

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.

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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](https://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

cuttings, only five of 28 made produced roots and shoots. While working to improve these propagation methods, we will also trial tissue culture propagation methods. We hope these methods will produce viable seedlings that can be used to support additional ex situ conservation and future reintroduction programmes for the species.

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Threats to an undescribed songbird species in Indonesia

New vertebrate species are still being discovered in the Indonesian Archipelago (Rheindt et al., 2020, *Science*, 367, 167–170), many of which may already be threatened with extinction. One such species is the Wangi-Wangi white-eye, an undescribed micro-endemic species of *Zosterops* inhabiting just one small island: the 155 km² Wangi-Wangi in the Wakatobi archipelago, South-east Sulawesi (O'Connell et al., 2020, *Raffles Bulletin of Zoology*, 68, 574–587). The Wangi-Wangi white-eye is a novel taxon, unlike many recently described bird species that have resulted from so-called taxonomic splits. Genetic and morphological analyses (O'Connell et al., 2019, *Zoological Journal of the Linnean Society*, 186, 701–724) have shown the Wangi-Wangi white-eye to be distinct, but it is not formally recognized as a species as no type specimen (a preserved adult) exists in a museum.

Wangi-Wangi Island has been heavily deforested and therefore the Wangi-Wangi white-eye is likely to have already suffered from habitat loss. The Indonesian NGO Prigen Conservation Breeding Ark has found this species is being increasingly traded in bird markets (Menner, 2020, *Prigen Conservation Breeding Ark Spring News*, silentforest.eu/spring-news-from-the-prigen-conservation-breeding-ark-pcba-march-2020). White-eye species are commonly traded for their pleasant song, and trade in bird species that have suffered from habitat loss is threatening songbird species in Indonesia (Marshall et al., 2020, *Biological Conservation*, 241, 108237). Trade of this undescribed species is therefore of concern. Although Menner (op. cit.) notes the Wangi-Wangi white-eye is being bred in captivity, it is difficult to ascertain how many of the traded birds have been captive bred and how many have been recently trapped in the wild.

Unregulated trapping for the cage bird trade may pose a serious threat, particularly as the Wangi-Wangi white-eye's status has yet to be formalized. Until a species is formally described, it receives no conservation protection (O'Connell et al., 2020, *Science*, 369, 1172). The process of obtaining permits for the collection of a type specimen is underway, to facilitate formal recognition of the species and an assessment of its conservation status. Only then can it be protected by law. However, this can be a lengthy process.

As its range is < 500 km², the Wangi-Wangi white-eye is likely to be categorized as Endangered on the IUCN Red List. The example of the Wangi-Wangi white-eye highlights the problems faced by rare new species. Modern trappers are quick to exploit profitable populations (Yang & Chan, 2015, *Zootaxa*, 3980, 67–80; Neslen, 2016, *The Guardian*, theguardian.com/environment/2016/jan/01/poachers-using-science-papers-to-target-newly-discovered-species). Conservationists need to be alert to this issue and consider how to make protection more effective for threatened populations.

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Saving the Tapanuli orangutan requires zero losses

The discovery of a new great ape species is a rare event. Prior to the discovery of the Tapanuli orangutan *Pongo tapanuliensis* in Sumatra in 2017, the last great ape described was the bonobo *Pan paniscus*, in 1929. Ironically, immediately after its description the Tapanuli orangutan was categorized as Critically Endangered on the IUCN Red List. A recent study suggested that the range of the Tapanuli orangutan has declined by more than 95% in the past 130 years (Meijaard et al., 2020, *bioRxiv*, 2020.08.11.246058). Saving the rarest great ape in the world requires avoiding all further losses.

Approximately 800 Tapanuli orangutans remain, in three forest blocks. These blocks remain ecologically connected but the development of a hydroelectric project threatens to separate the populations. A goldmine and small-scale farming