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Diversity of Fish Species in Lubuk Larangan Kampung Surau, Gunung Selasih Village, Pulau Punjung Sub-district, Dharmasraya Regency

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ABSTRACT

This paper discusses the diversity of fish species in the Lubuk Prohibition of Kampung Surau, Nagari Gunung Selasih, Pulau Punjung Sub-district, Dharmasraya Regency. This study was conducted for one month from April 1-30, 2022. The results of the study found 16 fish species from 4 orders, 6 families, and 16 genera. Among the species collected, the most dominant is the order *Cypriniformes* with 68.75% followed by the order *Perciformes* and the order *Cypriniodontiformes* with 12.50% each, and the order *Anabantifoemes* with 6.25% of the total fish species. Species with vulnerable status are *Hemibagrus mumurus*, *Barbonymus gonionotus*, *Cyclocheillichthys Apogon*, *Macrochirichthys macrochirus*, and *Osphronemus goramy*.

Keywords: Biodiversity of fish, Economic value, The depths of prohibition, Dharmasraya.

INTRODUCTION

The island of Sumatra has the potential of waters with large fishery resources. The total area of public waters (freshwater) about 23% of the total 13.85 million hectares of public waters in Indonesia is located on the island of Sumatra. Based on the types of fish caught in several locations in Sumatra, shows an indication of a decrease in the diversity of fish species, such as in the Kampar Kanaan River (Aryani, 2015).

On the island of Sumatra, the largest watershed is the Batanghari Watershed covering an area of ± 4,537,882. The Batanghari watershed is divided into five sub-watersheds, namely the Batanghari Merangin-Tembesi sub-watershed, the Batang Tebo sub-watershed, the Batang Tabir sub-watershed, the Batanghari Hulu sub-watershed, and the Batanghari Hilir sub-watershed. The Bukit Barisan Mountains are the upper Batanghari watershed which has high rainfall and flows into the Batanghari River network (Jambi Province Environmental Service, 2016). The fish resources in this river are very abundant and are used by the community to meet their daily needs and meet their economic needs. The types of fish found in river waters in Jambi Province, it has been widely published by Nurdawati *et al*., (2007); Arpiagam *et al*., (2017); Syaputra *et al*., (2017); Rusadi *et al*., (2019); Budiman *et al*. (2021).

Lubuk Larangan Kampung Surau Village is administratively located on the Batang Pangian River, Nagari Gunung Selasih, Pulau Punjung Sub-district, Dharmasraya Regency, West Sumatra Province (Fig 1). This river has a length of 8 km, a depth of 1.25

m, a width of 15 m with a water flow velocity of 0.80 m/s. Lubuk Larangan Kampung Surau Village has a depth of 1.25 m with a length of 1 km and a width of 15 m, a depth of 1.25 m (Parwati, 2012).

Figure 1. Map of reseach location

Based on information from the people of Lubuk Larangan Kampung Surau Village, in the depths of this prohibition, there are several types of fish that are now starting to decrease. For this reason, it is necessary to manage them as Syandri *et al*., (2014), fisheries resource management can be done by understanding the characteristics and dynamics of the resource itself. However, data on the types of fish in the Lubuk Larangan Kampung Surau Village are not yet available. Based on this, it is necessary to research the diversity of fish species in the prohibition area of Kampung Surau.

METHODS

Identify the types of fish in the Lubuk Larangan Kampung Surau Village which is caught by fishermen using fishing nets, Lukes and fishing rods. The catch from each fishing gear is selected based on the type. Each identified fish species is classified by order to species according to Weber De Beaufor 1916 and Fish Base (Muchlisin, 2013).

RESULTS

Based on the results of observations, the diversity of fish species found in the ban area of Kampung Surau is quite high. As the opinion of Krismono *et al*., (2009), small diversity has 1-5 fish species included in a score of 1, moderate diversity has 6-10 fish species with a score of 2, and high diversity has > 10 fish species included in score 3. The fish collected comes from the catch of local fishermen. The fish found were 16 species from four orders

and six families. Members of the order *Cypriniformes* are dominated by 11 species, followed by the order *Cypriniodontiformes* 2 species, the order *Perciformes* 2 species, and the order *Anabantiforme*. Six families consist of 16 species of fish.

The family *Cyprinidae* is the dominant group with 11 species where the composition is composed of *Chiclidae*, *Hampala macrolepidota*, *Labiobarbus Festivus*, *Osteochilus Haseltine*, *Rasbora argyrotaenia*, *Diplocheilichthys pleurodynia*, *Acantopsis octoatinotus*, *Hampala macrolepidota*, and the most abundant of *Cyclocheichonotus*, *macrocells*, and the most abundant of the a. found to be less abundant. The species of fish from the *Cyprinidae* family are well known and inhabit several rivers in Sumatra with a very large population. Romlah (2015) stated that the family *Cyprinidae* has a relatively large number of species in freshwater.

This was followed by the *Bangridae* family where *Hemibagrus murmurs* were found to be less abundant. Family *Chiclidae* where Oreochromis niloticus is found in abundance. The family *Channidae* where *Channa striata* are found in abundance. The family *Mastacambelidae* where *Mastacembelus* unicolor is found in abundance. Then the family *Osphronemidae* where *Osphronemus goramy* is less abundant. The scientific name of each type of fish found and the economic value is shown in Table 1 below.

