

New records of non-marine snails at Sainte-Anne, Martinique

DILIAN GEORGIEV^{1, 2}, TODOR MISHEV²

¹Department of General Animal Husbandry, Section Ecology, Faculty of Veterinary Medicine, Trakia University – Stara Zagora, 6000 Stara Zagora, Bulgaria, dilyan.georgiev@trakia-uni.bg, diliangeorgiev@uni-plovdiv.bg

²Department of Ecology and Environmental Conservation, University of Plovdiv “Paisii Hilendarski”, 24 Tsar Assen Street, 4000 Plovdiv, Bulgaria

Abstract. The paper presents new data on the distribution of non-marine molluscs from the vicinities of Sainte-Anne, Martinique (Lesser Antilles). Field surveys conducted in August 2026 recorded a total of 16 species. Among them, several records expand the known distribution of terrestrial snails on the island, including the second locality record of the introduced *Huttonella bicolor* (T. Hutton, 1834) on Martinique.

Key words: Lesser Antilles, distribution, molluscs.

Introduction

The terrestrial and freshwater mollusc fauna of the Caribbean islands exhibits high diversity and endemism, yet detailed distribution patterns for many species remain incompletely documented. Following the comprehensive catalog and identification guide of non-marine molluscs of Martinique by Delannoye *et al.* (2015), field investigations continue to yield valuable distributional data. The southern peninsula of Martinique, particularly around Sainte-Anne, features unique xeric coastal forest habitats, agricultural lands, and limestone hills that harbor diverse malacofaunal communities.

The aim of this study is to report new locality records of non-marine snail species from the area of Sainte-Anne, contributing to a better understanding of their precise distribution on the island of Martinique.

Material and Methods

The study was carried out between 08-16.08.2026 at the vicinities of Sainte-Anne, Martinique. Mainly shells were studied but also some living snails were observed and photographed. Photographs of the shells were processed by Adobe Photoshop CC 2015 and Gemini AI. Species identifications followed Delannoye *et al.* (2015). Taxonomy followed <https://molluscabase.org/>.

Localities surveyed:

1. 07.08.2026, agricultural lands near xeric forest (probably the same locality shown by Delannoye *et al.* (2015), p. 45: “melon fields, Sainte Anne”), 14° 25' 49.79"N, 60° 52' 22.74"W, 60 m;

2. 08. 08.2026, 09. 08.2026, 16.08.2026, xeric forest on a limestone hill near water reservoirs, 14°26'02.1"N 60°52'36.3"W, 44 m;

3. 08. 08.2026, 15. 08.2026, 16.08.2026, grasses and bushes, near concrete blocks and a small stream, 14°25'55.4"N 60°52'36.5"W, 19 m.

Abbreviation used/legend: * - species new to the area, H - shell height, D - shell width.

Results and Discussion

A total of 16 species were registered from which seven were new records for Sainte-Anne:

Thiaridae T. Gill, 1871 (1823)

****Melanoides tuberculata* (O. F. Müller, 1774):** Loc. № 3, 2 shells on the bank of the stream. Introduced species known from many localities on Martinique but not registered at the area of Sainte-Anne (Delannoye *et al.* 2015).

Helicinidae A. Férussac, 1822

***Helicina fasciata fasciata* Lamarck, 1822:** Loc. № 2, 3 shells (Fig. 1-J). This subspecies is endemic to Lesser Antilles. On Martinique it was previously reported from the area of Sainte-Anne (Delannoye *et al.* 2015).

***Helicina platychila* (Megerle von Mühlfeld, 1824):** Loc. № 1, 1 shell (Fig. 1-I); loc. № 3, 6 shells. The species is known from Guadeloupe, St. Lucia (Wagner 1911), and Martinique (Robinson *et al.*, 2009). Reported for Sainte-Anne (Delannoye *et al.* 2015).

Annulariidae J. B. Henderson & Bartsch, 1920

***Diplopoma crenulatum* (Potiez & Michaud, 1838):** Loc. № 2, 10 shells and many living specimens observed near and on the walls of a water reservoir; loc. № 3, 1 shell (Fig. 1-K). Endemic to Lesser Antilles. The species was known from the area of Sainte-Anne (Delannoye *et al.* 2015).

Achatinidae Swainson, 1840

***Allopeas gracile* (T. Hutton, 1834):** Loc. № 3, 5 shells and living specimens (Fig. 1-C). Pantropical species known from six localities on Martinique, including Sainte-Anne (Delannoye *et al.* 2015).

***Allopeas micra* (A. d'Orbigny, 1835):** Loc. № 3, 4 shells (Fig. 1-D). An introduced species, reported for the area of Sainte-Anne (Delannoye *et al.* 2015).

****Beckianum beckianum* (L. Pfeiffer, 1846):** Loc. № 2, 4 shells; loc. № 3, 7 shells (Fig. 1-E). Pantropical, introduced species known from five localities on Martinique, not including the study area (Delannoye *et al.* 2015).

