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The Meloidae (Coleoptera) of the United Arab Emirates with an updated Arabian checklist

MARCO A. BOLOGNA[1] & FEDERICA TURCO[2]
Dipartimento di Biologia, Università Roma Tre, Viale Marconi 446 00146 Roma Italy.
E-mail: [1]bologna@uniroma3.it; [2]federicaturco@yahoo.it

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Abstract

This is the first contribution on the blister beetles (Meloidae) of the United Arab Emirates (U.A.E.), but new records from all countries of the Arabian Peninsula are also included, with the addition of some species never recorded before from this region, thus updating the previous checklist. Two species from U.A.E. are described: *Hycleus pirata* **n. sp.** (distributed also in Oman) and *Hycleus dunalis* **n.sp.**, both belonging to different groups of species characterized by an unmodified mesosternum. *Mylabris* (*Mylabris*) *desertica* **n.sp.**, *Hycleus pintoi* **n.sp.**, and *Hycleus fraudulentus* **n. sp.** from Saudi Arabia, are also described. The following species previously referred to different mylabrine genera are here included in the genus *Hycleus* as new combinations: *H. arabicus* (Pallas, 1781), *H. borchmannianus* (Kaszab, 1983), *H. gratiosus* (Marseul, 1870), *H. ligatus* (Marseul, 1870), *H. pseudobrunnipes* (Kaszab, 1983), *H. scabratus* (Klug, 1845), *H. scapularis* (Klug, 1845). *Coryna pitcheri* Kaszab, 1983 is doubtfully referred to *Hycleus.* The new synonymies *Deridea notata minor* Kaszab, 1960 = *Deridea notata* Thomas, 1897, *Mylabris bimaculata* Klug, 1845 = *Hycleus sexmaculatus* (Olivier, 1811), and *Zonabris rugosissima* Pic, 1909 = *Hycleus aestuans* (Klug, 1845), are proposed. New information on the relationships of several species, particularly of the genera *Lydomorphus* and *Hycleus*, are also provided.

Key words: Meloidae, Arabian Peninsula, United Arab Emirates, checklist, new species, taxonomy, faunistics

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Introduction

In the last twenty years, the knowledge on the Arabian fauna has been greatly improved by the publication of the "Fauna of Saudi Arabia" volumes, which increased the scarce zoological information on this large geographical region. For Meloidae specifically, Kaszab (1983) published an important contribution in this editorial series, which summarized the state of art, adding the descriptions of several new taxa (both genera and species) and new records as well. A second paper by Schneider (1991) added one new species and new faunistical records.

The previous literature on the Arabian Peninsula was very scarce, with a single old paper devoted specifically to this area (Klug 1845), and other sparse records in taxonomic or applied works. A single contribution on the Yemen blister beetles (Borchmann 1938) and a short note on Saudi Arabian Coleoptera (Shalaby 1961) have to be considered as exceptions. The whole literature was considered by Kaszab (1983), who omitted only the following three papers: Baudi (1878a; 1878b, who, besides, erroneously cited *Mylabris impressa* Chevrolat, 1838 and *M. dejeani* Gyllenhal, 1817 from Arabia); Abushama & Cloudsley-Thompson (1979, who cited only an unidentified *Mylabris* from Kuwait). Some other records or taxonomic clarifications were published, after Kaszab's and Schneider's contributions, within revisional works on different genera or subgenera (Bologna & Coco 1991; Bologna & Pinto 1998), catalogues (Selander 1986; 1988), biogeographical reviews (Bologna 1988; 1990), or in other literature (Purrini & Rohde 1988).

The present work on U.A.E. represents the first comprehensive contribution to the knowledge of this eastern portion of the Arabian Peninsula, an interesting biogeographical zone, transitional between Afrotropical and Sindian Regions. Meloidae of the United Arab Emirates were never studied systematically, except a few species listed in two recent books, respectively devoted to the natural history of this country (Gillet & Gillet 2005) and of a single eastern mountain (Gillet & Howarth 2004), as well as in short reports (Gillet 1992; Gillet & Gillet 1996). In spring 2005, we organized a short field expedition on the U.A.E., primarily focused on the research of Cerocomini blister beetles in the Al Aïn area (Abu Dhabi Emirate), after an agreement with the local University. The field work along the northern Emirates as well as more intensive collecting in the Al Aïn area, led to the collection of interesting species, two of which are new. Four species cited by Gillet & Gillet (2005), namely *Epicauta sharpi* Marseul, 1875, *Hycleus maculiventris* (Klug, 1845), *Meloe omanicus* Kaszab, 1983 and *Nemognatha chrysomelina* (Fabricius, 1751), were not recently collected in U.A.E. but only in other countries of the Arabian Peninsula.

Moreover, in the last few years, one of us (MAB) studied several collections from different European museums, and assembled additional records on the Arabian Meloidae, including species new or never recorded for this region. These data are here presented, together with those of the U.A.E., to improve the faunistical knowledge of the Arabian Peninsula. One new *Mylabris* from Saudi Arabia and four new *Hycleus* species from both U.A.E. and Saudi Arabia are described. All new and previous records are summarized in Table 1, thus representing an update of the Meloidae checklist from Arabian countries published by Kaszab (1983) and Schneider (1991), according to the nomenclature recently defined by Bologna (1991) and Bologna & Pinto (2002), and to the synonymies listed by Bologna (in press).

Material and methods

The specimens collected in the 2005 expedition are preserved in the M. Bologna collection, Roma Tre University (CB); also several specimens from other Arabian countries, cited in the second part of the paper, are preserved in the same collection, if not differently indicated. Types of the new species are preserved in the CB and in the Natural History Museum, London (BMNH).

TABLE 1. Checklist of Meloidae in the Arabian Peninsula countries. Question marks indicate doubtful taxa.

Taxa	Saudi Arabia	Yemen / S= Suqutra	Oman	U.A.E.	Kuwait
Actenodia denticulata (Marseul, 1872)	x			x	
Alosimus syriacus syriacus (Linnaeus, 1758)	x				
Anisarthrocera batesi (Marseul, 1872)	x				
Cabalia arabica Kaszab, 1983	x				
Cabalia rufiventris (Walker, 1871)	x				
Cerocoma scovitzi marani Kaszab, 1951	x				
Ceroctis wittmeri Kaszab, 1983	x				
Ceroctis yerburyi (Gahan, 1896)	x	x			
Croscherichia albilanea (Bedel, 1899)	x				
Croscherichia femorata (Klug, 1845)	x				
Croscherichia goryi (Marseul, 1870)	x		x	x	
Croscherichia litigiosa (Chevrolat, 1837)	x		x	x	
Croscherichia paykulli (Billberg, 1813)	x?				
Croscherichia richteri Kaszab, 1957	x	x	x	x	
Croscherichia salavatiani Kaszab, 1968	x	x	x	x	
Croscherichia sanguinolenta arabica Bologna & Coco, 1991	x				
Croscherichia sonyae (Kaszab, 1983)	x			x	
Croscherichia tigrinipennis (Latreille, 1827)	x	x			
Cyaneolytta fryi (Wollaston, 1861)	x				
Cyaneolytta maculifrons (Mäklin, 1875)	x	x			
Deridea notata Thomas, 1897	x	x			
Diaphorocera hemprichi saudita Kaszab, 1983	x		x	x	
Diaphorocera johnsoni Kaszab, 1983	x			x	
Epicauta fasciceps Walker, 1871		x			
Epicauta sharpi (Marseul, 1875)	x	x	x	x	
Epicauta textilis (Haag-Rutenberg, 1880)	x				
Horia fabriciana Betrem, 1929	x	x		x	
Hycleus (?) pitcheri (Kaszab, 1983)	x			x	
Hycleus aestuans (Klug, 1845)	x	x			
Hycleus afrotropicus (Kaszab, 1983)		x			
Hycleus arabicus (Pallas, 1781)	x	x	x		
Hycleus argentatus (Fabricius, 1792)	x?				
Hycleus argentifer bytinskii (Kaszab, 1969)	x				
Hycleus argentifer pallidissimus (Kaszab, 1983)	x				
Hycleus bipunctatus (Olivier, 1811)	x			x?	
Hycleus borchmannianus (Kaszab, 1983)		x			
Hycleus brunnipes (Klug, 1845)	x	x	x	x	
Hycleus cingulatus (Faldermann, 1837)	x				
Hycleus cruentatus (Klug, 1845)	x				

to be continued.

TABLE 1. (continued)

Taxa	Saudi Arabia	Yemen / S= Suqutra	Oman	U.A.E.	Kuwait
Hycleus dunalis **n.sp**.				x	
Hycleus duplicatus (Klug, 1845)	x	x			
Hycleus fimbriatus (Marseul, 1870)	x	x			
Hycleus fraudulentus **n.sp**.	x				
Hycleus gratiosus (Marseul, 1870)	x		x		
Hycleus infasciculatus (Pic, 1929)	x				
Hycleus ligatus (Marseul, 1870)	x				
Hycleus maculiventris (Klug, 1845)	x	x	x	x	
Hycleus nigriplantis (Klug, 1845)	x	x			
Hycleus nigrohirtus (Kaszab, 1983)	x				
Hycleus novemdecimpunctatus (Olivier, 1811)	x				
Hycleus pintoi **n.sp.**	x				
Hycleus pirata **n.sp.**			x	x	
Hycleus pseudobrunnipes (Kaszab, 1983)	x		x	x	
Hycleus rubricollis (Marseul, 1875)	x	x			
Hycleus scabratus (Klug, 1845)	x	x	x		
Hycleus scapularis (Klug, 1845)	x	x	x		
Hycleus sexmaculatus (Olivier, 1811)	x				
Hycleus talhouki (Kaszab, 1983)	x				
Hycleus tigrinus (Klug, 1845)	x	x			
Hycleus yemenicus (Kaszab, 1983)		x			
Leptopalpus quadrimaculatus Gahan, 1896		x			
Lydoceras fasciatus (Fabricius, 1775)	x	x			
Lydoceras lictor (Gerstaecker, 1885)	x				
Lydomorphus (?) beccarii (Haag-Rutenberg, 1880)	x	x			
Lydomorphus (?) palaestinus (Kirsch, 1870)	x				x
Lydomorphus angusticollis fairmairei (Kaszab, 1955)	x	x			
Lydomorphus angusticollis maculithorax (Kaszab, 1955)		x			
Lydomorphus angusticollis suturellus (Haag-Rutenberg, 1880)	x	x	x	x	
Lydomorphus brittoni (Kaszab, 1953)	x		x	x	
Lydomorphus buettikeri (Kaszab, 1983)	x		x	x	
Lydomorphus leucophthalmus bipallidus (Kaszab, 1953)	x	x			
Lydomorphus picticollis breviceps (Kaszab, 1955)	x	x			
Lydomorphus szalaymarzsoi (Kaszab, 1978)	x	x			
Lydomorphus tenuicollis (Pallas, 1798)	x	x			
Lydus humeralis (Gyllenhal, 1817)	x?				
Lyttolydulus thiebaulti arabicus Kaszab, 1983	x				
Lyttonyx bicolor (Walker, 1871)	x	x	x	x	
Meloe coelatus Reiche, 1857	x				
Meloe lefevrei Guérin-Méneville, 1849		x? (S)			

to be continued.

TABLE 1. (continued)

Taxa	Saudi Arabia	Yemen / S= Suqutra	Oman	U.A.E.	Kuwait
Meloe marianii Kaszab, 1983	x				
Meloe omanicus Kaszab, 1983			x	x	
Meloe rathjensi Borchmann, 1938		x			
Meloe sanaanus Borchmann, 1938		x			
Meloe trapeziderus Gahan, 1903		x (S)			
Mylabris calida (Pallas, 1782)	x	x			
Mylabris cincta Olivier, 1795	x				
Mylabris desertica **n. sp.**	x				
Mylabris elegans Olivier, 1811	x		x	x	
Mylabris excellens Kaszab, 1983	x				
Mylabris raml Schneider, 1991	x			x	
Mylabris tenebrosa Laporte de Castelnau, 1840	x				
Nemognatha chrysomelina (Fabricius, 1775)	x			x	
Nemognatha quinquemaculata Suffrian, 1853	x		x		
Rhampholyssodes pitcheri Kaszab, 1983	x			x	
Stenoria muiri Kaszab, 1956		x			
Zonitoschema gibdoana (Kaszab, 1956)	x				
Zonitoschema griseohirta Pic, 1914	x				
Zonitoschema oculatissima Peyerimhoff, 1929	x?				
Zonitoschema pallidissima (Reitter, 1908)	x?				
Zonitoschema rubricolor Pic, 1924	x				

Other specimens were examined in the following collections (with associated acronyms reported in the text): BMNH = Natural History Museum, London; C. Krejcik = Stanislav Krejcik coll., Unicov, Czech Republic; C. Migliaccio = Enrico Migliaccio coll., Roma; HNHM = Hungarian Natural History Museum, Budapest; MNHN = Muséum National d'Histoire Naturelle, Paris; MNHU = Museum für Naturkunde der Humboldt-Universität, Berlin; MRST = Museo Regionale di Storia naturale, Torino; MZUF = Museo Zoologico de "La Specola", Università di Firenze; UCD = University of California, Davis, R. M. Bohart Museum of Entomology; ZSM = Zoologischen Staatssammlung, Münich.

Results

Subfamily Eleticinae

We recently examined an undescribed species from Yemen, belonging to a new genus with derived features (Bologna & Geisthardt unpublished), which seems to be related to another undescribed genus from southwestern Africa (Bologna & Pinto unpublished). This species is not considered in the present checklist of the Arabian Meloidae.

Tribe Derideini

***Deridea notata* Thomas, 1897**

Distribution. This species, endemic to the Arabian Peninsula, represents one of the Afrotropical elements of the Arabian fauna; it belongs to a genus which includes two other species from central and southeastern Africa.

New records. *Saudi Arabia*: Wadi Jīzān, 21.v.1979, G. Filipponi coll. 2 exx. (CB); Wadi Qarma, 14.ii.1937, H. St. J. B. Phillby coll. 1 ex. (BMNH); Shiara, i.1946, L. Tillin coll. 1 ex. (BMNH).
Yemen: Yemen, Milliken coll. 1 ex. (BMNH); Lahej, 1 ex. (BMNH).

Remarks. The systematic position of this genus is controversial and still needs a detailed analysis (Bologna & Pinto 2002); it was referred to the subfamily Nemognathinae (Selander 1991).

