

Ethnobotany of Dasigo Tribe of Mamberamo in Papua

Etnobotani Suku Dasigo di Mamberamo, Papua

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Abstrak

Hutan dan keuntungan yang dihasilkan memainkan peranan yang sangat penting dalam kehidupan manusia. Hal ini ditunjukkan dengan kekayaan keanekaragaman hayati, khususnya tumbuhan tertentu yang dikenal sebagai sumberdaya penting bagi komunitas lokal di dalam dan sekitar hutan tropis. Tulisan ini bertujuan untuk menginformasikan hasil pengamatan yang dilakukan terhadap aspek etnobotani kelompok etnik Dasigo di Mamberamo, Papua. Hasil pengamatan menunjukkan bahwa sebanyak 40 species tumbuhan dimanfaatkan oleh masyarakat suku Dasigo untuk keperluan keseharian mereka misalnya untuk tujuan konstruksi, makanan dan minuman, kayu bakar, ornamen dan keperluan lainnya.

Kata kunci: Etnobotani, tanaman berguna, suku Dasigo, Mamberamo

INTRODUCTION

Study on biological and other natural resources have conducted in Mamberamo to provide baseline information on development of this area as part of the Sarmi Regency. Collaboration survey between Pemda Kabupaten Sarmi and Universitas Negeri Papua was carried out to perform Natural Resources Mapping.

Three major tribes namely Dasigo and Airo – local people from Dabra and Dani – a migrant tribe from Jayawijaya regency occupied the site. Like any other forest-dwelling people, local communities of Dabra is closely integrated to the forest, and linked to the biodiversity of their forest environment. The interrelationship with the ecosystem is expressed on the traditional use of forest resources for multipurpose reasons. The form of interaction between human and environment clearly depicted by the utilization of particular flora and fauna species by this ethnic group for widely purposes of the household needs. Sastrapradja and Rivai (1972) indicated in Indonesia 4.000 plant species that currently directly utilized by people and approximately ¼ of them was cultivated.

The present paper aims to inform the results of our observation on ethnobotany aspects of the Dasigo ethnic group at the

Mamberamo, Papua, particularly focusing on the local condition and traditional knowledge of plant resource utilization for construction material, food including vegetable, edible fruit, spice, medicinal items and oil, and ornamental.

RESEARCH METHOD

Survey was achieved from 4 - 28 September 2004 in the Dabra (03°16'S 138°36'E), Taiyeve (03°14.06'S 138°26.62'E) and Fokri-Baso (03°05.08'S 138°50.12'E) villages of the Mamberamo Hulu District of Kabupaten Sarmi, Papua. Dabra as the capital city of the Mamberamo Hulu was about 121 mile distance from Jayapura. It would be reached in an hour trip with an aircraft from Sentani Airport Jayapura.

The village of Dabra at the Mamberamo Hulu was the tropical rain forest, geographically remote with low human population level and lesser human impact on natural resources utilization. Polhemus and Richards (2002) described Dabra at the present time reflected ecologically in the distribution of forest types and their associated aquatic habitats.

Information on ethnobotany aspect concerning the relationship between people and forest was obtained by the semi-

structured interview by interviewing primary informants – villagers (chosen randomized key informants including highly respected and high status people within the villages, village leaders, tribe leaders, church leaders, highly educated people and the government officers. Direct observation to the plantation area around the study site to observe particular species growth and used by local people was also conducted to cross check the interview results. Supporting data was tracked through secondary data by review of supplemented literature from previous study. Herbaria specimen was collected to identify anonymous plant species observed in the field. Identification was done in the Manokwariense Herbarium to complete

checklist specimen found during the survey in Mamberamo.

Generally, the study site is described as lowland swampy area surrounded by primary rainforest along the Mamberamo river basin. Vegetation found in this area is much more varied, ranging from tall, mixed species forest near river to low, open canopy forest of mixed Pandanus species herbaceous swamp dominated by sedges, ridges and floating grasses. The climate is tropically dry from May to September signed by the period of crocodile hunting, followed by rainy season with the average of annually rainfall range from 180mm to 560mm. Daily temperature ranged from 29-32oC and relative humidity about 7% and 80% (Pattiselanno, 2003).

