

## ‘Miss Kerala’ added to the IUCN Red List of Threatened Species

‘Miss Kerala’ or Denison’s barb, *Puntius denisonii* (Day 1865), India’s most popular freshwater fish in the international aquarium trade has finally found its way to the *IUCN Red List of Threatened Species*. The most recent version of the *Red List* has categorized *P. denisonii* as a ‘vulnerable’ (VU) species in view of its restricted range of occurrence, decline in habitat quality, number of mature individuals in the wild and declining population trend<sup>1</sup>.

*P. denisonii* is a small to medium sized cyprinid, endemic to the Western Ghats hotspot<sup>2,3</sup>. The species shows highly restricted distribution in the southern regions (Kerala and south Karnataka) of the hotspot and local populations in close to 12 rivers appear to be extremely fragmented. *P. denisonii* is gregarious and shoals are known to occur in rocky pools with thick vegetation along its banks<sup>3</sup>. They are extremely sensitive<sup>4</sup> and have peculiar biological characters including an extremely skewed sex ratio favouring males<sup>3</sup>.

Denison’s barb has been the centre of focus of an open-access and unmanaged fishery targeting various endemic fishes of Western Ghats for the international aquarium pet trade. *P. denisonii* was collected for the first time in 1996 and sent to Germany<sup>3</sup>. The following year at ‘Aquarama 1997’ (world exhibition on ornamental fish), *P. denisonii* was awarded the third prize in the ‘new species category’ competition<sup>3</sup>. This created hobbyist attention and the species soared in popularity. The opening up of the Cochin International Airport in 1999 probably stimulated increased trade, as Kerala was connected to Singapore (the largest world market for ornamental fish) by daily flights<sup>3</sup>. During the last decade, *P. denisonii* was requested in majority of trade enquiries and was being exported in consistent numbers, very regularly from India<sup>5</sup>. Of India’s total live ornamental fish exports to the tune of US\$ 1.54 million during 2007–08, *P. denisonii* accounted for almost 60–65%<sup>6</sup>.

The ‘boom and bust fishery’ for *P. denisonii* was considered to be one of the most important conservation challenges in the Western Ghats<sup>7</sup>. In spite of being listed as ‘endangered’ (EN) in the local Conservation Assessment and Management Plan Report<sup>8</sup>, the species received less attention from policy makers for many years<sup>3,7</sup>. Worse so, the species was even promoted as an ‘export item’ by certain government agencies! This apathy, and failure to regulate the collection and trade for over a decade resulted in massive declines of wild populations<sup>3,9</sup>.

Though late, the Government of Kerala has finally acted – largely due to the increasing global attention on *P. denisonii*<sup>3,7–9</sup>. The Department of Fisheries, Government of Kerala issued an order, restricting catching and exporting *P. denisonii*<sup>6</sup>. Several management measures including issue of quotas, restrictions on fishing gears, catch size and a seasonal closure of fishery were recommended<sup>6</sup>. Although many of these management measures are highly debatable and their long term success uncertain<sup>6,10</sup>, this has nonetheless given a fresh lease of life to the species.

The present listing of *P. denisonii* in the *IUCN Red List* will no doubt bring international attention for its conservation. However, a collective effort from the state government agencies in Kerala and Karnataka as well as the Central Environment Ministry is the need of the day, to develop sound conservation and management plans for this species, and monitor its success on a regular time scale. One of the most important strategies to regulate trade and protect wild populations may be through the listing of *P. denisonii* in the National Wildlife Protection Act.

Together with *P. denisonii*, 52 species of freshwater fishes from India have been placed under various threat categories in the 2008 *IUCN Red List*<sup>11</sup>. Many species that occur in Kerala including *Tor khudree*, *Garra hughi*, *Glyptothorax*

*davisinghi* and *Monopterus fossorius* have been listed as ‘endangered’.

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