ABSTRACT

JUSRI NILAWATI. Reproduction of *Telmatherina sarasinorum* (Kottelat, 1991) as the Foundation of Conservation in Lake Matano South Sulawesi. Under direction of SULISTIONO, DJADJA S. SJAFEI†, M.F. RAHARDJO, and ISMUDI MUCHSIN.

The research was aimed to analyze characteristics of preferential spawning habitat, spatial and temporal distribution, and reproduction of *T. sarasinorum* in spawning habitat. Research was carried out in Lake Matano from September 2008 to August 2009 at different sampling sites. Fish were caught by using mini beach seine of 10 m length, 3 m depth, and 3 mm mesh size. Habitat condition was analyzed, and water physical chemical characteristics were measured monthly. Fish standard length, total weight, and gonad weight were measured. Results showed that the fish preferred to spawn in sandy gravel arena and root arena shaded by vegetation or boulders. Mean standard length of male and female were 54.50 mm and 48.60 mm, respectively. Male has larger body and dominant in population. Population was dominated by mature individuals. Male and female’s first standard length at gonadal maturation was 40.28 mm and 37.95 mm, respectively. Mean fecundity was 224. Oocyte and spermatocyte development of *T. sarasinorum* was asynchronic; the species spawned in batches. Oocyte diameter ranged between 0.50 and 1.75 mm. The spawning peaked at the end of dry season with gradual increased of water level. The fish protected the freshly laying eggs. In addition, the sneakers and single males seemed picking the sperm remnants. Currently, conservation of the fish and its habitat is urgently required cause of increasing anthropogenics surrounding the lake.

Keywords: spawning arena, preferences, *Telmatherina sarasinorum*