

***Heliconoides linneensis* sp. nov., a new holoplanktonic gastropod  
(Mollusca, Thecosomata) from the Late Oligocene  
of the Aquitaine Basin (France, Landes)**

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The gastropod *Heliconoides linneensis* sp. nov. (Mollusca, Thecosomata) is described from Late Oligocene (Chattian) deposits of several localities in the southwestern Aquitaine Basin (France, Landes).

**Introduction**

Thecosomatous gastropods (so-called 'pteropods') from the Paleogene and Neogene of the Aquitaine Basin, SW France, have been described in a large number of papers, the most important of which are Daudin (1800), Grateloup (1840-1847), Benoist (1873, 1889), Peyrot (1932, 1933), Curry (1982), Lozouet & Maestrati (1982) and Lozouet & Le Renard (2007). Research and extensive field work during the last 25 years, however, have also yielded a large number of species new for the basin, some of which are new to science. One of these latter, occurring in Late Oligocene deposits, is introduced in the present paper, anticipating a more extensive description of the assemblages (Cahuzac & Janssen, in prep.).

**Abbreviations**

- BRS collection B.G. Roest, Silvolde, The Netherlands.  
MNHN Muséum national d'Histoire naturelle, Laboratoire de Biologie des Invertébrés et de Malacologie, Paris, France. Unofficial registration numbers (PL) refer to the Pierre Lozouet et al. collection.  
RGM Nationaal Natuurhistorisch Museum Naturalis, Palaeontology Department (formerly Rijksmuseum van Geologie en Mineralogie), Leiden, The Netherlands (RGM registration numbers).

### Systematic palaeontology

Phylum Mollusca Linné, 1758  
Class Gastropoda Cuvier, 1797  
Superorder Heterobranchia Burmeister, 1837  
Order Euthyneura Spengel, 1881  
Suborder Thecosomata de Blainville, 1824  
Infraorder Euthecosomata Meisenheimer, 1905  
Superfamily Limacinoidea Gray, 1847  
Family Limacinidae Gray, 1847  
Genus *Heliconoides* d'Orbigny, 1836

Type species.— *Heliconoides inflata* (d'Orbigny, 1836) (Recent).

#### *Heliconoides linneensis* sp. nov. (figs 1-7)

Type material.— Holotype RGM 541 416 (Fig. 1a-b).

Type locality.— St. Etienne-d'Orthe, outcrop in Ruisseau de l'Église, east of Lartigaou, France (Landes), coordinates  $x = 316.500$ ,  $y = 149.150$ .

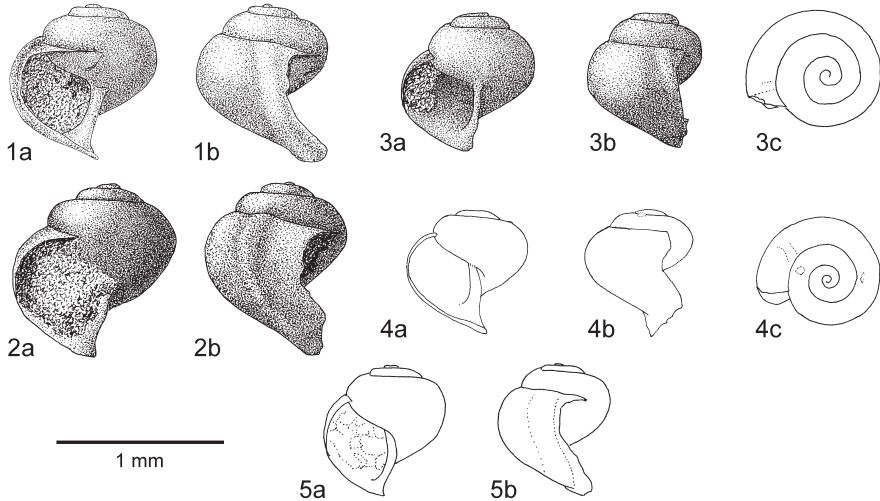
Stratum typicum.— Marnes de St. Etienne-d'Orthe (Oligocene, Chattian), zone NP25 (Steurbaut, in Zorn & Janssen, 1993, p. 61).

Derivatio nominis.— The species is named after the Société linnéenne de Bordeaux, which in the course of time published numerous papers on geology and palaeontology of the Aquitaine Basin. The Société, of course, is named after Carl von Linné.

