

I. GENERAL INFORMATION

1.1 Name: **Mt. Malindang Range Natural Park (MMRNP)**

1.2 Area

The protected area has a total land area of 53,028 hectares which constitutes the core zone of 34,694.00 hectares and the buffer zone of 23,262 hectares. (RA 9304)

Table 1. Management Zones

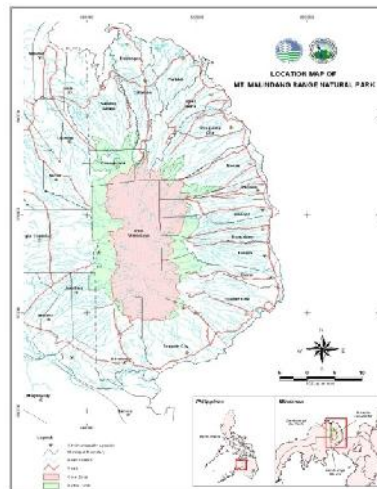
Management Zone	Area (ha.)
Core zone	34,694.00
Buffer zone	18,334.00
Total Area	53,028.00

1.3 Legal Basis : Republic Act No. 6266 dated June 19, 1991
Republic Act No. 9304 dated July 30, 2004

1.4 Geographical Location

The Mt. Malindang Range Natural Park is located at the core of the Province of Misamis Occidental. It covers the forest lands of the Cities of Oroquieta, Ozamis and Tangub; and the municipalities of Sapang Dalaga, Concepcion, Don Victoriano, Calamba, Aloran, Panaon, Lopez Jaena, Jimenez, Tudela Sinacaban, Clarin and Bonifacio. (RA 9304)

The Malindang Range lies at 8°17' N and 8°29' N latitude and between 123°32' E and 123°46' E longitude.



Map of Mt. Malindang

1.5 Accessibility

In terms of accessibility the Mt. Malindang Ranges become more easy for the local and foreign tourist to visit the areas that possess significant attributes that could possibly invite mountaineers, enthusiast and nature lovers. With the advent of technology, it made more possible to visit the unique features of the PA. Accordingly, the presence of 14 major road networks emanating from the national highways in the municipalities and cities within the three provinces of Misamis Occidental, Zamboanga del Norte and Zamboanga del Sur. The park could be easily access by means of single motorcycle locally known as "Habal-habal" and four wheeled type vehicle. In some instance, the area of the park to the Municipality of Don Victoriano one can reach Don Victoriano through jeepneys, motorcycles and PUB.

For local and foreign visitors outside in the province, Philippine Airlines, Air Philippines and Cebu Pacific has three weekly domestic flights from Ozamiz to Manila and Cebu City vice versa. Also shipping line companies ferry services from Cebu City and Iligan City every other day.

II. PHYSICAL FEATURES

2.1 Topography and Geological Features

The province of Misamis Occidental which is the Northeasternmost portion of the Zamboanga Peninsula, belongs to the Central Visayas subprovince of the Central Physiographic Province. The sub province also includes the adjacent Bohol and North Bukidnon-lanao Plateau. The Misamis Volcanic complex is predominantly rugged and mountainous, consisting of five major physiographic features: volcanic mountains; volcanic flanks; isolated hillocks; volcanic footsloes; and coastal and alluvial plains. The volcanic Malindang range with its volcanic flanks dominates the Misamis Occidental as a linear cluster generally oriented north-South. The mountains have steep slopes (often >75%) moderately to severely dissected by ravines, gullies and gorges.

The volcanic flanks lie from 600 to 1000m altitude with slopes 18-45% and straddle the border of the park. Most are moderately to severely dissected by ravines and deep, nearly vertical gullies, sometimes forming amphitheatres.

2.2 Elevation

The most prominent mountain is Mt. Malindang itself with an elevation of 2,404 meters above sea level.



Photo showing the Mountainous areas of MMRNP

2.2.1 Mountain Peaks

Table 2. Mountain Peaks

Mountain/Peaks	Location	Elevation
1. Mt. Malindang	Don Victoriano	2,404 m asl
2. Mt. Labag	Don Victoriano	1,861 m asl
3. Mt. Sumalarong	Don Victoriano	1,821 m asl
4. Mt. Balabag	Concepcio	1,753 m asl
5. Mt. Ampiro	Concepcion	1,532 m asl
6. North Peak	Don Victoriano	2,095 m asl
7. South Peak	Don Victoriano	1,850 m asl

2.22 Valleys

GANDAWAN VALLEY



Photo showing the Gandawan Valley located at Barangay Gandawan, Don Victoriano, Mis. Occ

Gandawan Valley is a crater valley located in Barangay Gandawan, Don Victoriano that has a larger plain, divided in two plains of the barangay proper and Sitio of Pongol, with a total area of of 1.019 sq. km or 101.9 has. The surrounding mountains have peaks of 1,635m, 1,716 m and 1,678 m with an averaging slopes to 33 degrees. (Hansel et. Al, 2004)

LAKE DUMINAGAT VALLEY

Lake Duminagat Valley is a crater valley with a plain area of .478 sq. km or 47.8 has. Surrounded by



Prof

mountains having peaks of 1,678 m, 1865 m and 2,183 m (North Peak).

LIBORON AND SEBUCAL VALLEY

Photo showing the Lake Duminagat Valley located at Barangay Lake Duminagat, Misamis Occidental.



Photo showing the Liboron and Sebucal Valley

Liboron and Sebucal Valley is located in Barangay Liboron, Don Victoriano and Barangay Sibucal of Oroquieta City

PALALE VALLEY

Palale Valley is located Barangay Mabas, Lopez Jaena in Concepcion, Misamis Occidental.

2.3 Hydrological Features

2.3.1 River Systems



The **headwater** of Salug River located at Lalud Don Victoriano, Misamis Occ.
(Photo by M. Ignacio)

Mt. Malindang Range is the source of the 17 major rivers catchments arise in the park or its buffer zone (Table 5.1), each with numerous tributaries emanating from the Core Area. They radiate outwards from the central volcanic mass, generally getting narrower at lower altitudes. A large number of smaller rivers and streams arise between the major rivers in a parallel drainage pattern. As the land has been cleared, anecdotal

evidence suggests that stream flow is becoming more irregular.

The potable water coming from Mt. Malindang provides water for domestic uses, industrial, agricultural and other uses to more than one million inhabitants of Misamis Occidental and eastern parts of Zamboanga del Norte and Zamboanga del Sur.

Table 3. Major Watersheds/River System

Name of Watersheds	Location
1.Layawan	Oroquieta City
2. Aloran	Aloran, Misamis Occidental
3.Palilan	Jimenez, Misamis Occ
4.Clarin	Clarin, Misamis Occ
5.Labo	Clarin, Misamis Occ.
6.Bagumbang	Bonifacio, Misamis Occ
7.Migcanaway	Tangub City
8.Malubog	Tangub City
9.Usugan	Tambulig, Zamboanga del Sur
10.Salug Diot	Molave, Zamboanga del Sur
11.Salug Dako	Molave, Zamboanga del Sur
12.Dipolog	Dipolog City
13.Dapitan	Dapitan City
14.Putongan	Sibutad, Zamboanga del Norte
15.Langaran	PLaridel, Misamis Occ
16.Dioyo	Baliangao, Misamis Occ
17.Daisog	Lopez Jaena, Misamis Occidental

MMRNP Profile 2001 and GMP 1st Edition



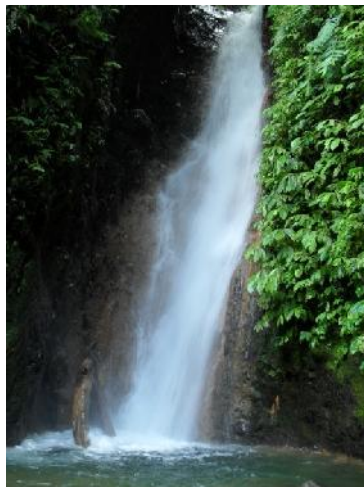
Layawan River, Oroquieta City

2.3.2 Waterfalls

There are Ten (10) waterfalls (Table 4) with unique features documented inside the park which are potential for ecotourism and recreation activities for both local and foreign tourist. This is also the potential for energy generation if this will tapped as a source of hydropower.

Table 4. List of Waterfalls

NAME OF WATERFALLS	LOCATION	APPROX. HEIGHT
Makatagbaw Falls	Migsali, Bonifacio, Misamis Occ.	12 meters
Curtain Falls	Sitio Piduan, Lalud, Don Victoriano	8 meters
Tulobong Falls	Roxas, Aloran, Misamis Occ	8 meters
Buntayawan Falls	Toliyok, Oroquieta City	7 meters
Kalutongan Gamay Falls	Estrella, Sinacaban, Misamis Occ	12 meters
Kalutongan Dako Falls	Sitio, Aquino , Carmen, Jimenez, Misamis Occidental	15 meters
Guiban Falls	Barangay Guiban, Concepcion	20 meters
Ozamiz Falls a.k.a. Cobra falls	Stemson Abordo, Ozamiz City	80 meters
Siatog Dako Falls	Toliyok, Oroquieta City	30 meters
Siatog Gamay Falls	Toliyok, Oroquieta City	10 meters



Liboron Falls, Don Victoriano, Misamis Occidental



Kaltatungan Falls, Aquino, Carmen, Jimenez, Misamis Occidental



Pidua-an Falls, Lalud, Don Victoriano, Misamis Occidental



Makatagbaw Falls, Bonifacio, Misamis Occidental



Cobra Falls, Stenson Abordo, Ozamzs City



Guiban Falls, Guiban, Concepcion, Misamis Occidental

2.3.3 Hotspring

There are three (3) hotspring found inside Mt. Malindang. One of the famous and has wider size is the Sebucal Hotspring which considered by the local resident as "sulfur spring" particularly located in the hinterland of Barangay Sebucal, Oroquieta City. The hotspring has a depth of 2.0 meters. Mostly of the visitors took a bath inside the lagoon of the hotspring. The hottest spring is the Liboron Spring found last 2010 in the hinterlands of Municipality of Don Victoriano, Misamis Occidental.



