

***Oospira (Atractophaedusa) zhaoyifani* spec. nov. (Gastropoda, Pulmonata, Clausiliidae) from Guangxi Province, China**

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*Oospira (Atractophaedusa) zhaoyifani* spec. nov., a large clausiliid species, is described from the central Hechi Prefecture of Guangxi Province, China. Its relation to other *Oospira (Atractophaedusa)* species, and the systematic status and distributional pattern of the subgenus are discussed.

Key words: Gastropoda, Pulmonata, Clausiliidae, Phaedusinae, *Oospira*, taxonomy, China.

## INTRODUCTION

The first two species of *Oospira (Atractophaedusa)* Ehrmann, 1927, from the Bay of Tonkin became known at the beginning of the 20th century (Möllendorff, 1901). After that it took a hundred more years until the next Vietnamese representative of this subgenus was discovered (Gittenberger & Vermeulen, 2001). This was quickly followed by the description of four additional species (Nordsieck, 2003, 2005; Maassen & Gittenberger, 2007), two of which extended the known range of these clausiliids to southern China. Remarkably, all Vietnamese species [*O. (A.) antibouddah* Nordsieck, 2003; *O. (A.) keavica* (Möllendorff, 1901); *O. (A.) pyknosoma* Gittenberger & Vermeulen, 2001; *O. (A.) rhopaloides* (Möllendorff, 1901); *O. (A.) smithi* Maassen & Gittenberger, 2007] seem to be confined to a 30 × 30 km area, separated by almost 500 km from the localities of the Chinese species [*O. (A.) ookuboi* Nordsieck, 2005; *takagii* Nordsieck, 2005]. Here we describe one more, *O. (Atractophaedusa)* from Guangxi Province, which occurs more than 200 km WSW of the other two.

For collections the following abbreviations are used: BMNH, Natural History Museum, London; FLMNH, Florida Museum of Natural History, Gainesville; FMNH, Field Museum of Natural History, Chicago; HNHM, Hungarian Natural History Museum, Budapest; IZCAS, Zoological Museum of China, Institute of Zoology of the Chinese Academy of Sciences, Beijing; MNHN, Muséum National d'Histoire Naturelle, Paris; NNM, Nationaal Natuurhistorisch Museum 'Naturalis', Leiden; SMF, Forschungsinstitut und Naturmuseum Senckenberg, Frankfurt am Main; ZSM, Zoologische Staatssammlung, München. Private collections: ER, Zoltán Eröss, Budapest; GE, Charles J. Geerts, Brussels; GR, Jozef Grego, Banská Bystrica; NE, László Németh, Budapest; ST, Jozef Šteffek, Banská Štiavnica; SZ, Miklos Szekeres, Szeged; VE, Marcel A. P. Verhaeghe, Strombeek-Bever.

## SYSTEMATIC PART

Phaedusinae A.J. Wagner, 1922

*Oospira* Blanford, 1872.

*Oospira* Blanford, 1872, type species: *O. (O.) philippiana* (L. Pfeiffer, 1847).

Subgenus *Atractophaedusa* Ehrmann, 1927. Type species: *O. (A.) rhopaloides* (Möllendorff, 1901).

*Oospira (Atractophaedusa) zhaoyifani* spec. nov. (fig. 1)

Material. – China, Guangxi Province, Hechi Prefecture (河池市), Duan Yao Autonomous County (都安瑶族自治县), Gaoling District (高岭乡), Dingfu Village (定福村); empty shells collected by local people, May, 2005. Holotype: IZCAS. Paratypes: BMNH 20070352, FLMNH 410896, FMNH 312306, HNHM 96850, MNHN 20391, NNM 110002, SMF 330272, ZSM Mol 20070725, ER/1, GE/1, GR/9, NE/1; ST/1, SZ/2, VE/1.

Diagnosis. – Shell large, not strongly inflated, not decollated, apex pointed, peristome simple, with protruding upper margin; palatal plicae short, not parallel to the plica superior.

