A study of ectoparasite on snakeskin gourami (trichogaster pectoralis) and morphology of trichodinid / Muhamad Abdul Rauf Abdullah.

Lihat sebelah

A STUDY OF ECTOPARASITE ON SNAKESKIN GOURAMI (*Trichogsater pectoralis*) AND MORPHOLOGY OF TRICHODINID

By
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Research Report submitted in partial fulfillment of
the requirements for the degree of
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Department of Fisheries Science and Aquaculture
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PENGAKUAN DAN PENGESAHAN LAPORAN PROJEK ILMIAH I DAN II

Adalah ini diakui dan disahkan bahawa laporan ilmiah bertajuk:

A Study of Ectoparasite on Snakeskin Gourami (*Trichogaster pectoralis*) and Morphology Of Trichodinid

Oleh **Muhamad Abdul Rauf bin Abdullah**, No.Matrik **UK14295** telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada **Jabatan Sains Perikanan dan Akuakultur** sebagai memenuhi sebahagian daripada keperluan memperolehi **Ijazah Sarjana Muda Sains Agroteknologi (Akuakultur)** Fakulti Agroteknologi dan Sains Makanan, Universiti Malaysia Terengganu.

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I hereby declare that the work in thesis is my own except for quotations and summaries which have been duly acknowledgement

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ABSTRACT

This is a study on ectoparasites of Snakeskin gourami, *Trichogaster pectoralis*. The objectives of this study were the observation of ectoparasites which infected the fish and establish morphological studies of *Trichodina* sp. Fishes were bought from Pasar Tani, Kuala Terengganu, Terengganu and thirty fishes were observed and diagnosed at Biodiversity Lab, Universiti Malaysia Terengganu. In this study, skin and gill smears were made for observation of parasites. Trichodinids and Monogenean were found. The samples were mounted on the slide and observed under microscope to identify parasite. *Gyrodctylus* sp. and *Trichodina* sp. were found on skin smears. *Gyrodactylus* sp. has two main anchor hooks and opisthaptor with 16 marginal hooks. A pair of anchor hooks were joined by a pair of dorsal and ventral bars. This species have no eyespots and short oesophagus. In the middle of body has uterus with embryo. *Trichodina* sp. has proteinaceous cytoskeleton of the adhesive disc consists of a ring of hollow conical elements with flat lateral projections, known as denticles. Slide glass containing *Trichodina* sp. were air dried. Then, the dried slides were submerged into 1 % of Silver nitrate, rinsed with distilled water and placed in Petri dish which filled distilled water. A piece of white paper was placed under Petri dish and exposed to sunlight for 3-4 hours. The sunlight will oxidize the silver nitrate to change into black colour. Ten samples of *Trichodina* sp. that were found were drawn on tracing paper. The measurements of morphology *Trichodina* sp. were done to compare with other *Trichodina* that have been studied based on number of denticles, number of radial pins and other characteristics of morphometric measurements. The measurements of this *Trichodina* sp. did not match any of the species described hence is could be a new species.

ABSTRAK

Kajian ini adalah mengenai kajian ektoparasit pada Ikan Sepat Siam, *Trichogaster pectoralis*. Objektif kajian ini adalah mengkaji ektoparasit yang menyerang pada ikan dan mempertingkatkan kajian mengenai morphologi *Trichodina* sp. Sampel ikan dibeli di Pasar Tani, Kuala Terengganu, dan sebanyak 30 ekor ikan dikaji dan didiagnosis di Makmal Biodiversiti, Universiti Malaysia Terengganu. Dalam kajian ini, lumuran mukus luaran permukaan badan ikan dan insang dilakukan untuk kajian ektoparasit. Trichodinid dan Monogenean dijumpai dalam kajian ini. Semua sampel diawetkan pada permukaan slaid kaca dan pemerhatian dilakukan di bawah mikroskop untuk mengenalpasti parasit. *Gyrodactylus* sp. dan *Trichodina* sp. dijumpai pada permukaan kulit ikan. *Gyrodactylus* sp. mempunyai 2 cangkuk sauh utama dan opisthaptor yang mengandungi 16 cangkuk pinggir. Sepasang cangkuk sauh dihubungkan oleh sepasang dorsal dan ventral bar. Spesies ini tidak mempunyai bintik mata dan mempunyai oesophagus yang pendek. Di tengah badan spesies ini terdapat uterus yang mengandungi embryo. *Trichodina* sp. mempunyai *adhesive disc* sitoskeleton berprotein yang mengandungi cincin rongga yang berbentuk elemen kon dengan sisian unjuran yang rata, yang dikenali sebagai dentikel. Slaid kaca yang mengandungi *Trichodina* sp. dikeringkan. Kemudian, slaid kaca yang telah kering direndamkan ke dalam 1 % Silver nitrat dan dibilas dengan air suling. Seterusnya slaid kaca tadi direndamkan dalam piring petri yang mengandungi air suling. Sekeping kertas putih diletakkan di bawah piring petri dan didedahkan cahaya matahari selama 3-4 jam. Cahaya matahari akan mengoksida Silver nitrate dan merubah kepada warna hitam. Sebanyak 10 sampel *Trichodina* sp. yang dijumpai dilukis pada kertas surih. Pengukuran morphology *Trichodina* sp. dilakukan untuk membandingkan dengan spesies *Trichodina* yang lain yang mana berdasarkan kajian yang telah dilakukan berdasarkan bilangan dentikel, bilangan radial pin dan ciri-ciri pengukuran morphometrik. Pengukuran *Trichodina* sp. ini tidak mempunyai persamaan mana-mana spesies Trichodina yang telah dikenalpasti oleh demikian spesies ini berkemungkinan spesies baru.