Journal of Nature Studies 12 (2): 1-10
ISSN: 1655-3179

DISTRIBUTION PATTERN OF *Neoechinorhynchus* SP. (ACANTHOCEPHALA: NEOECHINORHYNCHIDAE) IN THEIR FISH HOSTS, NILE TILAPIA (*Oreochromis niloticus* L.) FROM SAMPALOC LAKE, PHILIPPINES

Christian Paul de la Cruz[1]*, Modesto Bandal, Jr.[1], Angela Rosalina Avila[1], and Vachel Gay Paller[1]
[1]Animal Biology Research Laboratory, Institute of Biological Sciences, College of Arts and Sciences, University of the Philippines Los Baños, College 4031, Laguna, Philippines
*Corresponding author: xian_bio@hotmail.com

ABSTRACT – Studies on acanthocephalans underscore many aspects of parasite biology. They are implicated to play vital roles in shaping ecosystems through regulation of their hosts' community structure. Studies have also shown both their potential as agents of disease upon reaching epizootic levels and biomonitors of environmental changes. This research was conducted to describe the distribution pattern of an unidentified neoechinorhynchid acanthocephalan infecting cultured *Oreochromis niloticus* in Sampaloc Lake, Laguna, the Philippines. Results showed that *Neoechinorhynchus* sp. had a non-random distribution pattern among their fish hosts ($P<0.001$). Subsequent analysis showed a highly aggregated distribution ($D=0.82$; Variance/mean=4.403). Larger Nile tilapia appears to harbor more parasites than smaller-sized ones as indicated by positive correlations between intensity and fish length ($r=0.40$, $P<0.001$) and weight ($r=0.30$; $P<0.001$). This study could serve as baseline information for future investigation on the ecology and infection dynamics of Acanthocephala, especially in the Philippines.

Keywords: Acanthocephala, Aggregation, Correlation, Neoechinorhynchus, Oreochromis niloticus, Parasitology, Poulin's Index of Discrepancy

JOURNAL OF NATURE STUDIES
(formerly Nature's Bulletin)
Print ISSN: 1655-3179
Online ISSN: 2244-5226

To cite this paper: de la Cruz, C.P.P., Bandal, M.Z., Jr., Avila, A.R.B., and Paller, V.G.V. 2013. Distribution Pattern of *Neoechinorhynchus* Sp. (Acanthocephala: Neoechinorhynchidae) in their Fish Hosts, Nile Tilapia (*Oreochromis Niloticus* L.) From Sampaloc Lake, Philippines. *Journal of Nature Studies*. 12 (1): 1-10