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NOTE

Lectotypification and Recollection of *Rochelia laxa* I. M. Johnst. (Boraginaceae) from Type Locality after the Lapse of Forty Years

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ABSTRACT: A note on lectotypification of *Rochelia laxa* I.M. Johnst. is presented in this paper. This is necessary in order to fix the current usage of the name since the holotype sheet is found to be missing. Consequently, this taxon is also recorded from the type locality after a gap of forty years since its type collection.

KEY WORDS: India, lectotypification, recollection, *Rochelia laxa*, type locality.

INTRODUCTION

During the course of identification of the unidentified specimens collected from Lahaul-Spiti, Himachal Pradesh, housed in BSD herbarium, Botanical Survey of India, Dehradun, one of the authors (KA) came across two unidentified specimens collected by *U.C. Bhattacharyya* 52017 from Rahrik, Lahaul in Lahaul-Spiti district at an altitude of 3,600 m. Both the specimens belong to genus *Rochelia* Rchb. which have been critically studied and matched with the allied species of the genus in the herbaria of BSD, DD, CAL and also compared with all the existing species of *Rochelia* in India based on literature (Johnston, 1940; Kazmi, 1971; Nasir, 2009) which finally turned out to *Rochelia laxa* I. M. Johnst.

The genus *Rochelia* belonging to family Boraginaceae is represented by *ca* 20 species (Mabberley, 2008) and distributed worldwide from Central South-west Asia to the Mediterranean basin and Australia (Kazmi, 1971). In India, the genus is known by eight species from Kashmir, Himachal Pradesh and Uttarakhand in North-west Himalaya.

Rochelia laxa was first described by I. M. Johnston in the year 1940 based on the Koelz's collections from Zanskar, Ladakh in Kashmir, India in year 1931. In the protologue Johnston has also recorded this taxon from other parts of Ladakh and Lahaul-Spiti in Himachal Pradesh as well. The image of the type and authentic specimens of *R. laxa* have been procured from Gray herbarium (GH), USA and K. The type sheet from GH bears seven specimens arranged from left to right in clockwise manner. A single specimen pasted on the left side of the sheet labelled as *Rochelia stellulata* Rchb. (*Koelz* 2946b) from Bok, Zanskar, Kashmir growing in camp ground at an altitude of 11,500 ft. was labelled as isotype of *R. laxa* as determined by S. M. A. Kazmi in 1969. In the protologue the specimens of *Koelz* 2946a was designated as 'type' by the author and mentioned the preserved specimen are housed at Gray herbarium (GH). Kazmi, 1971 in his revision of the Boraginaceae of West Pakistan and Kashmir mentioned the collection of Koelz's 2946a as holotype and *Koelz* 2946b as an isotype both in GH. Consequently, after thorough search, holotype sheet (*Koelz* 2946a) could not be traced and is found to be missing at GH as confirmed by the curator (by pers. comm. received from Dr. Brian Franzone, Curatorial Assistant, Harward University Herbarium, GH, USA). This necessitated the lectotypification of the name as per code (cf. Art. 9.2 of McNeill *et al*., 2006) and hence the isotype sheet at GH (*Koelz* 2946b) is choosen here as lectotype (cf. Art. 9.10 of McNeill et al., 2006). The rest of the six specimens were separated on the right side from top to bottom of the sheet, corresponding to another label *Rochelia stellulata* collected from Jispa, Lahaul, Punjab, Dry plain, alt. 10,500 ft., Fls. Baby-blue, eye narrowly white, 15.6. 1931, *Koelz* 2042 were also cited in the protologue by Johnston, which attains the status of paratypes. Kazmi (1971) in his revision of family Boraginaceae of West Pakistan and Kashmir has not mentioned any collection of *R. laxa* from Himachal Pradesh, though he used the term North-west India under distribution.

R. laxa differs from its allied species *Rochelia rectipes* Stocks in having more loosely branched habit, elongated inflorescences, deflexed, spreading, rather than ascending pedicels and smaller nutlets with shorter style.

After thorough scrutiny of literature (Kachroo *et al.* 1977; Naithani, 1990; Kachroo, 1993) and searching of herbarium specimens at DD, RRL, CAL, K it is concluded that this species was never recollected after the type collection from any of the localities in Jammu & Kashmir and Himachal Pradesh, though there has been

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regular field trips for the floristic survey and exploration to the areas of Lahaul-Spiti and Ladakh. Chowdhery and Wadhwa (1984) and Aswal and Mehrotra (1993) have also not included this species in their Flora of Himachal Pradesh and Lahaul-Spiti respectively. This species was recollected after a lapse of 40 years by U. C. Bhattacharyya in the year 1973 from one of the type locality i.e. Rahrik in Lahaul-Spiti, Himachal Pradesh. The record of this species after the type collection and after the lapse of four decades establishes its endangeredness. It is worth to mention that all the type localities as mentioned in protologue are located in the Cold Desert regions of the North-western Himalaya which is one of the micro endemic centres of the hot spot. Not much information about this species is documented in the literature. Hence, detailed description, digital image of the recollected specimen (*U. C. Bhattacharya* 52017) along with the image of designated lectotype specimen from GH is provided to facilitate easy identification and to locate it further from the neighbouring areas. (Figs. 1 & 2).

