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Report on the search for six land snail species from the Canary Island Tenerife classified as “Critically Endangered” in the European Red List

MARCO T. NEIBER, JAVIER ALMUNIA, MARIO APONTE, CAROLINA CASTILLO RUIZ, PENÉLOPE CRUZADO-CABALLERO, MARÍA DEL CRISTO VELASCO-FLORES, VICTOR GARCIA TAGUA, CELIA GIGANTO, JORGE HERNÁNDEZ-LÓPEZ, CARLA LUIS-SANCHEZ, ARANZAZUT MUXIKA, CARSTEN RENKER, ARNOLDO SANTOS-GUERRA, ISAMBERTO SILVA, DINARTE TEIXEIRA & KLAUS GROH

Abstract: In February 2022 a targeted survey of critically endangered gastropod species according the European Red List of Terrestrial Molluscs was conducted on Tenerife (Canary Islands) to establish the current status of these species. The main focus was on *Hemicycla modesta*, *H. mascaensis*, *H. plicaria* (Helicidae), *Insulivitrina reticulata* (Vitrinidae), *Napaeus teobaldoi* (Enidae), and *Keraea garachicoensis* (Geomitridae). All species, except the latter, were re-discovered in vital populations and their current extinction risk is discussed.

Altogether, 76 terrestrial and two freshwater gastropod species were found at the 50 different sites studied during this survey, roughly representing two-thirds of the terrestrial species diversity known from Tenerife.

Keywords: Macaronesia, Canary Islands, Teno Mountains, Anaga Mountains, endemism, endangerment, Helicidae, *Hemicycla*, Vitrinidae, Enidae

Zusammenfassung: Im Februar 2022 wurden im Rahmen einer gezielten Untersuchung die nach der Roten Liste der Europäischen Landschnecken vom Aussterben bedrohten („critically endangered“) Landschnecken Teneriffas (Kanarische Inseln) untersucht. Betroffen waren die Arten *Hemicycla modesta*, *H. mascaensis*, *H. plicaria* (Helicidae), *Insulivitrina reticulata* (Vitrinidae), *Napaeus teobaldoi* (Enidae) und *Keraea garachicoensis* (Geomitridae). Alle Arten, mit Ausnahme der letztgenannten, wurden in vitalen Populationen wiedergefunden. Ihr Aussterberisiko wird diskutiert.

Insgesamt wurden 76 Land- und zwei Süßwasserschneckenarten an den 50 untersuchten Standorten im Rahmen dieser Studie nachgewiesen – das entspricht ungefähr zwei Dritteln der bekannten Landschneckendiversität von Teneriffa.

Introduction

On initiative of Dr. JAVIER ALMUNIA, director of the Loro Parque Fundación, Puerto de la Cruz, Tenerife, and in cooperation with the Universidad de La Laguna, Facultad de Biología Animal, Edafología y Geología (Prof. Dr. CAROLINA CASTILLO RUIZ & Prof. Dr. PENÉLOPE CRUZADO CABALLERO) and the Facultad Ciencias de la Comunicación y Trabajo Social (Prof. Dr. PATRICIA ADRIANA DELPONTI), San Cristóbal de La Laguna, Tenerife, this project was planned from October 2020 onwards and realised in February/March 2022. Its aim was to acquire current information on the distribution and vitality of populations of land snail species that are endemic to the island of Tenerife and which have very small known areas of occupation and additionally have in part even not been found since their original description. Some of these species have been treated as ‘critically endangered’ in the recent IUCN Red List (NEUBERT & al. 2019a, b). For Tenerife these are *Hemicycla modesta* (FÉRUSSAC 1822), *H. mascaensis* ALONSO & IBÁÑEZ 1988, *H. plicaria* (LAMARCK 1816) (Helicidae), *Insulivitrina reticulata* (MOUSSON 1872) (Vitrinidae), *Napaeus teobaldoi* MARTÍN 2009 (Enidae), and *Keraea* [“*Xerotricha*”] *garachicoensis* (WOLLASTON 1878) (probably Geomitridae, see HOLYOAK & al. 2011), which were in the main focus of this survey. Confirmation of occurrences, characterization of the habitat, better information on the area of occupation and definition of criteria for the rescue of these species shall help the regional and local administration for nature protection to develop plans for the protection of these animals, especially by the protection of their habitats. This study can be seen as a pilot project for similar studies of land molluscs on other Canarian Islands, as well as for other Critically Endangered animals or plants in the archipelago. In addition to the faunistic and nature conservation aspect, the focus is on improving the knowledge of little-known animals and plants in the general public, especially among

pupils and students. A short summary describing the project and reporting preliminary results has been provided by TEIXEIRA & al. (2023) and earlier an extensive report by ALMUNIA & DELPONTI (2022).

The list of target species included eleven species in total that were selected because of their high risk category in the current version of the IUCN European Red List of Terrestrial Molluscs (NEUBERT & al. 2019a, b) or their small known or suspected distribution range. The six primary target species are the species listed as Critically Endangered by the IUCN above. This includes also the semi-slug *Insulivitrina reticulata* and the helioid *Hemicycla plicaria*, which listed in the Canarian catalog of protected species according to Law 4/2010 of June 4, as vulnerable species. Additionally, two species that are listed as Endangered, i. e., *Drusia tenerifensis* (ALONSO & al. 1985) (Parmacellidae) and *Malacolimax wiktoriae* ALONSO & IBÁÑEZ 1989 (Limacidae), one species that is listed as Vulnerable, i. e., *Hemicycla eurythyra* BOETTGER 1908 (Helicidae), one species that is listed as Near Threatened, i. e., *Hemicycla diegoi* NEIBER & al. 2011 (Helicidae), as well as one species listed as Data Deficient, i. e., *Pomatias raricosta* (WOLLASTON 1878) (Pomatiidae) were surveyed.

The surveys were undertaken by Spanish, German and Portuguese researchers, as well as students of the University of La Laguna, Tenerife, Canary Islands (Fig. 1). In the present contribution, the results of the surveys are presented. Actual threats that may affect the target species are discussed and appropriate categories of extinction risk are suggested.



