

UNIVERSITI TEKNOLOGI MARA

**DIVERSITY, ABUNDANCE
DISTRIBUTION, MORPHOMETRICS
AND POPULATION STRUCTURE OF
THE MANGROVE GASTROPODS OF
KUALA SELANGOR NATURE PARK,
SELANGOR**

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ABSTRACT

This study reports on diversity, abundance distribution, morphometrics and population structure of mangrove gastropods from Kuala Selangor Nature Park sampled from August to November 2017. The line transect with quadrat method was employed to sample the gastropods in 5m x 5m quadrats. Gastropod collection was from roots, stems and branches of trees and mangrove floor. Nineteen gastropod taxa from seven families were recorded from the *Bruguiera*, mixed (*Bruguiera*, *Avicennia* and *Rhizophora*) and *Avicennia* and *Rhizophora* zones. *Avicennia* sp. recorded larger Girth at Breast Height (GBH) (mean=37.3±18.2 cm) while *Bruguiera* sp. recorded the smallest GBH (mean=22.36±8 cm). The Ellobiidae (*Ellobium aurisjudae* and *Cassidula aurisfelis*), Potamididae (*Cerithidea obtusa*, *C. cingulata* and *Telescopium telescopium*), Muricidae (*Chicoreus capucinus*) and Naticidae (*Nerita balteata*) were the most distributed gastropod families at the study site. *Cerithidea obtusa* (0.13 no/m²), *T. telescopium* (0.10 no/m²), and *N. balteata* (0.9 no/m²) were the most abundant gastropods sampled. Gastropod horizontal distribution varied between sampling zones while gastropod vertical distribution varied between height and sub-habitats as per the principle component analysis (PCA). The Margalef's species richness (D=2.90) and Shannon-Weiner diversity (H'=2.32) was low while Pielou's evenness (J=0.777) was relatively high. *Telescopium mauritsi* [Shell Length (SL) = 83.26±12.81mm] and *T. telescopium* (SL=63.03±84.21mm) were the larger gastropods while *Spheraassiminea miniata* (SL=6.2±1.4mm) was the smallest. The shell length-weight relationship of *C. obtusa*, *C. cingulata*, *Cassidula aurisfelis*, *C. nucleus*, *Nerita balteata* and *T. telescopium* demonstrated negative allometric growth (b<3). The size frequency distribution indicated juvenile, ageing and stable gastropod populations. In conclusion, there was clear horizontal and vertical distribution of the gastropod taxa but gastropod density between sampling zones did not vary significantly. Further studies of their role in the coastal food chain, as bioindicators of habitat change and as potential food source are needed.

Key words Mangrove, Gastropods, Diversity, Abundance, Distribution and Kuala Selangor Nature Park

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