BIODIVERSITY: BIOPROSPECTING IN BATAAN

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Ancestral Domain of Magbukún Aytas

Ancestral Domain of Aytas of KNRA (Kanawan Negritos Reservation Area)

• 10,000-ha area in Morong
  – Portion of Subic Bay Forest Reserve south of Boton River
  – Portion of the Bataan Natural Park (BNP) on northwestern side of Mt. Natib

• BNP is one of 10 priority reserves of the Conservation of Priority Protected Areas Project (CPPAP) - implemented in 2008 with funds from GEF through the WB Forest Peoples Program.
Objectives

• To explore the natural products of plants and other forest bioresources
• To develop natural products as drugs, other health products & applications for eventual commercialization
• To empower Aytas as stewards of forest resources and help them rise above poverty
Community Preparation

- Information & education campaign on biodiversity & conservation
- Education on IP rights - IPRA & Wild Life Act
- Education of responsibilities as stewards of the forest
- IPR & benefit sharing from bioprospecting
- Assistance in preparing documents needed for CADT application
Biodiversity Survey of Forest Trees in BNP

Training of Aytas in parataxonomy & biodiversity inventory
Survey of trees along the boundaries of the ancestral domain
Biodiversity assessment using Gentry plots (UF Ferreras et al)

277 morpho-species found (82 families of angiosperms & pteridophytes (>2.5 cm stems)
Families with most number of species:
Annonaceae, 10 spp. Lauracea Sapotaceae, 10 spp.

(PTFCF-supported project of Kanawan Aytas & CBMSF)
Nursery of Forest Trees
• Monitoring of about 1,500 hectares of forest
• Reforestation of denuded sites

*Albizia procera*  *Albizia acle*  *Cassia javanica*  *Parkia timoriana*
Dracontomelon dao

Dipterocarpus grandiflorus

Cassia javanica

Diospyros pilosanther

Diospyros sp

Chisocheton sp

Cassia javanica
Paradigm for Natural Products Research & Sustainable Bioprospecting

- Biodiversity & Conservation
- Scientific Development
- Utilization of Bioresources
- Community Development
- Development of Drugs & Other Applications

Commercialization → Sharing of Benefits
Ethnomedical Documentation

- Traditional healers interviewed re medicinal plants, uses & preparation
- Elders interviewed re functional foods
- Small scale collection and extraction of active components
- Preliminary verification of bioactivities
R&D on Traditional Food & Medicinal Plants
Example: c/o Dr. Grace Yu

Shoot of Limuran (*Calamus ornatus*), a species of rattan
Used as traditional food and remedy for diarrhea

Bioactivites found:
Antimotility
Anti-inflammatory
Inhibition of cancer cells

Bioactive compounds have been isolated (spirostanols)

Product Development ➔ Commercialization ➔ Profit Sharing

Other products are in the pipeline
Impacts of the Project

• Aytas aware of the importance of biodiversity
• Forest conservation - Regular monitoring of forest & reporting to authorities
• Increased earnings from NTFPs such as shoots of rattan
• Potential for commercialization & benefit sharing
• Will contribute to poverty reduction in the Ayta community
• Will contribute to scientific development
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