
ARTICLE

Current status of *Moeroris tenella* (Phyllanthaceae) in Spain and throughout Europe

Situación actual de *Moeroris tenella* (Phyllanthaceae),
en España y el conjunto de Europa

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Abstract: CURRENT STATUS OF *MOERORIS TENELLA* (PHYLLANTHACEAE) IN SPAIN AND THROUGHOUT EUROPE. — The presence of *Moeroris tenella* in Europe has been updated, rejecting some published localities where it is not found in the wild or due to georeferencing errors. New specific records have been provided for Andalusia and the Valencian Community in Spain.

Keywords: Alicante; *Moeroris*; *Phyllanthus*; Sevilla, Spain.

Resumen: SITUACIÓN ACTUAL DE *MOERORIS TENELLA* (PHYLLANTHACEAE), EN ESPAÑA Y EL CONJUNTO DE EUROPA. — Se actualiza la presencia de *Moeroris tenella* en Europa, rechazando algunas localidades publicadas donde no se encuentra asilvestrada o se trata de errores de georreferenciación. Se aportan nuevas citas concretas para Andalucía y la Comunidad Valenciana, en España.

Palabras clave: Alicante; *Moeroris*; *Phyllanthus*; Sevilla, Spain.

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Supplementary information ↓

INTRODUCTION

During our fieldwork surveying the flora of Alicante (Valencian Community, Spain), we found an alien species present in some big flowerpots outdoors at a shopping center in Santa Pola. After detailed investigation, we concluded that it was *Moeroris tenella* (Roxb.) R. W. Bouman, a taxon previously unknown in the Valencian Community and rarely cited in Europe. Updating its status in Europe, poorly georeferenced records or records of cultivated plants were found that should be deleted from their distribution as a naturalized species.

MATERIALS AND METHODS

The georeferencing of this new population in the Valencian Community was carried out using the GPS of a smartphone and transferred to the program ©OruxMaps. Any error was corrected afterwards using the viewer of the Generalitat Valenciana's Cartographic Institute (<https://visor.gva.es/>) which offers the 1 km² UTM grid in the ETRS89 Datum.

To correctly identify the collected plant, a recent monograph of its group in Brazil (Silva & Sales, 2008), the Flora of North America (Levin, 2020) and its original description (Roxburgh, 1832) have been used, as well as its most up-to-date systematic classification, the recent revision of the tribe Phyllanthae (Bouman *et al.*, 2022).

To compile the species current distribution in Europe, previously published localities and new ones were uploaded to the software ©QGIS 3.12 București. The published localities were compared with the maps provided in GBIF (2025), eliminating points where the species is not actually naturalized (Fig. 1).

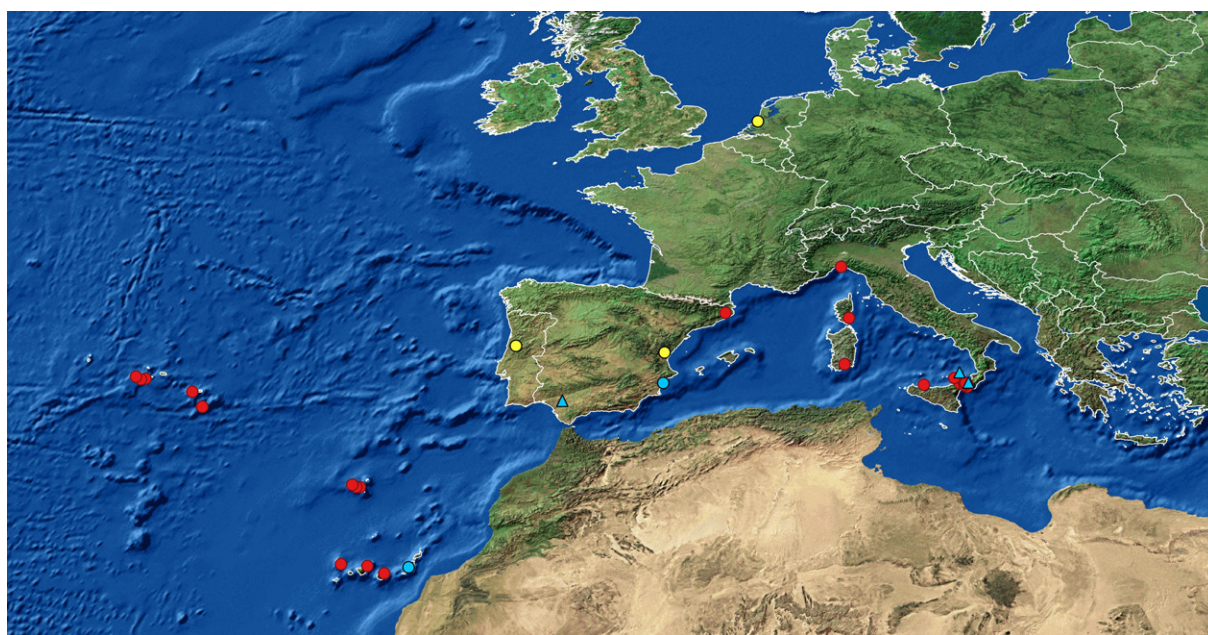


Figure 1. Distribution of *Moeroris tenella* in Europe: yellow dots, erroneous references; red dots, locations already published; blue dots, new locations with sheets; blue triangles, new locations with photos.

