

Re-evaluation of different species of *Juncus* (Juncaceae) occurring in Sri Lanka

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A study was carried out in order to investigate the different species of *Juncus* (Juncaceae) that occur in Sri Lanka. The recent treatment on the Sri Lankan Juncaceae by Harriman in 1991 in Revised Hand Book to the Flora of Ceylon identifies 3 species of *Juncus*, *J. effusus* L., *J. bufonius* L. and *J. prismatocarpus*. R.Br. All these species are recorded from the Montane zone of the country. A recent study done on *Juncus* in the Malaysian region cites voucher specimens cited under *J. prismatocarpus* in the Revised Handbook to the Flora under two other species, *J. wallichianus* Laharpe and *J. leschenaultii*. J. Gay ex Laharpe. This raises the question of the number of *Juncus* species that occur in Sri Lanka.

A literature survey was carried out to get familiarize with the characters and the distributions of these species. Live specimens were collected from all the possible suspected locations and morphological studies were carried out. Leaves and flowers were dissected and observed. Depending on the variations, 48 characters were scored by pooling all the specimens. Then the characters were coded into a data matrix. A cluster analysis was done using SAS program (average method) to separate the species. For all the specimens examined, voucher specimens were prepared and deposited at the National Herbarium, Peradeniya and the Department of Botany, University of Peradeniya.

Cluster analysis revealed 4 species of *Juncus*, two of them supported the characters of *J. effusus* and *J. bufonius*. Specimens collected as *J. prismatocarpus* separated very early into 2 clusters revealing 2 different species. Their characters supported the characters of *J. wallichianus* with unitubulose leaves and maroon stigma and *J. leschenaultii* with pluritubulose leaves and greenish yellow stigma. According to literature *J. prismatocarpus* varied from both species being more robust and having a capsule twice as long as sepals. Also, literature supports that *J. prismatocarpus* occurs only in Australia and New Zealand. Thus, the study identifies 4 species of *Juncus* in Sri Lanka, *J. effusus* L., *J. bufonius* L., *J. wallichianus* Laharpe and *J. leschenaultii* J. Gay ex Laharpe. Further, *J. prismatocarpus* is a non-occurring species in the country.

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