

# Annotated catalogue of types of Hawaiian land and freshwater snails (Mollusca: Gastropoda) in the Muséum national d'Histoire naturelle, Paris, with lectotype designations. Addendum: lectotype designation for *Lymnaea affinis* Souleyet, 1852

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Published on 30 September 2016

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[urn:lsid:zoobank.org:pub:550D4592-AB27-4F50-98D1-B72F82E7141E](http://urn:lsid:zoobank.org:pub:550D4592-AB27-4F50-98D1-B72F82E7141E)

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Cowie R. H., Héros V., Yeung N. W. & Hayes K. A. 2016. — Annotated catalogue of types of Hawaiian land and freshwater snails (Mollusca: Gastropoda) in the Muséum national d'Histoire naturelle, Paris, with lectotype designations. Addendum: lectotype designation for *Lymnaea affinis* Souleyet, 1852. *Zoosystema* 38 (3): 389-391. <http://dx.doi.org/10.5252/z2016n3a6>

### KEY WORDS

Lymnaeidae,  
types,  
MNHN,  
Hawaii,  
lectotypification.

### ABSTRACT

A catalogue of types of Hawaiian land and freshwater snails (Mollusca: Gastropoda) deposited in the Muséum national d'Histoire naturelle (MNHN), Paris, was recently published in *Zoosystema*. Type material of an additional species, *Lymnaea affinis* Souleyet, 1852, has since been found and is here documented and a lectotype designated.

## RÉSUMÉ

*Catalogue annoté des types des gastéropodes terrestres et d'eau douce d'Hawaï (Mollusca: Gastropoda) du Muséum national d'Histoire naturelle, Paris, avec désignations de lectotypes. Addendum: désignation de lectotype de Lymnaea affinis Souleyet, 1852.*

**MOTS CLÉS**  
Lymnaeidae,  
types,  
MNHN,  
Hawaï,  
lectotypification.

Un catalogue des types des gastéropodes terrestres et d'eau douce d'Hawaï (Mollusca: Gastropoda) déposés au Muséum national d'Histoire naturelle (MNHN), Paris, a été récemment publié dans *Zoosystema*. Le matériel type d'une espèce additionnelle, *Lymnaea affinis* Souleyet, 1852, a depuis été retrouvé; il est ici documenté et un lectotype est désigné.

## INTRODUCTION

A catalogue of types of Hawaiian land and freshwater snails (Mollusca: Gastropoda) in the Muséum national d'Histoire naturelle (MNHN), Paris, was recently published in this journal (Cowie *et al.* 2016) as one of a series of catalogues of museum types representing this highly threatened fauna (Yeung *et al.* 2016). Type material of an additional species, *Lymnaea affinis* Souleyet, 1852, has since been discovered, incorrectly placed among the Physidae in the MNHN molluscan type collection ("typothèque"). We here provide details of this material, following the approach laid out by Cowie *et al.* (2016).

*affinis* Souleyet, 1852, *Lymnaea*  
(Fig. 1)

*Lymnaea affinis* Souleyet, 1852: 528, pl. 29, figs 42-44.

CURRENT TAXONOMIC STATUS. — Lymnaeidae, *Lymnaea* (*Pseudisidora*) *producta* Lea, 1841, synonym (Cowie *et al.* 1995: 32).

TYPE MATERIAL. — Lectotype (here designated) MNHN IM-2000-32500 (ex MNHN IM-2000-2636); paralectotypes: MNHN IM-2000-2636 (2 spms).

TYPE LOCALITY. — "Nous avons recueilli cette Lymnée dans les mêmes lieux que la précédente" ["...les ruisseaux de l'île Oahou (îles Sandwich)"].

### REMARKS

The original description indicates that this species is always sinistral and all three of the MNHN specimens are indeed sinistral. The three specimens are similar in size and overall appearance. However, one of them most closely resembles the illustration of Souleyet (1852: pl. 29, fig. 44) of a presumed life-size shell in both size and shape, especially in the depiction of the columellar region of the aperture and the shape of the aperture. It also resembles Souleyet's more detailed illustrations of the shell (Souleyet 1852: fig. 43) and of the shell of the living animal (Souleyet 1852: fig. 42). The specimen is 6.25 mm in height (Souleyet's description says 7 mm) and 4.2 mm in width (Souleyet's description says 4 mm). This specimen is here designated as the lectotype; the remaining two specimens are paralectotypes. Those in MNHN IM-2000-2636 (from which the lectotype was segregated as MNHN IM-2000-32500) are

explicitly labelled as having been obtained from the voyage of *La Bonite* in 1838, the year after its return.

