Article

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Rediscovery of *Linum corymbiferum* (*Linaceae*) in Europe

Abstract

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Linum corymbiferum, a species treated as historic casual in France, was rediscovered in the department Gard, on its previously documented location and several close places. This species, endemic to Algeria and Tunisia, was discovered in 1875 in Rodilhan (department Gard, France) by A. Barrandon, J. Duval-Jouve and Courcière. It was then recorded four times at the same location in the following years by different botanists who collected samples. Other herbarium specimens dated 1872, 1913 and 1927 were respectively collected in Hyères (Var department, France) and Béziers (department Hérault, France). Subsequently, the species had not been recorded in Europe until 2025.

Key words: floristics, alien flora, France.

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Introduction

Linum L. is the most diverse genus in the *Linaceae* DC. ex Perleb, comprising about 230 species distributed in the temperate regions of the World (Mediterranean region, South Africa, southern North America, Mexico, and South America) (Winkler 1931; Rogers 1982; Diederichsen & Richards 2003; Mabberley 2008). The Mediterranean area is one of the main centres of diversity for this genus and harbours about 75 species (Greuter & al. 1989; Martínez Labarga & Ferrer-Gallego 2020). The section *Linopsis* (Rchb.) Engelm. consists of approximately ten taxa, all in North Africa, including *Linum corymbiferum* Desf. (Ruiz & al. 2015).

The purpose of this paper is to confirm the presence of *L. corymbiferum* in Europe and specifically in France, more than 150 years after its first discovery.

Material and methods

Linum corymbiferum was recorded during botanical field investigations in the wild 24th June 2025 beside a water purification plant in the Vistre valley (department Gard, France). The species is reported as historic casual in France and is not included in identification keys in major botanical manuals like Flora Gallica (Tison & Foucault (de) 2014).

Investigations were made to find historical localities and in herbaria from different European countries where this North African endemic species has been mentioned or is supposed to grow. Each European record is reviewed with specific comment.

Historical background

North Africa

The plant was described by Desfontaines (1798) after being collected for the first time in Miliana (Algeria). It is noted as being very common in Algiers at the edge of fields (Munby 1847). Battandier (1885) described a new taxon, closely related to *L. corymbiferum*, which he named *L. aristidis* Batt., and a woolly form, "*villosa*". Battandier & Trabut (1888) maintain this distinction in their Flore d'Algérie (Flora of Algeria) but class *L. aristidis* at subspecific rank (*L. corymbiferum* subsp. *aristidis* (Batt.) Batt.) and rename the woolly form "*velutinum*".

Quézel & Santa (1963), on the other hand, distinguish only two subspecies: *L. corymbiferum* subsp. *asperifolium* (Boiss. et Reut.) C. Martínez; *L. corymbiferum* subsp. *corymbiferum*, including *L. aristidis*.

Few years later, Bonnet & Barratte (1896), cite only *L. corymbiferum* in Kroumirie.

Martínez (1957) considers *L. corymbiferum* as a collective species, retaining two subspecies and six varieties: subsp. *asperifolium* Boiss. & Reut. (var. *asperifolium* and var. *lambesanum* Boiss. & Reut.) Maire) and subsp. *corymbiferum* (var. *aristidis* Batt., var. *genuinum* Maire, var. *maroccanum* Maire, var. *velutinum* Batt.). According to the current nomenclatural rules, var. *genuinum* should be treated as var. *corymbiferum*.

Potier-Alapetite (1979) accepts three subspecies: subsp. *aristidis*, subsp. *corymbiferum* and subsp. *lambesanum* (Boiss. & Reut.) C. Martínez. More recently, Le Floch' *& al.* (2010), raise to specific status *L. aristidis* Batt. *L. corymbiferum* and *L. lambesanum* Boiss. & Reut.

Finally, Dobignard & Châtelain (2012) publish a comprehensive summary of the nomenclature and associated synonyms accepting a single species with three subspecies: subsp. *aristidis* (Batt.) Batt., subsp. *asperifolium* (Boiss. et Reut.) Martínez (incl. L. *lambesanum*) and subsp. *corymbiferum*.

