

RINGKASAN

Aktivitas harian lebah *Heterotrigona itama* pada tanaman meliputi pengumpulan nektar dan polen dari bunga. Aktivitas terbang harian lebah dimulai sejak pagi sampai sore hari tergantung kondisi cuaca dan ketersediaan sumber pakan. Kunjungan lebah dalam mengambil nektar pada bunga merupakan perilaku khusus yang menggambarkan kuantitas dan kualitas nektar bunga. Tanaman *Dombeya wallichii* merupakan salah satu sumber pakan bagi *H. itama* karena ketersediaan nektar dan polennya yang cukup banyak. Suhu dan kelembaban sangat mempengaruhi aktivitas pengumpulan nektar dan polen lebah, oleh karena itu perlu dilakukan evaluasi hubungan nektar lingkungan seperti suhu dan kelembaban terhadap aktivitas pencarian pakan pada lebah *H. itama*. Penelitian ini bertujuan untuk mengetahui hubungan faktor lingkungannya seperti suhu dan kelembaban terhadap aktivitas harian lebah *H. itama* pada tanaman *D. wallichii*.

Penelitian ini dilakukan di Kelurahan Pabuwaran, Banyumas dengan menggunakan metode survey. Pengambilan sampel dilakukan dengan teknik *simple random sampling*. Pengamatan kunjungan lebah *H. itama* pada tanaman *D. wallichii* dilakukan sebanyak 15 ulangan pada pukul 06.00–09.00 WIB, 09.00–12.00 WIB, 12.00–15.00 WIB, 15.00–18.00 WIB. Pengamatan kunjungan lebah pada bunga dan lama kunjungan lebah pada bunga didokumentasikan menggunakan kamera dan *stopwatch*. Hubungan antara waktu dengan jumlah kunjungan lebah dianalisis menggunakan uji Anova selanjutnya dilakukan uji korelasi dan regresi dengan bantuan *software SPSS*.

Hasil penelitian menunjukkan bahwa jumlah kunjungan lebah *H. itama* terhadap bunga *D. wallichii* cenderung fluktuatif, sedangkan lama kunjungan mengalami peningkatan konstan. Faktor lingkungan pada lokasi pengamatan menunjukkan semakin tinggi suhu maka kelembaban akan menurun begitu juga sebaliknya. Waktu pengamatan berpengaruh nyata terhadap lama kunjungan ($0,0006 < 0,05$). Suhu tidak berkorelasi terhadap jumlah dan lama kunjungan. Kelembaban tidak berkorelasi terhadap jumlah kunjungan namun berkorelasi negatif terhadap lama kunjungan ($-0,008 < 0,05$). Hubungan suhu dan kelembaban terhadap jumlah kunjungan memiliki persamaan $Y = 32.1229 - 0.5291 X_1 - 0.1878 X_2$, sedangkan terhadap lama kunjungan memiliki persamaan $Y = 4391.6628 - 50.7779 X_1 - 37.7408 X_2$. Kenaikan suhu dan kelembaban akan menurunkan jumlah dan lama kunjungan.

Kata kunci: Aktivitas harian, *Dombeya wallichii*, *Heterotrigona itama*, kelembaban, suhu

SUMMARY

The daily activities of *Heterotrigona itama* bees on plants include collecting nectar and pollen from flowers. Bees' daily flying activity starts from morning to evening depending on weather conditions and availability of food sources. The visit of bees to collect nectar from flowers is a special nectar that describes the quantity and quality of flower nectar. The *Dombeya wallichii* plant is a source of food for *H. itama* because of the availability of quite a lot of nectar and pollen. Temperature and humidity greatly influence the nectar and pollen collection activities of bees, therefore it is necessary to evaluate the relationship between environmental factors such as temperature and humidity on the foraging activities of *H. itama* bees. This research aims to determine the relationship between environmental factors such as temperature and humidity on the daily activity of *H. itama* bees on *D. wallichii* plants.

This research was conducted in Pabuwaran Village, Banyumas using a survey method. Sampling was carried out using a simple random sampling technique. Observations of *H. itama* bee visits on *D. wallichii* plants were carried out in 15 repetitions at 06.00–09.00 WIB, 09.00–12.00 WIB, 12.00–15.00 WIB, 15.00–18.00 WIB. Observations of bee visits to flowers and the duration of bee visits to flowers were documented using a camera and stopwatch. The relationship between time and the number of bee visits was analyzed using the Anova test, then correlation and regression tests were carried out with the help of SPSS software.

The results showed that the number of visits by *H. itama* bees to *D. wallichii* flowers tended to fluctuate, while the duration of visits increased steadily. Environmental factors at the observation location show that higher temperature, lower humidity, and vice versa. Observation time had a significant effect on visit duration ($0,0006 < 0,05$). Temperature does not correlate with the number and duration of visits. Humidity is not correlated with the number of visits but is negatively correlated with the duration of visit ($-0,008 < 0,05$). The relationship between temperature and humidity to the number of visits has the equation $Y = 32,1229 - 0,5291 X_1 - 0,1878 X_2$, while the duration of visit has the equation $Y = 4391.6628 - 50.7779 X_1 - 37.7408 X_2$. Increases in temperature and humidity will reduce the number and duration of visits.

Keywords: Daily activity, *Dombeya wallichii*, *Heterotrigona itama*, humidity, temperature