Department of Primary Industries

primefact

Stocky Galaxias – *Galaxias tantangara*

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Figure 1: A Stocky Galaxias (Photo: T. Raadik)

Introduction

The Stocky Galaxias (*Galaxias tantangara* Raadik 2014) is a newly described species with few museum specimens. The name 'tantangara' is taken from the small alpine stream from which the first specimens were collected, a tributary of the upper Murrumbidgee River draining from Mount Tantangara.

The species is only known from one locality, the headwaters of Tantangara Creek, upstream of the Tantangara Reservoir, NSW. It is restricted to a small creek above a waterfall, approximately 4 km from the source.

In NSW, the Stocky Galaxias is listed as a **critically endangered species**. There are heavy penalties for harming, possessing, buying or selling them, or for harming their habitat (see 'Legal implications').

Description

The Stocky Galaxias is a small fish named after its distinctly stocky body. It is recorded to grow to 103mm long and 13g in weight, but is more commonly 75-85 mm long.

The body is predominantly dark olive-brown on the back and upper sides above the lateral line, becoming lighter to cream ventrally. Individuals possess many dark brown to almost black spots and flecks that may vary in size, found along the body, head and snout. The fins are translucent dusky grey and the gill covers are translucent. It has a long anal fin, short nostrils and an upper jaw that is slightly longer than the lower jaw.

Figure 2: Stocky Galaxias occur above Tantangara Creek Falls in Kosciuszko National Park (Photo: T. Raadik)