The same treatment is retained in Plants Of the World Online (POWO 2026) which quotes Dobignard & Châtelain (2012).

On the other hand, the Euro+Med Plantbase (Raab-Straube 2018+), accepts four species: *L. corymbiferum, L. aristidis, L. asperifolium* et *L. lambesanum*.

According to all the current sources, the species *sensu lato* is endemic to Algeria and Tunisia. It was mistakenly reported in Morocco (Jahandiez 1928) and remains unknown in this country so far (M. Ibn Tattou, pers. comm.)

Europe

The first French mentions go back to 3rd and 12th June 1872 and concern herbarium specimens collected by R. J. Shuttleworth (AIX081441) with the note "spont. in horto meo" (appeared spontaneously in my garden), in Hyères (Var). This datum was reproduced by Albert & Jahandiez (1908). A third sample was collected by F. Raine in the same locality in 1913. The datum was, then, published by Jahandiez (1928) in a document supplementing the previous catalogue. Finally, the species was included in the "Atlas-catalogue de la Flore Vasculaire du Var" (Inflovar 2021), citing several old French floras: "Plant from North Africa found accidentally in Hyères (Var) and Rodilhan (Gard)" and specifying that there have been no recent records in the Var.

On 8th July 1875, three years after R. J. Shuttleworth, A. Barrandon, J. Duval-Jouve & Courcière discovered and collected the flax at Pont de Car, city of Rodilhan (Gard) (LY0691367). The site was then visited by Lombard-Dumas, Abbé Magnen, and twice by Cabanès, in 1883, 1885, 1898, and 1903, respectively. Abbé Magnen reported it twice (1885, 1888), followed by Cabanès (1891) in his "Catalogue of plants not mentioned in De Pouzolz's work and new to the flora of the department Gard (continued)". Aubin (1992) included the data in his catalogue of the flora of Gard, describing it as "undoubtedly adventitious."

Finally, in 1927, Fages collected several samples of the plant at a place called "Grand Hôpital" in Béziers (Hérault). These samples appear in the Montpellier herbaria (MPU699781, MPU699782). No further information is available on this population of *L. corymbiferum*. The "Grand Hôpital' was likely the hospital built in 1481 on rue de l'Argenterie, within the grounds of the former Augustinian convent. It is not excluded that the flax could have been only cultivated there.

The species is claimed to have been collected in Estremadura (Portugal) by Gérard (1906), but this information is not included in Flora Europaea (Tutin & al. 1968) nor Flora Iberica (Martínez & Muñoz 2015). The latter don't describe the taxon, because no specimens were found in Iberian herbaria. From more recent sources, there is no known reference of the species in the Portuguese Estremadura (S. Vasco, pers. comm.), nor specimens in Welwitsch's collections (LISU) (A. I. Correia, pers. comm.). It is unknown in Spain and Italy (L. Peruzzi, pers. comm.). Domina & al. (2025) do not mention this species either in their synthesis of unconfirmed, doubtful, excluded or extinct taxa of Italy. No other publications in Europe appears to cite it.

L. corymbiferum sensu stricto (= subsp. *corymbiferum* depending on the author), which is by far the most widespread taxon of the complex in North Africa, is the only one that was discovered in the French localities.

Short description

The species is described as stout, with a woody, multi-stemmed rootstock (Battandier & Trabut 1888; Gérard 1906), and therefore perennial. This is indeed what is observed in Bouillargues and Rodilhan (Fig. 1). *Linum aristidis*, on the other hand, is described as annual by these authors. However, Benabadji & al. (2013) describe *L. corymbiferum* as an annual (therophyte). This could be explained by the fact that the latter author describes the "*aristidis*" form. Indeed, if he considers that there is only one species and does not specify the subspecies, the plant can be considered either annual or perennial. This is also indicated by Martínez (1957).