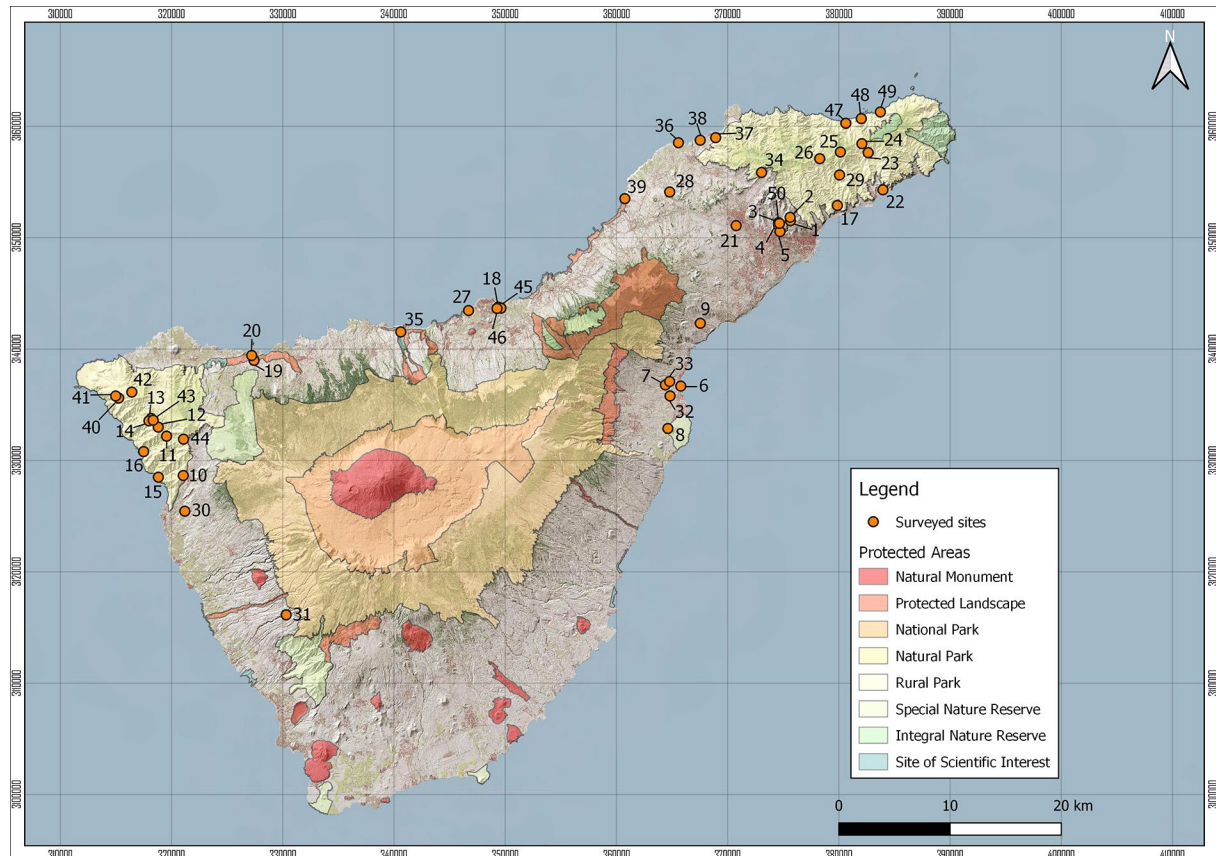
Fig. 1: Members of the research group in Las Mesas, 16th of February 2022. From left to right: J. HERNÁNDEZ-LÓPEZ, M. APONTE, C. GIGANTO, M. DEL CRISTO VELASCO-FLORES, P. CRUZADO-CABALLERO, C. RENKER, C. CASTILLO RUIZ, M. T. NEIBER, K. GROH, D. TEIXEIRA, I. SILVA, J. ALMUNIA (phot. M. PÉREZ).

Materials and Methods

Samples were collected by handpicking and to a lesser extent by dry sieving in terrestrial habitats and by handpicking in freshwater habitats. Geographic coordinates were determined with a GPS device. Samples were sorted in the laboratory and live collected specimens were preserved in 70–96% ethanol. Specimens were determined on the basis of shell characters and/or soft part anatomy (i. e., Agriolimacidae, Limacidae, Milacidae and Vitrinidae). The following literature was used for determination: ALONSO & al. (1985, 1995, 2006, 2013), ALONSO & IBÁÑEZ (1989, 2007, 2015a-c), BOBER & al. (2021), D'ORBIGNY (1836-1844), GITTENBERGER & RIPKEN (1987), GERBER (1996), GREVE & al.

(2010), HENRÍQUEZ & al. (1993a, b), HOLYOAK & HOLYOAK (2009), IBÁÑEZ & ALONSO (2007), IBÁÑEZ & al. (1987, 1995), MARTÍNEZ-ORTÍ & BORREDA (2012), MOUSSON (1872), NEIBER & al. (2011), NEUBERT & GOSTELI (2003), REISE & al. (2011), SHUTTLEWORTH (1852), VALIDO & al. (1993), VEGA-LUZ & VEGA-LUZ (2008), WEBB & BERTHELOT (1833), WIKTOR (1987, 2000), WOLLASTON (1878) and YANES & al. (2009a, b, 2011).

Voucher specimens are deposited in the collections of KG, MTN, IS and DT, but predominantly in the Museum of the Molluscan Science Foundation, Owing Mills, MD, USA (78 lots), the Naturhistorisches Museum/Landessammlung für Naturkunde, Mainz, Germany (62 lots), the Museo de Historia Natural do Funchal, Madeira, Portugal, and the collection of the Departamento de Biología Animal, Edafología y Geología at the University of La Laguna, San Cristóbal de La Laguna, Tenerife, Spain.



Map 1: Map of Tenerife (Canary Islands, Spain) with its protected areas and the 50 collecting sites (graphics by D. TEIXEIRA).

The following sampling sites (Map 1) were visited during the excursions in Tenerife (Spain, Canary Islands).

1. Las Mesas, recreational area, 28°29'04"N 16°16'14"W, 510 m a.s.l., 16.02.2022, leg. J. ALMUNIA, C. CASTILLO RUIZ, P. CRUZADO-CABALLERO, C. GIGANTO, K. GROH, J. HERNÁNDEZ LÓPEZ, C. LUIS SÁNCHEZ, M. T. NEIBER, C. RENKER, I. SILVA & D. TEIXEIRA.
2. Las Mesas, N-slope, 28°29'14"N 16°16'15"W, 520 m a.s.l., 16.02.2022, leg. J. ALMUNIA, C. CASTILLO RUIZ, P. CRUZADO-CABALLERO, C. GIGANTO, K. GROH, J. HERNÁNDEZ LÓPEZ, C. LUIS SÁNCHEZ, M. T. NEIBER, C. RENKER, I. SILVA & D. TEIXEIRA.
3. Barranco de Guerra, Valle Tabares, 28°28'58"N 16°16'53"W, 310 m a.s.l., 16.02.2022, leg. K. GROH & C. RENKER.
4. Montaña de Guerra towards Barranco de Santos, 28°28'50"N 16°16'53"W, 380 m a.s.l., 16.02.2022, leg. C. CASTILLO RUIZ, P. CRUZADO-CABALLERO, C. GIGANTO DÍAZ, K. GROH, J. HERNÁNDEZ LÓPEZ, C. LUIS SÁNCHEZ, M. T. NEIBER, C. RENKER, A. SANTOS-GUERRA & D. TEIXEIRA.
5. La Cuesta, W-slope of Barranco de Santos, 28°28'32"N 16°16'48"W, 250 m a.s.l., 16.02.2022, leg. C. CASTILLO RUIZ, M. T. NEIBER, A. SANTOS-GUERRA, I. SILVA & D. TEIXEIRA.

