Diversity and distribution of ichthyofauna in Rawog conservation area, Segaliud Lokan forest reserve, Sabah, Malaysia

ABSTRACT

The purpose of this study was to assess the ichthyofauna community of Sq Rawoq and four of its tributaries: Sg Jambatan Belian, Sg Jambatan Runtuh, Sg Payau, and Sg Trail 12, which flow through the Sungai Rawog Conservation Area, Segaliud Lokan Forest Reserve. Sampling was carried out for six consecutive days, and four types of traps were deployed, including a one-inch mesh net, two-inch mesh seine net, two-and-a-half-inch mesh seine net, and electric shocker. Two hundred-one individuals, 10 Families, and 20 species were successfully sampled, with 9 Bornean Endemic 1 Introduced Species. The species Nematabramis everetti had the highest number of individuals, with 69 individuals contributing to 34.3% of the total specimens. Hampala sabana closely followed with 30 individuals, accounting for 14.9% of the whole samples. Meanwhile, the species Lobocheilos erinaceus, Lobocheilos ovalis, Ompok sabanus, and Osphoronemus laticlavius had the lowest abundance, each with only one individual, contributing only 0.5% to the total specimens. Sg Payau recorded the highest sample count, totalling 70 individuals. Sg Rawog, on the other hand, recorded the highest Shannon Diversity Index (H) value of 2.13. For the Sorensen Similarity Index (s), Sq Belian and Sg Rawog recorded the highest value of 0.71. The independent T-test results indicated non-significance in fish diversity between locations such as Sg Jambatan Belian and Sg Jambatan Runtuh, as well as Sg Jambatan Runtuh and Sg Payau, suggesting uniformity among these locations. Conversely, the comparison between Sg Belian and Sg Rawog showed a significant difference, highlighting the uniqueness and importance of Sq Rawog in maintaining freshwater fish diversity. Regarding the IUCN conservation status, most sampled fish species fell into the Least Concern (LC) category, indicating that they are currently not considered significantly at risk of extinction. Approximately 80% of the recorded specimens were classified as LC. In contrast, fewer species showed a more severe conservation status.