The cited material was found in the herbaria K, MA, FR, WAG, (Thiers, 2025+) and LSH (private herbarium of one of the authors).

RESULTS AND DISCUSSION

Taxonomic treatment:

Moeroris tenella (Roxb.) R. W. Bouman in Phytotaxa 540(1): 31 (2022)

- ≡ *Phyllanthus tenellus* Roxb., Fl. Ind. ed. 1832, 3: 668 (1832)
- ≡ *Diasperus tenellus* (Roxb.) Kuntze in: Revis. Gen. Pl. 2: 601 (1891)
- = *Phyllanthus corcovadensis* Müll. Arg.; Fl. Bras. [Martius] 11(2): 30 (1873)
- *Phyllanthus niruri*, auct. non L.

Type: lectotype, Icones Roxburghianae, No. 1913 (K), designated by [Mitra \(1987\)](#) and published image by [Chakrabarty \(2019\)](#).

Moeroris tenella was described into the genus *Phyllanthus* (*P. tenellus* Roxb.) by [Roxburgh \(1832\)](#) from material carried to the Botanical Gardens at Calcutta by Captain Tennant from Mauritius in 1802. Although this material was collected on December 20, 1814 by Francis Buchanan-Hamilton from these introduced plants. This collection cannot be used to typify the species because Roxburgh left Calcutta in 1813 and died in Edinburgh in 1815, and therefore did not see Francis Buchanan-Hamilton's sheet. However, there is a collection of plates made by Indian artists when Roxburgh was still in India, which has been used to lectotypify numerous Roxburgh taxa, including *Phyllanthus tenellus* ([Mitra, 1987](#); [Chakrabarty, 2019](#)).

Although *M. tenella* was initially described as *Phyllanthus tenellus* within the *Euphorbiaceae* family, *Phyllanthus* s. l. has been included afterwards in the *Phyllanthaceae* family for years ([APG II, 2003](#); [Hoffmann et al., 2006](#)). In a recent revision of the tribe *Phyllanthae* in which the genus *Phyllanthus* is kept monophyletic by transferring some species to other closely related genera, *P. tenellus* has been transferred to the genus *Moeroris* ([Bouman et al., 2022](#)).

Description:

Erect small annual or biannual herb, with stem up to 50 cm, slightly papillose and phyllanthoid branches 10 cm long, glabrous with 10–20 alternate leaves. Leaves slightly papillose, oblong, ovate or obovate, 3–6 × 6–12 mm, petioles 0.5–1 mm long, stipules lanceolate or triangular-lanceolate smaller than the petioles, narrowly hyaline, acute, entire. At the bottom of the branches there are 2–3 male and 1–2 female flowers and at the top only 1–2 female flowers, all pedicellate flowers in axillary cymes. Male flowers with five white sepals with green midrib, 0.4–0.6 mm long, pedicels 0.5–1.5 mm, nectary with five glands, five stamens and free filaments distinct. Female flowers with five white sepals with green midrib, 0.7–1 mm long, pedicels 4–6 mm, reflexed in fruit, nectary unlobed, styles bifid. Capsules smooth, depressed-globose, 0.8–1 × 1.7–1.9 mm, with three celled and two seeds in each cell. Seeds orange-brown, 0.7–0.9 mm, convex dorsally and flat laterally, dorsally papillose ([Roxburgh, 1832](#); [Crisafulli et al., 2011](#); [Levin, 2020](#) and herbarium material).

Distribution:

It is a taxon apparently endemic to Madagascar and the Reunion Islands ([Schäfer, 2002](#); [Crisafulli et al., 2011](#)), from where in the last two centuries it has spread to all tropical and subtropical territories, reaching more recently extratropical countries such as Japan ([Mito & Uesugi, 2004](#)), Morocco ([Khamar et al., 2022](#)), and even Iran ([Zare et al., 2015](#)). Its spread has been due first to its introduction to botanical gardens and, subsequently and inadvertently, to the use of peats for ornamental flora infested with its seeds ([Mitra, 1987](#); [Crisafulli et al., 2011](#); [Khamar et al., 2022](#)), so acting as a stowaway. Always grows in gardens, flowerpots of ornamental trees and their surroundings, linked to wet environments and not seeming to invade natural areas. For the Iberian Peninsula it has been considered as an epiphyte metaphyte ([Sanz Elorza et al., 2004](#)).