It is common for *Linum* species of the *Linopsis* sect to behave as annuals or perennials depending on the season. In Spain, it has been documented for *Linum strictum* L. (Martínez & Muñoz 2015: 201) that plants in central Spain, in areas with frost, are clearly annuals, but those on the periphery near the coast, without frost, often behave as shortly perennial. Therefore, *L. corymbiferum*, which is a plant native to warm and temperate climates outside of frost, can behave as an annual or perennial.

The height of the plant is 20 to 60 cm according to Potier-Alapetite (1979), 60 to 100 cm according to Desfontaines (1798), 60 to 120 cm according to Gérard (1906). We actually found plants approaching 200 cm in shady conditions at Bouillargues. The stems are usually erect and profusely branched in corymb towards the top.

The petals are described as yellow to whitish by Martínez (1957), white or sometimes yellow by Potier-Alapetite (1979). All individuals found in the Gard have sulphur-yellow petals fading to pale yellow to whitish, as sometimes observed in *Linum strictum*. The petals are roughly four times longer than the sepals.

Results

Linum corymbiferum was discovered during a botanical inventory within the framework of an environmental Impact Study Assessment 24th June 2025, beside the water purification plant of Bouillargues (department Gard, France). The population, consisting of hundreds of individuals, was setting the riparian forest of the river Vistre next to a disturbed stand of *Fraxinus angustifolia* Vahl accompanied by *Prunus cerasifera* Ehrh. Most of the plants grew in clearings forming dense clusters of dozens of individuals. One individual was recorded in the herbaceous edge between the road and the water purification plant fence.

This discovery encouraged us to visit the historical locality of "Pont de Car" (Rodilhan, department Gard, France), also on the banks of the Vistre, about 3 km away. The species was searched for there and found in the ditch bordering the D 999 road, on both sides of the bridge extending to the Baraquette (J.-M. Tison, pers. comm.). We also recorded the species on the same day at Moulin Gazay, near the D 6113 road bridge as well as along the Pont des Iles path, a few hundred metres southwest of the Pont de Car. One individual was also observed on the grassy verge along the D 135 road, near Mas de la Pépinière (Appendix 1).

Discussion

The data from Pont de Car, in Rodilhan, is located near an estate called "Mas de la Pépinière" (nursery). It therefore seems likely that a nursery did indeed exist in Rodilhan at the time and could be the source of the plant's establishment in the surrounding area. This information is corroborated by an article in the newspaper "Le Midi" (Académie de Nîmes 1886), quoting Abbé Magnen (who collected the species in 1885):

"This Algerian plant is naturalized in Rodilhan, in a former nursery owned by Mr. Mouret. It has been multiplying on its own for more than fifteen years and has spread to the neighbouring banks." A further article by Abbé Magnen (1885) cites Mr. Barrandon assertion that he had observed it more than a decade prior.

Fig. 1. *Linum corymbiferum* : a-c) Pont de Car, Rodilhan (Gard, France), photos by M.-A. Bouchet. ; d) chemin du Pont des Iles, Rodilhan (Gard, France), photo by J.-M. Tison.

This information suggests that the plant may have been known in the department Gard before 1875, when A. Barrandon and his colleagues collected it. It is remarkable that the species remained confined to the Vistre valley (Vistrenque) and has not been seen in this region for 122 years. It is therefore reasonable to assume that this plant never disappeared but fell into oblivion due to a lack of subsequent targeted surveys by botanists. The region of Bouillargues is currently the only known European location for this species (Fig. 2).

The Béziers and Hyères stations are less well documented than those in the department Gard