Table 5. List of Hotspring

Name of Hotspring	Location
1. Sebucal Hotspring	Sebucal, Oroquieta City
2. Tuminawan Hotspring	Mialen, Oroquieta City
3. Libron Hotspring	Old Libron, Don Victoriano, Misamis Occ.

Insert pic of Tuminawan and Liboron Hotspring

2.3.4 LAKE

CRATER LAKE DUMINAGAT

Lake Duminagat is located approximately at Latitude 8°18'N and longitude of 123°37'E, with an altitude of approximately 1560 masl. Its nearest barangay are barangay Lake Dumigat, and Gandawan. One of the mountains at the periphery of Barangay Lake is North Peak, which has an elevation of 2,183 masl.



The geologic history of Mt. Malindang range (Dickerson, 1928) and lake basin topography would justify the lake Duminagat as crater lake. There was probably a violent ejection of magma forming the depression that accumulated water, which gave rise to the lake. Lake Duminagat is surrounded by mountains at all sides, except the opening in the westerly direction. The surrounding slope has an average slope to 45.6 degree. The total area of the catchment basin is about 53.2 has. The map scale show the lake dimension to be 350 m in the E-W and 300 m N-S direction. The lake has no inlet streams, with only one small outflow stream located at the southeastern part of the lakeshore. Lake Duminagat is a small lake with a surface area of only 80,400 sq. M.or 8.04 has. Its maximum depth of 20 .95 m is about at the almost middle of the circular lake.(Hansel et. Al, 2004)

III. BIOLOGICAL FEATURES

The park has five (5) major habitats. These are the grassland, dipterocarp forest, Lower montane forest, Upland wetland, Mossy and associated forest.

a. Openland, Grassland



The Openland/Grassland is located around the outer part of the range with in the elevation of 800 meters upward . The grassland ecosystem is dominated by Cogon (*Imperata cylindrica*)and Hagonoy (*Chromolaena odorata*). Another grasses and ferns are also grown along the rivers and steep slopes.

The fauna found in these areas of the PA are Philippine Palm Civet, Wild pig, Philippine Tarsier, Ground Shrew, Philippine Field Rat, Monitor Lizard, Flying Volans, Philippine Cobra, Reticulated Phyton. Birds includes the Grass Owl, Brahminy Kite. (GMP of MMRNP 2000)

b. Dipterocarp Forest

The Dipterocarp Forest is located in the central part of the core area up to 1000 meter above sea level. The intact dipterocarp lowland forest are situated in Mountains of Sumalarong, Ampiro and Balabag and the base of North, South and Malindang peaks within the PA.

The forest vegetation is dominated with White Lauan, Red Lauan, Mayapis, Tanguile, Bagtikan, Rattan, Makaasim, and Nato. The fauna species belong to class reptalia includes *Dasia species*, *Sphenomprphos sp.*, Monitor Lizard, Python, Oligodon Snake, *Draco volans*. Frog and toad belong to Philautus, Rana and Racophorous are also present. Mammals include the Philippine Deer, Wild Pig, Long tailed Macaca, Flying Lemurs, bats, Palm Civet and Civet Rat. (GMP of MMRNP)

c. Lower Montane Rainforest

The Lower Mountain Rainforest located 1000-2000 meters in the plateaus of Malindang Range and steep slopes of Liboron, Palale and Lake Duminagat-Gandawan areas of Don Victoriano and Concepcion, and Pamakaran-Sungan area of Tudela and Sinacaban.

Mostly of the vegetation it is dominated by Casuarina and Igem species. The fauna found in the area includes tree shrews, ground shrew rats. Species of birds found include the flowerpeckers, parrot finches, mountain white eyes and wood peckers.



Nesting Site of Philippine Eagle at Sitio Piduan, Lalud, Don Victoriano, Misamis Occidental. Photo by M Ignacio

d. Upland Wetland

The upland wetland areas located in the depression of Lake Duminagat area, natural ponds, flat, widened and swallow riverbanks of major river

tributaries in Mt. Malindang Range that includes the Labo River, CLarin River, Dapitan River , Salug River, Usugan River , Dimorok River, Langaran River and Layawan river.

The fauna found are Sailfin lizard, amphibians and toads, freshwater shrimp, crabs, mollusk, snakes and water associated birds such as river and forest kingfisher, rails, whistling tree ducks. Its dominated in the inundated portion with pandan and tree ferns.

e. Mossy Forest and Associated Forest

The mossy forest and associated forest is situated mostly in prominent forested peaks of the range, steep mountains ridges and deep canyons above 1500 m. The Flora that dominates in the mossy forest are ferns, liverworts, mosses orchids and other epiphytes.



Mossy forest found in the North Peak of Mt. Malindang

Tree species are composed of Podocarpus, Dacrycarpus, Engelbartia, Myrica, and Zyzigium species. Fauna species found are tree shrew, Philippine deer, Wildpig, toads, frogs, lizard and associated bird species of genus Dicaeum, Zosterop, Erythrura, shortwings and island trush. (MMRNP GMP 2000)

The forest cover of Mt. Malindang has contributed much in maintaining the health and welfare of the constituents in Misamis Occidental by providing clean water for domestic and agricultural uses, absorb Carbon dioxide of about 200,000 tons per year and release oxygen of about 146,000 tons to the atmosphere.

3.1 Flora

The Mt. Malindang Range is endowed and harbors with numerous type of plants both endemic and critically endangered in status. The research studies have been undertaken includes Mearns in 1906 and Rabor in 1956. In recent park survey in Don Victoriano it recorded 223 plant species in 89 families. Experience from recent survey elsewhere in the Philippines would suggest a high degree of



Medinilla malindangensis is locally known as "Latipo" is an endemic plant of Mt. Malindang Photo by: M. Ignacio

endemism and a substantial number of species not yet known scientifically. The more accessible parts of Mt. Malindang Range up to about 800 m have been cleared by logging and shifting cultivation.

Mt. Malindang Range has three main type of forest covers that includes the Dipterocarp forest, Lower Montane forest, and the Mossy forest. Dipterocarp forest is found up to 1,000 masl that is dominated by straight-trunked evergreen trees of the family Dipterocarpaceae. It is located at the lower part of the core area. The lower montane forest is located above the dipterocarp. It is characterized by the presence of Igem (*Podocarpus sp.*) and Almaciga (*Agathis sp.*). Above the lower montane forest is the Mossy forest that is characterized by dwarf trees and abundance of ferns, liverworts, mosses and epiphytes.(MMRNP GMP 2000)

According to Tabaranza et al., (2001) there are 422 species of plants have been documented belonging to 110 families. Several of these species are endemic and many are locally depleted with extinction like a rattan species *Calamus merrilli* and 10 dipterocarp species like *Shorea contorta*, *Shorea negronensis*, and *Shorea polysperma*. Many forest dependent species e.g. Sili-sili "*Drimys piperita*", "Kalingag" *Cinnamomum mercadoi* known to be of high medicinal values and being used by the indigenous people. High valued ornamentals include *Medinilla spp.*, *Caryota cumingii* and orchids.

Dr. Amoroso et. Al. (2004) found during the inventory of plant species in Mt. Malindang a total of 1,284 species, 472 genera and 187 families. Among the group of plants 873 were considered as angiosperms, 20 gymnosperms, 280 as pterodophytes, 85 as byrophytes, and 25 species as lichens (*Appendix B*) The percentage of angiosperms, gymnosperms and pteridophytes was

comparatively higher than the percentage reported by Tabaranza et al (2001) and Arances (2004). For Pterodophytes alone the number of species recorded represented about 44% of the 632 species found in Mindanao (Amoroso 2000).On the other hand, Zamora and Co (1986) reported that 33 species of gymnosperm in the Philippines in the Philippines and 20 species or 60% found in Mt. Malindang. It revealed further that for vegetation type, the montane and mossy forest has higher species richness (263 and 256 species respectively)

Sinha, C and Heaney, L (2006) include Mt. Malindang in the list of extremely high conservation priority areas of plants based on figure 8.a PBCPP 2002.



