



Freshwater stingrays

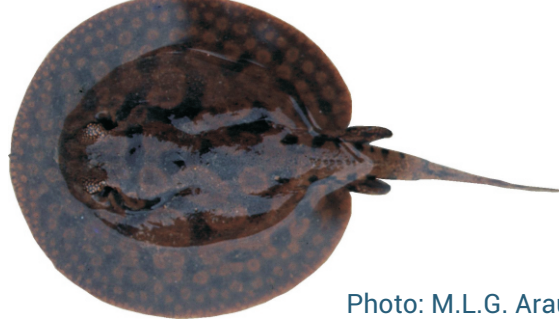


Photo: M.L.G. Araújo

Wallace's freshwater or curucu stingray (*Potamotrygon wallacei*)

Meets CITES criteria

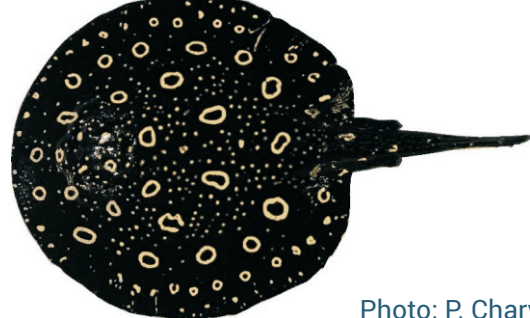


Photo: P. Charvet

Black Xingu freshwater stingray (*Potamotrygon leopoldi*)

Does not meet CITES criteria

Freshwater stingrays *Potamotrygon leopoldi* and *P. wallacei* are endemic low productivity species of the Amazon Basin Region in Brazil.

The Expert Panel recognized that *P. leopoldi* and *P. wallacei* are subject to a number of anthropogenic pressures, predominantly habitat changes and degradation, and examined available evidence of declines in their main area of distribution. Export of these species, although controlled, and their global presence in aquaculture and ornamental fish facilities were also considered.

In review of the scientific data and technical information on *P. leopoldi*, the majority of the Expert Panel concluded that the available data on *P. leopoldi* did not provide adequate evidence that the species meets CITES Appendix II listing criteria. One unpublished set of three surveys in catch rates for the ornamental trade over a 16-year period was a concern, but the majority of the Panel determined available scientific and technical information on the status of the species did not meet the marked decline criteria of CITES. A minority view argued that declines from this survey, coupled with continued habitat degradation, could be considered as sufficient evidence for *P. leopoldi* to meet the CITES Appendix II listing criteria.

For *P. wallacei*, a population dynamics model suggested a reduction in relative population size now, and over the next 10 years the model showed a concerning change in average age and therefore fecundity of the population. Noting this negative change in demographic structure of the population together with habitat loss, the Expert Panel determined *P. wallacei* could be considered to meet the CITES Appendix II criteria.

The Expert Panel noted that captive bred specimens of these species are found globally to supply demand from the ornamental fish market, decreasing pressure on the fishery for wild caught specimens from Brazil. Captive bred specimens now dominate the global trade in these species. Aquaculture suppliers assure the Expert Panel they can satisfy current or increased global demand, although demand for wild caught specimens has not ceased and demand for small numbers of new broodstock from the wild will likely be ongoing.

Cross-breeding in the wild and in commercial breeding facilities can yield fertile hybrids. This and look-alike species indicated in the proposal must be taken into account in reporting trade and captive breeding.

The Expert Panel noted that Brazil has previously listed both species in Appendix III of the CITES Convention, and both species are included in the National Export Quota System, since 2003, which established number and size limits for these and other species. Trade in both species is suspended from Brazil.

Management

P. wallacei was only formally described in 2016, with its previous characterization in the Brazilian national export regulations referred to under a range of other names.

Brazil has an ornamental export quota system in place for six species of potamotrygons with quantities and maximum catch sizes established according to species. Trade has been regulated since 1998, when a single State (State of Amazonas) export quota was established. Starting in 2003, a bi-State regulation was put in place establishing export numbers for each species and then numbers per species plus maximum size.

All the potamotrygonins in this Proposal have been listed under Appendix III since January 2017.

Trade

The price of freshwater stingrays varies according to colour, colour novelty, size and sex. *P. leopoldi* has been a more valuable species (mainly due to its dorsal colour pattern) than *P. wallacei* (mainly attractive to the trade due to its small size).

In 2004, legal trade from Brazil exceeded the established quota by around 20 percent (quota = 5 000), and in 2005 the number of *P. leopoldi* traded officially exceeded the quota by around 5 percent (quota = 1 200). It has been reported that controls in place have been difficult to implement and illegal trade in freshwater stingrays continues. Therefore, data captured in the CITES Trade Database are likely an underestimate of ongoing trade.

There are several small to large freshwater stingray aquaculture facilities in many countries, particularly in Asia. Captive breeding operations are obtaining colour patterns desired by the market through breeding programmes and providing stingrays at competitive prices, which has decreased dependence on fish taken from the wild.

Likely effectiveness of an Appendix II listing for conservation of these two species

A CITES uplisting from Appendix III to Appendix II could potentially assist in increasing compliance and understanding of trade. However, the export of wild-caught freshwater stingrays would be unlikely to improve in Brazil, as exports from the country have already been under strict controls for decades; achieving compliance has been difficult.

Under the current Appendix III listing, the provisions for an export permit do not require a non-detriment finding (NDF), although there are other requirements for legal compliance and shipping. Under Appendix II, a Scientific Authority needs to provide a positive NDF, while a Management Authority provides evidence of legality and compliance with shipping requirements. The import of any specimen of a species included in Appendix II will require the prior presentation of either an export permit or a re-export certificate. A monitoring programme (from fishery areas to export centres) according to CITES Resolution Conf. 16.7 (Rev. CoP17) is required. Owing to the interpretations of "captive bred" for stingray species, an Appendix II listing poses a higher regulatory burden for producers and Parties. This could have the impact of increasing illegal trade if legal aquaculture trade diminishes.

Listing potamotrygonins under CITES Appendix III in 2017 did not improve the necessary trade data (Proposal 39, 2022). A CITES Appendix II listing is argued as likely to be more effective, although through experience an Appendix II listing of these stingrays has the potential to delay aquaculture facilities exports, as they would need to comply with necessary process steps required of new CITES provisions for both production and trade. Certifications and export paperwork would need to be in place for trade of aquaculture products; otherwise, legal exports of these freshwater stingrays will be halted or would continue without proper CITES documentation (i.e. illegal trade). Such an event, even a delay for commercial facilities, would mean loss of investment and livelihoods and decline of this sector. This could also have unintended negative consequences for wild stocks if illegal fishing of these populations increased to fill the gap left if aquaculture facilities' production and export capacity are decreased or halted.