

***Alzoniella navarrensis* n. sp., *Pseudamnicola (Corrosella) hydrobiopsis* n. sp.  
and the type species of *Pseudamnicola* Paulucci, 1878  
Unknown West European Prosobranchia, 9<sup>1</sup>**

Hans D. BOETERS

Karneidstr. 8, D-81545 München, Germany

The genus *Alzoniella* Giusti & Bodon, 1984, has not yet been recorded for Western Europe. A new species, *A. navarrensis* n. sp., is described from the French Pyrenees. Further, a new species of *Pseudamnicola* Paulucci, 1878, is reported as *P. (Corrosella) hydrobiopsis* n. sp. from Andalusia. Finally, some comments on the designation of the type species of *Pseudamnicola* Paulucci, 1878, are given.

Key words: Gastropoda, Prosobranchia, Hydrobiidae, *Alzoniella*, *Pseudamnicola*, taxonomy, France, Spain.

***Alzoniella navarrensis* n. sp. (figs. 5-7)**

*Belgrandiella* cf. *perissii* (Dupuy, 1851). — Boeters, 1983: 20 fig. 26, and 22 fig. 34.

A new representative of the genus *Alzoniella* Giusti & Bodon, 1984, is described. Its shell is smaller than that of *A. pyrenaica* (Boeters, 1983), the only other representative of this genus known from France, which up to now has been regarded as belonging to *Belgrandiella* A. J. Wagner, 1928.

Shell. — Shell with 3.5 whorls. Shape of the shell like that of a wheat grain, suture pronounced, whorls fairly convex, smooth and only very faintly striped. Last whorl forms more than half of the total height of the shell. Aperture slightly slanted and egg-shaped. Edge of the aperture sharp, neither thickened nor widened. The aperture touches the last whorl over a short distance; more basally there is an umbilical slit. The area of the umbilicus is thickened inside the shell, which can be seen through the transparent shell wall.

Measurements. — Height 1.2 mm, width 0.64 mm.

Operculum. — Transparent, brownish. Nucleus also brownish to pale orange.

Animal. — Pigmentless, eyes reduced or at least unpigmented. Gill: The mantle cavity of only one specimen was dissected which showed merely a single gill leaflet. Intestine: A first Z-like bend is followed by a second pronounced Z-like bend. Male copulatory organ: Unknown. Female sex tract: Bursa shaped like a ball, with two receptacula (Boeters, 1983: 20, fig. 26).

Differentiating features. — *Alzoniella pyrenaica* (Boeters, 1983) differs by the height of its shell, which is nearly twice that of the new species. Further, the bursa of *A. pyrenaica* is not shaped like a ball but rather like a kidney which is inserted at its distal end by the pedunculus.

<sup>1</sup> No. 8, see *Heldia*, 1 (5/6): 169-170, 1989.

Habitat. — Known merely from two wells in Arnéguy (Basses-Pyrénées) sympatrically with *Lithabittella elliptica* (Paladilhe, 1874) and *Bythinella* sp. The small number of only four specimens found there and their lack of pigmentation point to a subterranean existence.

Type locality. — France, Basses-Pyrénées, Arnéguy, well (iron pipe) about 300 m Northeast of the church and on the right side of the street towards St. Jean-Pied-de-Port [UTM XN37].

Material. — (i) locus typicus; holotype (shell; NNM 59144) and 2 paratypes (females; BOE 362, not BOE 363), 21.IX.1970; (ii) France, Basses-Pyrénées, Arnéguy, well (iron pipe) about 1.3 km Northeast of the church and on the right side of the street towards St. Jean-Pied-de-Port [UTM XN37]; 1 paratype (female; BOE 1442), 29.V.1998.

Derivatio nominis. — The name of this new species is derived from that of the French region Navarre.

***Pseudamnicola (Corrosella) hydrobiopsis* n. sp.** (figs. 1-2)

A new representative of the genus *Pseudamnicola* Paulucci, 1878, is described. All data are based on three shells found in a spring in Southern Spain, Province of Granada. Because of the slenderness of the shells it is assumed that the new species belongs to the subgenus *Corrosella* Boeters, 1970.

Description.- Surface of the shell corroded and whitish to weakly brownish. The brownish colour of the shell wall is clearly seen when looking into the aperture. Tip of the shell truncated by corrosion so that not more than about 4 1/2 whorls remain for an adult specimen. With its slender shape, a height of about 3 mm and its dull chestnut colour, the shell looks at first glance like that of a species of *Acicula* or *Hydrobia*. Suture not strongly pronounced, whorls moderately convex. Aperture pear-shaped. From the upper angle of the aperture to where the umbilicus opens, the peristome forms a groove with the preceding whorl. Outer peristome not thickened, sharp and only very slightly widened at the base.

