



New data on the recently described *Xiphion heracleantum* (Iridaceae), endemic to Morocco

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Abstract

Xiphion heracleantum was recently described from the Tingitane Peninsula (northern Morocco), on the basis of herbarium material collected mostly in the 19th century. After field work in the Rif area, a new population with three independent subpopulations of *X. heracleantum* has been discovered in Djebel Bouhachem, over 60 km southeast from Tangiers, the type locality. About 100 reproductive individuals are growing there, on schistose soils in rocky places. New data on morphology, ecology, and distribution of this taxon are reported on the basis of re-evaluation of characters from both living specimens and herbarium material, and morphological affinities and differences with close relatives in the genus are discussed. In particular, relationships with the North African endemic *X. junceum* are newly revised, a morphologically very close plant which is lectotypified here and as which it has repeatedly been misidentified. Furthermore, inclusion of this species in the list of rare plants of Morocco is proposed as RR, and a key for identification of the known species of *Xiphion* is presented.

Key words: Biogeography, ecology, Iridaceae, *Iris*, lectotypification, Morocco, morphology, pollination, Rif mountains, *Xiphion heracleantum*, *Xiphion junceum*

Introduction

Xiphion heracleantum Martínez-Rodríguez & Crespo (2013: 90) is endemic to the Riphæan area, in northern Morocco. This outstanding taxon was recently described (on-line early-view version: February-2012) from herbarium materials collected in the 19th and 20th centuries, mostly in the surroundings of Tangiers and Tétouan, which had been misidentified as *Xiphion junceum* (Poiret 1789: 85) Parlatore (1860: 304).

This new species is mainly characterized by its long floral bracts, and yellow flowers with a long perianth tube and inconspicuous filiform inner tepals among other features, a combination of characters not present in any of the known taxa of the genus (Martínez-Rodríguez & Crespo 2013). However, no precise information was shown in the protologue on the true colour of flowers and other important characteristics of fruits and seeds, since they were indistinguishable or absent in the herbarium specimens, and no wild populations were known by that time.

Field work developed within the last years in the sites where it was first collected in the beginning of the 19th century did not yield new findings, even in the type locality (Djebel Kebir, western Tangiers) where it was expected to be abundant. Fortunately, recent research in Djebel Bouhachem, about 20 km northwest of Chefchaouen (cf. Chambouleyron 2012), has resulted in the discovery of a new population with three independent subpopulations of *X. heracleantum*, growing on schistose soils in rocky slopes. This finding is remarkable not only because new data can be obtained to complete the morphological description, namely the reproductive characteristics of the species, but also because it comes to value the forthcoming declaration of the ‘Natural Park of Bouhachem’.

As discussed by Martínez-Rodríguez & Crespo (2013), members of the genus *Xiphion* Miller (1754: without

- Flowers lilac, bluish or purple-violet; outer tepals erect-patent to subpatent; inner tepals 30–70 mm long, about as long as outer tepals 7
- 7. Claw of outer tepals with short hairs 1–3 mm long on the upper surface; stigma with triangular acute lobes, clearly apart from the outer tepal *Xiphion boissieri*
- Claw of outer tepals smooth or minutely papillose; stigma with obtuse lobes, in contact with the outer tepal 8
- 8. Basal leaves up to 2 mm wide, filiform. Flowers dark reddish-purple to purple-violet; yellowish signal on limb of outer tepals with a bluish flange; inner tepals ovate-spatulate to oblanceolate *Xiphion filifolium*
- Basal leaves usually wider than 2 mm, not filiform. Flowers whitish-lilac to bluish-violet; yellowish signal on limb of outer tepals either without flange or with a whitish flange; inner tepals oblanceolate to lanceolate 9
- 9. Radicular plate wider than 7 mm. Basal leaves at least 6 mm wide; stem leaves at least 10 mm wide *Xiphion tingitanum*
- Radicular plate not wider than 6 mm. Basal leaves not more than 6 mm wide; stem leaves not more than 6 mm wide *Xiphion fontanesii*

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