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SPECIES COMPOSITION OF THE FAMILY ARRHOPALITIDAE (COLLEMBOLA, SYMPHYPLEONA)

R. S. Vargovitsh

Schmalhausen Institute of Zoology NAS of Ukraine,
B. Khmielnicky str., 15, Kyiv, 01601 Ukraine
E-mail: arete@izan.kiev.ua

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Species Composition of the Family Arrhopalitidae (Collembola, Symphypleona). Vargovitsh R. S. — Species composition of a recently revised family Arrhopalitidae is provided. 31 species are listed within the genus *Arrhopalites* Börner, 1906 and 83 species and subspecies within the genus *Pygmarrhopalites* Vargovitsh, 2009. 79 species are transferred from the genus *Arrhopalites* to *Pygmarrhopalites*; now combinations are listed.

Key words: Collembola, *Arrhopalites*, *Pygmarrhopalites*, species composition.

Видовой состав семейства Arrhopalitidae (Collembola, Symphypleona). Варгович Р. С. — Приведен видовой состав ревизованного семейства Arrhopalitidae. Список рода *Arrhopalites* Börner, 1906 составляет 31 вид, а рода *Pygmarrhopalites* Vargovitsh, 2009 — 83 вида и подвида. 79 видов перемещено из рода *Arrhopalites* в род *Pygmarrhopalites*; приводится список новых комбинаций.

Ключевые слова: Collembola, *Arrhopalites*, *Pygmarrhopalites*, видовой состав.

Introduction

Until recently the family Arrhopalitidae was formed by a single genus *Arrhopalites* with more than a hundred species. As a result of revision this genus was split into 2 genera, however, the species composition of these genera was not specified (Vargovitsh, 2009). Dividing of *Arrhopalites* was based on both previously known and new generic characters (trichobothrial pattern and tibiotarsal chaetotaxy) that allowed separating *caecus*-group of species into the genus *Arrhopalites* and *pygmaeus*-group of species into the genus *Pygmarrhopalites*. Thus for now 31 species form the genus *Arrhopalites* and 83 species and subspecies form the genus *Pygmarrhopalites*. Composition of the family Arrhopalitidae is listed below.

ARRHOPALITIDAE Stach, 1956 *sensu* Bretfeld, 1999

Arrhopalites Börner, 1906

Syn.: *Pseudarrhopalites* Stach, 1945 : 7
Coecarrhopalites Yosii, 1967 : 66

Type species: *Sminthurus caecus* Tullberg, 1871.

Composition: *A. alambariensis* Zeppelini, 2006; *A. amorimi* Palacios Vargas & Zeppelini, 1995; *A. antrobus* Yosii, 1954; *A. anulifer* Nayrolles, 1990; *A. baccettii* Dallai, 1969; *A. botuveraensis* Zeppelini, 2006; *A. caecus* (Tullberg, 1871), *A. coreanus* Park & Kang, 2007; *A. diversus* Mills, 1934; *A. gnaspini* Palacios-Vargas & Zeppelini, 1995; *A. harveyi* Denis, 1933; *A. heteroculatus* Zeppelini, 2006; *A. incertus* Zeppelini & Christiansen, 2003; *A. karabiensis* Vargovitsh, 2009; *A. lawrencei* Palacios-Vargas & Zeppelini, 1995; *A. loczyi* Loksa, 1960; *A. millsii* Delamare & Massoud, 1963; *A. minor* Park & Kang, 2007; *A. minutus* Yosii, 1970; *A. nivalis* Yosii, 1966; *A. paranaensis* Zeppelini, 2006; *A. peculiaris* Vargovitsh, 2009; *A. pukouensis* Wu & Christiansen, 1997; *A. remyi* Denis, 1948; *A. tenuis* Stach, 1945; *A. ulehlovae* Rusek, 1970; *A. vazquezae*

Palacios-Vargas & Zeppelini, 1995; ? *A. acanthophthalmus* Gisin, 1958; ? *A. ezoensis* Zeppelini, 2004; ? *A. gul* Yosii, 1966; ? *A. microphthalmus* Cassagnau & Delamare, 1953.

***Pygmarrhopalites* Vargovitsh, 2009**

Type species: *Dicyrtoma pygmaea* Wankel, 1860 = *Arrhopalites pygmaeus* (Wankel, 1860) *sensu* Stach, 1945.