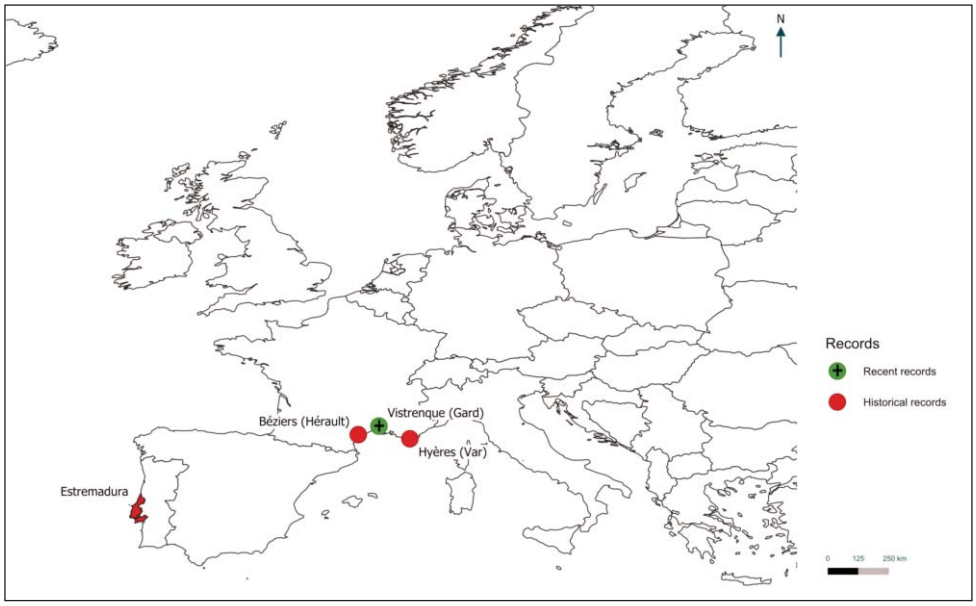

Fig. 2. *Linum corymbiferum* European range; © OpenStreetMap contributors.

and extensive research could lead to the rediscovery of specimens of this species, provided that the environment has not undergone fundamental changes since the early 20th century.

The Hyères collection (1872), however, has a peculiar interest in being the first known one for the species in Europe, three years before that of A. Barrandon. Nevertheless, the species was no longer cited in this locality after being collected by F. Raine in 1913. Since no information allows to think that it was found at Hyères outside of R. J. Shuttleworth's garden, it cannot be considered to have been truly established in the department Var.

The presence of this species in France may be due to an expansion originating from specimens cultivated for collection or maybe ornamental purposes.

Due to its showy flowering, this species was cultivated in the late 19th century and was a common feature of traditional gardens in a region with many country villas. Portuguese records from the Lisbon area likely also support this hypothesis.

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References

Académie de Nîmes (séance du 19 décembre 1885) 1886: *Linum corymbiferum*. – Midi J. Rép. Libéral, 18 janvier 1886: 2.

Albert, A. & Jahandiez, E. 1908: Catalogue des Plantes Vasculaires du département du Var. – Paris.

Aubin, P. 1999: Catalogue des plantes vasculaires du Gard. – Lyon.

Battandier, J. A. 1885: Notes sur quelques plantes rares d'Algérie. – Bull. Soc. Bot. France **32:** 336-343.

— & Trabut, L. 1888: Flore de l'Algérie; Ancienne Flore d'Alger transformée. – Alger.

Benabadji, N., Benabadji, N. & Bouazza, M. 2013: Les pelouses post-culturales dans la région de Mansourah (Oranie – Algérie). – Medit. Ser. Estud. Biol. Epoca II **24:** 76-104.

Bonnet, E. & Barratte, G. 1896: Catalogue raisonné des Plantes Vasculaires de la Tunisie. – Paris.

Cabanès, G. 1891: Catalogue des plantes non mentionnées dans l'ouvrage de De Pouzolz et nouvelles pour le département du Gard. – Bull. Soc. Et. Sci. Nat. Nîmes **19:** 8-81.

Desfontaines, R. L. 1798: Flora atlantica: sive historia plantarum quae in Atlante, agro tunetano et algeriensi crescunt. – Parisiis.

Diederichsen, A. & Richards, K. 2003: Cultivated flax and the genus *Linum* L. Taxonomy and germoplasm conservation. – Pp. 22–54 in: Muir, A. & Westcott, N. (eds) Flax: the genus *Linum*. – London.