Lady slipper (*Paphiopedilum sp.*)
species found in Mt. Malindang
(Photo by M. Ignacio)



Largest Almaciga Tree (*Agathis philippenensis*) found in Mt Malindang with a 600 cm diameter breast height (dbh) located at Don Victoriano, Misamis Occidental visited by the Representatives of the Trees for Travel of the Netherlands (Anton and Aart) with PASu Pito, staff and Community Workers

3.2 FAUNA

The park is the home of numerous species of fauna and some are endemic and considered as Critically Endangered not only in Mt. Malindang but in the Philippines. The faunal inventory consists of 37 mammals (68% reptiles endemic), 158 birds (42% endemic), 11 reptiles (27% endemic) and 14 amphibians (43% endemic). These include 15 birds, 5 mammals, 3 reptiles and 3 amphibians threatened species such as the Philippine Eagle, Philippine Deer, Philippine Tarsier, Rufous Hornbill, Flying Lemur, Reticulated Python, Monitor Lizard, Mindanao Warty Pig, and other rare and endangered species. About 24 birds and 3 reptile species have cultural and socio-economic significance to the local communities. (MMRNP GMP 2000)



Tarsius syrichta found in Mt. Malindang Rainforestation Project, Don Victoriano, Misamis Occ. (Cited Mt. Malindang Rainforestation Project Monitoring Report of Trees for Travel 2008-2009) Photo by M. Ignacio

Nuneza et. al (2004) found some 257 terrestrial vertebrate were recorded in the Mt. Malindang Range (Table 7) these includes 26 amphibians, 33 reptiles, 162 birds and 36 mammals

Table 6 .Vertebrates faunal species found in Mt. Malindang

Mt. Malindang		Mt. Malindang Don Victoriano (Tabaranza et. al. 2001	Mindanao	Philippines (Sodhi et al. 2004)
Amphibians	26 (11)	16	35(Crombie 1994)	101 (79)
Reptiles	33(16)		1092(Crombie 1994)	258(170)
Birds	162 (66)	147	325(Kennedy et al.2000)	576(195)
Mammals	36 (21)	37	84 (PAWB 2002)	179(111)
TOTALS	257 (114)	210	536	1114

Legend :() Philippine Endemic (Nuneza, et al, 2004)

Mt. Malindang according to Sinha, C. and Heaney,L (2006) is become part of the list of extremely high conservation priority areas for land mammals based on figure 12 in PBCPP 2002.

ANTHROPOLOGICAL FATURES

4.1 Cultural Resources



Rituals sa pagpananghid or ask permission to Mambabaja of the Subanen IP's led by Timoays at Barangay Namut, Tudela, Misamis Occ photo by Jelsun Bueza

By origin, the only ethnic tribes existing in the province is the SUBANOS – the freedom loving people in Northern Mindanao. Subano is derived from the vernacular word “SUBA” which means river. They are called as such because they dwell near or along riverbanks. They prefer to live near the rivers for convenience in washing

rootcrops, cooking, bathing and as source of drinking water.

Accordingly, they used bamboo culms in fetching water and the coconut shells as drinking cups or pitchers. The bamboo tubes used for fetching water is locally called as “SAG-OB” and the coco shells as “HUNGOT”.

Shelter and Livelihood

The Subanos usually build their house at the top of trees using native materials like cogon for roofing and walling, white lauan bark for flooring and rattan strips for tying.

Subanos are hardworking and cares their living in their own ways. Farming is their main source of living. Their main crops are corn, rice, vegetables and rootcrops. They sell their products in the nearest market or barter them with co-tribesmen.

Cultural Practices

Subanos have certain beliefs, traditions and rituals through food offerings cooked without salt during the new moon or full moon. Specific ceremonies/rituals are practiced for different occasions like wedding, baptismal, burial, and fiestas.

Wedding Ceremonies

Wedding agreements are arranged in the presence of the head of the tribe called "TIMOAY". Dowries and other necessities will be provided by the groom's family. At the time when the wedding agreement/negotiation is going on, the bride stays under mosquito net in exclusive room. When the wedding agreement is finally made, the groom gets the bride, give P1.50 and other obligations and bring the bride, to the "TIMOAY" who will then initiate the "DAGA". A "DAGA" is a ceremony whereby the bride and groom lays their tools like axes and bolos and wipe their palms with blood in an upward positions. The TIMOAY then get leaves of three plants namely; Salimbangon, Tobo-tobo and Salamoya which will be wiped with the blood of a white rooster. After the ceremony the TIMUAY will offer a prayer and gives advice to the new couple. For three days the new couple will stay in the bride's home and the groom pays P50.00 to the bride as an obligation.

Baptismal

Rituals for baptismal is called by the Subanos as "KANORATA". The father of the baby to be baptized prepares sugarcane juice, mix it in a basin of water where the baby is bathe. They then say a prayer for the baby's good health.

Burial

At the time of the burial, the bereaved family and relatives will offer a prayer for the death of their beloved. As they bury the dead, all his belongings are also buried with him on the belief that he can bring these things to his new world. Offerings known as "PALANAS-PALAYA" are made believing that the spirit of the dead will separate from the living.

Fiesta

Their fiesta is called “BOKLOG”. All their earnings must be spent for the occasion rather than spending it on their birthdays.

Death Anniversary

Preparations are made for the occasion. The “BAYLAN” or head will offer prayers for the dead inviting their spirits to eat with them in the ceremony.

The presence of IP in the park has both negative and positive impacts to the its existence considering the way of life that engaged in traditional farming and some are doing slash and burn cultivation that endangered the biological resources found therein. On the other side their traditional practices also help in the management of the park that also lead to the conservation of natural resources.

Archeological Sites

Lobong Balo is one of the burial sites of the Subanen IP's which they considered as sacred places, etc.

IV. SOCIO-ECONOMIC PROFILE

5.1 Population

Fifty four (54%) of the households in the park, mostly in the buffer zone are Subanen while the proportion at the core area of the park is much higher, at well over 90%.

Table 7. List of Municipalities/Cities/ Barangays and Population within the PA

NAME OF CITIES/MUNICIPALITIES/BARANGAYS	POPULATION(NSO 2007)
Municipality of Don Victorinao	
1. Lampasan	1,024
2.Liboron	243
3.Petianan	1,032
4.Bagong Clarin	943
5.Gandawan	345
6.Lake Duminagat	290
7.Maramara	427
8.Mansawan	1,237
9.Napangan	1,123

10.Tuno	1,338
11.Lalud	2,155
Municipality of Bonifacio	
12.Kanao-kanao	556
13.Mapurog	1,357
14.Buenvista	1,015
15.Montol	780
Tangub City	
16.Sicot	424
17.Matugnao	232
18.Hoyohoy	479
19.Baluc	457
	213
20.Owayan	
21.Kimat	494
22.Salimpuno	469
23.San Antonio	382
Ozamiz City	
24.Trigos	695
25.Stimson Abordo	1,766
26.Guingona	454
27.Guimad	425
Municipality of Clarin	
28.Dalingap	1,082
29.Penacio	244
Municipality of Tudela	
30.Gala	413
31.Namut	1,292
Municipality of Sinacaban	
32.San Lorenzo Ruiz	189
Municipality of Jimenez	
33.Carmen	1,445
34.Matugas Alto	600
Municipality of Pana-on	
35.San Juan	717
Municipality of Aloran	
36.Sinampungan	496
37.Mitasan	642
38.Roxas	642
39.Manamong	431
Oroquieta City	
40.Sebucal	238
41.Mialin	424
42.Clarin Settlement	300
43.Toliyok	889
Municipality of Lopez Jaena	
44.Mabas	105
45.Peniell	110

46.Burgos	419
Municipality of Calamba	
47.Mamalad	455
48.Singalat	245
49.Siloy	672
Municipality of Concepcion	
50.Bagong Nayon	811
51.Upper Dapitan	345
52.Lingatongan	237
53.Pogan	839
54.Upper Potongan	50
55.Guiban	516
56.Small Potongan	333
57.Marugang	245
58.New Casul	330
59.Sosoon	329
60.Virayan	226
61.Upper Salimpuno	200
62.Upper Dioyo	250
63.Poblacion	344
64. Capule	200
65. Mantukoy	100
TOTAL	37,250

V. USES

6.1 Tourism and Recreation

Mt. Malindang is among the remaining rainforest in Mindanao Island, Philippines. It is the home of the of the most diverse species of endemic, rare and endangered wildlife such as the pride of the Philippine and considered as one of the rarest and critically endangered Philippine Eagle. It is known as the country's national bird. Another endemic mammal found only in Mt. Malindang the Malindang Shrew. The park is rich in terms of flora and fauna and feasible area for educational and research purposes. Moreover,



Piduan falls at Sitio Piduan, Lalud, Don Victoriano, Misamis Occidental Photo by: M Ignacio

the park has numerous potential areas for tourist attractions such as for ecotourism, outdoor recreation, public viewing and enjoyment. The heighten the awareness activities can be done in areas within the park that possess

unique features and grandeur. (e.g. Lake Dumingat, Sebucal Hotspring, mountain peaks, waterfalls, camping areas and trekking.



Mt. Malindang Peak is one of the highest peak in MMRNP with an height of 2400 meters above sea level.

Some of the natural features of MMRNP have not been disturbed by human activities. In addition, the park is also good for scientific and socio-cultural studies that could help in designing suitable approaches to level off various interest from the point of views of the indigenous people in national and global arena.



Campsite located at Lake Duminagat Don Victoriano, Misamis Occidental

VI. THREATS

At present, Mt. Malindang is generally peaceful although it was identified before as the haven of insurgents. Presence of armed men in several Barangays of Tudela, Bonifacio, Tangub City and Don Victoriano were reported.

The main livelihood of the occupant is farming. Because of the increasing population within and around the park, encroachment inside the park for subsistence is a major threat. Other threats include the over-exploitation by traditional practices that may not be sustainable with today's population and unsuitable infrastructure and inappropriate tourism development.

