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LEPIDOPHALLUS COIFFAIT IS A SYNONYM OF MEGALINUS MULSANT & REY

(Coleoptera, Staphylinidae, Xantholinini)

184° CONTRIBUTION TO THE KNOWLEDGE OF STAPHYLINIDAE

Riassunto. Sono proposte le seguenti sinonimie: *Megalinus* Mulsant & Rey, 1877 = *Lepidophallus* Coiffait, 1956, **n. syn.**; *Megalinus scutellaris* (Fauvel, 1900) = *Lepidophallus denticulatus* Bordoni, 2004, **n. syn.** e le seguenti nuove combinazioni: *Gyrohypnus keijiroi* (Watanabe & Shibata, 1965), **n. comb.**; *Hypnogyra laevissima* ((Reitter, 1898), **n. comb.**; sono raffigurati tergite e sternite del segmento genitale maschile ed edago di *Megalinus oasis* (Steel, 1948).

Abstract. The following synonymies are proposed: *Megalinus* Mulsant & Rey, 1877 = *Lepidophallus* Coiffait, 1956, **n. syn.**; *Megalinus scutellaris* (Fauvel, 1900) = *Lepidophallus denticulatus* Bordoni, 2004, **n. syn.** The following new combinations are proposed: *Gyrohypnus keijiroi* (Watanabe & Shibata, 1965), **n. comb.**; *Hypnogyra laevissima* (Reitter, 1898), **n. comb.**; the genital tergum and sternum as well as the aedeagus of *Megalinus oasis* (Steel, 1948) are illustrated.

Key words. Coleoptera, Staphylinidae, Xantholinini, *Megalinus*, *Lepidophallus*, new synonymies, new combinations.

I described the species *Lepidophallus denticulatus* on the basis of a male specimen from Turkey (BORDONI, 2004) and later attributed some Bulgarian specimens to this same taxon (BORDONI, 2007). I attributed this species to the genus *Lepidophallus* Coiffait, 1956 because all the external characters and the aedeagus fit the description of this genus, which Coiffait had separated from *Xantholinus* Dejean, 1821 by the morphology of the paramera which are just vestigial in *Xantholinus* (see COIFFAIT, 1972). The attribution to *Lepidophallus* appeared further justified by a typical distal structure joined to the narrow and rather long paramers.

However, I recently studied some specimens from Rhodos (Schatzmayr, 28.IV.1932) in the Gridelli collection at the Trieste Natural History Museum which had been identified as *scutellaris* Fauvel, 1900. Previously I had never had an opportunity to examine any specimen of the species which, since the beginning of the last century (REITTER, 1908, sub subgenus *Metacyclinus*, a synonym of *Megalinus*), has been attributed to *Megalinus* Mulsant & Rey, 1877. This genus differs from *Xantholinus* by the structure of the male genital segment and the presence of thin paramers (COIFFAIT, 1972). This contribution establishes that *Lepidophallus denticulatus* Bordoni, 2004 and *Megalinus scutellaris* (Fauvel, 1900) are one and the same species and, therefore, I suggest the following synonymy: *Megalinus scutellaris* (Fauvel, 1900) = *Lepidophallus denticulatus* Bordoni, 2004, **n. syn.**

I have compared the characters - especially the aedeagi and the male and female genital segments - of all the species so far included in the two genera and my conclusion is that all of them belong to *Megalinus* Mulsant & Rey, 1877.

I had previously studied the morphology of the male genital segment of *Megalinus* and particularly of the plaeurae, the tergum and sternum (BORDONI, 1985, see figs. 17-20) which most resemble those of *Lepidophallus* (BORDONI, 2002b, figs. 1860-1864).

The examination of many other species confirms that the external characters are also

identical, particularly the morphology of the maxillary and labial palps, labrum, antennae, gular sutures, presternal plate, upper pronotum epipleural line, metasternum and legs. The somewhat different morphology of the genital segment occurring in some species so far included in *Megalinus* and *Lepidophallus* probably falls within the variability range of this genus, which may be better appreciated by reference to BORDONI, 1985 and to the description of *Lepidophallus* in BORDONI, 2002b. I, therefore, suggest the following synonymy: *Megalinus* Mulsant & Rey, 1877 = *Lepidophallus* Coiffait, 1956, **n. syn.**

Consequently the species so far included in *Lepidophallus* must be included in *Megalinus*. According to SMETANA, 2004 the species presently included in *Megalinus* are: *christophi* Lokay, 1919; *glabratus* (Gravenhorst, 1802); *keijiroi* Watanabe & Shibata, 1965; *laevis* Reitter, 1898; *nudobiiiformis* Tichomirova, 1973; *oasis* (Steel, 1948); *sabellai* Ciceroni & Zanetti, 1992; *scutellaris* (Fauvel, 1900); and *ussuricus* Tichomirova, 1973. So far the only type that I have been unable to examine is that of *christophi* which I hope to examine in the future.