Deridea notata was considered polytypic by Kaszab (1960; 1966), who described the ssp. *minor*, characterized by smaller size, head narrowed posteriorly and completely black or only with a small frontal red spot, middle and posterior sterna and legs completely black. Both the nominate subspecies and the ssp. *minor* (we examined the Holotypes of both at BMNH) were described from Yemen (Type localities, respectively: "Yemen" and "Yemen, Lahej near Aden"); the first was then cited from Saudi Arabia by Kaszab (1983). The head of the Arabian specimens we examined is entirely black in the male, and red with two small black spots on occiput in the female; other distinctive characters proposed by Kaszab (1960) appear inconsistent. The new synonymy *Deridea notata minor* Kaszab, 1960 = *Deridea notata* Thomas, 1897 is consequently proposed.

Subfamily Meloinae

Tribe Lyttini

***Cabalia rufiventris* (Walker, 1871)**

Distribution. Transaharan species, distributed from Morocco east to Sinai. New for the Arabian Peninsula.

New records. *Saudi Arabia*: Near Hā'il, Kubeh, 19.iv.1944, A. R. Waterston coll. 1 ex. (BMNH).

***Lyttonyx bicolor* (Walker, 1871)**

Distribution. Saharo-Sindian species, distributed from Morocco to Egypt through Sahara, southern Israel and Sinai, Iran and Arabian Peninsula (Saudi Arabia, Yemen, Oman). Previously cited from U.A.E. by Gillet & Gillet (1996) and Gillet & Gillet (2005).

New records. *Saudi Arabia*: Wadi Duram, 9.v.1976, W. Büttiker coll. 1 ex. (CB).

U.A.E.: Sharjah Emirate, EA3, 6,3 Km N Mileiha on W detour, 1,2 Km from crossroad, 25,19188° N 55,90548° E 150 m a.s.l., 11.iii.2005 M. Bologna & F. Turco coll. 5 exx., on *Eremobium aegyptiacum* (CB). Abu Dhabi Emirate, EA10, Al Aïn, 3–4 Km E Al Selimat on road Al Aïn-Abu Dhabi, 24,19263° N 55,58861° E, 220 m a.s.l., 12.iii.2005 M. Bologna & F. Turco coll. 1 ex., on *Eremobium aegyptiacum* (CB). Abu Dhabi Emirate, Al Aïn Road, 15.IV.1983, J.N.B. Brown coll. 1 ex. (BMNH). Abu Dhabi Emirate, EA4, Al Bateen dunes, 4 Km W Al Aïn on the road to Abu Dhabi, 24,20491° N 55,61263° E, 195 m a.s.l., 15.iii.2005, M. Bologna & F. Turco coll. 1 ex., on *Tribulus omanense* (CB). Abu Dhabi Emirate, Suweihan Road, 20.iv.1984, J.N.B. Brown coll. 1 ex. (BMNH).

Remarks. The numerous synonyms of this species are due to its great colour variability. The specimens from the U.A.E. are characterized by variable extensions of black colouration of the head.

***Lydomorphus (Lydomorphus) angusticollis suturellus* (Haag-Rutenberg, 1880)**

Distribution. *Lydomorphus angusticollis* is a polytypic Sudanian-Sindian species, distributed from Mauritania to northwest India, through northern Sahel, Ethiopia and Somalia, the Arabian Peninsula and Southern Iran. Kaszab (1983) cited from Oman the ssp. *fairmairei* Kaszab, 1955, also recorded from Djibouti (formerly French Somalia), Saudi Arabia and Yemen. From the Arabian Peninsula are cited also the ssp. *suturellus*, considered as a distinct species by Schneider (1991), distributed from Eritrea, Saudi Arabia, Yemen, Oman, Iran, Pakistan, India (erroneously cited also from Mauritania), and the ssp. *maculithorax* Kaszab, 1955, recorded from Yemen. According to Selander (1988), the locality of Buraimi, cited by Kaszab (1983) is located in the U.A.E., but actually it is in Oman, close to the borders with U.A.E., near the city of Al Aïn. Previously cited from U.A.E. by Gillet & Gillet (1996, 2005) and Gillet & Howart (2004).

New records. *Saudi Arabia*: Usfān-Jiddah, 10.iv.1979, F. Nunziati coll. 2 exx. (CB). Wadi Jizan, 20.iii.1978, 1.6.1978, 18., 23. and 26.xi.1978, G. Filipponi coll. 10 exx. (CB). Wadi Qarma, 14.ii.1937, H. St.J.B. Phillby coll. 5 exx. (BMNH). Wapar Faja, 17–18.vi.1936, H. St.J.B. Phillby coll. 1 ex. (BMNH). Lodar, 16.v.1967, G. Guichardt coll. 2 exx. (BMNH); Ahwar, vi.1936, R. C. M. Darling coll. 1 ex. (BMNH).

U.A.E.: United Arab Emirates, 1 ex. (University of Al Aïn , Department of Biology Insect Collection). Abu Dhabi Emirate, EA7, Al Aïn "Aïn Al Fayda" Hotel, 24,08863° N 55,72238° E, 235 m a.s.l., 13.iii.2005 M. Bologna & F. Turco coll. 6 exx. at light (CB).

Oman: Al Seefa, 3.iii.1989, L. Gray coll. 1 ex. (CB).

Remarks. The taxonomy of this species is still under discussion, and the validity of the six described subspecies needs confirmation. These subspecies are recognizable by colour differences, considered constant by Kaszab (1955; 1983), but actually they seem to form a cline; moreover, the ranges of these forms are partially overlapping. Schneider (1991) considered *suturellus* as a distinct species, the eastern vicariant (Arabian Peninsula, Iran to India) of *angusticollis*, which is distributed through the Sahel and the Horn of Africa, to Western Arabia and Yemen. We agree with Kaszab's opinion and consider *suturellus* as a subspecies, while we retain as doubtful some of the subspecies from Eritrea and Somalia.

***Lydomorphus (Lydomorphus) leucophthalmus bipallidus* (Kaszab, 1953)**

Distribution. The species is distributed in eastern Africa and Arabian Peninsula; this subspecies is endemic to Saudi Arabia and Yemen.

New records. *Saudi Arabia*: East Arabia, Thamud, 5.v.1953, G. Popov coll. 2 exx. (BMNH; CB); Nejran, 20.vii.1962, G. Popov coll. 1 ex. (BMNH).

***Lydomorphus (Lydomorphus) tenuicollis* (Pallas, 1798)**

Distribution. Distributed from Arabian Peninsula and Iran, east to Pakistan and India, south to East Africa. Dubiously cited from Egypt.

New records. *Saudi Arabia*: Lith, 29.i.1946, L. A. Tillin coll. 5 exx. at light in millet field (BMNH); Lith, 10 mil inland, i.1945, P. Uvarov coll. 1 ex. (BMNH). Wadi Lith, 30.i.1946, E. S. Brown coll. 1 ex. (BMNH). *Yemen*: Hodeidah to Sanaa, 20.ix.1962, G. Popov coll. 2 exx. (BMNH).

***Lydomorphus (Lydomorphus) buettikeri* (Kaszab, 1983)**

Distribution. Recorded from Oman and Saudi Arabia. Previuosly cited from U.A.E. by Gillet & Howarth (2004) and Gillet & Gillet (2005).

New records. *U.A.E.*: Abu Dhabi Emirate, EA4, Al Bateen dunes, 4 Km W Al Aïn on the road to Abu Dhabi, 24,20491° N 55,61263° E, 195 m a.s.l., 13–15.iii.2005 M. Bologna & F. Turco coll. 26 exx., on *Tribulus omanense* (CB). Abu Dhabi Emirate, Al Aïn , Al Bateen dunes, 18.iii.2000, M. Gillet coll. 8 exx. (C. Krejcik). Abu Dhabi Emirate, EA5, Al Jahar-Al Saad on road Al Aïn-Abu Dhabi, 24,21940° N 55,52091° E, 180 m a.s.l., 12–14.iii.2005 M. Bologna & F. Turco coll. 5 exx., on *Zygophyllum mandavillei* (CB). Abu Dhabi Emirate, EA7, Al Aïn "Aïn Al Fayda" Hotel, 24,08863° N 55,72238° E 235 m a.s.l., 14.iii.2005 M. Bologna & F. Turco coll. 7 exx., at morning and 1 ex at night, on *Zygophyllum mandavillei* (CB). Abu Dhabi Emirate, Al Aïn "Aïn Al Fayda", 25.ii.2000, M. Gilet coll. 1 ex (C. Krejicik). Abu Dhabi Emirate, EA8, Al Aïn, 2 Km E Al Saad, 24,21241° N 55,50620° E, 145 m a.s.l., 13.iii.2005 M. Bologna & F. Turco coll. 2 ex., on *Eremobium aegyptiacum* (CB). Abu Dhabi Emirate, EA9, Al Aïn, Al Bateen dunes, crossroad E22-road to Al Aïn Airport, 24,20080° N 55,59146° E, 195 m a.s.l., 13.iii.2005 M. Bologna & F. Turco coll. 4 exx., on *Zygophyllum mandavillei* (CB). Abu Dhabi Emirate, EA10, Al Aïn, 3–4 Km E Al Selimat on road Al Aïn-Abu Dhabi, 24,19263° N 55,58861° E, 220 m a.s.l., 12–15.iii.2005 M. Bologna & F. Turco coll. 28 exx., on *Tribulus omanense* (CB). Abu Dhabi Emirate, EA11, 37 Km S Al Aïn on road Al Aïn-Al Wijan, 23,9108° N 55,49472° E, 150 m a.s.l., 14.iii.2005 M. Bologna & F. Turco coll. 3 exx. on *Zygophyllum mandavillei* (CB). ? Liwa (or Uwa), 22.iii.1985 J.N.B. Brown coll. 1 ex. (BMNH).

Remarks. Kaszab (1983, as *Cylindrothorax*) emphasized the phenetic similarities between this species and *L. brittoni* (Kaszab, 1953), but referred it to the group XVIII rather than XV (*sensu* Kaszab 1955, as *Cylindrothorax*), close to *L. janczkyi* (Kaszab, 1959), a species distributed in Iraq and Iran. Kaszab (1959) related *L. janczkyi* to *L. csikii* (Kaszab, 1959), a species from Somalia, which, according to Bologna & Aloisi (1992) is a synonym of *L. cinnamomeus* (Fairmaire, 1889). Also Schneider (1991) considered *L. buettikeri* and *L. brittoni* as very difficult to distinguish from each other, and did not mention any diagnostic characters. Both authors examined only few specimens of *L. buettikeri* and were thus unable to define its variability.

Actually, *L. buettikeri* and *L. brittoni* are phenetically similar in size and colouration: the head and pronotum colour of the former is greatly variable and some specimens have the same pattern of red and black colouration of *L. brittoni*. Nevertheless, *L. buettikeri* is distinct because of its elongate (vs. greatly rounded) temples.

The examination of a great number of specimens of this species permits to define its relationships. The systematics of the genus *Lydomorphus* is still not defined, and this taxon seems to be polyphyletic (Bologna *et al.* unpublished), as previously indicated by Bologna & Pinto (2002); also some of the groups defined by Kaszab (1955) are not monophyletic. In our opinion, *L. buettikeri* is actually related to *L. brittoni* and both belong to a distinct Arabian-Sindian group of species, which includes also *L. janczkyi* but none of the species of both the XV and XVIII groups as defined by Kaszab (1955; 1959; 1983). In particular, *L. cinnamomeus*, previously included by Kaszab (1955 as *csikii*) in the XVIII group, is close to *L. angusticollis* (group XV) (see Bologna & Aloisi 1992), but all the other species referred in the literature to the XV group [*L. femoralis* (Kocher, 1955), *L. palaestinus* (Kirsh, 1870), *L. reymondi* (Selander, 1988), *L. saharianus* (Kaszab, 1961), *L. verrucicollis* (Karsh, 1881)], probably belong to a distinct genus as well as most of those of the XVIII group [*L. pici* (Kaszab, 1955), *L. rufopectus* (Kaszab, 1955), *L. sudanicus* (Pic, 1930), *L. casalei* (Pic, 1914), *L. discolor* (Haag-Rutenberg, 1880); see Bologna & Pinto 2002 for details].

***Lydomorphus (Lydomorphus) brittoni* (Kaszab, 1953)**

Distribution. Cited from Iraq, Saudi Arabia and Oman; new for the U.A.E.

New records. *U.A.E.*: Al Aïn, Al Bateen dunes, 18.iii.2000, M. Gillet coll. 1 ex. (C. Krejcik)

Oman: Ash Sharqiyah, Ra's Al Hadd, 23 27°N– 59 06°E, 22.iii.1990, M.D. Gallaghen coll. 1 ex. (CB).

***Lydomorphus (Somalolydus) szalaymarzsoi* (Kaszab, 1978)**

Distribution. Endemic to the Arabian Peninsula and until now cited from Saudi Arabia and Yemen. The present is the second citation of this species.

New records. *Yemen*: Hadeidah to Sanaa, 20.ix.1962, G. Popov coll. 1 ex. (BMNH).

***Lydomorphus* (?) *palaestinus* (Kirsch, 1870)**

Distribution. Widely distributed from Morocco, through the Sahara Desert, east to Egypt, Middle East, and Saudi Arabia. Possibly the western records refer to a distinct species.

New records. *Saudi Arabia*: Ghina, 13.ii.1948, J. B. Philby coll. 7 exx. (BMNH; CB); NW Arabia, Madain Salih, iv.1946, 1 ex. (BMNH).

Remarks. Some species, including *palaestinus*, presently referred to *Lydomorphus*, probably belong to a distinct genus, as previously indicated by Bologna & Pinto (2002). Molecular and morphological research (on both larvae and adults) on the *Lydomorphus*-complex is still in progress (Bologna *et al*., unpublished).

***Alosimus syriacus syriacus* (Linnaeus, 1758)**

Distribution. Polytypic species widely distributed in the Middle and Near East: the ssp. *afghanicus* Kaszab, 1973 is endemic to Afghanistan; the ssp. *austriacus* (Schrank, 1781) is distributed from Central to Eastern Europe (from Switzerland to Kazakhstan); the ssp. *rauterbergi* (Reitter, 1907) is distributed in Cyrenaica (Libya), northern Egypt, Sinai and southern Israel; the nominate subspecies from Anatolia, south to Israel and Palestine, and east to Iran. New for the Arabian Peninsula.

New records. *Saudi Arabia*: Djedda, M.V. Botta coll. 5 exx. (MNHN).

Tribe Cerocomini

***Rhampholyssodes pitcheri* Kaszab, 1983**

Distribution. Endemic to the eastern Arabian Peninsula, until now recorded only from the type locality in Saudi Arabia. Cited from U.A.E. by Gillet & Gillet (2005).