TAXONOMIC TREATMENTS

Rochelia laxa I. M. Johnst. in J. Arn. Arb. 21: 55. 1940; Kazmi in J. Arn. Arb. 52: 117. 1971; Stewart in Nasir & Ali, Annot. Cat. Vasc. Pl. W. Pak & Kashmir 602. 1972.

Holotypus (missing): India: Jammu and Kashmir state, Bok, Zanskar, 3450 m, camp-ground, Sept. 13, 1931, *Koelz* 2946a (GH).

Lectotypus (designated here): India: Jammu and Kashmir state, Bok, Zanskar, 3,450 m, camp-ground, Sept. 13, 1931, *Koelz* 2946b (GH, image! [GH00096937]).

Erect, annual herb, 8-25 cm high. Stems slender, hispid, much branched from base, lower branches short up to 8 cm long, upper branches long, divaricate, up to 15 cm long. Leaves sessile, lower leaves ovate-oblong or obovate, 0.5-1.8 × 0.2-0.5 cm, attenuate at base, obtuse to subrounded at apex, entire at margins, hairy tuberculate on both the surfaces covered with thin spinulous hairs, mid vein depressed above, embossed below; middle and upper leaves narrowed, linear-oblong or ovate-lanceolate, 0.2-1 × 0.1-0.2 cm, much hairy tuberculate on both surfaces, acute at apex, entire at margins. Inflorescence axillary or terminal, lax racemes, unilateral, bracteate; bracts ovate-lanceolate, small. Flowers tubular, blue *ca* 3 mm across. Calyx up to 4 mm long, linear-lanceolate, usually erect, shorter than nutlets, rarely exceeding, covered with white unicinate hairs. Style usually exceeding nutlets, whitish-brown. Fruits up to 1 cm long, dull brown, hispid. Fruiting pedicels up to 8 mm long, narrowed towards the base, covered with uncinate hairs. Nutlets 2 white, conspicuous tuberculate, ribbed 2-3 mm long. Seeds oblong-ovate, one in each nutlet, whitish-brown.

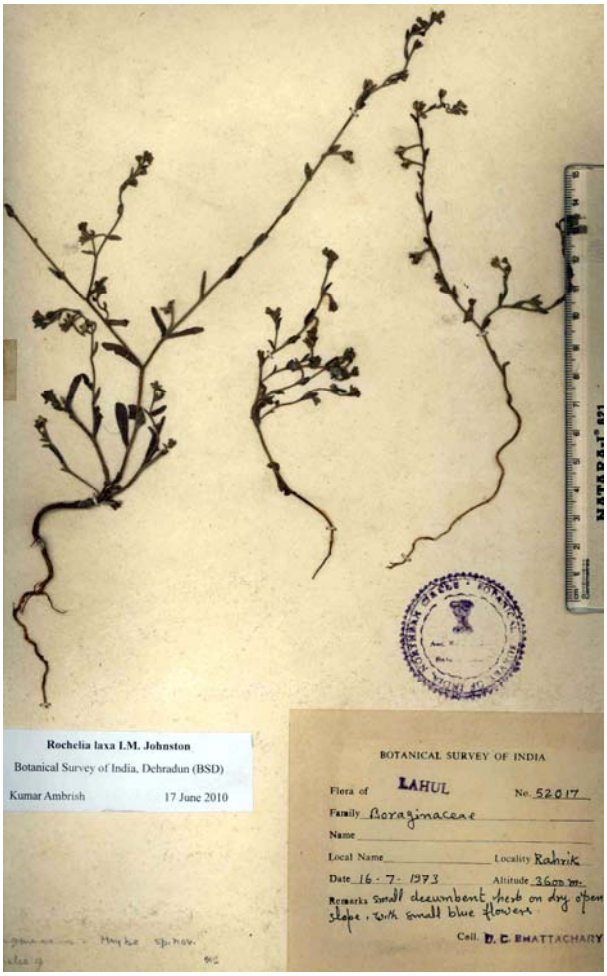


Fig. 1. The scanned recollected herbarium sheet image of *Rochelia laxa* I.M. Johnst (deposited at BSD).

Flowering and Fruiting: June – August.

Distribution: India: Jammu and Kashmir (Ladakh), Himachal Pradesh, Lahaul-Spiti.

Habitat: Grows on dry open slopes at an altitude of 3,600 m.

