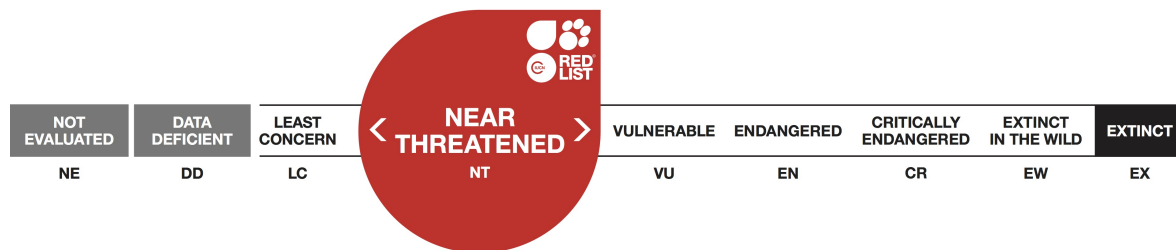


## *Oryzias nigrimas*, Black Buntingi

Assessment by: Mokodongan, D.F.



View on [www.iucnredlist.org](http://www.iucnredlist.org)

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## Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Actinopterygii	Beloniformes	Adrianichthyidae

**Taxon Name:** *Oryzias nigrimas* Kottelat, 1990

**Common Name(s):**

- English: Black Buntingi

**Taxonomic Source(s):**

Kottelat, M. 2013. The fishes of the inland waters of southeast Asia: a catalogue and core bibliography of the fishes known to occur in freshwaters, mangroves and estuaries. *Raffles Bulletin of Zoology* Supplement No. 27: 1-663.

## Assessment Information

**Red List Category & Criteria:** Near Threatened [ver 3.1](#)

**Year Published:** 2019

**Date Assessed:** November 16, 2018

**Justification:**

This species is endemic to Lake Poso in Central Sulawesi, Indonesia, where it is relatively abundant and is thought to have a stable population trend, based on surveys in 2012 and 2017. There are however multiple potential threats within the lake, including invasive species and pollution. Its exact distribution within the entire lake is also unknown, but it has a small extent of occurrence (EOO) between 170-500 km<sup>2</sup>. Based on its restricted EOO and continuing declines in the quality of clear water habitat within the lake, this species is assessed as Near Threatened. More information on its distribution, population trends and threats within Lake Poso is urgently needed.

**Previously Published Red List Assessments**

1996 – Vulnerable (VU)

<http://dx.doi.org/10.2305/IUCN.UK.1996.RLTS.T15576A4838579.en>

1994 – Vulnerable (V)

1990 – Vulnerable (V)