New records. *U.A.E.*: Al Aïn , Al Bateen dunes, 18.iii.2000, M. Gillet coll. 10 exx. (CB, C. Krejcik)

Remarks. This monotypic genus was recently revised by Turco & Bologna (in press). The figures of male genitalia published by Kaszab (1983) do not completely correspond to the actual aedeagal shape of both types and additional specimens examined.

***Diaphorocera hemprichi saudita* Kaszab, 1983**

Distribution. This polytypic Saharo-Arabian species is distributed from Morocco to Egypt, Israel and northern Saudi Arabia. The ssp. *saudita* is recorded only from eastern Saudi Arabia, Oman and southern Iran (Turco & Bologna 2007). Cited from U.A.E. by Gillet & Howarth (2004) and Gillet & Gillet (2005).

New records. *U.A.E.* Ras Al Khaimah Emirate, EA1, road E11 crossroad to the International Airport, 25,66708° N 55,76770° E, 5–10 m a.s.l., 11.iii.2005 M. Bologna & F. Turco coll. 5 exx., on *Senecio glaucus*

coronopifolius (CB). Ras Al Khaimah Emirate, EA2, 23 Km S International Airport on road E18 (Hebab-Manama), 25,43997° N 55,98395° E, 120 m a.s.l., 11.iii.2005 M. Bologna & F. Turco coll. 2 exx., on *Zygophyllum mandavillei* (CB). Abu Dhabi Emirate, EA4, Al Bateen dunes, 4 Km W Al Aïn on the road to Abu Dhabi, 24,20491° N 55,61263° E, 195 m a.s.l., 15.iii.2005 M. Bologna & F. Turco coll. 3 exx., on *Tribulus omanense* (CB). *Idem*, 18.iii.2000, M. Gillet coll. 2 exx. (CB). Abu Dhabi Emirate, EA5, Al Jahar-Al Saad on road Al Aïn-Abu Dhabi, 24,21940° N 55,52091° E, 180 m a.s.l., 12.iii.2005 M. Bologna & F. Turco coll. 2 exx., on *Zygophyllum mandavillei* (CB). *Idem*, 13.iii.2005, 1 ex. (CB). Abu Dhabi Emirate, EA10, Al Aïn, 3–4 Km E Al Selimat on road Al Aïn-Abu Dhabi, 24,19263° N 55,58861° E, 220 m a.s.l. , 13.iii.2005 M. Bologna & F. Turco coll. 1 ex., on *Eremobium aegyptiacum* (CB). *Idem,* 15.iii.2005, 4 exx. on *Tribulus omanense* (CB).

Remarks. The genus, recently revised by Turco & Bologna (2007), includes eight species distributed in the Saharan and Arabic deserts. Schneider (1991) considered doubtful the ssp. *saudita*, which is actually distinct only by its deeper punctation on the head and pronotum. We temporarily retained the validity of the subspecies.

***Diaphorocera johnsoni* Kaszab, 1983**

Distribution. Endemic to the eastern Arabian Peninsula. Till now cited only from the type locality in Saudi Arabia; new for the U.A.E.

New records. *U.A.E.*: Dubai Emirate, Nahali, 15.iv.1989 E. Suqda coll. 1 ex. (UCD). Abu Dhabi Emirate, EA5, Al Jahar-Al Saad on road Al Aïn-Abu Dhabi, 24,21940° N 55,52091° E, 180 m a.s.l., 12.iii.2005 M. Bologna & F. Turco coll. 1 ex., on *Zygophyllum mandavillei* (CB).

***Cerocoma (Mesocerocoma) scovitzi marani* Kaszab, 1951**

Distribution. Polytypic species distributed from Anatolia, east to Iran, and south to Saudi Arabia (doubtfully also in Egypt). The ssp. *marani* is recorded from Iraq and Saudi Arabia.

New records. *Saudi Arabia*: Al Kharj, 4.v.1981, 1 ex. (HNHM).

Tribe Epicautini

***Epicauta sharpi* (Marseul, 1875)**

Distribution. Israel and Palestine, Iran, Saudi Arabia, Yemen, Oman and Djibouti. Cited from U.A.E. by Gillet (1992 as *E. erythrocephala* (Pallas, 1776); Mahdad, Buraimi-Madah rd., km 18) and Gillet & Gillet (2005).

New records. *Oman*: Wadi Bani Kharus, 23 20°N 57 35°E, 19.viii.1988, M. J. Elsejer coll. 1 ex. (CB).

***Cyaneolytta fryi* (Wollaston, 1861)**

Distribution. Sahelian species, widely distributed from the Cape Verde Islands and Senegal, through the Sahel, east to Sudan, Ethiopia and Djibouti. New for the Arabian Peninsula, where it represents an Afrotropical component.

New records. *Saudi Arabia*: Wadi Jīzān, 18.viii.1979, G. Filipponi coll. 3 exx. (CB); Wadi Lasaba, i.1946, L. Tillin coll. 4 exx. on *Suaeda* thicket (BMNH); Shi-Aera, nr. Quafida, 2.ii.1946, E. S. Brown coll. 11 exx. at light (BMNH); Asir, nr. Sabya, i.1945, A. R. Waterstone coll. 2 exx. at light (BMNH).

***Cyaneolytta maculifrons* (Mäklin, 1875)**

Distribution. This species is widely distributed in the Afrotropical Region, except in the central and western areas primarily dominated by tropical forests regions, and also in the western Arabian Peninsula. It represents another Afrotropical element of the Arabian fauna. Cited from Yemen, it is new for Saudi Arabia.

New records. *Saudi Arabia*: Wadi Jīzān, 18.viii.1979, G. Filipponi coll. 2 exx. (CB).

Tribe Mylabrini

***Mylabris (Ammabris) elegans* Olivier, 1811**

Distribution. Species widely distributed through the Saharo-Arabian deserts, from Morocco, east to Egypt and Levant (Israel, Jordan, Syria), Saudi Arabia and Oman; new for U.A.E.

New records. *U.A.E.*: Ras Al Khaimah Emirate, EA2, 23 Km S International Airport on road E18 (Habab-Manama), 25,43997° N 55,98395° E, 120 m a.s.l., 11.iii.2005 M. Bologna & F. Turco coll. 2 exx., on *Eremobium aegyptiacum* (CB). Sharjah Emirate, 1.4 Km N of Al Madam on the road to Al Aïn , 24,93442°N–55,775995°E, 185 m a.s.l., 11.iii.2005 M. Bologna & F. Turco coll. 1 ex. on *Eremobium aegyptiacum* (CB). Abu Dhabi Emirate, EA4, Al Bateen dunes, 4 Km W Al Aïn on the road to Abu Dhabi, 24,20491° N 55,61263° E, 195 m a.s.l., 12–15.iii.2005 M. Bologna & F. Turco coll. 7 exx., on *Eremobium aegyptiacum* and *Tribulus omanense* (CB). Abu Dhabi Emirate, EA8, Al Aïn, 2 Km E Al Saad, 24,21241° N 55,50620° E, 145 m a.s.l., 13.iii.2005 M. Bologna & F. Turco coll. 2 exx., on *Eremobium aegyptiacum* and *Tribulus omanense* (CB).

Oman: Wadi Air, 7.v.1957, G. Popov coll. 1 ex. (BMNH).

***Mylabris (Ammabris) raml* Schneider, 1991**

Distribution. Endemic to the eastern Arabian Peninsula, till now recorded only from the type locality in Saudi Arabia; new for the U.A.E.

New records. *U.A.E.*: Abu Dhabi Emirate, EA4, Al Bateen dunes, 4 Km W Al Aïn on the road to Abu Dhabi, 24,20491° N 55,61263° E, 195 m a.s.l., 13–15.iii.2005 M. Bologna & F. Turco coll. 20 exx., on *Tribulus omanense* (CB). Abu Dhabi Emirate, EA8, Al Aïn, 2 Km E Al Saad, 24,21241° N 55,50620° E, 145 m a.s.l., 13.iii.2005 M. Bologna & F. Turco coll. 1 ex., on *Eremobium aegyptiacum* (CB). Abu Dhabi Emirate, EA9, Al Aïn, Al Bateen dunes, crossroad E22-road to Al Aïn Airport, 24,20080° N 55,59146° E, 195 m a.s.l., 13.iii.2005 M. Bologna & F. Turco coll. 1 ex. (CB).

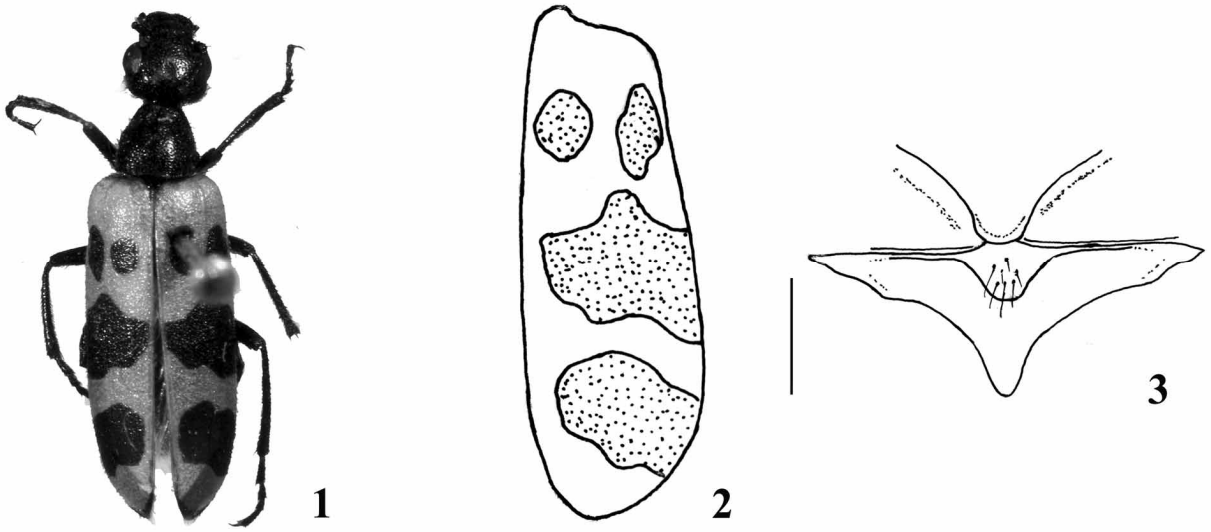
Taxonomic remarks. The species was considered as distinct from *M. elegans* only on the base of the antennal shape (antennal club composed by 7 vs. 6 segments). Other differences concern the longer pronotum, which is red with or without (as in one examined specimen) black spots and not unicolour black, and with fore sides more progressively narrowed; elytra are shiner.

Mylabris (Mylabris) desertica **Bologna n. sp.**

Type specimen. Holotype female: Saudi Arabia, Hā'il, Ghazzālah, 11.iv.1944 A. R. Waterston coll. (BMNH). This specimen lacks right antennomeres VIII–XI, left antennomeres III–XI, right mesotarsomeres and left hind leg.

Diagnosis. A medium sized *Mylabris* of the nominate subgenus (Fig. 1), characterized by a black elytral pattern unique in this group, with two fore spots, one middle wide spot, forming almost a transverse stripe, one subapical wide and transverse spot, almost forming a stripe, and a very narrow apical margin.

Description. Body black, but antennomeres after II dark reddish as well as mandibles; elytra brown with the following black spots (Fig. 2): two fore spots, parallel, the inner one rounded, the external wider and oval, one middle wide spot, forming almost a transverse stripe, enlarged anteriorly in the middle, two subapical spots wide and transverse fused to form a suboblique stripe, and an extremely narrow apical margin. Body maximal length: 13.4 mm.



FIGURES 1–3. *Mylabris (Mylabris) desertica* **n. sp.**: 1. Habitus of the Holotype; 2. right elytron; 3. mesosternal sclerites. Scale bar = 0.5 mm.

Head transverse, slightly wider than long, maximal width at the level of eye, which are large, slightly bulged, not evidently emarginated on the fore-dorsal margin. Frons only slightly convex, with a posteriorly bilobed red spot at middle, between eyes; punctation relatively scattered, slightly deep, intermediate surface micropunctate, shiny; frontal suture well developed. Temples subparallel but slightly convergent on occiput. Clypeus transverse, wider than long, with dense puncturation, fore margin slightly rounded; labrum 1.5 as long as clypeus, enlarged from base to middle, than convergent in front, fore margin widely emarginated. Mandibles narrowed anteriorly, about 1.5 as long as clypeus and labrum together. Maxillary and labial palpi unmodified, last maxillary palpomere slightly enlarged apically. Antennomere I more than twice as long as II, which is subglobose; III shiny and elongate, subparallel, three times as long as II and more than 1.5 as long as IV; IV–VI shiny, similar in shape, slightly widened from base; VII similar to IV–VI, but shorter and more widened, with denser setation.

Pronotum elongate, distinctly longer than wide, subparallel, slightly enlarged from base to the middle, then evidently narrowed to the fore margin. Anteriorly greatly depressed transversally; a round depression also at the middle and along the base. Punctures deep and distanced, intermediate surface shiny. Mesosternum

as in Fig. 3; mesepisterna anteriorly depressed, fore modified area ("scutum") small with a posterior setigerous area. Tibiae with two pointed elongate spurs; tibiae and tarsi with robust setae, subspiniform, fore protibial external expansion short; claws smooth, slender. Elytra densely punctured, punctures approached, subrugose, similar on both yellow and black surface.

Etymology. The name of this species refers to the most typical habitat of the Arabian Peninsula.

Mylabris (Mauritabris) tenebrosa Laporte de Castelnau, 1840

Distribution. Until now recorded with certainty from the whole North Africa, but probably distributed also in the Sinai Peninsula; other records from Near and Middle East must be referred to *M. damascena* Reiche, 1865. New for the Arabian Peninsula.

New records. *Saudi Arabia*: Buraydah, 12.4.76 R. Menrud coll. 1 ex. (ZSM); Near Hā'il, 23.iii.1962, G. Popov coll. 1 ex. (BMNH); Near Hā'il, Gazala, 11.iv.1944, A. R. Waterston coll. 1 ex. (BMNH).

Mylabris (Eumylabris) calida (Pallas, 1782)

Distribution. Centrasiatic-Mediterranean species, widely distributed from western China and Afghanistan west to Anatolia and eastern Balkan Peninsula, south to the Levant, Saudi Arabia and Yemen, and in the whole North Africa.