Specimens examined: India : Himachal Pradesh, Lahaul-Spiti, Rahrik, 3,600 m, 16.7.1973, *U. C. Bhattacharya* 52017 (BSD).

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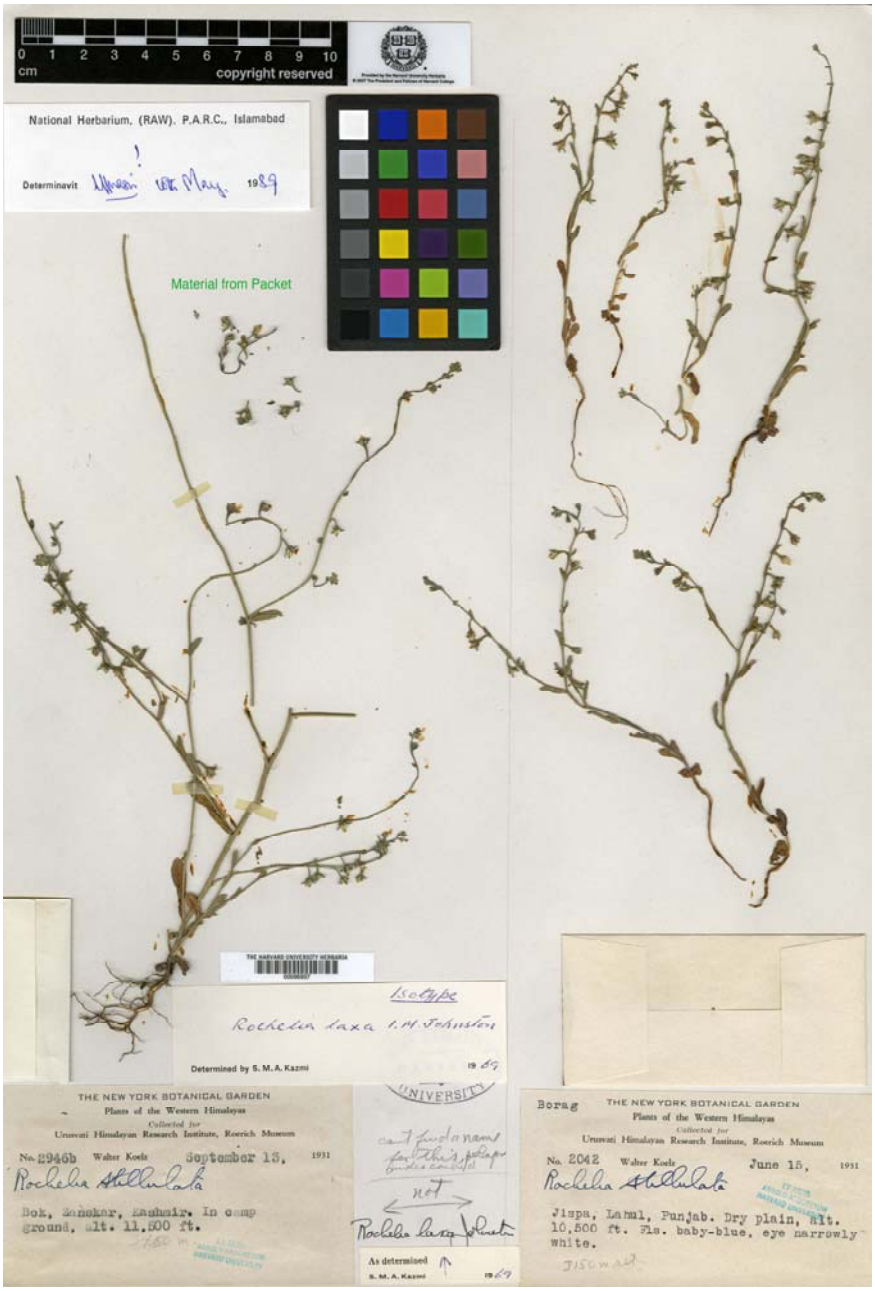


Fig. 2. The scanned lectotype image of *Rochelia laxa* I. M. Johnst (deposited at GH).

permission to publish the image of the type specimen. We also thank Sri Gautam Kr. Upadhyay, Ex- SRF, CNH, BSI for helping us in various ways during finalization of the manuscript.

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Rochelia laxa I. M. Johnst.（紫草科）之選定模式的指定及消失四十年後模式產地的再採集

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摘要：本篇論文指定 *Rochelia laxa* I.M. Johnst 的選定模式。在該種的模式標本消失之後這是必要的，並且用以解決當前植物名稱使用的問題。此外，本篇論文也同時報導這個物種於消失四十年後又在其模式的採集地再次被紀錄到。

關鍵詞：印度、選定模式的指定、再採集、*Rochelia laxa*、模式產地。

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