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REDEFINITION OF THE GENUS *DORIDICOLA* LEYDIG, 1853, SYNONYMY OF *METAXYMBOLGUS*

HUMES & STOCK, 1972, AND ESTABLISHMENT OF A NEW GENUS, *CRITOMOLGUS*

(COPEPODA, POECILOSTOMATOIDA, LICHOMOLGIDAE)

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ABSTRACT

The type-species of the genus *Doridicola* Leydig, 1853, *D. agilis* Leydig, 1853, has been re-examined. The armature of the exopod of the fourth leg of *D. agilis* is II,I,5, thus identical to that of the genus *Metaxymoligus* Humes & Stock, 1972. *Metaxymoligus* is synonymized with *Doridicola*. Those species formerly attributed to *Doridicola* but having an armature of III,I,5 on the endopod of the fourth leg, are placed in a new genus, *Critomoligus*.

The genus *Doridicola* was erected by Leydig in 1853 for his *Doridicola agilis* found on the nudibranch *Doris lugubris* at Trieste, Adriatic Sea. It has been reported many times since then from various nudibranchs in the Mediterranean Sea and northern Europe under several names (synonymy in Humes & Stock, 1973). The genus *Metaxymoligus* was proposed by Humes & Stock in 1972 to contain species previously placed in *Lichomoligus* Kossmann, 1877, *sensu lato*, but which possessed the armature II,I,5 on the segment of the exopod of leg 4. At that time

Doridicola, with the type-species *Doridicola agilis*, was considered to have the armature III,I,5 on the third segment of the exopod of leg 4. The apparently accurate drawing of leg 4 of *D. agilis* by Canu (1892, pl. XXII, fig. 10) led (or misled) us to conclude that the true formula for this species was III,I,5, although other workers (Della Valle, 1880; Aurivilius, 1882, 1883; T. Scott, 1892; Sars, 1917; Monod & Dollfus, 1932) showed the exopod with the formula II,I,5.

Questions on the formula for the third seg-

ment of the exopod of leg 4 raised by Dr. Ju-Shey Ho, to whom we express our thanks, have prompted us to locate specimens of *Doridicola agilis* for direct examination. We have been unable to discover type specimens, nor have we been able to obtain specimens from *Doris lugubris* in Trieste. However, examination of preserved material in the British Museum (Natural History) and the Zoölogisch Museum, Amsterdam, shows that the true formula for the third segment of the exopod of leg 4 is II,I,5. Included in this study were 85 females and 42 males of *Doridicola* (= *Lichomolgus*) *agilis* from Ireland; Scotland; Brest, Roscoff, and Banyuls, France; the Netherlands; and Naples, Italy, all showing without exception the formula II,I,5 for the third segment of the exopod of leg 4. Although we have not seen Leydig's types (if such exist) or topotypes, it is difficult to believe that the types would have a formula different from II,I,5 found in widespread collections of *D. agilis* from nudibranchs in Europe.

Accordingly, we propose the following amendments:

1) Redefinition of the genus *Doridicola* Leydig, 1853, recognizing that it has the formula II,I,5 on the third segment of the exopod of leg 4; and synonymy of the former species of *Metaxymolgus* Humes & Stock, 1972, with *Doridicola*. The following species are now included in *Doridicola*, with synonyms given for those species described in or since the 1973 revision of the Lichomolgidae by Humes & Stock:

Doridicola agilis Leydig, 1853, type-species.

Doridicola aculeatus (Humes & Ho, 1968), n. comb.

Doridicola antheliae (Humes & Stock, 1973), n. comb.

Metaxymolgus antheliae Humes & Stock, 1973: 222.

Doridicola botulosus (Stock & Kleeton, 1963), n. comb.

Doridicola brevifurcatus (Unmerkuty, 1962), n. comb.

Doridicola chlamydis (Humes & Stock, 1973), n. comb.

Metaxymolgus chlamydis Humes & Stock, 1973: 227.

Doridicola cincinnatus (Humes, 1975), n. comb.

Metaxymolgus cincinnatus Humes, 1975: 16.

Doridicola cinctus (Humes & Stock, 1973), n. comb.

Metaxymolgus cinctus Humes & Stock, 1973: 232.

Doridicola claudus (Humes & Stock, 1973), n. comb.

Metaxymolgus claudus Humes & Stock, 1973: 236.

Doridicola commodus (Humes, 1964), n. comb.

Doridicola comparatus (Humes, 1975) n. comb.

Metaxymolgus comparatus Humes, 1975: 11.

Doridicola confinis (Humes, 1982), n. comb.

Metaxymolgus confinis Humes, 1982: 71.

Doridicola congoensis (T. Scott, 1894), n. comb.

Doridicola cuspis (Humes, 1964), n. comb.

Doridicola echinasteris (Humes, 1976), n. comb.

Metaxymolgus echinasteris Humes, 1976: 2.

Doridicola gracilipes (A. Scott, 1909), n. comb.

Doridicola hetaericus (Humes & Ho, 1968), n. comb.

Doridicola hirsutipes (T. Scott, 1893), n. comb.

Doridicola inaequalis (Humes & Ho, 1966), n. comb.

Doridicola inflatiseta (Humes & Stock, 1973), n. comb.

Metaxymolgus inflatiseta Humes & Stock, 1973: 241.

Doridicola longicauda (Claus, 1860), n. comb.

