

**DINAMIKA *Atelocauda digitata*, PENYEBAB PENYAKIT KARAT PADA  
*Acacia auriculiformis* DI WANAGAMA I, GUNUNGKIDUL**

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**Intisari**

Penelitian ini bertujuan untuk mengetahui perkembangan *A. digitata* yang menyerang *A. auriculiformis* di Wanagama I dan mengetahui proses infeksi jamur *A. digitata* pada *A. auriculiformis*. Plot pengamatan dilakukan di petak 5, 7, dan 16 di Hutan Pendidikan Wanagama I. Kuantifikasi keberadaan patogen dan kerusakan yang merupakan bagian dari monitoring kesehatan pohon diwakili dengan persen kejadian dan tingkat keparahan penyakit yang digunakan sebagai tolak ukur dinamika *A. digitata*. Organisme patogen dibuktikan dengan Uji Patogenesitas. Proses infeksi dipelajari secara mikroskopis dan makroskopis.

Pada petak pengamatan di Hutan Pendidikan Wanagama I terdapat tiga jamur patogen yaitu *Oidium* sp. penyebab penyakit embun tepung, *Meliola* sp. penyebab penyakit embun jelaga dan *A. digitata* penyebab penyakit karat. Ketiga patogen ini bersifat parasit obligat. *A. digitata* menyebabkan kerusakan yang lebih parah dibanding dengan kedua patogen lainnya, sehingga penelitian lebih di fokuskan pada *A. digitata* yg menyerang *A. auriculiformis*.

Persen kejadian dan tingkat keparahan penyakit dari ketiga plot pengamatan selama musim hujan dan kemarau bersifat dinamis dengan kerusakan yang paling tinggi dijumpai pada Petak 5. *A. digitata* yang menginfeksi *A. auriculiformis* menghasilkan tiga jenis spora, yaitu teliospora, urediniospora dan aeciospora. Melalui lubang alami (stomata), hifa menginfeksi jaringan daun dua hari setelah inokulasi. Hifa intraseluler ditemukan lima hari setelah inokulasi.

Kata kunci: *Atelocauda digitata*, penyakit karat, *Acacia auriculiformis*.

**DYNAMICS OF *Atelocauda digitata*, THE CAUSE OF RUST DISEASE ON  
*Acacia auriculiformis*, AT WANAGAMA I, GUNUNGKIDUL REGENCY**

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**Abstract**

The research was aimed at determining the growth of *A. digitata* which attacked *A. auriculiformis* at Wanagama I, and determining the process of *A. digitata* fungi infection on *A. auriculiformis*. Observation was carried out at compartment 5, 7, and 16 in Wanagama I Educational Forest. Quantification of pathogen presence and damage, as part of health and disease monitoring, was represented by the percentage of disease incidence and severity, which was used as a benchmark of *A. digitata* dynamics. Pathogenic organisms were confirmed by Pathogenicity Test. The process of infection was studied microscopically and macroscopically.

On the observation plot in Wanagama I Educational Forest there were three pathogenic fungi, namely *Oidium sp.* which caused powdery mildew disease, *Meliola sp.* which caused sooty mold disease and *A. digitata* which caused rust disease. The three pathogens were obligate parasites. Economically, *A. digitata* caused a bigger damage than the other two pathogens, therefore, the research was focused more on *A. digitata* which attacked *A. auriculiformis*.

Percentage of incidence and severity of disease from the three observation plots during the rainy season and the dry season was dynamic, in which the highest damage was discovered at compartment 5. *Atelocauda digitata* which infected *A. auriculiformis* produced three types of spores, namely teliospores, urediniospores and aeciospores. Through the stomata, the hyphae infected the leaf tissue two days after inoculation. Intracellular hyphae was found five days after inoculation.

Keywords: *Atelocauda digitata*, rust disease, *Acacia auriculiformis*.