

A new species of *Alzoniella* Giusti & Bodon, 1984 (Gastropoda, Caenogastropoda, Hydrobiidae) from northern Spain

E. ROLÁN

Museo de Historia Natural, Campus Universitario Sur, E-15782 Santiago de Compostela, Spain

B. ARCONADA

Museo Nacional de Ciencias Naturales (CSIC), José Gutiérrez Abascal, 2, E-28006 Madrid, Spain

& H. D. BOETERS

Karneidstrasse 8, D-81545 München, Germany; boeters@online.de

Up to now six species of the genus *Alzoniella* Giusti & Bodon, 1984, have been reported from the Spanish province of Asturias, viz. *A. cantabrica* (Boeters, 1983), *A. asturica* (Boeters & Rolán, 1988), *A. lucensis* (Rolán, 1993), *A. montana* (Rolán, 1993), *A. ovetensis* (Rolán, 1993) and *A. mariana* Arconada, Rolán & Boeters, 2007. Meanwhile an additional congeneric species has been found in this province, i.e. *A. somiedoensis* spec. nov., which is described below.

Key words: Gastropoda, Caenogastropoda, Hydrobiidae, *Alzoniella*, Iberian Peninsula, Asturias.

INTRODUCTION

The genus *Alzoniella* Giusti & Bodon, 1984, comprises two subgenera, viz. the nominate subgenus and *Navarriella* Boeters, 2001. Representatives of the former subgenus inhabit subterranean watercourses and springs, and are known from Slovakia, Austria, northern Italy, France, Spain and Portugal. Arconada et al. (2007) published a revision of the genus for the Iberian Peninsula in which 12 species are listed for the nominate subgenus, six of which are reported for the Spanish province of Asturias. The present article deals with the description of *Alzoniella* (*A.*) *somiedoensis* spec. nov. as an additional *Alzoniella* species from that province.

For collections the following abbreviations are used: BOE, H.D. Boeters, Munich, Germany; MHNS, Museo de Historia Natural of the University, Santiago de Compostela, Spain; MNCN, Museo Nacional de Ciencias Naturales, Madrid, Spain; MNHN, Museum National d'Histoire Naturelle, Paris; RMNH, National Museum of Natural History, Leiden.

SYSTEMATIC PART

Alzoniella somiedoensis spec. nov. (figs 1-16)

Type series. – Asturias, Pola de Somiedo, district La Malva, towards the Espacio Natural de La Malva, in front of the Central Hidráulica de La Malva; E. Rolán leg., 2009 (BOE 2981/40 paratypes (animals); MNCN 15.05/53251/holotype (shell), 28 paratypes (25 animals & 3 shells); MNHN/20 paratypes (animals); MHNS/25 paratypes (animals); RMNH/10 paratypes (animals).

Morphology. – Shell slightly elongated oval, with 3.50-3.75 whorls ($n = 2$), separated

by a deep suture. The protoconch has a rough, scaly surface. Outline of the spire whorls convex. However, in frontal view, in large shells the last quarter of the last whorl is not closely wound around the axis of the columella, but shifted laterally, so that its palatal border exceeds the outline. The aperture is oval to slightly slanted oval and, in lateral view, ascends slightly on the last whorl; beneath the suture of the last quarter of the last whorl the shell wall is slightly thickened. The edge of the aperture is sharp. The parietal border touches the shell wall over a short distance. The columella is hollow, but the umbilicus is closed; this closure can be seen through the shell wall as a thickened area. The columellar border forms a funnel-like slit with the shell wall; the basal and the columellar border only are slightly broadened.

Height 1.35-1.75 [1.54] mm, width 0.90-1.30 [1.07] mm (n = 25).

Operculum yellowish with a strongly coloured center.

Soft body milky white, except for the black eyes, to more or less speckled with black pigment. The ctenidium of a female showed 7 lamellae. The intestine can be filled with at least 11 fecal pellets. Behind the stomach the intestine forms first a Z-like loop which is followed by a V-like curve. In females the distance between the suture and the intestine, seen through the shell wall, is larger than in males, since in females the intestine runs along the albumen gland and the capsule gland.

Radula. – Not examined.

Genital system. – The duct of the bursa copulatrix is wound and the bursa itself is oval [n = 4]. Compared to the sack-like RS2, the RS1 is quite long and touches the bursa. The male copulatory organ [n=5] is elongate with a small lobe and usually white. However, the penis of an animal that is speckled with black pigment showed blackish pigment along its axis.

