Conservation news

Ship sturgeon rediscovered in the Rioni River in Georgia

Preliminary findings indicate that the ship sturgeon *Acipenser nudiventris,* long thought to have been extirpated from the Black Sea basin, in fact survives, and is still spawning in Georgia. The ship sturgeon was historically found in the Black, Azov, Caspian and Aral Sea basins. Overfishing, destruction of spawning grounds, and habitat degradation combined to cause a catastrophic decline of all sturgeon populations worldwide (Ludwig, 2006, *European Journal of Wildlife Research*, 52, 3–8). The ship sturgeon was no exception; its population has decreased so dramatically that it has been considered extinct in the Black Sea basin, and Azov and Aral Seas, and dramatically reduced in the Caspian Sea (Mugue et al., 2016, *Mitochondrial DNA Part B*, 1, 195–197). It is categorized as Critically Endangered on the IUCN Red List.

After decades without confirmed evidence of ship sturgeon in the Rioni River, Fauna & Flora International collected photographic evidence and genetic samples from eight ship sturgeons in the Rioni River in 2020. Taking into account the biology of the fish, and the apparent maturity of these eight individuals (20–75 cm in length) the species appears to survive in the Rioni River. Initially, we suspected these individuals were releases from an ongoing captive breeding programme in the Kuban River in Krasnodar. In this breeding programme, ship sturgeons bred from Caspian Sea stocks are hatched and released into the Kuban River (N. Mugue, pers. comm., 2020). We therefore presumed the individuals from the Rioni River were most likely captive-bred individuals that had dispersed to the Rioni River after their release into the Kuban River c. 950 km distant. However, mitochondrial DNA sequence data indicates that the Rioni specimens are genetically different from the Kuban River breeding stocks. This, in turn, suggests that the Rioni River individuals are in fact from a surviving breeding population that spawns in the Rioni River, and that the species, once thought to be extinct in the Black Sea basin, has persisted. It is therefore likely that the Rioni River still hosts native stock of the ship sturgeon.

Tamar Beridze (orcid.org/0000-0003-4859-1519), Tamari Edisherashvili (orcid.org/0000-0003-4694-910X) and Cort Anderson Ilia State University, School of Natural Sciences and Medicine, Ilia State University, Tbilisi, Georgia
E-mail tamar.beridze.3@iliauni.edu.ge

Fleur Scheele Fauna & Flora International, Caucasus Programme, Tbilisi, Georgia

Status of *Cassine koordersii*, a tree endemic to East Java and last collected in 1898

Cassine koordersii (Celastraceae) is an endemic tree known only from the Puger area in Jember Regency, East Java, Indonesia. In 1998, the tree was categorized as Critically Endangered on the IUCN Red List because of its small geographical range (WCMC, 1998, dx.doi.org/10.2305/IUCN.UK.1998.RLTS.T37405A10050197.en). The tree is known from herbarium collections made in 1898 by Koorders from Watangan Mountains in Puger (Kostermans, 1986, *Gardens' Bulletin Singapore*, 39, 188–189). Since 1898 there have been no additional records of this tree. It is currently known only from two ex situ living collections in Bogor Botanic Gardens, which were propagated from seeds of a former mature tree that died in 2003.

To gather data for an updated conservation assessment of *C. koordersii* we conducted a survey in August–September 2020 in the Watangan Mountains. A total of seven localities were surveyed: from the western extent of the mountains at Puger Watangan Nature Reserve, through the central areas of Igir Pletes, Watu Susu, Maelang, Klatakan and Papuma, to the eastern mountains at Tanggul Asri, over an elevation range of 0–391 m. We were, however, unable to locate *C. koordersii*. We observed many charcoal production sites in the areas surveyed, and we believe this, together with timber extraction, is the most likely cause of our failure to relocate *C. koordersii*. In addition, the forest lies on periodically dry soil of weathered coral limestone, susceptible to frequent wildfires that could reduce the survival of *C. koordersii*.

Based on our findings, we have reassessed *C. koordersii* as Critically Endangered based on criteria A2c, B1ab(iii)+B2ab(iii) (Possibly Extinct in the Wild) using IUCN Categories and Criteria version 3.1. The species remains assessed under criterion B, as at present, with an area of occupancy and extent of occurrence of 8 km² and continuing decline in the area and quality of the habitat, but for the updated assessment criterion A is also used. Given the threats to the species, which have caused a decline in area of occupancy, extent of occurrence and/or habitat quality, the population size is likely to have decreased by at least 80% in the last three generations. This is inclusive of the original year in which the species was collected. The forest of Watangan Mountains continues to be affected by timber extraction and wildfires, and our updated assessment is an urgent call for the conservation of this endemic species.

Ex situ conservation is in progress for *C. koordersii*. There have been several attempts to propagate the species from the two living collections, including grafting and shoot cutting. Grafting has been successful, with three of four individuals surviving after 6 months. For shoot