In Europe it was initially detected in Madeira, in Funchal ([Hansen, 1968](#), *ut Phyllanthus niruri*), although later the same author assigned it to *P. tenellus* ([Hansen, 1973](#)), Canary Islands, in Gran Canaria ([Kunkel, 1971](#), *ut P. niruri*) and Azores, in Ponta Delgada and Pico ([Hansen, 1973](#)). It was not until the beginning of this century when it began to be observed in other parts of the European warm sites near coasts, starting in Corsica ([Jeanmonod, 2000](#)) and later it was mentioned again in Canary Islands, for the islands of Tenerife

(Padrón-Mederos *et al.*, 2009) and La Palma (Santos-Guerra *et al.*, 2013). Around the same time it was found in Sicily (Crisafulli *et al.*, 2011; Spadaro & Raimondo, 2017), where it seems to have spread to different parts of the island, reaching the continent in the areas closest to Calabria (Galasso *et al.*, 2019) and Genoa (Galasso *et al.*, 2016). The latest published observations correspond to the first reliable record in Spain, specifically a collection from Girona on August 15, 2017 (Sáez & Aymerich, 2021; Gómez-Bellver, 2023) and the corresponding one from Sardinia (Musarella *et al.*, 2024).

In mainland Spain, therefore, there is only the already indicated citation for Girona (Catalonia), and the two we provide in this report, from Alicante (Valencian Community) and Sevilla (Andalusia). We also provide specific references for some citations for which photographs or documents are included on the GBIF platform but have not yet been published:

Specimens examined: **Spain.** Alicante: Santa Pola, Gran Alacant, 30SYH1434, 23 m, 3.VI.2023, *E. Laguna*; ibídem, 20.VI.2023, *L. Serra 13518 & A. Bort* (LSH 15404, MA, Fig. 2); Sevilla: Dos Hermanas, 30STG3930, 49 m, 24.X.2020, *A. Aparicio* (Fig. 3). Las Palmas: Fuerteventura, Pájara, Fortsetzung des Barranco hinter Fuente de la Madre del Agua ostnordöstlich Ajuy, 28RDS5808, 168 m, 6.X.2021, *T. Gregor 20101 & Chr. Lattka* (FR 0163718) (Fig. 4). **Italy.** Mesina: Stromboli, Casa del Fico, 33SWC2094, 22 m, 18.IX.2022, *R. Guarino* (Fig. 5); Calabria: Scilla, Via Nucarella, 96, 33SWC6234, 65 m, 12.VIII.2020, *C. Corazza* (Fig. 6).



Figure 2. *Moeroris tenella*, Alicante (photograph: L. Serra).



Figure 3. *Moeroris tenella*, Sevilla (photograph: A. Aparicio).



Figure 4. *Moeroris tenella*, Fuerteventura, FR 0163718.
Image courtesy of the herbarium FR, reproduced with permission.



Figure 5. *Moeroris tenella*, Stromboli (photograph: R. Guarino).



Figure 6. *Moeroris tenella*, Calabria (photograph: C. Corazza).

Furthermore, after reviewing the data from GBIF for the European continent, we have found some erroneous references that need to be corrected:

- a) In Spain, within the Valencian Community, there is a point located in Segorbe (province of Castellon) that corresponds to a MA sheet from 1950 determined as *P. corcovadensis* and collected in Corcovado (Brazil), so it must be discarded as the first collection for the Valencian territory (Fig. 7).
- b) In continental Portugal there are several mentions, between 1952 and 1960 in Coimbra (Heleno *et al.*, 2024), these are collections of seeds from cultivated plants, today most likely extinct (Ruben Heleno, pers. comm.), so it cannot be considered as wild in this part of Europe.
- c) The existing references for the Netherlands consist of three sheets (WAG 0453361, 0453362, 0453363) collected by D. Groeneveld in 2014 from greenhouse-grown plants in Leiden, where they have not become wild either (Leni Duistermaat, pers. comm.).



Figure 7. *Moeroris tenella*, Corcovado, MA 251207.
Image courtesy of the herbarium MA, reproduced with permission.

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Not applicable.

Supplementary material

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Data availability

Not applicable.

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Authorship contribution statement

Lluís Serra Laliga & Emilio Laguna: Conceptualization, Investigation, Methodology, Writing – review & editing.

Competing interests

Not applicable.

Statement on the use of Artificial Intelligence

Not applicable.

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