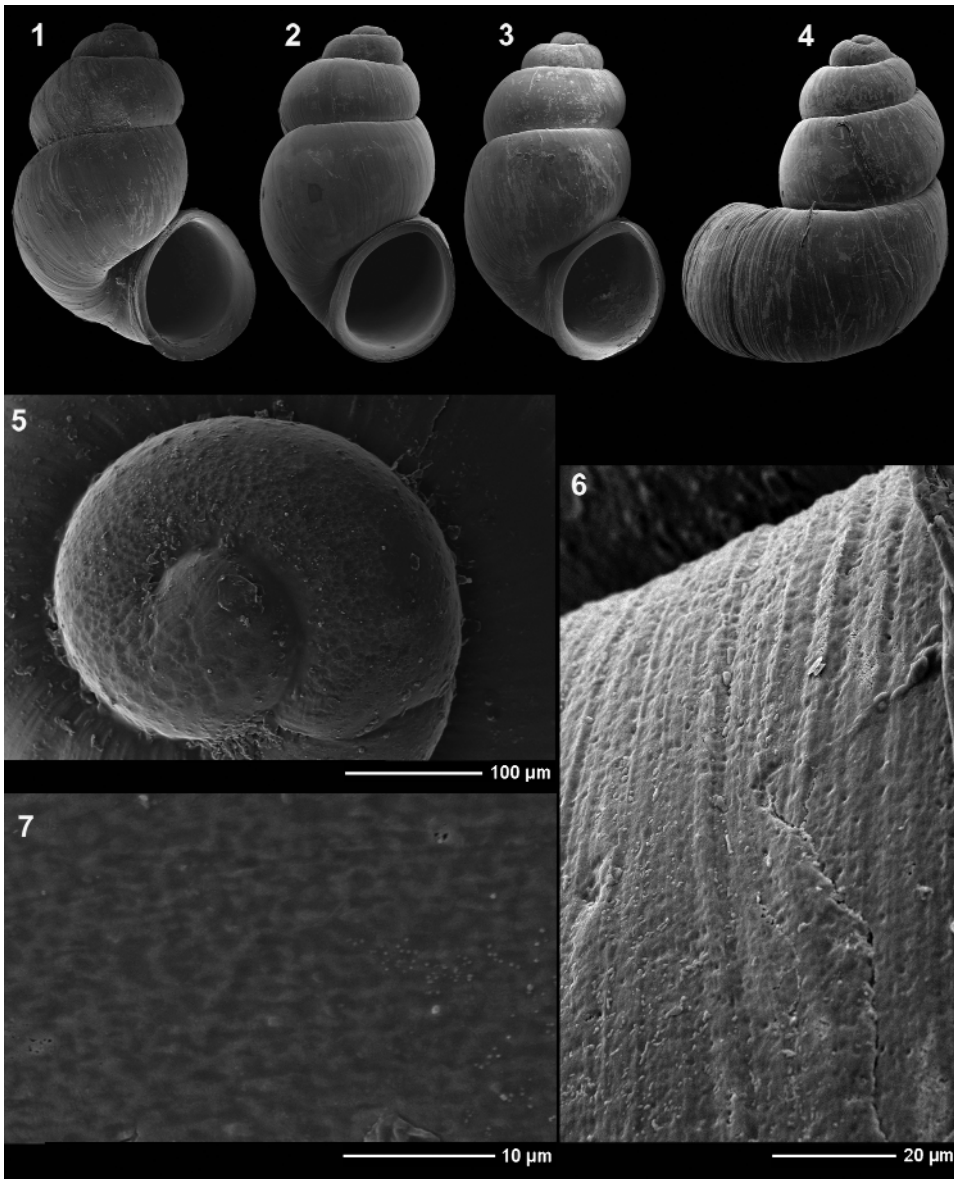
Differentiating features.– *Alzoniella (A.) somiedoensis* differs from *A. (A.) rolani* (Boeters, 1986), known from Galicia and Portugal, by a rough, scaly surface of the protoconch. In *A. (A.) rolani* the protoconch has a more regularly nodulous surface (Rolán, 1993: 117, pl. 2 figs 1-2; Arconada et al., 2007: 145, figs 78-79). In *A. (A.) rolani* the last whorl is slightly flattened what gives the shell a more cylindrical instead of an elongated ovate appearance. The shells of *A. (A.) rolani* show a subsutural depression and the rectum is curved simply.

In *A. (A.) cantabrica* the protoconch is regularly sculptured, differing additionally by the presence of circular depressions (Rolán, 1993: 117, pl. 2 figs 3-4; Arconada et al., 2007: 145, fig. 74). With a height of ± 1.8 mm, the shell of *A. (A.) cantabrica* is also larger than that of *A. (A.) somiedoensis*. In *A. (A.) cantabrica* the RS1 is shorter than in *A. (A.) somiedoensis* and does not reach the bursa.

The protoconch of *A. (A.) lucensis* differs by being similar to that of *A. (A.) cantabrica* (Rolán, 1993: 11, pl. 2 figs 5-6; Arconada et al., 2007: 146, figs 83-84). With a shell height of 1.8-2.0 mm, *A. (A.) lucensis* is also larger, whereas its last shell whorl is slightly flattened. In *A. (A.) lucensis* the RS1 is shorter than in *A. (A.) somiedoensis* and does not reach the bursa.

