

DISTRIBUTION OF *CABOMBA FURCATA*, AN AQUATIC ALIEN INVASIVE IN THE WET ZONE OF SRI LANKA

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Cabomba furcata (Cabombaceae), an aquatic plant native to tropical and subtropical Central and South America and the Caribbean, is a popular aquarium plant worldwide. Currently, the plant is recorded from outside its natural range in countries such as India, Peninsular Malaysia and Sri Lanka, indicating its potential to expand the range. In 2021, it was first recorded from natural habitats in the Neboda area in the Kalutara District in the Western Province of Sri Lanka. Further, its ability to extend its territory in the wet zone of the country has also been recognized. Hence, the objectives of the present study were to identify potential areas of occurrence using the species distribution model and to validate it. Field visits were conducted in the wet zone of the country in order to explore new locations in addition to its first recorded location, and GPS locations of the identified populations were logged. The species distribution modelling was carried out with presence-only data and environmental variables covariates (Bio2, Bio3, Bio4, Bio6, Bio7, Bio13, Bio15, Bio17, Bio18, Bio19) to build species' niche and potential geographical distribution model, using the principle of maximum entropy. The model identified parts of the Colombo and Galle districts, in addition to areas in Kaluthara, as the potential areas of occurrence of *C. furcata*. As predicted in the model, field excursions revealed eight new locations, further validating the model used in the study. The results suggest that habitat modelling can provide accurate information to predict areas where the invader could extend its territory. This study suggests the importance of using habitat modelling in predicting invasion. Further, this information would be an eye-opener for the authorities to initiate controlling and eradicating measures immediately for this potential invasive species. If not, this plant will extend its territory and invade other watercourses of the wet zone facilitated by frequent floods. Therefore, monitoring the most probable areas of occurrence predicted by the model is recommended.

Keywords: Alien invasive plant, Aquarium plants, *Cabomba furcata*, Species distribution modelling