

## **Gastropods in the Intertidal Shore of Kota Kinabalu, Sabah (Malaysian Borneo)**

### **ABSTRACT**

Intertidal gastropods provide numerous ecological benefits and are responsible for the dynamics of the intertidal shore's habitat and their community assemblages. This study examined the community structure of gastropods in the intertidal shore located near the city of Kota Kinabalu, the capital of Sabah where coastal areas are rapidly developed for various purposes and consequently destroying natural habitats. A total of 36 gastropods species from 15 families were recorded. The *Planaxis sulcatus* was the most abundant species with a density of 480 ind. m<sup>-2</sup> followed by *Nodilittorina pyramidalis* (182 ind. m<sup>-2</sup>) and *Cellana radiata* (97 ind. m<sup>-2</sup>) respectively. The number of species and their abundance, are almost three times lower than the number ever recorded for intertidal shores located in non-urban areas or remote locations. This suggests that the rapidly growing coastal urban areas is threatening the diversity and abundance of intertidal gastropods. The density of gastropod (i.e., *P. sulcatus* & *N. pyramidalis*) was significantly ( $p < 0.05$ ) high at the lower intertidal shore where slope gradient is steeper with rocks and crevices are the major component of substrates compared to the upper or middle zone which is flatter and composed mainly of coral rubble and sand. Our study suggests that gastropod communities in intertidal shores located adjacent to the urban areas are threatened especially by anthropogenic factors such as frequent human visitations and modification of natural habitat. Future development in the intertidal shore should minimise habitat destruction and should consider infrastructures that encourage gastropod populations to grow and highlighting their ecological role for conservation reasons.