6. Candelaria, coastal succulent scrubland near basilica, 28°20'58"N 16°22'10"W, 30 m a. s. l., 17.02.2022, leg. J. ALMUNIA, C. CASTILLO RUIZ, P. CRUZADO-CABALLERO, C. GIGANTO, K. GROH, J. HERNÁNDEZ LÓPEZ, M. T. NEIBER, C. RENKER, A. SANTOS-GUERRA, I. SILVA & D. TEIXEIRA.
7. Candelaria, Calle Vence, 28°21'01"N 16°23'01"W, 150 m a. s. l., 17.02.2022, leg. J. ALMUNIA, C. CASTILLO RUIZ, P. CRUZADO-CABALLERO, C. GIGANTO, K. GROH, J. HERNÁNDEZ LÓPEZ, M. T. NEIBER, C. RENKER, A. SANTOS-GUERRA, I. SILVA & D. TEIXEIRA.
8. Montaña de Güimar, W-slope, 28°18'54"N 16°22'51"W, 110 m a. s. l., 17.02.2022, leg. J. ALMUNIA, C. CASTILLO RUIZ, P. CRUZADO-CABALLERO, C. GIGANTO, K. GROH, J. HERNÁNDEZ LÓPEZ, M. T. NEIBER, C. RENKER, A. SANTOS-GUERRA, I. SILVA & D. TEIXEIRA.
9. Barranco Hondo, 28°24'02"N 16°21'08"W, 270 m a. s. l., 17.02.2022, leg. C. CASTILLO RUIZ, P. CRUZADO-CABALLERO, C. GIGANTO, K. GROH, J. HERNÁNDEZ LÓPEZ, M. T. NEIBER, C. RENKER, A. SANTOS-GUERRA, I. SILVA & D. TEIXEIRA.
10. Tamaimo, Guama, E-slope, 28°16'18"N 16°49'28"W, 650 m a. s. l., 18.02.2022, leg. M. APONTE, C. CASTILLO RUIZ, P. CRUZADO-CABALLERO, M. C. FLORES-VELASCO, K. GROH, M. T. NEIBER, C. RENKER, A. SANTOS-GUERRA, I. SILVA & D. TEIXEIRA.
11. Masca, entrance hiking trail Barranco de Masca, 28°18'12"N 16°50'25"W, 540 m a. s. l., 18.02.2022, leg. V. GARCIA TAGUA, C. GIGANTO, K. GROH, C. LUIS-SÁNCHEZ, M. T. NEIBER & C. RENKER.
12. Masca, Montaña del Cerco, E-slope, 800 m a. s. l., 28°18'38"N 16°50'53"W, 19.02.2022, leg. M. APONTE, C. CASTILLO RUIZ, P. CRUZADO-CABALLERO, M. C. FLORES-VELASCO, C. RENKER, A. SANTOS-GUERRA, I. SILVA & D. TEIXEIRA.
13. Teno, Roque de los Carrizales, N-slope, 28°19'03"N 16°51'17"W, 650 m a. s. l., 19.02.2022, leg. M. APONTE, C. CASTILLO RUIZ, P. CRUZADO-CABALLERO, M. C. FLORES-VELASCO, C. RENKER, A. SANTOS-GUERRA, I. SILVA & D. TEIXEIRA.
14. Teno, Roque de los Carrizales, W-slope, 28°18'56"N 16°51'24"W, 650 m a. s. l., 19.02.2022, leg. C. CASTILLO RUIZ, P. CRUZADO-CABALLERO, V. GARCIA TAGUA, C. GIGANTO DÍAZ, C. RENKER, A. SANTOS-GUERRA, I. SILVA & D. TEIXEIRA.
15. Teno, Playa de Barranco Seco, above beach at the entrance to Barranco Mancha de los Díez, 28°16'12"N 16°50'50"W, 30 m a. s. l., 19.02.2022, leg. J. ALMUNIA, V. GARCIA TAGUA, B. BRITO, M. C. FLORES-VELASCO, R. GONZÁLEZ, C. GIGANTO DÍAZ, C. LUIS SÁNCHEZ, K. GROH, & M. T. NEIBER.
16. Teno, Barranco de Masca, above beach, 28°17'26"N 16°51'40"W, 20 m a. s. l., 19.02.2022 leg. J. ALMUNIA, V. GARCIA TAGUA, V. GARCIA TAGUA, B. BRITO, M. C. FLORES-VELASCO, R. GONZÁLEZ, C. GIGANTO DÍAZ, K. GROH & M. T. NEIBER.
17. María Jiménez, Calle Briffard, 28°29'50"N 16°13'39"W, 30 m a. s. l., 19.02.2022, leg. M. T. NEIBER, C. RENKER, I. SILVA & D. TEIXEIRA.
18. Puerto de la Cruz, Urbanización El Botánico, 28°24'42"N 16°32'16"W, 100 m a. s. l., 20.02.2022, leg. K. GROH, M. T. NEIBER, C. RENKER, I. SILVA & D. TEIXEIRA; 02.03.2022 sample of 2 l sieved soil < 3 mm, leg. K. GROH.
19. San Pedro towards Garachico, upper part of Acantilado de La Culata, 28°21'57"N 16°45'40"W, 370 m a. s. l., 20.02.2022, leg. M. T. NEIBER, C. RENKER, A. SANTOS-GUERRA, I. SILVA & D. TEIXEIRA.
20. Garachico, lower part of Acantilado de La Culata, 28°22'11"N 16°45'48"W, 110 m a. s. l., 20.02.2022, leg. C. CASTILLO RUIZ, K. GROH, M. T. NEIBER, C. RENKER, A. SANTOS-GUERRA, I. SILVA & D. TEIXEIRA.
21. La Laguna, Campus of University of La Laguna, 28°28'48"N 16°19'13"W, 21.02.2022, 560 m a. s. l., leg. K. GROH, M. T. NEIBER, C. RENKER, I. SILVA & D. TEIXEIRA.
22. San Andrés, slope deposits above Playa de Las Teresitas, 28°30'37"N 16°11'09"W, 5 m a. s. l., 21.02.2022, leg. K. GROH, M. T. NEIBER, C. RENKER, I. SILVA & D. TEIXEIRA.
23. Valle de San Andrés, Barranco de Las Huertas, 28°32'25"N 16°11'59"W, 340 m a. s. l., 21.02.2022, leg. K. GROH, M. T. NEIBER, C. RENKER, I. SILVA & D. TEIXEIRA.
24. Anaga, laurel forest below El Bailadero, 28°32'51"N 16°12'20"W, 620 m a. s. l., 21.02.2022, leg. K. GROH, M. T. NEIBER, C. RENKER, I. SILVA & D. TEIXEIRA.
25. Anaga, Roque del Paso, southern slope, laurel forest, 28°32'26"N 16°13'31"W, 880 m a. s. l., 21.02.2022, leg. K. GROH, M. T. NEIBER, C. RENKER, I. SILVA & D. TEIXEIRA.
26. Anaga, Casas de la Cumbre, 28°32'06"N 16°14'39"W, 810 m a. s. l., 21.02.2022, leg. K. GROH, M. T. NEIBER, C. RENKER, I. SILVA & D. TEIXEIRA.
27. Puerto de La Cruz, Loro Parque, near Animal Embassy, 28°24'31"N 16°33'54"W, 30 m a. s. l., 22.02.2022, leg. C. GROH, K. GROH, M. T. NEIBER & C. RENKER.
28. Montaña de Guerra near Guamasa, 28°30'24"N 16°22'54"W, 530 m a. s. l., 22.02.2022, leg. K. GROH, M. T. NEIBER & C. RENKER.
29. Valle Brosque, end of road, 28°31'19"N 16°13'33"W, 250 m a. s. l., 22.02.2022, leg. K. GROH, M. T. NEIBER & C. RENKER.
30. Chigora, along road north of village, 28°14'34"N 16°49'21"W, 380 m a. s. l., 23.02.2022, leg. C. GROH, K. GROH & M. T. NEIBER.
31. Barranco de Ye, 28°09'36"N 16°43'42"W, 910 m a. s. l., 23.02.2022, leg. C. GROH, K. GROH & M. T. NEIBER.