New records. *Saudi Arabia*: nr. Hā'il, Kubeh, 19.iv.1944, A. R. Waterston coll. 2 exx. (BMNH). Saudi Arabia, Hā'il, 15–20.iii.1966 G. Popov coll. 1 ex. (BMNH). Saudi Arabia, nr. Hā'il, 10.iv.1944, J. Deloa coll. 1 ex. (BMNH).

Yemen: between Umm Laylá (17°17'N 43°27'E) and Begin (17°24'N 43°27'E), M. Borri & M. Poggesi coll. 4 exx. (MZUF).

Croscherichia sanguinolenta arabica Bologna & Coco, 1991

Distribution. Species widely distributed from Senegal and Western Sahara through the whole Sahara, east to Sinai, Middle East and Iran; ssp. *arabica* is endemic to Saudi Arabia.

New records. *Saudi Arabia*. Near Hā'il, 15–20.iii.1962 G. Popov coll. 1 ex. (BMNH). Bureida, 6.iv.1962, 1 ex. (BMNH).

Croscherichia salavatiani Kaszab, 1968

Distribution. Arabian-Sindian species, recorded from Saudi Arabia, Yemen, Iran, Pakistan, Afghanistan. New for U.A.E. and Oman.

New records. *U. A. E.*: Abu Dhabi Emirate, EA4, Al Bateen dunes, 4 Km W Al Aïn on the road to Abu Dhabi, 24,20491° N 55,61263° E, 195 m a.s.l., 15.iii.2005, 1 ex. on *Tribulus omanense* (CB). Abu Dhabi Emirate, EA9, Al Aïn, Al Bateen dunes, crossroad E22-road to Al Aïn Airport, 24,20080° N 55,59146° E, 195 m a.s.l., 13.iii.2005 M. Bologna & F. Turco coll. 1 ex. (CB). Abu Dhabi Emirate, EA10, Al Aïn, 3–4 Km E Al Selimat on road Al Aïn-Abu Dhabi, 24,19263° N 55,58861° E, 220 m a.s.l. , 13.iii.2005 M. Bologna & F. Turco coll. 1 ex., on Poaceae (CB).

Oman. Taruf, 23.1982, 2 ex on Umbelliferae (BMNH).

***Croscherichia femorata* (Klug, 1845)**

Distribution. Endemic to western Arabian Peninsula, and recorded only from Saudi Arabia.

New records. *Saudi Arabia*. Barth, 21.vi.1934, H. St. J.B. Philby 1 ex. (BMNH).

***Croscherichia tigrinipennis* (Latreille, 1827)**

Distribution. Widely distributed from Senegal and Western Sahara, through the whole Sahara, east to Sudan and Ethiopia, Arabian Peninsula. Cited also from Iraq.

New records. *Saudi Arabia*. Lodar, 800 m, 16.v.1967 K. Guichardt coll. 5 exx. (BMNH).

***Croscherichia goryi* (Marseul, 1870)**

Distribution. Distributed in eastern Sudan (and generically recorded also from Egypt), Syria, Israel, Palestine, Iraq, Iran, Saudi Arabia, Oman, Pakistan, northwestern India. New for the U.A.E., even if it was probably recorded by Gillet & Gillet (2005), who published one picture of this *Croscherichia* as *Mylabris bipunctata* (Olivier) (see also *Hycleus pirata* n.sp.).

New records. *Saudi Arabia*: Arabia, 1 ex. (BMNH).

U.A.E.: Ras Al Khaimah Emirate, EA1, road E11 crossroad to the International Airport, 25,66708° N 55,76770° E, 5–10 m a.s.l., 11.iii.2005 M. Bologna & F. Turco coll. 2 ex., on Asteraceae with yellow flowers (CB). Ras Al Khaimah Emirate, Diqdāqah (as Digdagga), 15.v.1992, 1 ex. (CB); Jebel Qatar ?, 30.v.1985 ? J.N.B. Brown coll. 1 ex. (BMNH).

***Croscherichia richteri* Kaszab, 1957**

Distribution. Arabian-Sindian species, recorded from Saudi Arabia, Yemen, Oman, Iran. Cited from U.A.E. by Gillet & Gillet (2005). The citation of *C. gilvipes* (Chevrolat, 1838) from Yemen, Lahej (Gahan 1896) refers to this species (Bologna & Coco 1991).

New records. *U.A.E.*: Abu Dhabi Emirate, EA4, Al Bateen dunes, 4 Km W Al Aïn on the road to Abu Dhabi, 24,20491° N 55,61263° E, 195 m a.s.l., 12–15.iii.2005 M. Bologna & F. Turco coll. 35 exx., on *Eremobium aegyptiacum* and *Tribulus omanense* (CB). Abu Dhabi Emirate, EA5, Al Jahar-Al Saad on road Al Aïn-Abu Dhabi, 24,21940° N 55,52091° E, 180 m a.s.l., 12–14.iii.2005 M. Bologna & F. Turco coll. 29 exx., on *Zygophyllum mandavillei* (CB). Abu Dhabi Emirate, EA6, Al Jahar South, 24,20368°N 55,53109°E, m 195, 12.iii.2005, M. A. Bologna & F. Turco coll. 6 exx., on *Zygophyllum mandavillei* (CB). Abu Dhabi Emirate, EA7, Al Aïn "Aïn Al Fayda" Hotel, 24,08863° N 55,72238° E, 235 m a.s.l., 14.iii.2005 M. Bologna & F. Turco vid. 1 ex. Abu Dhabi Emirate, EA8, Al Aïn, 2 Km E Al Saad, 24,21241° N 55,50620° E, 145 m a.s.l., 13.iii.2005 M. Bologna & F. Turco coll. 16 exx., on *Eremobium aegyptiacum* and *Tribulus omanense* (CB). Abu Dhabi Emirate, EA9, Al Aïn, Al Bateen dunes, crossroad E22-road to Al Aïn Airport, 24,20080° N 55,59146° E, 195 m a.s.l., 13.iii.2005 M. Bologna & F. Turco coll. 8 exx. (CB). Abu Dhabi Emirate, EA10, Al Aïn, 3–4 Km E Al Selimat on road Al Aïn-Abu Dhabi, 24,19263° N 55,58861° E, 220 m a.s.l., 12–15.iii.2005 M. Bologna & F. Turco coll. 3 exx., on *Zygophyllum mandavillei*, *Tribulus omanense* and Poaceae (CB). Abu Dhabi Emirate, EA11, 37 Km S Al Aïn on road Al Aïn-Al Wijan, 23,9108° N 55,49472° E, 150 m a.s.l., 14.iii.2005 M. Bologna & F. Turco coll. 10 exx. on *Zygophyllum mandavillei* (CB). UAE, U Line 5Z40, 316609E 2535048N, pitfall trap 01/05/95 unfl.; 4086; I. Hamer coll. 1 ex. (BMNH).

***Croscherichia sonyae* (Kaszab, 1983)**

Distribution. Recorded only from the type locality in eastern Saudi Arabia; new for the U.A.E.

New records. *U.A.E.*: Swethan (?), 11.iv.1986 1 ex. (BMNH). Near Bir Asakir (?), 28.ix.1956, D. J. Greathead coll. 2 exx. (BMNH; CB).

Remarks. This species, described in *Mylabris (Gorrizia)* (a taxon presently referred to *Hycleus*), was referred to the genus *Croscherichia* by Bologna & Pinto (2002). Actually this placement needs confirmation, because the mesosternum and aedeagus are typical of this genus, as well as the elytral pattern, antennal and protibial setation of female. However, the species is strongly distinct by the male tibial and antennal features described by Kaszab (1983), by the external hind spur not greatly thickened but only spoon-like, and the female protarsi very short and robust, differently than in other *Croscherichia.*

***Lydoceras fasciatus* (Fabricius, 1775)**

Distribution. Saudi Arabia; new for Yemen. It was cited also from Egypt, but we never confirmed this citation; we also know records from Jordan, which need confirmation.

New records. *Saudi Arabia*: Arabia, 5 exx. (MNHN; MNHU).

Yemen: Bājil, 2 exx. (CB, MNHU).

Remarks. The genus *Lydoceras* Marseul, 1870, which is under revision (Bologna unpublished), is an Afrotropical element strictly related to *Hycleus*, but is clearly distinct by the shape of antennae, which are progressively narrowed at apex.

***Hycleus maculiventris* (Klug, 1845)**

Distribution. Eastern Africa (Somalia, Ethiopia, Eritrea), Saudi Arabia, Oman and Yemen; doubtfully cited from Egypt. Cited from U.A.E. by Gillet & Gillet (1996: Ail Aïn and Buraimi area; 2005). It is another Afrotropical element of the Arabian fauna.

New records. *Saudi Arabia*: Arabia, 9 exx. (MNHN); *idem*, 1 ex (MRST); Wadi Jīzān, 9.xi.1978, G. Filipponi coll. 1 ex. (CB); Lodar, 800 m, 16.v.1967, K. Guichardt coll. 4 exx. (BMNH).

Yemen: Ju Amlah, 17° 07'N 43°34'E, ca. 26 Km NW Sa'dah, m 1950, ix. 1980, vi–vii.1981, M. Borri & M. Poggesi coll. 11 exx. (CB, MZUF); Al Harf, ca. 80 Km S of Sa'dah, on the road to Sana'a, vi–vii.1981, M. Borri coll. 7 exx. (MZUF).

Oman: Sur (W Rafsah), 17.iii.1976, K. Guichardt coll. 1 ex. (BMNH); Seeb, 21.1982 (?) on *Citrus* flower, 2 exx. (BMNH; CB).

Remarks. The limits of the genus *Hycleus* were clarified by Bologna (1978; 1991) and Bologna & Pinto (2002). Pardo Alcaide (1954; 1955; 1958; 1968) tried to single out some intra-generic lineages and described three sections, on the base of the shape of the mesosternum: without (*Mesogorbatus*), or with a small (*Mesotaeniatus*) or wide (*Mesoscutatus*) modified fore area, named "mesosternal scutum". These sections are extremely heterogeneous and were not considered as subgenera by Bologna & Pinto (2002), who preferred to consider them as phyletic lineages, waiting for a revision of this speciose genus (about 450 species). Within each phyletic lineage, several well defined groups of species can be recognized according to the structure of antennomeres, the shape of head, pronotum and mesopleural structure, the number and position of aedeagus hooks, etc. In some previous contributions Pardo Alcaide (e.g. 1963; 1966; 1968; 1969) and one of us (Bologna 1978; 1979; 1990; 1991; 1994a; 1994b), began the effort to single out several groups of species, which could be revised separately, and also in the present paper we continue this project.

Within the previously defined *Hycleus* lineage with the mesosternum of *Mesogorbatus*-type, are included some greatly distinct groups of species differing in several features of antennal structure and male genitalia and of the mesosternum itself. The groups of *H. maculiventris*, *H. sexmaculatus*, *H. brunnipes*, *H. quatuordecimsignatus* (and possibly that of *H. gratiosus*), which are discussed below, as well as other heterogeneous Afrotropical groups, refer to this lineage.

The group of *H. maculiventris* is composed of five large sized species with 11 antennomeres, mesepisterna with concave and depressed fore areas well defined by a carina, mesosternum prolonged anteriorly and without a clear "scutum" but with a fore smooth area posteriorly defined by a vague edge (see Pardo Alcaide 1963; Bologna 1990), two apical aedeagus hooks. *H. maculiventris* belongs to a primarily Eastern African group of species (the *H. maculiventris* group, as defined by Pardo Alcaide (1963) and Bologna (1978; 1990), which includes five other species from Sahel [*H. abiadensis* (Marseul, 1872)], Horn of Africa [*H. lateplagiatus* (Fairmaire, 1887), *H. rutilicollis* (Fairmaire, 1893), *H. thomasi* (Voigts, 1901)] and Iran [*H. schah* (Reiche, 1865)].

***Hycleus pirata* Bologna & Turco n. sp.**

Type specimens. Male Holotype, 1 male and 2 females Paratypes: U.A.E., Abu Dhabi Emirate, EA4, Al Bateen dunes, 4 Km W Al Aïn on the road to Abu Dhabi, 24,20491° N 55,61263° E, 195 m a.s.l., 15.iii.2005 M. Bologna & F. Turco coll., on *Tribulus omanense* (CB). 5 males and 4 females Paratypes: U.A.E.: Abu Dhabi Emirate, EA10, Al Aïn, 3–4 Km E Al Selimat on road Al Aïn-Abu Dhabi, 24,19263° N 55,58861° E, 220 m a.s.l., 12–14.iii.2005 M. Bologna & F. Turco coll., on *Tribulus omanense* and Poaceae (CB).
One male Paratype from Al Bateen has the left elytron partially broken, and another male Paratype from Al Selimat has the abdomen partially broken. Gillet & Howarth (2004) cited this species from the Jebel Hatif, and Gillet & Gillet (1996) from Al Aïn area, both as *Mylabris bipunctata* Olivier.

Other examined specimens. *Oman*: Wadi Air, 7.v.1957, G. Popov & R. J. Wood coll. 1 ex. (CB).

Diagnosis. One *Hycleus* belonging to the *sexmaculatus* group, within the *Mesogorbatus*-type lineage, characterized by male last antennomere modified and mesosternum without modifications on the fore portion.

Among the species of the *sexmaculatus* group, it phenetically resembles *H. apicipennis*, *H. trianguliferus*, *H. bipunctatus*, *H. schauffelei*, and *H. balteatus*, because of the wide apical black spot on elytra, which is represented only by a narrow border in the remaining species of the group. Actually, *H. pirata* is well distinct from these five species because of the shape of last male antennomere, which is strikingly curved, obtuse and neither conical nor filiform, and by male genitalia. The shape of last antennomere and parameres are quite similar to that of *H. sexmaculatus*, which has the black elytral apex extremely reduced.

Description. Body uniformly black, except elytra testaceous with two anterior black spots, one medial sinuate black fascia and apex obliquely black (Fig. 4); setation black, dense but short, sparser and obliquely recumbent on elytra, slightly denser at base. Golden dense pubescence on the ventral side of fore tibiae and tarsi of male, only on tibiae of female. Maximal body length: 16.5 mm.

