-Niculiţel. *Travaux du Muséum d'Histoire naturelle Grigore Antipa*, 17, 145–152.
Roubal, J. (1936) *Katalog Coleopter (brouků) Slovenska a Podkarpatské Rusi, 2*. Učená spol. Šafárikova v Bratislave, Státní tiskárna Praha.
Sadykova, T.M. (1989) K Faune zhukov-naryvnikov (Coleoptera, Meloidae) Kyrgyzii. *Entomologiteskie Issledovanija v Kyrgyzii*, 20, 21–36.
Sahlberg, J. (1913) Coleoptera Mediterranea orientalia, quae in Aegypto, Palestina, Syria, Caramania atque Anatolia occidentale anno 1904, collegerunt John Sahlberg et Unius Sales. *Őfversigt Finska Vetenskaps Societet Főhrandlingen*, 55 (19), 1–282.
Sainte-Claire Deville, J. (1937) Catalogue raisonné des Coléoptères de France. *L'Abeille*, 36, 265–372.
Saure, C. (1996) Der Ölkäfer *Cerocoma schaefferi* (L.) in der Niederlausitz (Col., Meloidae). *Entomologische Nachrichten und Berichte*, 40, 258–259.
Saussus, A. (1982) La faune entomologique de la Côte Saint-Germain (dpt de la Meuse, France). *Linneana Belgica*, 8, 497–515.
Schaeffer, L. (1949) Captures de Coléoptères dans la région Lyonnaise. *Bulletin mensuel de la Société Linnéenne de Lyon*, 18, 185–188.
Schatzmayr, A. (1943) Coleotteri raccolti dal Capitano Leonida Boldori in Albania. *Atti della Società Italiana di Scienze Naturali, Museo Civico di Storia Naturale di Milano*, 82, 93–140.
Schneider, O. & Leder, H. (1878) Beiträge zur Kenntniss der kaukasischen Käferfauna. *Verhandlungen des naturforschung Vereins in Brünn*, 17, 1–357.
Schneider, W. (1991) New records of Meloidae (Insecta: Coleoptera) from Arabia with description of a new species. *Fauna of Saudi Arabia,* 12, 273–288.
Seidlitz, G. (1891a) *Fauna Transsylvanica. Die Käfer (Coleoptera) Siebenbürgens*. Hartungsche, Könisberg.
Seidlitz, G. (1891b) *Fauna Baltica. Die Käfer (Coleoptera) der Deutschen Ostseeprovinzen Russlands.* Hartungsche, Könisberg.
Serri, S. (2004) New records of blister beetles for the fauna of Iran (Coleoptera, Meloidae). *Fragmenta entomologica*, 36, 247–251.
Simandl, J. (2002) New and interesting records of beetles (Coleoptera) from Bulgaria. *Acta Zoologica Bulgarica*, 54, 59–65.
Sorenson, M.D. (1999) *TreeRot, version 2*. Boston University, Boston MA.
Stebnicka, Z. (1987) Klucze do oznaczania owadów Polski. *Polskie Towarzystwo entomologiczne*, 138, 1–34.
Sumakov, G.G. (1934) Inventa entomologica itineris Hispanici et Maroccani quod a 1926 fecerunt Harals et Häkan Lindberg. XXI Méloides du basin Méditérranéen et du Maroc. *Commentationes Biologicae Societatis Scientiarum Fennicae, Helsingfor*, 4(13), 1–6.
Swofford, D.L. (2002) *PAUP*. Phylogenetic Analysis Using Parsimony (*and Other Methods). Version 4.*: Sinauer Associates, Sunderland MA.
Telnov, D., Barsevskis, A., Savich, F., Kovalevsky, F., Berdnikov, S., Doronin, M., Cibulskis, R., & Ratniece, D. (1997) Check-List of Latvian Beetles (Insecta: Coleoptera). *Mitteilungen des Internationalen Entomologischen Vereins e.V. Frankfurt a. M.,* suppl. 5, 1–42 + 2 pp.
Thompson, J.D., Gibson, T.J., Plewniak, F., Jeanmougin, F. & Higgins, G.G. (1997) The ClustalX Windows interface: flexible strategies for multiple sequences alignment aided by quality analysis tools. *Nuclear Acids Research*, 25, 4876–4882.
Tóth, L. (1973) Fundortangaben der Heteromeren (Coleoptera, Heteromera) aus dem Karpaten-Becken. *Folia Entomologica Hungarica* (s.n.), 26, 165–192.
Turco, F. & Bologna, M.A. (2007) Revision of the genus *Diaphorocera* Heyden, 1863 (Coleoptera, Meloidae, Cerocomini). *Contributions to Zoology*, 76, 63–85.
Turco, F. & Bologna, M.A. (2008) Phylogeny of the Cerocomini tribe and revision of the genera *Anisarthrocera*, *Rhampholyssa* and *Rhampholyssodes* with the description of the new genus *Somalarthrocera* (Coleoptera: Meloidae). *European Journal of Entomology*, 105, 329–342.
Turco, F., Di Giulio, A. & Bologna, M.A. (2003) Sexual and cleaning behaviour and related morphology in the genus *Cerocoma* (Coleoptera: Meloidae). *Journal of Insect Behavior*, 16, 257–278.
Turco, F., Di Giulio, A. & Bologna, M.A. (2006) The first larval description in the genus *Diaphorocera* Heyden (Coleoptera: Meloidae: Cerocomini): *D. chrysoprasis* Fairmaire. *Zootaxa*, 1295, 29–39.
Vrabec, V. (1994) Poznáky k rozšíření majkovitých broků (Coleoptera: Meloidae) ve středním Polabí, *Polabská Příroda*, 5, 13–17.
Zaripova, D. (1972) The blister-beetles (Coleoptera, Meloidae) of the Ramit Natural Reservation (Hissar Range Tadjikistan) and their zonal distribution. *Revue d'Entomologie de l'URSS*, 51, 585–587.

APPENDIX 1. Catalogue of known localities for *Cerocoma* species, from literature and collection specimen data.

C. adamovichiana

Czech Republic: Reckov (Dvořák 1989). **Slovakia:** Slovakia (Dvořák 1989; 1990; Jelinek 1993); Bratislav (CNM); Cerepes (CNM); Novi Mesto (CNM); Parkan (CK; CNM); Sarisske Michal'any (Dvořák 1983a); Sturovo (Dvořák 1983a; CBA); Vihorlat Remet, Poruba pod Vihorlatom (CNM); **Austria:** Zickbee (MSNG); Zurndorf (CNM). **Hungary:** Hungary (Kaszab 1951; Tóth 1973; Geisthardt 1989; Dvořák 1989; 1990; MGEN); Balatonaliga; Bátorliget; Bellye; Budapest; Budakeszi; Csór; Csukma; Érd; Fekete erdő; Gönyü; Győr; Kaposvár; Kecskehegy; Kéthalom; Kalocsa; Len-gyel; Lepsény; Martonvásár; Nagysalló; Öszöd; Pápa; Pécs; Pinnye; Siófok; Somogy megye; Sümeg; Szigetcsép; Ujpest-Alag; Ujvidék; Veszprém; Vörs: Diás-sziget, Zamárdi Töreki láp (Tóth 1973). **Balkans:** Balkans (Kaszab 1951; Dvořák 1989; 1990; Geisthardt 1989). **Croatia**: Croatia (Kaszab 1967); Slavonia, Posegona (Piller & Mitterparcher 1783); Slavonia (Kaszab 1967); Dalmatia (Kaszab 1951; Dvořák 1989; 1990; HNHM); Istria, Dalja (Dalia) (Tóth 1973). **Serbia:** Kazan (Kladovo) (Tóth 1973); Ujvidek, Mocrar (Novi Sad) (CB). **Bosnia-Herzegovina:** Bosnia-Herzegovina (Kaszab 1967); Mostar (CNM; HNHM; MSNG); Niksic (HNHM). **Albania:** Albania (Kaszab 1967; CNM); Elbasan (CNM); Ibë (Kaszab 1967); Kösztil (Csiki 1940; Kaszab 1967); Kula Ljums (Kaszab 1967); Ljum i Ljums (HNHM); Plostan (Csiki 1940; Kaszab 1967; HNHM); Tirana (Kaszab 1967; HNHM); Ibe (HNHM). **Macedonia:** Macedonia (Dvořák 1989); 10 Km NW Titov Veles, Vardar Valley (CK); Gevgelija (Geisthardt 1989; Bologna 1994); Jakupica Mts., Teovo (CK); Jaratock, East of Monastir (MNHN). **Bulgaria:** Harmanli (CK); Gevgelija (Geisthardt 1989; Bologna 1994); Kjuprija, Stranza planina (CNM); Petrič (CNM); Pirin (MZR); Sozopol (CB; CNM; MZR); Tsarevo (Simandl, 2002); Zeitin burun (CNM). **Greece:** Greece (Kaszab 1951; 1967; Bologna 1986; 1991; 1994; Bologna & Marangoni 1990; Dvořák 1990; 1993; Jelinek 1993; BMNH; MGEN); Alexandroupolis (Bologna 1994); 25 Km NW Alexandroupolis (CFR); Aetos (Bologna 1994; MSNV); Arkhondokhórion (CB, CO); Atiki (Oertzen 1886; Bologna 1994; CB, MCZR); Dramesi-Koritiani (Bologna 1994; CB; CL); Drosia (Bologna 1994; BMNH); Evia Is. (Kraatz 1863; Reitter 1885; Beauregard 1890; Reitter 1913; Borchmann 1917; Mader 1927; Bologna & Marangoni 1990; Dvořák 1990; Bologna 1994); Evia Is., Ambelakia (Mařan 1944; Dvořák 1990; Bologna 1994); Evia Is., Halkida (Bologna 1994; MSNV); Evia Is., Limni (Geisthardt 1989; Bologna 1994); Evia Is., Prokopi-Pili (Bologna 1994; MSNV); Drosia (Bologna 1994; BMNH); Grevena (Bologna 1994; MSNV); Hani (Turco *et al.* 2003; CB; CK); Itea (Bologna 1994; MSNM); Kalambaka, Pinios River (Bologna 1994; BMNH); Kalavrita (Bologna 1994; MCZR); Kalkis, Camping Paradise (MSNV); Corfu Is. (Bologna & Marangoni 1990; CNM; ZMS); Konitsa (Bologna 1994; MSNV); 9 Km N Konitsa (CB); Mavrovouni, Elafos-Skiti (Bologna 1994; CB; CGO); Meteora (Bologna 1994; CB; MSNV; SAA); Ossa Mt. (Bologna 1994; CB); Ossa Mt., Anatoli (Bologna 1994; CB; CGO); Pilion (MSNV); Polidoro (Bologna 1994; CB; CL); Politika (CGO); Ponati-Elatia (Turco *et al.* 2003; CB); Procopion-Pilion (MSNV); Thessaloniki (MSNG); Tymphi-Drakolimni (CB); Veluchi Mts. (HNHM). **Romania:** Macin (MSNG); Resita (Resicabánya) (Tóth 1973). **Turkey:** Turkey (Dvořák 1989); European Turkey (Kaszab 1967); Ak-Şhehir (CNM); Amasia (CNM); Bandirma (Özbek & Szaloki 1998); Bingöl (Dvořák 1990; CK); Demirkapı (CB); Edirne (Kaszab 1959; Özbek & Szaloki 1998; CNM); Edirne, Opogar (CH); Horasan (Özbek & Szaloki 1998); Izmir, Salihli Boz Dağ (CK); Seydi Şehir Teke Geç. (CK); Uludağ (CNM). **Georgia:** Georgia (CNM); Tbilisi (CNM).

C. albopilosa

Turkey: Amanus Mts., Yarpuz (CB); Çeyhan (HNHM). **Iran:** 30 Km N Bampur (Dvořák 1993; 1996). Records from Çeyhan (SE coast of Turkey) need confirmation, because of the overlapping ranges of this species and *C. longiseta* in this area.

C. azurea

Cyprus: Cyprus (Baudi 1878a 1878b; MRSN as *C. schraderi*). **Syria:** Syria (Kaszab 1951; HNHM). **Lebanon:** (HNHM). **Israel-Palestine:** Balach Tulkarem (HNHM); Haifa (CNM; HNHM); Jericho (CNM); Jerusalem, Mishor Adummim (CB); Niv Am (HNHM); Tiberias (Muche 1963; Dvořák 1990; CB; MNHN; MSNG; MSNV); Jaffa (Reitter 1913); Wadi el Kelt (CNM). **Jordan:** Damiya-Brucke (HNHM); Wadi Kafrein, 5–10 Km SW Waur (CB). **Iran**: Iran (Dvořák 1989).

C. barthelemyi

Doubtfully cited from southern Russia by Baudi (1878b). **Balkans:** Balkans (Dvořák 1989; 1990). **Greece:** Meteora (Dvořák 1996); Mycaene (Dvořák 1996); Preveza (Dvořák 1996). **Turkey:** Turkey (Kaszab 1951; Iablokoff- Khnzorian 1983; Dvořák 1989; 1990; CNM; HNHM); Bitlis, Güroymak (CB); Bozyaka Köyü, NW Erciş (CB, UCD); Doğubayazit (CK); Gevaş, Van Lake (CK; CNM); Gevaş-Resadiye (CNM); Karakurt (CB); Muradiye (CK); Söke, Bafa Lake (CB; FSAG); Tatvan, 20 Km NE Bitlis (CH); Tunceli-Ovacik (HNHM); Yalvaç (CK). **Caucasus:** Caucasus (Kaszab 1951; Dvořák 1989; 1990; HNHM). **Armenia:** Armenia (Iablokoff- Khnzorian 1983; CNM); Karabakhlar (HNHM); Klosnov (CB). **Syria:** Syria (Baudi 1878b; Iablokoff- Khnzorian 1983; Dvořák 1989; 1990); Syro-Palestinian area (Bologna 1988). **Israel-Palestine:** Haifa (HNHM); Rahobat near Haifa (Kaszab 1951). **Iran:** Elbruz Mts. (HNHM).

C. bernhaueri

Turkey: 10 Km SW Seriums (CB); 15 Km S Dıyarbakır (CMAL; CS); Digor (CB); Pinardere, Hop Geç. (CS); Seydi Şehir, Teke Geç. (CK); Silvan Bekhiran (CB). **Syria:** Syria (CNM; MNHN); Halep (CB; MNHN); Anata, 50 Km SE Suwayda (CK). **Lebanon:** Bekaa, Chtaura (MSNG); **Israel-Palestine:** Arad Junct., 5 Km S Devira (MUH); Jericho (MUH); Jer-

icho, Wadi El Kelt (CNM); Jerusalem, Mishor Adummim (CB; MUR); Omer E. Beer Sheva (CPI); Tiberias (ISR); W Farià (MUH; ZMB). **Jordan:** 10 Km N-NE Jarash (CB; CK); Sahm, near Irbid (CK); Wadi Kafrein, 5–10 Km SW Waur (CB). **Azerbaijan:** Kevasar (CMAL; CS); Talysh, Zuvand, Kalvazvil (CB). **Iran:** Ardabil, Sarab (CMAL; CS); Choplu (CMAL; CS); Guilan, 65 Km NW Gharvin (Dvořák 1983b); 56 km NW Qazvin (Pardo Alcaide 1977); Tabriz, Bostanabad (CMAL; CS; MSNG); Zarrinabad (CB; CMAL; CS).