32. Lomo del Caballo, above Polígono Industrial de Güimar, 28°20'29"N 16°22'45"W, 120 m a. s. l., 24.02.2022, leg. M. T. NEIBER.
33. Candelaria, Calle Tajinaste, 28°21'11"N 16°22'47"W, 120 m a. s. l., 24.02.2022, leg. M. T. NEIBER.
34. Las Mercedes, Vueltas Blancas, 28°31'24"N 16°17'51"W, 740 m a. s. l., 25.02.2022, leg. K. GROH & M. T. NEIBER.
35. Barranco de Ruiz, 28°23'26"N 16°37'37"W, 150 m a. s. l., 25.02.2022, leg. M. T. NEIBER.
36. Jöver, near fossil dune, 28°32'48"N 16°22'27"W, 20 m a. s. l., 26.02.2022, leg. C. GROH, K. GROH & M. T. NEIBER.
37. Bajamar, Camino Isogue along S-slope of Barranco de San Juan, 28°33'04"N 16°20'24"W, 130 m a. s. l., 26.02.2022, leg. K. GROH & M. T. NEIBER.
38. Mancha de La Laja, above fossil dune, 28°32'56"N 16°21'15"W, 60 m a. s. l., 26.02.2022, leg. K. GROH & M. T. NEIBER.
39. Mesa del Mar, road above village, 28°30'03"N 16°25'22"W, 140 m a. s. l., 26.02.2022, leg. C. GROH, K. GROH & M. T. NEIBER.
40. Teno Alto, Casa Bermeja, 28°20'01"N 16°53'05"W, 790 m a. s. l., 27.02.2022, leg. K. GROH & M. T. NEIBER.
41. Teno Alto, La Suertita, 28°20'07"N 16°53'15"W, 720 m a. s. l., 27.02.2022, leg. M. T. NEIBER.
42. Teno Alto towards El Palmar, La Carbonera, 28°20'19"N 16°52'22"W, 810 m a. s. l., 27.02.2022, leg. C. GROH, K. GROH & M. T. NEIBER.
43. Teno, Roque de los Carrizales, E-slope, 28°18'58"N 16°51'10"W, 740 m, 27.02.2022, leg. C. GROH, K. GROH & M. T. NEIBER.
44. Teno, Pico de Gato, W-slope, below Mirador de Cherfe, 28°18'04"N 16°49'29"W, 1030 m a. s. l., 27.02.2022, leg. K. GROH & M. T. NEIBER.
45. Puerto de la Cruz, Jardín de Aclimatación de La Orotava, 28°24'39"N 16°32'07"W, 112 m a. s. l., 28.02.2022, leg. K. GROH.
46. Puerto de la Cruz, park of Hotel El Botánico, 28°24'38"N 16°32'20"W, 105 m a. s. l., 01.03.2022, vid. K. GROH.
47. Anaga, Taganana, Barranco Tachero W of the village at the road to Ermita de San Juan, 28°33'50"N 16°13'14"W, 50 m a. s. l., 02.03.2022, leg. K. GROH.
48. Anaga, Almáciga, small barranco at Lomo La Cebada W of the village N islets "Las Bajas", 28°34'04"N 16°12'23"W, 30 m a. s. l., 02.03.2022, leg. K. GROH.
49. Anaga, Benijo, Barranco de Benijo W of the parking, 28°34'24"N 16°11'20"W, 40 m a. s. l., 02.03.2022, leg. K. GROH.
50. Montaña de Guerra towards Barranco de Guerra, 28°28'56"N 16°16'50"W, 380 m a. s. l., 26.03.2022, leg. A. SANTOS-GUERRA.

Fig. 2: Land snail habitats in Tenerife, Canary Islands (for detailed locality data, see text). **A.** Las Mesas (locality 2). **B.** Barranco de Guerra (locality 3). **C.** La Cuesta, western slope of Barranco de Santos (locality 5). **D.** Candelaria, coastal *Euphorbia balsamifera* scrubland (locality 6). **E.** Barranco Hondo (locality 9). **F.** Tamaimo, Guama (locality 10). **G.** Teno, Roque de los Carrizales (locality 13). **H.** Teno, Playa de Barranco Seco and entrance to Barranco Mancha de los Díez (locality 15). **I.** Acantilado de la Culata (locality 19). **J.** Anaga, laurel forest below El Bailadero (locality 24). (phot. D. TEIXEIRA (A, C, E, G, I, J), C. RENKER (B, D), M. T. NEIBER (F, H)).

Fig. 3: Land snail habitats in Tenerife, Canary Islands (for detailed locality data, see text). **A.** Valle Brosque (locality 29). **B.** Barranco de Ye (locality 31). **C.** Candelaria, degraded *Euphorbia balsamifera* scrubland (locality 33). **D.** Las Mercedes, Vueltas Blancas (locality 34). **E.** Jöver, degraded coastal vegetation near fossil dune (locality 36). **F.** Mancha de la Laja, degraded coastal vegetation and banana plantations above fossil dune (locality 38). **G.** Mesa del Mar, cliff above village (locality 39). **H.** Teno Alto, pastureland with rock outcrops (locality 40). **I.** Teno, Roque de los Carrizales (locality 43). **J.** Teno, Pico de Gato below Mirador de Cherfe (locality 44). (phot. C. RENKER (A), M. T. NEIBER (B-J)).



Fig. 2 (explanations see p. 5)

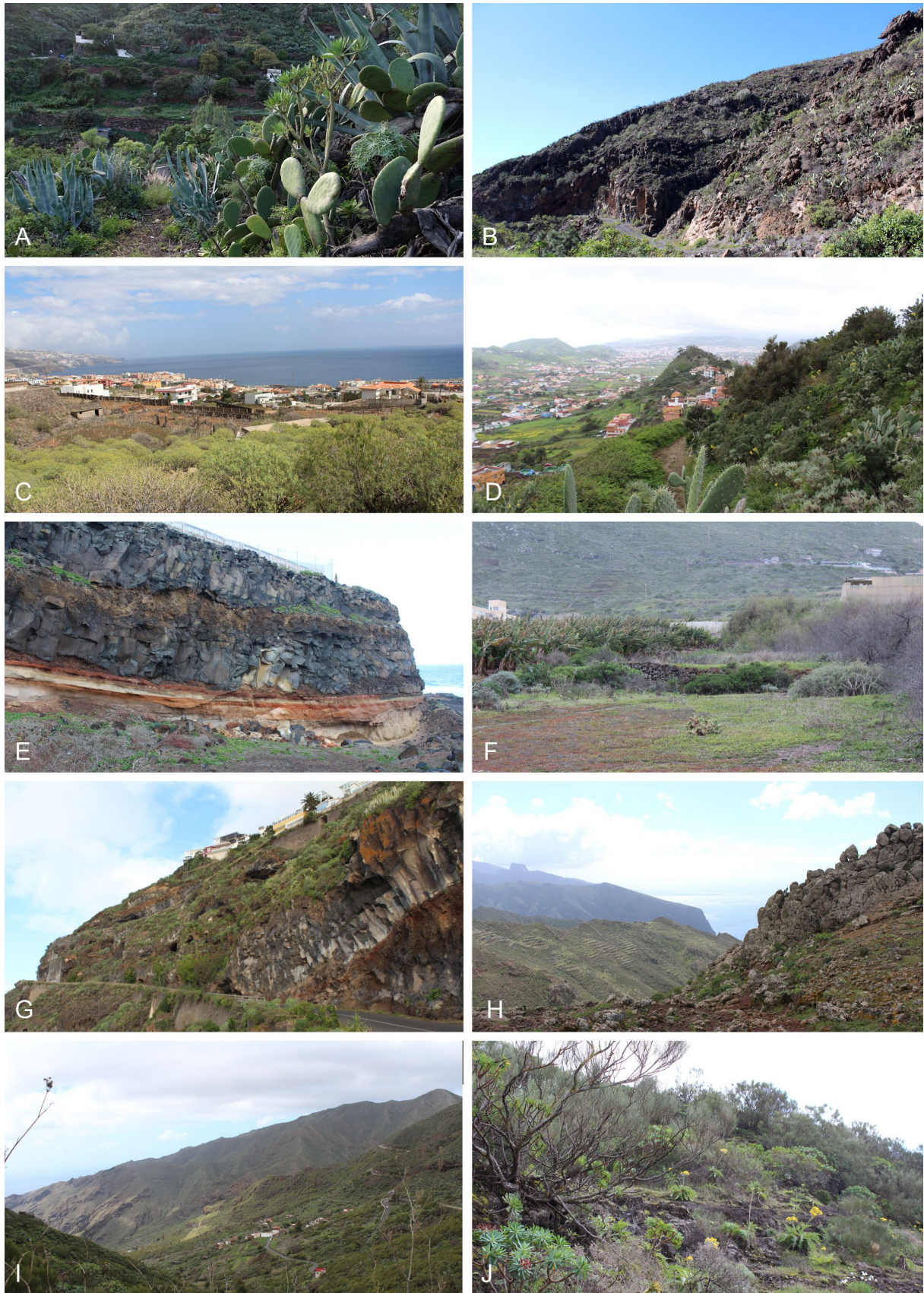


Fig. 3 (explanations see p. 5)



Fig. 4: Masca, Montaña del Cerco, E-slope, (locality 12, phot. C. RENKER).