Flooding occurrence in the lowland area of Mt. Malindang was mainly caused of the poor practices and development in the upland areas. Improper farming practices and massive cutting of trees are detrimental not only to the biological



resources but also to the human population that largely depend on it. Upland communities depend on forestland for their subsistence living. Conversion of forest land into agricultural areas endangered the forest ecosystems the provides enormous ecological benefits for the sustenance of life. The impact of continuous degrading the upland ecosystem will result to the flooding in the low lying areas in Misamis Occidental. Instead of absorbing the rainwater during the rainy season it will immediately drain to the river channel and it become a flood. Poor upland communities consider the forest area as the only resources that could help for them to survive. One way to continue their existence they have to encroach the forest resources which will led the chain effect the flooding that damages already damages lives, major infrastructure project and properties.

The government must take drastic move to solve this exacerbating problem that existed since time immemorial. Extension and implementation of livelihood project for additional income of the upland communities will be the concrete answer of the never ending dependence of this communities.

VII. ORGANIZATIONAL STRUCTURE

a. Protected Area Office

1. The Protected Area Office

The Protected Area Office (PAO) is managed and supervised by the Protected Area Superintendent (PASu) appointed and designated by the DENR considered as the Chief Executive of the PA who is directly responsible to the PAMB and the DENR. There are eight (8) personnel who perform the daily management and administration of the PA who support the PASu

2. The Core Staff

One (1) Protected Area Superintendent
One (1) Assistant Protected Area Superintendent
One (1) Special Disbursing Officer
Six (6) Forest Rangers
Seven (7) Contractuals
One (1) Driver Contractual

The core staff is supported by the eight (8) Mt. Malindang Green Task Force and 222 Barangay Bantay Lasang Volunteers covering the 65 barangays within the PA.



Bantay Lasang Volunteers of Mt. Malindang Range Natural Park, Mis. Occ.

b. Protected Area Management Board

The PAMB is the policy making body of the protected area. The MMRNP AMB comprise of 111 active members from the LGU's, NGO's, OGA's, Academe, Religious Sector and IP's. Majority vote of the members decides on budgetary allocations, proposal for funding, resources protection and general administration of the PA consistent with GMP. The PAMB is responsible in the monitoring and evaluation of the performance of the PA Personnel, NGO's and communities towards the biodiversity conservation of the PA.



Mt. Malindang PAMB Enbanc Meeting.

Table 8. Composition of PAMB of Mt. Malindang

PAMB EXECOM	33 MEMBERS
EN BANC MEMBERS	104 MEMBERS
SUB COM COMMITTEES CHAIRS	11 MEMBERS

VIII. PROTECTED AREA FACILITIES

- 1. Protected Area Office located at Capitol Compound, Oroquieta City**



- 2. Biodiversity Information Center located at Capitol Compound, Oroquieta City**



**3.Park Ranger Quarter
Capitol Compound, Oroquieta City**



IX. PROGRAMS AND PROJECTS

1. National Integrated Protected Area (NIPAP)

Chosen as one of the top 10 priority PA under the National Integrated Protected Areas Program (NIPAP)

NIPAP is a 5 year project funded by GOP (Euro 1.7x10) and EU (Euro 11x 10) to contribute to conservation, protection, and management of natural habitats and biodiversity of NIPAS. The Program is due on September 2000.

TABLE 9. POST-NIPAP PROGRAMS/PROJECTS IN MMRNP, 2000 & BEYOND

Programs/ Projects	Objectives/ Beneficiaries	Source of funding	Implement ing agency	Amount Sought/ allocated	Duration
Philippines Australia Local Sustainability Program (PALS)	The objective is to promote local participation and responsibility in planning and resource management towards sustainable livelihood; and supports LGUs and community organizations through livelihood, service delivery and environmental management. The municipalities of Bonifacio, Clarin, Don Victoriano, Jimenez, Lopez Jaena, Tudela and	AusAid	ACIL/LGUs	US \$5,000,000	1994- 2004

	153 barangays were beneficiaries of the PALS Program.				
Agencies Working for Ecological Sustainability on Mt. Malindang (AWESOME)	Aims to help protect the resources of Mt. Malindang by increasing public awareness of the park's biodiversity, implementing environmental conservation, and improving the household livelihood security and incomes in buffer zone communities.	Netherlands Embassy	CARE Philippines	US \$3,698,964	5 years (1998-2003)
Philippine-Netherlands Biodiversity Research for Development in Mindanao-Focus on Mt. Malindang	Representative areas in highland and coastal areas in Misamis Occidental have been chosen for a pilot project for the National Biodiversity Research Programme whose aims are to 1.)contribute to conservation, management, and sustainable use of biological and genetic resources; 2.) build and strengthen national capacity for biodiversity research; and 3.) promote research cooperation on equal footing between north and south researchers.	Netherlands Embassy	SEARCA	EURO 2,268,900	2000-2005
Mt. Malindang Rainforestation Project	The overall objective is the sequestration of the CO2 by rehabilitating degraded forest ecosystems through replanting of 50 ha/yr. of indigenous trees, thus providing employment for the local people, regulating water dynamics, safeguarding biodiversity, the water supply and water quality for the lowland communities.	the Trees for Travel (TfT)	PAMB	Euro 72,000 (Phase 1) Euro (Phase 2)	3 years 2008-2010
Focused-Food Production Assistance to Vulnerable Sectors (FPAVAS) (DCI/FOOD/2009/164	6,179 HH in 9 municipalities (44 barangays) which include Oroquieta, Panaon, Jimenez, Tudela, Sinacaban, Don Victoriano, Tangub, Clarin are beneficiaries of this program. The general goal is to reduce poverty, improve the well being of the farmers and ensure their access to safer food. Specifically the programs aim to: 1.) Increase Rice Production; 2.) Enhance Productivity of Upland Agriculture Through Crop Diversification; 3.) Increase Aquaculture Yield in Both Coastal and Inland Waters.; 4.) Identify and Document Indigenous Practices Used by Farmers and Fisher Folk That Help Conserve Resources; 5.) Understand the Risks and Effects of Climate Change Phenomena, and Develop Strategies and Plan to Help Reduce	An EC-Funded Project From Europe (Brussels, Belgium).	SEARCA in coordination with LGUs	Euro 430,540 for Mis. Occ. On A Grant of : EUR 3,460,073	January 2010 to October 2011

	its Impacts Especially on Agricultural Production.				
Ridge to Reef: An Ecosystem Based Approach to Biodiversity Conservation and Development in the Philippines (EB-ABCD Philippines)	The Objective is to address key issues affecting biodiversity conservation considering the practical need for natural resource utilization in Malindang. Among its components include Capacity strengthening on fisheries and aquaculture; policy reform and implementation; better enforcement of environmental laws; broadening the base for environmental financing; and mitigating natural resource use conflicts. Two major river systems (Langaran & Layawan rivers) will be the main target of this initiative that will benefit the municipalities of Plaridel, Calamba, Baliangao, Lopez Jaena and Oroquieta City.	USAID	WorldFish Center in collaboration with The Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) and the World Agroforestry Center (ICRAF)	\$US 800,000	2011-2012

