



*Malays. Appl. Biol.* (2019) 48(1): 163–168

***Colpoda steinii* ASSOCIATED WITH HYBRID GROUPER FROM**

**KG. GONG BATU SETIU, TERENGGANU**

FATIMAH HASHIM\*, MALINNA JUSOH, NIK NUR IZZATI NIK ROHIN

and NUR AL SYIFAA HASSAN

*School of Fundamental Science, Universiti Malaysia Terengganu,*

*21030 Kuala Nerus, Terengganu, Malaysia*

*\*E-mail: fatimah.h@umt.edu.my*

Accepted 16 January 2019, Published online 20 March 2019

## **ABSTRACT**

This research was carried out to examine the presence of protozoa that inhabit on the gills of hybrid grouper. This phylum can act as ecto and endoparasites in fish and in turn are responsible for many diseases. Observation on cultured samples by using swabbing techniques on the gill surface indicated the presence of ciliated protozoan. The morphological features of the vegetative stage ciliates were kidney shaped and highly motile with 49.12  $\mu$ m in length, whereas the resting stage of the ciliates was round shape with 38.42  $\mu$ m in length as shown by light microscopy. Observation on the cell surface by scanning electron microscopy indicated unfamiliar silverline system for ciliates and the resting cyst surface structure was mildly wrinkled.

Further specific species identification was verified by conducting Polymerase Chain Reaction (PCR). The ciliate gene in the 18S SSU ribosomal RNA isolated was very similar (99% sequence identity) to *Colpoda steinii* DNA sequence at GenBank under accession number of KJ607912.1 with 100% query cover. Although there were no reports on hybrid grouper mortality in Setiu, due to gills infection by ciliate *C. steinii*, it was important to obtain information on microorganism inhabitants in hybrid grouper fish gills. It is hoped that this data collected might be an indicator for fish health state for our fish farmers and as a precaution for conserving healthy environment in Setiu for better aquaculture-related production.

**Key words:** *Colpoda steinii*, hybrid grouper, ciliate, cyst, gill