Inclusion of Ocellate river stingray *Potamotrygon motoro* in Appendix II

Proponent: Plurinational State of Bolivia

Summary: The Ocellate River Stingray *Potamotrygon motoro* is a freshwater stingray from South America in the family Potamotrygonidae. It has a wide distribution in Argentina, Plurinational State of Bolivia (Bolivia), Brazil, Colombia, Ecuador, French Guiana, Guyana, Paraguay, Peru, Suriname and the Bolivarian Republic of Venezuela (Venezuela).

There are a number of taxonomic uncertainties surrounding Potamotrygonidae; it is possible that *P. motoro* may comprise a cluster of different species[1, 2, 3]. There are also reports of hybridisation between *P. motoro* and *P. falkneri* in the wild[4].

There is limited biological or population information available, but the species is believed to exhibit low fertility (with only the left ovary normally being present and functioning), long gestation periods (six months) and slow growth. Size at maturity has been estimated at various sizes, ranging from 20cm to 39cm for males and 24cm to 44cm for females. Age at maturity has been estimated at between 18 months and four years[2].

Information on population size is sparse. *P. motoro* was the predominant fish species around Marajó Island in the Amazon River in Brazil in 2005 to 2007, making up 50% of all catches; a 2009 study reported that artisanal fishers in Soure, Brazil, indicated that they frequently caught the species[1]. A 2016 study reported it was the most abundant *Potamotrygon* species found in a census of the Tomo River in Colombia, with a reported density of 0.3 individuals per 1000m^2 [5]. It was found at low densities in fisheries captures in the Rio Negro of the Orinoco in Colombia[6]. Only 79 specimens of *P. motoro* (52 males and 27 females) were found during night-time visual surveys in the dry season in 2010 to 2011 in the Estrella Fluvial de Inírida region in Venezuela and Colombia, where *P. motoro* was reportedly historically abundant[7]. Detection rates, however are dependent on a number of factors, including water levels and temperature, and time of the year and day[8]. Encounter rates by fishers in the Amazon in Peru have reportedly declined in more accessible areas[9].

The main impacts negatively affecting *P. motoro* are believed to be commercial and artisanal fisheries for the ornamental fish trade, particularly targeting juveniles. *P. motoro* is also caught for local consumption/use of its meat, oil and spines and it also may be affected by habitat modification.

Catch and trade data for *P. motoro* exist for Peru, Colombia and Brazil, however there are many uncertainties over the quality of the data, due to identification issues and specimens being traded using their common names, and concerns that numbers may be overestimates[3]. There are inadequate catch data available in most of the key exporting countries to determine the proportion of total catch destined for domestic and international markets, although in Iquitos, Peru, a high proportion of all rays caught were exported[9].

From 2000 to 2014 recorded annual exports from Peru averaged 25,000 specimens, with a peak in 2008 of ca. 45,000 specimens, after which annual exports declined again to similar levels as 2000 to 2002 (fewer than 20,000 individuals)[10]. Between 1999 and 2011 Colombia reported the export of an annual average of ca. 6500, increasing steadily from 1999, with a peak of 20,200 in 2008[2], after which quantities declined again to below 10,000 specimens in 2010 to 2011. Brazil exported ca. 6000 per year in 2003 to 2005, after which their exports declined greatly, although data are not available for recent years[3].

Based on USA trade data for 2004 to 2013, imports of *Potamotrygon* species were reported only from Brazil, Colombia and Peru. Most trade is reported at genus level. This has shown an increase from negligible levels in 2004 to 2008 to over 1500 per year in 2012 to 2013[11].

Some export of freshwater rays in general has been reported from Argentina but at a very low level (ca. 75 per year for 2004 to 20013); no export has been reported from Bolivia, Ecuador, Paraguay, Uruguay or Venezuela. There is reported to be transborder movement of *Potamotrygon* species, including *P. motoro* from Venezuela to Colombia via Puerto Carreño and Puerto Inírida[3].

The principal destinations for exports are Europe, the USA and increasingly East Asia[2]. The species is offered for sale on the internet[12, 13, 14, 15, 16] and appears readily available in the aquarium trade, however the provenance of many of these specimens is unknown. This species is reported to breed easily in captivity, and captive-breeding is known to be occurring in Europe, Southeast Asia and the USA. There is reportedly a surplus of captive-bred *P. motoro* individuals in European public aquaria, and therefore any demand for

wild-caught specimens in Europe is believed to come mainly from private collectors[17, 18]. The USA reported the export of over 3500 captive-bred *Potamotrygon* specimens in 2004 to 2013[11].

Brazil, Colombia and Peru have specific regulations in place governing harvesting and trade of ornamental species, including *P. motoro*, and Bolivia reports having draft legislation to control trade in ornamental fish in Bolivia underway. At an international level, this group of species has been the focus of several CITES Decisions aimed at improving the available information on their taxonomy, biology, population sizes/trends, harvesting and trade, with an expert workshop in 2014 identifying possible priority species and future actions, including Appendix II and III listings. The Supporting Statement does not provide details on how it fits within the wider picture and recommended actions. A proposal to list this species and *P. schroederi* in Appendix II was submitted to CoP16 but was not accepted.

Potamotrygon motoro can supposedly be differentiated from other *Potamotrygon* species by their colour patterns/markings, however these taxonomic uncertainties are problematic for monitoring use and trade in this species.

Potamotrygon motoro is classified by IUCN as Data Deficient (2005 – needs updating), although there may be some confusion with taxonomy in that assessment as a much more limited range is reported[8].

Analysis: *Potamotrygon motoro* has a very wide distribution in South America. Information on population status and trends is sparse and variable. It has been reported as abundant in some places and as occurring at low densities in others. There are some indications of declines in some locations. The species is taken in fisheries for local consumption of its meat and export of live specimens for the ornamental fish trade. Three out of eleven range States (Brazil, Colombia and Peru) are known to export the species. Reported export has been of the order of a few tens of thousands of specimens annually. These exporting countries comprise a reasonably large proportion of the overall range of the species, although it is not known how extensive harvest for export in any of the three known exporting range States is, or in general what proportion of the catch in these States is destined for export rather than for local consumption, although it may be significant in Peru. There is overall insufficient information to determine whether this species meets the criteria for inclusion in Appendix II.

Reviewers: J. González Sanz, H. Ortega Torres, M.L. Goes de Araujo and G. Sant.

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Information not referenced in the Summary section is from the Supporting Statement.

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