Source: NIPAP, Final Report, March 2001 and Program/Project Presentation Report

Rainforestation Project



Rainforestation Nursery, Don Victoriano, Misamis Occidental

TABLE 10. LIST OF MT. MALINDANG PAMB ENBANC

1.	DR. CORAZON B. GALINATO, CESO, IV	PAMB Chairman
2.	Hon. Juanidy M. Viña	Municipal Mayor, Concepcion
3.	Hon. Donjie D. Animas	Municipal Mayor, Sapang Dalaga
4.	Hon. Svetlana P. Jalosjos	Municipal Mayor, Baliangao
5.	Hon. Luisito B. Villanueva, Jr.	Municipal Mayor, Calamba
6.	Hon. Agnes C. Villanueva	Municipal Mayor, Plaridel
7.	Hon. Martin C. Migriño	Municipal Mayor, Lopez Jaena
8.	Hon. Jason P. Almonte	City Mayor, Oroquieta
9.	Hon. Jimmy R. Regalado	Municipal Mayor, Aloran
10.	Hon. Meriam L. Paylaga	Municipal Mayor, Panaon
11.	Hon. Ranulfo B. Limquimbo	Municipal Mayor, Jimenez
12.	Hon. Dello T. Lood	Municipal Mayor, Sinacaban
13.	Hon. Estela R. Obut	Municipal Mayor, Tudela
14.	Hon. David M. Navarro	Municipal Mayor, Clarin
15.	Hon. Nova Princess P. Echavez	City Mayor, Ozamiz
16.	Hon. Samson R. Dumanjug	Municipal Mayor, Bonifacio
17.	Hon. Rodolfo D. Luna	Municipal Mayor, Don Victoriano
18.	Timuay Desiderio I. Coronel	IP Representative 1 ST District
19.	Timuay Fernando M. Magante	IP Representative 2 nd District
20.	Mr. Dodge L. Cabahug, Sr.	NCIP
21.	Dir. Teodoro M. Paller	DILG
22.	Ms. Teresa B. Calamba	PPDO
23.	Mr. Dennis C. Leopoldo	Provincial Government ENRO
24.	Mr. Jose L. Satorre	Provincial Agricultural Officer
25.	Dir. Grace V. Villanueva	MUCEP
26.	Forester Rolando S. Dingal	PMFPC
27.	Dir. Ramonito O. Acaac	PETAL Foundation, Inc.
28.	Dir. Jose Loreto O. Procionos	MOFECO
29.	Dir. Roldan Gonzales	GITIB, Inc.
30.	Dir. Aproniano R. Panorel	PARTS, Inc.
31.	Sister Ester Paredes	St. Francis Ecological Movement
32.	Dr. Adelaida Borja	PENRO Zamboanga del Sur
33.	For. Carlito M. Tuballa	PENRO Zamboanga del Norte
34.	Hon. Dario S. Lapore	Brgy. Captain, Gandawan, Don Victoriano
35.	Hon. Emelio C. Medel	Brgy. Captain, Mara-mara, Don Victoriano
36.	Hon. Jomar Ending	Brgy. Captain, Lake Duminagat
37.	Hon. Romeo M. Maloloy-on	Brgy. Captain Lalud, Don Victoriano
38.	Hon. Roger Aca-ac	Brgy. Liboron, Don Victoriano
39.	Hon. Sergio Barimbao	Brgy. Captain, Mansawan, Don Victoriano
40.	Hon. Luiz Tamboboy	Brgy. Captain Petianan, Don Victoriano
41.	Hon. Nestor Napone	Brgy Captain, Napangan, Don Victoriano
42.	Hon. Nacario B. Ansao	Brgy. Captain, Bag-ong Clarin, Don Victoriano
43.	Hon. Ondo G. Tabata	Brgy. Captain Tuno, Don Victoriano
44.	Hon. Charlie T. Serohijos	Brgy. Captain, Lampasan, Don Victoriano
45.	Hon. Jovany Romo	Brgy. Captain, Kanao-kanao, Bonifacio
46.	Hon. Cerilo Endong	Brgy. Captain, Mapurog, Bonifacio
47.	Hon. Expedito Montemayores	Brgy. Captain, Buenavista, Bonifacio
48.	Hon. Quirino Tillor	Brgy. Capatin, Montol, Bonifacio
49.	Hon. Quilito O. Bejec	Brgy. Captain, Hoyohoy, Tangub City
50.	Hon. Norberto A. Carriaga	Brgy. Capatin, Kimat, Tangub City
51.	Hon. Andres R. Sarona	Brgy. Captain, Salimpuno, Tangub City

52	Hon. Mary Grace Tabalba	Brgy. Captain, Baluc, Tangub City
53	Hon. Fernando L. Carro, Sr.	Brgy. Captain, San Antonio, Tangub City
54	Hon. Artemeo B. Gongob	Brgy. Captain, Matugnao, Tangub City
55	Hon. Ramero Lumasag	Brgy. Captain, Sicot, Tangub City
56	Hon. Alejandro Sarajena	Brgy. Captain, Owayan, Tangub City
57	Hon. Esterlita Tumagna	Brgy. Captain, Guimad, Ozamiz City
58	Hon. Victor Z. Perez	Brgy. Captain, Guingona, Ozamiz City
59	Hon. Nestor Jala	Brgy. Captain, Trigos, Ozamiz City
60	Hon. Danilo T. Calzano	Brgy. Captain, Stenson Abordo, Ozamiz City
61	Hon. Eduardo Teate	Brgy. Captain, Penacio, Clarin
62	Hon. Romeo Ebio	Brgy. Captain, Dalingap, Clarin
63	Hon. Rogelio Montac	Brgy. Captain, Namut, Tudela
64	Hon. Jhonny Gumilos	Brgy. Captain, Gala, Tudela
65	Hon. Jose Macan	Brgy. Captain, San Lorenzo Ruiz, Sinacaban
66	Hon. Ricardo Lumantas	Brgy. Captain, Carmen, Jimenez
67	Hon. Vima Cabug	Brgy. Captain, Matugas Alto, Jimenez
68	Hon. Zacarias Mahinay	Brgy. Captain, San Juan, Panaon
69	Hon. Phil Apepe	Brgy. Captain, Manamong, Aloran
70	Punong Barangay	Brgy. Captain, Mitasan, Aloran
71	Hon. Ignacio Cabiara	Brgy. Captain, Roxas, Aloran
72	Hon. Luciano Tumanos	Brgy. Captain, Sinampongan, Aloran
73	Hon. Aurelia Sarancial	Brgy. Captain, Mialen, Oroquieta City
74	Hon. Marito Pastillo	Brgy. Captain, Sebuca, Oroquieta City
75	Hon. Melchora P. Sarial	Brgy. Captain, Toliyok, Oroquieta City
76	Hon. Jolly Gumolon	Brgy. Captain, Clarin Settlement, Oroquieta City
77	Hon. Teofila Lapinig	Brgy. Captain, Peniel, Lopez Jaena
78	Hon. Valeriano Manday	Brgy. Captain, Mabas, Lopez Jaena
79	Hon. Alejandro Gumolon	Brgy. Captain, Burgos, Lopez Jaena
80	Hon. Alex D. Ending	Brgy. Captain, Mamalad, Calamba
81	Hon. Lucita B. Jumawan	Brgy. Captain, Singalat, Calamba
82	Hon. Ranillo Lumantam	Brgy. Captain, Small Potongan, Concepcion
83	Hon. Morio Manday	Brgy. Captain, Upper Dioyo, Concepcion
84	Hon. Belmor Juancho	Brgy. Captain, Virayan, Cpnconcion
85	Hon. Joel S. Emoc	Brgy. Captain, Guiban, Concepcion
86	Hon. Alcher C. Lamoste	Brgy. Captain, Pogan, Concepcion
87	Hon. Pablo D. Gallera	Brgy. Captain, Soo-on, Concepcion
88	Hon. Oscar Rasonable	Brgy. Captain, Lingatongan, Concepcion
89	Hon. Johnny Omandam	Brgy. Captain, New Casul, Concepcion
90	Hon. Amansio Tumagna	Brgy. Captain, Marugang, Concepcion
91	Hon. Alberto Empil	Brgy. Captain, Bagong Nayon, Concepcion
92	Hon. Esmael Loquias	Brgy. Captain, Poblacion, Concepcion
93	Hon. Alex M. Umbay	Brgy. Captain, Upper Potongan, Concepcion
94	Hon. Roldan Tenae	Brgy. Captain, Upper Dapitan, Concepcion
95	Hon. Antonio Etol	Brgy. Captain, Mantokoy, Concepcion
96	Hon. Rey Ponce	Brgy. Captain, Upper Salimpuno, Concepcion
97	Hon. Filigrina P. Lumayog	Brgy. Captain, Capule, Concepcion
98	Mr. Gadwin Handumon	Paglaum Community Development Foundation Incorporated
99	The Manager	Buenavista Multi-Purpose Cooperative
100	Rene S. Sarno	Lalud Bigay Buhay Multi-Purpose Cooperative
101	Engr. Joecarnine L. Gubat	NIA
102	THE Manager	MOWD
103	The Provincial Director	PNP
104	Sofronio Cabatuan	IP Representative

Table 11. List of PAMB Executive Committee Members

1.	DR. Corazon B. Galinato, CESO IV	Regional Executive Director, PAMB Chairman
2.	Hon. Juanidy M. Viña	Municipal Mayor, Concepcion
3.	Hon. Donjie D. Animas	Municipal Mayor, Sapang Dalaga
4.	Hon. Svetlana P. Jalosjos	Municipal Mayor, Baliangao
5.	Hon. Luisito B. Villanueva, Jr.	Municipal Mayor, Calamba
6.	Hon. Agnes C. Villanueva	Municipal Mayor, Plaridel
7.	Hon. Martin C. Migriño	Municipal Mayor, Lopez Jaena
8.	Hon. Jason P. Almonte	City Mayor, Oroquieta
9.	Hon. Jimmy R. Regalado	Municipal Mayor, Aloran
10.	Hon. Meriam L. Paylaga	Municipal Mayor, Panaon
11.	Hon. Ranulfo B. Limquimbo	Municipal Mayor, Jimenez
12.	Hon. Dello T. Lood	Municipal Mayor, Sinacaban
13.	Hon. Estela R. Obut	Municipal Mayor, Tudela
14.	Hon. David M. Navarro	Municipal Mayor, Clarin
15.	Hon. Nova Princess P. Echavez	City Mayor, Ozamiz
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20.	Mr. Dodge L. Cabahug, Sr.	NCIP
21.	Dir. Teodoro M. Paller	DILG
22.	Ms. Teresa B. Calamba	PPDO
23.	Mr. Dennis C. Leopoldo	Provincial Government ENRO
24.	Mr. Jose L. Satorre	Provincial Agricultural Officer
25.	Dir. Grace V. Villanueva	Misamis University Community Extension Program
26.	Forester Rolando S. Dingal	PMFPC
27.	Dir. Ramonito O. Acaac	PETAL Foundation, Inc.
28.	Dir. Jose Loreto O. Procionos	MOFECO
29.	Dir. Roldan Gonzales	GITIB, Inc.
30.	Dir. Aproniano R. Panorel	PARTS, Inc.
31.	Sister Ester Paredes	St. Francis Ecological Movement
32.	Dr. Adelaida Borja	PENRO Zamboanga del Sur
33.	For. Carlito M. Tuballa	PENRO Zamboanga del Norte

