Komunitas fauna Gua Petruk dan Gua Jatijajar Kabupaten Kebumen Tengah = Fauna community of Petruk and Jatijajar cave, Kebumen Regency, Central Java

Fahma Wijayanti, author

Abstrak

Limestone cave is an unique ecosystem with having characteristics on enclosed space, dark, stable temperature, moist, air sirculation and being inhabited by specific flora and fauna. A limestone cave ecosystem is fragile and unrenewable for the process of its formation needs millions of years (Bullock,1965:60; Whitten et al. 1996: 542). Petruk and Jatijajar limestone caves are located at the vicinity of South Gombong Crust ,Central Java. Being potential as tourist attractions, the two caves are made used by local government tourist agency of Kebumen Regency. To create a proper managament system which saveguard the ecological function of the cave as well as the related ecological process, studies on the biodiversity and ecology are needed.

The objectives of this study are primarily to understand : (1). The level of abundance of bats (2). The different of the physical environment which influence the bats populations (3). The diversity of fauna (4). The preference roosting place the bats at Petruk and Jatijajar cave. This study is conducted at Petruk cave and Jatijajar cave which are located at Ayah subdistric , Kebumen regency , Central Java in July - September 1999.

The estimation of bat populations is made by counting the total number of induvidual bats when they left the cave in the evening and roosting the roof of cave during the days. For physical environment studies of the cave, the temperature, humidity and the light intensity at every zone of the cave were measured. Avertebrata and water fauna diversity were calculated by square method (murray 1991: 48), and the vertebrate diversity by line transek method (Wardoyo: 1986:11). The habitat preference of bat's roosting was identified using several criteria including the distance of the roosting place from the cave enterance, temperature, humidity and light intensity of the roosting place of each bats colony.

To compare the physical data of the similar zone the ANOVA test was used at the level of 95 % signiticant (Walpole 1987: 383).The fauna diversity index was calculated by the Shanon - Whiner index (Cox, 1997:195). The similarity of those population were measured by Sorensen formula (Cox, 1997:197).The map for roosting habitat preference is made based on available map has been provided by Finspac' (1997), while for Jatijajar cave has been prepared by tourism agency of the Kebumen local goverment 1997.

Conclusions drawn from this study were : 1) The bat population of Petruk cave during the research was approximately 144.00 at 661,34 and of Jatijajar cave around 2.874 + 179,2. 2) The physical environment of Petruk cave was warmer, with a high humidity level , and darker than the Jatijajar cave. 3) The land fauna diversity of Petruk cave was higher than that of Jatijajar cave. However those caves have similarities concerning the water fauna diversity. 4) At petruk cave 8 roosting places in habited by 6 species of bat' s

namely : Rousettus amplexicaudatus, Hipposideros bicolor,Hipposideros diadema, Myotis horsfieldii, Tadarida plicata and Rhinolopus luctus. At Jatijajar cave there are 6 roosting places inhabited by 3 species of bat , namely: Rousettus amplexicaudatus, Hipposideros bicolor and Rhinoilopus luctus. At both of cave the R. amplexicaudatus prefer red to have a roosting place somewhere around the entrance due to sufficient light.

However R. luctus preferred to have a roosting place at the far end of the cave where the level of humidity is high and there is no light at all. The other species : H. bicofon H. diadema ,M, horsfieldii, and T. plicata preferred to have a roosting place at the medle of the cave which little light is available and the temperature and humidity are fluctuative.