

ABSTRACT

Ulum, Moh. Alfian. Bahrul , 2013. Arthropod Diversity and Dominance in the Land Nature Reserve Manggis Gadungan and coffee-based agroforestry plantations in the district Mangli Puncu Kediri. Thesis. Department of Biology. Faculty of Science and Technology. State Islamic University (UIN) Maulana Malik Ibrahim Malang.
Supervisor: (I) Dwi Suheriyanto, S.Si, MP
(II) Ach. Nashichudin, MA

Keywords: Diversity, Dominance, Soil Arthropods, Mangosteen Gadungan Nature Reserve, Overlapping Sari Coffee Plantation, Coffee Plantation.

Soil is a substrate or medium that serves as habitat for arthropods, particularly soil arthropods rely on state land. Biotic and abiotic factors on the ground will affect soil conditions. Difference land use will affect the abundance and composition of soil arthropods. Diversity of soil arthropods in forest Nature Reserve Manggis Gadungan (CAMG) is an arthropod natural ecosystems soil, land use intercropping coffee plantations (PTS) and coffee plantations (PK), with differences in land use systems it is known arthropod diversity and dominance of the land.

The study was conducted in a forest reserve and Bogus Natural Mangosteen Coffee Plantation Mangli Puncu Kediri sub district. Identifikasi results of research carried out at the Laboratory of Ecology Department of Biology, Faculty of Science and Technology of the State Islamic University (UIN) Maulana Malik Ibrahim Malang. Exploratory research method uses directly using a *hand sorting* and extraction using *barless-tullgren*.

The results showed the soil arthropods in the forest (CAMG) found 15 order which consisted of 40 families with a total of 636 individuals, which acts as a soil arthropod predators (24 family), herbivor (7 family), omnivor (1 family), decomposers (1 family), and detrivor (8 family). In (PTS) intercropping system using soil arthropods found 14 order which consisted of 31 family with a total of 489 individuals, which acts as a soil arthropods predators (18 family), herbivor (5 family), omnivor (1 family), parasitoids (1 family), and detrivor (5 family). In (PK) soil arthropods found 15 order consisting of 38 families with a total of 609 individuals, which acts as a soil arthropod predators (25 family), herbivor (4 family), omnivor (1 family), parasitoids (1 family), and detrivor (7 family). Diversity index (H') highest cumulative Shannon Forest (CaMg) (2,70), whereas in (PTS) (1.95), and (PK) (2,10). Dominance value (C) is highest cumulative Simpson on (PTS) (0.29), while in the forest (CaMg) (0.09), and (PK) (0.25).