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Orobanche pseudorosmarina A. Pujadas et Muñoz Garm. sp. nov. (Orobanchaceae) from the eastern Mediterranean region

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The analysed plants from Dalmatia (Croatia) identified by Beck as *Orobanche rosmarina* Beck do not fit the lectotype for *Orobanche rosmarina* originally used by Foley [BM 574992]. As a consequence, these *Orobanche* specimens from the eastern Mediterranean region remain unnamed, but are described here as a new species *Orobanche pseudorosmarina* A. Pujadas et Muñoz Garm.

Keywords: nomenclature, *Orobanche pseudorosmarina*, typification, Croatia, Dalmatia, Mediterranean.

Introduction

The name *Orobanche rosmarina* Beck [Subgen. *Phelipanche* (Pomel) Tzvelev=Sect. *Trionychon* Wallr.] was first proposed at the specific rank in a publication on the Flora of South Dalmatia (Croatia) by GINZBERGER (1921: 243) where he wrote »*Orobanche rosmarina* (Welw.) Beck« and, in the footnote, »=*O. Muteli* Schltz. var. *stenosiphon* Beck«. Also, in his preparatory account of the genus *Orobanche* for *Flora iberica*, FOLEY (2001a: 231–232) lectotypified *Orobanche rosmarina* Beck based on a sheet of Welwitsch's exsiccata deposited in BM: »Flora Lusitanica, Sect. II (da). No. 779. *Trionychium Rosmarinum* [sic.] nov. Sp. S. de Arrabida. Annis 1848–50 leg. Dr. Welwitsch« (BM 574992) (Fig. 1). The problem arose when the characters of the Croatian and Portuguese specimens were found not to coincide, so the plants could not belong to the same taxon. Thus, while examining the lectotype of Foley (BM 574992) and the Iberian specimens which should seemingly be given its name, we found their morphological features to depart from the description and illustration of BECK (1890: 96, Tab. 1, Fig. 13) for his O. *mutelii* var. *stenosiphon*. Also, Beck's description and illustration differ from those by FOLEY (2001b: 40–41). Thus, BECK (1890: 96) described var. *stenosiphon* as possessing some differential characters: »*Spicis brevibus, densifloris, in apice rotundato-obtusis; floribus …valde pronus curvatis, subhorizontaliter patentibus,…*«; also, in his iconography, BECK (1890:

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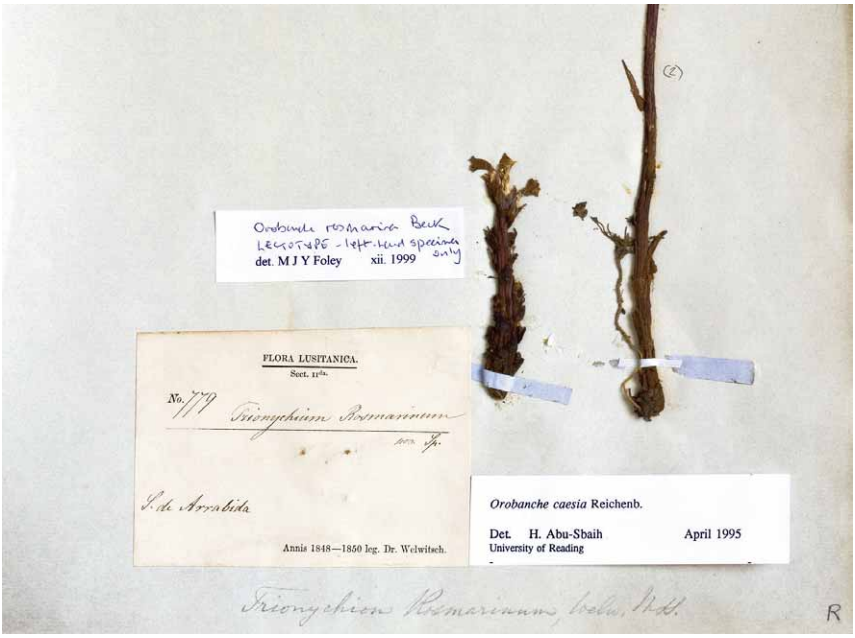

