

INTISARI

DISTRIBUSI SPASIAL *Helopeltis bradyi* DAN *Oxyopes javanus* DI PERKEBUNAN TEH PT PAGILARAN, BATANG, JAWA TENGAH

Novira Maya Sari

16/407504/PPN/04155

Helopeltis bradyi merupakan salah satu hama utama tanaman teh, sehingga cemiri ekologis penting diketahui untuk mendukung pengembangan sistem pengelolaan dan pengendaliannya. Penelitian ini bertujuan untuk mengetahui pola distribusi spasial *Helopeltis bradyi* dan *Oxyopes javanus* secara horizontal dan vertikal pada perkebunan teh PT Pagilaran, Jawa Tengah dalam musim penghujan 2018. Pengamatan populasi untuk distribusi Horizontal dilakukan *in situ* pada 30 pohon sampel yang diambil secara acak, setiap 3 hari sekali berturut-turut selama 30 hari. Pengamatan populasi untuk distribusi vertikal dilakukan *in situ* pada 20 pohon sampel terserang yang diambil secara acak, selama 10 hari berturut-turut, pada pagi, siang, dan sore. Pola distribusi spasial ditentukan berdasarkan indeks dispersi (ID) Poisson, binomial negatif, dan *Green's index* (GI). Hasil kajian menunjukkan bahwa laba-laba *O. javanus* ditemukan memangsa hama *H. bradyi*. Koeksistensi antara hama dan predator ini pada bagian tanaman yang sama hama sendiri, dan predator sendiri, berturut-turut terjadi pada pagi hari sebanyak 50,0; 42,8; dan 7,2%, siang hari 58,3; 41,7; dan 0%, serta sore hari 66,7; 33,3; dan 0%. Bagian tanaman tempat koeksistensi tersebut adalah daun peko, lembar daun muda ke-1, ke-2, ke-3, ke-4, dan lembar daun tua ke-1. Rasio predator : mangsa pada pagi, siang, dan sore hari berturut-turut sekitar 1:10,7; 1:16,7, dan 1:10,0. Hasil kajian pola distribusi menunjukkan bahwa *H. bradyi* pada pertanaman teh tahun pangkas pertama di kebun teh PT Pagilaran mengikuti pola mengelompok sangat lemah, sedangkan *O. javanus* cenderung acak hingga seragam. Pola distribusi vertikal pada pagi, siang dan sore hari untuk *H. bradyi* termasuk mengelompok yang lemah, sedangkan untuk *O. javanus* termasuk seragam. Peran *O. javanus* sebagai musuh alami *H. bradyi* perlu dikaji lanjut.

Kata kunci: *Helopeltis bradyi*, koeksistensi, *Oxyopes javanus*, pola distribusi, teh.

ABSTRACT

SPATIAL DISTRIBUTION OF *Helopeltis bradyi* AND *Oxyopes javanus* IN PT PAGILARAN TEA PLANTATIONS, BATANG, CENTRAL JAVA

Novira Maya Sari

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Helopeltis bradyi is one of the main pest in tea plantation. It is important to understand its ecological characteristics to support the development of their management and control measures. This study aimed to determine the spatial distribution patterns of *Helopeltis bradyi* and *Oxyopes javanus* horizontally and vertically at the PT Pagilaran tea plantation in Central Java during 2018 rainy season. Observations for Horizontal distribution were carried out in situ on 30 random trees taken each 3 days for 30 consecutive days. While for Vertical distribution were carried out in situ on 20 infested sample-trees at which taken randomly, for 10 consecutive days, in the morning, at noon and in the afternoon. The distribution patterns were determined based on Poisson dispersion index (ID), negative binomial, and Green's index (GI). The results showed that the *O. javanus* spider was found preying on *H. bradyi* pests. Coexistence between this pest and predator in the same part of the plant, the pest alone, and the predator alone, occurred in the morning as many as 50.0, 42.8, and 7.2%, at noon 58.3, 41.7, and 0%, and at the afternoon 66.7, 33.3, and 0%. The parts of the plant for the coexistence are peko leaves, the 1st, 2nd, 3rd, and 4th of young leaf sheet, and 1st of elder leave sheets. The pattern of horizontal distribution for *H. bradyi* was the very weak clumped, while for *O. javanus* was random to uniform. The pattern of vertical distribution in the morning, at noon and in the afternoon for *H. bradyi* was weak clumped, while for *O. javanus* was uniform. Ratio between predator : prey in the morning, at noon and in the afternoon approximately 1:10.7, 1:16.7, and 1:10.0, respectively. The role of *O. javanus* as a natural enemy of *H. bradyi* needs to be further studied.

Keywords: coexistence, distribution pattern, *Helopeltis bradyi*, *Oxyopes javanus*, tea