

Notes on Spanish non-marine molluscs  
2. New data on the distribution of some species<sup>1</sup>

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Extensive sampling of gastropods in NW. Spain (fig. 3) yielded some interesting zoogeographical results. Two species new for the Iberian peninsula were discovered and a record enlarging the known range of another species was obtained. For all localities the UTM Grid code (one or ten km squares) is given. The number of specimens studied is indicated after the collection in which the material is kept.

I am indebted to Mr. J. C. A. Eikenboom (Hellevoetsluis), Mr. J. J. Vermeulen (Leiden) and Dr. E. Gittenberger (Rijksmuseum van Natuurlijke Historie, Leiden) for the data they provided.

The following abbreviations are used: colln., collection; E, Eikenboom; R, Raven; RMNH, Rijksmuseum van Natuurlijke Historie; V, Vermeulen.

*Toltecia pusilla* (Lowe, 1831) (Endodontidae)  
new to the Spanish and French Atlantic coasts

The discovery of *Toltecia pusilla* in the Spanish province of Oviedo and the French department of Pyrénées-Atlantiques implies the occurrence of this widely distributed species (cf. Gittenberger et al., 1980) also along the Atlantic coasts of Spain and France.

Material. – Spain, Oviedo, N. of Buelles (UN7599), 80 m alt., densely vegetated limestone wall next to the N621; E leg., VIII.1980 (colln. E/many; colln. R/15).

France, Pyrénées-Atlantiques, Bayonne (XP21), at the foot of the old city walls along the Chemin de Lassequette (Domaine de Gaillet); R leg., 8.VI.1978 (colln. R/1).

*Vertigo (Vertigo) substriata* (Jeffreys, 1833) (Vertiginidae)  
new to the Iberian peninsula, new to SE. France

This species was discovered at a locality on the southern slope of the Cantabrian Mountains, far from its known range (Kerney & Cameron, 1979: 230, map 40). It was collected VI. 1978, by V and R, at about 1000 m alt., in a pool formed by a brooklet in an old forest (mainly oaks) SW. of the hamlet Alejico (UN2545), 5 km N. of Cistierna, province of León (colln. R/15; colln. V/14; colln. RMNH/12) (fig. 1). In the pool many additional species of small molluscs were collected, most of which (those with asterisk) not recorded

<sup>1</sup> *Planogyra sororcula* (Benoit, 1857) (Gastropoda, Valloniidae) new for the Cantabrian mountains. – *Basteria* 44: 54 (1980).

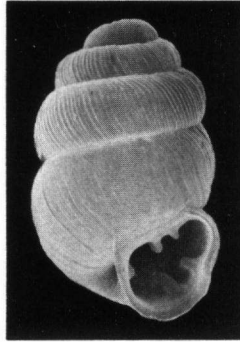


Fig. 1. *Vertigo (Vertigo) substriata* (Jeffreys, 1833). Alejico, León, Spain. Actual height 1.8 mm (photo: J. H. W. Krom, Leiden).

before from the province of León (material in colln. V and colln. R): *\*Pisidium (Rivulina) casertanum* (Poli, 1791), *\*P. (R.) personatum* Malm, 1855, *\*Galba (Galba) truncatula* (Müller, 1774), *\*Carychium minimum* Müller, 1774, *\*Succinea (Succinella) oblonga* Draparnaud, 1801, *\*Cochlicopa lubrica* (Müller, 1774), *\*C. lubricella* (Porro, 1838), *Pyramidula rupestris* (Draparnaud, 1801), *\*Vertigo (Vertigo) antivertigo* (Draparnaud, 1801), *\*V. (V.) pygmaea* (Draparnaud, 1801), *Lauria (Lauria) cylindracea* (Da Costa, 1778), *\*Vallonia costata* (Müller, 1774), *\*V. excentrica* Sterki, 1893, *\*V. pulchella* (Müller, 1774), *\*Acanthinula aculeata* (Müller, 1774), *\*Ena (Ena) obscura* (Müller, 1774), *\*Punctum (Punctum) pygmaeum* (Draparnaud, 1801), *\*Vitrina (Vitrina) pellucida* (Müller, 1774), *Phenacolimax (Gallandia) annularis* (Studer, 1820), *Nesovitrea hammonis* (Ström, 1765), *\*Vitrea (Crystallus) contracta* (Westerlund, 1871), *\*Aegopinella nitidula* (Draparnaud, 1805), *\*Euconulus (Euconulus) fulvus* (Müller, 1774), *\*Balea (Balea) perversa* (Linné, 1758), and *Candidula rocardioi* (Ortiz de Zárate, 1950). Only empty shells of *V. substriata* were collected, but there is no reason to suppose that the species no longer lives at this locality.