Fig. 1. (BM 574992) Lectotype for *Orobanche rosmarina* Beck

Tab. 1, Fig. 13) depicted a flower with linear lanceolate bracteoles, a calyx with long acuminate narrow triangular teeth and a densely pubescent patent corolla. In the lectotype (BM 574992), however, the spike was pauciflora and bore only three flowers rather than being densiflora; bracteoles were lanceolate rather than linear lanceolate; calyx teeth were triangular rather than narrow triangular long acuminate; corollas were erect to erecto–patent rather than subhorizontally patent or sharply inflected patent; and the corolla had scarce short glandular hairs not greater than 0.2 mm in size rather than being densely pubescent as in Beck's icon (BECK 1890: Pl. 1, Fig. 13). The lectotype characters (BM 574992) are consistent with those originally reported by FOLEY (2001a: 232; 2001b: 40).

Therefore, our morphological observations reveal that the lectotype proposed by Foley differs markedly from the description provided by BECK (1890: 96). Although we must concede that, most probably, Beck used plants from Istria or Dalmatia to describe the variety *stenosiphon* – he wrote »*O. stenosiphon imprimis in Istria et Dalmatia observatur*« – (BECK 1890: 96), the Welwitsch exsiccata specimen was the only one cited in the protologue and was thus the sole syntype. Foley had therefore no choice under Art. 9.10 (MCNEILL et al. 2006) but to select a specimen of this exsiccata number.

Results

Description of the new species

The Croatian plants that were previously identified as *O. rosmarina* Beck belong to an unnamed taxon other than that of the Iberian ones and are described as the following new species here:

Orobanche pseudorosmarina A. Pujadas et Muñoz Garm., **sp. nov.**

= *O. mutelii* var. *stenosiphon* Beck in Biblioth. Bot. 19: 96, Taf. I, Fig. 13(1) (1890) p.p.

= *O. rosmarina* Beck in Ginzberger, Oesterr. Bot. Z. 70 (9/12): 243 (1921) p.p.

Holotype –Reise nach den dalmatinischen Inseln. / 15. Mai bis 15. Juni 1911 / =*O. mutelii* var. *stenosiphon* Beck [handwritten by Beck] / *Orobanche rosmarina* (Welw.) G. Beck. [handwritten by Beck] / (Auf *Rosmarinus officinalis*) / Insel Lissa, Umgebung von Comisa: Schiff am der Nordseite der Bricht. / 21. Mai. / leg. A. Ginzberger. A. Teyber / (WU)

Other studied material

DALMATIA: Dalmat: ins. Brazza a species nova? (W), Hb. Portenschlag, [illegible]: 118 b. (WU) [sub *O. caerulea*, identified by Beck as *Orobanche stenosiphon* Beck]. Scoglie San Andrea. […illegible.], 26-V-1876, G. C. Spreitzenhofer (WU 7791) [sub *Phelipaea caerulea* C. A. Meyer; with a label handwritten by Beck: »*Orobanche Muteli* Schultz / var. *O. stenosiphon* mihi / Beck«]. Dalmatien, Insel Lissa, bei Comisa, 23-V-1901, A. Ginzberger (WU) [identified by Beck as *Orobanche mutelii* var. *stenosiphon* Beck]. Dalmatien, Comisa, Insel Lissa, 19-V-1905, E. Kindt (WU) [identified by Beck as *Orobanche mutelii* var. *stenosiphon* Beck]. Insel Busi, Oberhalb Porto Basi, machie, 20 to 26-V-1911, A. Ginzberger and A. Teyber (WU) [identified by Beck as *Orobanche rosmarina* Beck =*O. mutelii* var. *stenosiphon* Beck]. Insel San Andrea westl. von Lissa, Oberhalb Porto Slatina, 6 to 9-VI-1911, A. Ginzberger and A. Teyber (WU) [identified by Beck as *Orobanche rosmarina Beck =O. mutelii* var. *stenosiphon* Beck]. Insel San Andrea westl. Von Lissa, […illegible], 6 to 9-VI-1911, A. Ginzberger and A. Teyber (WU) [identified by Beck as *Orobanche rosmarina* Beck =*O. mutelii* var. *stenosiphon* Beck].