Head transverse, with the maximum width at the level of eye. Punctures slightly deep, large and dense, with a longitudinal medial narrow area almost unpunctate. Eye globose, with the antero-dorsal margin slightly sinuate, just behind the antennal insertion. Temples parallel, only slightly curved posteriad and shorter than the longitudinal diameter of eye. Clypeus narrower than the interocular width, rounded on sides, anteriorly smooth and sloping; labrum about as wide as clypeus, rounded on sides, the fore margin slightly sinuate in both sexes, medially depressed. Maxillary palpomeres subcylindrical and stout, IV flattened, with long and black setae on the external side of the apex of each palpomere (except IV), particularly on III, without evident sexual dimorphism. Mandibles abruptly narrowed on the apical third. Antennae with 11 antennomeres, I–IV shiny, the following opaque; antennomere I slightly longer than II–III together; II subglobose; III–IV slender

and subcylindrical, III about 1.5 times as long as IV; V–VIII similar in length, subtrapezoidal, apically enlarged on external side, increasing in width from V to VIII and then decreasing from IX to X, which are subquadrate and shorter than VIII; male antennomere XI evidently narrower and slightly longer than X (Figs. 9–10), greatly curved and obtuse at apex, in female conical, shorter than X and at base as wide as X (Fig. 11).

Pronotum elongate, about as wide as head, subparallel on sides to the middle and then slightly narrowing anteriad; fore portion evidently depressed, as well as on sides at posterior third, and on the base posteriad, just in front of mesonotum; puncturation similar to that on head, with two rounded impunctate areas transversally disposed and dorso-medial in position. Elytral pattern as in Fig. 4. Mesosternum of the *Mesogorbatus*-type (Fig. 8); fore margins of mesepisterna large, concave, only slightly depressed, at the same level of the sclerite. Legs slender, both tibial spurs on all legs slender, the external metatibial rounded at apex; protarsi in male with a distinct golden ventral pad, in female with robust black setae, externally well visible.

Posterior margin of the penultimate male abdominal sternite widely emarginated, that of the last visible sternite deeply emarginated and medially very depressed. Parameres (Figs. 5–6) evidently elongate with slender and elongate apical lobes, submembranous on sides in the fore half; two slender aedeagus hooks (Fig. 7), endophallic hook slender.

Relationships. *Hycleus pirata* belongs to the *H. sexmaculatus* group, previously discussed. The taxonomy of this group is still unresolved, but it coincides with *Sphenabris* Kuzin, 1954, which was described as subgenus of the genus *Mylabris* (see Bologna 1991; Bologna & Pinto 2002, for the synonymies), having its type species *Meloe balteata* Pallas, 1782 from India and Sri Lanka.

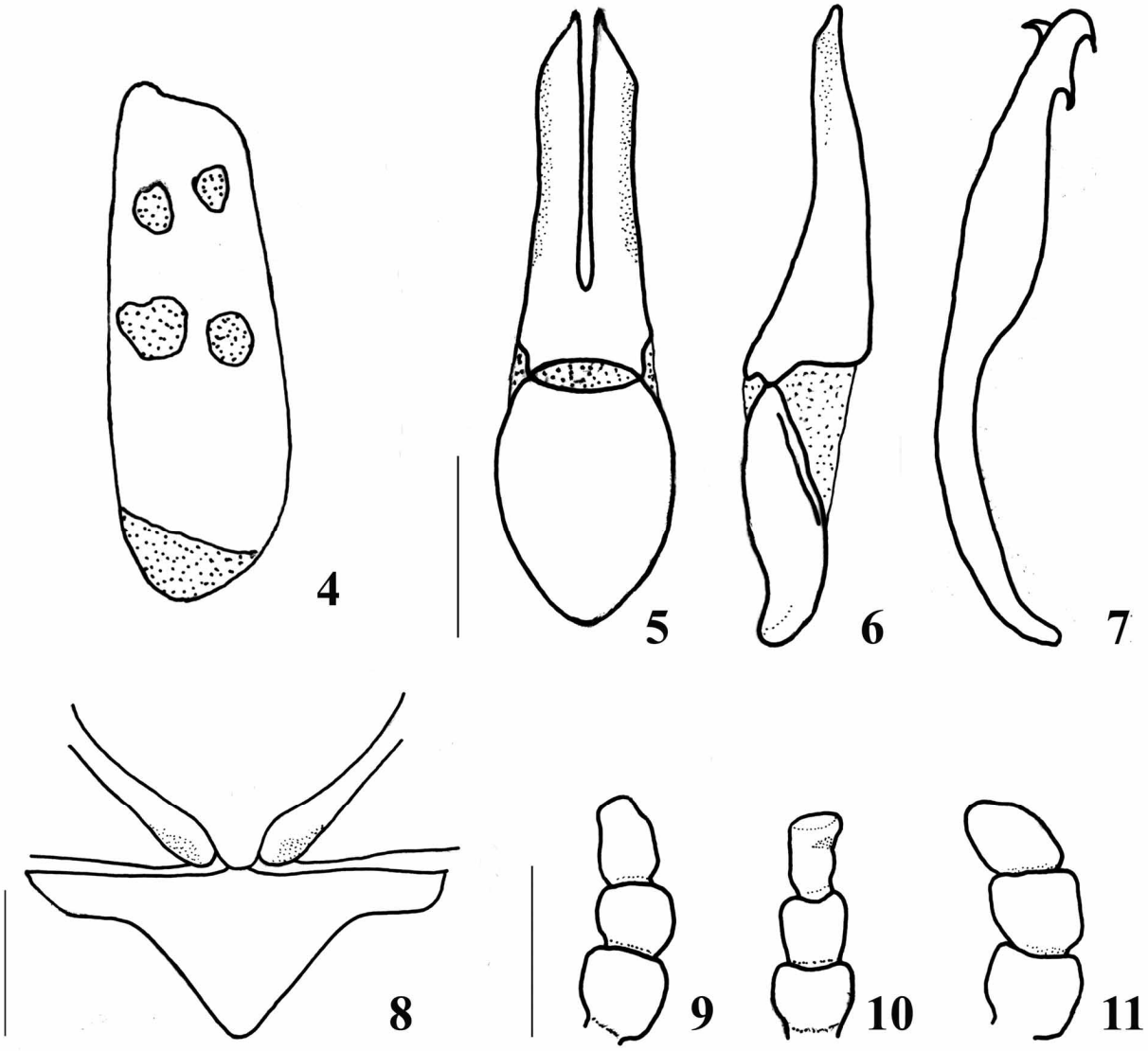
As discussed by Bologna (1979), this phylogenetic unit was noted by Escherich (1899) as "*Zonabris ledereri*-Gruppe" (a synonym of *H. sexmaculatus*), Soumakov (1915), and then described by Kuzin (1954) as *Sphenabris*. Pardo Alcaide (1963) singled out among the *Mesogorbatus*-lineage, two Palaearctic and two Oriental groups of species, one of which corresponds to *Sphenabris*, and considered *balteatus* in one of the Oriental group together with *H. orientalis* (Marseul, 1872) and *H. thunbergi* (Billberg, 1813).

The *H. sexmaculatus* group, which is distributed primarily in the Arabian-Iranian region, is greatly distinct because of the narrowed last antennomere, particularly in the male, almost filiform at apex in some species, or obtusely vs. conically curved in a few species. The apex of antennomere XI in the female in some cases distinctly differs from that of the male and for this reason the two sexes of the same species have been described separately. After the examination of specimens of *H. balteatus* (India: Nilgiri Hills; Kerala) we noted that this species has the antennomere XI similar in shape to that of the *H. sexmaculatus* group. We considered this as a synapomorphic condition and we refer *balteatus* to this group, rather than to the Oriental ones, in which the last antennomere is unmodified. *H. balteatus* results the only Oriental species of the *sexmaculatus* group, which thus includes 12 species.

Updating the previous literature, we refer to this group, which needs a cladistic revision, the following species: *H. apicipennis* (Reiche, 1865), *H. balteatus* (Pallas, 1782), *H. bipunctatus* (Olivier, 1811), *H. cingulatus* (Faldermann, 1837), *H. colligatus* (Redtenbacher, 1850), *H. javeti* (Marseul, 1870), *H. pirata* **n. sp.**, *H. schauffelei* (Kaszab, 1957), *H. sexmaculatus* (Olivier, 1811), *H. soumakovi* (Pic, 1930) (doubtful species), *H. tenuepictus* (Fairmaire, 1892), *H. trianguliferus* (Heyden, 1883).

H. pirata differs from the other species of the group because of the characters indicated in the diagnosis. It greatly resembles, and seems really close, to *H. sexmaculatus* from Anatolia and Levant, because of the shape of the last male antennomere, even if in this species it is less curved, more conical at apex and slightly longer. Also parameres very slender and scarcely sclerotized, seem to be a synapomorphy between these species. A difference between *H. sexmaculatus* and *H. pirata* concerns the shape of fore margin of labrum, more emarginated in *H. pirata* (as *H. apicipennis* and *H. tenuepictus*) and the greater extension of the apical black spot of elytra. The new species could be related also to *H. apicipennis* from Egypt, of which we examined only females; the female last antennomere of *H. apicipennis* is evidently shorter than in *H. pirata*, the elytra are opaque with deeper and wider punctation, and the fore tarsi shorter.

Etymology. The name of this species refers, as apposition, to the old name of the United Arab Emirates, the "Pirates coast".



FIGURES 4–11. *Hycleus pirata* **n. sp.** 4. right elytron; 5. tegmen, dorsal view; 6. tegmen lateral view; 7. aedeagus; 8. mesosternal sclerites; 9–10. male last antennomeres, dorsal and lateral views; 11. female last antennomeres, dorsal view. Scale bars = 0.5 mm.

***Hycleus sexmaculatus* (Olivier, 1811)**

Distribution. From Ukraine and south Russia to Kazakhstan, Anatolia, Caucasus, Iran, Levant. The very old record from Arabia (see below) could refer to some areas of the northern Arabian Desert in Jordan or Iraq.

Remarks. Species belonging to the *H. sexmaculatus* group previously discussed.

In the MNHU we examined the Type of *Mylabris bimaculata* Klug, 1845, which was always considered as a distinct species of the same group. The female Type, associated with four other specimens, probably Syntypes (two from Arabia and two from Syria), has the following labels: "*bimaculata* N. Arab. Ol." (yellow, original, handwritten), "28658" (printed); "Hist. Coll. Nr. 28658" (printed); Zool. Mus. Berl." (printed, recent). These specimens actually refer to *H. sexmaculatus*; consequently, we propose the new synonymy *Mylabris bimaculata* Klug, 1845 = *Hycleus sexmaculatus* (Olivier, 1811).

***Hycleus brunnipes* (Klug, 1845)**

Distribution. Saharo-Arabian species, distributed from Morocco through Sahara east to Egypt, south Israel and Saudi Arabia. New for Oman, Yemen and U.A.E. Cited from U.A.E. by Gillet & Gillet (2005).

New records. *Saudi Arabia*: Hedjaz, P. Bates 2 exx. (BMHN).

U.A.E.: Ras Al Khaimah Emirate, EA1, road E11 crossroad to the International Airport, 25,66708° N 55,76770° E, 5–10 m a.s.l., 11.iii.2005 M. Bologna & F. Turco coll. 15 exx., on *Senecio glaucus coronopifolius* (CB). Ras Al Khaimah Emirate, EA2, 23 Km S International Airport on road E18 (Habab-Manama), 25,43997° N 55,98395° E, 120 m a.s.l., 11.iii.2005 M. Bologna & F. Turco coll. 1 ex., on *Eremobium aegyptiacum* (CB). Sharjah Emirate, EA3, 6,3 Km N Mileiha on W detour, 1,2 Km from crossroad, 25,19188° N 55,90548° E, 150 m a.s.l., 11.iii.2005 M. Bologna & F. Turco coll. 2 ex., on *Eremobium aegyptiacum* (CB). Abu Dhabi Emirate, EA4, Al Bateen dunes, 4 Km W Al Aïn on the road to Abu Dhabi, 24,20491° N 55,61263° E, 195 m a.s.l., 15.iii.2005 M. Bologna & F. Turco coll. 3 exx., on *Tribulus omanense* (CB). Abu Dhabi Emirate, Al Aïn, Al Bateen dunes, 18.iii.2000, M. Gillet coll. 2 exx. (C. Krejcik). Abu Dhabi Emirate, Al Aïn road, 15.iv.1983, J.N.B. Brown 1 ex. (BMNH).

Yemen: North Yemen, Al Mahrah, between Shabwa and Haswah, 100 m, 29.xii.1998, B. Osella coll. 7 exx. (CB). South Yemen, Hadhramaut, between Aymal and Seyium, 30.xii.1998, B. Osella coll. 1 ex. (CB).

Oman: Wadi Air, 7.v.1957, G. Popov & A.j. Wood coll. 3 exx. (BMNH).

Remarks. Pardo Alcaide [1963, as *Mylabris (Gorrizia)*] considered in the *Mesogorbatus*-type lineage one Saharan group including 7 species: *H. quatuordecimsignatus* (Marseul, 1870), *saharicus* (Chobaut, 1901), *rungsi* (Peyerimhoff, 1935), *gratiosus* (Marseul, 1870), *brunnipes* (Klug, 1845), *wagneri* (Chevrolat, 1838), *raphael* (Marseul, 1876). Afterwards, the same Author (Pardo Alcaide 1968, as *Gorrizia*) deduced from this group a Trans-Saharan restricted unit, named group of *H. brunnipes*, which includes only *H. brunnipes, H. raphael,* to which he added *H. ghorfii* (Pardo Alcaide, 1962), *H. kaszabi* (Pardo Alcaide, 1968), and doubtfully also *H. varius* (Olivier, 1811). Actually, this last group is well distinct from the remaining species because of the aedeagus shape, with a single proximal large hook. To this group, so defined, we refer also *H. pintoi* **n.sp.** (see below). *H. varius* remains still not clearly placed.

The remaining species can be referred to: a) the group of *H. quatuordecimsignatus*, partially discussed by Ruiz (2004), which has the male aedeagus with two hooks, the proximal one large and the distal one very small (see below); b) the possible group of *H. gratiosus*, still scarcely characterized (see below).

Pic (1896: 62) noted that the North African specimens of *H. brunnipes* are distinct from those typical from Arabia and named them as var. *letourneuxi* and var. *interrupta*, and afterwards described "*Zonabris*" *adrarensis* Pic, 1942, which, according to Pardo Alcaide (1962) is only a synonym of *H. brunnipes*. Actually, the Maghrebian specimens have a few morphological differences, as the pronotum shorter and wider, the elytra more reddish and with the black ondulate strip less angulate.

