

ABSTRAK

KEANEKARAGAMAN NEMATODA TANAH DI TAMAN HUTAN RAYA WAN ABDUL RACHMAN

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Perubahan Taman Hutan Raya Wan Abdul Rachman menjadi lahan agroforestri mempengaruhi kondisi tutupan lahan. Produksi seresah yang berkurang oleh vegetasi dapat menurunkan kandungan bahan organik di dalam tanah yang merupakan sumber makanan bagi biota tanah. Nematoda tanah merupakan salah satu biota yang dapat dijadikan indikator perubahan lingkungan tanah karena responnya yang tinggi terhadap gangguan. Penelitian ini bertujuan untuk mengetahui komunitas nematoda tanah dan mengetahui perbandingan komunitas nematoda pada blok pemanfaatan dan blok lindung di HPKT Tahura WAR. Penelitian dilaksanakan pada bulan April - Mei 2018 dengan mengambil sampel tanah di delapan arboretum yaitu arboretum 1-4 yang terletak di blok pemanfaatan dan arboretum 7-10 yang terletak di blok lindung. Ekstraksi nematoda tanah dengan metode penyaringan bertingkat dan sentrifugasi. Fiksasi nematoda menggunakan larutan Golden X. Preparat permanen menggunakan larutan Seinhorst I dan larutan Seinhorst II. Preparat permanen ini dibuat untuk

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pengamatan nematoda di bawah mikroskop stereo binokuler pada perbesaran 400 kali. Nematoda diidentifikasi hingga tingkat genus berdasarkan ciri morfologinya. Hasil penelitian menunjukkan bahwa di HPKT Tahura WAR ditemukan 34 genus nematoda yang terdiri dari 20 genus nematoda parasit tumbuhan dan 14 nematoda hidup bebas. Blok pemanfaatan ditemukan sebanyak 30 genus nematoda yang terdiri dari 19 genus nematoda parasit tumbuhan dan 11 genus nematoda hidup bebas sedangkan blok lindung ditemukan sebanyak 29 genus nematoda yang terdiri dari 17 genus nematoda parasit tumbuhan dan 12 genus nematoda hidup bebas. Kelimpahan nematoda berkisar 171-617 individu/300cc tanah. Keragaman nematoda tanah berdasarkan indeks *Shannon-Wiener* berkisar 2,33 – 2,8 yang tergolong kriteria sedang dengan Indeks *Simpson's* berkisar 0,862 – 0,929.

Kata kunci : Hutan Pendidikan Unila, komunitas nematoda, Tahura Wan Abdul Rachman

ABSTRACT

DIVERSITY OF SOIL NEMATODE IN WAN ABDUL RACHMAN FOREST PARK

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The changes of Wan Abdul Rachman Forest Park into an agroforestry affected condition of land cover. The reduction of litter production by vegetation could also reduce the soil organic material which was a food source for the soil biota. Soil nematodes were one of biota that could be used as an indicator of the changes in soil environment due to its high respon to disturbances. This research aimed to determine the community of soil nematodes in the HPKT WAR Forest Park, also to know the comparison of the soil nematodes community in utilization block and protection block. The research was conducted in April - May 2018 by collected soil samples in eight arboretums that was arboretum 1-4 located in the utilization block and arboretum 7-10 which located in the protected blocks. The extraction of soil nematode used multilevel filtration method and centrifugation method. The fixation of nematodes used Golden X solution. The permanent preparat used the Seinhorst I solution and Seinhort's II solution. Permanent preparat was made to observe nematodes under a binocular stereo microscope at 400 times

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magnification. The nematodes was identified until its genus based on their morphological characteristics. The results showed there were 34 nematodes genera consisted of 20 genera of parasitic nematodes and 14 free-living nematodes in the HPKT of WAR Forest Park. Nematodes which were found on utilization block were 30 nematode generas consisted of 19 genera of parasitic nematodes and 11 free living nematodes. Nematodes which were found on protection block were 29 nematode generas consisted of 17 genera of parasitic nematodes and 11 free living nematodes. The abundance of nematodes was about 171-617 individuals/300cc soils. The diversity of soil nematodes based on *Shannon-Wiennner* index was about 2,33 – 2,8 which classified as medium and based on *Simpson's* index was about 0,862 – 0,929.

Keywords : Nematodes community, Unila Education Forest, Wan Abdul Rachman Forest Park