Hubendick (1952: 321), in his review of Hawaiian Lymnaeidae, considered there to be only one sinistral species, *Lymnaea reticulata* Gould, 1847. He placed *affinis* Souleyet, 1852 in the synonymy of *reticulata* Gould, 1847, also including *Physa producta* Mighels, 1845 in synonymy, but with a question mark. Morrison (1968: 32) considered *affinis* to be a "short-spined sinistral species" distinct from *reticulata*. However, Cowie *et al.* (1995: 32) treated all taxa synonymized under *reticulata* by Hubendick (1952: 321) as synonyms of *producta* on the basis that Morrison had synonymized *reticulata* and *producta*, although such practice is not generally deemed appropriate. Nonetheless, other authors have considered *L. producta* to be the only sinistral Hawaiian lymnaeid species, indeed the only sinistral lymnaeid species globally (e.g. Burch & Patterson 1971: 209; Burch 1982: 247; Christensen 2015: 54), although sinistral individuals or populations of normally dextral lymnaeids are occasionally encountered (e.g. Pierce 1996; Vinarski & Vodyanitskaja 2008) and the genetics of the dimorphism is well studied (Liu *et al.* 2013).

Confusion in the literature between native Hawaiian sinistral lymnaeids (*L. producta*) and introduced physids (all physid species are sinistral) was noted by Cowie (1997: 8), and exemplified by curation of the specimens noted here among Physidae in the MNHN. It is possible that additional specimens of sinistral Hawaiian lymnaeids may be found curated among the Physidae in other museums.

### Acknowledgements

We thank Carl Christensen for alerting us to the presence of type material of *Lymnaea affinis* in the MNHN and Manuel Caballer of the MNHN project E-RECOLNAT ANR-11-INBS-0004 for photographing the lectotype and preparing Figure 1. This work is part of a US National Science Foundation funded project (DEB-1120906) and was partially supported by an MNHN Visiting Curatorship to Robert Cowie, initiated by Philippe Bouchet, whom we thank for his support. This paper constitutes Contributions no. 2016-006 to the Hawaii Biological Survey and 9707 of the University of Hawaii School of Ocean and Earth Science and Technology.

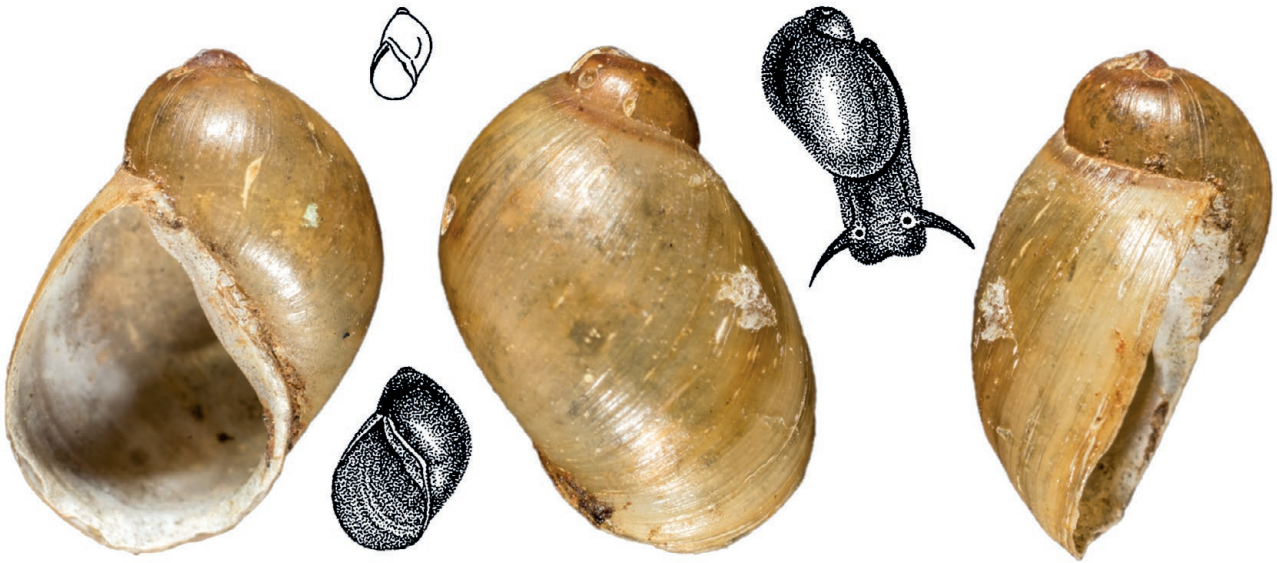


FIG. 1. — *Lymnaea affinis* Souleyet, 1852, lectotype MNHN IM-2000-32500, shell height 6.25 mm, width 4.2 mm; reproductions of figs 42-44 of Souleyet (1852), to the same relative scale as they were in the original publication.

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Submitted on 25 June 2016;  
accepted on 11 July 2016;  
published on 30 September 2016.