****Leptinaria unilamellata* (A. d'Orbigny, 1838):** Loc. № 2, 1 shell; № 3, 8 shells (Fig. 1-B). Naturally occurring in Central and South America. Introduced on Martinique and reported from many localities but not registered at Sainte-Anne (Delannoye *et al.* 2015).

****Limicolaria aurora* (J. C. Jay, 1839):** Loc. № 1, 2 shells; loc. № 2, 2 shells (Fig. 1-A). This invasive species was not reported for this area (Delannoye *et al.* 2015).

***Lissachatina fulica* (Bowdich, 1822):** Loc. № 2, loc. № 3, many shells and living specimens at each locality (Fig. 2). Invasive species introduced on Martinique, known from many localities (Delannoye *et al.* 2015).

****Opeas hannense* (Rang, 1831):** Loc. № 3, 4 shells and one living specimen. Introduced pantropical species known from three localities on Martinique, not known from the area of Sainte-Anne till now (Delannoye *et al.* 2015).

***Subulina octona* (Bruguière, 1789):** Loc. № 1, 1 shell (Fig. 1-F); loc. № 2, 2 shells; loc. № 3, 3 shells. This species is considered South American (Auffenberg & Stange 1988), now due to human transportation is known from many parts of the world. Reported for the area of Sainte-Anne (Delannoye *et al.* 2015).

Streptaxidae J. E. Gray, 1860

****Huttonella bicolor* (T. Hutton, 1834):** Loc. № 3, 2 shells (Fig. 1-G). A cosmopolitan species, possibly originating from East Africa (Gerlach & Bruggen 1999). Known only from one locality on Martinique - La Trinité (Delannoye *et al.* 2015). Our find is the second record on the island, situated approximately 35 km straight line from the first one.

Pleurodontidae Ihering, 1912

****Pleurodonte dentiens* (A. Férussac, 1822):** Loc. № 2 and loc. № 3, many shells. Endemic to Lesser Antilles. Reported close to Sainte-Anne at Morne Malgré Tout and Morne Manioc (Delannoye *et al.* 2015).

***Pleurodonte discolor* (A. Férussac, 1821):** Loc. № 2, 1 shell. Endemic to Martinique. Reported from many localities on the island, including Sainte-Anne (Delannoye *et al.* 2015).

***Pleurodonte guadeloupensis roseolabrum* (M. Smith, 1911):** Loc. № 2 and loc. № 3, many shells (Fig. 1-H). The subspecies is endemic to Lesser Antilles and widely distributed on Martinique, including the area of Sainte-Anne (Delannoye *et al.* 2015).



Fig. 1. Shells of some of the species recorded at the area of Sainte-Anne (not to scale, measurements in mm): A - *L. aurora*: loc. № 1, H = 57.0, D = 24.0; B - *L. unilamellata*: loc. № 3, H = 8.5, D = 4.9; C - *A. gracile*: loc. № 3, H = 8.8, D = 3.0; D - *A. micra*: loc. № 3, H = 5.0; E - *B. beckianum*: loc. № 3, H = 5.7, D = 2.4; F - *S. octona*: loc. № 1, H = 16.4, D = 4.2; G - *H. bicolor*: loc. № 3, H = 5.7; H - *P. g. roseolabrum*: loc. № 3, H = 13.0, D = 19.8; I - *H. platychila*: loc. № 1, H = 6.2 D = 7.9; J - *H. f. fasciata*: loc. № 2, H = 5.3, D = 7.2; K - *D. crenulatum*: loc. № 2, H = 9.2, D = 5.2.



Fig. 2. Living specimen of *L. fulica* from the vicinities of Sainte-Anne: the most numerous invasive species of the area.

References

- Auffenberg, K. & Stange, L. A. (1988) The Subulinidae of Florida. *Entomology Circular*, 305: 1-4.
- Delannoye, R., Charles, L., Pointier, J.-P. & Massemin, D. (2015) *Mollusques continentaux de La Martinique/Non-marine Molluscs of Martinique, Lesser Antilles*. Muséum national d'Histoire naturelle, Paris, 328 p.
- Gerlach, J. & Bruggen, A. C. (1999) Streptaxidae (Mollusca: Gastropoda: Pulmonata) of the Seychelles Islands, western Indian Ocean. *Zoologische Verhandelingen*, 328: 1-60.
- MolluscaBase eds. (2026) *MolluscaBase*. Available at <https://www.molluscabase.org> (Accessed on 2026-08-19).
- Robinson, D. G., Hovestadt, A., Fields, A. & Breure, A. S. H. (2009) The land Mollusca of Dominica, Lesser Antilles, with notes on some enigmatic or rare species. *Zoologische Mededelingen*, 83(13): 615-650.
- Wagner, A. J. (1911) Die Familie der Helicinidae. In: H. C. Küster & W. Kobelt (Eds.), *Systematisches Conchylien-Cabinet von Martini und Chemnitz*, (N. F.) 1, (18: 2): 1-391.