ABSTRACT

Gobies are small fishes chiefly recognized as the fastest growing family of freshwater fishes despite being already the largest of freshwater fishes. However, no record has been published yet for Maragondon river in Cavite, Philippines. DNA extracts from muscle tissues of three goby phenotypes were amplified using primers specific for Cytochrome Oxidase I (COI) gene; and the sequences viewed and analysed to determine identity and phylogeny of the gobies. Software processing and analyses of the sequences using BLASTN and MEGA 5.05 revealed that COI comprises 655 bp.; and are putatively indentified as follows: A1-*Amblygobius sphynx;* B2-*Glossogobius sp.;* and D4 forming a clade with genus *Oxyurichthys opthalmonema.* Estimates of evolutionary divergence and Minimum Evolution with high bootstrap values suggest that Family Gobiidae is monophyletic. However, subfamily Gobiinae where A1 and B2 belong; and subfamily Gobionellinae where D4 nested are polyphyletic.