

A new combination in *Erica* (Ericaceae)

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Abstract

A new nomenclatural status and combination is proposed for *Erica cinerea* var. *numidica*. New data about the morphology, chorology and ecology of this taxon are given.

Key words: Algeria; cork oak forest; *Erica numidica*; geographic isolation; plant morphology; seeds.

Resumen

Una combinación nueva en *Erica* (Ericaceae).- Se propone un nuevo estatus y combinación nomenclatural para *Erica cinerea* var. *numidica*. Se aportan nuevos datos sobre la morfología, corología y ecología de este taxón.

Palabras clave: aislamiento geográfico; Argelia; bosque de alcornoques; *Erica numidica*; morfología de plantas; semillas.

Erica cinerea s. l. is a taxon of the section *Brachycallis* I. Hansen and it has an Atlantic distribution in its wider sense (Dupont, 1962; Roisin, 1969). It also appears in two sites far from the main area of distribution of the species. One of them is the island of Madeira (McClintock, 2001: 249), where it was first described as a variety and later elevated to specific status under the name of *Erica maderensis* (Benth.) Bornm., see McClintock (1989) and Hansen & Sunding (1993).

A second nucleus can be found on the east Algerian coast, from where it was first reported by Battandier (1919) as *Erica cinerea* and later as a new taxon: *E. cinerea* var. *numidica* by Maire (1931). Quézel & Santa (1963) and Greuter *et al.* (1986) ratified the presence of this taxon in Algeria. These populations there exhibit particular morphological characters that separate them from the European and Macaronesian ones.

Its morphological distinction as well as its particular ecology and geographical isolation support the proposal of a nomenclatural change for this Algerian taxon.

Erica numidica (Maire) Romo & Boratyński, comb. & stat. nov. ≡ *Erica cinerea* L. var. *numidica* Maire in Bull. Soc. Hist. Nat. Afrique N. 22: 303. 1931 [Basionym]

Lectotype (designated here): [Algeria] Dr. R. Maire – Iter Numidicum – 1931 / *Erica cinerea* L. / var. *numidica* Maire/ In quercetis suberis in colle Koudiat / Tella nuncupato, inter lacum Salsum / et Promontorium Rosa, ad occid. urbis / Tunizae, 100-150 m, solo lapidoso/arenaceo / die 28 junii (MPU 002662).

Morphology

It is a taxon morphologically close to *Erica cinerea*, isolated from the continuous area of the European populations, which exhibits a series of morphological peculiarities that are summarized in Table 1.

E. numidica is characterized by: peduncles (0.75)1-2 mm long. Bracts 1.5 to 2 mm long. Sepals 2.5-3.25 mm long, more than half as long as corolla, linear-lanceolate. Corollas 4-5 x 2-2.5 mm. Stamens

Table 1. Comparative table of the three closely-related taxa.

	<i>E. cinerea</i> ¹	<i>E. maderensis</i> ²	<i>E. numidica</i> ³
Peduncle length (mm)	(1.5)2-4(4.5)	2-2.3	(0.7)1-2
Bracts length (mm)	1-1.25(1.75)	1.5-2	1.5-2
Flowers length x width (mm)	(7)7.5-8 x 4.5-5	5 x 2	(3.5)4-5 x 2-2.5
Corolla lobes length (mm)	(0.6)0.8-1	0.5	0.6-0.7
Sepals length (mm)	2-3.5	1.85-2	2.5-3.25
Anthers length (mm)	0.8-1.0(1.2)	0.90	0.7-0.75
Anther appendages length (mm)	0.5	0.3	0.4-0.5
Stigma	exerted	not exerted	not exerted
Grains shape	curved	curved and apiculate	curved
Grains length - width (mm)	(0.77)0.8-1 x 0.44-0.45	0.63-0.65 x 0.54-0.55	0.72-0.73 x 0.44-0.45
Distribution	SW Europe	Madeira Island	NE Algeria

Sources of material used to elaborate the table:
¹ Bayer (1996) and Fagúndez & Izco (2008, 2009).
² Fagúndez & Izco (2008, 2009).
³ Algeria, dans le Quercetum suberis sur Koudiat Tella, entre le Lac Melah et le Cap Rosa, à l'W de la Calle, grés, altitude 100-150 m, 28.06.2010, R. Maire s. n. (Société Française, 1932. Exsic. Ch. Duffour, BC-Sennen).