Dobignard, A. & Châtelain, C. 2012: Index synonymique de la flore d'Afrique du Nord Volume 4 Dicotyledoneae: *Fabaceae* - *Nymphaeaceae*. – Genève.

Domina, G., Abeli, T., Alessandrini, A., Angiolini, C., Argenti, C., & al. 2025: Refining the inventory of the vascular flora of Italy: Unconfirmed, doubtful, excluded or extinct taxa. – Phytotaxa **723(1):** 1-137. https://doi.org/10.11646/phytotaxa.723.1.1

Gérard, R. 1906: *Linum corymbiferum* Desf. et *Linum corymbulosum* Rchb. *in* Chronique horticole. – Bull. Soc. Centr. Hort. Nancy. **5:** 153-156.

Greuter, W., Burdet, H. M. & Long, G. (eds) 1989: Med-Checklist. A critical inventory of vascular plants of the Circum-Mediterranean countries, **4.** – Geneva & Berlin.

Inflovar (Association pour l'Inventaire de la Flore du Var) 2021: Atlas-catalogue de la Flore Vasculaire du Var. – Turriers.
Jahandiez, E. 1928: Additions à la Flore du Var 2ème partie Plantes adventices. – Ann. Soc. Hist. Nat. Toulon **13:** 42-75.
Le Floch', E., Boulos, L. & Vela, E. 2010: Catalogue synonymique commenté de la flore de Tunisie. – Tunis.
Mabberley, D. J. 2008: Mabberley's Plant-book. A portable dictionary of plants, their classification and uses. – Cambridge.
Magnen, J. 1885: Glanes Botaniques, notices sur diverses plantes à ajouter à la flore du Gard. – Mém. Acad. Nîmes **8:** 395-420.
— 1888: Compte-rendu de la session extraordinaire de la Société botanique de France à Millau. – Bull. Soc. Et. Soc. Hist. Nat. Nîmes **16:** 3-8.
Martínez, C. 1957: Les Linacées de l'Afrique du Nord. – Bull. Soc. Hist. Nat. Afrique du Nord **48(7-8):** 537-577.
Martínez Labarga, J. M. & Ferrer-Gallego, P. P. 2020: Taxonomic and nomenclatural notes on African *Linum squarrosum* sensu lato (*Linaceae*). – Phytotaxa **439(2):** 127-135. https://doi.org/10.11646/phytotaxa.439.2.3
— & Muñoz Garmendia, F. 2015: *Linum* L. – Pp. 173-266 in: Muñoz Garmendia, F., Navarro, C., Quintanar, A. & Buira, A. (eds). Flora iberica, **9.** – Madrid.
Munby, G. 1847: Flore de l'Algérie ou Catalogue des Plantes indigènes du Royaume d'Alger. – Paris.
Potier Alapetite, G. 1979: Flore de la Tunisie, **1.** – Tunis.
POWO 2026: Plants of the World Online. Facilitated by the Royal Botanic Gardens, Kew. – https://powo.science.kew.org/ [accessed 1/2/2026]
Raab-Straube E. (2018+): *Linaceae*. – In: Euro+Med Plantbase – the information resource for Euro-Mediterranean plant diversity. – http://www.europlusmed.org [1/2/2026].
Rogers, C. M. 1982: The systematics of *Linum* sect. *Linopsis* (*Linaceae*). – Pl. Syst. Evol. **140:** 225-234. https://doi.org/10.1007/BF02407299
Ruiz-Martín, J., Jiménez-Mejías, P., Martínez Labarga, J. M. & Pérez-Barrales, R. 2015:. *Linum flos-carmini* (*Linaceae*) a new species from northern Marocco. – Ann. Bot. Fennici **52 (3-4):** 383-395. https://doi.org/10.5735/085.052.0521
Quézel, P. & Santa, S. 1963: Nouvelle Flore de l'Algérie et des régions désertiques méridionales. – Paris.
Tison, J.-M. & Foucault (de) B. 2014. Flora Gallica Flore de France. – Mèze.
Tutin, T. G., Heywood, V. H., Burges, N. A., Moore, D. M., Valentine, D. H. & al. 1968: Flora Europaea, **2.** – Cambridge.
Winkler, H. 1931: *Linaceae*. – Pp. 82-130 in: Engler, H. G. A. & Prantl, K. A. E. (eds) Die Natürlichen Pflanzenfamilien, **19a.** – Leipzig.