The species *nudobiiiformis* and *ussuricus* are synonyms of *Sungaria mandschurica* (Bernhauer, 1923) (BORDONI, 2002a) while the species *keijiroi* belongs to *Gyrophypnus* Leach, 1819. Therefore I suggest the new combination: *Gyrophypnus keijiroi* (Watanabe & Shibata, 1965), **n. comb.** (Fig. 1).

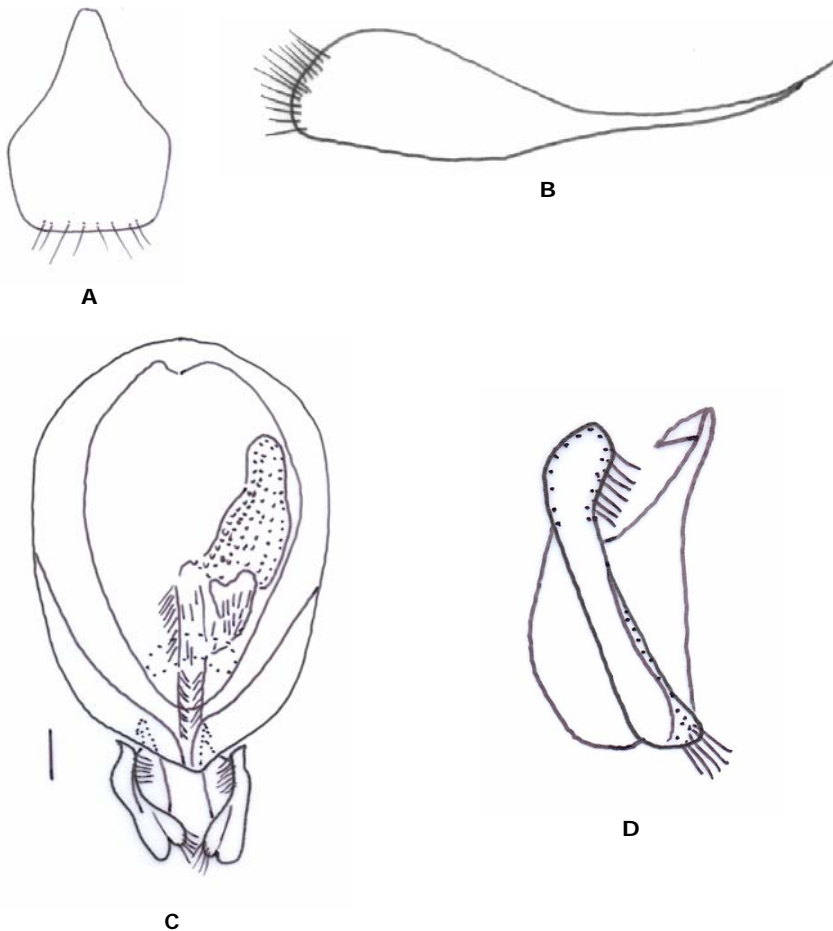


Fig. 1. *Gyrophypnus keijiroi* (Watan. & Shib.): A, tergum and B, sternum of the male genital segment; C, aedeagus (scale 0.1 mm); D, paramere in ventral view.

Type material

Megalinus keijiroi, 1 ♂, 1 ♀, Rishiri Is., Hokkaido, Juli 21.1963, K. Takahashi, *Megalinus* (s. str.) *keijiroi*, Y. Watanabe, Y. Shibata 1965.

Note: One specimen is labelled Holotype, the other Paratype. The specimens belong to the Entomological Laboratory of Tokyo University. The Y. Shibata collection contains two more specimens (paratypes) labelled Kabuka, Ruben Is., Y. Shibata, 27.VII.1963.

Neither does the species *laevissimus* belong with *Megalinus* but rather to the genus *Hypnogyra* Casey, 1906. Therefore I suggest the following new combination: *Hypnogyra laevissima* (Reitter, 1898), **n. comb.**