C. bodemeyeri

Turkey: Turkey (Mařan 1944; Kaszab 1951); Eski-Şehir (Dvořák 1990; CNM), this record from western Turkey needs confirmation. **Syria:** Syria (Dvořák 1989; 1990; CNM). **Iraq:** Iraq Ashhar (HNHM). **Iran:** Iran (Reitter 1909; 1913; Mařan 1944; Kaszab 1951; Dvořák 1989; CNM; HNHM); Bahramdjerd (Kaszab 1968a; Mirzayans 1970; PPT); Choplu (CB; CMAL; CS); 4 Km E Do Dehak (CH); Firouzkouh, Gadouk (Kaszab 1968a); Keredj (Dvořák 1990; CNM); Kevdi (Dvořák 1990); Luristan (Reitter 1909; 1913; Dvořák 1990); Manjil (MSNG); Pol-e Dokhtar (PPT); Qazvin (Kaszab 1968a; Mirzayans 1970; PPT); 15 Km N Sanandag (HNHM); Zanjan (Modarres Awal 1997); Zandjan-Miyaneh (HNHM); Zarrinabad (CB; CMAL; CS).

C. confusa

Slovakia: Cerepes (CNM); this record is extremely doubtful. **Balkans:** Balkans (Dvořák 1989). **Bulgaria:** Achtopol (CK); Arkutino, Burgas (HNHM); Carevo (CK); Cherno More (CK); Djuni (CK); Fasanovo, W Lozenec (CK); Humata, Cape Djuni (CMI); Lozenec (CK); Nestinarka (CK); Primorsko (CK); Rezovo (CMI); Sozopol (CK; CNM); Tsarevo (Simandl, 2002). **Greece:** Greece (Kaszab 1967; Bologna 1979; 1986; 1994); Agrinion (HNHM); Argos (Bologna 1994; CB; CFR); Dramesi-Koritiani (Bologna 1994; CL); Erythres-Thiva (CB); Gythion (HNHM); Corfu (Bologna & Marangoni 1990; Bologna 1994; CB; ZMS); Korinthos (CNM); Leptokarya (CK); Meteora (CBA); Polikastron (HNHM); Trikala, Mougani Valley (CCAS). **Russia:** Kurp (CNM); Saratov (MSNG). **Turkey:** Turkey (Kaszab 1951; Dvořák 1989); Adana (BMNH; CNM; HNHM; MNHN; ZMB); Akhisar (CB; MSNV); Ak-Şhehir (CNM); 7 Km S Altinova (CB); 7 Km S Ayvacık (CB); 25 Km N Beyşehir (CB); Burdur (ZMS); Didim, Mileto (CM); Engiz (BMNH); Erzincan (Özbek & Szaloki 1998); Ivriz (HNHM); Izmir (Özbek & Szaloki 1998; CNM; HNHM); Kadiköi (HNHM); 5–15 Km S Kalecik (CB); Kızıl Dağ (MNHN); Kurlu (FSAG); Makri (CB; HNHM; MSNG); Mersin (CB; MCNV); Mut (CB; CK) Oltu (CB); 35 Km E Serik (CH); Siirt (Özbek & Szaloki 1998); Silvan (Özbek & Szaloki 1998); Söke, Bafa Lake (FSAG); Sultansüyü Hara near Malatya (HNHM); Tercan (Özbek & Szaloki 1998); Tunceli (CB); Yalova (Bologna 1979; Özbek & Szaloki 1998; CB; MSNV); Siirt-Eru (Kaszab 1968b). **Caucasus:** Caucasus (Kaszab 1951; Dvořák 1989; CNM; MSNG). **Georgia:** Kumisi near Tbilisi (CNM; HNHM); Svanetia (CNM). **Armenia:** Nor Aresh (CNM); Echmiadsin (MSNG); Yerevan (CNM). **Azerbaijan:** Baku (CK); Gandzak (HNHM). **Syria:** Syria (Kaszab 1951; Dvořák 1989; 1990; HNHM; MNHN); Al Ghaydah (MSNG); Halep (HNHM; MSNG); Kuneitra (MUH); Zebedani (Abeille de Perrin 1880). **Syria-Palestine:** Syro-Palestinian region (Bologna 1988). **Lebanon:** Lebanon (MNHN). **Israel-Palestine:** Israel-Palestine (Dvořák 1990); Bab el Ouad (Abeille de Perrin 1880); Brurchajl? (ISR); Haifa (Reitter 1913; Mařan 1944; Dvořák 1990; HNHM; MNHN); Jericho (MNHN); Jericho, Wadi el Kelt (Dvořák 1990); Jerusalem (Dvořák 1990); Jerusalem, Mishor Adummim (CL; MUR); Nazreth (Abeille de Perrin 1880; MNHN); Ramla (MUH). **Jordan**: Al Aridah; Amman; Dibbin; Gawr Kabed; Jarash; Madaba (Katbeh-Bader 1996); Marsa'a (MSNG); Suwaylih; Zavy (Katbeh-Bader 1996). **Iran:** Iran (Dvořák 1989; MSNG; MSNV); Ala Dagh (CNM); Astrabad (Muche 1963; CB; CFR; CNM; HNHM; MSNG); Budschnurd (CFR; CNM; MSNG); Behshahr (Mirzayans 1970); Behshahr, Cheshm-e Bolbol (PPT); 15 Km SW Chalus (CNM); near Chalus, W Marzan, Abad (Pardo Alcaide 1977); Choplu (CMAL; CS); Dasht (HNHM); Elburs Mts. (CNM; HNHM); Elburs, 40 Km E Rudbar (Pardo Alcaide 1977); Ghapan (MNHN); Golestan Forest (Mirzayans 1970); Golestan Nat. Park (PPT); Gonbad Qavoos (Mirzayans 1970); Gorgan (Mirzayans 1970; Modarres Awal 1997); Keredj (Dvořák 1990; CNM); Kopet Dag, Ziarat (HNHM); Mazandaran (Modarres Awal 1997); Mehran (Mirzayans 1970; PPT); Minudasht (Mirzayans 1970; PPT); Moghan (PPT); Oshtoran Kuh- Tian (PPT); Sari (Mirzayans 1970; PPT).

C. dahli

Stebnicka (1987) cited this species from Poland but this record is very doubtful. **Austria:** Austria (Baudi 1878a 1878b; Stebnicka 1987), Deutsch Altenburg (Redtenbacher 1874; Horion 1956) these citations were not confirmed by further records and possibly refer to *C. muehlfeldi* (Horion 1956). **Balkans:** Balkans (Kaszab 1951). **Bulgaria:** Ljuben (Mařan 1944; CK); Rumelia (Kraatz 1863; Reitter 1885; Horion 1956). **Greece:** Greece (Baudi 1878a; Baudi 1878b; Mařan 1944; Bologna 1986; 1994; MCNV); Aetos (MSNV); Alexandroupoli (CNM); Thessaloniki (Bologna 1994; ZMS). **Romania:** Romania (Reitter 1913; Mařan 1944; Kaszab 1951; 1967; Stebnicka 1987). **Turkey:** Turkey (Reitter 1885; 1913; Mařan 1944; Kaszab 1951; Horion 1956; Dvořák 1989; CB); Adana (CMAL; CNM; CS; MNHN); Adıyaman (Özbek & Szaloki 1998); Ağri Mt. (Özbek & Szaloki 1998); Akseki, Irmasan Geç. (CBA); Alcicek (CB); 5 Km N Ankara (MCNV); Aşkale (Bologna 1979; Özbek & Szaloki 1998; MSNV); Baghuru (ZMS); Bağlum (CB); 2 Km SE Bala to Kirşehir (CB); 10 Km S Buçak (CCAS); Basköy (Özbek & Szaloki 1998); Bayburt (Kaszab 1968b; Bologna 1979; CB; MSNV); Beyşehir-See (ZMS); 25 Km N Beyşehir (CB); 4.2 Km N Beyşehir (CB); Birecik (Özbek & Szaloki 1998); E Birecik on Euphrat River (Kaszab 1968b); Bucek-Yeciler (CB); Çamliyayla (Özbek & Szaloki 1998; MSNV); Çanakkale (Özbek & Szaloki 1998); Çorum (Bologna 1979; Özbek & Szaloki 1998; CB; CBR); Digor (CB; MGEN); 40 Km S Dıarbakır (Kaszab 1968b); Dodrun (Kaszab 1968b); Elaziğ (Özbek & Szaloki 1998); SW Elaziğ (Kaszab 1968b); Elaziğ -Baskil (Kaszab 1968b);

Elenkirt (CK); Erzurum (Özbek & Szaloki 1998); Eskihumoz near Niğde (Kaszab 1968b); Gölbasi (CB; MCNV); Gülek (MNHN); Gülek, Çamalan (CB; CSA); Gümüshane (Özbek & Szaloki 1998); Gümüshane-Pontus, 80 Km S Trapezunt (ZMS); 2 Km E Güzelöz (CB); Horasan (Özbek & Szaloki 1998); Hülük, between Niğde and Yeşilisar (CB); Ilica, Atlikonak (Özbek & Szaloki 1998); 15 Km NW- 1 Km S Ilica (CH; CNM); Ispir (CS); Izmir (MNHN); Kabasakal (Özbek & Szaloki 1998); Kandilli (CNM); Karakurt (Özbek & Szaloki 1998; MSNM); 25 Km E Karakurt, Araş, Nehri Valley, (CK); Kayseri (Özbek & Szaloki 1998; MSNV); between Kayseri and Yeşilhisar (Kaszab 1968b); Tortum, Kericli (Özbek & Szaloki 1998); Kirşehir (CMAL; CS); Kurupınar, Oltu (Özbek & Szaloki 1998); Malatya-Tecde (MNHN); 5 Km NW Mersin (CM); Misis, Adana questa è la prov, togli (Kaszab 1968b; HNHM); Niğde (Kaszab 1968b; Özbek & Szaloki 1998); Okçular, Horasan (Özbek & Szaloki 1998); Oltu, Sutkans (Özbek & Szaloki 1998); 5 Km NE Orence (CB); Ösmaniye (Özbek & Szaloki 1998); Pasinler (Özbek & Szaloki 1998); Paslı Geç. (CS); Pazarcık (CMAL; CS); Perge near Antalya (ZMS); Pinardere, Hop Geç. (CB); Pozanti (CB; CK); Pozanti on Bulghar Dağ (CB; ZMS); Sarıkamış (Özbek & Szaloki 1998; SMNS); 10 Km SSE Sarıkamış (ZMB); Selale, Uzundere (Özbek & Szaloki 1998); 10 Km SW Seriums (CB); Seydi Şehir Teke Geç. (CK); Sille near Konya (ZMS); Silvan (Özbek & Szaloki 1998); Silvan, Bekiran (CB; CBA); Sırıklı, near Merzifon (BMNH); Sultan Dağ near Ak-Şhehir (ZMB); Tapraşkale near Ösmaniye (Kaszab 1968b); Tercan (CB; CPI); Tokat (Özbek & Szaloki 1998); Tortum (Özbek & Szaloki 1998); Tuzlağoze, Baykan (CB); Ülü Dağ (ZMS); W Topakli (CB); Yenidoğan 10 Km E Polatli (CB). **Caucasus:** Caucasus (Reitter 1913; Mařan 1944; Kaszab 1951; Dvořák 1989; MSNV; MZR). **Georgia:** Abastouman (HNHM); Kumisi (ZMB). **Azerbaijan:** Talysh, Zuvand, Kelvaz (CB).

The following citations of *C. dahli* refer to specimens we could not examine or were studied long before this revision. Therefore, these data could be referable to either *C. dahli* or *C. bernhaueri*.

Armenia: Armenia (Reitter 1885; 1889; 1913; Mařan 1944; Kaszab 1951; Horion 1956; Iablokoff- Khnzorian 1983; Stebnicka 1987); Ararat Mt. (Iablokoff- Khnzorian 1983). **Armenia-Azerbaijan-NE Turkey**: Araxes valley (Reitter 1913). **Azerbaijan:** Ewlach (Clermont 1904). **Syria:** Syria (Reitter 1913); near Homs (Mařan 1944; Kaszab 1951; Muche 1963; Dvořák 1989). **Syria-Palestine:** Syro-Palestinian area (Bologna 1988). **Lebanon:** Chtaura (CNM). **Israel-Palestine:** Israel-Palestine (Stebnicka 1987); Israel-Palestine: Upper Galilee, Lower Galilee, Samaria, Northern coastal plain, Central coastal plain, Foothills of Judea, Judean Desert, Dead Sea area, Northern Negev, Central Negev (Chikatunov 1999); Beer Sheba (NHMW); Brurchajl (ISR); Jericho (CNM); Jerusalem (Horion 1956); Kinaret (ISR). **Jordan:** Al Jubayhah (Katbeh-Bader 1996); Aljuun S of Anjara (CK); Ar Rumman; Dibbin ; Jarash (Katbeh-Bader 1996); 10 Km N-NE Jarash (CK); Kafr Asad (Katbeh-Bader 1996); Sahm, near Irbid (CK; CNM); Umm Qays (Katbeh-Bader 1996). **Iran:** Iran (Mirzayans 1970; Dvořák 1989; Modarres Awal 1997; PPT); Alamut, Gazor Khan (PPT); Ghasre Shirin (Kaszab 1968a); Gonbad Qavoos (Mirzayans 1970); Gorgan (Modarres Awal 1997); Keredj (CNM); Kermanshah (Modarres Awal 1997); Khorasan (Modarres Awal 1997); Lowshan, Bivarzin (PPT); Machad (Mirzayans 1970); Qazvin (Mirzayans 1970); 56 Km NW Qazvin (Pardo Alcaide 1977); Guilan, 65 Km NW Qazvin (Dvořák 1983a); Varamin (PPT); Zanjan (Modarres Awal 1997).

