Ikan gatul sebagai kandidat hewan model: identifikasi morfologi dan taksonomi ikan gatul di lingkungan FMIPA Universitas Negeri Malang / Dyah Pusparini

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ABSTRAK

Gatul Fish as a Candidate of Model Animal:

Identification of Its Morphology and Taxonomy

ABSTRACT

Gatul is a small fish, males smaller than females" This animal living in freshwater bodies and widely known in Indonesian archipelago and various continents in different names" This fish also eats on mosquito larvae and might decrease the population of malaria mosquitoes" The capability of this fish to live in polluted water give the ecologies reason to use this fish as a bio-indicator of pollution" Gatul fish is also consumed in some areas in Indonesia" Hence, this fish is necessary to be conserved" Preliminary study showed that Gatul fish is easily cultivated ex-situ (in laboratory)" Thus, it is possible for this fish to be a model animal for biological studies" Since the biological study of this fish is still limited currently, it is necessary to begin this study"

To identify the possible scientific group (taxon) of this fish, we examined a hundreds both males and females living in water spring in Faculty of Mathematics and Natural Science, State University of Malang area, its morphological characteristics including: body length, colour pattern, scale type, caudal fin type, number of dorsal fin ray, and reproduction system, carefully"
In this current study we found that Gatul fish shows sexual dimorphism in size and colour pattern. Its scale type is cycloid. Female has rounded caudal fin and male has rounded or rounded with elongated dorsal part. Number dorsal fin rays are 7-8. Male reproduction system consists of a pair of testis, spermatocytes develop in lobulus and female reproduction system consists of one ovary and oviduct. This system empties into cloacal opening. Gatul fish has specific characters i.e. they perform internal fertilization, male has external copulatory organ named gonopodium and female is live-bearer.

Based on those morphological characters, we propose Gatul fish as a member of Genus Poecilia of Poeciliidae with the taxonomic hierarchy as follow:

Kingdom Animalia, Phylum Chordata, Class Actinopterygii, Ordo Cyprinodontiformis, Family Poeciliidae, and Genus Poecilia

Keywords: Gatul fish, morphology, taxonomy, model animal