Fig. 5: Anaga, Casas de la Cumbre, (locality 26, phot. C. RENKER).

Results

In Tab. 1 the malacological results of the collections made as part of the project between February 16th and April 2nd, 2022 are summarized. From 50 different sites, a total of 337 lots of terrestrial and freshwater snails were recorded. These include 75 terrestrial and two freshwater species (FW) and a further five distinguishable subspecies from 22 families (two FW) and thus represent roughly two-thirds of the entire non-marine mollusc fauna of Tenerife. Among them, 40 species were found alive, corresponding to 90 different lots.

The systematics and nomenclature follow BOUCHET & al. (2017) at the suprageneric level and the specific taxa are based on the constantly updated information on *MolluscaBase.org* (accessed 13th November 2025). The Red List status is taken from NEUBERT & al. (2019a, b).

Tab. 1: Recorded extant species and sampling sites (see text). Arrangement of gastropod families follows BOUCHET & al. (2017). Abbreviations – EC: endemic (sub-)species of the Canary Islands; ET: endemic (sub-)species of Tenerife; IS: introduced species; NS: native but non-endemic species; aff.: affinis (= closely related to or akin to); cf.: confer (= compare with); NA: Not applicable; NE: Not evaluated; DD: Data deficient; LC: Least concern; NT: Near threatened; VU: vulnerable; EN: Endangered; CR: Critically Endangered; RL: IUCN Red List Status. Numbers of sampling sites in bold font indicate localities at which a (sub-) species was observed alive (numbers in normal font refer to shell records).

Taxon	Sampling site(s)	Distribution type	RL
Pomatiidae			
<i>Pomatias canariensis</i> (D'ORBIGNY 1840) ¹⁾	20, 23	ET	DD
Physidae			
<i>Physella acuta</i> (DRAPARNAUD 1805)	16	IS	LC
Planorbidae			
<i>Ancylus striatus</i> QUOY & GAIMARD 1834 ²⁾	16, 48	EC	DD
Achatinidae			
<i>Rumina decollata</i> (LINNAEUS 1758)	6, 17, 24, 34, 37	NS	LC
Ferussaciidae			
<i>Ceciloides acicula</i> (MÜLLER 1774)	8, 18	IS	LC
<i>Ferussacia folliculum</i> (SCHRÖTER 1784)	2, 3, 4, 5, 8, 9, 20, 21, 22, 23, 26, 28, 29, 34, 35, 37, 38	IS	LC
Streptaxidae			
<i>Gibbulinella dealbata</i> (WEBB & BERTHELOT 1833)	3, 37	EC	LC
<i>Gibbulinella dewinteri</i> BANK & al. 2002	4, 5, 10, 12, 15, 16, 23, 44	EC	LC
Enidae			
<i>Napaeus</i> ³⁾ <i>badiusus</i> (WEBB & BERTHELOT 1833)	2, 3, 4, 5	ET	LC
<i>Napaeus bajamarensis</i> IBÁÑEZ & ALONSO 2009	37, 48	ET	LC
<i>Napaeus baeticatus</i> (WEBB & BERTHELOT 1833)	23, 29, 37	ET	LC
<i>Napaeus bechi</i> ALONSO & IBÁÑEZ 1993	12, 13, 14, 44	ET	LC
<i>Napaeus</i> aff. <i>bechi</i> ALONSO & IBÁÑEZ 1993 ⁴⁾	10, 12, 13	ET	NE
<i>Napaeus doliolum</i> HENRÍQUEZ 1993	23, 29	ET	EN
<i>Napaeus elegans</i> ALONSO & IBÁÑEZ 1995	12, 14	ET	VU
<i>Napaeus helvolus</i> (WEBB & BERTHELOT 1833)	37	ET	LC
<i>Napaeus roccelicola</i> (WEBB & BERTHELOT 1833)	12, 14, 19, 20	ET	VU
<i>Napaeus tabidus</i> (SHUTTLEWORTH 1852)	28	ET	LC
<i>Napaeus</i> cf. <i>tafadaensis</i> YANES 2009	23, 25	ET	NT
<i>Napaeus tenoensis</i> HENRÍQUEZ 1993	13, 14, 19, 20, 40, 42	ET	LC
<i>Napaeus teobaldoi</i> MARTÍN 2009	9	ET	CR
<i>Napaeus variatus</i> (WEBB & BERTHELOT 1833)	12, 37, 39	ET	LC
<i>Napaeus</i> sp. 1 ⁵⁾	10, 31	ET	NE
<i>Napaeus</i> sp. 2 ⁶⁾	39	ET	NE

Taxon	Sampling site(s)	Distribution type	RL
Lauriidae			
<i>Lauria cylindracea</i> (DA COSTA 1778)	18, 21	NS	NE
<i>Leiosyla taeniata</i> (SHUTTLEWORTH 1852) ⁷⁾	25 cf., juv.	EC	DD
Valloniidae			
<i>Vallonia costata</i> (MÜLLER 1774)	18	IS	LC
<i>Vallonia pulchella</i> (MÜLLER 1774)	18, 21	IS	LC
Limacidae			
<i>Ambigolimax valentianus</i> (FÉRUSSAC 1821)	21, 23, 28, 31	IS	LC
<i>Limacus flavus</i> (LINNAEUS 1758)	21	IS	LC
Agriolimacidae			
<i>Deroceras invadens</i> REISE & al. 2011 ⁸⁾	21, 46	IS	LC
Vitrinidae			
<i>Canarivitrina mascaensis</i> (MORALES 1987)	10, 12, 14, 44	ET	NT
<i>Guerrina cuticula</i> (SHUTTLEWORTH 1852)	25	EC	NT
<i>Insulivitrina blauneri</i> (SHUTTLEWORTH 1852)	31	ET	LC
<i>Insulivitrina lamarckii</i> (FÉRUSSAC 1821)	19, 23, 24, 25, 34, 42	EC	LC
<i>Insulivitrina reticulata</i> (MOUSSON 1872)	1, 2, 3, 4	ET	CR
Gastrodontidae			
<i>Retinella circumscissa</i> (SHUTTLEWORTH 1852)	25	ET	LC
Oxychilidae			
<i>Oxychilus draparnaudi</i> (BECK 1837)	11, 14, 19, 20, 25, 42, 45	IS	LC
Pristilomatidae			
<i>Hawaiiia minuscula</i> (BINNEY 1847)	18	IS	NA
<i>Vitrea contracta</i> (WESTERLUND 1871)	13, 34	IS	LC
Punctidae			
<i>Paralaoma servilis</i> (SHUTTLEWORTH 1852)	18	IS	DD
Parmacellidae			
<i>Drusia tenerifensis</i> (ALONSO & al. 1985) ⁹⁾	21	ET	EN
Milacidae			
<i>Milax gagates</i> (DRAPARNAUD 1801)	4	IS	LC
Helicidae			
<i>Cornu aspersum</i> (MÜLLER 1774)	18, 21, 27, 45	IS	LC
<i>Hemicycla</i> ¹⁰⁾ <i>bethencourtiana</i> (SHUTTLEWORTH 1852)	9	ET	NT
<i>Hemicycla bidentalis bidentalis</i> (LAMARCK 1822)	23, 24, 25, 47, 48, 49	ET	LC
<i>Hemicycla consobrina consobrina</i> (FÉRUSSAC 1822)	17, 22, 29	ET	LC
<i>Hemicycla consobrina nivariae</i> (WOLLASTON 1878)	28 cf., 35, 38, 39	ET	NE
<i>Hemicycla eurythyra</i> BOETTGER 1908	38, 39	ET	VU
<i>Hemicycla fulgida</i> ALONSO & IBÁÑEZ 2007	25	ET	LC
<i>Hemicycla incisogranulata</i> (MOUSSON 1872)	31	ET	NT
<i>Hemicycla inutilis</i> (MOUSSON 1872)	7, 9	ET	VU
<i>Hemicycla invernicata</i> (MOUSSON 1872)	34, 37	ET	NE
<i>Hemicycla mascaensis</i> ALONSO & IBÁÑEZ 1988	10, 11, 15, 16, 30	ET	CR
<i>Hemicycla melchori</i> VEGA-LUZ & VEGA-LUZ 2008	12, 13, 14, 19, 20, 40, 41	ET	LC
<i>Hemicycla modesta</i> (FÉRUSSAC 1822)	4, 50	ET	CR
<i>Hemicycla plicaria</i> (LAMARCK 1816)	6, 7, 33	ET	CR
<i>Hemicycla pouchadan</i> IBÁÑEZ & ALONSO 2007	2, 4, 5	ET	EN
<i>Hemicycla pouchet</i> (FÉRUSSAC 1821)	17, 29	ET	VU
<i>Otala lactea</i> (MÜLLER 1774)	1, 2, 3, 4, 5, 7, 9, 17, 22, 37, 38	IS	LC
<i>Theba geminata</i> (MOUSSON 1857)	36, 37, 38	EC	DD
<i>Theba pisana pisana</i> (MÜLLER 1774)	4, 21, 34, 38	IS	LC