Lichomolgus longicauda (Claus, 1860) in Humes & Stock (1973: 193). Ho (in press) has studied this copepod from *Sepia* at Plymouth, England, and finds that it has characters of the former genus *Metaxymolgus*, with II,I,5 on the third segment of the exopod of leg 4. Therefore, it is now placed in *Doridicola* as redefined.

Doridicola lumarius (Humes, 1980), n. comb.

Metaxymolgus lumarius Humes, 1980: 66.

Doridicola micropus (Humes, 1973), n. comb.

Metaxymolgus micropus Humes, 1973: 21.

Doridicola mimicus (Humes, 1975), n. comb.

Metaxymolgus mimicus Humes, 1975: 21.

Doridicola myorae (Greenwood, 1971), n. comb.

Doridicola patulus (Humes, 1959), n. comb.

Doridicola pertinax (Humes, 1982), n. comb.

Metaxymolgus pertinax Humes, 1982: 64.

Doridicola praelongipes (Humes, 1975), n. comb.

Metaxymolgus praelongipes Humes, 1975: 7.

Doridicola securiger (Humes, 1964), n. comb.

Doridicola sensilis (Humes, 1964), n. comb.

Doridicola sepieae (Izawa, 1976), n. comb.

Lichomolgus sepieae Izawa, 1976: 89.

Doridicola simplex (Thompson & A. Scott, 1903),

n. comb.
Doridicola singularipes (Humes & Ho, 1968), n. comb.
Doridicola spinulifer (Humes & Frost, 1964), n. comb.
Doridicola sunnivae (Humes, 1982), n. comb.
Metaxymolgus sunnivae Humes, 1982: 79.
Doridicola turmalis (Humes, 1982), n. comb.
Metaxymolgus turmalis Humes, 1982: 75.
Doridicola venustus (Humes, 1959), n. comb.

2) Establishment of a new genus, *Critomolgus*, to receive those species with III,I,5 on the third segment of the exopod of leg 4 (species formerly in the genus *Doridicola*). *Critomolgus* includes the following species, with synonyms given for those species described in or since the 1973 revision of the Lichomolgidae by Humes & Stock:

Critomolgus astrophyticus (Humes & Stock, 1973), n. comb.
Doridicola astrophyticus Humes & Stock, 1973: 168.
Critomolgus actinae (Della Valle, 1880), n. comb.
Critomolgus audens (Humes, 1959), n. comb.
Critomolgus brevipes (Shen & Lee, 1966), n. comb.
Critomolgus buddhensis (Thompson & A. Scott, 1903), n. comb.
Critomolgus bulbipes (Stock & Kleeton, 1963), n. comb.
Critomolgus caelatus (Humes, 1982), n. comb.
Doridicola caelatus Humes, 1982: 25.
Critomolgus cylichnophorus (Humes, 1982), n. comb.
Doridicola cylichnophorus Humes, 1982: 6.
Critomolgus dunnae (Humes, 1982), n. comb.
Doridicola dunnae Humes, 1982: 41.
Critomolgus fishelsoni (Stock, 1967), n. comb.
Critomolgus foxi (Gurney, 1927), n. comb.
Critomolgus gemmatus (Humes, 1964), n. comb.
Critomolgus hispidulus Humes, 1982, n. comb.
Doridicola hispidulus Humes, 1982: 31.
Critomolgus isoawamochi (Ho, 1981), n. comb.
Doridicola isoawamochi Ho, 1981: 28.
Critomolgus magnificus (Humes, 1964), n. comb.
Critomolgus paterellis (Humes, 1982), n. comb.
Doridicola paterellis Humes, 1982: 15.
Critomolgus penicillatus (Humes, 1982), n. comb.

Doridicola penicillatus Humes, 1982: 36.
Critomolgus pteropodus (Humes, 1978), n. comb.
Doridicola pteropodus Humes, 1978: 531.
Critomolgus ptilosarci (Humes & Stock, 1973), n. comb.
Doridicola ptilosarci Humes & Stock, 1973: 174.
Critomolgus rigidus (Unmerkutty, 1962), n. comb.
Critomolgus scyphulanus (Humes, 1982), n. comb.
Doridicola scyphulanus Humes, 1982: 20.
Critomolgus titillans (Humes, 1982), n. comb.
Doridicola titillans Humes, 1982: 45.
Critomolgus trispinosus (Stock, 1959), n. comb.
Critomolgus virgulariae (Humes, 1978), n. comb.
Doridicola virgulariae Humes, 1978: 525.

The two valid lichomolgid genera under discussion may be briefly diagnosed as follows:

Doridicola Leydig, 1853

Synonym.-

Metaxymolgus Humes & Stock, 1972: 128; 1973: 220.

With the generic characters as given by Humes & Stock (1972, 1973) but the third segment of the exopod of leg 4 having the formula II,I,5.

Type-species.-

Doridicola agilis Leydig, 1853.

Critomolgus, new genus

With the generic characters as given by Humes & Stock (1972, 1973) for their genus *Metaxymolgus*, but the third segment of the exopod of leg 4 having the formula III,I,5.

Type-species.-

Critomolgus astrophyticus (Humes & Stock, 1973).

Etymology.-

The generic name is a combination of the Greek words *kritos*, chosen or picked out, and *molgos*, a word often used in forming generic

names of the Lichomolgidae.

The generic redefinition outlined above necessitates a change in the last couplet of the key of the genera of the family Lichomolgidae as given by Humes & Stock (1973: 85). That couplet should now read:

Leg 4 with third exopod segment II,I,5
 *Doridicola*.
 Leg 4 with third exopod segment III,I,5
 *Critomolgus*.

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