0.7-0.75 mm long, with laciniate appendages of 0.4-0.5 mm long.

The morphology of the seeds provides taxonomic characters that should be used in the taxonomy of these species of the genus *Erica* (Table 1; Fagúndez & Izco, 2008, 2009).

General distribution

Erica numidica, described initially by Maire (1931) and mentioned repeatedly from Algeria by numerous authors (Quézel & Santa, 1963; Greuter *et al.*, 1986; Charco, 2001), exhibits a considerable geographical isolation from the close relative *E. cinerea*. To date, *Erica numidica* is only known from the summit of the Koudiat Tella and the Jbel Koursi (200-300 m), some kilometers to the south of the first locality, both lying within the Democratic and Popular Republic of Algeria. Quézel & Santa (1963) mentioned it from the area surrounding Cap Rosa, where it is reported as being very rare.

Erica cinerea has its southern limits in Liguria (Pignatti, 1982) and Catalonia (Dupont, 1962), being absent from the Italian Peninsula, the southern half of Spain and Morocco. The large distance

separating that species from *Erica numidica* could be a reason for the emergence of morphological differences and formation of a species. Similar vicariants, furthermore, can be found among several other taxa (Romo & Boratyński, 2007; Terrab *et al.*, 2007, 2008; Habel *et al.*, 2009). The period of isolation is lately estimated as from the end of Messinian Salinity Crisis, which occurred approximately 5 million years ago (Krijgsman *et al.*, 1999).

Incomprehensibly, the website Aluka (2010), where specimen sheets from herbarium MPU (Montpellier) and from herbarium P (Paris) can be seen, apart from the label containing numerous transcriptional errors, assigns the plants from these herbaria to Tunisia when in fact they correspond to localities in Algeria. The error comes from the locality expressed on the label: "ad occid. urbis Tunizae", which is merely orientative.

Ecology

The ecology of *Erica numidica* is also singular, since it departs from the typical heath formations of Atlantic affinity and is found in plant communities of a clearly Mediterranean character. These heathers

Key for the three taxa (*E. cinerea* aggregate):

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Flowers longer than 5 mm Flowers 5 mm long or shorter | <i>E. cinerea</i>
2 |
| <ol style="list-style-type: none"> 2. Sepals 2 mm long or shorter Sepals longer than 2 mm | <i>E. maderensis</i>
<i>E. numidica</i> |

(or heaths), according to Quézel & Santa (1963), are a constituent of the cork oak forests' understorey and, judging by the data on herbarium labels, have never been found very far from the coastline, nor do they ascend much in altitude, being found always below 300 m. At present, these populations of *E. numidica* are protected in the National Park of El Kala (Stevenson *et al.*, 1988).

This plant is located in the regional hot-spot of Kabylies-Noumidie-Kroumirie (Médail & Diadema, 2009) and the putative refugia of Petite Kabylie (Médail & Diadema, 2009)

Revised material

Algeria: In quercetis suberis collis lapidosi arenacei Koudiat Tella dicti, inter lacum Salsum et Promontorium Rosa, ad occid. urbis Tunizae, ad alt. 100-150 m, 28.06.1931, *R. Maire s. n.* (Iter Numidicum, BC 138575, MPU 002661, P00083011); In quercetis suberis in colle Koudiat Tella nuncupato, inter lacum Salsum et Promontorium Rosa, ad occid. urbis Tunizae, 100-150 m, solo lapidoso arenaceo, 28.06.1931, *R. Maire s. n.* (MPU 002662); dans le *Quercetum suberis* sur Koudiat Tella, entre le Lac Melah et le Cap Rosa, à l'W de la Calle, grés, altitude 100-150 m, 28.06.1931, *R. Maire s. n.* (Société Française, 1932. Exsic. Ch. Duffour, BC 138758, BC-Sennen).

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