Taxon	Sampling site(s)	Distribution type	RL
Canariellidae			
<i>Alvaradoa pthonera</i> (MABILLE 1883)	42	ET	VU
<i>Canariella giustii</i> (IBÁÑEZ & ALONSO 2006)	10, 12, 13 , 14, 20, 40, 41, 42, 44	ET	LC
<i>Canariella hispidula</i> ¹¹⁾ (LAMARCK 1822)	4, 5, 6, 7, 8, 9, 32, 33	ET	VU
<i>Canariella berthelotii beata</i> (WOLLASTON 1878)	22, 23, 28 cf., 29	ET	NE
<i>Canariella berthelotii berthelotii</i> (D'ORBIGNY 1836)	1, 2, 3	ET	NE
<i>Canariella lanosa</i> (MOUSSON 1872)	37, 38, 39	ET	NE
<i>Canariella leprosa</i> (SHUTTLEWORTH 1852)	24, 34	ET	VU
<i>Canariella planaria</i> (LAMARCK 1822)	39 , 47, 48	ET	LC
Geomitridae			
<i>Cernuella virgata</i> (DA COSTA 1778)	1, 2, 4, 38	IS	LC
<i>Cochlicella acuta</i> (O. F. MÜLLER, 1774) ¹²⁾	21	IS	LC
<i>Cochlicella barbara</i> (LINNAEUS 1758)	21	IS	LC
<i>Microxeromagna lowei</i> (POTIEZ & MICHAUD, 1838) ¹³⁾	21	IS	LC
<i>Monilearia persimilis</i> (SHUTTLEWORTH 1852)	28, 34	EC	LC
<i>Monilearia phalerata</i> (WEBB & BERTHELOT 1833)	1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 22, 23, 28, 29, 30, 31, 32, 33, 34, 35, 37, 38, 39, 40, 41, 42, 43, 44, 47	ET	NT
<i>Xerotricha conspurcata</i> (DRAPARNAUD 1801)	34		LC
<i>Xerotricha orbignii</i> (D'ORBIGNY 1836)	1, 2, 3, 4, 7, 11, 12, 14, 18, 19, 20, 22, 23, 28, 32, 33, 37, 38, 39, 40, 42, 43, 44, 48	ET	LC
Trissexodontidae			
<i>Caracollina lenticula</i> (MICHAUD 1831)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 28, 29, 30, 31, 32, 33, 34, 35, 37, 38, 39, 40, 41, 42, 47, 48	NS	LC

¹¹⁾ Earliest available name for the pre-occupied *Cyclostomus laevigatus* WEBB & BERTHELOT 1833 (see GROH & NEIBER 2023a).

¹²⁾ *Ancylus striatus* is also known as “Clade 3” from the Azores and the north-eastern Iberia Peninsula (Pfenninger & al. 2003) and was also reported recently from Morocco (MABROUKI & al. 2021).

¹³⁾ The recording of 13 out of 16 species of the genus *Napaeus* known from Tenerife (there are two more extinct species and four with doubtful records) and the finding of two more possibly new species is especially noteworthy.

⁴⁾ 12 shells. Compared to *Napaeus bechi* it seems to us that these specimens differ in terms of size, shape and ornamentation; review needed. Near Tamaimo the taxon was recorded from the vicinity of the Degollada de la Cruz.

⁵⁾ An elongated form, conchologically similar to *N. elegans*; review needed.

⁶⁾ Similar to the nominal species *Bulimus halmyris* MABILLE 1883, which is said to be a synonym of *N. baeticatus*.

⁷⁾ The distribution of this species is only little known. It is mentioned by AnimalBase (<http://www.animalbase.uni-goettingen.de/zooweb/servlet/AnimalBase>, accessed 13. November 2025) from La Palma, El Hierro and La Gomera, by BIOTA – Banco de Datos de Biodiversidad de Canarias (<https://www.biodiversidadcanarias.es/biota>, accessed 13. November 2025) from Tenerife and La Palma, both sources without localisable data. So, this possible record is especially noteworthy and it is recommended to carry out further searches at the locality and its surroundings.

⁸⁾ This synanthropic and wide spread species is listed in the catalogue of BIOTA still under the name *D. panormitanum* (LESSONA & POLLONERA 1882).

⁹⁾ This taxon, worldwide only known from its type locality (the campus of the Universidad de La Laguna and its south-eastern surroundings as far as San Bartolomé), is for sure not an endemic species of Tenerife, but is most probably introduced from North Africa. It is listed in the BIOTA catalogue as a synonym of *D. valenciennii* (WEBB & VAN BENEDEN 1836), which is differing in the shape of the spatula (MARTINEZ-ORTI & BORREDÀ 2013). Unpublished molecular data, however, seem to confirm this synonymy (pers. comm. E. MORALES 2022).

¹⁰⁾ The recording of 14 out of 16 species listed by BIOTA in the genus *Hemicycla* as extant from the island of Tenerife is especially noteworthy (records of *H. gomerensis* (MORELET 1864) and *H. laurijona* ALONSO & IBÁÑEZ

2007 were not considered as these have been erroneously attributed to WALL & al. 2018). There are additionally four species that are either extinct or doubtful.

¹¹⁾ The *Canariella hispidula* complex was recently revised by GROH & NEIBER (2023b).

¹²⁾ BIOTA shows a specimen of *C. acuta*, photographed by M. IBÁÑEZ probably at least one decade ago. This was then probably the first record of the species for the Canary Islands, even only recently such was published by MARTÍNEZ PÉREZ & al. (2022) for Gran Canaria.

¹³⁾ This species was previously only recorded from two sites on La Palma and El Hierro, respectively. So, this is the first published record of the species for the island of Tenerife.

Despite intensive search in the areas where the type localities of the target species are located, neither *Keraea garachicoensis* (Garachico) nor *Malacolimax wiktorei* (La Laguna and Tegueste) or *Pomatias raricosta* (Taganana) could be found. Their status remains uncertain. For the latter, however, TALAVÁN SERENA & TALAVÁN GÓMEZ (2025) published new locality data recently.

