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Ciliate-zooplankton epibiosis in Africa's largest estuarine lakeSalome Jones¹, Andre Vosloo¹, Nicola Carrasco¹ and Renzo Perissinotto^{1,2}¹University of Kwazulu-Natal, South Africa²Nelson Mandela Metropolitan University, South Africa

Epibiosis is a symbiotic association between two organisms, in which one species (epibiont) uses the surface of another species (host) as an attachment substrate. Although not traditionally regarded as parasitic, recent studies have revealed that epibionts mainly have a deleterious effect on zooplankton hosts. In spite of its widespread occurrence, there are very few studies in Africa that address epibiosis in the aquatic environment, particularly that involving zooplankton as hosts. Epibiotic ciliates are often found in zooplankton samples from the St Lucia estuary, Africa's largest estuarine lake. A study was conducted in the St Lucia Estuary between 2014 and 2016 to determine the identity of the epibiotic ciliates, their species-specific association with the zooplankton of St Lucia, their effect on their hosts and also the environmental conditions that promote their proliferation. The results of this study revealed that the epibiotic ciliates are the *peritrich*. *Epistylis* sp., are specific for the dominant copepod *Pseudodiaptomus stuhlmanni*, and have a negative association with the fitness of this copepod. *Epistylis* sp. also appears to be favoured by salinities below 20 and turbid conditions, with the latter only holding true if there is a high organic matter content. The ecological implications of ciliate-zooplankton epibiosis in the St Lucia estuary and similar systems will be discussed.

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