

## Spawning habitat of *Telmatherina sarasinorum* (Family: Telmatherinidae) in Lake Matano

[Habitat pemijahan ikan *Telmatherina sarasinorum* (Famili: Telmatherinidae)  
di Danau Matano]

Jusri Nilawati<sup>1,2,✉</sup>, Sulistiono<sup>3</sup>, Djadja S. Sjafei<sup>3</sup>, M.F. Rahardjo<sup>3</sup>, Ismudi Muchsin<sup>3</sup>

<sup>1</sup> Graduate student of School of Graduate Studies, Bogor Agricultural University, Indonesia

<sup>2</sup> Department of Fisheries, Faculty of Agriculture, University of Tadulako, Palu, Indonesia  
e-mail: jnilawati\_98@yahoo.com

<sup>3</sup> Department of Aquatic Resources Management, Bogor Agricultural University, Indonesia

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### Abstract

A study on habitat of *Telmatherina sarasinorum* was conducted in Lake Matano. An underwater observation on the fish habitat was performed to allow description on habitat while investigating its reproductive behaviour. There were two types of spawning habitat on the fish observed. The first was shallow beach with flat contour and bottom covered by cobble and little sand in between which was located in littoral area with trees on the lake sides. The second was deeper water with steeper bottom which has hanging down roots and fallen down stems and twigs of any trees covered by alga. In the two habitats the fish prefers shading places provided by any trees existing on the lake sides as spawning sites. The fish was not observed spawn in places covered by dense cobbles and open waters exposed directly to sunlight. Such a habitat specialist becomes important factor needed to be taken into account in the attempts to conserve the fish and its habitat in Lake Matano. Maintaining the existence of spawning habitat through protecting the presence of terrestrial vegetation surrounding the lake is important key for conservation of the fish and its habitat.

Keywords: habitat preference, Lake Matano, spawning arena, spawning substrate, *Telmatherina sarasinorum*.

### Abstrak

Penelitian tentang habitat *Telmatherina sarasinorum* dilakukan di Danau Matano. Pengamatan bawah air pada habitat ikan ini dilakukan untuk membuat gambaran mengenai habitat sambil meneliti tingkah laku reproduksinya. Ada dua tipe habitat pemijahan ikan yang diamati. Pertama adalah pantai dangkal dengan kontur datar dan dasar ditutupi oleh kerikil dan sedikit pasir diantaranya yang terletak di daerah litoral dengan pohon-pohon di pinggir danau. Kedua adalah perairan dalam dengan dasar lebih curam yang mempunyai akar-akar menggantung serta batang dan ranting pohon tumbang yang diselubungi oleh alga. Pada kedua tipe habitat tersebut ikan menyukai tempat-tempat teduh yang mendapat bayang-bayang dari pohon yang ada di pinggir danau sebagai tempat pemijahan. Ikan diamati tidak memijah di tempat-tempat yang ditutupi oleh kerikil yang padat dan perairan terbuka yang terpapar langsung oleh cahaya matahari. Habitat khusus demikian merupakan faktor penting yang perlu dipertimbangkan dalam usaha konservasi ikan dan habitatnya di Danau Matano. Pemeliharaan habitat pemijahan melalui perlindungan keberadaan vegetasi terestrial di sekeliling danau adalah kunci penting untuk konservasi ikan dan habitatnya.

Kata penting: arena pemijahan, Danau Matano, pemilihan habitat, substrat pemijahan, *Telmatherina sarasinorum*.

### Introduction

Sulawesi Island has long been known as the hotspot in global biodiversity because of high endemism among its native faunas (Whitten *et al.*, 2002), 76% of native fishes in Sulawesi are the endemics (Kottelat *et al.*, 1993) and unique. Lake Matano is one of the world ancient lakes which are situated in the central south of Sulawesi Island, and it is in the uppermost end of Malili Lakes System. Lake Matano (Haffner *et al.*, 2001) has a total area of 164 km<sup>2</sup>, 590 m in

depth, high water transparency (the Secchi disc still can be visualized from the distance of 23 m), steep sides along the lake with relatively narrow littoral area, and it is famous as an oligotrophic lake. The lake is at least inhabited by seven Telmatherinidae species (*T. abendanoni*, *T. antoniae*, *T. obscura*, *T. opudi*, *T. prognatha*, *T. sarasinorum*, and *T. wahjui*) (Kottelat, 1991) and 1 newly described species *T. albolabiosus* (Tantu & Nilawati, 2008), and one other species – *Telmatherina bonti* – (Tantu & Nilawati, 2007) re-