Table 1. Types and economic value of fish found in Lubuk Larangan Kampung Surau

Ordo	**Famili**	**Genus dan Spesies**	**Local Name**	**Economic value@/Kg**	**Status IUCN**
Cypriniodontiformes	Bangridae		Baung	Rp 80.000,-	LC
	Chiclidae	*Oreochromis niloticus*	Nila	Rp 35.000,-	NE
Cypriniformes	Cyprinidae	*Chiclidae*	Garing	Rp 80.000,-	NE
		Hampala macrolepidota	Mansai	Rp 25.000,-	NE
		Labiobarbus festivus	Mali	Rp 15.000,-	NE
		Osteochilus haselti	Paweh/palau	Rp 25.000,-	NE
		Barbonymus gonionotus	Tawes/lampam	Rp 25.000,-	LC
		Cyclocheillichthys apogon	Keperas	Rp 20.000	LC
		Rasbora argyrotaenia	Pantau	Rp 25.000,-	NE
		Macrochirichthys macrochirus	Simancung	Rp 20.000,-	NT
		Diplocheilichthys pleurotaenia	Lelan	Rp 15.000,-	NE
		Acantopsis octoatinotus	Tali-tali	Rp 20.000,-	NE
		Hampala macrolepidota	Barau	Rp 15.000,-	NE
Perciformes	Channidae	*Channa striata*	Gabus	Rp 75.000,-	NE
	Mastacambelidae	*Mastacembelus unicolor*	Tilan	Rp 50.000,-	NE
Anabantiformes	Osphronemidae	*Osphronemus goramy*	Gurame	Rp 80.000,-	NT

Remarks: Not yet evaluated (NE = Not Evaluated), Requires attention (LC = Least Concern), and Almost threatened (NT = Near Threatened).

Garing fish can be found in the depths of this prohibition. *Garing* fish is a species of fish that lives in the highlands to the lowlands whose presence often dominates the waters, especially the forbidden pit. According to Rukiah (2020), crispy fish is a prima donna fish in every depth of prohibition more than other types of fish in it. Of the 16 species, the most prioritized for domestication are *Hemibagrus murmurs*, *Barbonymus gonionotus*, *Cyclocheillichthys Apogon*, *Macrochirichthys macrochirus*, and *Osphronemus goramy*

because these species have been threatened, among others due to river pollution activities by factory waste and community domestic waste and fishing with non-environmentally friendly tools.

Sixteen species were identified and recorded in Lubuk Larangan Kampung Surau Village. Among these orders, the most dominant is the order *Cypriniformes* with 68.75% followed by the order *Perciformes* and the order *Cypriniodontiformes* with 12.50% each, and the order *Anabantifoemes* 6.25% of the total fish species shown in (Fig 2).

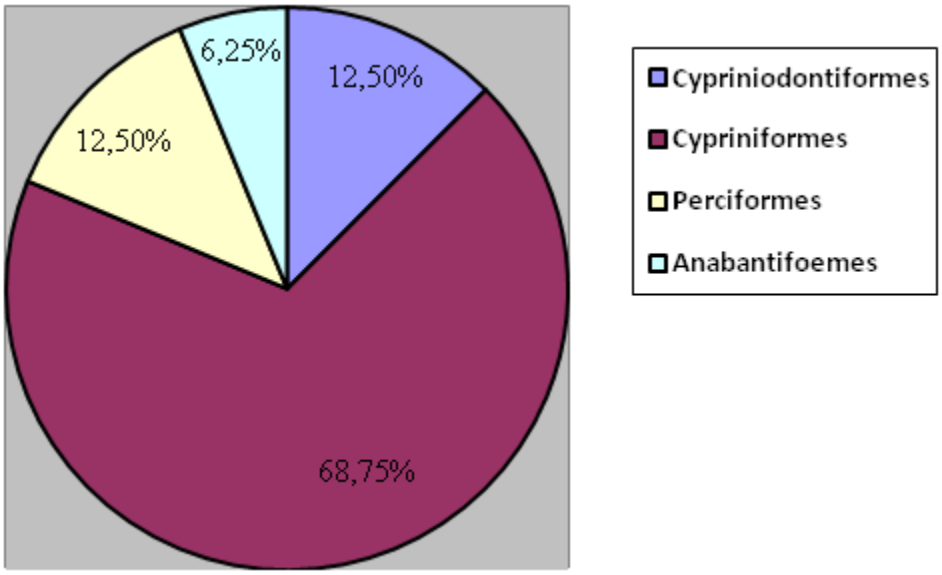

Figure 2. Diagram of the composition of fish species by order

CONCLUSIONS

The diversity of fish species found in Lubuk Larangan Kampung Surau Village is high, namely 16 fish species consisting of 4 orders and 6 families. The order *Cypriniformes* is dominated by 11 species (68.74%), followed by *Cypriniodontiformes* 2 species (12.50%), the order *Perciformes* 2 species (12.50%), and the order *Anabantiforme* 1 species (6.25%). Of the 16 species, the most prioritized for domestication are *Hemibagrus murmurs*, *Barbonymus Gonionotus*, *Cyclocheillichthys*, *Apogon*, *Macrochirichthys Macrochirus*, and *Osphronemusgoramy*.

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