Species included: *P. aggtelekiensis* (Stach, 1930) comb. n., *P. alticola* (Yosii, 1970) comb. n., *P. altus* (Christiansen, 1966) comb. n., *P. amarus* (Christiansen, 1966) comb. n., *P. arcus* (Zeppelini & Christiansen, 2003) comb. n., *P. ater* (Christiansen & Bellinger, 1998) comb. n., *P. bellingeri* (Christiansen, 1966) comb. n., *P. benitus* (Folsom, 1896) comb. n., *P. bifidus* (Stach, 1945) comb. n., *P. bimus* (Christiansen, 1966) comb. n., *P. boneti* (Stach, 1945) comb. n., *P. buekkenensis* (Loksa, 1969) comb. n., *P. caedus* (Christiansen & Bellinger, 1996) comb. n., *P. canzianus* (Stach, 1945) comb. n., *P. carolynae* (Christiansen & Bellinger, 1996) comb. n., *P. carpathicus* (Vargovich, 1999) comb. n., *P. changbaishanensis* (Wu & Zhong, 1997) comb. n., *P. chiangdaoensis* (Nayrolles, 1990) comb. n., *P. chopardi* (Cassagnau & Delamare, 1955) comb. n., *P. clarus* (Christiansen, 1966) comb. n., *P. cochlearifer* (Gisin, 1947) comb. n., *P. commorus* (Christiansen & Bellinger, 1996) comb. n., *P. delamarei* (Nosek & Paoletti, 1984) comb. n., *P. dubius* (Christiansen, 1966) comb. n., *P. dudichi* (Loksa & Rubio, 1966) comb. n., *P. elegans* (Cassagnau & Delamare, 1953) comb. n., *P. furcatus* (Stach, 1945) comb. n., *P. giovannensis* (Cassagnau & Delamare, 1953) comb. n., *P. gisini* (Nosek, 1960) comb. n., *P. habei* (Yosii, 1956) comb. n., *P. hedrosensis* (Selga, 1963) comb. n., *P. hirtus* (Christiansen, 1966) comb. n., *P. hubbardi* (Zeppelini & Christiansen, 2003) comb. n., *P. hungaricus* (Loksa, 1967) comb. n., *P. infrasecondarius* (Loksa & Rubio, 1966) comb. n., *P. intermedius* (Loksa, 1969) comb. n., *P. japonicus* (Yosii, 1956) comb. n., *P. jay* (Christiansen & Bellinger, 1996) comb. n., *P. jeanneli* (Cassagnau & Delamare, 1955) comb. n., *P. kaprusi* Vargovitsh, 2009, *P. kolymensis* (Tshelnokov, 1990) comb. n., *P. kristiani* (Vargovich, 2005) comb. n., *P. lacuna* (Christiansen & Bellinger, 1996) comb. n., *P. lewisi* (Christiansen & Bellinger, 1998) comb. n., *P. longicornis* (Cassagnau & Delamare, 1953) comb. n., *P. madonnensis* (Zeppelini & Christiansen, 2003) comb. n., *P. marshalli* (Christiansen & Bellinger, 1996) comb. n., *P. maui* (Delamare & Bassot, 1957) comb. n., *P. miravetensis* (Baquero, Herrando-Pérez & Jordana, 2005) comb. n., *P. nanjingensis* (Lin & Chen, 1997) comb. n., *P. nigripes* (Park & Kang 2007) comb. n., *P. obtusus* (Zeppelini & Christiansen, 2003) comb. n., *P. octacanthus* (Yosii, 1970) comb. n., *P. ornatus* (Stach, 1945) comb. n., *P. pavo* (Christiansen & Bellinger, 1996) comb. n., *P. plectrifer* (Hüther, 1963) comb. n., *P. postumicoides* (Cassagnau & Delamare, 1953) comb. n., *P. postumicus* (Stach, 1945) comb. n., *P. principalis* (Stach, 1945) comb. n., *P. principalis skelicus* Vargovitsh, 2009, *P. pseudoappendices* (Rusek, 1967) comb. n., *P. pseudoprincipalis* Vargovitsh, 2009, *P. pygmaeus* (Wankel, 1860) comb. n., *P. ruseki* (Nosek, 1975) comb. n., *P. sacer* (Christiansen & Bellinger, 1996) comb. n., *P. sapo* (Zeppelini & Christiansen, 2003) comb. n., *P. secundarius* (Gisin, 1958) comb. n., *P. sericus* (Gisin, 1947) comb. n., *P. sextus* (Zeppelini & Christiansen, 2003) comb. n., *P. silvus* (Christiansen & Bellinger, 1996) comb. n., *P. slovacicus* (Nosek, 1975) comb. n., *P. spinosus* (Rusek, 1967) comb. n., *P. styriacus* (Nosek & Neuherz, 1976) comb. n., *P. subbifidus* (Travé, Gadea & Delamare, 1954) comb. n., *P. subboneti* (Cassagnau & Delamare, 1953) comb. n., *P. tauricus* Vargovitsh, 2009, *P. terricola* (Gisin, 1958) comb. n., *P. texensis* (Christiansen & Bellinger, 1996) comb. n., *P. thermophilus* (Loksa, 1964) comb. n.,

P. troglophilus (Palissa, 2000) comb. n., *P. uenoi* (Yosii, 1956) comb. n., *P. whitesidei* (Jacot, 1938) comb. n., *P. yosiii* (Zeppelini, 2004) comb. n.

Discussion

It is necessary to point out that such generic characters as trichobothrial pattern and tibiotarsal chaetotaxy remain unknown for many species; therefore it is possible that the lists given above would be modified after verification. Especially it concerns those species which were difficult for including either to *caecus*- or *pygmaeus*- group (marked with “?” in the list: *A. acanthophthalmus*, *A. ezoensis*, *A. microphthalmus*, and *A. gul*) and which are tentatively placed into the genus *Arrhopalites*.

P. terricola was considered as synonym of *P. pygmaeus* since the diagnostic features (different ratio of Ant. III : basal subsegment of Ant. IV) were overlapping due to variability (Palissa, 2000). In my opinion, based on material from Ukrainian caves these two are possibly different species differentiated by: narrowed tip of mucro and broadened circumanal setae in females of *P. terricola*, and rounded or broadened tip of mucro and strong but not broadened circumanal setae in females of *P. pygmaeus*. Therefore, *P. terricola* is included to the list as a valid species.

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