C. ephesica

Balkans: Balkans (Kaszab 1951; Dvořák 1989). **Macedonia:** Macedonia (Mařan 1944). **Bulgaria:** Bulgaria (Mařan 1944; Kaszab 1967); Arkutino (CK); Biser, 7 Km S Harmanli (CK); Burgas, Slancev Brjag (CBA); Harmanli (Kaszab 1959; Bologna 1994; HNHM); Kresna (CK; CNM); Ljuben (CK); Ljubinec 16 Km S Harmanli (CK); Momcilgrad, Vrbica Valley (CNM); Nessebar (Muche 1964; ZMB); Petrič (CNM); Pirin (CB; MZR); Primorsko (CK); Rila Plain (CNM); Sozopol (CB; CNM; MZR; ZMB); Varna (CNM). **Greece:** Greece (Bologna 1986; 1994; MNHN); Alfios River mouth (BMNH); Araxos (SMNS); Asprovalta (Bologna 1994; CB; MSNV); Gazoros, Nea Zihni (Bologna 1994; MGEN); Kalamata (ZMS); Kanali (CL); Corfu Is. (Bologna & Marangoni 1990; ZMS); Khalkidhiki, Arnéa (Bologna 1994; MSNV); Sostis (Bologna 1994; CB). **Turkey:** Turkey (Mařan 1944; Kaszab 1951; Dvořák 1989; HNHM); Adana (MNHN); Afyon (Bytinski-Salz 1956; Bologna 1979; Özbek & Szaloki 1998; CB); Akhisar (FSAG); Ak-Şhehir (Bytinski-Salz 1956; CNM; MNHN); Akbèz (HNHM); Akseki (SMNS); Alanya, Yesilköy (CBA); Alimpınar (Özbek & Szaloki 1998); Amasia (Reitter 1913; CNM; HNHM); Ankara (Escherich 1897); Antalya, Beldibi (BMNH; OUM); 20 Km SW Antalya (SMNS); 50 Km NE Antalya, 7 Km N Beşkonak, Koprülü Canyon (CH); Aydin (ZMS); Balâ S of Ankara (BMNH); Bayırbağ (Özbek & Szaloki 1998); Bilecik (Bodemeyer 1906); Bolü (Özbek & Szaloki 1998); Çeyhan (Kaszab 1941; HNHM); Dauda (HNHM); Edirne, Opogar (CH); Ephesus (Reitter 1885; 1913; HNHM); Hut (ZMS); Ispir (Özbek & Szaloki 1998); Kadiköi (Kaszab 1941); Karacabey (Kaszab 1941); Kassaba (BMNH); Kızıl Dağ near Konya (HNHM; MNHN); Konya, Sile (CK); Maden Şhehir (HNHM); Moğan Gölü (Kaszab 1959; CNM); Perge near Antalya (ZMS); Selçük, Meryemana (CMAL; CS); Seydi Şehir, Teke Geç. (CK); Söke, Bafa Lake (FSAG); Susuzköy (Bologna 1979; CB); Tekirdağ (Bologna 1994); Ulukişhla (HNHM). **Armenia:** Armenia (MNHN). **Azerbaijan:** Lenkoran (CNM). **Iran:** Iran (Mařan 1944; Kaszab 1951; Dvořák 1989). **Egypt:** Egypt (Reitter 1913; Mařan 1944; Kaszab 1951; Alfieri 1976; Dvořák 1989; HNHM). No additonal records from Egypt of this or other *Cerocoma* species (except a doubtful citation of *C. scovitzi*) were examined; the Reitter's citation, reported several times in the literature, needs confirmation.

C. festiva

Turkey: Turkey (Kaszab 1951; Dvořák 1989); Büyükdere, Paşinler (Özbek & Szaloki 1998); Doğubayazit (CB; SMNS); Gevaş (CNM); Gevaş, on the Van Lake (CK); near Gonuk (HNHM); Horasan, Ardi (Özbek & Szaloki 1998); 20 Km W Iğdir (SMNS); Iğdir, Çalpala (CB); Ispir (Özbek & Szaloki 1998); Ispir, Madenkoprubası (Özbek & Szaloki 1998); Karakurt (CB); Muş (Özbek & Szaloki 1998); Sultansüyü Hara, Malatya (Kaszab 1941; HNHM); Tozul-Gümüşane (CB;

MNHN); Tunceli (Kaszab 1968b; Özbek & Szaloki 1998); Turnali, Senkaya (Özbek & Szaloki 1998); S Van, on the lake shore (CB; SMNS). **Caucasus:** Caucasus (CNM; HNHM; Dvořák 1989). **Transcaucasia:** Transcaucasia (Reitter 1885; 1913; Mařan 1944; Kaszab 1951). **Armenia-Azerbaijan-NE Turkey:** Araxes Valley (Iablokhoff-Khnzorian 1983; CNM; HNHM; MNHN). **Armenia:** Dilishan (HNHM); Gorovan desert (CS); Karabakhlar (HNHM); 40 Km SE Sighepot (MCNV); Urcadzor (CK); Vedi (HNHM). **Azerbaijan:** Ordubad (CNM); Zocmaneh (CB); Zuvand, Diabara (CBA). **Iraq:** Ashhar (Dvořák 1989; HNHM). **Iran:** Iran (Motschoulsky 1872; Baudi 1878a 1878b; Reitter 1885; 1913; Mařan 1944; Kaszab 1951; Dvořák 1989; HNHM; MNHN; MSNG); Andimechk (Mirzayans 1970; PPT); Ardabil (PPT); E Azerbaijan (Modarres Awal 1997); Behbahan (Mirzayans 1970); Boushehr (Modarres Awal 1997); Borazdjan (Mirzayans 1970; PPT); 30 Km N-NE Borazjan (CNM); 10 km N Dalaki (PPT); Djegiran (MNHN); Do Gonbadan (Mirzayans 1970; PPT); Firousabad, 20 Km E Farashband (CB); Genaveh-Siahmakan (PPT); Golshan (CNM); 3 Km E Hoseinabad, between Shiraz and Dast-e-Arzhan (CK); Jashak, 60 Km Jolfa (Mirzayans 1970; PPT); SE Khormuj (CNM); Khuzestan (Modarres Awal 1997); Lar (PPT); Masjed Soleiman (PPT); Oroumiyeh, Kouh-e Sylvaneh (PPT); Sabalan-Ghotoursou (PPT); Sharud (HNHM); Soltanabad (HNHM); Tabriz (Kaszab 1968a; Mirzayans 1970; PPT); **Turkmenistan:** Transcaspia (Kaszab 1951). **Kazakhstan:** Kara-Tau (Dokhtouroff 1889). **Uzbekistan**: Kyndyr-Tau (Heyden 1887; Dokhtouroff 1889); Margelan, Kokand (Hauser 1894).

C. gloriosa

Erroneously cited from Greece (Kaszab¸1967; Bologna 1986; 1994) based on one record from Atiki (Oertzen 1886). **Turkey:** Turkey (Baudi 1878a 1878b; Mařan 1944; Kaszab 1951; Dvořák 1989; 1990); Adana (CMAL; CS; MNHN); Anamur (HNHM); Bahçe (CB; CSA); Bilecik (Dvořák 1990); Caramania (Kraatz 1863; Baudi 1878a); Çamliyayla (Özbek & Szaloki 1998); Çeyhan (Mařan 1944; Kaszab 1941; HNHM); Dalaman (Özbek & Szaloki 1998); Gülek (CK; MNHN); Gülek-Boğazi (Muche 1963; Dvořák 1990); Gülek-Çamalan (CB; CSA); Işkenderun (Dvořák 1990); Ösmaniye (Özbek & Szaloki 1998); Pompeopolis near Mersin (MCNV); Taurus Mts. (Özbek & Szaloki 1998); Toprakkale near Ösmaniye (Kaszab 1968b; HNHM). **Caucasus:** Caucasus (Mařan 1944; Kaszab 1951; Dvořák 1989). **Armenia-Azerbaijan-NE Turkey:** Araxes Valley (Reitter 1913; CNM; HNHM; MNHN). **Azerbaijan:** Ordubad (CNM). **Syria:** Syria (Mařan 1944; Kaszab 1951; Dvořák 1989; 1990; HNHM). **Syria-Palestine:** Syro-Palestinian region (Bologna 1988).

C. graeca

Albania: Scutari Lake (MSNG); **Macedonia:** Macedonia (Dvořák 1989); Veles (Mařan 1944; Dvořák 1990; CNM). **Greece:** Greece (Mařan 1944; Kaszab 1951; Dvořak 1990; Bologna 1994; MSNG); Athos (Bologna 1994); Athos (Mařan 1944; Dvořák 1990; Bologna 1994; CNM; MSNV); Athos, Daphni (Dvořák 1990; Bologna 1994); Atiki (Bologna 1994; MSNG); Camp Dimitri Mitropulos 10 Km W Vitina (Bologna 1994; CB; CM); Crete Is. (Bologna 1986; 1994; Dvořák 1989; Bologna & Marangoni 1990); Crete Is., Xyloskala (Mařan 1944; CNM); Dirrahi-Neohori (CK); Dramesi-Koritiani (Bologna 1994; CB; CL); Githion (Dvořák 1990; Bologna 1994); Githion, Karioupolis (Dvořák 1990; Bologna 1994); Grevena-Kozani (CS); Hani (Turco *et al.* 2003; CB; CK; SAA); Itea (Bologna 1994; CB; MSNM); Kanali (Bologna 1994; CB; CL; CMI); Karpenision (Mařan 1944); Corfu Is. (CNM); Lefkas Is., Sivros (CB); Ossa Mt. (Bologna 1994; CGO; MSNG); Ossa Mt., Anatoli (CB); 9 Km W Patra (CB); Mavrovouni, Elafos-Skiti (Bologna 1994; CGO); Meteora (CB; CBA); Metsovo (CB; CO); Mitikas (CB; CO); Olympia (Dvořák 1990; Bologna 1994); Olympia-Varvara (Bologna 1994; CB); Parnassos Mt. (Dvořák 1990; Bologna 1994); Patra Airport 9 km W (Turco *et al.* 2003; CB); Pindo Mt., Katara Pass (CB); Polidoro (Bologna 1994; CB; CL); Polikastron (HNHM); Ponati-Elatia (Turco *et al.* 2003; CB); Preveza (CK); Sivros (SAA); Skala (CK); Sparta (Dvořák 1990; Bologna 1994); Stilia (CS); Timfristos Mt. (Mařan 1944; Dvořák 1990; Bologna 1994; MSNV); Veluchi Mts. (Dvořák 1990; CNM); Veluchi Mts., Volos (Dvořák 1990; Bologna 1994); Xyloskala (Mařan 1944, Dvořák 1990; Bologna 1994); Zagoria, Kipi-Frangadhes (Bologna 1994; CB; CGO).

C. kunzei

Erroneously cited from some European countries as France. **Hungary:** Hungary (MGEN), this record is probably due to a label error. **Balkans:** (Reitter 1885; 1913; Mařan 1944; Kaszab 1951; Dvořák 1989; 1990). **Croatia.** Istria (Conev 1958; Bologna 1991).This record needs to be confirmed. **Serbia**. Bela (Conev 1958); Kragujevac (Conev 1958); Pozarevac (Conev 1958); Raška (Conev 1958); Tutin (Conev 1958). Planina (Kantardjièva 1929). **Albania:** Albania (Kaszab 1967; Bologna 1994); Vorra (Kaszab 1967; HNHM). **Macedonia:** Macedonia (Kaszab 1967). **Bulgaria:** Bulgaria (Kaszab 1967); Balkan Mts, near Stara Zagora (Angelov 1968); Burgas; Caribrod; Gorna-banja; Knjazhev; Lozen Planina; Panchevo (Kantardjièva 1929); Rodopi Mts. (Kantardjièva 1929; Bologna 1994); Ruse; Sadovo; Sofia, Negovansko; Strandzha (Kantardjièva 1929); **Greece:** Greece (Kaszab 1967: Bologna 1986; 1991; 1994); Metsovo (CMAL; CS); Skiathos Is. (Geisthardt 1989; Bologna 1994); Parnassos (HNHM); Vitina (Bologna 1994; MNHN); Volos (CNM). **Turkey:** Turkey (Reitter 1885; 1913; Mařan 1944; Kaszab 1951; Dvořák 1989); European Turkey (Baudi 1878b); Adana (CNM); Akbèz (CNM); Amanus Mts., Yarpuz (CB); Elaziğ (Özbek & Szaloki 1998); Elaziğ-Baskil (Kaszab 1968b); SW Elaziğ (Kaszab 1968b; HNHM); 20 Km W Elaziğ (Kaszab 1968b); Ephesus (Sahlberg 1913); 60 Km W Erzurum (SMNS); Gazipaşa-Güney (Özbek & Szaloki 1998); Izmir (HNHM); Karakurt (CB); Kusadesı, Mocamp (SMNS); Ispir, Madenkoprubasi (Özbek & Szaloki 1998); Malatya (CB; MCNV); Sultansüyü Hara near Malatya (Kaszab 1941); Malatya-Tecde (MNHN); Mersin (CB); Mucur (CS); Pazarcık (CMAL; CS); Silvan Bekirhan (CB); Tercan (HNHM); Tercan (Özbek & Szaloki 1998); Toprakkale (CNM); Tunceli (CB); Tüzlagüzü, Baykan (CB). **Caucasus:** Caucasus (Kaszab 1951; Dvořák 1989; 1990; CNM). **Georgia:** Georgia (CNM); Achalzich (Kaszab 1951). **Armenia:** Armenia (Reitter 1885; Iablokoff- Khnzorian 1983). **Syria:**

Syria (Kaszab 1951; Dvořák 1989; 1990). **Syria-Palestine:** Syro-Palestinian area (Bologna 1988); **Israel-Palestine:** Israel-Palestine (CNM; MSNM); Haifa (HNHM); Jericho (Muche 1963; Dvořák 1990; MNHN); Jerusalem, Mishor Adummim (CB; CL; MUR); 3 Km S Verokan (MUH); Wadi el Kelt (CNM). **Jordan:** Raf En Naqb (MUF; CNM); Suwaylih (Katbeh-Bader 1996). **Iran:** Iran (Muche 1963; Dvořák 1989; 1990); Jiroft (PPT); Kerman, Bahramjerd (PPT); Pol Dokhtar (PPT); Qazvin (PPT); Shahreza-Abadeh (PPT); Taleghan, Parachan (PPT). **Turkmenistan:** Chakich (HNHM).

C. latreillei

Iraq: Iraq (Kaszab 1951; Dvořák 1989); Bagdad (Kaszab 1968a; HNHM); **Iran:** Iran (Kaszab 1951; Dvořák 1989); Balouchestan (Modarres Awal 1997); Bandar Abbas (Mirzayans 1970; PPT); Djegiran (CB; MNHN); Fars (Modarres Awal 1997); Firusabad (Kaszab 1968a; Mirzayans 1970; Dvořák 1996; HNHM; PPT); Ghasre Chinin, Nalte Chah (MNHN); Hormozgan (Modarres Awal 1997); Karvandar (Mirzayans 1970; PPT); Khansar, Golestan-kuh (CB; PPT); Khash (Mirzayans 1970; PPT); Keredj (Mařan 1944; CNM); Saravan (PPT).