We should note that the voucher housed as type material in Beck's herbarium at PRC – »*O. rosmarina* GB [pencil handwriting] / =*Orob. Muteli* Schultz var. *stenosiphon* m. [Beck's handwriting] / det. Dr. G. Beck (PRC)« – also belongs to this taxon. However, it has no collection label, which was probably lost at some time. Therefore, we believe it is not amenable to typification

Iconography: Beck (1890: Tab. 1, Fig. 13); Fig. 2.

Diagnosis

Planta humilis, 9–14 cm alta. Caulis gracilis, debilis, 2.5–3.3 mm latus in medio. Spica 3.5–5.5 × 2.2–2.7 cm, breviter cylindracea, rotundata in apice, subdensa. Bracteae 4.5–5.5 mm longae, quam calyx breviores, ovatae, cum pilis glandulosis usque ad 0.4 mm longis. Bracteolae 3.5–6 × 0.3–0.8 mm, linear–lanceolatae. Calyx 6–9 mm longus, triangularibus longiacuminatis dentibus, perspicuis percursis nervis, interdum indumento occultis. Corolla 13–16 mm longa, curvata, valde prona, patens ad erecto–patentem; conspique constricta supra insertionem staminum, basi alba, apice in siccitate atroviolaceo; labrorum lobulis obtusis, rotundis; labrorum marginibus breviglanduloso–pilosis, pilis usque ad 0.4 mm longis. Filamenta glabra infra, supra pilis glanduliferis perpaucis obsita. Antherae 0.9–1.1 mm, ciliis comosis basi, pilis 0.3–0.4 mm longis. Germen parce glanduloso–pilosum, subglabrum interdum, pilis usque ad 0.2 mm. Stylus parce glanduloso–pilosus, subglabrus interdum, pilis usque ad 0.1 mm longis.

Fig. 2. (WU) Holotype for *Orobanche pseudorosmarina* A. Pujadas et Muñoz Garm.

Description

Plant 9–14 cm tall. Stem 2.5–3.3 mm in diameter, thin, slightly swollen at the base, up to 8 mm in diameter. Leaves 5–7(8) mm, ovate, spread. Inflorescence 3.5–5.5 × 2.2–2.7 cm, short, cylindrical, with a round apex, subdense, densely pubescent glandular rachis, with hairs up to 0.4 mm long. Sessile flowers. Bracts 4.5–5.5 × 2.5–3 mm, smaller than the calyx, ovate, with dense glandular hairs up to 0.4 mm, usually blue to dark purple when dry. Bracteoles 3.5–6 × 0.3–0.8 mm, linear-lanceolate. Calyx 6–9 mm, with long acuminate tri-

angular teeth, matching its tube, conspicuous nerves, occasionally concealed by an indument of glandular hairs 0.2–0.4 (0.6) mm long. Corolla 13–16 mm, patent to erecto-patent, uniform and strongly curved, base slightly thickened and thinner above the insertion point of filaments and tubular, slightly infundibuliform at the apex, shortly pubescent with glandular and eglandular hairs up to 0.3(0.4) mm, hairs uniformly, densely distributed in the upper 2/3 of the corolla, glabrous or glabrescent at the base, with a white base and a purplish blue apex when dry. Upper lip bilobate, round, emarginate, obtuse, the lower one longer than the upper one, having subequal, round, obtuse lobes with shortly hairy glandular margin, hairs up to 0.4 mm long. Filaments obliquely inserted, adaxial filaments inserted 4.5–5.2 mm above the corolla base, abaxial filaments inserted at 4–5 mm, glabrous at the base and hairs nearly 0.1 mm in size, dispersed in the upper 2/3, occasionally subglabrous, scant subssesile glandular hairs (c. 0.05 mm) below the anthers; anthers 0.9–1.1 mm (apiculum 0.1–0.2 mm), ovate, apiculate, white when dry, hairy at the base, hairs 0.3–0.4 mm long. Ovary with short glandular hairs up to 0.2 mm in size, in the upper half, occasionally subglabrous. Style with hairs up to 0.1 mm long, disperse, occasionally subglabrous. Stigma scarcely bilobate.

