

ZOO INDONESIA

Jurnal Fauna Tropika

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Masyarakat Zoologi Indonesia (MZI) adalah suatu organisasi profesi dengan anggota terdiri dari peneliti, pengajar, pemerhati dan simpatisan kehidupan fauna tropika, khususnya fauna Indonesia. Kegiatan utama MZI adalah pemasyarakatan tentang ilmu kehidupan fauna tropika Indonesia, dalam segala aspeknya, baik dalam bentuk publikasi ilmiah, publikasi populer, pendidikan, penelitian, pameran ataupun pemantauan.

Zoo Indonesia adalah sebuah jurnal ilmiah di bidang fauna tropika yang diterbitkan oleh organisasi profesi keilmiah Masyarakat Zoologi Indonesia (MZI) sejak tahun 1983. Terbit satu tahun satu volume dengan dua nomor (Nopember & Juni). Memuat tulisan hasil penelitian dan tinjauan ilmiah yang berhubungan dengan aspek fauna, khususnya wilayah Indonesia dan Asia. Publikasi ilmiah lain adalah Monograph Zoo Indonesia - Seri Publikasi Ilmiah, terbit tidak menentu.

Short note

SUGAR ANALYSIS OF THE DIGESTIVE TRACT OF *Tabanus rubidus* (DIPTERA: TABANIDAE)

Sri Hartini, Janita Aziz & Chairul

Pusat Penelitian Biologi-LIPI, Cibinong

An analysis of sugar consumed by *Tabanus rubidus* flies in their natural habitat was conducted at Treub Chemical Laboratory, Puslit Biologi-LIPI (formerly Puslitbang Biologi LIPI). The aim of this examination was to find out the type of sugar found in *T. rubidus* digestive tract to enable to produce an artificial feed for flies during rearing in the laboratory which was similar to their natural feed ones.

Flies were captured using butterfly net and only female were selected, dissected and their ingesta were removed and stored in 70% ethanol. One hundred thirty six samples were obtained from three different places at the Bogor municipality (Pasir Eurih, Darmaga and Jonggol). Sample from each collection site were soaked in 70% ethanol for three days, crushed, screened and coagulated. Each crude extract amounting 50 ml was injected

into HPLC with reverse phase condition using static phase column nucleosil NH₂ (4.6/250) and motile phase acetonitril-water (17:3).

The results indicated manosa, sacharosa and arabinosa were the main sugar group (Table 1). Lall (1970) and Magnareli & Anderson (1981) recorded that sugar content which was found on flies crops of *Chrysops vittatus* and some species of *Hybomitra* sp. Were glucose, fructose, sucrose, maltosa and raffinosa. The difference of sugar content could be attributed to the type of flower visited by the flies. Observation on the plants species around the flies collected location in this study were *Urena lobata*, *Lantana camara* and *Ipomea fistulosa*. No nectar collection was conducted in this study to compare the sugar content.

Table 1. Sugar content of *T. rubidus* digestive tract from three locations.

Location	Type of sugar		
	Manosa	Sacharosa	Arabinosa
Jonggol	+	+	+
Pasir Eurih	+	+	+
Darmaga	+	+	+

Diptera generally requires carbohydrate, protein and fat in order to sustain their metabolic process. Protein and fat are obtained from blood, while carbohydrate came from nectar of flowers. To meet the need of their carbohydrate requirements, Tabanid flies visit flowering plants to find some nectar which are being used to provide energy for different activities, such as mobility, feed gathering and

reproduction (Downes 1958). The absorption process of carbohydrate can only be found in the form of monosaccharide to be able being absorbed by in the middle and last parts of digestive organ of Diptera. Further analysis is required in order to find a better correlation between the sugar content in the digestive tract of the flies and the species of the plants visited.

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