C. longiseta

Bulgaria: Lozenec (CK). **Turkey:** Adana (CNM); 7 Km S Ayvacik (CB); 4.2 Km N Beyşehir (CB); 1.5 Km NE Bözüyük on road SS 580 (CB); Çeyhan (HNHM); Edirne, Opogar (CH); Gordion (CB, BMNH); Isparta, Karakus Dagi Centr. (CB); Kirşehir-Nevşehir (CB); Kou Merşlik (CNM); Küzülü Köyu (HNHM); Makri (MSNG); Seydi Şehir Teke Geç. (CK); Söke, Bafa Lake (CB; FSAG); Taurus (CNM); Toprakkale (CNM); Yenidoğan 10 Km E Polatli (CB). Records from Çeyhan (SE coast of Turkey) need confirmation, because of the overlapping ranges of this species and *C. albopilosa* in this area.

C. macedonica

Serbia: Belgrade (Dvořák 1989 1990; CNM); **Bosnia-Herzegovina:** Bosnia (Dvořák 1990; CNM). **Macedonia:** Macedonia (Kaszab 1951; Dvořák 1989); Ali Botus (Dvořák 1990; CNM); Pletvar, Prilep (Dvořák 1990; Bologna 1994); Skoplje (Mařan 1944; Dvořák 1990; CNM). **Bulgaria:** Bulgaria (CNM); Petrič (Mařan 1944; Bologna 1994; CNM); Ramborach (Dvořák 1990). **Greece:** Greece (Bologna 1986; 1994; Dvořak 1990; HNHM); Sykourion (Dvořák 1990; Bologna 1994). **Turkey:** Turkey (Mařan 1944; Kaszab 1951; Dvořák 1989); Ankara (Mařan 1944; Dvořák 1990; CNM); 4.2 Km N Beyşehir (CB); 25 Km N Beyşehir (CB); Çanakkale, Karabiga (Dvořák 1990); Gümüldür (Dvořák 1990); Incirliova, Avoin (CCAS); Oltu (CB); Silvan Bekiran (CBA).

C. malatyensis

Turkey: Turkey (Dvořák 1989; 1990); 30 Km SW Baykan near Siirt (Kaszab 1968b); Bingöl, 8 km NE vs Erzurum (CB); Dıyarbakır (HNHM); Malatya (Kaszab 1951); Sultansüyü Hara near Malatya (Kaszab 1941; Mařan 1944; HNHM); Tunceli (Kaszab 1968b; HNHM). **Caucasus:** Caucasus (Mařan 1944).

C. marginiventris

Turkey: Iğdir, Cilli Geç. (CK; CMA); Yılanlı Köyu, 7 Km Doğubayazit-Ağri (CB). **Caucasus:** Caucasus (CNM). **Armenia-Azerbaijan-NE Turkey:** Araxes Valley (Reitter 1889; 1913; HNHM). **Armenia:** Yerevan (HNHM). **Iran:** 131 Km S Makoo on the Highway Mařand-Makoo (CB).

C. martae

Macedonia: Jaratock, E Bitola (MNHN). **Bulgaria:** Nessebar (Muche 1964). **Turkey:** Pamükkale (CB; FSAG); Söke, Bafa Lake (FSAG); Söke, Menderes River (FSAG).

C. muehlfeldi

Erroneously cited from Spain (see García-París and Ruiz, 2005) and southern France (Mulsant 1857; Baudi 1878a; 1878b). The citations from Cyprus (Baudi 1878a; 1878b; Bologna & Marangoni 1990) must be referred to *C. azurea.*

Generically cited from central (Mařan 1944; Horion 1956), southern (Motschoulsky 1872; Baudi 1878a; Reitter 1885; 1913) and southeastern Europe (Baudi 1878b; Reitter 1913; Horion 1956). Some of the following records need confirmation and could refer to other species: **Poland** (Stebnicka 1987). **Germany:** Bavaria (Reitter 1911; Horion 1956); Brandenburg (Horion 1956). **Czeck Republic**: Moravia-Bohemia (e.g. Seidlitz 1891a; Reitter 1911; Fleischer 1933; Horion 1956; Jelinek 1993). **Slovakia** (Roubal 1936; Horion 1956; Stebnicka 1987).

Austria: Austria (Gyllenhal 1817; Fischer 1827; Stebnicka 1987); Marchegg; Neusiedl am See; Reichnitz; Stammersdorf; Wien (Horion 1956). **Hungary:** Hungary (Germar 1824; Fischer 1827; Laporte de Castelnau 1840; Baudi 1878b; Reitter 1885; 1913; Kaszab 1951; Dvořák 1990; CNM; MCNV; MRSN; MSNM; MSNV; MTR); Aegytalu (MCNV); Budapest (Horion 1956; CNM); Békéscsaba; Budapest környéke; Debrecen; Dévaványa: Ecsegpuszta; Dömsöd: Apajpuszta; Gyoma; Hortobágy; Kaba; Kunmadaras; Makó; Mezőcsát; Miskolc; Öszöd; Oszlár: Ti-szatér (Tóth 1973); Pécs (Horion 1956); Rákospalota; Sukoró; Szeged; Szentes; Szentandrás; Tard; Ulma; Velencei hegység (Tóth 1973); Sátoralaja-Ujtely (Horion 1956). **Balkans:** Balkans (Mařan 1944; Kaszab 1951; Dvořák 1989; 1990). **Croatia:** Croatia (Kraloslava Schlossera 1878; Kaszab 1967); Križevca and Varaždina (Kraloslava Schlossera 1878); Petrovo-Selo (Conev 1958); Tabor (Tóth 1973); Turn-Severin (MSNG). **Serbia:** Serbia (CNM); Apatin (Tóth 1973); Belgrade (CNM; HNHM); Bihar (Horion 1956); Kraljevo

(HNHM); Lajkovac (Conev 1958); Syrmien (Horion 1956); Zemum (Conev 1958). **Bosnia-Herzegovina:** Bosnia (CNM); Čapljina; Derventa; Domanovići; Jablanica; Mostarsko Blato; Stolac (Conev 1958). **Montenegro**: Bar; Titograd (Conev 1958). **Albania:** Albania (MCNV; MSNM; MSNV); Leskoviku (BIE); Lushnja (Schatzamyr 1943, erroneously considered as *kunzei* by Kaszab 1967; CB; MSNV); Terpan (Schatzamyr 1943, erroneously considered as *kunzei* by Kaszab 1967). **Macedonia:** Macedonia (Horion 1956; Conev 1958; Bologna 1994); Ali Botus (Mařan 1944); Uskub (CNM). **Bulgaria:** Bulgaria (Kaszab 1967; CNM); 3 Km W Carevo (CH); Knyazevo (CNM); Petrič (Mařan 1944); Rhilo Mts. (HNHM); Sofia (CNM); Sozopol (CNM; MZR); Zeitin burun (CNM). **Greece:** Greece (Kaszab 1951; 1967; Horion 1956; Bologna 1973; 1986; 1991; 1994; MSNM; MSNV; MZR); Aetos (MSNV); Ambelakia (Mařan 1944); Athens (Geisthardt 1989; Bologna 1994); Athos (MSNV); Carisa (MSNV); Evia Is. (Reitter 1885; Mařan 1944; Bologna & Marangoni 1990); Kalavrita (Bologna 1994; MZR); Konitsa (Bologna 1994; CB; CFR; BIE); 9 Km N Konitsa (CB; CFR); Larissa (Bologna 1994; MSNV); Meteora (MSNV); Methoni, Modon (Brullé 1832; Bologna 1994); Peloponnese (Brullé 1831, Laporte de Castelnau 1840; Kiesenwetter 1861; Oertzen 1886; Bologna 1994); Corfu Is. (Kraatz 1863 as *kunzei* var. *cuprea*; Baudi 1878b; Bologna & Marangoni 1990; Bologna 1994); Parapotamos (Bologna 1994; MSNV); Parnon Mt., Kosmas (Geisthardt 1989; Bologna 1994); Polikastron (Bologna 1994; HNHM; MSNV); Preveza (Apfelbeck 1902; Bologna 1994); Skiathos Is. (Geisthardt 1989; Bologna 1994); Skiathos Is., Troulos (Geisthardt 1989; Bologna 1994); Thessaloniki (Bologna 1994; BMNH). **Romania:** Romania (Kaszab 1967); Arad (Tóth 1973); Cluj (Klausenburg) (Horion 1956); Comana Vlasca (HNHM; MNHN); Dobrudscha, Mačin-Tulcea-Niculiţe (Roşca 1976); Resita (Resicabánya); Timişoara (Temesvár) (Tóth 1973). **Ukraine:** Crimee (Laporte de Castelnau 1840); Kerch (Levtshinkaja 1964); Left Bank (Medveded & Levshinskaja 1962); Podolia (Baudi 1878a). **Russia:** Russia (MRSN); southern Russia (Baudi 1878a; Reitter 1913; Mařan 1944; Horion 1956); Stavropol and neighbourings (Lutshnik 1921). **Turkey:** Turkey (Reitter 1885; 1913; Kaszab 1951; Horion 1956; Dvořák 1989; 1990; CNM; MGEN; MNHN); Akhisar (Bologna 1979; CB; CBR); Amasia (Özbek & Szaloki 1998; MSNV); Ankara (Escherich 1897; Özbek & Szaloki 1998; CNM); Bergama (CB; CM); Bingöl (Özbek & Szaloki 1998); Bingöl-Kuruca (Kaszab 1968b); Çeyhan (Kaszab 1941); Elaziğ (Özbek & Szaloki 1998); 20–25 Km W Elaziğ (Kaszab 1968b); Ephesus (Sahlberg 1913; MSNV); Erciyes Dağı (Ganglbauer 1905); Göksun (CB); Horasan (Özbek & Szaloki 1998); Horasan-Sarikamiş 17 Km SW Sarikamiş (ZMS); Izmir (HNHM); Kadiköi (Kaszab 1941); Kahraman Maraş (Özbek & Szaloki 1998); Kassaba (BMNH); Kazan (Bologna 1979; MSNV); Kertalya, Gediz (BMNH); Küzülü Köyu (Özbek & Szaloki 1998); Makri (MSNG); Maliköi Biro (HNHM); Manisa (Özbek & Szaloki 1998; HNHM); N Göksün (Bologna 1979); Sultansüyü Hara near Malatya (Kaszab 1941; HNHM); Tokat (Özbek & Szaloki 1998); Torul (Özbek & Szaloki 1998); Tunceli (Özbek & Szaloki 1998); 20–25 Km SW Tunceli (HNHM); Tunceli-Ovacik (Kaszab 1968b); Turhal (Bologna 1979; MSNV); Yaygaladağ (CB). **Syria:** Syria (Baudi 1878a; 1878b; Reitter 1885; 1913; Horion 1956; MRSN); **Syria-Palestine:** Syro-Palestinian area (Bologna 1988); **Israel-Palestine:** Israel-Palestine: Israel-Palestine: Upper Galilee, Lower Galilee, Golan Heights, Northern coastal plain, Jordan valley, Dead Sea area (Chikatunov 1999; MRSN; MSNM); Genezareth Lake; Hermon River (Sahlberg 1913). **Caucasus:** Caucasus (Reitter 1913; Mařan 1944; Horion 1956; MRSN; MSNV). **Georgia:** Georgia (Motschoulsky 1872); **Armenia:** (CNM; MSNV); Godit Gechart, 35 Km SE Yerevan Azat River Valley (CK). **Armenia-Azerbaijan-NE Turkey**: Araxes Valley (MZR). **Azerbaijan**: Ewlach (Clermont 1904); Lenkoran (Ménétries 1832); Caspian Sea (Kraatz 1863); Xanlar (Schneider & Leder 1878). **Iraq:** Iraq (Reitter 1885; 1913; Mařan 1944; Dvořák 1989; 1990). **Iran:** Iran (Laporte de Castelnau 1840; Baudi 1878a 1878b; MCNV); Firuzabad, Chalus (Kaszab 1968a). **Transcaspia:** Transcaspia (Mařan 1944). **Turkmenistan**: Gaudan (Reichardt 1934); Kara-kala **(**Reichardt 1934; CNM).

C. prevezaensis

Albania: Albania (OUM); Durres (CK); Kap Rodoni (HNHM). **Greece:** Agios Apostoli (CK); Aharavi (CH); Alfios River mouth (Bologna 1994; BMNH); Ammoudhiá (CO); Araxos Lake (Bologna 1994; SMNS); Gythion (Dvořák 1993; 1996; Bologna 1994); Kaiafas (Geisthardt 1989 as *C. ephesica*; Bologna 1994); Kalamata (Dvořák 1993; Bologna 1994; CB; ZSM); Kalogria (CB; CL; CSE); Kanali (Bologna 1994; Turco *et al.* 2003; CB; CL; CMI; CSE); Kefallinia Is. (CW); Corfu Is. (Bologna & Marangoni 1990 pars; Bologna 1994; CB; ZSM); Peloponnese (Bologna 1986 as *C. ephesica*); Patra Airport, 9 Km W (Turco *et al.* 2003; CB); Preveza (CK); Preveza, Agios Thomas (Dvořák 1993; Bologna 1994; Dvořák 1996; CK; CNM; HNHM);Sostis (CB); Taygetos Mt. (Dvořák 1993); Zakynthos Is., Vassilikos (Bologna 1994; CW).

C. prochaskana

Turkey: Akbèz (Reitter 1896; 1913; Mařan 1944; HNHM; MNHN). **Syria:** Syria (Kaszab 1951; Dvořák 1989); **Syria-Palestine:** Syro-Palestinian area (Bologna 1988). **Israel-Palestine:** Israel-Palestine (MB); Jerusalem, Mishor Adummim (CB; MUR). **Jordan:** Jordan (HNHM). **Iraq:** Iraq (Kaszab 1951; Dvořák 1989); Bagdad (HNHM); Kanaqin (HNHM). **Iran:** Iran (HNHM); Bandar Abbas (Mirzayans 1970; CB; HNHM; PPT); Beni Laam (MNHN); Bushehr (Mirzayans 1970; PPT); Fars (Modarres Awal 1997); Hormozgan (Modarres Awal 1997); Lar (Mirzayans 1970; PPT).

C. rapillyi

Cited from **Bulgaria**, Tsarevo by Simandl (2002), but this record is very doubtful.