***Hycleus pintoi* Bologna & Turco n. sp.**

Type specimens. Holotype female, 3 females and 1 male Paratype: *Saudi Arabia*, Wadi Doga, 13.ii.1962, G. Popov coll., B.M. 1965-369 (BMNH, 1 Paratype CB; M. Bologna det. 1992 as *H. brunnipes*). 1 Paratype female: *Saudi Arabia*, Wadi Lasaba, 9.i.1946, L. A. Tillin coll. on *Tamarix* sp. (BMNH; M. Bologna det. 1992 as *H. brunnipes*). 2 male and 1 female Paratypes: *Saudi Arabia*, Hali & Yibia area, 9.ii.1962 G. Popov (BMNH; M. Bologna det. 1992 as *H. brunnipes*). 1 Paratype female: *Saudi Arabia*, Jidda, ii–iii.1936, R.C.M. Darling on *Panicum* (BMNH; M. Bologna det. 1992 as *H. brunnipes*). 1 Paratype female: *Saudi Arabia*, Hadhn, 23.vi.1934, H.St.J.B. Philby, (BMNH; M. Bologna det. 1992 as *H. brunnipes*).

Type specimens are greatly damaged, and we selected one better preserved female as Holotype, the remaining specimens lacking abdomen, or one or both antennae, or one or more legs. The gonostyli and basal piece of the single male Paratype (CB) are lost, and its abdomen is damaged; so we figured only the aedeagus (Fig. 15).

Diagnosis. One *Hycleus* belonging to the group of *H. brunnipes,* strictly related to *H. kaszabi* Pardo Alcaide, 1968 because of the depressed and flattened frons, clypeus on the same level of frons and legs almost completely red, except coxae and throcanters, but immediately distinct from this last species because of the following features: head more elongate, particularly labrum and clypeus, and consequently mandibles less visible outside of the labrum; frontal suture well visible; temples more parallel and less narrowed posteriorly; antennae black with only middle antennomeres vaguely reddish; last antennomere slightly more robust in the last third; head and pronotum puncturation denser; elytra brown and partially reddish with two fore black spots transverse and not oblique.

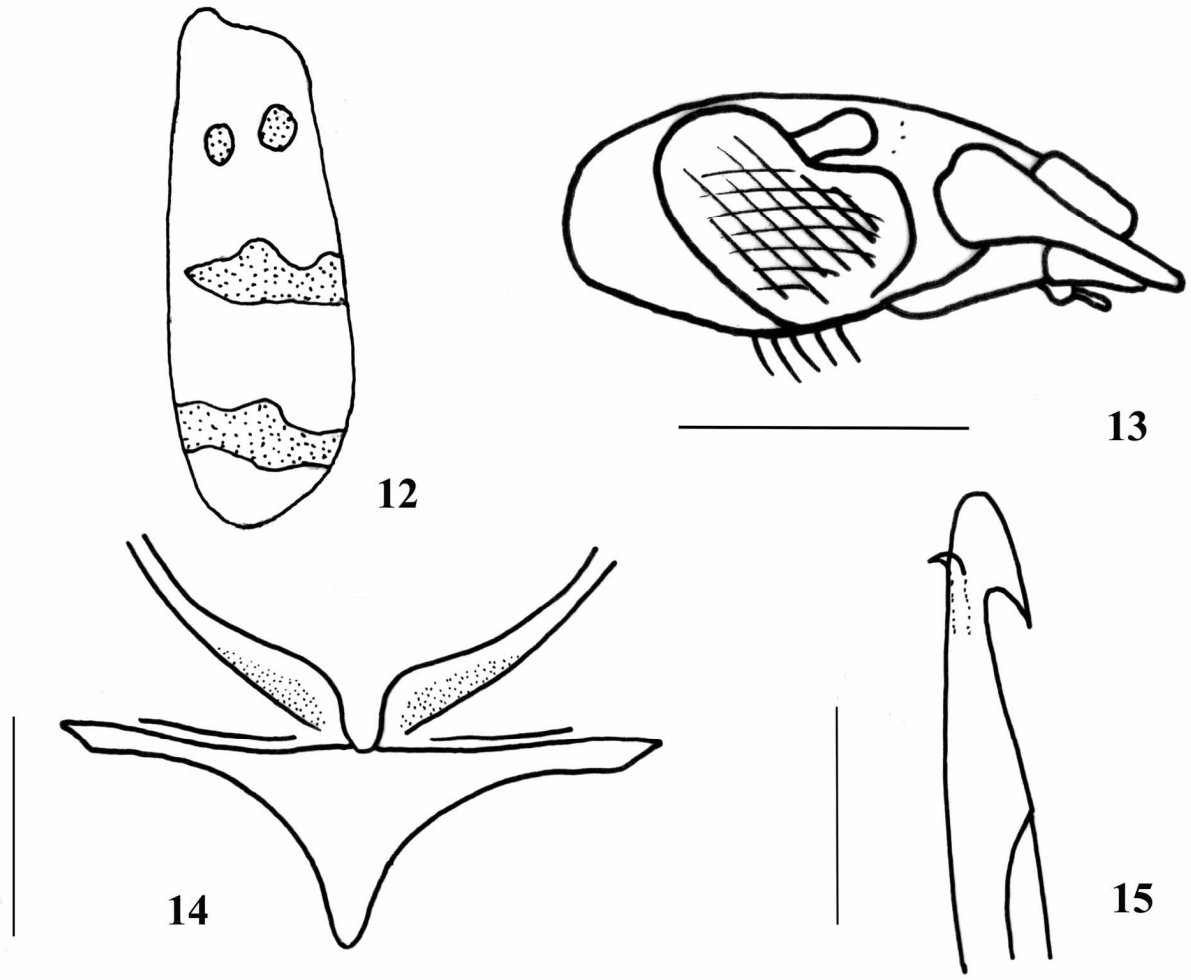
Description. Body shiny and unicolor black, but legs red, except trochanters and coxae, elytra subopaque brown-orange with two anterior, transverse black spots, and two sinuate black fascia one on the middle and the second on the posterior third (Fig. 12); setation denser and black on head and pronotum, sparser and obliquely recumbent on elytra, slightly denser at base. Pubescence sparse, black with silver reflexions on the ventral side of body; golden and very dense on the ventral side of fore tibiae and tarsi of male, where forms a pad. Maximal body length: 14.1mm.

Head transverse, with the maximum width at the level of eye; punctures scarcely deep, fine and relatively dense, intermediate surface unpuncturate, shiny, particularly on frons; frons evidently flat, with a middle wide and concave longitudinal depression extended posteriorly to the vertex, this one convex only on temples; eye globose, laterally extended on the entire gena (Fig. 13), with the antero-dorsal margin slightly sinuate, at the level of the antennal insertion; temples short and subparallel, shorter than the longitudinal diameter of eye. Clypeus evidently narrower than the interocular width, slightly rounded on sides, flat and scarcely puncturate, positioned on the same level of frons, fronto-clypeal suture well visible; labrum shorter and narrower than clypeus, the fore margin almost straight, flat, sloping. Maxillary palpomeres subcylindrical and stout, IV flattened and slightly enlarged anteriorly, with black setae on the external side of the apex of each palpomere (except IV), particularly on III, without evident sexual dimorphism; maxillae not modified; labial palpi with long and dense setae, particularly on the penultimate palpomere. Mandibles falcate and evidently pointed, in lateral view slightly curved. Antennae with 11 antennomeres, I–V shiny, the following opaque, III–VI vaguely reddish at base; antennomere I subequal in length to II–III together; II subglobose; III–VI slender and subcylindrical, III slightly longer than IV; VII–IX similar in length, subtrapezoidal, apically enlarged on external side, increasing in width and length from VII to IX, X slightly narrower, XI at base almost as wide as X but two times longer, the apical half evidently narrowed, apex obtusely stout.

Pronotum elongate, slightly longer than wide and slightly narrower than head, scarcely sinuate on sides before the middle and then slightly narrowing anteriad; fore portion evidently depressed; a wide middle longitudinal depression extended in the middle, base depressed just in front of mesonotum; puncturation similar to that on head, but wider, more scattered posteriad; dorsal surface with a longitudinal medial deep furrow. Elytra parallel, dorsally convex, subopaque with dense but superficial, wide punctures; elytral pattern as in Fig. 12. Mesosternum of the *Mesogorbatus*-type (Fig. 14); fore margins of mesepisterna well defined, not greatly wide, concave and evidently depressed, at the same level of the sclerite; fore portion of mesosternum smooth and shiny. Legs slender, both tibial spurs on all legs slender, those of metatibiae rounded at apex; male protarsi with a distinct golden ventral pad.

Posterior margin of the penultimate male abdominal sternite almost straight, that of the last visible sternite deeply V-emarginated and medially very depressed. One single elongate aedeagus hook (Fig. 15), endophallic hook small and slender.

Etymology. This new species is named after John D. Pinto, Professor Emeritus of the University of California at Riverside, specialist of blister beetles and Trichogrammatidae wasps, who is for us a brotherly friend and a true teacher in our studies on Meloidae.



FIGURES 12–15. *Hycleus pintoi* **n. sp.** 12. right elytron; 13. head, lateral view; 14. mesosternal sclerites; 15. apex of the aedeagus. Scale bars = 0.5 mm.

Relationships. This species clearly belongs to the group of *H. brunnipes*, and seems extremely close to *H. kaszabi*, because of the shape of frons, labrum and mandibles, but differring because of the characters listed in the diagnosis. It represents the Arabian vicariant of *H. kaszabi*, which was described from the Sudanese coast of the Red Sea, but is distributed through the entire southern Sahara: we examined one specimen from Niger (Sahara, Air, between Talak and Iferovane, BMNH) and two from Mauritania (between Oujaf and Oualata, CB, BMNH); Pardo Alcaide (1968) cited the second known specimen of this species as doubtfully collected in Mauritania, and our records confirm this trans-Saharan distribution.

***Hycleus dunalis* Bologna & Turco n. sp.**

Type specimen. Holotype female: *U.A.E.*, Abu Dhabi Emirate, EA4, Al Bateen dunes, 4 Km W Al Aïn on the road to Abu Dhabi, 24,20491° N 55,61263° E, 195 m a.s.l., 15.iii.2005 M. Bologna & F. Turco coll., on *Tribulus omanense* (CB).

Diagnosis. One *Hycleus* with *Mesogorbatus*-type mesosternum, characterized by elytral pattern composed by three series of three black spots angulate in position, and subpentagonal pronotum.

Description. Body shiny and unicolor black, elytra shiny brown-orange with three series of black spots, angulate in position, one anterior, one on the middle and one on the posterior third (Fig. 16); setation denser and black on head and pronotum, sparser and obliquely recumbent on elytra, slightly denser at base. Pubescence sparse, black; genae and protibiae with external longer setae. Maximal body length: 9.1 mm.

Head transverse, with the maximum width at the level of eye; punctures deep, wide and relatively dense, slightly scattered on frons, the intermediate surface unpucturate; frons convex; eye globose, laterally extended on almost the entire gena, with the antero-dorsal margin not sinuate; temples short and parallel, shorter than the longitudinal diameter of eye. Clypeus evidently narrower than the interocular width, rounded on sides, convex and with the same puncturation of head; fronto-clypeal suture well visible; labrum as long as clypeus, the fore margin almost slightly sinuate, shagreened. Maxillary palpomeres subcylindrical and stout, IV slightly enlarged anteriorly, with black setae on the external side of the apex of each palpomere (except IV), particularly on III; maxillae and labial palpi not modified; mandibles robust, curved in the fore half. Antennae with 11 antennomeres, I–II shiny, the following opaque, III–VI vaguely reddish at base; I longer than II–III together, II subglobose, III–VI slender and subcylindrical, III slightly longer than IV and evidently more than V–VI, VII–X subtrapezoidal, apically enlarged on external side, evidently increasing in width and length from VII to X, XI at base as wide as X but two times longer, the apical half evidently and conically narrowed, apex obtuse.

Pronotum subpentagonal, slightly wider than long, almost as wide as head on eye, sides subparallel before the middle and then evidently narrowing anteriad; fore portion transversally depressed; middle furrow extended only in the middle, base shorly depressed just in front of mesonotum; puncturation similar to that on head, but slightly deeper. Elytra parallel, dorsally convex, shiny with dense but superficial, middle sized punctures, with black pattern as in Fig. 16. Mesosternum of the *Mesogorbatus*-type (Fig. 17); fore margins of mesepisterna well defined, not greatly wide, concave and evidently depressed, at the same level of the sclerite, laterally well defined; fore area of mesosternum smooth and shiny. Legs slender, both tibial spurs on all legs slender, the external on metatibiae only slightly rounded at apex; ventral blade of claw regularly developed.

Abdominal sternites shiny with very scattered puncturation.

Etymology. The name refers to the red sand dunes where the species lives.

Relationships. The position of *H. dunalis* is not completely clarified because males, and the features they exhibit, remain unknown. It has a mesosternum as in the *Mesogorbatus*-type lineage, but we can not refer it with certainty to the group of *H. quatuordecimsignatus*, or relate it to *H. gratiosus* (see above). It phenetically differs from the group of *H. brunnipes* at least because of the unicolour black legs. It has an elytral pattern similar to that of *H. gratiosus*, but also to that of *H. pseudobrunnipes* and *H. saharicus*, both belonging to the group of *H. quatuordecimsignatus*. It differs evidently from *H. gratiosus* and *H. pseudobrunnipes* because of the regular shape of claws, with the ventral blade well developed, the pronotum subpentagonal, shorter and with denser puncturation. The pronotum shape is similar to that of *H. saharicus*, with marked middle angles, but the punctures are deeper and the intermediate surface shiner; moreover the mesosternum is wider and slightly curved on sides.

Hycleus gratiosus (Marseul, 1870) n. comb.

Mylabris gratiosa Marseul, 1870

Distribution. Recorded from Egypt and Saudi Arabia; new for the Oman. Cited from U.A.E. by Gillet & Gillet (2005) but this record needs confirmation.

New records. *Oman*: Masqat, Al Ausab, 23.ii.1989, M. J. Ebejer coll. 1 ex. (CB).

***Hycleus pseudobrunnipes* (Kaszab, 1983) n. comb.**

Distribution. Recorded only from Saudi Arabia; new for the U.A.E. and Oman.

New records. *Oman*: Muscat, Ruwi, iii.1976, K. Guichardt coll. 1 ex. (BMNH).

U.A.E.: Abu Dhabi Emirate, Al Aïn, Al Bateen dunes, 18.iii.2000, M. Gillet coll. 2 exx. (CB, C. Krejcik).