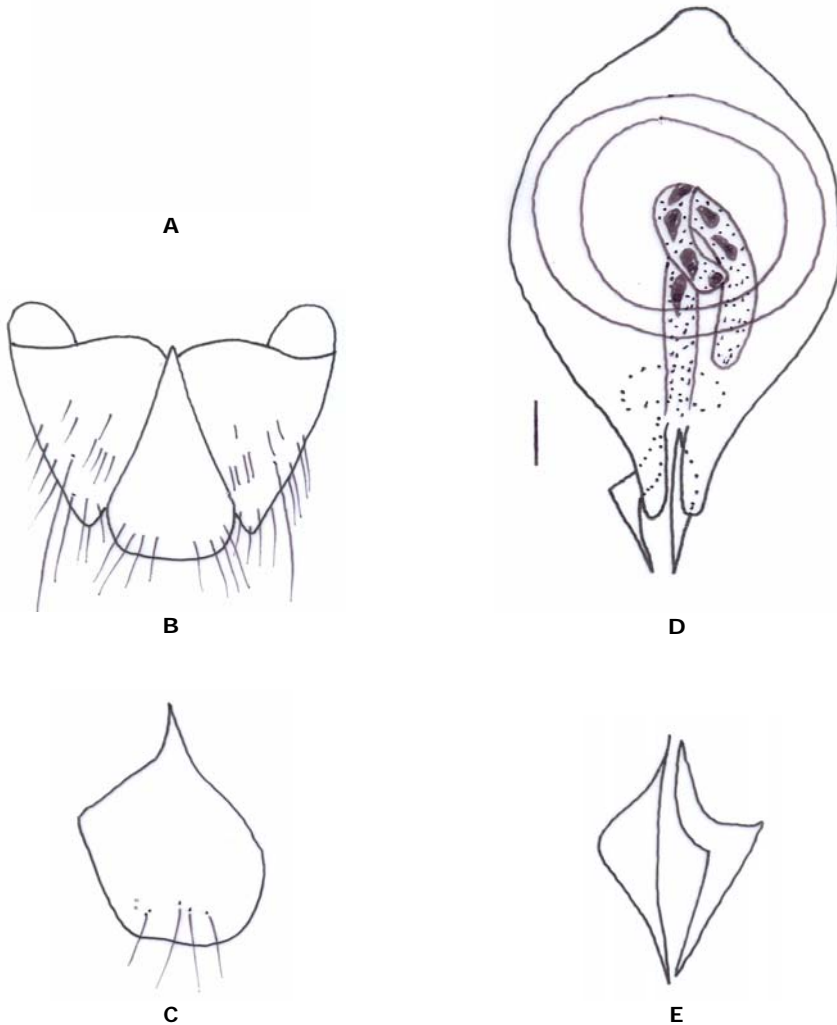


Fig. 2. *Hypnogyra laevissima* (Rtt.): A, 6th visible tergum; B, male genital segment; C, sternum of the same; D, aedeagus (scale 0.1 mm); E, parameres in ventral view.

To the localities of the type and the paratype, quoted in BORDONI, 1974, I now add that of a male in the Natural History Museum of Budapest: Iran, Now-Schahr, am Kaspian Meer, J. Klapperich VIII-IX.1961. Though originally described as a *Xantholinus* and later as *Megalinus* (HERMAN, 2001; SMETANA, 2004) this species rates as a *Hypnogyra* by the morphology of both the posterior margin of the 6th male tergum which is covered by short, thick, black spinules, and the aedeagus, which has clearly asymmetrical paramera (fig. 2).

All the other species belong to *Megalinus*. It must be remembered that the species *oasis* was originally described by Steel as *Xantholinus (Megalinus) oasis* and was attributed to the genus *Megalinus* for the first time by COIFFAIT, 1972.

Type material

Xantholinus (Megalinus) oasis, ♂, N. Africa, Cyrenaica, N of Bengazi, Merg., 12.IV.1926, T. Chaworth Musters, W. Steel 1948, Holotype.

Note: I have studied the Holotype which is labelled as are all the other specimens, all in Steel's handwriting. The type series of this species is in the London Natural History Museum.