Iraq: Iraq (Dvořák 1989; 1990). **Iran:** Iran (Dvořák 1989; MSNG); 10 Km N Keredj (Dvořák 1990); 25 Km NW Khorzamabad, Selmisch (Dvořák 1990); Davan (HNHM); Keredj (CNM); Magsud-beik (Pardo Alcaide 1977; MNHN); Meshed (HNHM); Shah Reza [we are unable to identify the present name of this locality] (Pardo Alcaide 1977; MNHN); Sharud (HNHM); Tehran-Neyzar (CB); Tehran region (CB).

C. schaefferi

This species was generically cited several times from western Europe countries. We herein summarise these records as follows: (a) we list generic records from wide European areas only once, citing a single or few recapitulatory references; (b) as concerns Spain, Italy and Germany, and France, we refer to recent Catalogues and comprehensive papers (indicating only the districts where the species occurs) and list additional or unpublished records.

Erroneously recorded from Algeria (Horion 1956). Cited generically from Central (e.g. Reitter 1913; Mařan 1944; Horion 1956), central-southern (e.g. Baudi 1878a; Reitter 1885; 1913; Horion 1956) and southern Europe (e.g. Baudi 1878a; Górriz Muñoz 1882; Horion 1956).

Portugal: Portugal (Oliveira 1899); Algarve, Ribatejo (Fuente 1933); Azambuja (Oliveira 1893); Faro (Oliveira 1893; Pérez-Moreno *et al.,* 2003; CB; MRSN). **Spain:** records from this country were summarised recently by Capote and García-París (2001), Pérez-Moreno *et al.* (2003), García-París & Ruiz (2005), García-París *et al.* (2006); these records concern all continental Spanish districts, excluding Asturias, Cantabria, Castellón Guipúzcoa, La Coruña, Pontevedra, Toledo, Valencia. Additional unpublished records not referring to these districts, are as follows: Navacepeda de Tormes (CMI); Navatalgordo (CMI); Perdiguera (FSAG); Puerto Padornelo (HNHM); Puerto de Boruelo (HNHM); Sierra de Alcubierre (HNHM); Sierra de Guadarrama, La Granja (OUM); Sierra de Queija (HNHM); Sierra Morena, Cárdenas (CFR); Sucarral (Vilar de Sucarral) (MZR); Villafranca de Ebro (MSNV). **France:** France (Dvořák 1989; MCNV; MSNV); temperate regions of northern France (Sainte-Claire Deville 1937); central France (Desbrochers des Loges 1899) southern France (e.g. Baudi 1878a; Desbrochers des Loges 1899; Sainte-Claire Deville 1937; Mařan 1944; Kaszab 1951). Records from southern France (provinces of Alpes Maritimes, Basses Alpes, Bouche du Rhône, Var, Vaucluse) were summarised by Caillol (1914). Additional localities from literature and museums are as follows: Alsace (Horion 1956); Aude, Alaric Mt. (Gavoy 1893); Bezouce (SMNS); Carret de Mar, Vergès (FSAG); Cavalaire (CNM; HNHM); Champagne (Sainte-Claire Deville 1937); Dieulefit (FSAG); Fouchères (HNHM); Frejus (CBA); Landes (Bedel 1892); Laon (Sainte-Claire Deville 1937; Horion 1956); Le Lavandou (CNM; ZMB); Le Poet-Laval (FSAG); Les Mées (CB); Mézilhac, Col des Quatre Vios (Aberlenc 1996); Marson, Bagneux (Gallois 1890); Meuse, Coté Saint-Germain (Saussus 1982); Normandie (Bedel 1892); Paris (Mulsant 1857; Baudi 1878a; Desbrochers des Loges 1899; MGEN); Paris, Fontainbleau (Laporte de Calstenau 1840; Bedel 1892); Péronne (Sainte-Claire Deville 1937; Horion 1956); Perpignan, St Nazaire, Fôret Reart (CB); Pilat (Schaeffer 1949); Provence (Bedel 1892); Saone et Loire, Le Creusot (Fauconnet 1887); Sérignan Plage (CHA); Thorigné; (Gallois 1890); Torreilles (CHA); Torreilles, sud pont D. 81-Agly (CB); Vaucluse, La Bonde (MSNG); Vias, Fainette-Plage (CHA). **Italy:** several citations were summarised by Bologna (1991) from the following districts (particularly southern Italy): Bolzano (only two old records of middle XIX century), Avellino, Caserta, Catanzaro, Cosenza, Crotone, Foggia, Latina, Matera, Potenza, Reggio Calabria, Rome. Additional unpublished records are as follows: Accettura, Salandrella River (CGO); Aspromonte Mt., near Bagalodi (CMI); Aspromonte Mt., Piani di Aspromonte (CA); Belvedere di Spinello, Neto River (CGO); Calvello (CA); Campi di Ruggiano (MSNV); Catanzaro, Le Serre, Lacina (CA); Cosenza, Campana (CGO); Cosenza, Moccone SS117 (CB); Finimeri (MUB); Matese Lake (ZMUP); Pietrapertosa, Impiso Mt. (CCA); Serra S. Bruno (CA); Serrastretta (MSNV); Sila Mts., Bosco Pirillo (CGO); Sila Mts., Cecita Lake (CB); Sila Mts., Croce Magara (CA); Sila Mts., Fago del Soldato (MSNV); Sila Mts., La Fossiata (CB; MZR); Sila Mts., Montescuro (Turco *et al.* 2003; CB; MSNG); Sila Mts., S. Pietro in Guarano (CA); Sila Grande, Volpintesta Mt. (MSNV). **Belgium:** Fleurus (Bivort 1899; Horion 1956; Stebnicka 1987). **Netherland**: Netherland (Stebnicka 1987); Roermond; Winterswjik; Doetichem (Everts 1903; 1922; Horion 1956); records from Belgium and Netherland probably refer to extinct populations. **Switzerland**: Basel; Geneva; Schauffhausen (Horion 1956). **Germany:** Horion (1956) summarised generic records and precise localities from the following regions: Baaden-Württenberg, Bavaria, Hamburg, Hannover, Hesse, Mark-Brandeburg, Mecklenburg, Middle Elbe, Rhineland-Pfalz, Saxony, Thuringia, Westphalia (see also Matthes 1970, for a review of records). Lückmann & Niehuis (2009) recently confirmed the current distribution only in Brandeburg, evidencing the extinction after 1950 in Bavaria and Saxony, and before this date in Thuringia; other records probably refer to extinct populations before 1900. Additional records are as follows: Erlangen (HNHM); Kreis Dahme-Spreewald, Tagebau Schlabendorf, N. Bergen (Saure 1996). **Poland:** Poland (Motschoulsky 1872; Kaszab 1951; Horion 1956); Lebner (1871) and Horion (1956) cited some localities from Pommern, Prussia and Silesia where the species is probably currently extinct; Dolnego (Stebnicka 1987); Górnego (Stebnicka 1987); Łodź-Stoki (Kowalczyk & Watała 1988); Pomorza (Stebnicka 1987); Rogów, Skierniewice (Kowalczyk & Watała 1988); Wielkopolski (Stebnicka 1987); Wzgórz Trzebnickisch (Stebnicka 1987). **Latvia:** Latvia (Lundberg 1995; Telnov et al. 1997); Courland (Seidlitz 1891a; 1891b; Horion 1956). **Czech Republic:** Czech Republic (e.g. Horion 1956; CNM); Bohemia (Klima 1902; Jelinek 1993); Moravia (Seidlitz 1891a; Jelinek 1993); Budejovce (CNM; UCD); Čelakovic (Vrabec 1994; BMNH); Karaný (CNM); Kosice (Dvořák 1983a); Plzen (Dvořák 1996); Prague (CNM); Prague, Bechovice (CNM); Sv. Vaclav (CNM); Tousen (CNM). **Slovakia:** Slovakia (Kaszab 1951; Jelinek 1993); Bratislava (CNM); Kosice (Dvořák 1983a); Michal'any (Dvořák 1983a); Parkan (CNM); Pozsony (Tóth 1973); Sahy (CNM). **Austria:** Austria (Dahl 1823; Redtenbacher 1858; HNHM); Linz, St. Magdalena (Dalla Torre 1880); Marchfeld (Horion 1956); Nuesiedl am See (Horion 1956; Tóth 1973); Stammerrsdorf (Horion 1956); Wien (Horion 1956; CNM; HNHM); Wien, Oberweiden Nussdorf (Horion 1956; CFR); Wiener Donaubecken (Horion 1956); Wienerwald-Ulrichskirchen (Horion 1956). **Hungary:** Hungary (Kaszab 1951; HNHM; MCNV); Gyöngyös; Szeged (Tóth 1973). **Balkans:** Balkans (Mařan 1944; Kaszab 1951; Horion 1956; Dvořák 1989). **Slovenia**: Novi Mesto (CNM). **Croatia**: Croatia (Kraloslava Schlossera 1878; Conev 1958; Kaszab 1967); Slavonia; Dalmatia (Kraloslava Schlossera 1878). **Bosnia-Herzegovina**: Duvo Polj, Duvanisko Polje (Conev 1958); Mostar (CNM). **Serbia**: Zemun (CNM). **Montenegro:**

Montenegro (Kaszab 1967). **Macedonia:** Macedonia (Mařan 1944; Kaszab 1951; Conev 1958; CNM); Galicica plain (CNM); Keretschkol (MSNG); Nezilovo, Karadzica, Yakupica (HNHM); Pelister, Magarevo (HNHM). **Bulgaria:** Bulgaria (Mařan 1944; Kaszab 1951; 1967); Belovo (Kantardjièva 1929); Bistrica (CK); Burgas; Burgas, Mandra-glol (Kantardjièva 1929); Chotovo (CK); Dobrudja (Kantardjièva 1929); Kresna (BAS; CK; CNM); Kulata (CK); Kyustendil (Kantardjièva 1929); Lesnikovo (CK); Liljanovo (CNM); Lozen; Malko, Strandzha Mts.; Markovich (Kantardjièva 1929); Melnik (CK; CNM); Pazardzhik; Pazgrad (Kantardjièva 1929); Petrič (Maran 1944; Bologna 1994); Pirin, N Sandanski (CNM); Pirin, Poyana Laka (HNHM); Rila (Kantardjièva 1929); Rhilo Mts. (Reitter 1885; CNM; HNHM); Rhilo planina (CNM); Rilski Monastir (CNM); Rodopi Mts. (Angelov 1965; HNHM); Rodopi Mts., Backovo (CNM); Rodopi Mts., Chepelare (Kantardjièva 1929; ZMB); Rumelia (CNM); Ruse (Kantardjièva 1929); Sandanski (CK; CNM); Sandanski, Liljanovo (CNM); Selo Vlachi, Pyrin planina (CNM); Sofia (CNM); Sofia Pancharevo; Sredna Gora Sliven (Kantardjièva 1929); Struma Valley, Sklave (HNHM); SW Kulata (CK); Vitosa (HNHM). **Greece:** Greece (Bologna 1986; Bologna 1994); Aetos (Bologna 1994; CB; MSNV); Alexandroupoli (Kantardijèva 1929; Bologna 1994); Ambelakia (CNM); Hani (Turco *et al.* 2003; CB); Kastoria (Bologna 1994; MSNV); Methoni (Bologna 1994); Mitsikeli, Elati-Manassis (Bologna 1994; CB;CGO); Panorare, Menikio Mt. (MSNG); Peloponnese (Brullé 1831; Kiesenwetter 1861; Bologna 1994), this record probably refers to another species; Peristeri (CNM); Pindo Mts, Elati-Manassis (CGO); Pindos Mts., Katara Pass E (Bologna 1994; CB; CK); Pindo Mts., Koridallos (CB); Pindo Mts., Metsovo-Grevena road (CB); Pindos Mts., Milea-Kranea (Bologna 1994; CGO); Pindo Mts., Morfi (CB); Pindo Mts., Metsovo, Kria Vrisi (Bologna 1994; CB); Pindos Mts, Platanistos (CB); Pisodherion (Bologna 1994; BMNH); Veluchi Mts. (CNM). **Romania:** Romania (Kaszab 1951; 1967); Dobrudscha (Reitter 1885); Dobrudscha, Mačin-Tulcea-Niculiţe (Roşca 1976); Târgu Mureş (Marosvásárhely); Transilvania; Zenica (Tóth 1973). **Belarus:** Orshansko-Mogilevskjii; Nemansko-Predpolesskji; Beresinsko- Predpolesskji (Alexandrovitch *et al*. 1996). **Ukraine:** Crimea, Alma River (Levtshinkaja 1964); Left Bank (Medveded & Levshinskaja 1962); Prishib (HNHM); Severskii Donets River (HNHM); Soumy (CB); Svyatogorskaya (HNHM); Tambowsk. Obl. Drjasginsk. R-u. selo kriwki (ZMB); Zakomel'skaya (HNHM). **Russia:** Russia (e.g. Baudi 1878b; Mařan 1944; Kaszab 1951; CB; MGEN; MSNV); western Russia (Horion 1956); southern Russia (Baudi 1878b; Horion 1956); erroneously cited from eastern Siberia, Songoria (Fischer 1842); the old Don Province (Kieseritzky 1912); Caucasian steppes (Ménétries 1832); Ishboldino au der Kama (ZMB); Kasan (Csiki 1901; HNHM); Orenburg, Iletskaya Zashkta (CNM); R. Voronezs (HNHM); Rostov (CNM); Saratow (HNHM); Sarepta (MSNG); Siberia orientale (Fischer 1842); Sosnowka au der Belaja (ZMB); Stavropol (Lutshnik 1921); Tockoe, gub. Samara (CNM); Umg. Kargala, 22 Km N Orenburg (ZMB); Ural Uralski Mts) (HNHM); Uralsk (HNHM); Uspjenskaja (ZMB). **Turkey:** Turkey (Reitter 1885; 1913; Mařan 1944; Kaszab 1951; Dvořák 1989; Özbek & Szaloki 1998); Adana (CNM); Akhisar (CBR); Aladağ, Kızılcahaman (Özbek & Szaloki 1998); Ankara, Biro (HNHM); Ankara, Kızılcoren (MSNM); Bergama, Acropolis (CB); Edirne (CNM); Ephesus (Sahlberg 1913); Erzurum (CB); Gevas-Resadiye (CNM); Gök Dağ (MCNV); Izmir (HNHM); Kadinhani (CB); Konya (CNM); Maden-Bayburt (CB); Maliköi Biro (HNHM); Manisa (HNHM); Oltu (Özbek & Szaloki 1998); Tarsus (Sahlberg 1913); Taurus Mts. near Adana (MSNG); Tekirdağ (Kantardjièva 1929); Tschakit-Thai (CNM). **Caucasus**: Caucasus (Ménétries 1832). **Armenia:** Armenia (Motschoulsky 1872). **Azerbaijan:** Lenkoran (CNM). **Syria:** Syria (CNM). **Syria-Palestine:** Syro-Palestinian area (Bologna 1988). **Kazakhstan:** Ili River (Nikolaev & Kolov, 2005); Kazalinsk (CNM).