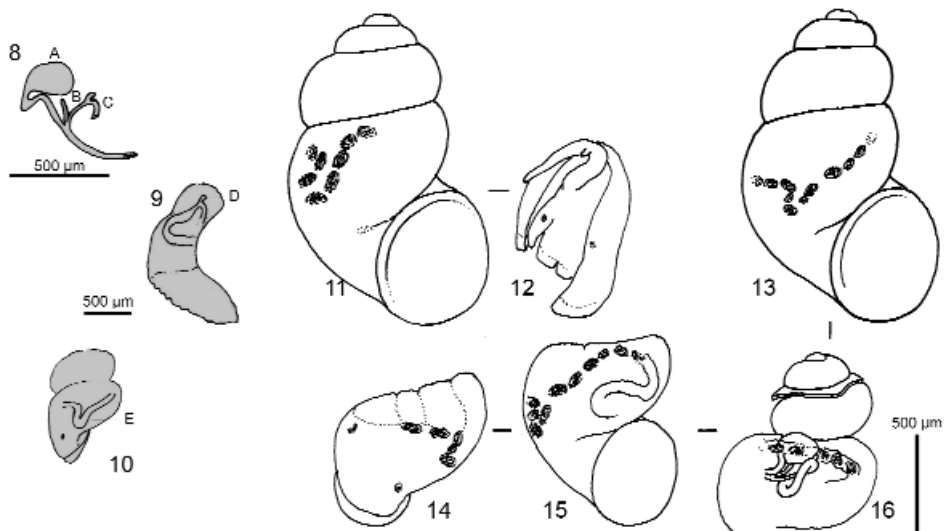
The protoconch of *A. (A.) montana* differs by its regularly sculptured surface, with circular depressions (Rolán, 1993: 118, pl. 3 fig. 2; Arconada et al., 2007: 146, figs 86-87). With a height of 1.25-1.37 mm, the shell of *A. (A.) montana* is smaller than that of *A. (A.) somiedoensis*; it is also clearly more elongated. The RS1 of *A. (A.) montana* is about as long as the RS2 and shorter than in *A. (A.) somiedoensis* and thus does not reach the bursa.

In *A. (A.) ovetensis* the protoconch is similar to that of *A. (A.) cantabrica* (Rolán, 1993: 118, pl. 3 fig. 1; Arconada et al., 2007: 146, fig. 85). Further, in *A. (A.) ovetensis* RS1 and RS2 are about equally large or RS2 is even more bulky; its penis differs by being pink near its tip.



Figs 1-7. *Alzoniella somiedoensis* spec. nov., Spain, province of Asturias, Pola de Somiedo. 1, holotype (MNCN 15.05/53251); 2-4, paratypes (MNCN 15.05/53251); 5, paratype, protoconch (MNCN 15.05/53251); 6-7, paratype, shell details (MNCN 15.05/53251).

Shells of *A. (A.) somiedoensis* are about as large as *A. (A.) marianae* but the protoconch of the latter species is similar to that of *A. (A.) cantabrica* (Rolán, 1993: 118, pl. 3, fig. 5 “*B. cf. cantabrica*”; Arconada et al., 2007: 146, fig. 88-89). In *A. (A.) marianae* the duct of the bursa is straight and not wound.



Figs 8-16. *Alzoniella somiedoensis* spec. nov., Spain, province of Asturias, Pola de Somiedo. 8-10, paratype, female (MNCN 15.05/53251); 8, renal oviduct; 9, renal oviduct with albumen and capsule gland; 10, lateral view of animal. 11-12, paratype, male (BOE 2981); 11, shell (intestine seen through shell wall); 12, mantle cavity opened to expose penis. 13-16, paratype, female (BOE 2981); 13, shell (intestine seen through shell wall); 14, lateral view of last body whorl (eyes, fecal pellets and capsule and albumen glands seen through mantle roof); 15, first loop of intestine and fecal pellets (seen through body wall); 16, body whorls (shell broken away except for first whorl; kidney opened to expose renal oviduct with bursa, RS1 and RS2).

The protoconch of *A. (A.) somiedoensis* is slightly similar to that of *A. (A.) asturica* (Rolán, 1993: 118, pl. 3 fig. 3; Arconada et al., 2007: 145, figs 80-81). However, the shell of the former species is clearly larger and more elongated than that of *A. (A.) asturica*, which measures only 1.0-1.1 mm. The RS1 of *A. (A.) asturica* is shorter than that of *A. (A.) somiedoensis* and does not reach the bursa.

Habitat and distribution. – *Alzoniella (A.) somiedoensis* spec. nov. is known only from a spring at its type locality in northwestern Asturias. The animals live under fallen leaves on humid surfaces and also on rocks in the same habitat.

Derivation nominis. – The name of the new species is derived from its type locality.

ACKNOWLEDGEMENTS

We have to thank Jesús Méndez, who made the SEM microphotographs in the Centro de Apoyo Científico y Tecnológico a la Investigación (CACTI) of the University of Vigo.

REFERENCES

- ARCONADA, B., E. ROLÁN & H. D. BOETERS, 2007. A revision of the genus *Alzoniella* Giusti & Bodon, 1984 (Gastropoda, Caenogastropoda, Hydrobiidae) on the Iberian Peninsula and its implications for

the systematics of the European hydrobiid fauna. – *Basteria* 71: 113-153.

ROLÁN, E., 1993. El género *Belgrandiella* Wagner, 1927 en el norte de la Península Ibérica con descripción de tres especies nuevas (Mollusca, Gastropoda, Hydrobiidae). – *Thalassas* 9: 99-122.