**Data paper**

**Title: New records of the land and freshwater molluscs of Northern Spain**

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**Abstract**

**Keywords**

snails, bivalves, Mollusca, terrestrial, freshwater, Northern Spain, occurrence, observation, open data, data paper

**Rationale**

**Taxonomic coverage**

Land and freshwater molluscs do not comprise a monophyletic taxonomic group, but are all mollusc species that live in respectively land and freshwater habitats. On land, only gastropods occur (class Gastropoda, snails and slugs) and in freshwater, both gastropods as bivalves (class Bivalvia) occur. The dataset includes 222 observations of 75 taxa belonging to 52 genera and 36 families.

Determination was mainly done with Cadevall & Orozco (2016) and Welter-Schultes (2012) and for species with a wider, European, distribution also the following works were consulted: Cameron (2008), Glöer (2015), Horsák (2013), Jansen (2015). Finally, for specific genera …

**Taxonomic ranks**

**Kingdom:** Animalia  
**Phylum:** Mollusca  
**Class:** Gastropoda  
**Families:** Agriolimacidae, Arionidae, Azecidae, Chondrinidae, Clausiliidae, Cochlicopidae, Discidae, Ellobiidae, Elonidae, Enidae, Ferussaciidae, Gastrodontidae, Geomitridae, Helicidae, Hydrobiidae, Hygromiidae, Lauriidae, Lymnaeidae, Megalomastomatidae, Neritidae, Oxychilidae, Physidae, Planorbidae, Pomatiidae, Pristilomatidae, Punctidae, Pupillidae, Pyramidulidae, Tateidae, Testacellidae, Trissexodontidae, Truncatellinidae, Valloniidae, Vertiginidae, Vitrinidae  
**Species:** *Abida vasconica, Aegopinella nitidula, Alzoniella* spec.*, Ancylus fluviatilis, Arion rufus/vulgaris, Arion spec. 1, Arion spec. 2, Azeca goodalli, Cecilioides acicula, Cepaea nemoralis, Cernuella aginnica, Chondrina cliedentata, Chondrina kobelti, Clausilia bidentata, Cochlicella acuta, Cochlicella barbara, Cochlicopa lubrica, Cochlicopa lubricella, Cornu aspersum, Deroceras* spec.*, Discus rotundatus, Elona quimperiana, Galba truncatula, Gastropoda spec., Helicella itala itala, Helicella pampelonensis, Helicella spec., Helicella valdeona, Hygromia limbata, Hygromiidae* spec.*, Lauria cylindracea, Leucophytia bidentata, Macrogastra rolphii digonostoma, Mengoana jeschaui, Merdigera obscura, Obscurella asturica, Obscurella bicostulata, Obscurella crassilabrum, Obscurella hidalgoi, Obscurella asturica/hidalgoi, Obscurella* spec.*, Oestophora silvae, Oestophorella buvinieri, Oligolimax annularis, Oxychilus navarricus navarricus, Paralaoma servile, Peringia ulvae, Physella acuta, Plentuisa vendia, Pomatias elegans, Potamopyrgus antipodarum, Potamopyrgus antipodarum* f.*carinata, Pseudomelampus exiguus, Pupilla bigranata, Pupilla muscorum, Pyramidula pusilla/umbilicata, Pyrenaearia cantabrica, Pyrenaearia schaufussi, Testacella maugei, Theba pisana, Theodoxus fluviatilis, Trochulus hispidus, Truncatellina callicratis, Vallonia costata, Vallonia excentrica, Vallonia pulchella, Vertigo pygmaea, Vitrea contracta, Vitrea subrimata, Vitrea* spec., *Vitrina pellucida, Xerosecta cespitum, Xerotricha apicina*

**Class:** Bivalvia  
**Families:** Sphaeriidae  
**Species:** *Euglesa* aff. *globulare, Euglesa* cf. *casertana*

**Geographic coverage**

The dataset comprises three trips taken to Northern Spain (to Vízcaya, Cantabria and Asturias) by the first author and four extra observations based on shells bought on a shell show (WL:SNAIL:ES:OCC:00000 - WL:SNAIL:ES:OCC:00003).

**Bounding box**

West: -4.989424; East: -2.637003; North: 43.46482086; South: 43.064564

**Temporal coverage**

2004-08-18 to 2019-09-16

**Methodology**  
**Sampling description**

Sampling was done ad random along random routes. Locations were not predefined, but some regions were specifically visited because of known species richness or endemics occurrence. At site, observations were incidental, but microhabitats or elements that were thought to be favourable for snails or were given more attention (e.g. dead wood, north facing slopes etc.). Collection of specimens was mainly done by hand on sight. In some cases, a soil sample was taken that was later examined at home.

Individuals were observed as living snails or empty shells. Juveniles were treated as individuals with a shell that lack adult characteristics, like an underdeveloped peristome or the presence of a keel that is not present in adult shells. Following this practice, subadult specimen were often classified as juveniles.

**Dataset  
Dataset description**

The following Darwin Core terms (<https://dwc.tdwg.org/terms/>) are used in the dataset:

**Object name:** Land and freshwater molluscs of Northern Spain

**Format name:** Darwin Core Archive format

**Format version:**

**Character encoding:** UTF-8

**Language:** English

**License:** <https://creativecommons.org/publicdomain/zero/1.0/>

**Usage norms:**

**Publication date:**

**Distribution:**

**DOI:**

**Data records:**

**Additional information**

**Acknowledgements**

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**References**

Cadevall, J. & Orozco, A. (2016). Caracoles y babosas de la península Ibérica y Baleares. - Omega Ediciones SA, Barcelona: 817 pp.

Cameron, R., 2008. Keys for the identification of Land Snails in the British Isles. Second Edition. - FSC, Shrewsbury: 84 pp.

Glöer, P. (2015). Süβwassermollusken. Ein Bestimmungsschlüssel für die Muscheln und Schnecken im Süβwasser der Bundesrepublik Deutschland. 14., überarbeitete Auflage. - Deutscher Jugendbund für Naturbeobachtung (DJN), Götingen: 135 pp.

Horsák, M., Juřičková, L. & Picka, J. (2013). Molluscs of the Czech and Slovak Republics. - Nakladatelství kabourek, Zlín: 264 pp.

Jansen, E. A. (2015). Veldgids slakken en mossels - land en zoetwater. - KNNV Uitgeverij, Zeist: 272 pp.

Welter-Schultes, F. (2012). European non-marine molluscs, a guide for species identification. - Planet Poster Editions, Götingen: 679 pp.