TABLE 12. PAMB SUBCOMMITTEES OF THE MMRNP, 2009

Name of Sub-committees	Duties/Responsibilities
Forest Protection and Law Enforcement	- mobilize multi-sectoral support for forest protection activities;
Ecosystem and Eco-tourism Development	- promote and strengthen stakeholders' participation on ecosystem development of the MMRNP; - coordinate with the Protected Area Office on programs, projects and plans for Ecosystem development; - identify potential Ecotourism activities in the Park; - propose Ecotourism plan as well as appropriate policies and regulations on mini expeditions, trekking, recreational climbs and educational field tours in the Park
Indigenous Peoples and Special Concerns	- ensure that the rights of the IPs/ICCs on their ancestral domain are recognized and respected; - inform the IPs/ICCs on any proposed plans, projects, programs and

	<p>activities sought to be introduced into their ancestral domain;</p> <ul style="list-style-type: none"> - ensure that consent of the IPs/ICCs be secured first before any programs, projects, activities are introduced to their ancestral domain; - assist the IPs/ICCs to fully participate at all levels of decision-making on programs/ projects that may affect their rights, lives and destinies; - monitor compliance with the terms and conditions of the MOA entered into by and between the IPs/ICCs and the project proponents
Community-Based Resource Management & Livelihood	<ul style="list-style-type: none"> - review and recommend appropriate policy guidelines to PAMB on resource management and livelihood; - initiate activities that enhance the capacity of communities on the management and conservation of natural resources and at the same time, improve their livelihood systems - assist in the formulation and implementation of resource management and livelihood plan of local communities
Information, Education and Communications	<ul style="list-style-type: none"> - enhance awareness of the general public on the importance, issues and priority programs of the MMRNP thru IEC events and activities and IEC materials development; - develop management information system as tool and guide for planning, decision-making, monitoring and evaluation; - increase capacity of the PASu personnel and PAMB re utilization of mass media and person-to-person communications for advocacy campaign
Research and Development	<ul style="list-style-type: none"> - review all proposed research-related activities that will be implemented in the Protected Area before it will be presented to the PAMB - request the needed funding from the PAMB for field research evaluation if necessary - work and communicate closely with the research proponent/s in the publication of completed researches in order to submit research progress report to PAMB
Finance and Resource Mobilization	<ul style="list-style-type: none"> - assist in setting up, mobilization and the institutionalization of Special Trust Fund to be used for financing programs and projects in the MMRNP; - serve as the implementing Committee on the Integrated Protected Areas Fund and ensure funds transparency; - organize and initiate fund sourcing activities; - link up at various levels for fund sourcing and network building
Infrastructure Development	
Policies and Administrative Concerns	<ul style="list-style-type: none"> - review, enhance and recommend regulatory legislations for the protection and sustainability of the MMRNP; - harmonize or strengthen rules, policies and legislations impacting on the management and administration of the Park;

Source: Protected Area Office, GMP 2010

Table 13. List of Protected Area Community Based Agreement (PACBRAMA) Within the Mt. Malindang Range Natural Park.

NAME	PRESIDENT	LOCATION	DATE ISSUED	AREA (has.)
1. Owayan Farmers Association	Ruben D. Catalon	Owayan, Tangub City	December 29, 2003	158.31
2. Matugnao Farmers Association	Gregorio Mandawe	Matugnao, Tangub City	December 8, 2003	164.04
3. Mansawan Planters Association	Bernaldo Mamonta	Mansawan, Don Victoriano, Misamis Occidental	December 23, 2004	667.0

4.	Gandawan Planters Association	Dario Lapore	Gandawan, Don Victoriano, Misamis Occ	December 28, 2004	331.32
5.	Liboron Farmers Association	Pascual Lumandao	Liboron, Don Victoriano, Misamis Occ	December 23, 2009	116.36
6.	Self Employment Kaunlaran Association	Wilfredo Buyog	Napangan, Don Victoriano, Misamis Occ	December 23, 2004	770.78
7.	Malahutayong Pagpanalipud Sa Malindang Alang sa Kalambuan	Perfecto Sumibay	Lalud, Don Victoriano, Misamis Occ	December 23, 2004	229.57
8.	Sicot Small Farmers Association	Mateo Odchegue	Sicot, Tangub City	December 2007	168.91
		TOTAL			2,605.29

Source: Protected Area Office

Table 14. List of CBFM Projects in Misamis Occidental within MMRNP

No	Name of PO	Location	Area (has)	CBFMA No.	Date Issued	No. of Beneficiaries
1	Upper Dioyo, Concepcion	Upper Dioyo, Concepcion	130.6	57531	12/15/00	17
2	Siloy ISF Beneficiaries Association	Siloy, Calamba	66.89	57528	12/14/00	30
3	Upper Salimpuno ISF Beneficiaries Association	Upper Salimpono, Concepcion	196.9	57529	12/15/00	67
4	Bag-ong Clarin Land Dwellers Association for Environment and Economic Restoration, Inc.	Bag-ong Clarin, Don Victoriano	354	57508	12/11/98	69
5.	Tuno Multi-Purpose Cooperative	Tuno, Don Victoriano	650	57509	12/11/00	96
6	Lampasan Ecological Association of Farmers, Inc	Lampasan, Don Victoriano	460	57507	12/11/99	101
7	Buenavista Ecological Association for Development	Buenavista, Bonifacio	345	57511	6/25/99	35
8	Stimson Abordo Reforestation Beneficiaries Association	Stimson Abordo, Ozamis City	25	57501	12/20/97	25
9	Sicot Reforestation Association, Inc	Sicot, Tangub City	20	57510	12/20/97	30
10	Salimpuno Association of Farmers for Environment	Salimpono, Tangub City	302	57516	11/21/00	33
11	Montol Indigenous Farmers Association, Inc	Montol, Bonifacio	390	57517	7/15/00	50
12	Owayan Farmers Association, Inc.	Owayan, Tangub City	51.9505	57521	8/10/00	28
13	Kimat Farmers Association, Inc	Kimat, Tangub City	29.15	57523	9/6/00	8
14	San Lorenzo Ruiz Farmers Association, Inc	San Lorenzo Ruiz, Sinacaban	180.85	57524	12/06/00	50
15	Singalat ISF Beneficiaries Association, Inc.	Singalat, Calamba	69.51		12/10/04	30
		TOTAL	3,271.85			

(Profile of DENR-PENRO, Misamis Occidental 2008)

Table 15. LIST OF CELLSITE FACILITIES

STAKEHOLDERS	LOCATION	AREA	DATE SIGNED	USES
1. SMART	Lalud Don Victoriano, Misamis Occ	300 sq. meter	Ocotober 31, 2007	Cell site tower/Telecommunication Facilites
	Poblacion, Concepcion, Mis . Occ	300 sq. meter	Ocotober 31, 2007	Cell site tower/Telecommunication Facilites
2. GLOBE	Lalud Don Victoriano, Misamis Occ	400 sq. Meters	February 21, 2007	Cell site tower/Telecommunication Facilites
	Poblacion, Concepcion, Misamis Occ.	400 sq.meters	Febraury 21, 2007	Cell site tower/Telecommunication Facilites

Source:Protected Area Office

Table16 Special Use Agreement in Protected Area

NAME OF SAPA HOLDER	LOCATION	AREA
1. Hoyohoy Stone Chapel	Hoyohoy, Tangub City	1.8 has.

Table 17. List of . Plants in Mt. Malindang Range Natural Park, their conservation status

	Scientific Name	Common Name	Conservation Status
1	<i>Acer laurinum</i> Hassk.	Salindata	EC,EIS
2	<i>Adiantum mindanaense</i> Copel.		EC
3	<i>Adinandra Montana</i> Merr.	Tabantis	EC
4	<i>Adinandra robinsonii</i> Elm.	Sagemsem	EC
5	<i>Agathis philippinensis</i> Warb.	Dingan	EN,EC,EIS
6	<i>Albizia lebbeck</i> (Linn.) Benth.	Talugaw	EIS
7	<i>Allium fistulosum</i> L. *	Sibuyas	EIS
8	<i>Allium</i> sp.*	Sibuyas	EIS
9	<i>Alocasia sanderiana</i> Bull.	Ihalas nga viga	EN,EIS
10	<i>Alocasia zebrine</i> C. Koch. and Hort. Veitch	Ihalas nga viga	EN,EIS
11	<i>Alphitonia philippinensis</i> Braid	Tulo	EC
12	<i>Amorphyllus campanulatus</i> (Roxb.) Bl. Ex Decne	Balaynolag	EIS
13	<i>Ananas comosus</i> (Linn.) Merr. *	Pinya	EIS
14	<i>Anisoptera thurifera</i> subs. <i>thurifera</i> (BL.) Blume	Tomating	EC,VU,EIS
15	<i>Arcangelisia flava</i> (L.) Merr.	Alibutra	EIS
16	<i>Artocarpus blancoi</i> (Elm.) Merr.	Kapulot	VU,EIS,EC
17	<i>Artocarpus heterophyllus</i> *	Nangka	EIS
18	<i>Artocarpus odoratissimus</i> Blco.	Marang	EIS
19	<i>Arundina graminifolia</i> (H. Don) Hochr.	Orchid	EIS
20	<i>Ascarina philippinensis</i> C.B. Rob.	Babakag	EIS
21	<i>Asclepias physocarpa</i> (E.H. Mey) Schltr.	Flower ball	EIS
22	<i>Asplenium decorum</i> Kunze.	Lakno	D, EIS
23	<i>Asplenium amboinense</i> Wild.	Lakno	R
24	<i>Asplenium apoense</i> Copel.		EC
25	<i>Asplenium excissum</i> Presl.		EIS
26	<i>Asplenium militare</i> Copel.	Lakno	EC,EIS
27	<i>Asplenium musaefolium</i> Mett.		EIS
28	<i>Asplenium nidus</i> Linn.	Pagaypay	D,EIS
29	<i>Asplenium polyodon</i> Forst.		EIS
30	<i>Astrocalyx calycina</i> (Vidal) Merr.	Hantutungaw	EC,EIS
31	<i>Astronia cumingina</i> Vid. var. <i>cumingiana</i>	Tungaw-tungaw	EC,EIS
32	<i>Athyrium ramosii</i> Copel.		EC,EIS
33	<i>Atuna racemosa</i> Rafin.*	Tabo-tabon	EIS
34	<i>Azolla pinnata</i> R. Br.		EIS
35	<i>Basella alba</i> L. *	Alugbati	EIS
36	<i>Begonia copelandii</i> Merr.	Mamangpang	EC
37	<i>Begonia cumingii</i> A. Gray	Mamangpang	EC
38	<i>Belvisia glauca</i> Copel.	Pagaypay	EC
39	<i>Blechnum egregium</i> Copel.		EC,EIS
40	<i>Blechnum fraseri</i> Luer.		EIS
41	<i>Blechnum orientale</i> Linn.		EIS
42	<i>Blumeodendron subrotundifolium</i> (Elm.) Merr.	Bakhaw	EC,EIS
43	<i>Botrychium daucifolium</i> Wall.	Lakno	R
44	<i>Brassica oleraceae</i> var. <i>capitata</i> *	Repolyo	EIS
45	<i>Brassica rapa</i> spp. <i>pekinensis</i> *	Chinese cabbage	EIS

