

ABSTRACT

Qiptiyah, Mariatul. 2014. *Arthropod Diversity of Soil in Tea Plantation PTPN XII Bantaran Blitar*. Thesis. Department of Biology. Faculty of Science and Technology. State Islamic University (UIN) Maulana Malik Ibrahim Malang.
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Soil arthropods are arthropods that live in the soil either ground level or in the soil. Soil arthropods have a very vital role in the food chain particularly as use as soil enricher and improve environmental quality plantation, because without these natural organisms would not be able to recycle organic materials. Soil arthropods depends on the soil conditions. Biotic factors and abiotic constraints on land will affect the diversity of soil arthropods. Tea Plantation is one of the results of the plantation commodities had an important role in the economic activity in Indonesia. The development of tea production in Indonesia during the last five years have fluctuated. Efforts to improve the productivity of tea leaf tea by way of trimming to maintain the condition of the fields picking and getting high crop productivity. The trimmed expected to affect the existence of soil arthropods in both the soil and the soil surface.

The study aims to determine the diversity arthropoda soil and their role in tea plantations. The study was conducted on a tea plantation PTPN XII Bantaran Blitar. Identification of soil arthropods conducted at the Laboratory of Ecology and optical laboraorium Biology Department of the State Islamic University (UIN) Maulana Malik Ibrahim Malang. The research method uses direct exploration using a hand sorting and indirectly using pitfall traps.

The results showed the soil arthropods in tea plantations found 16 order consisting of 61 families with a total of 3806 individuals, soil arthropods that act as predators (28 families), herbivores (14 families), detritivor (13 families), decomposers (4 families), parasites (1 family), and parasitoids (1 family). In arthropods in the soil obtained the total number of individuals in 1910 covers 15 orders and 45 families, arthropods in the soil that act as predators (19 families), detritivor (12 families), decomposers (2 families), parasites (1 family), parasitoids (1 family), and herbivores (10 families). On the ground arthropods were found in 1896 consisting of 12 orders and 29 families, soil surface arthropod predators found (16 families), parasitoids (1 family), herbivores (5 families), decomposers (3 families), and detritivor (7 families).

Diversity index (H') the cumulative Shannon on higher ground (2.70), from the soil surface (2.30). Dominance value (C) Simpson cumulative higher ground level (0.14), from the ground (0.25).