RESULTS and DISCUSSIONS

Table 1. List useful Plants for Dasigo Tribe in Mamberamo

Family	Species	Utilization
Acanthaceae	<i>Abelmoschus manihot</i> (L.) Medik.	Vegetable
Acanthaceae	<i>Gendarusa vulgaris</i> Ness	Ornamental
Anacardiaceae	<i>Dracortomeillon etchile</i>	Construction material
Araceae	<i>Arenga</i> sp.	Rope for binding fence
Araceae	<i>Areca catechu</i> Linn	Edible fruit
Araceae	<i>Calamus</i> sp.	String for fasten trap
Araceae	<i>Colocasia esculenta</i> (L.) Schott.	Edible fruit
Araceae	<i>Metroxylon sago</i> Roottb.	Traditional food
Araceae	<i>Coccol nucifera</i> L.	Edible fruit, dry branch for fuel wood
Araceae	<i>Caladium bicolor</i> (W.Ait.) Vent.	Ornamental
Araceae	<i>Xanthosoma sagittifolium</i> Schott.	Edible fruit
Bromeliaceae	<i>Ananas comosus</i> (L.) Merr.	Edible fruit
Burseraceae	<i>Canarium actinofolium</i> (DC.) Merr	Edible fruit
Caricaceae	<i>Carica papaya</i> L.	Vegetable, edible fruit
Combretaceae	<i>Terminalia complanata</i>	Construction material
Datiaceae	<i>Ocoteuiles sumtrana</i>	Construction material
Euphorbiaceae	<i>Antidesma montanum</i> Bl.	Garden fence, fuel wood
Euphorbiaceae	<i>Macaranga nappia</i> M.A.	Leaves for wrapping, fire wood
Euphorbiaceae	<i>Jatropha curcas</i> L.	Ornamental
Euphorbiaceae	<i>Cordiaum variegatum</i> (L.) Bl.	Ornamental
Fabaceae	<i>Pterocarpus indicus</i>	Construction material
Ginetaceae	<i>Gnetum gnepon</i> L.	Construction material
Lauraceae	<i>Cinnamomum cullinarum</i> Bl.	Vegetable
Lauraceae	<i>Cryptoria massoy</i> (Oken.) Kosterm.	Oil extract from bark
Maranthaceae	<i>Phacelophrynium maculatum</i> (Bl.) K. Schum	Roof construction
Meliaceae	<i>Aglaia sapindina</i> (F.&M.) Harms	Fuel wood
Moraceae	<i>Artocarpus communis</i> Forst.	Vegetable food
Moraceae	<i>Artocarpus Integer</i> (Thunb.) Merr	Fruit
Moraceae	<i>Ficus</i> sp.	Fuel wood
Moraceae	<i>Piaratocarpus venosus</i> Bocq.	Kitchen utensils
Musaceae	<i>Musa</i> spp	Fruit

Myrtaceae	<i>Psychidium guajava</i> L.	Fruit
Nyctaginaceae	<i>Bougainvillea spectabilis</i> Wild.	Ornamental
Piperaceae	<i>Piper betle</i> L.	Chewing plants
Poaceae	<i>Zea mays</i> L.	Food
Podocarpaceae	<i>Podocarpus blumei</i>	Construction material
Rubiaceae	<i>Coffea robusta</i> Linden	Beverage
Rubiaceae	<i>Gardenia jasminoides</i> Ellis	Ornamental
Rubiaceae	<i>Morinda citrifolia</i> L.	Fruit, medicinal
Rutaceae	<i>Citrus nobilis</i> Lour.	Fruit
Sapindaceae	<i>Pometia pinnata</i> J.R. & G. Frost	Fruit
Sterculiaceae	<i>Sterculia</i> sp.	Garden fence, fuel wood
Sterculiaceae	<i>Theobroma cacao</i> L.	Fruit, beverage
Verbanaceae	<i>Duranta erecta</i> L.	Ornamental
Zingiberaceae	<i>Alpinia galangal</i> (L.) Swartz	Spice, Medicinal
Zingiberaceae	<i>Curcuma domestica</i> Sw.	Food, spice
Zingiberaceae	<i>Zingiber officinalis</i> Rosc.	Spice, medicinal