The following material of *V. substriata* could also be studied: Spain, Oviedo, S. of the road from Noriega to Bogüerizo (UP7101), 300 m alt.; H. D. Boeters leg., VI.1974 (RMNH/1). France, Pyrénées-Orientales, Fort Remeu (DH2106), 1800 m alt.; C. O. van Regteren Altena leg., VI.1928 (RMNH/1). France, Pyrénées-Orientales, La Llagonne, up to the Pic de la Tausse (DH20), 1600 m alt., D. Aten leg., 3.VII.1952 (RMNH/2).

These data demonstrate that *V. substriata* occurs in some isolated, mountainous areas beyond its major distributional area. This suggests that in former days the range of the species was larger, probably due to a glaciation. A comparable case is that of *Zoogenetes harpa* (Say, 1824) (Valloniidae) of which an isolated population occurs near Zermatt in Switzerland (Ehrmann, 1933: 57) while the species is further known in Europe from Scandinavia only (Kerney & Cameron, 1979: 99). During the last glaciation (Weichselian) the snow line in the Cantabrian Mountains was about 1200 m lower than the actual (imaginary) snow line at 2600 m (Solé Sabaris, 1954). I found living molluscs up to 2200 m, about 400 m below the (imaginary) snow line. Therefore it is supposed that during a glaciation the central part of the Cantabrian Mountains was unsuited for molluscan life, which persisted only at the northernmost strip along the coast (from sea level up to the actual

1000-1100 m contour maximally) and the southernmost strip of the mountains, bordering the Meseta (below the actual contour of 1000-1100 m maximally). Maybe the species lived also beyond the mountains on the Meseta, but as far as known now no species of the genus live on the dry Meseta. Therefore the Cantabrian Mountains may be considered a refugium for *V. substriata*.

The two localities in the eastern Pyrenees are both in the valley of the river Tet and situated at a higher altitude than those in the Cantabrian Mountains. Although glaciers had a greater extension in the Pyrenees than in the Cantabrian Mountains, perpetual snow reached downward to only about 1800-2200 m (Solé Sabaris, 1952). The Tet valley was beyond the area which was covered more than six months per year by snow (Solé Sabaris, 1952) and here the species survived. Maybe when the climate improved the species extended its range towards higher areas.

*Ponentina ponentina* (Morelet, 1845) (Helicidae)  
new to the province of Palencia

*Ponentina ponentina* is known from several parts of the Iberian peninsula, viz. Galicia, León, Asturias, Navarra, Huelva and Málaga (Manga, 1980). The record of the species in Navarra is uncertain, because only Martorell (1879; cited in Ortiz de Zárate Lopez & Ortiz de Zárate Rocandio, 1949, and Manga, 1980) mentions the species from there. Several specimens of this species were collected VIII.1982 by J. J. Vermeulen in the province of Palencia, near Aguilar de Campoo, on dry calcareous ground N. of Mave (UN9633), at about 1000 m alt. (fig. 2). This is the first confirmation that the species indeed occurs also beyond the northwesternmost and the southernmost parts of the Iberian peninsula.



Fig. 2. *Ponentina ponentina* (Morelet, 1845). Mave, Palencia, Spain. Scale 1 mm.