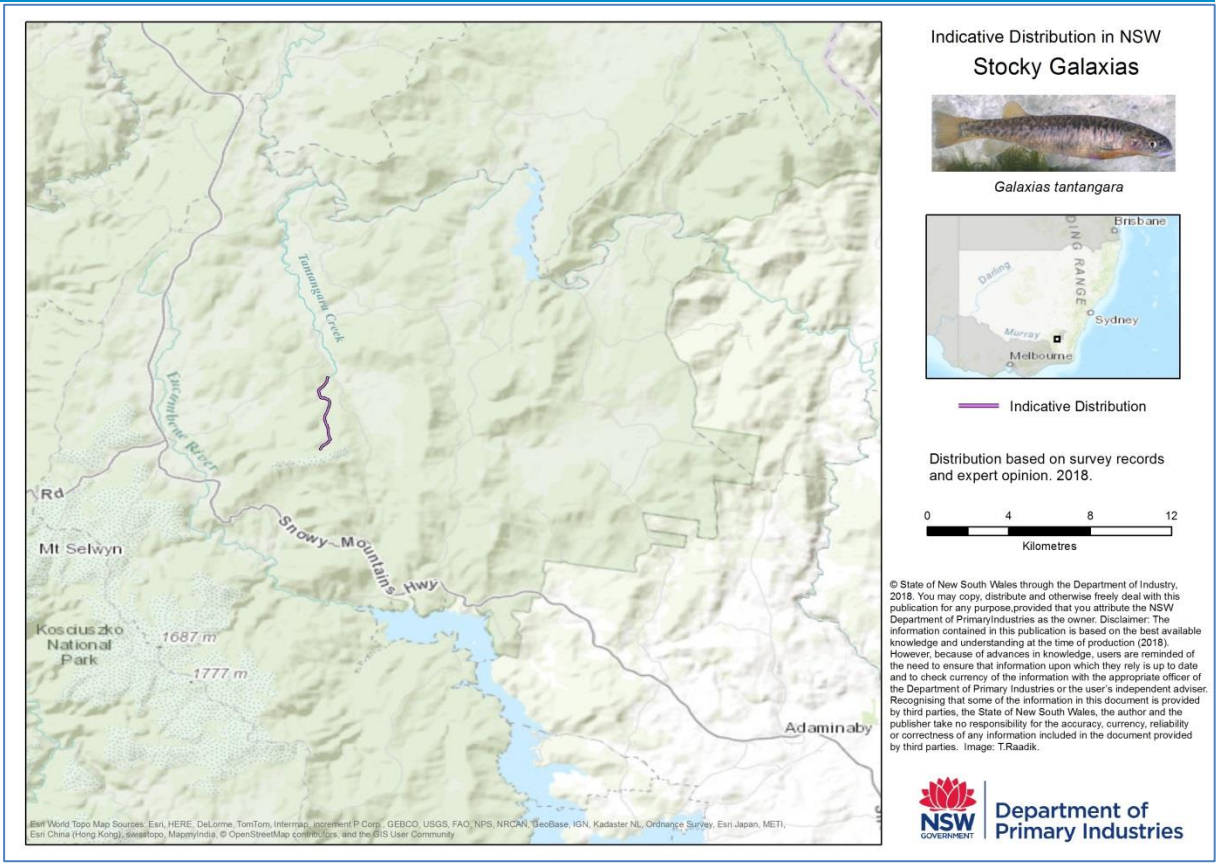

Figure 3: Indicative distribution of Stocky Galaxias

Habitat and ecology

- Very little is known about the ecology and environmental requirements of the Stocky Galaxias.
- It's present distribution and habitat is a small, cold, clear and fast flowing alpine creek, flowing through an open forest of Eucalypts, low shrubs and tussock grass, which is often covered in snow during winter. The creek consists predominantly of riffle and glide with substrate composed of bedrock, boulder and cobble with smaller amounts of pebble and gravel and sections of silt.
- The reproductive ecology of Stocky Galaxias is unknown but can be assumed to be similar to other closely related galaxiid species.
- Sexual maturity is likely to be reached at 1 year and individuals may live up to 6–10 years.
- The spawning period is unknown, but thought to be during winter.
- Other closely related galaxiid species, such as the Mountain Galaxias (*Galaxias olidus*) have low fecundity (less than 400 eggs annually) with eggs generally attached to the underside of rocks in riffles. The eggs are approximately 2.3 mm in diameter, spherical, demersal and adhesive and hatch after 20–30 days. Newly hatched larvae are 9.4mm long on average.
- The movement requirements of the Stocky Galaxias are unknown, but based on movements of the closely related Mountain Galaxias, large migrations are unlikely and the home-range is likely to be limited to less than 100 m.
- Stocky Galaxias are assumed to feed on aquatic insect larvae and terrestrial insects that fall into the water from overhanging vegetation, similar to other members of the Mountain Galaxias group.

Why is the Stocky Galaxias threatened?

- Although the historical distribution is unknown, the current global distribution of the Stocky Galaxias is confined to approximately 4 kms of Tantangara Creek in Kosciuszko National Park (NSW) located above a large waterfall.
- Trout access to this section of the creek is currently prevented by the waterfall that creates a natural barrier. A severe decline in distribution and abundance, leading to the likely extinction of the species, is projected if trout are introduced above the waterfall.

- The limited distribution of the species renders it extremely vulnerable to random events.
- Loss of riparian vegetation, overgrazing and sedimentation as a result of pest animals and bushfires represent local-to-catchment scale threatening processes.
- Climate change is likely to alter temperature and stream flow regimes in the range of the Stocky Galaxias. It is also predicted to result in more extreme weather events, along with an increased risk of fire. Severe storms in burnt catchments are likely to result in high sedimentation of streams, with major impacts on small stream habitats.
- The alien Oriental Weatherloach (*Misgurnus anguillicaudatus*) is spreading throughout the upper Murrumbidgee catchment, predominantly through its illegal use as live bait, and could be introduced to Tantangara Creek. It is a benthic feeder and a potential predator of fish eggs such as those deposited by the Stocky Galaxias.

Conservation and recovery actions

- Prevent the introduction of trout and Oriental Weatherloach to Tantangara Creek.
- Protect and restore riparian habitat in the Tantangara Creek locality that supports Stocky Galaxias.
- Establish additional populations in nearby creeks within its former range.
- Conduct urgent research into the life history and population assessment of the species.
- Ensure the habitat of Stocky Galaxias remains protected from stocking of trout.
- Ensure Stocky Galaxias conservation requirements are included in any relevant fishway programs (e.g. need for predator barriers).
- Educate the public about the identification and threatened status of the Stocky Galaxias.
- Educate the public about the threat of trout and Oriental Weatherloach to the Stocky Galaxias.
- Report any sightings of the species via the NSW DPI online form: www.dpi.nsw.gov.au/fisheries/species-protection/report-it
- A full list of strategies to be adopted for promoting the recovery of the Stocky Galaxias is set out in the NSW DPI Priorities Action Statement: www.dpi.nsw.gov.au/fisheries/species-protection/priorities-action-statement2

Legal implications

It is illegal to catch and keep, buy, sell, possess or harm Stocky Galaxias (or any other threatened species in NSW) without a specific permit, licence or other appropriate approval, and significant penalties apply. For critically endangered species, these penalties can include fines of up to $220,000 and up to two years in prison.

There can also be significant penalties for causing damage to the habitat of a threatened species without approval, through actions such as dredging river or creek beds, removing large woody debris and constructing barriers that block the free passage of fish.

Clearing that constitutes a routine agricultural management activity, and certain routine farming practice activities (other than clearing) are permitted, provided the activities are to the minimum extent reasonably necessary and all other relevant statutory approvals or authorities have been obtained.

The impacts of developments or activities that require consent or approval in accordance with the *Environmental Planning and Assessment Act 1979* must be assessed and considered by consent or determining authorities. Where such actions are likely to result in significant impact on a threatened species or its habitat, a detailed species impact statement must be prepared.

Strategies to be adopted for promoting the recovery of the Stocky Galaxias must be set out in the NSW DPI Priorities Action Statement.

Bibliography and further reading

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For further information

See the NSW DPI website: www.dpi.nsw.gov.au

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