

INTISARI

POTENSI *Oxyopes javanus* (Araneae: Oxyopidae) SEBAGAI PREDATOR *Helopeltis bradyi* (Hemiptera: Miridae) HAMA TEH

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Laba-laba jenis *Oxyopes javanus* ditemukan berasosiasi dengan *Helopeltis bradyi*, hama utama teh. Penelitian ini bertujuan untuk menilai potensi laba-laba sebagai predator dan agens pengendalian hayati hama *H. bradyi*. Potensi dilihat dari sinkronisasi predator-mangsa (kemiripan pola distribusi spasial), dependensi predator terhadap hama (respons numerik), agregasi predator terhadap populasi mangsa tertinggi, dan daya makan predator. Penelitian berlangsung dalam bulan Januari – Juni 2024 di kebun teh PT. Pagilaran Unit Produksi Pagilaran, Kabupaten Batang, Jawa Tengah, pada blok kebun Karangdadi I/II. Unit sampel adalah individu pohon teh yang sudah berproduksi berumur muda dan bergejala serangan *H. Bradyi*. Kepadatan populasi hama dan predator pada tanaman teh sampel diamati periodik setiap seminggu sekali sebanyak delapan kali. Tanaman sampel sebanyak 30 unit diambil dengan metode acak sistematis. Daya makan individu laba-laba pada *H. bradyi* instar ke-3 dan ke-5 diuji di laboratorium. Hasil penelitian menunjukkan bahwa laba-laba jenis *O. javanus* berpotensi tinggi sebagai predator dan kandidat agens pengendalian hayati yang menjanjikan pada *H. bradyi*. Predator sinkron dengan mangsanya dilihat dari kemiripan pola distribusi spasialnya yaitu mengelompok. Predator menunjukkan dependensi terhadap mangsa yang ditunjukkan oleh respons numerik dengan korelasi yang sangat kuat ($r = 0,818$) dan menunjukkan agregasi yang sangat lemah sampai lemah terhadap mangsa. Daya makan individu predator cukup tinggi, dalam 10 jam laba-laba betina memakan *H. bradyi* sebanyak 31 ekor instar ke-3 dan 9 ekor instar 5, sedangkan laba-laba jantan sebanyak 12 ekor instar ke-3 dan 8 ekor instar ke-5.

Kata kunci: agregasi, daya makan, dependensi, distribusi spasial, *Helopeltis bradyi*, *Oxyopes javanus*

ABSTRACT

POTENCY OF *Oxyopes javanus* (Araneae: Oxyopidae) AS A PREDATOR OF *Helopeltis bradyi* (Hemiptera: Miridae) THE TEA PEST

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The *Oxyopes javanus* spider was found to associate with *Helopeltis bradyi*, the major pest of tea. This research aimed to determine potency of the spider as a predator and biological control agent for the *H. bradyi*. The predatory potency was indicated with predator-prey synchronization (similarity in spatial distribution patterns), predator dependency against pests (numerical response), predator aggregation to the highest prey population density, and predator voracity. The research took place from January to June 2024 at the Karangdadi I/II tea plantation block of PT. Pagilaran Plantation in Batang Regency, Central Java Province. The sample unit was an individual of young productive tea plant that had symptoms of *H. bradyi* attack. The population density of pests and predators on sample tea plants was observed *in situ* periodically once a week for eight times. A total of 30 sample plants were taken using a systematic random sampling method. The voracity of individual spider feeding on the 3rd and 5th instars of *H. bradyi* was tested in the laboratory. Results showed that the *O. javanus* spider performed high potential as a predator and a promising candidate for biological control agents to the *H. bradyi*. The predator was synchronous with its prey as indicated with similarity of their spatial distribution patterns, namely clumped. The predator showed strongly dependent to the prey as indicated by a numerical response with a very strong positive correlation ($r = 0.818$) and showed very weak aggregation to prey density. The predator was voracious, within 10 hours a single female spider ate 31 individuals of 3rd instars and 9 individuals of 5th instars of *H. bradyi*, while the male spider ate 12 individuals of 3rd instars and 8 individuals of 5th instars.

Key words: aggregation, dependency, spatial distribution, voracity