New findings: *Microxeromagna lowei* is published here for the first time for Tenerife, although earlier records might exist in collections; two *Napaeus* species, which are most probably new to science have been detected, here further search and research is necessary. Furthermore, despite the fact that their occurrence on Tenerife is known since decades, records of *Cochlicella barbara* and *C. acuta* are here published for the first time from this island (in BIOTA there is a mix-up with *Cochlicella acuta* (O. F. MÜLLER 1774), which is figured from an unknown location only).

Noteworthy are further the findings of species which are listed in the European Red List of terrestrial molluscs (NEUBERT & al. 2019a, b) as “Endangered” (EN): *Napaeus doliolum*, *Drusia tenerifensis* [= *Drusia valenciennii*] and *Hemicycla pouchadan*, as well as those of species listed as “Vulnerable” (VU): *Napaeus elegans*, *N. roccelicola*, *Hemicycla eurythyra*, *H. inutilis*, *H. pouchet*, *Canariella hispidula*, *C. leprosa*, and *C. pthonera*.

Biological observations: In *Hemicycla melchori* (white and colored shells, n = 13 adults and n = 2 juveniles) from Montaña del Cerco (Masca), two specimens (one adult and one juvenile) with signs of predation were observed. In this same locality, *Canariella giustii* also shows signs of predation (2 adults of 6 shells). Possible signs of predation were noted also in Roque de los Carrizales for *Napaeus* aff. *bechi* (1 specimen). In the Barranco Seco, 7 out of 12 specimens of *Hemicycla mascaensis* showed signs of rodent predation.

With respect to *Canariella berthelotii* from “Las Mesas”, a great range of morphological variability of the shells was observed. A second as yet undescribed species may be involved here, which is currently under study.

The high abundance of the invasive species *Otala lactea* in the distribution area of *Insulivitrina reticulata* is also noteworthy (IS). In Candelaria, *O. lactea* with a reddish mouth was recorded, in Bajamar even one specimen with a white aperture.

Discussion

It is necessary to update the list of threatened species of the Government of the Canary Islands for their effective conservation. We propose downgrades or changes of the status in the European Red List of Terrestrial Molluscs (NEUBERT & al. 2019a, b) for the following species: *Monilearia phalerata* NT to LC, *H. mascaensis* CR B2ab(iii) to VU; NT or even LC, *Insulivitrina reticulata* CR B2ab(iii) to CR B1ab(i,ii,iii,iv).

An upgrade of the status is proposed for the following species: *Keraea garachicoensis* CR(PE) to DD (probably not an allochthone species), *Malacolimax wiktorei* EN to CR(PE), *Hemicycla eurythyra* VU to CR B1ab(iii), *H. diegoi* NT to VU, *Pomatias raricosta* DD to possibly VU, EN or even CR (taking into account the records by TALAVÁN SERENA & TALAVÁN GÓMEZ 2025).

Comments concerning the target species

Pomatias raricosta

This species was already sparsely recorded in the 20th century (working group ALONSO & IBÁÑEZ, ULL). Two extant specimens, one with operculum, were collected in 1986 along a hiking trail from Cabezo de Toro towards Montaña Tafada by ALONSO & IBÁÑEZ. Additional records were recently published by TALAVÁN SERENA & TALAVÁN GÓMEZ (2025), reporting a live specimen collected in August 2002 from La Fajaneta in the Anaga Mountains. Further search at this location in 2018 was unsuccessful. As the species was, despite intensive search, not detected since more than two decades it should probably be classified at least as VU but possibly as EN or CR.

Napaeus teobaldoi

This species was only known from the type locality. The search in 2022 yielded a new life record east of the type locality, the second published record in total. But still it is only present in a small area of occupancy of an estimated 2 km² only. The area is under pressure from increasing urbanisation and decline in habitat quality. Based on the existing information it is therefore still considered as “Critically Endangered” CR B1ab(iii)+2ab(iii).



Fig. 6: Achatinidae, Ferussaciidae, Streptaxidae, Enidae, Lauriidae and Valloniidae observed during the excursions (for localities, see text). **A.** *Rumina decollata* (locality 17). **B.** *Ferussacia folliculum* (locality 21). **C.** *Gibbulinella dealbata* (locality 37). **D.** *Napaeus badius* (locality 2). **E.** *Napaeus bechi* (locality 2). **F.** *Napaeus roccicicola* (locality 19). **G.** *Lauria cylindracea* (locality 21). **H.** *Vallonia pulchella* (locality 21). (phot. C. RENKER (A, B, D-H), M. T. NEIBER (C)).

Malacolimax wiktori

Actually, not found again at the type localities despite intensive search. Previously, M. T. NEIBER (pers. comm. 2016) reported that he failed to locate the species in the known habitats during optimum sampling conditions in 2015. Since then, IBÁÑEZ and ALONSO resurveyed the sites in February 2016 and also failed to record the species again. The only published records are from the original description by ALONSO & IBÁÑEZ (1989) and ALONSO & al. (1990). In the 35 years since its description there has been a drastic change in land use in the area, with much of the area being converted from agricultural land into urban areas. Hence, the habitats and area of occupancy have significantly declined. It is not sure if we have to deal with an autochthonous taxon, but as long as that is not proven otherwise it is listed by BIOTA as an endemic species of Tenerife and therefore also has to be accessed by the IUCN. In respect to the actual situation, it should be upgraded from “Endangered” EN to “Critically Endangered, possibly Extinct” CR(PE).

Insulivitrina reticulata

The distribution range of this species is fragmented by the urban area of Santa Cruz de Tenerife and the main threat to the species is habitat destruction as a consequence of ongoing urbanization. Because of the severe fragmentation, the small range, limited number of locations and current threats, the species still should be assessed as “Critically Endangered” CR B1ab(i,ii,iii,iv).



Fig. 7: Limacidae, Vitrinidae, Parmacellidae and Milacidae observed during the excursions (for localities, see text). **A.** *Ambigolimax valentianus* (locality 21). **B.** *Deroceras invadens* (locality 21). **C.** *Canarivitrina mascaensis* (locality 44). **D.** *Insulivitrina lamarkii* (locality 19). **E.** *Insulivitrina reticulata* (locality 3). **F.** *Drusia tenerifensis* (locality 21). **G.** *Milax gagates* (locality 4). (phot. C. RENKER (A, B, D-G), M. T. NEIBER (C)).



Fig. 8: Helicidae observed during the excursions (for localities, see text). **A.** *Otala lactea* (locality 1). **B.** *Hemicycla pouchadan* (locality 4). **C.** *Hemicycla plicaria* (locality 7). **D.** *Hemicycla melchiori* (locality 12). **E.** *Hemicycla mascaensis* (locality 15). **F.** *Hemicycla c. consobrina* (locality 17). **G.** *Hemicycla c. consobrina* (locality 29). **H.** *Hemicycla b. bidentalis* (locality 24). **I.** *Hemicycla eurythyra* (locality 38). **J.** *Hemicycla modesta* (locality 50). **K-L.** *Theba geminata* (locality 38). (phot. M. T. NEIBER (A, C-E, G, I, L), C. RENKER (B, F), D. TEIXEIRA (H), P. A. DELPONTI (J), K. GROH (K)).



Fig. 9: Canariellidae, Geomitridae and Trissexodontidae observed during the excursions (for localities, see text). **A.** *Canariella b. berthelotii* (locality 3). **B.** *Microxeromagna lowei* (locality 21). **C.** *Monilearia phalerata* (locality 9). **D.** *Caracollina lenticula* (locality 19). (phot. C. RENKER).