Records from the following countries need confirmation. **Israel-Palestine:** Israel-Palestine: Upper Galilee, Lower Galilee, Golan Heights, Samaria, Northern coastal plain, Jordan valley, Central coastal plain, Southern coastal plain, Northern Negev, Southern Negev (Chikatunov 1999); Jericho (Baudi 1894; Sahlberg 1913). **Iran:** Teheran (Modarres Awal 1997).

C. schreberi

The old record from Tunisia (Cros 1939) is due to misidentification and is to be referred to *C. vahli*.

Cited generically from Central (Mařan 1944); central-southern (Baudi 1878a), southern Europe (Fabricius 1801; Fischer 1827; Laporte de Calstelnau 1840; Baudi 1878a; Horion 1956), and southeastern Europe (Reitter 1913), Orient (Laporte de Calstelnau 1840; Baudi 1878b). **Portugal**: Portugal (Oliveira 1899; Pérez-Moreno *et al.,* 2003; MSNV); Alto Alentejo; Baixo Alentejo; Beira Alta (Capote & García-París, 2001; Pérez-Moreno *et al.,* 2003); Azambuja (Oliveira 1893), Beira Litoral (Pérez-Moreno *et al.,* 2003); Coimbra (Oliveira 1893); Evora (MSNV); Luso (CB; FSAG); Ribatejo (Fuente 1933; Capote & García-París, 2001; Pérez-Moreno *et al.,* 2003); Vila Nova entre Luso et Anadia (FSAG). **Spain**: records from this country were summarised recently by Pérez-Moreno *et al.* (2003), and García-París & Ruiz (2005); these records concern all continental Spanish districts, excluding Álava, Alicante, Asturias, Badajoz, Barcelona, Cáceres, Cádiz, Cantabria, Castellón Guipúzcoa, Gerona, Huelva, Jaén, La Coruña, Lugo, Malaga, Pontevedra, Sévilla, Soria, Tarragon. Additional unpublished records are as follows: Ademuz (FSAG); Almacelles (FSAG); Binefar (FSAG); Gredos (HNHM); Moriscos (MSNV); Poveda (MNHN); Valencia, Torre Baja (FSAG). **France**: France (Grenier 1863; Kaszab 1951; MGEN; OUM); southern France (e.g. Baudi 1878b; Mařan 1944); cited from Vendée (Blaud 1894), but this record is doubtful; Agay; Aramon (Caillol 1914); Arles (ZMS); Bagnols (Caillol 1914); Camargue (Caillol 1914; HNHM); Carcès; Draguignan; Frèjus (Caillol 1914); Gard (Sainte-Claire Deville 1937; Horion 1956); Hyères (Caillol 1914); Le Lavandou (CNM); Le Bonde; Le Plan d'Aups; Le Luc; Le Muy (Caillol 1914); Marseille (HNHM); Provence (Mulsant 1857; Górriz Muñoz 1882; Desbrochers des Loges 1899; Sainte-Claire Deville 1937); Puget sur Argens (CB); St. Raphael; Ste. Cécile; Toulon (Caillol 1914); Vaucluse (CB; MSNG); Vaucluse, Orange (FSAG); Vidauban (Caillol 1914). **Italy**: Bologna (1991; 2001) recently summarised all Italian records, from literature and museums, from the following districts: Caserta, Catanzaro (doubtful record), Chieti, Cuneo, Firenze, Grosseto, L'Aquila, Latina, Livorno, Lucca, Modena, Novara, Parma, Pavia, Pisa,

Ravenna, Rome, Siena, Terni, Torino, Verona, Vicenza, Viterbo. Additional unpublished records are as follows: Firenze, Corella; Grosseto, Chiarone scalo; Viterbo, Canino; Anzio (Rome); Rocca di Papa (Rome). **Germany**: Bavaria (Reitter 1911; Kaszab 1951; Horion 1956); Muggendorf (Horion 1956). **Czech Republic**: Bohemia (e.g. Reitter 1911; Kaszab 1951; Horion 1956); Moravia (Seidlitz 1891a; Reitter 1911; Horion 1956; Jelinek 1993); both records are doubtful. **Slovakia**: Slovakia (Roubal 1936; Kaszab 1951; Horion 1956; Stebnicka 1987; Jelinek 1993); Kosice (Dvořák 1983a); Leles (CK; CNM); Leles-Kadona (CK); Maly Neres (Maly Gyres) (CK); Novi Mesto (CNM); Novi Vieska (CNM); Parkan (CNM); Somotor (CNM); Streda nad Bodrogom (CK); Streda River near Bodrogom (CK); Sturovo (Dvořák 1983a; CBA); Zadiel (Dvořák 1983a). **Poland**: Poland (Kaszab 1951); Rawicz (Stebnicka 1987); Silesia (Stebnicka 1987). Austria: **Austria** (Reitter 1913; Stebnicka 1987); Marchfeld; Neusiedl am See; Weiden am See (Horion 1956); Wien (Redtenbacher 1858; Horion 1956). **Hungary**: Hungary (Dahl 1823; Baudi 1878b; Reitter 1885; 1913; Mařan 1944; Kaszab 1951; CNM; MCNV; MSNV); Agasegyháza; Békéscsaba; Budafok; Budakeszi; Budaörs; Gellérthegy, Bugac; Buj; Csikihegyek; Csór; Dömsöd: Apajpuszta; Esztergom; Érd; Érdliget; Gyón; Győr; Hortobágy; Kalocsa; Káposztásmegyer; Kecskemét; Kisbalaton: Vörs: Diássziget; Kiskunhalas: Járószék; Kistétény; Kisvelence; Lepsény; Máriabesnyő; Martonvásár; Ménfőcsanak; Nagyerdő; Nagytétény; Ócsa; Öszöd; Pécel; Pécs; Puszta-szabolcs; Rákospalota; Sárpentele; Sátoraljaujhely; Siófok; Somlóvásárhely: Somló; Sopron; Söregpuszta; Sukoró; Szeged; Székesfehervár; Szigliget; Szigetcsép; Tokaj; Velencei hegység: Nadap: Meleghegy; Ürbö; Vérteshegység: Papvölgy; Zalavár: Lebujpuszta: Zalavárerdő; Zamárdi: Tóközpuszta (Tóth 1973); Simontornya (Horion 1956; Tóth 1973); Budapest (Horion 1956; Tóth 1973; CFR); Budapest, Vicegrad (CB). **Balkans**: (Mařan 1944; Kaszab 1951). **Slovenia**: Slovenia (Horion 1956; CNM). **Croatia**: Croatia (Kraloslava Schlossera 1878; Mařan 1944; Kaszab 1967); Slavonia (Kraloslava Schlossera 1878); Ferganah (CNM); Zagreb (Conev 1958; CNM). **Serbia**: Serbia (CNM); Belgrade (Kosanin 1904); Moldova (Tóth 1973); Novi Sad (Conev 1958); Veliko Gradište Zemun (Conev 1958; CNM); Vrdnik (Tóth 1973). **Bosnia-Herzegovina**: Bosnia (Kaszab 1967; CNM; HNHM); Čapljina (Conev 1958); Mostar (Conev 1958; CNM; HNHM); Prozor (CNM); Stolac (Conev 1958). **Montenegro**: Montenegro (Kaszab 1967; CBA); Bar (Conev 1958); Titograd (Novak 1952; Conev 1958; Mikšic 1977); Ulcinj (Miksic 1977); Virpazar (Conev 1958). **Albania**: Albania (Kaszab 1967; MSNM; MSNV; ZMUP); Elbasan (Kaszab 1967; CNM; HNHM); Kap Rodoni (Kaszab 1967; CNM; HNHM); Stičen (Csiki 1940; Kaszab 1967); Tirana (Kaszab 1967; HNHM); Tropoja (Csiki 1940; Kaszab 1967; HNHM); Vlora (Kaszab 1967); Vorra (Kaszab 1967; CNM; HNHM). **Macedonia**: Macedonia (CNM; MSNG; MSNV); Bitola (Bologna 1994; MNHN); Jaratock E Monastir (MNHN). **Bulgaria**: Bulgaria (Kaszab 1967); Balkan Mts, near Stara Zagora (Angelov 1968); Burgas (HNHM); Burgas, Mandra-glol (Kantardjièva 1929); Burgas, Slancev Brjag (CBA); Caribrod (Kantardjièva 1929); Djuni beach (CB); Dragalevci (Kantardjièva 1929); Izgrev (CK); Kalovo (CNM); Karnobat, Staldzha (Kantardjièva 1929); Kjuprija (CNM); Koprinka (CHA); Kresna (CNM); Kyustendil (Kantardjièva 1929); Ljuben (CK); Ljubinec 16 Km S Harmanli (CK); Lozenets (CNM); Lozenets, Primorsko (CK); Lozenets, Ambelic beach (CB, CMI); Nessebar (Muche 1964; ZMB); Pazardzhik; Pazgrad (Kantardjièva 1929); Petrič (CNM); Rodopi Mts. (Angelov 1965); Ropotamo River mouth (CNM); Sadovo (Kantardjièva 1929; CNM); Selo Vlachi, Pyrin Plain (CNM); Sistova (CNM); Sofia (Kantardjièva 1929); Sozopol (CK; MZR); Sozopol, Djuni, Humata Cape (CMI); Stara Zagora (Kantardjièva 1929); Stranza plain (CNM); Thrace, Sofli (Kantardjièva 1929); Thrace localities (Angelov 1964);Varna (CNM; MNHN); Varna, Zlatni Pjasecy (CNM); Vidin, Severna (Kantardjièva 1929); Vlachi, Pyrin (CNM); Zeitin burun (CNM); Zlatograd (CNM). **Greece**: Greece (Baudi 1878b; Reitter 1885; Kaszab 1967; Bologna 1986; 1991; 1994; Legakis 1990; CNM; HNHM; MNHN; MSNM); Attica (Horion 1956); Asprovalta (Bologna 1994; MSNV); Athos Mt. (Bologna 1994; CFR; MSNG);); Athos, Daphni (Bologna 1994; CFR; CNM; ZMB); Atiki (Kiesenwetter 1861; Oertzen 1886; Horion 1956; Bologna 1994); Dojran Lake (CBA); Evia Is. (Bologna & Marangoni 1990; Bologna 1994); Evia Is., Halkida (Bologna 1994; MSNV); Gazoros, Nea Zihni (Bologna 1994; MGEN); Githion (HNHM); Itéa (Bologna 1994; MSNM); Kalamata (CB); Kalkis, Camping Paradise (CB; MSNV); Kassandra (Geisthardt 1989; Bologna 1994; CB; ZMS); Corfu Is. (Bologna & Marangoni 1990; Bologna 1994; HMNH); Corfu Is., Agios Georgios (HNHM); Corfu Is., Lorissia (Palm 1965; Bologna 1994); Mikra Prespa Lake (Bologna 1994; MSNG); Litokhoron (Bologna 1994; CB; HNHM); Litokhoron, station area Pieria (CM); Methoni (Brullé 1832; Bologna 1994); Patra (HNHM); Peloponnese (Brullé 1831; Kiesenwetter 1861; Oertzen 1886; Horion 1956; Bologna 1994); Polikastron (HNHM); Prespes (CH); Preveza (MSNG); Sithonia (Bologna 1994; CMAL; CS; ZMS); Stavros (CK); Thessaloniki (HNHM); Volos (Bologna 1994; BMNH; CNM). **Romania**: Romania (Kaszab 1967); Danube River delta (Ieništea 1968; 1974); Dobrudscha, Mačin-Tulcea-Niculiţe (Roşca 1976); Krassó megye (Tóth 1973); Resita (Resicabánya) (Tóth 1973); Transylvania (Siebenbürgen) (Horion 1956); Vamesu (MNHN). **Ukraine**: Podolia (Baudi 1878b; Horion 1956; MSNV); Bjelosarajskaja kosa (ZMB); Crimea Alma River (Levtshinkaja 1964); Crimea Furmanovka (Levtshinkaja 1964); Left Bank (Medveded & Levshinskaja 1962); Maiaki, Sidorovo (HNHM); Mariupol (MSG); Odessa (HNHM); Prishib, Severskii (HNHM); Sevastopol (Levtshinkaja 1964); Simferopol (Levtshinkaja 1964); Svyatogorskaya (HNHM); Tomak (HNHM); Tysauzhfalu (Tóth 1973); Užhorod (Ungvár) (Tóth 1973); Yevtatoriia (Levtshinkaja 1964). **Russia**: Russia (Kaszab 1951); southern Russia (Fischer 1824; Motschoulsky 1872; Reitter 1913; Mařan 1944; Horion 1956; ZMB); Bijsk (HNHM); Bogolo, Kalmucken-Steppa, Volga River (SMNS); the old Don Province (Kieseritzky 1912); Falzfelnowo, Dnieprr River (ZMB); Ostrogozhsk (HNHM); Voronez River (HNHM); Rostov (CNM); Sarepta (CNM, MUF); Siberia (Kaszab 1951); Stavropol (Lutshnik 1921); Uralsk (HNHM). **Turkey**: Turkey (Reitter 1885; Mařan 1944; Kaszab 1951; Horion 1956; HNHM; MNHN; MTR); European Turkey (Ménétries 1838); Adapazari (Bologna 1979; Özbek & Szaloki 1998; ZEI); Akhisar (CB; FSAG); Ak Şheihr (CNM; HNHM); Ankara (Escherich 1897); Antalya (Özbek & Szaloki 1998); Balıkesir, Erdek (FSAG); Cerkezköy (Özbek & Szaloki 1998); Çorlu (Özbek & Szaloki 1998); Denizli (ZMS); Inegöl (Özbek & Szaloki 1998); Kahraman

