



## The Sawfish Formally Known As...

What's in a name? The practice of taxonomy and systematics defines and names biological organisms on the basis of shared characteristics. Each and every species that has been described by scientists is given a two part (or 'binomial') scientific name, which is unique to that species (for humans, this name is *Homo sapiens*). Ongoing research may show that species once thought to be separate are actually the same species (that is, they actually share the same characters) or conversely, species thought to be the same are shown to be distinct. In the latter case, improving research tools such as morphometrics (analysing the size and shape of each species) or molecular (genetic) techniques show that they have separating characters.

In recent times, the sawfishes (which form the family Pristidae within the Class Chondrichthyes – the cartilaginous fishes: sharks, rays and chimaeras) have been treated as seven distinct species. A paper published this year, however, has reviewed and adjusted the taxonomy of the sawfishes.

Vicente Faria and colleagues published 'Species delineation and global population structure of Critically Endangered sawfishes (Pristidae)' in the *Zoological Journal of the Linnean Society*. Using both morphometrics and molecular techniques they have redefined how we view the sawfish family.

They demonstrated that the family consists of three groups:

- (1) The Narrow Sawfish (*Anoxypristis cuspidata*) which is the sole member of its genus and whose taxonomy remains unchanged;
- (2) The 'smalltooth sawfish'-group of *Pristis* species, represented by the Dwarf Sawfish *Pristis clavata*, Smalltooth Sawfish *P. pectinata* and Green Sawfish *P. zijsron*; these also remain unchanged; and,
- (3) The 'largetooth sawfish'-group, which have had a major shape-up (see below).

The 'largetooth sawfish'-group has previously been considered to consist of three distinct species: *Pristis pristis* (a name used in the eastern Pacific and Atlantic), *P. perotteti* (Atlantic) and *P. microdon* (Indo-West Pacific). However, Faria and colleagues found no characters to separate these and propose that they all be treated as the one species: the Largetooth Sawfish *Pristis pristis*. This species consists of four subpopulations: Eastern Atlantic, Western Atlantic, Eastern Pacific and Indo-West Pacific.

Overall, the results of this work mean that there are five distinct sawfish species. Of relevance here in northern Australia is that the previous name of Freshwater Sawfish *Pristis microdon* is no longer valid (in taxonomic terms, the name has been 'sunk'). We now have to adjust to calling this species the Largetooth Sawfish *P. pristis*.





**Manuscript citation:** Faria VV, McDavitt MT, Charvet P, Wiley TR, Simpfendorfer CA and Naylor GJP (2013) Species delineation and global population structure of Critically Endangered sawfishes (Pristidae). *Zoological Journal of the Linnean Society* 167: 136–164.

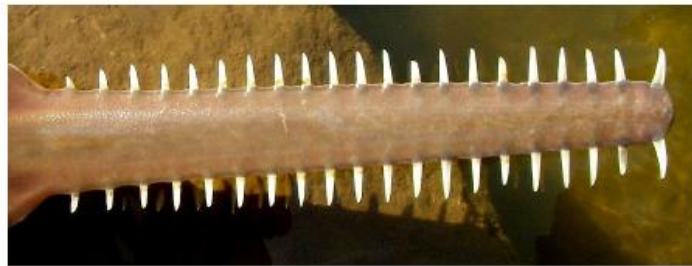
**Manuscript can be found at:**

<http://onlinelibrary.wiley.com/doi/10.1111/j.1096-3642.2012.00872.x/abstract>

## Largetooth Sawfish

### Identification:

**Rostral teeth evenly-spaced and occur along the whole rostrum:**



**Front of the first dorsal fin is well forward of the pelvic fins:**



*The Largetooth Sawfish Pristis pristis (formerly known in our region as the Freshwater Sawfish P. microdon) is identified from other sawfish by its rostrum and the position of its first dorsal fin.*

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