Drusia tenerifensis

During our investigation in 2022 the species was frequent at the Campus of the University of la Laguna. Formerly, this taxon was listed as “Endangered” EN. Meanwhile, genetic analysis has confirmed it as a synonym of *Drusia valenciennii* (WEBB & VAN BENEDEN 1836) (E. MORALES, pers. comm. 2022). Since a conspecific status of this taxon with a North-African *Drusia* species has to be assumed, the taxon should be considered as probably introduced and therefore no longer be listed as a CR or even an EX species of the Canary Islands.

Hemicycla diegoi

The type locality was not accessible due to landslides in the area. Searches at sites at higher altitudes just above the known area of distribution only yielded records of the more widely distributed *H. melchiori*, so that it can be assumed that this species is indeed restricted to the small area of the middle-high western slopes of the Teno Mountains east of the Punta de Teno, an area of approx. 500 × 700 m only. This species is not significantly impacted by recreational activities such as hiking, but habitat alteration through invasive grasses (*Cenchrus setaceus*) probably threatens the species at least to some extent. Considering these (potential) threats and the very small extent of occurrence and of occupancy of 8 km² only, the species should be assessed as VU.

Hemicycla eurythyra

The species has previously been assessed as “Vulnerable” VU D2. It is only known from a small area in the north-east part of the island between Jöver and Bajamar. The estimated extent of occurrence of 2 km² and the estimated area of occupancy of 16 km² are very small. The species is affected by habitat destruction or degradation and fragmentation as a consequence of ongoing construction of houses and roads, banana plantations in and at the periphery of the urban areas of Bajamar and Tejina, predation by

introduced rodents and habitat degradation through invasive plants. Because of its very restricted current range, therefore lets an upgrade of the assessment from actually EN to CR B1ab(iii) appear justified.



Fig. 10: *Hemicycla c. consobrina* (locality 17, phot. C. RENKER).

Hemicycla mascaensis

The species was thought to be restricted to a small area near the village of Masca in the Teno Massif in western Tenerife (IBÁÑEZ & al. 1988). HUTTERER (1994) reported that the species is present in (sub-)fossil slope deposits near Los Gigantes in the southern-most part of the Teno Massif and the distribution maps of ALONSO & al. (1990) suggest that the species is still extant near Los Gigantes. BOBER & al. (2021) recorded the species from many different sites in the south-eastern part of the Teno Massif. The present surveys confirmed its presence at the type locality in the Barranco de Masca (locality 11, Tab. 1) and the eastern slopes of the Guama mountain near Tamaimo, as well as near Chigora (locality 30, Tab. 1) where the species was previously recorded by BOBER & al. (2021). Furthermore, it was recorded during the present surveys in the lower part of the Barranco Mancha de los Díez (locality 15, Tab. 1 and Fig. 8E) and the lower part of the Barranco de Masca (locality 16, Tab. 1). These findings close the distribution gap between the populations near the village of Masca and the mountainous areas west and east of the Barranco del Valle, which forms the south-eastern boundary of the Teno Massif. *Hemicycla mascaensis* was not recorded at localities west of the Barranco de Masca, which suggests that *H. mascaensis* and *H. diegoi* may indeed be allopatric species (BOBER & al. 2021). However, additional surveys along the coast between the Barranco de Masca and the western-most part of the Teno Massif at the Punta de Teno are necessary to confirm this hypothesis. Although *H. mascaensis* is definitively under pressure at the type locality because of the alteration of the original habitat through human activities and predation by introduced rodents, the species has an area of occupancy that is much larger than previously thought. Moreover, since most of the distribution range of the species is included in the protected area of the Parque Rural del Teno, the listing as Critically Endangered in the IUCN European Red List of Terrestrial Molluscs (NEUBERT & al. 2019a, b) seems to be unwarranted. Because of the present surveys and previously published distribution data (BOBER & al. 2021) the species should be considered as VU or NT at most, but may actually qualify as LC because most of the known sites are located within a protected Area (Parque Rural de Teno).

Hemicycla modesta

Only after several attempts, the species could be found alive in a very small area (site 50), the only site so far known where the species survived. We therefore propose to continue to assess the species as “Critically Endangered” CR. Noteworthy is the additional threat in the distribution area of *H. modesta* due to the high density of the invasive African poacean species Purple Fountain Grass (*Cenchrus setaceus*).

Hemicycla plicaria

The species has previously been assessed as “Critically Endangered” CR B2ab(iii). Additional threats have been identified (e. g., threats through invasive rodent and plant species). However, a survey of published distribution data suggests that the area of occupancy is larger than previously thought so that the assessment is now based on the extent of occurrence. The area and extent of occurrence, as well as the number of locations is expected to further decline. Furthermore, the range of the species is considered as severely fragmented (ALMUNIA PORTOLÉS & DELPONTI 2021). Thus, maintaining an assessment as “Critically Endangered” CR B1ab(i,ii,iii,iv) appears to be justified.

Keraea [*Xerotracha*] *garachicoensis*

WOLLASTON (1878) described *Patula (Iulus) garachicoensis* from the vicinity of Garachico based on material collected by LOWE in 1861 and also *P. (Iulus) garachicoensis* var. β *submarmorata*, which was collected in Tenerife but without detailed locality data by BERTHELOT and later given to LOWE. He also mentioned the manuscript name *Helix agrestis* with attribution to LOWE. Syntypes of *P. garachicoensis* are present in the Natural History Museum London (NHM) London (Fig. 11) and National Museum of Ireland (NMI) in Dublin. The family assignment is uncertain. Currently, Geomitridae is used in MolluscaBase based on the discussion in HOLYOAK & al. (2011), although the assignment to the genus *Xerotracha* is also questionable. Since a synonymisation with a European species can be assumed, the taxon should no longer be listed as a “Critically Endangered” CR or even as an “Extinct” EX species in the fauna of the Canary Islands, but rather as a “Data Deficient” DD species for the time being.



Fig. 11: Syntype of *Patula (Iulus) garachicoensis* WOLLASTON, 1878, NHM 1895.2.2.73, scale = 5 mm. (phot. J. ABLETT, NHM).

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Addresses of authors:

- MARCO T. NEIBER, Leibniz-Institut zur Analyse des Biodiversitätswandels (LIB), Museum der Natur Hamburg, Martin-Luther-King-Platz 3, D-20146 Hamburg, Germany, mneiber@hotmail.de
- JAVIER ALMUNIA, Loro Parque Fundación, Avda. Loro Parque, E-38400 Puerto de la Cruz, Canary Islands, Spain, dir@loroparque-fundacion.org
- MARIO APONTE, CAROLINA CASTILLO RUIZ, PENÉLOPE CRUZADO-CABALLERO, MARÍA DEL CRISTO VELASCO-FLORES, VÍCTOR GARCÍA TAGUA, CELIA GIGANTO DÍAZ, JORGE HERNÁNDEZ-LÓPEZ, CARLA LUIS-SANCHEZ, ARANZAZUT MUXIKA, Universidad de La Laguna, Departamento de Biología Animal, Edafología y Geología, Avda. Astrofísico Francisco Sánchez 2, E-38206 San Cristóbal de La Laguna, Canary Islands, Spain
- CARSTEN RENKER, Naturhistorisches Museum Mainz/Landessammlung für Naturkunde Rheinland-Pfalz, Reichklarastraße 10, D-55116 Mainz, Germany
- ARNOLDO SANTOS-GUERRA, Calle Guaidil 16, Urbanización Tamarco, E-38280 Tegueste, Canary Islands, Spain
- ISAMBERTO SILVA, DINARTE TEIXEIRA, Instituto das Florestas e Conservação da Natureza IP-RAM, Jardim Botânico da Madeira – Eng. Rui Vieira, Caminho do Meio, Bom Sucesso, P-9064-512 Funchal, Madeira, Portugal
- KLAUS GROH, Hinterbergstr. 15, D-67098 Bad Dürkheim, Germany