*Helicella* cf. *mangae* Gittenberger & Raven, 1982 (Helicidae)  
new to the Ebro valley

Originally *Helicella mangae* was only known from the province of León and, with doubt, from the provinces of Palencia and Burgos, all in mountainous areas at the northern part of the Duero valley. It is impossible to distinguish between the shells of specimens

from Palencia and Burgos, and those from León, but the anatomy shows differences which might have taxonomical value (Gittenberger & Raven, 1982). For the time being the specimens from outside the province of León are indicated as *H. cf. mangae*. Such specimens were collected at several localities in the Ebro valley, thus considerably enlarging the range of this species (fig. 3).

Material (Spain) - Burgos, 1.5 km N. of Oña, dry limestone slopes near the bridge over the river Ebro (VN6733), 700 m alt.; V leg., VIII.1982 (colln. V/2). Burgos, N. of Pancorbo, dry limestone slopes (VN9121), 700 m alt.; V leg., VIII.1982 (colln. V/2). Alava, 2 km N. of Puerto de Orduña, below limestone blocks (VN9856), 700 m alt.; R leg., VIII.1982 (colln. R/4). Navarra, Paso de Dos Hermanas, N. of Irurzún, below limestone blocks (WN9554), 490 m alt.; R leg., VIII.1982 (colln. R/1). Mr. C. E. Prieto (Bilbao) also collected specimens in the Ebro valley (personal communication).

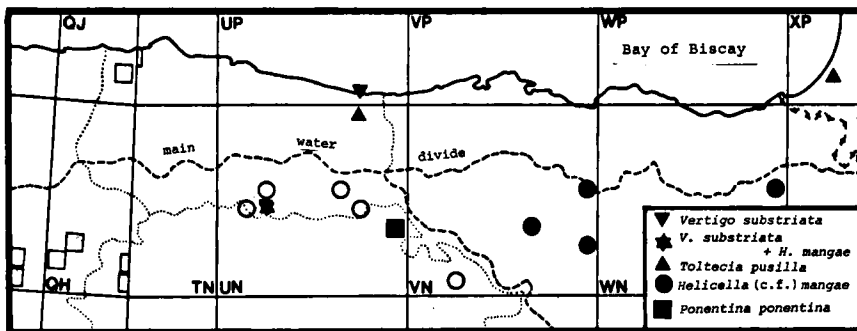


Fig. 3. The investigated area. Literature data of *Helicella mangae* and *Ponentina ponentina* (Gittenberger & Raven, 1982; Manga, 1980) are indicated with open symbols, new data are indicated in black. The borders of the Meseta and of the area with non-calcareous rocks are indicated (stippled line).

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### SAMENVATTING

*Toltecia pusilla*, bekend uit o.a. circummediterrane gebieden en de centrale Pyreneën, werd voor het eerst in Zuidwest-Frankrijk en in Noord-Spanje vastgesteld. *Vertigo substriata* werd vastgesteld op twee plaatsen in het Cantabrisch gebergte en op twee plaatsen in de oostelijke Pyreneën, ver buiten het bekende verspreidingsgebied. Het is mogelijk dat deze populaties een zuidelijker verspreiding van de soort tijdens de laatste ijstijd weerspiegelen. *Ponentina ponentina* werd vastgesteld in de provincie Burgos, buiten de bekende verspreidingsgebieden in Noordwest- en Zuid-Spanje. *Helicella* cf. *mangae* werd vastgesteld in het westen van het Ebrodal en in Spaans Baskenland, zodat het bekende verspreidingsgebied sterk naar het oosten werd uitgebreid.

### SUMARIO

*Toltecia pusilla*, conocido entre otros de áreas circummediterráneas y de los Pirineos centrales fue comprobado por la primera vez en el suroeste de Francia y el norte de España. *Vertigo substriata* fue comprobado por primera vez en España en la Cordillera Cantábrica y también en el Pirineo oriental francés, lejos del areal conocido. Posiblemente estas poblaciones reflejan una distribución más meridional de la especie durante la última glaciación. *Ponentina ponentina* fue comprobado en la provincia de Burgos, fuera de los areales conocidos en el noroeste y el sur de España. *Helicella* cf. *mangae* fue comprobado en el oeste del valle del Ebro y en el País Vasco de modo que el areal conocido de la especie se extendió mucho al este.