Description. – Shell with a pointed apex with slightly concave sides, not decollated, ventricose, yellowish-brown; with  $9\frac{1}{4}$ - $10\frac{1}{3}$  almost smooth whorls, separated by a shallow suture. Neck rounded, with the same sculpture as the central whorls. Aperture ovoid, its white peristome neither inflated nor doubled; upper margin of the peristome protruding, not curved towards the columella. Lamella superior prominent, continuous with the spiralis, which reaches inwards to the ventral side. Lamella inferior as long as the body whorl, thickening and curved downward at its outer end. Lamella subcolumellaris well visible in frontal view, ending close to the lowest part of the lamella inferior, not reaching the peristome; inside it reaches as deep as the spiralis. Plica principalis running from the ventral side to shortly behind the peristome; a long, almost parallel plica ends ventrolaterally. At the lateral side, there are five to seven additional short plicae, situated along a strong, lunella-like ridge; the upper- and lowermost ones are longer than the others, and those near the basis are almost parallel with the shell axis. The clausilium plate is elongated, with parallel margins and a rounded tip.

Shell height 27.1-31.2 mm, shell width 8.4-8.9 mm, aperture height 8.1-8.7 mm, aperture width 6.3-7.1 mm.

Differentiation. – *Oospira (Atractophaedusa) zhaoyifani* spec. nov. is similar to the two *Atractophaedusa* species from the central Guangxi Province that are also not decollated. From the most similar *O. (A.) ookuboi* it differs by its more elongated shell, with a relatively smaller aperture, the thinner, simple peristome, and the short palatal plicae that become perpendicular to the plica principalis towards the shell basis. The peristome is markedly different from that of all other *Atractophaedusa* species. Its margin is much less swollen, non-duplicated, and stands free from the adjacent whorl at both its upper and the columellar side. The internal structure of the clausilial apparatus is similar to that of *O. (A.) pyknosoma* as figured by Gittenberger & Vermeulen (2001), except that in the new species the lamella inferior reaches deepest into the shell, and the clausilium plate is narrower, with almost parallel margins at its centre.

Etymology. – The new species is named after Mr. Zhao Yi-fan who kindly provided the type material.

Discussion. – *Atractophaedusa*, comprising species from northeastern Vietnam and central Guangxi Province, China, has recently been classified as a subgenus of *Oospira*



Figure 1. *Oospira (Atractophaedusa) zhaoyifani* spec. nov., holotype (IZCAS), China, Guangxi Province, Dingfu Village. Actual height: 24.4 mm.

Blanford, 1872 (Nordsieck, 2001). We follow this view, but not without reservations. The almost 90 species that are classified by Nordsieck within *Oospira* are of a great diversity, which could justify a subgeneric division of what Nordsieck regarded as the nominate subgenus, and a generic status for those groups that he considered subgenera. Even the species of *O. (Atractophaedusa)* themselves show a considerable diversity. The shells can be decollated [*O. (A.) kebvica* (Moellendorff, 1901), *O. (A.) pyknosoma* Gittenberger & Vermeulen, 2001, *O. (A.) rhopaloides* (Moellendorff, 1901)] or non-decollated [*O. (A.) anti-bouddah* Nordsieck, 2003, *O. (A.) ookuboi* Nordsieck, 2005, *O. (A.) smithi* Maassen & Gittenberger, 2007, *O. (A.) takagii* Nordsieck, 2005, *O. (A.) zhaoyifani* spec. nov.], very large and inflated [*O. (A.) pyknosoma*] or relatively small and slender [*O. (A.) kebvica*, *O. (A.) smithi*].

Interesting differences can also be observed in the distribution patterns of the *Atractophaedusa* species. Whereas the Vietnamese species are known exclusively from the coastal region and some islands of the Gulf of Tonkin, those from China are from inland localities situated at distances of 250-300 km from the coast.

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Figure 2. The distribution of *Oospira* (*Atractophaedusa*) species in northeastern Vietnam and southern China: *O. (A.) antbouddah* (square), *O. (A.) kebavica* (square outline), *O. (A.) ookuboi* and *O. (A.) takagii* (diamond outline), *O. (A.) pyknosoma* and *O. (A.) smithi* (circle), *O. (A.) rhopaloides* (dot), and *O. (A.) zhaoyifani* spec. nov. (diamond).

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