Measurements.- Since the tips of all three shells on which this description is based are strongly corroded, the shell heights are minimum measurements.

Height of shell: 2.85, 3.15 and 3.50 mm

Width of shell: 1.40, 1.40 and 1.45 mm

Height of aperture: 0.95, 1.00 and 1.10 mm

Width of aperture: 0.80, 0.80 and 0.80 mm

Differentiating features.- *Pseudamnicola (Corrosella) hydrobiopsis* most closely resembles *P. (C.) falkneri* Boeters, 1970, the type species of *Corrosella*, which also occurs in Andalusia. The geographical distance between the type localities of the two species is about 156 km.

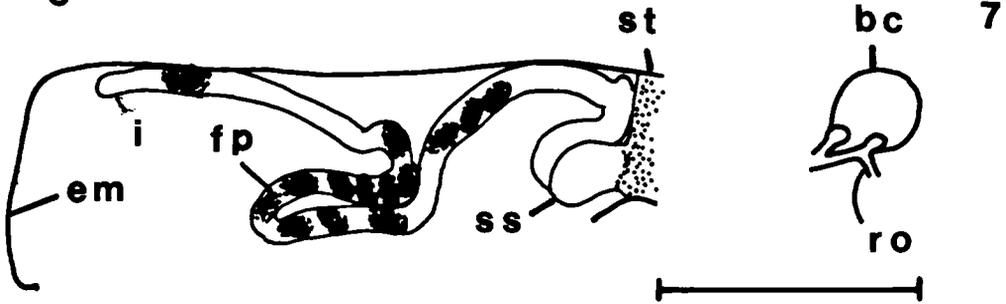
Because of the shape of its shell *P. (C.) hydrobiopsis* could be regarded as a representative of the genus *Hydrobia*, whereas the shell of *P. (C.) falkneri* is less elongate and rather more conically shaped. The whorls of *P. (C.) falkneri* are fairly convex, while those of *P. (C.) hydrobiopsis* are flatter. Finally, the area of the umbilicus provides a good differentiation. In *P. (C.) hydrobiopsis* the umbilicus is slit-like and the edge of the peristome defining this slit is sharp, stands away from the shell below the umbilicus and swings away towards the right. In the case of *P. (C.) falkneri* the umbilicus is also slit-like. Below the umbilicus, however, the border of the peristome is fused with the shell wall.

*Pseudamnicola (Corrosella) luisi* Boeters, 1984, with its type locality only about 75 km away, is quite different. The shells are more conical and larger, with a height of 3.75 to 5.00 mm, and the last whorl is rather bulging.



Figs. 1-5. Shells of hydrobiid species. 1-2. *Pseudamnicola (Corrosella) hydrobiopsis* n. sp., Fuente La Carmonilla, Loja, Granada, Spain; 1, holotype (NNM 59145), height 3.50 mm; 2, paratype (NNM 59146), height 3.15 mm. 3. *Pseudamnicola (Corrosella) falkneri* Boeters, 1970, Cerro de la Virgen between Galera and Orce, Granada, Spain (holotype, SMF 219026), height 2.2 mm. 4. *Pseudamnicola (Corrosella) luisi* Boeters, 1984, Lapeza, Granada, Spain (holotype, SMF 256391), height 4.3 mm. 5. *Alzoniella navarrensis* n. sp., Arnéguy, Pyrénées-Atlantiques, France (holotype, NNM 59144), height 1.2 mm.

6



Figs. 6-7. Anatomical details of *Alzoniella navarrensis* n. sp.; 2 paratypes (females; BOE 362), scale bar 0.5 mm. Abbreviations: bc = bursa copulatrix, em = edge of mantle cavity, fp = faecal pellet, i = intestine, ro = renal oviduct, ss = style sac, st = stomach.

Habitat. — Pumped from a spring ('sondage Bou-Rouch').

Type locality. — Spain, Province of Granada, Loja, Fuente La Carmonilla (altitude 520 m) [UTM UG 9913].

Material. — Holotype (NNM 59145) and 2 paratypes (NNM 59146) ex BOE 1399; A. J. de Winter don.

Discovery. — The material was collected by P. van den Hurk and R. Leys on July 19, 1985.

Derivatio nominis. — The name refers to similar shell characteristics of species of *Hydrobia* Hartmann, 1821.