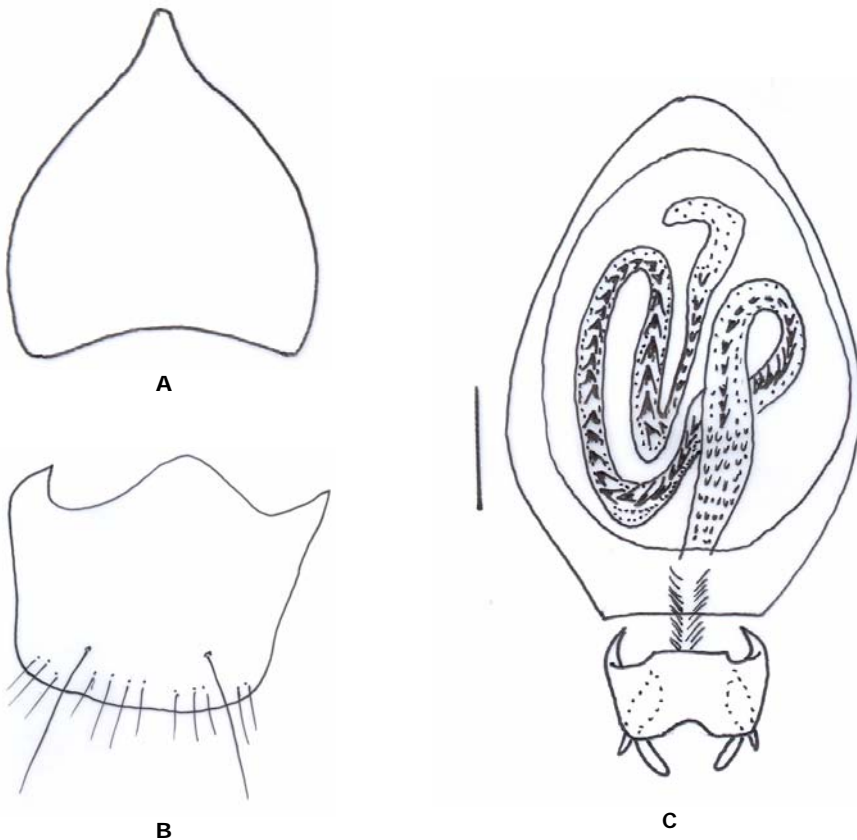


Fig. 3. *Megalinus oasis* (Steel): A, tergum and B, sternum of the male genital segment; C, aedeagus (scale 0.1 mm).

While for most characters nothing can be added to the descriptions of this species by STEEL (1948) and COIFFAIT (1972), only the latter author had illustrated the aedeagus but his depiction of the distal part and the paramera is entirely wrong and must be amended.

STEEL (l. c.) drew the head of the insect and the genital segment but his drawing of the latter is rather approximate. Therefore I give my drawing of the tergum and sternum of the male genital segment and the aedeagus (fig. 3), clarifying the morphology of its distal part which is joined to the paramera, the character peculiar to the genus. This species is, so far, known only from Lybia.

In summary, the presently known *Megalinus* species are:
glabratus (Gravenhorst, 1802) (type species) W Palaearctic region
bicatellatus (Bordoni, 2005) Sichuan
boki (Bordoni, 2000) China
cinnamomeus (Zheng, 1994) Sichuan
coloratus (Karsch, 1881) Algeria, Lebanon, Turkey
coracinus (Zheng, 1994) Sichuan
flavus (Bordoni, 2002) S-China
hayashii (Bordoni, 2002) Yunnan
hesperius (Erichson, 1839) W-Mediterranean, Azores
japonicus (Sharp, 1874) Japan, Fujian, S-Korea
kambaitiensis (Bordoni, 2002) Burma
malaisei (Scheerpeltz, 1965) Burma
melonii (Bordoni, 2004) Sardinia
metallicus (Fauvel, 1895) Pakistan, Assam, Thailand, Vietnam, China, Taiwan
mirus (Bordoni, 2003) Sichuan
mixtus (Sharp, 1874) Sichuan, S-Korea, Japan
mom (Bordoni, 2002) Meghalaya
montanicus (Bordoni, 2003) Sichuan
oasis (Steel, 1948) Lybia
oculatus (Bordoni, 2002) Taiwan
pandarum (Bordoni, 2003) Sichuan
pervivagus (Bordoni, 2005) Sichuan
pseudohesperius (Reitter, 1908) W-Mediterranean
punctatissimus (Bordoni, 2003) Hubei
ruficaudatus (Cameron, 1932) Buthan, Nepal, N-Bengal
sabellai Ciceroni & Zanetti, 1992 Sicily
scutellaris (Fauvel, 1900) Bulgaria, Turkey, Rhodos
schawalleri (Bordoni, 2002) Nepal
suffusus (Sharp, 1874) S-Korea, Japan, Taiwan
taipingensis (Bordoni, 2003) Sichuan
zhenyuanensis (Zheng, 1994) Gangsu

Not included in this list are the South American species *dahli* Blackwelder, 1944 and *pseudoelongatus* Coiffait & Saiz, 1964 attributed to *Lepidophallus* by HERMAN (2001) which I think must be re-studied.

From the above list it is apparent that the genus *Megalinus* ranges over much of the Palaearctic region, from Great Britain to the Mediterranean, from Europe to China - where it is widespread, from Japan to Taiwan. Some species even occur in the northern mountainous areas of the Oriental region.

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Note. In the meantime the synonymy *Megalinus scutellaris* (Fauvel, 1900) = *Lepidophallus denticulatus* Bordoni, 2004 has been proposed by ASSING (2007, *Zootaxa*, 1474: 45).

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