Appendix 1: new records details – datum WGS 84 (EPSG: 4326)

Linum corymbiferum Desf.

France, Gard department: Bouillargues, river Vistre valley, le Moulin Gazay, 4.400957 E 43.815311 N, in a riparian forest, next to Bouillargues water purification plant, 30 m, 24-VI-2025, *M.-A. Bouchet* (2 specimens); Bouillargues, river Vistre valley, le Moulin Gazay, 4.40092 E 43.815539 N, at the edge of a riparian forest, next to Bouillargues water purification plant, 30 m, 24-VI-2025, *M.-A. Bouchet*; Bouillargues, river Vistre valley, le Moulin Gazay, 4.401225 E 43.81526

N, at the edge of a riparian forest, next to Bouillargues water purification plant, 30 m, 24-VI-2025, *M.-A. Bouchet*; Bouillargues, river Vistre valley, le Moulin Gazay, 4.401296 E 43.815216 N, in the herbaceous edge between the road and the water purification plant fence, 30 m, 24-VI-2025, *M.-A. Bouchet*; Rodilhan, river Vistre valley, Pont de Car, 4.422546 E 43.833277 N, along the D 999 road ditch, right bank of the river, 38 m, 25-VI-2025, *M.-A. Bouchet*; Rodilhan, between Mas de la Pépinière and the roundabout, 4.424451 E 43.831794 N, in the herbaceous edge of the D 135 road, 37 m, 25-VI-2025, *M.-A. Bouchet*; Rodilhan, river Vistre valley, Pont de Car, 4.423232 E 43.833233 N, along the D 999 road ditch, left bank of the river, 37 m, 25-VI-2025, *J. Molina, JM23233, JM23234*; Bouillargues, river Vistre valley, le Moulin Gazay, 4.40025 E 43.81439 N, chemin du Mas de Coulon, in a road ditch, 30 m, 25-VI-2025, *J. Molina*; Bouillargues, river Vistre valley, le Moulin Gazay, 4.398151 E 43.813594 N, right bank of the river, N of the D 6113 bridge, 30 m, 25-VI-2025, *J. Molina*; Bouillargues, river Vistre valley, le Moulin Gazay, 4.397968 E 43.813316 N, left bank of the river, S of the D 6113 bridge, 30 m, 27-VI-2025, *J. Molina*; Rodilhan, chemin du Pont des Iles, 4.414179 E 43.83102 N, along the road, 37 m, 27-VI-2025, *J. Molina* ; Rodilhan, chemin du Pont des Iles, 4.414516 E 43.830721 N, 36 m, along the road, 27-VI-2025, *J. Molina* ; Rodilhan, chemin du Pont des Iles, 4.41508 E 43.830163 N, along the road, 36 m, 27-VI-2025, *J. Molina* ; Rodilhan, chemin du Pont des Iles, 4.41549 E 43.82966 N, along the road, 36 m, 27-VI-2025, *J. Molina* ; Rodilhan, between Mas de la Pépinière and Mas de Peyre, 4.41682 E 43.82925 N, right bank of the river Vistre, 35 m, 27-VI-2025, *J. Molina*; Rodilhan, between Mas de la Pépinière and Mas de Peyre, 4.41662 E 43.82904 N, right bank of the river Vistre, 35 m, 27-VI-2025, *J. Molina*; Rodilhan, between Mas de la Pépinière and Mas de Peyre, 4.41658 E 43.82895 N, right bank of the river Vistre, 35 m, 27-VI-2025, *J. Molina*; Rodilhan, between Mas de la Pépinière and Mas de Peyre, 4.41656 E 43.82887 N, right bank of the river Vistre, 35 m, 27-VI-2025, *J. Molina*.

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