International Journal of Ecology and Environmental Sciences 49: 117, 2023
ISSN: 2320-5199 (Online); https://doi.org/10.55863/ijees.2023.2778

Book Review

Choudhury, B.I. and Khan, M.L. 2020. Himalayan Soap Pod Tree (*Gymnocladus assamicus*): An Ecologically and Economically Important Tree on the Brink of Extinction. CAB International, London, UK. Xiii+173 pages. eISBN : 978-1-78639-199-5. British Pound 97.40.

The genus *Gymnocladus* belongs to family Leguminosae has two of the known native ranges, one in south eastern Canada to central and eastern USA and the other in eastern Himalaya to south China and Indo-china biodiversity hotspot. While the genus includes 11 scientific plant names of species rank only five of them are accepted, 4 are synonyms and 2 are yet to be resolved. Most of the species are small to large, mostly deciduous trees with bipinnate to simple leaves. The species variation is high in Indo-malayan region with most number of species while only *G. dioica* (L.) K. Koch (commonly known as coffeetree) is native to American continent. The genus was first described in 1785 in Species Plantarum as *Guilandina dioica* was also known as *Gynocladus Canadensis* Lam. The Indo-malayan region has *G. angustifolius* (Gagnep.) J.E.Vidal (Vietnam), *G. assamicus* P.C. Kanjilal (north eastern Himalayan ranges), *G. burmanicus* C.E. Parkinson (Myanmar, Vietnam and north east India), *G. chinensis* Baill (south central China region). Both *G. guangxiensis* P.C. Huang & Q.W. Yao and *G. arabicus* Lam. are yet to be resolved and thus not accepted.

Gymnocladus assamicus known as 'Menangmanba-shi' by the Monpa community of Tawang district in Arunachal Pradesh, India is a highly valued resource for the north-eastern region of India due to its saponin content which is used for cleansing purposes. This sop pod tree is intricately associated with local traditions and religious activities has highly dispersed individuals with low natural regeneration and thus considered critically endangered as per IUCN plant status reports. This species was selected by the authors of this volume for a special recovery plan which resulted into this extensive work. The authors identified 28 mature trees of which only 9 are actively reproducing in the region. The work by the authors has recorded the seed coat imposed dormancy, anthropogenic overexploitation are the major limiting factors for its natural regeneration. Evolutionarily the andodioecious mating systems were considered an intermediate step towards dioecy. Why such mating system evolved in *G. assamicus* is not clear, but assumed that it gives assurance to mating success for this species.

The volume is organised into six chapters covering, systematics, evolutionary relationships, reproductive ecology, seed biology, regeneration and conservation and management possibilities. The general introduction summarises what is being presented in the volume and itself can be considered as abridged version of the book. The systematic position and distribution description of the species in chapter 1 clearly elaborates the phonological behaviour. Relationship with sister genus *Gleditsia* which also occurring in both native regions of *Gymnocladus* with 14 species was elaborated in chapter 2. The reproductive ecology of *G. assamicus* was presented in detail in chapter 3 which was based on the experimental studies conducted by the authors themselves. Seed biology and modes of regeneration were discussed in chapter 4 and seedling regeneration and dynamics were dealt in detail in chapter 5. One significant point the authors highlight is that the regeneration of this species should ensure that it is raised along river or stream banks where soil moisture is sufficient during drier seasons and soil is rich with organic matter with lower irradiance levels. The concluding chapter is a generalised conservation status of the region with special emphasis on the management plan for *G. assamicus* with both short-term and long-term goals.

I am unaware any other species of this genus was investigated with such focussed attention and thus it stands alone as an important contribution to the biodiversity conservation and management of this critically endangered species. I strongly recommend it for both the academic researchers and policy planners, though the volume is slightly costly when compared to the income status of individuals in the region.

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