

FUNDED BY
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FOUNDATION



THE OBJECTIVES OF PROJECT ARE

To perform biodiversity surveys of selected bacteria, fungi, plants, insect, arthropods, and on Southeast Sulawesi, Indonesia.

To screen biological materials for novel bioenergy applications.

To screen selected biological materials for novel therapeutics for treatment of cancer, additions, and immune system disorders such as HIV/AIDS.

To compare levels of biological diversity in several taxonomic groups to use that information to develop recommendations for strategies to conserve biodiversity.

To develop and encourage local conservation planning, education, and outreach efforts that are ecologically, economically, and socio-politically sound and effective

To develop effective international agreements related to sharing and development of biogenetic resources.

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INTERNATIONAL COOPERATIVE BIODIVERSITY GROUP (ICBG)

"Biodiversity Surveys in Indonesia and Discovery of Health and Energy Solutions"

Abstract

Sulawesi is known to have a high rate of species endemism. An inventory of flora, insect, vertebrates, and microbes at various elevation in the Mekongga mountains region is being performed as part of a US-NIH funded project from 2008 to 2013. Specimens are being deposited in collections in Indonesia and the US. Flora survey: 523 species flora were recorded. It was found at least two new species of *Begonia*, one new genus of bamboo and three species that were not previously recorded in Sulawesi. Three samples of trees belonging to the family *Moraceae* and *Euphorbiaceae* were collected for therapeutics screening. Insect survey: to date we have collected approximately 22,000 specimens of insects, including *Lepidoptera*, *Odonata*, Vespidae, parasitic wasps, Vespidae wasps, *Coleoptera*, *Orthoptera*, and many others. Microbe survey: microbes were collected from soil, plant surface, leaf litter and insect gut, and include 339 bacteria, 154 actinomycetes, 112 filamentous fungi, and 140 yeasts. Screening: microbe and plant samples are being assayed for anti-cancer, anti-HIV/AIDS, anti-inflammatory and neurological activity at UC Berkeley and ITB. Microbes are also being screened for energy applications including cellulose activity and high lipid content. Vertebrate survey: collected 34 bird species are endemic to Sulawesi. Other vertebrates include two endemic rats, 40 bat specimens including three endemic fruit bats, one *Macaca*, one wild pig, one lizard, one frog and one *Prosciurillus*. Local impact: The history of settlement, agriculture, and forestry in the area has been documented as well as traditional uses of native plants and animals. Conclusion: The biodiversity of Mekongga region is still very good, despite illegal logging and cacao plantation. These data will be used to support biodiversity preservation and watershed conservation programs.

AP1. Macro- organism Surveys

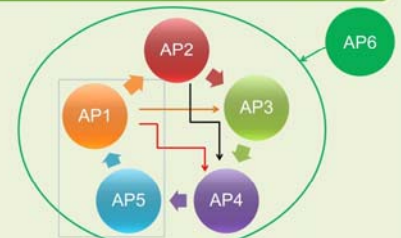
AP2. Micro-organism Surveys

AP3. Discovery of Energy Solutions

AP4. Discovery of Human Health Solutions

AP5. Conservation Research and Vertebrate Surveys

AP6. Conservation Partnerships, Training, and Ethics



To accommodate this goal, the program is divided into 6 groups



MEKONGGA MOUNTAINOUS RANGE



The project involves the participation of researchers from three institutions in Indonesia



as well as several other collaborators in both countries