#### THE TYPE SPECIES OF *PSEUDAMNICOLA* PAULUCCI, 1878

In 1971, Boeters (p. 175) demonstrated that *Bythinia lucensis* Issel, 1866, is the type species of *Pseudamnicola* designated by Kennard & Woodward (1926: 24); cf. also Wenz (1939: 566). In 1966, Zilch (p. 291) 'corrected' Wenz and Kennard & Woodward and indicated *Paludina macrostoma* Kuester, 1853; this species had been selected as type species by A. J. Wagner (1928: 276) two years after the very first designation by Kennard & Woodward. Recently Kabat & Hershler (1993: 45) referred to Zilch, confirming his view that *Bythinia lucensis* Issel, 1866, was not an originally included species. This allegation needs reconsideration.

Paulucci (1878: 19) gives a list of species which reads inter alia as follows:

"? Gen. *Ammicola*, Gould. (113 bis).

477 1 *macrostoma* (114) Kuester Chemn.-Kuester, pl. 13, fig. 16-17

Nord E. x

Cent. O. x

Sud E. x

Sud O. x

478 2 ...

479 3 *lucensis* Stabile Bullet. Malac. Ital., 1868, pl. 6, fig. 9

Cent. O. x

B. de Lucqua

480 4 ... "

The reference to "Bullet. Malac. Ital., 1868" for *lucensis* means a publication by Gentiluomo who mentioned the species in question as "*Bythinia lucensis*, Stabile" from "Bagni di Lucca" (1868: 95, also pl. 6 fig. 9). Two years earlier, this species had been described by Issel (1866: 30) as "*Bythinia lucensis*, Stabile. *Bithinia* [sic] *lucensis*, Stabile, in litt. Fu copiosamente raccolta dall sig. V. Uzielli ai Bagni di Lucca."

As mentioned before, *Bythinia lucensis* Issel, 1866, was included by Paulucci in a list of species for "? Gen. *Ammicola*, Gould." The question mark expresses a reservation which was explained by Paulucci in the same publication in another paragraph entitled "Genre *Ammicola*, Gould" (p. 48) as follows:

"Je désigne ainsi les *Hydrobia* à spire courte, à tours peu nombreux et à dernier tour renflé. Il ne m'est pas démontré que ces espèces appartiennent réellement au genre *Ammicola* de l'Europe un nom de genre nouveau, je proposerais celui de *Pseudammicola*, Paulucci."

Undoubtedly, *Bythinia lucensis* Issel, 1866, was one of those species which Paulucci regarded as "appartiennent réellement au genre *Ammicola* de l'Europe" when adding "B. de Lucqua" as locality (p. 19).

## REFERENCES

- BOETERS, H. D., 1971. *Pseudammicola* Paulucci, 1878 und *Mercuria* n. gen. (Prosobranchia, Hydrobiidae). — Archiv für Molluskenkunde 101: 175-181.
- , 1983. Unbekannte westeuropäische Prosobranchia, 5. — Archiv für Molluskenkunde 114: 17-24.
- GENTILUOMO, C., 1868. Catalogo dei molluschi terrestri e fluviali della Toscana. — *Bullettino malacologico italiano* 1: 81-100.
- ISSEL, A., 1866. Dei molluschi raccolti nella provincia di Pisa. — *Memorie della Società italiana di Scienze naturali* 2: 1-38.
- KABAT, A. R., & R. HERSHLER, 1993. The prosobranch snail family Hydrobiidae (Gastropoda: Rissooidea): Review of classification and supraspecific taxa. — *Smithsonian Contributions to Zoology* 547: 1-94.
- KENNARD, A. S., & B. B. WOODWARD, 1926. Synonymy of the British non-marine Mollusca (Recent and Post-Tertiary): I-XXIV, 1-447. London.
- PAULUCCI, 1878. Matériaux pour servir à l'étude de la faune malacologique terrestre et fluviale de l'Italie et de ses îles: 1-54. Paris.
- WAGNER, A. J., 1928. Studien zur Molluskenfauna der Balkanhalbinsel mit besonderer Berücksichtigung Bulgariens und Thraziens, nebst monographischer Bearbeitung einzelner Gruppen. — *Prace Zoologiczne Polskiego Państwowego Muzeum Przyrodniczego* 6 [1927]: 263-399.
- WENZ, W., 1939. Gastropoda. Allgemeiner Teil und Prosobranchier (Amphigastropoda u. Streptoneura). In: O. H. SCHINDEWOLF, *Handbuch der Paläozoologie*, 6 (1) (3): 481-720. Berlin-Nikolassee.
- ZILCH, A., 1966. Berichtigungen zum Handbuch der Paläozoologie Band 6 Gastropoda, Teil 2 Euthyneura. — *Archiv für Molluskenkunde* 95: 287-291.