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Analysis of *Avicennia* Sp. Plants Herbivory and Associated Insects in Mangrove Ecosystem Restoration

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ABSTRACT

Herbivory is a natural mechanisms for adjustment of tree growth, form, survivorship, and reproductive output of forest ecology including in mangrove ecosystem. The purpose of this study was to compare herbivory and insect diversity in various growth stages of *Avicennia* Sp. related with restoration of mangrove ecosystem. The research was carried out four months (July-October 2020) in Pagatan Besar mangrove ecosystem in Tanah Laut District, South Kalimantan Province. The results showed that marginal pattern is the most leaf attack case, both in every plant growth stages (39-68%) and canopy (53-58%) of *Avicennia* Sp. The highest average of leaf damage was found in lower canopy (3.06%), and the growth stage of seedling (3.62%). Herbivory most often found at lower canopy (3.17%) and seedling life stages (3.76%) of *Avicennia* Sp. It was found about 13 species of insects in all growth stages of *Avicennia* Sp. with the highest Biodiversity Index found in seedling (0.753). Insects function on all life stages of *Avicennia* Sp. was dominated by predator.

Keywords: *Avicennia*, herbivory, insect, mangroves