Maraş (Özbek & Szaloki 1998); Kadiköi (Kaszab 1941; HNHM); Karacabey (HNHM; Kaszab 1941); Kuruk-kel (HNHM); Küzülü Köyu (Özbek & Szaloki 1998); Pamukkale (FSAG); Tekirdağ (FSAG); Therapia (CNM); Tschakit-Thai (CNM). **Syria**: Syria (Baudi 1878a). **Syria-Palestine**: Syro-Palestinian area (Bologna 1988). **Israel-Palestine**: Haifa (MSNG). **Caucasus**: Caucasus (MSNG). **Georgia**: Georgia (CNM). **Azerbajian**: Baku (Schneider & Leder 1878). **Iran**: Fars (Modarres Awal 1997); this records is doubtful. **Turkestan**: Turkestan (Reitter 1913; Horion 1956). **Kazakhstan**: Kazakhstan (Nikolaev & Kolov, 2005); Ak-Say (CNM); Almaty (HNHM); Anshar, Syr Darja River (HNHM); Auliye-Ata, Grosnoje (CNM); Baethy (HNHM); Dzambul-Assa (CK); Dzhanbel River, between SE Karatan Mts. and Ulkan Burul Tan, 20 Km S Berkara (CB; CCO); Dzhungar Alatan Malyi Baskan (HNHM); Dzhuvaly Kara-Tau, Boroldaj-Tau (HNHM); Ili River, Hauf (HNHM); Karatau Mts. (HNHM); Kazalinsk (CNM); Kzyl-Orda (ZMB); NW Aral Sea, coastal Barsuchi Mts (HNHM); Pavlodar Irtys River (CK); Sunkajty, S Mujunkum (HNHM); Syr Darja River (CNM); Vernyy (HNHM). **Turkmenistan-Uzbekistan**: Saravshan River (CNM; ZMS). **Turkmenistan**: Turkmenistan (Reitter 1913; Mařan 1944; Kaszab 1951); Chodschakent (HNHM); Karategyan (HNHM); Repetek (Reichardt 1934); Taskent (CNM); Tobmab (HNHM). **Uzbekistan**: Bukhara (Dokhtouroff 1889; Kaszab 1951); E Bukhara, Tschitschantan (HNHM); Samarkand (Heyden & Kraatz 1882; CNM; MCNV; MSNV); W Altai Mts., 5 Km S Samarkand (HNHM); Tchimgan (Hauser 1894). **Kyrgyzstan**: Dzhalal-Abad (ZMB); Frunze (HNHM); Jalal Abad River, 26 Km E Toktogul (CK); Pishpek (HNHM); Chatkal; Frunze; Kara-Turuk; Talas; Toktogul; Torkent; and a few other not identified localities (Sadykova 1989). **Tajikistan**: Tajikistan (Pripisnova 1987); Hissar Range, Ramit reserve (Zaripova 1972); Karatag (CK; CNM); Norak (CNM); Surchob Waidara (HNHM); Vachrobod (CNM). **Afghanistan:** Kirghis (CB). **China:** Boro Horo Shan, Jiping, Ining-H-Sien (CB; CK); Hsin-Tschian (HNHM); Kuldja (Pic 1935); upper Jli Valley (CFR).

C. scovitzi

Russia: southern Russia (HNHM); Sarepta (MCNV; MSNV). **Turkey:** Turkey (Baudi 1878a 1878b; Reitter 1913; Mařan 1944; Kaszab 1951; Dvořák 1989; HNHM; MCNV; MSNG; OUM); Adana (Mařan 1944; HNHM; MNHN; ZMB); Akbèz (Mařan 1944; CFR; CNM; HNHM; MNHN); Ak-Şheihr (Mařan 1944; Kaszab 1951; Özbek & Szaloki 1998; CNM; HNHM); Amasia (MNHN); Akhisar (FSAG); Ankara (Escherich 1897; Mařan 1944; MSNG); Buğlan Geç. (CB); Çamliyayla (CMAL; CS); Çeyhan (HNHM); Denizli (ZMS); Dıyarbakır (HNHM); Elaziğ (Özbek & Szaloki 1998); Erzincan (Özbek & Szaloki 1998); Erzin-Dörtyol (ZMB); Fevzipaşa (Özbek & Szaloki 1998; MSNV); Gevaş, Van Lake (CK); Gölbasi (MCNV); Hasanoğlan (BMNH); Ivris (HNHM); Izmir (Mařan 1944; HNHM); 5–15 Km S Kalecik (CB); Karacabey (HNHM); Karataş (BMNH); Kassaba (BMNH); Makri (MSNG); Malatya (Kaszab 1951; Özbek & Szaloki 1998); Mut (CB); Pamukkale (CB; FSAG); Silvan Bekhiran (CB); Söke (FSAG); Söke, Menderes River (FSAG); Sultansüyü Hara near Malatya (HNHM); Tarsus (Baudi 1878a); Taurus (Mařan 1944; CB; HNHM; MCNV; MSNG). **Transcaucasia:** Transcaucasia (Reitter 1913). **Armenia-Azerbaijan-NE Turkey:** Araxes Valley (Reitter 1913; Mařan 1944; HNHM; MNHN). **Armenia:** Nor Aresh (Mařan 1944; CNM; MNHN; MSNG); Vedi (Iablokhoff-Khnzorian 1983); Yerevan; and a few other not identified localities (Mařan 1944; Iablokhoff-Khnzorian 1983; CNM). **Azerbaijan:** Azerbaijan (Kaszab 1951; MSNV); Gandzak (Mařan 1944; CNM; MZR); Babadjanides (HNHM); Geok Tepe (MNHN). **Syria:** Syria (Kraatz 1863; Baudi 1878a; Reitter 1913; Mařan 1944; Kaszab 1951; Dvořák 1989; MGEN; MRSN); Halep (CFR; MSNG); Hara (ZMB). **Israel-Palestine:** Chedera (HNHM); Golan Susita (CB); Haifa (CB; HNHM; MNHN); Jordan Valley (MSNG); Reinh Arendt (HNHM); Susita (MGEN); Tiberias (MSNG). **Iraq:** Iraq (Dvořák 1989); Ashhar (HNHM); Bagdad (Kaszab 1951; HNHM; MNHN). **Iran:** Iran (Baudi 1878a 1878b; Reitter 1913; Kaszab 1951; CB; HNHM); Ab Ali (PPT); Andimechk (Mirzayans 1970; PPT); E Azerbaijan (Modarres Awal 1997); Balouchestan (Modarres Awal 1997); Bandar Abbas (Kaszab 1968a; Mirzayans 1970; Dvořák 1993; 1996; HNHM; PPT); Behbahan (Mirzayans 1970); Borazdjan (Mirzayans 1970; PPT); Bushehr 10 km N Dalaki (PPT); Chabankareh (Mirzayans 1970); Chahroud (Mirzayans 1970); Dacht-Danial (Mirzayans 1970); Dadine (Mirzayans 1970); Dezful, Coga Zambil (CK); Djegiran (CB; MNHN); Djulfa (PPT); Do Gonbadan (Mirzayans 1970; PPT); Farashband, Hoseynabad (Mirzayans 1970; PPT); Fars (Modarres Awal 1997); Firuzabad (Mirzayans 1970; HNHM; PPT); Firuzabad, 20 Km E Farashband (CB); Firuzabad, 40 Km SE Kazeroun (CB); Ghasr-i-shirin (PPT); Ghasr-i-shirin, Naftechah (MNHN); Golestan (HNHM; PPT); Golestan Forest (Mirzayans 1970); Golestan Nat. Park (PPT); Gonbad Qavoos (Mirzayans 1970); Gorgan (Modarres Awal 1997); Hasro (HNHM); Hormozgan (Modarres Awal 1997); Iranshahr (PPT); Jiroft (PPT); Jolfa (PPT); Karaj, Eshtehard (PPT); Kazeroun (Mirzayans 1970; PPT); Kelardasht (PPT); Keredj (Mařan 1944); Khorasan (Modarres Awal 1997); Khuzestan (Modarres Awal 1997); Km NW Langir, 48 Km Omidiyen (CNM); Lar (CB; PPT); Masjed Soleiman (PPT); Meleto Dagh (HNHM); Moghan (Mirzayans 1970; CB; HNHM; PPT); Mozafari (Mirzayans 1970); Naft Shah (Mirzayans 1970); Nikshahr (Mirzayans 1970; PPT); Qazvin (PPT); Sar Mashhad (Mirzayans 1970); Shabankareh-Borazjan (PPT); Shiraz (Mirzayans 1970; HNHM; PPT); Soltanabad (PPT); Sudaghlan (Mirzayans 1970); Tehran (Kaszab 1963); Varamin (CNM; PPT); Varamin, Mahmudabad (PPT). **Saudi Arabia:** Saudi Arabia (Dvořák 1989); Al Kharj (HNHM); Jaww Dukha (Kaszab 1983; HNHM); Riyadh (Schneider 1991; HNHM). **Egypt:** Egypt (Reitter 1913; Kaszab 1951; Dvořák 1989; HNHM); probably this record refers to Sinai.

C. simplicicornis

Turkey: Turkey (Mařan 1944; MRSN); Adana (CNM); Calpala (CB); Iğdir, Cilli Geçidi. (CK). The record from Adana needs confirmation. **Caucasus:** (Kaszab 1951; Dvořák 1989). **Armenia-Azerbaijan-NE Turkey:** Araxes Valley (Reitter 1913; CNM; HNHM). **Armenia:** Armenia (Kaszab 1951; Dvořák 1989; HNHM); Viktorov (HNHM); Yerevan (HNHM). **Azerbaijan:** Talysh Zubant (CB). **Iran:** 10 Km S Alamdar (CB; CMAL; CS); Mařand (CNM; CPI).

C. turcica

Slovakia: Sturovo-Parkan (CNM); this record is out of the current range for the species and is considered doubtful. **Macedonia:** Uskub (CNM). **Bulgaria:** Petrič (CNM). **Greece:** Ambelakia (CNM); Trikala, Kalambaka (Kastraki) (CK; HNHM). **Romania:** Dobroudja (MNHN). **Russia:** Volgograd, Golubaya River (CB). **Turkey:** Turkey (Dvořák 1989; CK; CNM); Acigöl, Cardak (CK); Ak-Şheihr (Dvořák 1990; CNM); Ankara (CNM); 36 Km E Bingöl (CB); Buğlan Geç. (CPI; CS); 60 Km W Erzurum (SMNS); Genç (CB); Gordion (CB); Iğdır, Cilli Geç. (CK); 15 Km W-NW 1 Km S Ilica (CNM); Inönsö (Dvořák 1990); Karakurt (CB; CMAL; CS); Kazan (MSNV); 20 Km N Korkuteli (CB; SMNS); Resadiye (CB); Sarikamiş (Dvořák 1990); 36 Km W Sivrihişar (CB); E of Solhan (Pardo Alcaide 1977); 20 Km W Tatvan (Pardo Alcaide 1977); Taurus Mts, Irmasan Geç.-Badamli Geç. (CB); W Topakli (CB); W Erzincan, 20 Km W Akarsu (Pardo Alcaide 1977); Yenidoğan 10 Km E Polatli (CB); Yuksekova (CB). **Caucasus:** Caucasus (HNHM). **Georgia:** Georgia (CNM). **Armenia:** Armenia (CB; CNM; MNHN); Azat River valley, Godit Gechart, 35 Km SE Yerevan (CK); Yerevan (CK; HNHM). **Iran**: Ardabil, Moghan (Serri, 2004).

C. vahli

Erroneously cited by some authors from Spanish and French localities, as discussed respectively by García-París & Ruiz (2005) and Mulsant (1857).

Generically recorded from northern Africa (Fabricius 1787). **Morocco:** Morocco (Baudi 1878a 1878b; Cros 1939; Mařan 1944; Kaszab 1951; Dvořák 1989; CB; CNM; HNHM; MCNV; MNHN; OUM); Aderdour (Martinez de la Escalera 1914); Agadir (MCNV); Aguelmane, Azigza (CB); Ait Ourir (MNHN); Al Kabir (CBA); Amismiz (Martinez de la Escalera 1914; CB); Asni (CK); Azrou (Kocher 1956; ISR); 5 Km SE Azrou (CK); 50 Km SW Beni Mellal (CK); Berguent (Kocher 1956; ISR); Bou Laouane (ISR); Christian (ISR); Dar Caid, Hida Nmués (Martinez de la Escalera 1914); El Garma (Pardo Alcaide 1950); El Garma, Kebdana (CNM); Essaouira (Martinez de la Escalera 1914); Fes (HNHM; MNHN); Fes, Zalagh Mt. (HNHM); Granja de Muluya, Kebdana (HNHM); Imi n' Tanout (ISR); Issil (ISR); Khenifra (ISR); Mahiridja (Kocher 1956; ISR); Marrakech (Martinez de la Escalera 1914; CK; HNHM; ISR); 50 Km E Marrakech on road P31 (CB); Meknès (CNM); Melilla (Kocher 1954; 1956; ISR); 100 Km S Mhamid (CK); Mohammedia (CB); N Mohammedia (CK); Mskala (Martinez de la Escalera 1914); Muley Rechid (Pardo Alcaide 1950; ISR); Oudjda (Kocher 1954; 1956; ISR); Oudoumana (ISR); Oued Isseu (ISR); Oulad-Ayad W Beni-Mellal (CB; CF); Rich, Haut Ziz (Kocher 1956; ISR); Ros el Aila (MNHN); Sker (ISR); Skhirat (ISR); Skhour-des-Rehamna N Marrakech (CB; CF); Sous (Kocher 1954); Taddert, Tizi-n-Tichka (CB); Taguelft (ISR); Tanger (Martinez de la Escalera 1914; CNM; HNHM; MNHN); Taounate (CB); Taroudant (Martinez de la Escalera 1914; CB; ISR MHNM; MNHN); Taroudannt, Aderdour (Martinez de la Escalera 1913); Taza Mts., Bab-Bou-Idir (CB); Tizi-Machou (Kocher 1954; 1956; ISR); Tiznit, Oued Massa (CB); Tleta des Aksas (ISR); Volubilis (ISR); Xauen Sougna Mts. E (MNHN); Zaers (ISR); Zaers Forest (ISR); Zaers Forest, Nemeth (ISR); Zaers, Khatouat (ISR); Zahamaout (ISR). **Algeria:** Algeria (Kraatz 1863; Motschulsky 1872; Baudi 1878a; 1878b; Górriz Muñoz 1882; Reitter 1885; Bedel 1892; Reitter 1913; Cros 1939; Mařan 1944; Kaszab 1951; Dvořák 1989; CNM; HNHM; MRSN; MSNV; MGEN); Alger (Chevrolat 1838; Lucas 1849; Motscholsky 1872; CNM; HNHM); Aurès Mts (CNM); 10 Km N Batna (CB); Bône (Chevrolat 1838; Lucas 1849); Béjaïa (Lucas 1849); Boukhanefis (MUB); Costantine (Lucas 1849); Djemila (CB); Ghardaia (HNHM); Jijèl (CB; MSNV); El Kala (Lucas 1849); Lambessa (HNHM); Medjez, Amar (HNHM); Mekalis (MNHN); Oran (Chevrolat 1838; Lucas 1849; Baudi 1878b; HNHM); Souk Ahras (MRSN); Souk Ahras, Medjerda Mts. (MSNV); Souk Ahras, Tahamimine (CB; MRSN); St. Charles (MNHN); Teniet el Had (MNHN); Yakouren (HNHM). **Tunisia:** Tunisia (Cros 1939; Mařan 1944; Dvořák 1989; MSNG); Ain Draham (Normand 1936; HNHM); Ben-Metir (CB); Bulla Regia (Normand 1936; CNM); El Feidja (Normand 1936); El Kef (Normand 1936; CNM); Gaber Zarat (CI); Gabès (MCNV); Hammamet (HNHM; MNHN); Sakiet Sidi Youssef (Normand 1936); Sejenane-Teskraia (CB); Téboursouk (Normand 1936); Tunis (MCNV).