Remarks. The affinities of this species have been erroneously interpreted by Kaszab (1983), who related it to *H. brunnipes*. In fact, *H. pseudobrunnipes* also has the mesosternum (Fig. 18) of *Mesogorbatus*-type, but the male genitalia, never described before (Fig. 19), have the same structure as that of the group of *H. quatuordecimsignatus* (as defined by Pardo Alcaide 1963, and by Ruiz 2004), with two aedeagus hooks, the distal one very small, instead of a single distal hook as in the group of *H. brunnipes*. The reduction in length and thickness of the ventral lobe of the claws, sets apart this species within the group; this claw reduction is common to *H. gratiosus* (in this species the reduction is extreme), whose position is uncertain because the male genitalia are unknown. Therefore the group of *H. quatuordecimsignatus* includes at least four Saharo-Arabian species (see also Ruiz 2004): two endemic to the Western Sahara, namely *H. rungsi* (Peyerimhoff, 1935) and *H. saharicus* (Chobaut, 1901); *H. quatuordecimsignatus* (Marseul, 1870), widely distributed from Morocco to Egypt, Israel and Jordan; *H. pseudobrunnipes* (Kaszab, 1983) endemic to the Arabian Peninsula.

***Hycleus arabicus* (Pallas, 1781) n. comb.**

Meloe arabica Pallas, 1781

Distribution. Saudi Arabia, Yemen; new for Oman.

New records. *Saudi Arabia*: Hedjaz, 1 ex. (BMNH). Lodar, 800 m, 16.v.1967 K. Guichardt coll. 3 exx. (BMNH).

Yemen: Yemen, Frey coll. 1 ex. (BMNH). Aden, 3 exx. (CB, BMNH). Lahej, 1 ex. (BMNH). Lahej, Sufen, Oasis Fauna Sewell, 1 ex. (BMNH). Tihama, iv.1980, Mochi coll. 1 ex. (C. Migliaccio).

Oman. Dhofar, Khandrafi, 670 m, 1.x.1977 K. Guichardt coll. 2 exx. (BMNH).

Remarks. This species probably belongs to an Afrotropical group of the phyletic lineage characterized by "*Mesogorbatus*-type" mesosternum. Even if the elytral pattern and setation are very distinct, according to Pardo Alcaide (1965), it could be close to *H. amplectens* (Gerstaecker, 1871) and *H. vestitus* (Reiche, 1847), both widely distributed in South-Saharan countries, because of the presence of a very posterior triangular suture on the mesosternum.

***Hycleus rubricollis* (Marseul, 1875) n. comb.**

Coryna rubricollis Marseul, 1875

Distribution. Recorded only from Saudi Arabia and Yemen.

New records. *Saudi Arabia*. Arabia, 1 ex. (MNHN); Abyan, 50 m, 21.v.1967, K. Guichardt coll. 9 exx. (BMNH; CB).

Remarks. This species is scarcely known and its phylogenetic relationships were previously not clarified. According to the mesosternal structure, it belongs to the phyletic lineage characterized by "*Mesogorbatus*-type" mesosternum.

Some remarks on morphological characters are useful: the number of antennomeres actually varies from 9 to 10; the pronotum is lackey red, an uncommon condition within the genus *Hycleus*, with narrow black base; the mesosternum lacks the anterior differentiated area and mesepisterna are distinct by very deep furrowed

border area; elytra are shiny with light yellow fasciae; legs reddish on ventral side; last three urites red or reddish; aedeagus hooks different in length, the distal one very small and extremely apical, the proximal one far from the other and evidently greater.

Hycleus borchmannianus (Kaszab, 1983) n. comb.

Distribution. Endemic to Yemen.

New records. *Yemen*: between Umm Laylá (17°17'N 43°27'E) and Begin (17°24'N 43°27'E), vii.1981, M. Borri & M. Poggesi coll. 1 ex. (CB).

Remarks. The phylogenetic relationships of this species are still not clarified. Kaszab (1983) compared it to *H. fimbriatus* (Marseul, 1870), which actually belongs to a different group, well characterized by the mesosternal and aedeagus features (see Pardo Alcaide 1963). This small species is distinct because of the antennal shape with an evident terminal club, and the subglobose pronotum.

Hycleus aestuans (Klug, 1845)

Distribution. Eritrea, Ethiopia, Saudi Arabia, Yemen.

New records. *Saudi Arabia*: Arabia, 3 exx. (MNHN).

Remarks. This species, as well as the following, belongs to the *Mesoscutatus*-type phyletic lineage previously discussed, defined as a section of *Hycleus* by Pardo Alcaide (1954), and characterized by a large and well defined fore area of the mesosternum. The most species of the diverse genus *Hycleus* have this type of mesosternum, and several groups of species can be singled out within this lineage.

In particular, the group of *H. duplicatus* is an Afrotropical complex which includes at least 5 species distributed in the East Africa and Arabian Peninsula, well characterized by the last male antennomere apically bifid (see also Bologna 1990): *H. aestuans* (Klug, 1845) (Arabian Peninsula, Ethiopia, Kenya, Somalia); *H. andreinii* (Pic, 1933) (Eritrea; this species needs confirmation); *H. argyrostictus* (Fairmaire, 1882) (Somalia), *H. duplicatus* (Klug, 1845) (Djibouti, Arabian Peninsula); *H. scapularis* (Klug, 1845) (Arabian Peninsula).

In the MNHN collections, we examined the type of *Zonabris rugosissima* Pic, 1909, a species cited in Kaszab's (1983) synopsis without settlement as to its taxonomic status. The Hungarian specialist suggested a possible synonymy with "*Decapotoma" scabrata*, a species belonging to the genus *Hycleus* discussed below. The type specimen has the following labels: a) "Arabia f. Mylabre"; "*aestuans* var." (handwritteen by M. Pic); "TYPE" (handwritteen by M. Pic); "*rugosissima* Pic" (handwritteen by M. Pic); "type" (red, printed); "*Gorrizia aestuans* (Klug), Pardo Alcaide det. 1967 (printed).

This new synonymy of *Zonabris rugosissima* Pic, 1909 = *Hycleus aestuans* (Klug, 1845), confirms the Pardo Alcaide's identification, never published, and clarifies the uncertain Kaszab's citation (1983).

Hycleus duplicatus (Klug, 1845)

Distribution. Recorded from Djibouti, Saudi Arabia and Yemen; doubtfully cited from Egypt.

New records. *Saudi Arabia*: Arabia, 3 exx. (MNHN).

Yemen: Haijah prov., Sūq Al Hamal near Al Tur, 500–1000 m, 27.viii.1988 R. Sindaco coll. 10 exx. (CB). Al Hudaydah prov., Jabal Burà, near Bājil, 500 m, 14°53'11 N 43°25'18E, 11.viii.1988 R. Sindaco coll. 7 exx. (CB).

***Hycleus scapularis* (Klug, 1845) n. comb.**

Mylabris scapularis Klug, 1845

Distribution. Endemic to the Arabian Peninsula, till now recorded from Saudi Arabia, Oman and Yemen.

New records. *Saudi Arabia*: Wadi Jīzān, 30.v.1978, G. Filipponi coll. 1 ex. (CB). Arabia, 2 exx. (MHNH).

Yemen: Al Fardah, 100 Km NW of Al Mukallā, 15.viii.1996, X. Vazquez coll. 11 exx. on *Acacia* sp. (CB).

Oman: Dhofar, Raysūt, 16°58'N 53°57'E, 15.ix.1989, M. J. Ebejer coll. 1 ex. (CB).

***Hycleus scabratus* (Klug, 1845) n. comb.**

Mylabris scbrata Klug, 1845

Distribution. Distributed in the Arabian Peninsula (Saudi Arabia, Oman) and in Sinai, but cited also from Egypt.

New records. *Saudi Arabia*: Lodar, 800 m, 16.v.1967, K. Guichardt coll. 4 exx. (BMNH).

Yemen: Ju Amlah, 17°17'N 43°34'E, ca. 26 Km NW of Sa'dah, 1950 m a.s.l., ix.1980, M. Borri & M. Poggesi coll. 4 exx. (MZUF). Al Harf, ca. 80 Km S of Sa'dah, on the road to Sana'a, vi–vii.1981, M. Borri coll. 5 exx. (MZUF).

Remarks. The phylogenetic position of this species, among those with mesosternum of the *Mesoscutatus*-type lineage is still doubtful.

***Hycleus ligatus* (Marseul, 1870) n. comb.**

Mylabris ligata Klug, 1845

Distribution. Recorded from Egypt, Sudan, Ethiopia, Eritrea, Kenya; it is another Afrotropical element new for the Arabian Peninsula.

New records. *Saudi Arabia*: Arabia, 1 ex. (MNHN).

Remarks. This species belongs to the *Mesoscutatus*-type lineage. According to the shape of male maxillary palpi, anteriorly depressed and enlarged, it seems related to the group of *H. dubiosus*, an Afrotropical complex of species, still not studied in detail.

***Hycleus tigrinus* (Klug, 1845)**

Distribution. Afrotropical species, distributed from the eastern Africa to western Arabian Peninsula, north to Egypt, Sinai and Israel. Recorded from Saudi Arabia and Yemen.

New records. *Saudi Arabia*: Lodar, 800 m, 16.v.1967, K. Guichardt coll. 3 exx. (BMNH).

***Hycleus argentifer bytinskii* (Kaszab, 1969)**

Distribution. Polytypic Saharo-Arabian species: the nominate subspecies is distributed in Western Sahara, from Morocco to Libya; the ssp. *bytinskii* is recorded from Israel and Saudi Arabia, and the ssp. *pallidissimus* (Kaszab, 1983) from Saudi Arabia.

New records. *Saudi Arabia*: Shiara, i.1946, L. A. Tillin coll. 2 exx. (CB, BMNH). Madā'in Ṣālih, iv.1946, D. W. Fitzgerald coll. 1 ex. (BMNH).

Remarks. This species belongs to the group of *H. octodecimmaculatus* (see Pardo Alcaide 1962), characterized by a *Mesoscutatus*-type mesosternum and species with a number of antennomeres which varies from 9 to 11.

Hycleus nigriplantis (Klug, 1845)

Distribution. Widely distributed through the Sahel from Senegal to Sudan, Ethiopia and Somalia, in southern Israel, Saudi Arabia, Yemen. It was cited also from Egypt, but probably this record refers to Sinai.

New records. *Saudi Arabia*: Arabia, 2 exx. (MNHN); Lodar, 800 m, 16.v.1967, K. Guichardt coll. 5 exx. (BMNH).

Yemen: Al Hudaydah to Sana'a, 20.ix.1962, G. Popov coll. 1 ex. (BMNH). 10 Km S of Beit el Faqi, 14°3''N 43°17'E, 19.vi.1951, 1 ex. (BMNH).

Remarks. As evidenced by Pardo Alcaide (1958, as *Gorrizia*) and Bologna (1978, as *Coryna*), this species of the *Mesoscutatus*-type lineage, belongs to the Palaeotropical group of *H. pallipes* (Olivier, 1811), which is characterized by the hind external spur of metatibia enlarged, similarly to the mylabrine genus *Croscherichia,* to which was referred by Kaszab (1983). Within this group, *H. nigriplantis* seems to be related to two Indian species.

Hycleus fraudulentus Bologna n.sp.

Type specimens. Holotype female and 3 females Paratypes: *Saudi Arabia*, Lodar, 800 m, 16.v.1967, K. Guichardt coll.; BMNH E 1997-213 (Holotype and 2 Paratypes: BMNH; 1 Paratype, CB).
One Paratype lacks two hind right tarsomeres; one lacks four left fore tarsomeres, the entire left leg, and the metasternum is greatly damaged by dermestids.

Diagnosis. One *Hycleus* belonging to the *Mesoscutatus*-type lineage. It is characterized by the reduced number of antennomeres (9), the bicoloured antennae and legs, and by the elytral black pattern very similar to that of *H. nigriplantis* (Klug, 1845), a species belonging to another group of species.

Description. Body uniformly black, but tibiae orange and antennomeres II–V dark reddish; elytra subopaque brown-orange with one vanished small humeral spot, anteriorly reddish, two anterior black spots, disposed in a row, one middle narrow and sinuate black fascia, zig-zag shaped, one posterior fascia similar to the middle one, but more or less fragmented or reduced to an extended half-moon spot; subapical suture and apical margin more or less infuscate (Fig. 20). Head, pronotum and ventral side of body with elongate and dense, argentate setae; elytral setation short, recumbent, argentate, that of tibiae and tarsi shorter; setae at apex of elytra dark. Maximal body length: 10.6 mm.

Head capsule transverse, with the maximum width at the level of eye; punctures scarcely deep, fine, small and relatively dense, intermediate surface unpuncturate, shiny, particularly on the middle of frons where punctures are more scarce; frons convex, anteriorly slightly bulged; temples very short, less than 1/3 the longitudinal length of the eye; eye globose, laterally extended on the entire gena, with the antero-dorsal margin only slightly sinuate. Clypeus and labrum with punctures similar to those of head, evidently narrower than the interocular width, slightly rounded on sides, convex, positioned almost on the same level of frons, frontoclypeal suture well visible; labrum slightly shorter and narrower than clypeus, the fore margin almost straight. Maxillary palpomeres subcylindrical and stout, IV flattened and slightly enlarged anteriorly, with black setae on the external side of the apex of each palpomere (except IV), particularly on III; labial palpi with long and

dense setae, particularly on the penultimate palpomere. Mandibles short and evidently curved. Antennae with 9 visible antennomeres: antennomere I subequal in length to II–III together; II subglobose; III–VI slender and subcylindrical, III 1.5 as long as IV; IV–VI similar in length, cylindrical, progressively increasing in width; VII–VIII trapezoidal, evidently wider than VI, VIII wider than VII, IX as long as V–VIII together, deriving by the fusion of three antennomeres (IX–XI), as evidenced by the vanished suture visible on ventral side, bean-shaped, on the anterior third conical but apically stout.

Pronotum elongate, slightly longer than wide and slightly narrower than head, scarcely sinuate on sides before the middle and then slightly narrowing anteriad; anterior third slightly depressed; a narrow middle longitudinal depression extended in the middle, base depressed just in front of mesonotum; puncturation similar to that on head, but wider, more scattered posteriad. Elytra parallel, dorsally convex, subopaque with dense but superficial, punctures, wider than on pronotum; elytral pattern as in Fig. 20. Mesosternum of the *Mesoscutatus*-type (Fig. 21); fore margins of mesepisterna well defined, narrow, evidently depressed, at the same level of the sclerite; fore portion of mesosternum modified to form a short and small "scutum". Legs slender, both tibial spurs on all legs slender, those of metatibiae rounded at apex.

Protarsi with elongate black setae on external side, emerging from the basal setation; protibiae with external apex not evidently protruded.

Etymology. The name of this new species refers to its similarity with *H. nigriplantis*, which caused a misinterpretation on the first examination of the specimens.