## Geographic Range

**Range Description:**

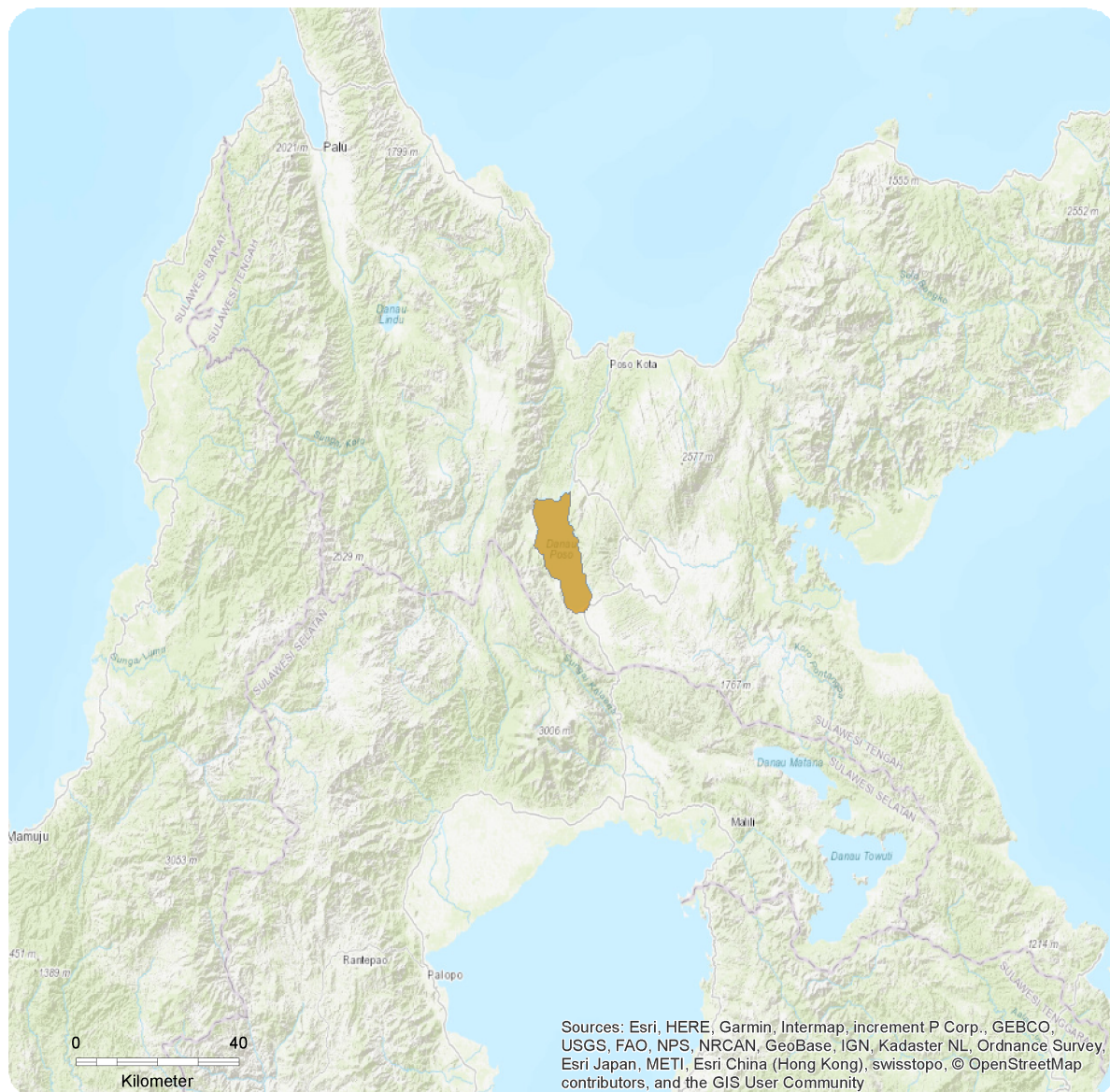
This species is endemic to Lake Poso in Central Sulawesi, Indonesia, and occurs at Tentena, Peura, and Pantai Saluopa (Kottelat 1990, Parenti 2008, D.F. Mokodongan pers. obs. 2018). It has only been observed and collected in the western part of the lake, and so more information is needed to determine its distribution within Lake Poso.

**Country Occurrence:**

**Native:** Indonesia (Sulawesi)

# Distribution Map

*Oryzias nigrimas*



## Range

Extant (resident)

## Compiled by:

IUCN (International Union for Conservation of Nature)



The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.



## Population

This species is known only from Lake Poso, Central Sulawesi, Indonesia (Kottelat 1990, Parenti 2008), but recent surveys of its population in 2012 and 2017 show it is probably stable (D.F. Mokodongan pers. obs. 2012, 2017), although it was only observed and collected in the western part of the lake.

**Current Population Trend:** Stable

## Habitat and Ecology (see Appendix for additional information)

This is a pelagic species that occurs in clear water over a substrate of sand and pebbles in Lake Poso, Central Sulawesi, Indonesia (Parenti 2008, D.F. Mokodongan pers. obs. 2018). It has a maximum standard length of 51 mm (Parenti and Soeroto 2004). Adult males are dark grey to black, turning darker during breeding, while females are a lighter grayish yellow to brown (Mokodongan *et al.* 2014).

**Systems:** Freshwater

## Use and Trade

This species is used in scientific research (Mokodongan and Yamahira 2015).

## Threats (see Appendix for additional information)

The primary threats to freshwater fish within Lake Poso are invasive alien species, eutrophication caused by pollution from multiple sources, and intensive fishing (Parenti and Soeroto 2004). Introduced fish have a negative effect through predation, competition, disease, pest contamination and parasite infestation of native species (Parenti and Soeroto 2004). Invasive species within the lake include the Common Carp (*Cyprinus carpio*) and Nile Tilapia (*Oreochromis niloticus*), which were introduced for fishing activities. Lake Poso is also a clear water lake, so is sensitive to pollution coming from domestic waste from nearby settlements in addition to fertiliser run off from surrounding agricultural land (Parenti and Soeroto 2004).

