Keanekaragaman dan *Functional Feeding Groups* Insekta pada Ekosistem Air Terjun di Gunung Lawu Kabupaten Karanganyar

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INTISARI

Kemampuan adaptasi insekta di berbagai habitat memberikan keanekaragaman jenis insekta yang penting sebagai indikator kondisi lingkungan. Ekosistem air terjun memiliki karakter unik tersendiri dengan adanya arus air yang deras disertai aliran sungai dan zona riparian di sekitar air terjun. Keanekaragaman jenis insekta di ekosistem air terjun dapat menjadi acuan kondisi lingkungan tersebut, namun saat ini sedikit penelitian yang dilakukan karena ekosistem ini jarang ditemui. Penelitian ini bertujuan untuk mengetahui keanekaragaman dan adaptasi insekta pada ekosistem air terjun serta kondisi lingkungan pada tiga air terjun wisata di Gunung Lawu Kabupaten Karanganyar. Pengambilan data keanekaragaman insekta dilakukan di tiga air terjun wisata yaitu air terjun Parang Ijo, Jumog, dan Grojogan Sewu. Serangga diambil berdasarkan plot sebesar 5x5 m di 20 titik zona sekitar air terjun, 10 plot terestrial dan 10 plot perairan. Ditemukan sebanyak 72 famili serangga di seluruh lokasi penelitian, 48 famili serangga terestrial dan 36 famili serangga di plot air termasuk 9 famili larva serangga. Nilai indeks keanekaragaman serangga berdasarkan Shannon-Weinner yaitu Parang Ijo 1,31, Jumog 1,08, dan Grojogan Sewu 1,30 sedangkan plot air Parang Ijo 1,5, Jumog 0,9, dan Grojogan Sewu 2,0. Famili paling banyak dari ordo Diptera sedangkan dalam bentuk larva paling banyak dari ordo Ephemeroptera. Serangga terestrial paling banyak merupakan serangga herbivora pemakan bagian tumbuhan atau bunga. *Functional Feeding Group*(FFG) larva serangga paling banyak dari jenis *gathering-collectors* dan *scrapers*. Komposisi FFG larva serangga air terjun Parang Ijo, Jumog, dan Grojogan Sewu menunjukan sebagai daerah hulu sungai. Karakter lokasi air terjun Parang Ijo dan Grojogan Sewu menunjukkan banyak kesamaan dari data vegetasi, serangga, serta parameter lingkungan.

Kata kunci: kemelimpahan, larva, parameter lingkungan, vegetasi, zona riparian.

Diversity and Functional Feeding Groups of Insects on Waterfall Ecosystems in Mount Lawu, Karanganyar Regency

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ABSTRACT

Insect adaptation ability on various habitats makes insecta have big diversity that become important role as environment indicator. Waterfall ecosystem have unique character with fast water flows, streams, and riparian zone around the waterfall. Insect diversity in waterfall ecosystem can leads to understanding the environment condition but only few research have done for it because there is not many waterfall ecosystem found. The aims of this research is to know the diversity and adaptation of insecta in waterfall ecosystem, also the environmental aspect of three public waterfall in Lawu Mount Kabupaten Karanganyar. Data observation of insect diversity took place on three public waterfall; Parang Ijo, Jumog and Grojogan Sewu. Insect collected on 5x5m plot in 20 spot, 10 plot terrestrial and 10 plot on water river spots. Total 72 family insecta found from all the three sites, 48 family terrestrial insects and 36 family insects on water spot including 9 family of insect larvae. Index diversity of insecta according to Shannon-Weinner is Parang Ijo waterfall 1,33, Jumog 1,08, and Grojogan Sewu 1,30, meanwhile index diversity on water spots for Parang Ijo 1,5, Jumog 0,9, and Grojogan Sewu 2,0. The most abundant and various family is from order Diptera, while for larvae is order Ephemeroptera. Terrestrial insect most dominated by herbivore insects that feeds by plant vascular and flower. Functional Feeding Group(FFG) of insect larvae most found with feeding type gathering-collectors and scrapers. Composition of insect larvae FFG from three waterfall sites Parang Ijo, Jumog, and Grojogan Sewu shows that these waterfall are the upstreams. The site characters of Parang Ijo and Grojogan Sewu shows a lot similarity from data vegetation, insects, and enviromental parameter.

Key words: abundance, environmental parameter, larvae, riparian zone, vegetation.