Relationships. Relationships of this species are not clear, and it is not referred to any defined group, also because the *Mesoscutatus*-lineage is very speciose and scarcely studied.

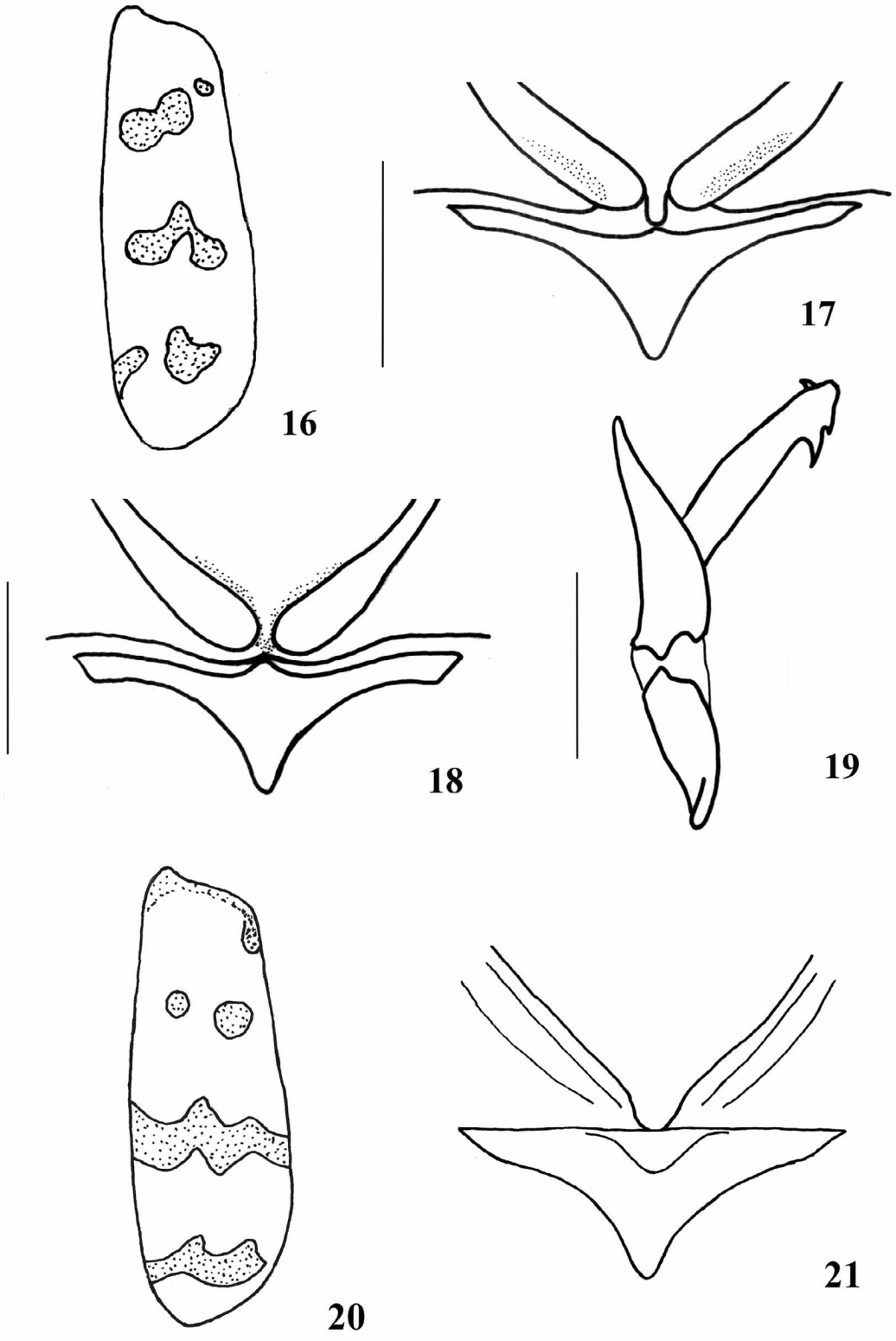
The new species is characterized by the reduction of the antennomeres, one condition evolved separately in several Afrotropical, North African and Middle East species. It is phenetically similar to *H. nigriplantis* (Klug), which belongs to a Palaeotropical *H. pallipes* (Olivier, 1811) group, discussed above, but it is easily distinguishable because of the tibial and antennal colouration and the fusion of the last antennomeres, which form a slender clava. Also the shape of the metatibial external spur, stick-like and not spatulate, as well as the shape of mandibles not so slender, distinguish *H. fraudulentus* from *H. nigriplantis.* The new species also differs from *H. fimbriatus* (Marseul, 1870), previously discussed, which has a similar elytral pattern, at least because of the mesosternum with modified fore portion and the antennomeres reduction and shape.

***Hycleus (?) pitcheri* (Kaszab, 1983) n. comb.**

Distribution. Endemic to the Arabian Peninsula, until now recorded only from the type locality in the Saudi Arabia, Eastern Province. New for the U.A.E.

New records. *U.A.E.*: Abu Dhabi Emirate, EA4, Al Bateen dunes, 4 Km W Al Aïn on the road to Abu Dhabi, 24,20491° N 55,61263° E, 195 m a.s.l., 15.iii.2005 M. Bologna & F. Turco coll. 1 ex., on *Tribulus omanense* (CB). Abu Dhabi Emirate, EA10, Al Aïn, 3–4 Km E Al Selimat on road Al Aïn-Abu Dhabi, 24,19263° N 55,58861° E, 220 m a.s.l., 12–14.iii.2005 M. Bologna & F. Turco coll. 3 exx., on *Tribulus omanense* (CB). Abu Dhabi Emirate, EA11, 37 Km S Al Aïn on road Al Aïn-Al Wijan, 23,9108° N 55,49472° E, 150 m a.s.l., 14.iii.2005 M. Bologna & F. Turco coll. 1 ex. on *Zygophyllum mandavillei* (CB).

Remarks. Kaszab (1983) described this species from Saudi Arabia in *Coryna* Billberg, 1813 (a synonym of *Hycleus* Latreille, 1817), and evidenced that it is very distinct from all others with nine antennomeres particularly because of the elongate shape of pronotum. Antennomeres number is a character erroneously used in the mylabrine systematics (Bologna & Pinto 2002) and nine antennomers are present in several Afrotropical *Hycleus*, as well as in the most Palaearctic species of the genus *Actenodia* Laporte de Castelnau, 1840 (Bologna *et al.* in press).



FIGURES 16–21. *Hycleus dunalis* **n. sp.** (16–17) 16. right elytron; 17. mesosternal sclerites. *Hycleus pseudobrunnipes* (Kaszab) (18–19) 18. mesosternal sclerites; 19. male genitalia, lateral view. *Hycleus fraudulentus* n.sp. (20–21). 20. right elytron; 21. mesosternal sclerites. Scale bars = 0.5 mm.

This species probably belongs to a new genus, and represents a real puzzle of characters. The mesosternum has the fore portion unmodified, the mesepisterna anteriorly do not have depressions and carina, and the

aedeagus has two hooks, both far from apex. This combination of features, is similar in *Actenodia* (Bologna *et al.* in press) and *Mimesthes* Marseul, 1872 (a southwestern African endemism: Bologna 2000). Since *Coryna* is a synonym of *Hycleus*, this species is transitorily included in the genus *Hycleus,* but it has not clear relationships within it.

The male genitalia (figured by Kaszab 1983; we examined only four females) have a general shape similar to those of *Actenodia* but also to those of several *Mylabris* Fabricius, 1775. This species has nine antennomeres, but the apical club is differently shaped in comparison to the Palaearctic *Actenodia,* and is more similar to some *Hycleus* with the same number of antennomeres. The mesosternal structures are more similar to those of *Actenodia*, but also to *Croscherichia* Pardo Alcaide, 1950, a very distinct mylabrine genus. The pronotum strongly differs from that of *Actenodia,* being elongate, narrowed in the fore portion and depressed, differently than in other Mylabrini.

***Actenodia denticulata* (Marseul, 1872)**

Distribution. Recorded only from Saudi Arabia; new for the U.A.E.

New records. *Saudi Arabia*: Arabia, E Thukmein, 4.ix.1956, D. J. Greathead coll. 1ex. (BMNH).

U.A.E.: Ras Al Khaimah Emirate, EA1, road E11 crossroad to the International Airport, 25,66708° N 55,76770° E, 5–10 m a.s.l. , 11.iii.2005 M. Bologna & F. Turco coll. 2 exx., on *Senecio glaucus coronopifolius* (CB). Sharjah Emirate, EA3, 6,3 Km N Mileiha on W detour, 1,2 Km from crossroad, 25,19188° N 55,90548° E, 150 m a.s.l., 11.iii.2005 M. Bologna & F. Turco coll. 23 exx., on *Eremobium aegyptiacum* (CB). Sharjah Emirate, 1,4 Km N Al Madam on road to Al Aïn, 24,93442° N 55,77595° E, 185 m a.s.l., 11.iii.2005 M. Bologna & F. Turco coll. 1 ex, on *Eremobium aegyptiacum* (CB). Abu Dhabi Emirate, EA4, Al Bateen dunes, 4 Km W Al Aïn on the road to Abu Dhabi, 24,20491° N 55,61263° E, 195 m a.s.l., 15.iii.2005 M. Bologna & F. Turco coll. 16 exx., on *Tribulus omanense* (CB). Abu Dhabi Emirate, EA5, Al Jahar-Al Saad on road Al Aïn-Abu Dhabi, 24,21940° N 55,52091° E, 180 m a.s.l., 12.iii.2005 M. Bologna & F. Turco coll. 1 ex., on *Zygophyllum mandavillei* (CB). Abu Dhabi Emirate, EA9, Al Aïn, Al Bateen dunes, crossroad E22-road to Al Aïn Airport, 24,20080° N 55,59146° E, 195 m a.s.l., 13.iii.2005 M. Bologna & F. Turco coll. 1 ex. (CB). Abu Dhabi Emirate, EA10, Al Aïn, 3–4 Km E Al Selimat on road Al Aïn-Abu Dhabi, 24,19263° N 55,58861° E, 220 m a.s.l., 12 and 15.iii.2005 M. Bologna & F. Turco coll. 2 exx., on *Tribulus omanense* (CB). Al Ghayl, 22.iii.1982, JNB524, I. Hamer coll. 1 ex. (BMNH).

Remarks. The genus *Actenodia,* as defined by Bologna (1991) and Bologna & Pinto (2002), was recently revised (Bologna *et al.* in press). It includes 18 species, distributed in the Mediterranean, Saharo-Sindian Region, eastern and southern Africa. *Actenodia denticulata* belongs to a Saharo-Arabian group, which includes also *A. suturifera* (Pic, 1896) from Western Sahara, *A. mateui* (Pardo Alcaide, 1965) from the Central Sahara (Tchad), and *A. lata* (Reiche, 1865) from Egypt. Bologna (1991) postulated the synonymy of all these taxa, but the examination of types and new specimens supported their specific distinction (Bologna *et al*. in press).

Two Yemeni species referred to *Actenodia* by Kaszab (1983: *afrotropicus* Kaszab, 1983 and *yemenicus* Kaszab, 1983) actually belong to the genus *Hycleus*, even if they have 8 antennomeres as the Afrotropical species of *Actenodia* (see Bologna 1990; Bologna *et al*. in press).

***Meloe (Afromeloe) trapeziderus* Gahan, 1903**

Distribution. Endemic to the Yemeni island of Suqutra.

New records. *Yemen*: Suqutra Is., Ras Shonah, 1899, O. Simons coll. 1 ex. (HNHM).

Remarks. The relationships of the Afrotropical species of the genus *Meloe* were clarified by Bologna & Pinto (1998).

Meloe (Mesomeloe) coelatus Reiche, 1857

Distribution. Widely distributed through the Saharan and Arabian deserts, from the eastern Canary islands, east to southern Iran.

New records. *Saudi Arabia*. Wadi Huraymala, 770 m, 11.ii.1988, C.W. Mills coll. 1 ex. (CB); Rumaihiya, 25°35'N 47°00'E, 30–.i.1945, 1 ex. (BMNH).

Meloe (Meloe) rathjensi Borchmann, 1938

Distribution. Endemic to Yemen.

New records. *Yemen*: Yemen, 1 ex. (BMNH). Sana'a, Sheraton Hotel, 2400 m a.s.l., 29.xii.1998 and 5.i.1999, B. Osella coll. 14 exx. (CB).

Subfamily Nemognathinae

Tribe Horiini

Horia fabriciana Betrem, 1929

Distribution. Widely distributed in the eastern and northeastern Africa and through the Arabian Peninsula (recorded from Saudi Arabia and Yemen), east to the Indian subcontinent. New for the U.A.E.

New records. *Saudi Arabia*: Red Sea coasts, 1849, Arnaud coll. 1 ex. (MNHN); Zebib env., 1853, Arnaud coll. 1 ex (MNHN).

U.A.E.: Al Aïn (?), Farm Fujira, 20.11.2003, Arwa coll. 1 ex. (University of Al Aïn, Department of Biology Insect Collection) together with 3 specimens of *Xylocopa* sp. (black or with yellow pronotum), possible hosts.

Tribe Nemognathini

Zonitoschema gibdoana (Kaszab, 1956)

Distribution. Sahelian species, recorded from Gambia, Tchad, Sudan, Kenya and Tanzania, and from Saudi Arabia.

New records. *Saudi Arabia*: Wadi Yiba, 18°55'N 41°15'E, 29.iii–148, B. P. Uvarov coll. 1 ex. (BMNH).

Remarks. The taxonomy of the whole genus needs a complete revision and the identification of most species is primarily based on the colouration of antennomeres and legs. The American genus *Pseudozonitis* Dillon, 1952 could be a synonym of *Zonitoschema* Péringuey, 1909 (Pinto & Bologna 1999; Bologna & Pinto 2002).

***Zonitoschema* sp. (*oculatissima* Peyerimhoff, 1929 ?)**

Distribution. *Zonitoschema oculatissima* was described from the Algerian Sahara, and afterwards recorded from Saudi Arabia by Kaszab (1983).

New records. *Saudi Arabia*: Dhah, x.1935, C. H. Darling coll. 1 ex. at light (BMNH).

Remarks. This specimen lacks the antennae, making the identification uncertain; femora are completely red.

***Nemognatha quinquemaculata* Suffrian, 1853**

Distribution. This is a Saharo-Sindian species, recorded from Morocco, Egypt, Iran and Saudi Arabia.

New records. *Saudi Arabia*: SW of Taif, Jallal Dakki, 22.vi.1962, G. Popov coll. 1 ex. (BMNH).

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