46	<i>Bridelia glauca</i> Bl.	Talan/Balitadhan	EIS
47	<i>Bryum rasulum</i>		EN
48	<i>Calamus aidae</i>	Oway	EIS
49	<i>Calamus diepenhorstii</i> Miq.	Pudlos	EIS
50	<i>Calamus discolor</i> Mart.	Oway	EIS
51	<i>Calamus filispadix</i> Becc.	Oway	EIS
52	<i>Calamus merrillii</i> Becc.	Tomalum	VU, EC, EIS
53	<i>Calamus mindorensis</i> Becc.	Oway	VU, EC, EIS
54	<i>Calamus ornatus</i> Bl. ex Schult.	Oway	EIS
55	<i>Calamus usitatus</i> Blco.	Oway	EIS
56	<i>Calcluvia celebica</i> (Bl.) Hoogl.	Malabago	EIS
57	<i>Calophyllum blancoi</i> Pl. And Tr.	Palomaria	EC, EIS
58	<i>Cananga odorata</i> (Lamk.) Hook. f. and Thoms.	Bakan	EC, EIS
59	<i>Canarium luzonicum</i> (Blume) A. Gray	Salong lunay	VU, EC
60	<i>Carica papaya</i> L.*	Kapayas	EIS
61	<i>Caryota cumingii</i> Lodd. ex Mart.	Pogahan	EC, EIS
62	<i>Caryota rumphiana</i> var. <i>philippinensis</i>	Takipan	EC, EIS
63	<i>Celtis luzonica</i> Warb.	Goralo	VU, EC, EIS
64	<i>Chingia christii</i> (Copel.) Holtt.		EC
65	<i>Chionanthus coriaceus</i> Gaertn.	Tulanmanok	EIS
66	<i>Chionanthus</i> sp.	Tulanmanok	EIS
67	<i>Chisocheton</i> cf. <i>patens</i> Bl.	Tagimtim, Malakape	EC, EIS
68	<i>Christensenia aesculifolia</i> (Bl.) Maxon		R
69	<i>Chromolaena odorata</i> (L) R.M. King and H. Rob.*	Hagonoy	EIS
70	<i>Chrysophyllum caimito</i> L.*	Kaimito	EIS
71	<i>Cibotium barometz</i> (Linn.) J. Sm.		EIS
72	<i>Cibotium cumingii</i> Kunze	Gantaw pula	EIS
73	<i>Cinnamomum mercadoi</i> Vid.	Kalingag	VU, EIS, EC
74	<i>Cinnamomum mindanaensis</i> Elmer.	Mana-mana	VU, EIS
75	<i>Citrus aurantifolia</i> (Christm. and Pans.)*	Busdak	EIS
76	<i>Citrus madurensis</i> L.*	Lemonsito	EIS
77	<i>Citrus reticulata</i> L.*	Citrus	EIS
78	<i>Clerodendrum macrostegium</i> Sch.	Lindang-lindang	EIS
79	<i>Clethra lancifolia</i> Turez.	Sakam	EC, EIS
80	<i>Cocos nucifera</i> L.	Lobe	EIS
81	<i>Coffea</i> sp.*	Kape	EIS
82	<i>Coix lacryma-jobi</i> L.		EIS
83	<i>Coleus</i> sp.*	Mayana	EIS
84	<i>Colocasia esculenta</i> (L.) Schott and Endl.*	Taro	EIS
85	<i>Coniogramme subcordata</i> Copel.		EC
86	<i>Cornopteris elmeri</i> Copel.		EC
87	<i>Corypha utan</i> Roxb.*	Buli	EIS
88	<i>Croton leiophyllus</i> Muell. –Arg.	Talisay	EC, EIS
89	<i>Cryptospermum merkusii</i>	Palaw	EIS
90	<i>Cryptostylis arachnites</i> Bl.	Spike orchid	EIS
91	<i>Ctenopteris millefolia</i> (Bl.) Copel.		EC

92	<i>Cyathea loherii</i> (Christ.)	Gantaw	EIS
93	<i>Cyathea apoensis</i> Copel.	Gantaw	EC, EIS
94	<i>Cyathea cineria</i> Copel.	Gantaw puti	EC, EIS
95	<i>Cyathea elmeri</i> (Copel.)	Gantaw'	R
96	<i>Cyathea contaminans</i> (Wall.) Copel.	Gantaw	EC, EIS
97	<i>Cyperus brevifilius</i> (Rottb) Hassk.*	Busikad	EIS
98	<i>Cyprinus glaucus</i> (J.Sm.) Copel.		EC
99	<i>Cyrtandra parviflora</i> Merr.	Pure salisip	EC
100	<i>Cyrtandra umbellifera</i> Merr.	Lalago pino	EC
101	<i>Dacrycarpus cumingii</i> (Parl.) de Laubenf.	Pinetree, Lomot	EIS
102	<i>Dacrydium elatum</i> (Roxb.) Wall.	Lomot	EIS
103	<i>Daemonorops ochrolepis</i> Becc.	Dawla/Oway	EIS
104	<i>Daemonorops molles</i> (Blco.) Merr.	Oway	EIS
105	<i>Daphniphyllum</i> sp.	Tulanmanok	EIS
106	<i>Daucus carota</i> L.*	Carrots	EIS
107	<i>Davallia denticulate</i> (Burm.) Mett.	Serelak	EIS
108	<i>Davallia solida</i> (Forst) Sw.	Serelak	EIS
109	<i>Davallodes</i> sp.		EIS
110	<i>Dawsonia superba</i>	Blas	EN
111	<i>Decaspermum fruticosum</i> Forts	Ulingon	EIS
112	<i>Dendrobium bullenianum</i> Sw.	Yellow Flower	VU, EIS
113	<i>Dendrochilum cobbianum</i> Reichb. f.		VU, EIS
114	<i>Dendrocnide densiflora</i> (C.B. Rob.) Chew	Gaksog lemon	EC
115	<i>Dendrocnide meyeniana</i> var. <i>meyeniana</i>	Labaret	EC
116	<i>Dichroa philippinensis</i> Schltr.	Bulak Yellow	EC
117	<i>Dichroa philippinensis</i> Schltr.	Bulak Yellow	EC
118	<i>Didymochlaena truncatula</i> (Sw.) J. Sm.		EIS, R
119	<i>Dillenia philippinensis</i> (Desr.) Guike*	Mabolo	EN, EIS, EC
120	<i>Dillenia philippinensis</i> Rolfe	Katmon	VU, EC, EIS
121	<i>Dimocarpus longan</i> Lour.	Binalagas	EIS
122	<i>Dinochloa pubiramea</i> Gamble	Bulukawe	EIS
123	<i>Dioscoria alata</i> L.*	Ube	EIS
124	<i>Diplazium tenuifolium</i> (Copel.) Price.		EC
125	<i>Diplazium altum</i> Copel.	Pako	EC, R
126	<i>Diplazium esculentum</i> Retz.	Pako	EIS
127	<i>Diplodiscus paniculatus</i> Turze.		VU, EC, EIS
128	<i>Dipterocarpus confertus</i> V. Sloat.	Apitong	EN, EIS, EC
129	<i>Dipterocarpus grandiflorous</i> Bl.	Balaw-balaw	EN, EIS
131	<i>Dipterocarpus validus</i> Blume	Apitong	EN, EIS
132	<i>Dracontomelon dao</i> (Bl.) Merr. And Rolfe	Luyaw	EN, EIS
133	<i>Drymis piperita</i> Hook. f.	Tambal-hilo	EIS
134	<i>Dryna ria descensa</i> Copel.	Pagaypay	EC, D
135	<i>Drynaria quercifolia</i> (Linn.) J. Sm.	Pagaypay	EIS
136	<i>Durio zebethinus</i> Merr.*	Durian	EIS