Geographical distribution and habitat

Orobanche pseudorosmarina occurs on the coastal islands of Croatia (Dalmatia), where it seems to be very scarce. We have found no herbarium material from other regions corresponding to this taxon. It often parasites on *Rosmarinus officinalis* L.

Other studied material

***Orobanche rosmarina* Beck**

PORTUGAL. ESTREMADURA: S. de Arrábida, 1848–1850 [1852], Dr. Welwitsch, No 779 (BM 574992) [sub *Trionychium Rosmarinum* nov. sp.; Foley's lectotype for *O. rosmarina*]. Serra da Arrábida, …, in Serra de Montejunto, V–VI, Welwitsch (LISU P34461) [sub *Phelipaea* (*Trionychion*) *Rosmarini* Welw.]. Serra da Arrábida, Casal da Pimenta, 15-IV-1903, A. Guimarães (LISU P 34460) [sub *Orobanche Muteli* F. Schultz α. *(O.) stenosiphon* Beck]. Serra da Arrábida, Casal do Pimenta, sobre *Rosmarinus*, -IV-1903, A. Guimarães, n° 2270 (LISU P34459) [sub *O. ramosa* L. b. *Mutelii* (F. Schultz) var. *stenosiphon* Beck (sic.)]. Serra da Arrábida, in collib. calcar. pr. Freitas, 150 m, 20-V-1936, W. Rothmaler, Fl. Lusit. 419 (JE). Serra da Arrábida, in rupestribus inter Portinho et Torres, 21-V-1936, W. Rothmaler, Fl. Lusit. 515 (JE).

Discussion

The new species can be easily distinguished from *Orobanche rosmarina* (= *O. mutelii* var. *stenosiphon* Beck), with which it has so far been confused, owing to its thin stem, 2.5–3.3 mm in diameter [(3)5–7 mm in diameter, relatively robust, in *O. rosmarina*]; inflorescence 3.5–5.5 × 2.2–2.7 cm, short [5–12 × (1.5)2–2.3 cm, longer in *O. rosmarina*]; bracts 4.5–5.5 × 2.5–3 mm (6–8 × 3–4.5 mm in *O. rosmarina*); bracts with dense glandular hairs up to 0.4 mm [with very short (0.1–0.2 mm), glandular hairs in *O. rosmarina*]; bracteoles 3.5–6 × 0.3–0.8 mm, linear–lanceolate (4–7 × 1–2 mm, lanceolate in *O. rosmarina*);

calyx with triangular long acuminate teeth (with triangular teeth in *O. rosmarina*); corolla 13–16 mm, patent to erecto-patent, uniform and strongly curved (erecto–patent, occasionally erect, straight to uniform and gently curved in *O. rosmarina*); corolla with shortly hairy glandular margin, hairs up to 0.4 mm long (with a glabrous or glabrescent margin in *O. rosmarina*); staminal filaments glabrous at the base and hairs up to 0.1 mm long, disperse in the upper 2/3, occasionally subglabrous (shortly hairy in the lower half and glabrous in the upper 2/3 or with subsessile glandular hairs below the anthers in *O. rosmarina*); anthers 0.9–1.1 mm (1.2–1.4 mm in *O. rosmarina*); anthers hairy at the base with hairs 0.3-0.4 mm long (glabrous in *O. rosmarina*); ovary with short glandular hairs up to 0.2 mm in size in the upper half, occasionally subglabrous (glabrous in *O. rosmarina*); and style with hairs up to 0.1 mm, disperse, occasionally subglabrous (glabrous in *O. rosmarina*).

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