APPENDIX 2. Data matrix for the 53 morphological characters used in the phylogenetic analysis. D.chr: *Diaphorocera chrysoprasis*; D.hem: *D. hemprichi*; C.ada: *Cerocoma adamovichiana*; C.alb: *C. albopilosa*; C.azu: *C. azurea*; C.bar: *C. barthelemyi*; C.bod: *C. bodemeyeri*; C.con: *C. confusa*; C.glo: *C. gloriosa*; C.gra: *C. graeca*; C.kun: *C. kunzei*; C.lon: *C. longiseta*; C.mac: *C. macedonica*; C.mal: *C. malatyensis*; C.mar: *C. marginiventris*; C.mue: *C. muehlfeldi*; C.rap: *C. rapillyi*; C.tur: *C. turcica*; C.ber: *C. bernhaueri*; C.dah: *C. dahli*; C.pro: *C. prochaskana*; C.sca: *C. schaefferi*; C.sim: *C. simplicicornis*; C.lat: *C. latreillei*; C.sco: *C. scovitzi*; C.vah: *C. vahli*; C.eph: *C. ephesica*; C.fes: *C. festiva*; C.mat: *C. martae*; C.pre: *C. prevezaensis*; C.scr: *C. schreberi*.

Taxa	Characters 1-10	11-20	21-30	31-40	41-50	51-53
D.chr	0 0 0 0 0 0 1 0 0 1	? 0 0 0 0 0 0 0 ? ?	? 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 ? 0 ? 0 0 0 0 ?	0 0 0
D.hem	0 0 0 0 0 0 1 0 0 1	? 0 0 0 0 0 0 0 ? ?	? 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 ? 0 ? 0 0 0 0 ?	0 0 0
C.ada	0 1 0 0 0 0 1 1 0 1	? 0 0 0 0 0 1 2 1 0	1 1 2 0 1 0 0 1 1 0	1 1 1 0 0 0 0 0 0 0	0 1 1 0 ? 0 0 0 1 1	1 0 0
C.alb	0 1 0 0 0 0 1 1 0 1	? 0 0 0 0 0 1 2 1 0	1 1 2 0 1 0 0 1 0 0	0 1 1 0 0 0 0 0 0 0	0 1 1 0 ? 1 1 0 1 1	1 0 0
C.azu	0 1 0 0 0 0 1 1 0 1	? 0 0 0 1 0 1 2 1 1	1 1 2 0 1 0 0 1 1 0	0 1 1 0 0 0 1 0 0 0	1 1 1 0 ? 0 0 0 1 1	1 0 0
C.bar	0 1 0 0 0 0 1 1 0 1	? 0 0 0 0 0 1 2 1 0	1 1 2 0 1 0 1 1 0 0	1 1 1 0 0 0 0 0 0 0	0 1 1 0 ? 1 1 0 1 1	1 0 0
C.bod	0 1 0 0 0 0 1 1 0 1	? 0 0 0 1 0 1 2 1 0	0 1 1 0 1 0 0 1 0 0	0 0 0 0 0 0 0 0 0 0	0 1 2 1 1 0 0 0 1 1	1 0 0
C.con	0 1 0 0 0 0 1 1 0 1	? 0 0 0 1 0 1 2 1 1	1 1 2 0 1 0 0 1 1 0	0 1 1 0 0 0 1 0 0 0	1 1 1 0 ? 0 0 0 1 1	1 0 0
C.glo	0 1 0 0 0 0 1 1 0 1	? 0 0 0 1 0 1 2 1 0	0 1 1 0 1 0 0 1 0 0	0 0 0 0 0 0 0 0 0 0	0 1 2 1 0 1 0 0 1 0	1 0 0
C.gra	0 1 0 0 0 0 1 1 0 1	? 0 0 0 1 0 1 2 1 0	1 1 2 0 1 0 0 1 1 0	1 1 1 0 0 0 0 0 0 0	1 1 1 0 ? 1 0 0 1 1	1 0 0
C.kun	0 1 0 0 0 0 1 1 0 1	? 0 0 0 1 0 1 2 1 0	0 1 1 0 1 0 0 1 0 0	0 0 0 0 0 0 0 0 0 0	0 1 2 1 1 1 0 0 1 1	1 0 0
C.lon	0 1 0 0 0 0 1 1 0 1	? 0 0 0 0 0 1 2 1 0	1 1 2 0 1 0 0 1 0 0	1 1 1 0 0 0 0 0 0 0	0 1 1 0 ? 1 1 0 1 1	1 0 0
C.mac	0 1 0 0 0 0 1 1 0 1	? 0 0 0 1 0 1 2 1 0	0 1 1 0 1 0 0 1 0 0	0 0 0 0 0 0 0 0 0 0	0 1 2 1 1 0 0 0 1 1	1 0 0
C.mal	0 1 0 0 0 0 1 1 0 1	? 0 0 0 1 0 1 2 1 0	1 1 2 0 1 0 1 1 0 0	1 1 1 0 0 0 0 0 0 0	1 1 1 0 ? 1 1 0 1 1	1 0 0
C.mar	0 1 0 0 0 0 1 1 0 1	? 0 0 0 1 0 1 2 1 0	0 1 1 0 1 0 0 1 0 0	0 0 0 0 0 0 1 0 0 0	0 1 2 1 0 1 0 0 1 0	1 0 0
C.mue	0 1 0 0 0 0 1 1 0 1	? 0 0 0 1 0 1 2 1 0	1 1 2 0 1 0 0 1 0 0	1 1 1 0 0 0 0 0 0 0	0 1 1 0 ? 0 0 0 1 1	1 0 0
C.rap	0 1 0 0 0 0 1 1 0 1	? 0 0 0 1 0 1 2 1 0	0 1 1 0 1 0 0 1 0 0	0 0 0 0 0 0 0 0 0 0	0 1 2 1 0 1 0 0 1 0	1 0 0
C.tur	0 1 0 0 0 0 1 1 0 1	? 0 0 0 0 0 1 2 1 0	1 1 2 0 1 0 0 1 1 0	1 1 1 0 0 0 0 0 0 0	1 1 1 0 ? 0 0 0 1 1	1 0 0
C.ber	0 0 1 0 0 0 1 1 0 1	? 0 0 1 1 0 1 1 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	1 0 ? 0 ? 1 0 0 0 ?	1 0 0
C.dah	0 0 1 0 0 0 1 1 0 1	? 0 0 1 1 0 1 1 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	1 0 ? 0 ? 1 0 0 0 ?	1 0 0
C.pro	0 0 1 0 0 0 1 1 0 1	? 0 0 1 1 0 1 1 0 0	0 1 1 0 0 0 0 0 0 1	0 0 0 0 0 0 0 0 0 0	1 0 ? 0 ? 0 0 0 0 ?	1 0 0
C.sca	0 0 1 0 0 0 1 1 0 1	? 0 0 1 1 0 1 2 1 0	0 1 1 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	1 0 ? 0 ? 0 0 0 0 ?	1 0 0
C.sim	0 0 1 0 0 0 1 1 0 1	? 0 0 1 1 0 1 1 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	1 0 ? 0 ? 0 0 0 0 ?	1 0 0
C.lat	1 1 0 1 1 0 1 0 1 0	? 1 0 0 ? 0 1 2 1 0	0 0 0 0 0 0 0 0 1 0	0 0 0 0 1 1 0 0 1 1	1 3 ? 0 ? 1 0 0 0 ?	0 0 0
C.sco	1 0 0 1 0 0 1 0 0 0	? 1 0 0 ? 0 1 2 1 0	0 0 0 0 0 0 0 0 0 1	0 0 0 0 1 1 0 0 1 1	1 3 ? 0 ? 0 0 0 0 ?	0 0 0
C.vah	0 0 0 0 0 0 1 0 0 0	? 0 0 0 ? 0 1 2 1 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	1 2 ? 0 ? 0 0 0 0 ?	0 0 0
C.eph	0 0 0 0 0 1 1 0 0 1	1 0 1 0 1 1 1 2 1 0	0 0 0 1 0 1 0 0 0 0	0 0 0 1 0 0 0 1 0 0	1 1 0 0 ? 1 0 1 0 ?	1 1 1
C.fes	0 0 0 0 0 1 1 0 0 1	0 0 1 0 1 1 1 2 1 0	0 0 0 0 0 1 0 0 0 0	0 0 0 1 0 0 0 0 0 0	1 1 0 0 ? 0 0 0 0 ?	1 0 0
C.mat	0 0 0 0 0 1 1 0 0 1	2 0 1 0 1 1 1 2 1 0	0 0 0 1 0 1 0 0 0 0	0 0 0 1 0 0 0 1 0 0	1 1 0 0 ? 1 0 0 0 ?	1 1 0
C.pre	0 0 0 0 0 1 1 0 0 1	1 0 1 0 1 1 1 2 1 0	0 0 0 1 0 1 0 0 0 0	0 0 0 1 0 0 0 0 0 0	1 1 0 0 ? 1 0 1 0 ?	1 1 1
C.scr	0 0 0 0 0 1 1 0 0 1	2 0 1 0 1 1 1 2 1 0	0 0 0 1 0 1 0 1 0 0	0 0 0 1 0 0 0 1 0 0	1 1 0 0 ? 1 0 1 0 ?	1 1 0

APPENDIX 3. Male morphological characters used in the phylogenetic analysis, with description of character states.

HEAD

1. Head colour: not black (0), partially or completely black (1)
2. Head colour: not orange (0), partially orange (1)
3. Labrum length versus clypeus length: subequal (0), distinctly longer (1)
4. Depression in the middle of occiput: absent (0), present (1)
5. Eye shape: elliptic (0), ventral half larger than the dorsal (1)
6. Long and narrow groove on frontal calli outer side, over the eye (frontal calli lateral margin being elevated and slightly protruding over the eye in dorso-lateral view): absent (0), present (1)
7. Frontal calli: absent (0), present (1)
8. Frontal calli: close to each in the middle of the frons (0), separated by a "frontal area" variously extended (1)
9. Depression on frontal calli outer side, just in front of the eyes: absent (0), present (1)
10. Shape of frontal calli posterior margin: straight (0), curve (1)
11. Shape of frontal calli lateral margin (over the eye), in dorsal view: straight and slightly converging anteriorly (0), straight and parallel (1), sinuate (2)
12. Frontal calli, in lateral view: only slightly raised (0), distinctly raised (1)
13. Frontal calli length versus eye length, in dorsal view (I): shorter (0), subequal or longer (1)
14. Frontal calli length versus eye length, in dorsal view (II): more than the half of eye length (0), less than the half of eye length (1)
15. Shape of frontal calli posterior margin: curved but close to each other, from clypeus to frons and then abruptly curved to the eye (0), gradually curved from clypeus to eye (1)
16. Frontal calli lateral margin (over the eye), in dorsal view: not distinct (0), raised and slightly protruding over the eye, so clearly distinct (1)
17. Number of antennomeres: 11 (0), 9 (1)
18. Keel on antennomere I: absent (0), poorly developed (1), well developed (2)
19. Shape of keel on antennomere I: directed upwards (0), externally curved (1)
20. Small and pointed expansion on the edge of keel on antennomere I: absent (0), present (1)
21. Wide incision on the apical margin of keel on antennomere I: absent, or only slightly visible (0), well visible (1)
22. Laminar expansion under antennomere III: absent (0), present (1)
23. Laminar expansion under antennomere III: inconspicuous (0), simple (1), with an anterior lobate expansion, variously developed and curved (2)
24. Narrow, long and curved expansion on dorsal side of antennomere IV: absent (0), present (1)
25. Short setae on distal face of ventral foliaceous expansion of antennomere V: absent (0), present (1)
26. Very long and narrow expansion on dorsal side of antennomere V: absent (0), present (1)
27. Long and dark setae under antennomere VI: absent (0), present (1)
28. Long, narrow and distinctly curved expansion under antennomere VI: absent (0), present (1)
29. Long setae on antennomere VII: absent (0), present (1)
30. Colour of antennomere IX: yellow (0), dark (1)
31. Small and pointed expansion on antennomere IX: absent (0), present (1)
32. Ventral socket on antennomere IX: absent (0), present (1)
33. Lateral incision on antennomere IX: absent (0), present (1)
34. Laminar and sinuate expansion along the outer side of antennomere IX: absent (0), present (1)
35. Deep hollow on dorsal portion of antennomere IX: absent (0), present (1)
36. Shape of palpomere IV: cylindrical or weakly flattened (0), strongly flattened, almost laminar and convolute (1)
37. Socket on palpomere IV ventral side: absent (0), present (1)
38. Shape of palpomere IV: not hatchet-like (0), hatchet-like (1)

THORAX

39. Thorax colour (I): metallic (0), not metallic (1)
40. Thorax colour (II): not orange (0), at least partially orange (1)
41. Male protarsi length versus protibiae: subequal (0), longer (1)
42. Shape of male protibiae: not extended (0), dorsally well extended to form a keel (1), dorsally scarcely extended and with an evident lateral depression (2), dorso-ventrally flattened (3)
43. Shape of male protibial keel: with a dorsal straight edge (in lateral view) and with a distal curved expansion (0), with a dorsal rounded edge (in lateral view) (1), with a dorsal straight edge (in lateral view) with a bulge in the middle of anterior edge (2)
44. Flattened extension on the anterior edge of mal protibiae, also known as "patella": absent (0), present (1)
45. Shape of the "patella" on male anterior edge of protibiae: slightly protruding over probasitarsus (0), distinctly protruding over probasitarsus (1)

46. Protarsomere V length versus III: longer (0), subequal (1)
47. Protarsomeres III–V length versus I–II: subequal or longer (0), shorter (1)
48. Triangular expansion on protarsomere V inner side: absent (0), present (1)
49. Dorsal bulge on male protarsomere II: absent (0), present (1)
50. Shape of dorsal bulge on male protarsomere II: dorsally directed (0), directed outwards (1)
51. Hollow on the dorsal side of protarsomere I: absent (0), present (1)
52. Long setae on the inner side of protarsomere V: absent (0), present (1)

ABDOMEN

53. Two posterior laminar expansions on last abdominal sternite: absent (0), present (1)