Nine species have been identified as construction material (house and fence), whereas two among those species have also been utilized as fuel wood. Particular species were commonly utilized for building material distributed fairly among the Papua region acknowledged as high quality wood (*Octomeles sumatrana*, *Terminalia complanata*, *Podocarpus blumei* and *Intsia bijuga*). The study of Arobaya and Pattiselanno (2007), Peday (2004) indicated seven species around the highland site of Baliem Valley utilized by the Dani ethnic group such as *Podocarpus papuana* (inside wall pannel) while the outside part constructed from *Araucaria cunninghamii*, *Paraserianthes* and other hardwood species that specifically found at the upland site. While people along the coastal site using mangrove species (*Sonneratia alba* and *Xerriops tagal*) for housing construction and fuel wood (Aibekob *et al.* 2002; Mamoribo *et al.*, 2003).

Certain part of species that mostly used for construction (branch and small stem) can also be used for fuel wood. In this study we only noted four species that have been using for fuel wood. Fruit and leaves of two among four species recognized earlier, were also used for other purposes (food and wrap material). Differently, people in West Timor utilized approximately 21 species of plants as fuel wood sources (Pulunggono 1999).

Nineteen species have been consumed as edible fruit, vegetable and traditional food as well by the tribe. Some species were commonly used in Indonesia such as banana, cacao, citrus, pineapple,

papaya and coconut, while others were locally consumed and utilized by certain ethnic group occupied the eastern part of Indonesia. For example, *Colocasia*, *Xanthosoma*, sago, canary, beetle nut and piper. Tuber crops were acknowledged as carbohydrate resources and according to Sastrapradja and Rifai (1989) in undeveloped and dry areas like in Nusa Tenggara and Maluku root of tuber crops utilized as food sources substituted by corn and sago.

Our findings is relatively similar to the study of Worabai, *et al.*, (2001) that found twenty four plant species as food sources by Wondama tribe at Wasior. Uniquely, local communities in Biak and Inanwatan Papua particularly those who inhabited coastal sites, utilized mangrove (*Bruguiera gymnorhiza*) as carbohydrate sources for their household (Wanma, 2007; Prayitno *et al.*, 2002).

Rifai (1986) recognized around 329 fruit species including endemic and introduced species in Indonesia, and Uji (2007) compiled approximately 266 indigenous fruit species potency in Indonesia from various studies. In Gorontalo Province, Sunarti *et al.* (2007) recorded fifteen edible fruit consumed by local people around the Tangale Nature Reserve.

We recorded only three species used together as therapeutic items, spice and edible fruit as well. Arobaya and Pattiselanno (2007) have only noticed limited species used by Dani tribe at the Baliem Valley. Findings obtained from other studies in Papua evidenced that local

communities were still dependent on medicinal product from particular forest sources (Hamzah *et al.*, 2003; Howay *et al.*, 2003; Suebu *et al.*, 2002). The use of medicinal plants in Indonesia is common such as in West Timor, Pulunggono (1999) recognized 22 plant species, and in North Sumatera it was relatively higher than West Timor (Simbolon, 1994).

Using plant for ornamental purpose was playing an important role among ethnic groups in Papua, because local people was dependently on local tradition and culture that require natural resources (plant and animals) for the traditional ritual and cultural ceremonies. During the survey, seven species have been identified using by the Dasigo for ornamental reason. Differently, people around the coastal site of the Bird Head Area were more dependently on mangrove species (Leonard, *et al.*, 2003). On the other hand, two palm species have been used commonly for culture and ritual activities by local community at the lowland forest of Bayeda Arguni Bay, (Nega, *et al.*, 2003).

In this survey, we also recognized three species using for spice and one species for beverage that widely used among other Indonesian ethnic groups. Other five species classified under other purposes usually use as rope, string, oil, utensils and chewing plants. Pinang (*Piper betle* L.) not only used by Dasigo, but also utilized by other ethnic groups in Papua as well,

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