

RINGKASAN

Tumbuhan rheophyte merupakan tumbuhan tahan banjir yang hidup pada zona dasar sungai dan tepian sungai berbatu dan berarus deras, tumbuhan ini dapat tumbuh hingga mencapai ketinggian banjir yang terjadi secara teratur. Sungai batang merangin yang terdapat di Desa Air Batu memiliki panjang ± 16 km dan lebar ± 75 m dengan lebar daerah batuan ± 10 m. Penelitian ini bertujuan untuk melihat komposisi dan struktur vegetasi rheophyte di sungai Batang Merangin. Penelitian ini dilakukan di 10 titik stasiun berbeda melalui metode *purposive sampling*. Pengambilan data dilakukan dengan metode plot kuadrat dengan bantuan garis transek (sungai). Plot penelitian diletakkan secara sistematis dengan jumlah 6 plot setiap stasiun. Pengambilan sampel dilakukan pada setiap plot dan dilakukan dokumentasi. Preparasi sampel di lapangan dilakukan dengan pemberian alkohol 70% dan dibungkus koran dan plastik untuk selanjutnya dibuat herbarium lalu diidentifikasi. Selain itu dilakukan pengukuran faktor fisika dan kimia lingkungan berupa pH tanah, kelembapan tanah, suhu tanah, suhu udara, kelembapan udara dan intensitas cahaya, kandungan Posfat dan Nitrat air sungai. Analisis data menggunakan rumus Indeks Nilai Penting, Indeks Keanekaragaman, Indeks Kemerataan jenis dan *Principal Component Analysis* (PCA). Hasil penelitian menunjukkan terdapat 18 famili yang terdiri dari 39 spesies dan 2.425 individu tumbuhan yang menyusun vegetasi di Daerah Aliran Sungai Batang Merangin. spesies *Phyllanthus rheophyticus* merupakan spesies yang paling mendominasi di kawasan sungai Batang Merangin. Indeks keanekaragaman tumbuhan di sungai Batang Merangin menunjukkan keanekaragaman sedang. Untuk indeks kemerataan jenis tumbuhan menunjukkan persebaran tumbuhan di sungai Batang Merangin kurang merata. Hubungan parameter fisika-kimia lingkungan dengan keanekaragaman dan kemerataan jenis tumbuhan rheophyte menunjukkan korelasi positif pada parameter kandungan nitrat perairan, kelembapan udara dan intensitas cahaya. Serta berkorelasi negative pada parameter suhu udara, suhu tanah, kelembapan tanah, pH tanah dan kandungan fosfat.

Kata Kunci : Rheophyte, Keanekaragaman, Kemerataan, Parameter Lingkungan, Sungai Batang Merangin

SUMMARY

The rheophyte plant is a flood-resistant plant that lives in rocky and fast-flowing riverbed zones and riverbanks. This plant can grow to a height of regular flooding. The Batang Merangin River in Air Batu Village has a length of ± 16 km and a width of ± 75 m with a rock area of ± 10 m. This study aims to look at the composition and structure of rheophyte vegetation in the Batang Merangin river. This research was conducted at 10 different station points using a purposive sampling method. Data collection was carried out using the quadratic plot method with the help of transect lines (rivers). The research plots were laid out systematically with a total of 6 plots for each station. Sampling was carried out on each plot of 2 samples per species and documentation was carried out. Samples are labeled with a collection number and location found. Sample preparation in the field was carried out by adding 70% alcohol and wrapping it in newspaper and plastic for further herbarium making and identification. In addition, measurements of environmental physical and chemical factors were also carried out in the form of soil pH, soil moisture, soil temperature, air temperature, air humidity and light intensity, phosphate and nitrate content of river water. Data analysis used the formulas for Important Value Index, Diversity Index, Species Evenness Index and Principal Component Analysis (PCA). The results showed that there were 18 families consisting of 39 species and 2,425 individual plants that make up the vegetation in the Batang Merangin Watershed. *Phyllanthus rheophyticus* species is the most dominant species in the Batang Merangin river area. The diversity index of plants in the Batang Merangin river shows moderate diversity. The evenness index of plant species shows that the distribution of plants in the Batang Merangin river is uneven. The relationship between physico-chemical parameters of the environment and the diversity and evenness of rheophyte plant species showed a positive correlation with the parameters of water nitrate content, air humidity and light intensity. As well as a negative correlation on the parameters of air temperature, soil temperature, soil moisture, soil pH and phosphate content.

Keywords : Batang Merangin River, Diversity, Environmental Parameters, Evenness, Rheophyte