SHORT COMMUNICATION

THREE NEW SYNONYMS AMONG CHINESE CAMAENID SNAILS (GASTROPODA: EUPULMONATA: CAMAENIDAE)

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ABSTRACT: Three new synonyms are recognised among recently described camaenid taxa from China. Two subspecies of the newly described Bradybaena changchunensis Sun, Zeng et He, 2017 are to be referred to B. virgo (Pilsbry, 1927), and the newly described Nesiohelix meiqiu Ge et He, 2017 is referred to Aegistohadra delavayana (Heude, 1885). Differences in the method of whorl counting are a major cause of this confusion. A further confusion over B. virgo was also revealed by this study.

KEY WORDS: synonymy, taxonomy, Camaenidae, China, land snail

INTRODUCTION

Three recent papers concerning terrestrial snails in China (He & Zhou 2017, Ge & HE 2017, Sun et al. 2017) differed from that commonly accepted (Kerney & Cameron 1979). A reassessment of the material shows that three of the new taxa are synonyms. Further, this reassessment corrects earlier misidentification of Bradybaena virgo (Pilsbry, 1927) and elucidates a synonym of B. similis (Férussac, 1822).

TAXONOMIC PART

Class: Gastropoda
Subclass: Heterobranchia
Superfamily: Helicoidea Rafinesque, 1815
Family: Camaenidae Pilsbry, 1895
Genus: Bradybaena Beck, 1837
Bradybaena virgo (Pilsbry, 1927)

Eulota murensis Cockerell, 1926: 227.

Bradybaena (Virginihelix) virgo – KURODA & HABE (1949: 64, fig. 30); HABE (1956: fig. 1).
Karafiohelix arcasiana – KANTOR et al. (2009: 231); SYSOEV & SCHILEYKO (2009: 180, fig. 101D) (misidentification).
Bradybaena virgo virgo (Pilsbry, 1927) – WANG et al. (2014: 10, figs 2D, 4D).
Bradybaena virgo mongolia Wang et Zhou, 2014 –

WANG et al. (2014: 12, figs 2E, 4E).

Bradybaena changchunensis changchunensis Sun, Zeng et He, 2017: 23, fig. 1, new synonym
Bradybaena changchunensis harbinensis Sun, Zeng et He, 2017: 23, fig. 2, new synonym

Material examined. Photos of comparative material were used for comparison. They were obtained from the Academy of Natural Sciences of Philadelphia, Philadelphia, USA (ANSP) 99965, holotype, Ganesella virgo, 10 March, 1910, Wichu (or Uiju); the State Key Laboratory of Molluscan Quarantine and Identification, Fujian Entry-Exit Inspection & Quarantine Bureau, Fuzhou, China (FJIQBC) 18466, holotype, Bradybaena virgo mongolia, 5 October, 1982, Zhalaiteqi, Inner Mongolia; the Zhejiang Museum of Natural History, Hangzhou, China (ZMNH) AIMS 27098, holotype, Bradybaena changchunensis changchunensis, Changchun, Jilin; ZMNH AIMS 27099, holotype, Bradybaena changchunensis harbinensis, Harbin, Heilongjiang.

Remarks. The greatest notional difference between B. virgo and B. changchunensis is the number of whorls (SUN et al. 2017); B. changchunensis has six rather than seven whorls when a count is made using the standard method, based on the images in the original description. The specimens thus appear identical to those of B. virgo. The distributions of B. virgo and B. changchunensis are adjacent. PILSBRY (1927) described B. virgo from Uiju near Liaoning Province, and SUN et al. (2017) found B. changchunensis in Changchun, Jilin and Harbin, Heilongjiang. SUN et al. (2017) claimed that the new species could be clearly distinguished by the colour and pattern. The colour they described was white, almost transparent. B. changchunensis changchunensis had no colour pattern. PILSBRY (1927) described the colour of Ganesella virgo using the word “This species has a somewhat bullet-like contour and the pale colour of the Japanese species.” SUN et al. (2017) did not consider papers by PILSBRY (1927) and WANG et al. (2014).

The holotype of G. virgo shows no bands. The distinguishing feature of Bradybaena changchunensis changchunensis and B. changchunensis harbinensis is the presence or absence of bands (SUN et al. 2017). Several surveys show that the presence or absence of bands among camaenids in general and in Bradybaena in particular is a variable character (KOMAI & EMURA 1955, ASAMI et al. 1993) and cannot be treated as a diagnostic feature. In the absence of any anatomical and/or molecular studies, B. changchunensis and its subspecies should be treated as synonyms of B. virgo. SYSOEV & SCHILEYKO (2009) and KANTOR et al. (2009) reporting B. virgo from Shanghai in south China misidentified it as Helix arcsanaia Crosse et Debeaux, 1863 which in fact is B. similares (Férussac, 1822) (MARTENS 1867). There is nothing to suggest that B. virgo occurs in Shanghai or more to the south in China (COCKERELL 1926, PILSBRY 1927, CHEN & GAO 1987, KANTOR et al. 2009, SYSOEV & SCHILEYKO 2009, SUN et al. 2009). Though the original figure of H. arcsanaia is similar to B. virgo, the description of H. arcsanaia does not match the picture. CROSSE & DEBEAUX (1863) wrote “Diam. maj. 16, min. 14. Alt. 10 1/2 millim.”. The shape is not globular; H. arcsanaia is flatter. Compared to H. arcsanaia, the whorls of B. virgo increase more rapidly. COCKERELL (1926) compared Eulota murensis, a synonym of B. virgo, with E. similares var. arcsanaia to make sure his species was new.

Genus: Aegistohadra Wu, 2004

Aegistohadra delavayana (Heude, 1885)


Nesiohelix meiqiui Ge et He, 2017: 14–16, figs 6–7, new synonym

Material examined. Institute of Zoology, Chinese Academy of Sciences, Beijing, China (IZCAS)-type-2902-1 and IZCAS-type-2902-2, paratype, Nanina delavayana, Fa Kouan Tchen (Dali, Yunnan); ZMNH AIMS 27102, holotype, Nesiohelix meiqiui, Kunming, Yunnan (photos).

Remarks. A thorough comparison of the descriptions and figures shows that the whorl number of Nesiohelix meiqiui is ca. 5.75 instead of 6–7 reported by GE & HE (2017), and their shells are identical. GE & HE (2017) did not cite the papers by HEUDE (1885) and WU (2004).

GE & HE (2017) collected specimens from Kunming, Yunnan. HEUDE (1885) used specimens from Ta-li fou (Dali, Yunnan, 25°40'N, 100°09'E) (JOHNSON 1973). The distribution is almost the same. There is no evidence that Nesiohelix meiqiui is a new species.

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