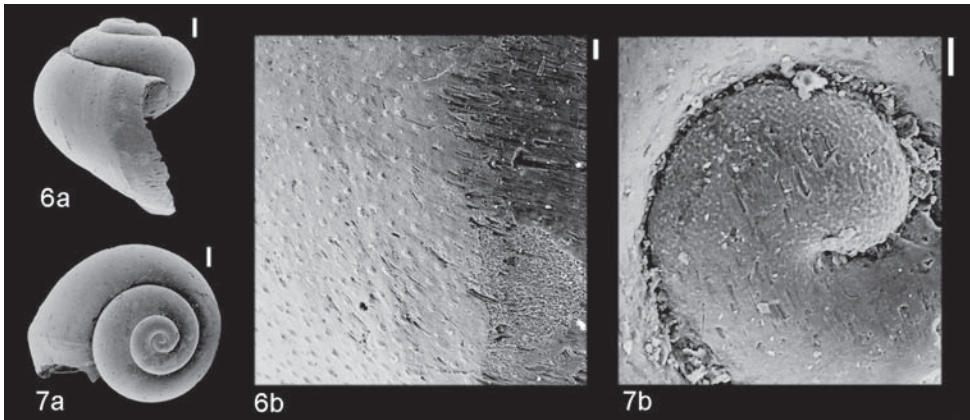
Diagnosis.— *Heliconoides* of near spherical shape,  $3\frac{1}{4}$  moderately convex whorls, tangents along the spira convex, body whorl with oblique reinforcement rim slightly behind the apertural margin.

Description.— The shell is sinistral, small, slightly higher than wide (height of holotype 0.92 mm, width 0.86 mm) and nearly spherical in shape. The protoconch is not clearly separated from the teleoconch. The nucleus has a diameter of *c.* 45  $\mu\text{m}$  and has a granulated to honey-comb micro-ornament (Fig. 7b). There are somewhat more than three, rarely three and a half, moderately convex whorls, together forming a low cone with convex tangents. The body whorl is gradually rounded and has a narrow umbilicus. Close to the apertural margin an obliquely vertical, slightly curved swelling in the shell wall forms a reinforcement rim. At this place the shell wall has a micro-ornament of irregularly arranged pustules (Fig. 6b). The shell wall in front of this rim is very fragile, and broken in practically all specimens.

Paratypes.— All specimens from the Late Oligocene of the Aquitaine Basin, further details on these localities will be specified in Cahuzac & Janssen (in prep.). Belus (Marcon): MNHN PL 6594/17 + 1 (Fig. 2a-b); Marcon (Sas): MNHN unnumbered/2 fragments; Orthevielle (Tauzia): MNHN PL 5497/1 fragment; Peyrehorade (Peyrère): MNHN PL 6626/1 (Fig. 3a-c), MNHN PL 6626/5; RGM 541 403/2, leg. A.W. Janssen; Peyrehorade (Tauziède): MNHN PL 5897/5, 1 fragment; St. Etienne-d'Orthe (Église A): MNHN PL 6593/8 + 10 damaged; St. Etienne-d'Orthe (Église B): MNHN PL 6627/18; St. Etienne-d'Orthe (Église C): MNHN unnumbered/2 fragments, leg. Lozouet ?; St Etienne d'Orthe



Figs 1-5. *Heliconoides linneensis* sp. nov., holotype (1) and paratypes (2-5). 1a-b: St. Etienne-d'Orthe, Lartigaou, RGM 541 416; 2a-b: Belus (Marcon): MNHN PL 6594; 3a-c: Peyrehorade (Peyrère): MNHN PL 6626; 4a-c: St. Paul-les-Dax (Estoti): MNHN PL 6597; 5a-b: St. Paul-les-Dax (Lestrilles): MNHN PL 6614. a: apertural, b: lateral, c: apical views.



Figs 6-7. *Heliconoides linneensis* sp. nov., paratypes. 6a-b: St. Etienne-d'Orthe (Lartigaou), RGM 541 417; a: lateral view, b: micro-ornament just behind apertural reinforcement; 7: same locality, RGM 541 418; a: apical view, b: micro-ornament on nucleus. Bar length 100  $\mu\text{m}$  (figs. 6a, 7a), 10  $\mu\text{m}$  (figs. 6b, 7b)

(Hondelatte): RGM 541 457/2 fragments, leg. A./W. Janssen; St. Etienne-d'Orthe (Lartigaou): BRS unnumbered/11; RGM 541 417/1 (Fig. 6a-b), RGM 541 418/1 (Fig. 7), RGM 541 419/88, leg. A.W. Janssen, 1984-1990, RGM 541 449/3, leg./don. A.C. Janse; St. Etienne-d'Orthe (Verdun): MNHN PL 6592/6 + 27; St. Paul-les-Dax (Bezoye): MNHN PL 6595/3 juveniles; St. Paul-les-Dax (Estoti): MNHN PL 6597/1 (Fig. 4a-c); St. Paul-les-Dax (Lestrilles): MNHN PL 6614/1 (Fig. 5a-b).

Distribution.— Exclusively known from Late Oligocene deposits (' Chattian Adour' ) in the Aquitaine Basin.

## Discussion

A closely related species is *Heliconoides vanderweideni* Janssen, 2004 (p. 14, pl. 3, figs. 17a-b, 18a-c), introduced from the Aquitanian Lower Globigerina Limestone Formation of the Maltese Archipelago. It differs from the present species in being more globular, with more convex whorls and the apertural rim is interrupted at 2/3rd of its height.

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