## Conservation Actions (see Appendix for additional information)

Education and awareness programs are in place to introduce and inform local populations about the importance of species endemic to Lake Poso (J. Sulfani Udin pers. comm. 2019). Continuous monitoring is needed within Lake Poso to help guide conservation assessments and actions. Invasive species should be controlled, as many cages are used to breed and grow species such as Tilapia within the lake, especially in the Tentena region in the north.

## Credits

**Assessor(s):** Mokodongan, D.F.

**Reviewer(s):** Sulfani Udin, J. & Sayer, C.

**Contributor(s):** Kottelat, M.

**Facilitators(s) and Compiler(s):** Palmer-Newton, A. & Meredith, C.R.

## Bibliography

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Kottelat, M. 1990. The ricefishes (Oryziidae) of the Malili Lakes, Sulawesi, Indonesia, with description of a new species. *Ichthyological Exploration of Freshwaters* 1(2): 151-166.

Mokodongan, D.F. and Yamahira, K. 2015. Origin and intra-island diversification of Sulawesi endemic Adrianichthyidae. *Molecular phylogenetics and evolution* 93: 150-160.

Mokodongan, D.F., Tanaka, R. and Yamahira, K. 2014. A new ricefish of the genus *Oryzias* (Beloniformes, Adrianichthyidae) from Lake Tiu, Central Sulawesi, Indonesia. *Copeia* 2014(3): 561-567.

Parenti, L.R. 2008. A phylogenetic analysis and taxonomic revision of ricefishes, *Oryzias* and relatives (Beloniformes, Adrianichthyidae). *Zoological Journal of the Linnean Society* 154: 494-610.

Parenti, L.R. and Soeroto, B. 2004. *Adrianichthys roseni* and *Oryzias nebulosus*, two new ricefishes (Atherinomorpha: Beloniformes: Adrianichthyidae) from Lake Poso, Sulawesi, Indonesia. *Ichthyological Research* 51: 10-19.

## Citation

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## External Resources

For [Images and External Links to Additional Information](#), please see the [Red List website](#).

## Appendix

### Habitats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Habitat	Season	Suitability	Major Importance?
5. Wetlands (inland) -> 5.5. Wetlands (inland) - Permanent Freshwater Lakes (over 8ha)	Resident	Suitable	Yes

### Threats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Threat	Timing	Scope	Severity	Impact Score
5. Biological resource use -> 5.4. Fishing & harvesting aquatic resources -> 5.4.1. Intentional use: (subsistence/small scale) [harvest]	Ongoing	Unknown	Unknown	Unknown
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
8. Invasive and other problematic species, genes & diseases -> 8.1. Invasive non-native/alien species/diseases -> 8.1.1. Unspecified species	Ongoing	Unknown	Unknown	Unknown
	Stresses:	2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		
9. Pollution -> 9.3. Agricultural & forestry effluents -> 9.3.1. Nutrient loads	Ongoing	Unknown	Unknown	Unknown
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		
9. Pollution -> 9.3. Agricultural & forestry effluents -> 9.3.2. Soil erosion, sedimentation	Ongoing	Whole (>90%)	Unknown	Unknown
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		
9. Pollution -> 9.3. Agricultural & forestry effluents -> 9.3.3. Herbicides and pesticides	Ongoing	Whole (>90%)	Unknown	Unknown
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		

### Conservation Actions in Place

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Conservation Actions in Place
In-Place Land/Water Protection and Management
Occur in at least one PA: No
In-Place Education
Subject to recent education and awareness programmes: Yes

## Conservation Actions Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Conservation Actions Needed
1. Land/water protection -> 1.2. Resource & habitat protection
2. Land/water management -> 2.2. Invasive/problematic species control
4. Education & awareness -> 4.1. Formal education
6. Livelihood, economic & other incentives -> 6.2. Substitution

## Research Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Research Needed
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.3. Life history & ecology
1. Research -> 1.5. Threats
3. Monitoring -> 3.1. Population trends

## Additional Data Fields

Distribution
Estimated extent of occurrence (EOO) (km <sup>2</sup> ): 170-500
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes



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