



Oxygraphis kumaonensis sp. nov. (Ranunculaceae) from Western Himalaya, India

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Abstract

Oxygraphis kumaonensis I. D. Rai and G. S. Rawat, a new species from the alpine region of Western Himalaya is described and illustrated. Diagnostic features for identification, brief notes on the ecology and description of Type locality are given. The species is named after place of its occurrence, i.e., Kumaon, a well-known floristic sub-region in the state of Uttarakhand, India. Information on the distribution and conservation status of the new species is provided.

Key words: Floral diversity, Kumaon Himalaya, new species, taxonomy, Uttarakhand, Western Himalaya

Introduction

Ranunculaceae Jussieu (1789: 231) is regarded as one of the most primitive families of flowering plants and placed in Clade-Eudicots according to APG-III classification (Haston *et al.* 2009). The family is represented by about 60 genera and 2500 species worldwide, mainly distributed in the temperate regions, particularly in East Asia (Wang *et al.* 2001). Genus *Oxygraphis* Bunge (1836: 46) in this family is of much interest because of its peculiar habit, i.e., dwarf, scapose and glabrous perennial having single flowered scape. Petals are 10–15, with a nectariferous pit on the claw. It differs from the genus *Ranunculus* Linnaeus (1753: 548) in having persistent sepals (Hooker 1875). *Oxygraphis* is represented by five species in the world, viz., *O. delavayi* Franchet (1886: 374), *O. glacialis* (Fischer ex de Candolle 1817: 305) Bunge (1836: 47), *O. polypetala* (Rafinesque) Hooker & Thomson (1855: 27), *O. shaftoanus* Aitchison & Hemsley (1882: 149) and *O. tenuifolia* Evans (1921: 172). All the species are confined to the northern hemisphere, primarily distributed in the Hindu Kush-Himalayan (HKH) region covering Bhutan, India, Nepal, Pakistan, Afghanistan and China while one species (*O. glacialis*) is reported from Mongolia, Kazakhstan, Russia and North America as well. *Oxygraphis tenuifolia* is endemic to China. The genus is represented by three species in the Indian Himalaya viz., *Oxygraphis polypetala*, *O. glacialis* and *O. delavayi*. Of these, first two are distributed in the Western Himalaya (Hooker 1875), and the latter is known to occur in Arunachal Pradesh.

During a recent botanical exploration in the alpine zone of Kumaon region (Western Himalaya) we recorded an interesting species of *Oxygraphis* growing on the steep rocky slopes among the mosses. Close scrutiny of literature and detailed study of allied taxa reveals that this taxon does not match with any of the species described so far and turns out to be new to science. Hence, it is being described for the first time under the name *Oxygraphis kumaonensis* sp. nov. with photo plates and illustrations to aid identification.

Material and Method

Specimens were collected from the Najurikot area of the Pithoragarh district. The Type locality lies just outside of the boundary of the Askot Wildlife Sanctuary in the state of Uttarakhand, India. Characteristic features of the species were noted down and measurements of the different plant parts were taken with the help of digital callipers and ruler in the field. Habitat characteristics and various ecological parameters were noted. Specimens of *Oxygraphis* at regional herbaria, viz., Wildlife Institute of India (WII), Botanical Survey of India, Dehradun (BSD) and Forest research Institute, Dehradun (DD) were examined and collections at Kew were also studied. The specimens are deposited in WII and BSD. Morphology and distribution of all species were compared in the relevant literature, viz., Hooker (1875), Hara and Williams (1979), Naithani (1984), Wang *et al.* (2001) and Uniyal *et al.* (2007).