The Wealth Typical Fauna Goa Ciampea Endangered Ecosystems

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Students Society of Nature Lover “Lawalata” of Bogor Agricultural University has successfully managed to collect 46 specimens in the cave ecosystem in its study on "Keanekaragaman Fauna Khas dalam Sistem Pergoaan di Kawasan Karst Ciampea (Diversity in the Typical Fauna of Karst Ecosystem in Ciampea)" on February to March 2011. The team successfully went into 3 (three) of the 13 (thirteen) recorded cave ecosystems, namely Sigodawang, Sidempet, and Sipanjang caves at Ciampea Village, Ciampea District, Bogor Regency. Unfortunately, natural wealth is endangered with extinction by mining limestone.

The objectives of the study were to obtain the initial data of the distribution and types of typical fauna of karst ecosystems of Ciampea caves which will be utilized as supporting data to review the mining of limestone activities that threaten the sustainability of ecosystems, including habitats of this unique fauna. The Team which was consisted of 9 (nine) members of Lawalata IPB implemented the data collection in three stages on three different cave, on 20 February 2011, 26 March 2011, and 27 March 2011, then they analyzed those samples in the Molecular laboratory of the Department of Biology and Laboratory of Bogor Agricultural University and Laboratory of Entomology of Indonesian Institute Sciences (Lembaga Ilmu Pengetahuan Indonesia LIPI). The research methodology utilized for the data collection was by direct collection.

Sigodawang, Sidempet and Sipanjang caves were selected as they are expected to have great potential as the habitat of karst fauna are that liveable in a very low light intensity or even in the fully darkenss zone. Those 3 (three) caves are vertical cave, so the team used a single rope techniques (Single Rope Technique) to enter.

The team successfully managed to collect 46 (fouyrt six) species of arthropods found in 11 (eleven) orders, 16 (sixteen) families, and 4 (four) genera in which morphologically and size they have different characteristics. Those families are as follows, Rhaphidophoridae, Staphylinidae, Carabidae, Reduviidae, Gryllidae, Blattidae, Blaberidae, Pentatomidae, Formicidae, Scuttigeridae, Parajulidae, Oxydesmidae, Polydesmidae, and Charontidae. Most insects identified were under the Blattidae family or cockroach and Gryllidae family or crickets.

Crickete identified in all three caves have very long antennae, about five times its body length. These crickets live on the walls of the cave to a depth of 35 meters. The specificity of the cricket is only identified in the typical species of cricket live in karst ecosystems. Such cricket is classified into the genus Rhaphidophora sp, in addition to cricket the team also identified arthropods or centipede with long antenna to adapt to environments with low light intensity.

The unique environment of the karst conditions were the reasons of the adaptation of those species, both physiologically and morphologically. In the future, it is expected new unique species in the karst ecosystems in Ciampea area will be identified. Ciampea cave ecosystems not only save the wealth of karst fauna, but also formed a hydrological systems to form the underground rivers in it. Such water systems is the source of the underground water that supply the basic water needs of all life. Mining of limestone will quickly damage the
hydrological system and accelerate the extinction of the typical fauna of the cave. “Lawalata” of Bogor Agricultural University has encouraged Bogor regency administration to review the mining activities that endanger the natural resources. (Wied)