

RINGKASAN

Rayap merupakan serangga sosial yang termasuk ke dalam ordo Isoptera. Peran ekologis komunitas rayap pada suatu habitat dapat diketahui dengan mengamati keragaman spesies rayap dan kelimpahannya. Aktivitas rayap sangat dipengaruhi oleh faktor suhu dan curah hujan. Rayap mudah dijumpai di dataran rendah tropik. Sejauh ini penelitian rayap berlangsung pada lahan subur, dan belum banyak penelitian pada lahan karst atau kapur. Tanah dengan kandungan kapur yang tinggi akan berakibat pH yang tinggi, sebagaimana tanah Kawasan Karst Gombang Selatan. Tujuan penelitian ini untuk mengetahui keragaman, kelimpahan, dominansi rayap ordo Isoptera dan perbedaan antar petak di Kawasan Karst Gombang Selatan Kebumen Jawa Tengah. Metode yang digunakan adalah survei, teknik pengambilan sampel diatur sebagai berikut. Area karst dibagi tiga lokasi berdasarkan arah mata angin, yaitu lokasi 1 kecamatan Rowokele (lereng Utara), lokasi 2 dan 3 mencakup Kecamatan Ayah (lereng Barat dan Selatan). Dari setiap lokasi, rayap diambil pada pohon hidup, pohon mati, kulit pohon, serasah dan tanah. Rayap kasta prajurit yang diperoleh diambil dan dimasukkan ke dalam botol berisi alkohol 70%. Temperatur, kelembapan udara, intensitas cahaya, dan pH tanah diukur sebagai variabel pendukung. Data yang didapat dianalisis dengan uji F (ANOVA) untuk membedakan kelimpahan rayap antar lokasi. Penelitian ditemukan tiga spesies rayap di Kawasan karst Gombang Selatan yaitu *Macrotermes gilvus*, *Microtermes insperatus*, dan *Schedorhinotermes javanicus*. Semua dari kelompok rayap pemakan kayu. Tingkat keragaman dan pemerataan rayap rendah dan perbedaan lokasi sampling menyebabkan perbedaan jumlah individu rayap.

Kata Kunci : *Karst Gombang Selatan, kelimpahan, keragaman, rayap*

SUMMARY

Termites are social insects in the Isoptera order. The ecological role of the termites community in a habitat can be determined by knowing the diversity of termite species and their abundance. Termite activity is strongly influenced by temperature and rainfall factors. Termites are easily found in tropical lowlands. Research about termites was took place on fertile land, and there has not any research on karst or limestone fields. Soil with a high content of limestone will result in high pH, as does the land of the Southern Gombong Karst Region. The purpose of this study was to determine the diversity, abundance, dominance of termites of the Isoptera order and differences between plots in the Karst area of Southern Gombong, Kebumen, Central Java. The method used was survey method, the Sampling technique was arranged as the karst area divided into three namely location 1 Rowokele sub-district (Northern slope), location 2 and 3 encompassing Ayah District (Western and Southern slope). From each part, termites are taken from living trees, dead trees, tree bark, litter and soil. Soldier caste termites obtained were taken and put into small bottles containing 70% alcohol. Temperature, humidity, light intensity, and soil pH are measured as supporting variables. The data obtained were analyzed using the Shannon-Wiener diversity index, Shannon-Evenness evenness index, and dominance index and F (ANOVA) test to determine the termites abundance between locations. The results obtained by three species of termites, namely *Macrotermes gilvus*, *Microtermes insperatus*, and *Schedorhinotermes javanicus*. All are from wood-eating termite groups. Shannon-Wiener diversity index (H') and Evenness index (E) are in the low category and there is no dominant species. The conclusions that can be drawn from this study are that the South Gombong karstic soil in the Southern Gombong Karst area has a low diversity and abundance of termites and different sampling locations cause differences in the number of termite species.

Keywords : Abundance, diversity, Southern Gombong, termite