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Evaluation of conservation status of Sri Lankan *Syzygium* species

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Taxonomic data provides basic information in evaluation of conservation priorities. A recently conducted detailed taxonomic study on the genus *Syzygium* in Sri Lanka revealed certain conflicts with previous treatments. This study was focused on deviation of red list categories due to these taxonomic alterations. Conservation status of all the indigenous *Syzygium* species of Sri Lanka was evaluated using the IUCN red listing Criteria B (geographic range in the form of extent of occurrence and/or area of occupancy) with the consideration of regional evaluation aspects. Newly collected specimens during this study were authenticated and utilized in this evaluation. In addition, specimens collected during last five decades, house at the National Herbarium, Peradeniya (PDA) and at some foreign herbaria were included. Co-ordinates of the specimens collected during this study were taken from a GPS. Location data of the herbarium specimens were geo-referenced based on Digital Gazetteer, fine-tuned using 'Google earth Pro' and the information provided digitally in the www.protectedplanet.net. Specific microhabitat conditions of each species were considered in assigning co-ordinates for 'broader' localities. From these data, 'area of occurrence (AOO)' and 'extent of occurrence (EOO)' were calculated using QGIS (ver. 3.20.3). The secondary conditions need to be evaluated under Criteria B were assigned based on the protected area network map and on the field experience on the treats faced by the species. A total number of 1323 data points for 33 *Syzygium* species were utilized. The AOO and EOO values and assigned conservation status for each species were compared with the findings of the previous national evaluation completed in 2020. Considerable number of species found to suggested drastic deviations for the calculated values from the previous study, mainly due to misidentification of the specimens and due to assigning erroneous co-ordinates for the historical collections. The new evaluation placed eight species in higher threaten categories and four species in lower threaten categories than the previous. Altogether 23 species (70%) were placed under threatened categories, where *S. cyclophyllum*, *S. montis-adam*, *S. potamicum*, *S. sclerophyllum* and *S. hemisphericum* were identified as 'critically endangered'(CR) species. All these species are restricted to montaneareas where the latter species is not reported from natural habitats during last 4 decades and currently known only from the trees at Royal Botanic Garden, Peradeniya. This study highlights the importance of the accuracy of the basic science: taxonomy in applied sciences.

Keywords: red list, critically endangered, *Syzygium*, Sri Lanka