137	<i>Elaeocarpus calomala</i> (Bl.) Merr.	Babate	EIS
138	<i>Elaphoglossum luzonicum</i> Copel.		EC
139	<i>Elaphoglossum cumingii</i> Schn.		EIS
140	<i>Eleaegnus philippinensis</i>	Garang	EC, EIS
141	<i>Engelhardtia apoensis</i> Elm. Ex Nagel		EC, EIS
142	<i>Engelhardtia</i> sp.		EIS
143	<i>Equisetum ramosissimum</i> Desf.		EIS
144	<i>Ficus ampelas</i> Burm. F.	Saginsil	EIS
145	<i>Ficus botryocarpa</i> Mig. Var. <i>botryocarpa</i>	Tatanak	EC, EIS
146	<i>Ficus calycina</i>	Ple	EIS
147	<i>Ficus cumingii</i> Miq. var. <i>cumingii</i>	Saginsil	EIS
148	<i>Ficus fistulosa</i> Reinw. ex Bl. var. <i>fistulosa</i>	Busyong	EIS
149	<i>Ficus glandulifera</i> (Wall. ex Mig.) King var. <i>camiguinensis</i> (Merr.) Corner	Tatanak	EC, EIS
150	<i>Ficus latsoni</i> Elm.	Tubog	EIS
151	<i>Ficus minahassae</i> (Teijsn. And de Vr.) Mig.	Hagimit	EIS
152	<i>Ficus nota</i> (Bl.) Merr.	Tubog	EC, EIS
153	<i>Ficus septic</i> Burm. F.	Lagnob	EIS
154	<i>Ficus magnoliifolia</i> Bl.		EIS
155	<i>Fragaria vesca</i> L.*	Strawberry	EIS
156	<i>Freycinetia cumingiana</i> Gaudich	Baraas	EC
157	<i>Freycinetia multiflora</i> Merr.	Baraas	EC
158	<i>Freycinetia negrosensis</i> Merr.	Baraas	EC
159	<i>Garcinia binuca</i> (Bl.) Choisy	Kandiis	EC, EIS
160	<i>Garcinia dives</i> Pierre	Ganlis	EC, EIS
161	<i>Garcinia mangostana</i> L.*	Mangosteen	EIS
162	<i>Garcinia venolosa</i> Bl.	Ganlis	EC, EIS
163	<i>Gardenia longiflora</i> Vid.	Magatapalak	EC
164	<i>Glochidion album</i> (Bl.) Boeri.	Libangna	EC, EIS
165	<i>Glycine max</i> *	Soybeans	EIS
166	<i>Gmelina arborea</i> Roxb.	Gmelina	EIS
167	<i>Gnetum</i> cf. <i>acuminatum</i>	Bago	EIS
168	<i>Gnetum gnemon</i> L. var. <i>gnemon</i>	Bago	EIS
169	<i>Goodyera</i> sp.	Dalamdam	EIS
170	<i>Gordonia luzonica</i> Vid.	Sabon-sabon	EC
171	<i>Helmintostachys zeylanica</i> Linn.		VU, EIS
172	<i>Hibiscus esculentus</i> Linn.*	Okra	EIS
173	<i>Hibiscus tiliaceus</i> L.	Malabago	EIS
174	<i>Hibiscus tiliaceus</i> Linn.	Malabago	EIS
175	<i>Homalomena philippinensis</i> Enge.	Pusaw	EC, IES
176	<i>Hopea acuminata</i> Merr.	Magasusu	EN, EIS
177	<i>Hopea</i> cf. <i>santosii</i>	Magasusu	EN, EIS
178	<i>Hopea philippinensis</i> Dyer	Magasusu	EN, EIS, EC
179	<i>Horsfieldia ardisiifolia</i> (A.D.C.) Warb.	Talatab	EC, EIS
180	<i>Horsfieldia megacarpa</i> Merr.	Duguan	EC, EIS
181	<i>Humata obtusata</i> v.A.v.R.	Serelak	EIS
182	<i>Imbellia philippinensis</i>	Lalunaw	EC, EIS

183	<i>Impatiens balsamina</i>	Silangka	EIS
184	<i>Impatiens montalbanica</i> Hook	Silangka	EC, EIS
185	<i>Imperata cylindrical</i> (L.) P. Beauv.*	Cogon	EIS
186	<i>Ipomoea batatas</i> (L.) Lam.*	Kamote	EIS
187	<i>Knema glomerata</i> (Bl.) Merr.	Babakang/Duguan	VU, EIS, EC
188	<i>Lansium domesticum</i> Corr. Serr.*	Lanzones	EIS
189	<i>Lecanopteris pumila</i> Bl.		R
190	<i>Lecanopteris sinuosa</i> (Wall. ex. Hook)		R
191	<i>Lepidogyne longifolium</i>	Giant ground orchid	EIS
192	<i>Leucostegia immerse</i> (Wall.) Presl.		EC, EIS
193	<i>Lindsaea fissa</i> Copel.		EIS
194	<i>Lithocarpus sulitii</i> Soepadmo	Gulayan	EIS
195	<i>Lithocarpus mindanaensis</i> (Elm.) Rehd.	Gulayan kulasit	EC, EIS
196	<i>Lithocarpus nieuwenhuisii</i> (von Seem.) A. camus		EIS
197	<i>Lithocarpus ovalis</i> (Blco.) Rehd.	Gulayan kulasit	EN, EC, EIS
198	<i>Lithocarpus philippinensis</i> (A.D.C.) Rehd.	Gulayan puti	EC, EIS
199	<i>Litsea garciae</i> Vid.	Kalambog	EIS
200	<i>Litsea grandis</i> Lam.	Gupa	EIS
201	<i>Lomagamma copelandii</i> Holtt.		EC
202	<i>Lucuma nervosa</i> A.D.C.*	Tesa	EIS
203	<i>Lycopodium banayanicum</i> (Hert.) Copel.	Ikog-iring	EIS
204	<i>Lycopodium cernuum</i> L.	Ikog-iring	EIS
205	<i>Lycopodium nummularifolium</i> Bl.	Ikog-iring	EIS
206	<i>Lycopodium piscium</i> (Hert.) Tagawa	Ikog –iring	EIS
207	<i>Lycopodium pulmonaria</i>		EIS
208	<i>Lycopodium serratum</i> Thunb.	Ikog-iring	EIS
209	<i>Lycopodium squarrosus</i> Forst.	Ikog-iring	EIS
210	<i>Lycopodium verticillatum</i> Linn. f.	Ikog-iring	EIS
211	<i>Lycopodium magnusianum</i> Hert.	Ikog-iring	EIS
212	<i>Lygodium auriculatum</i> (Wild.)	Nito	EIS
213	<i>Lygodium circinnatum</i> (Burn.)	Nito	EIS
214	<i>Lygodium japonicum</i> Sw.	Nito	EIS
215	<i>Lygodium microphyllum</i> (Cav.) R. Br.	Nito	EIS
216	<i>M. candollii</i> (Bl.) Keng var. <i>candollii</i>	Bunot-bunot	EIS
217	<i>M. malindangensis</i> Merr.	Lapeto	EC, EIS
218	<i>M. tanarius</i> (L.) Muell.-Arg.	Binonga	EIS
219	<i>Macaranga grandifolia</i> (Bl.) Merr.	Labulag	EC, EIS
220	<i>Macaranga dipterocarpifolia</i> Merr.	Salumay	EN, EC, EIS
221	<i>Magnolia philippinensis</i> Linn.	Ngilo	EC, EIS
222	<i>Mangifera indica</i> L.	Manga	EIS
223	<i>Mastixia philippinensis</i> Wang	Tagibokbok	EC, EIS
224	<i>Mastixia trichotoma</i> var. <i>clarkeana</i> (Elm.) Hall. f.	Magatalo	EIS

225	<i>Medinilla clementis</i> Merr.	Kayupo	EC, EIS
226	<i>Medinilla cumingii</i> Naud.	Kayupo	EIS
227	<i>Medinilla pendulla</i> Merr.	Latepo	EIS
228	<i>Melanolepis multiglandulosus</i> (Reinw.) ex Blume Harms	Alom	EC, EIS
229	<i>Melicope acuminata</i> Merr.	Bintoko	EC, EIS
230	<i>Melicope confuse</i> (Merr.) Liu	Bintoko	EIS
231	<i>Melicope monophylla</i> Merr.	Bintoko	EC, EIS
232	<i>Mentha arvensis</i> L.*	Himbabauena	EIS
233	<i>Molinaria capitulate</i> (Lour.) Herbert		EIS
234	<i>Musa sapientum</i> Linn.*	Saging	EIS
235	<i>Musa textiles</i> Nee.*	Abaka	EIS
236	<i>Mussaenda nervosa</i> Elm.	Dalagang bukid	EC
237	<i>Myristica philippinensis</i> Lam.		EC, EIS
238	<i>Neonaucle formicaria</i> (Elm.) Merr.	Labalod	EC, EIS
239	<i>Neonauclea calycina</i> (Bartlr.) Merr.	Labalod	EC, EIS
240	<i>Nephelium lappaceum</i> L.*	Rambutan	EIS
241	<i>Nephrolepis clementis</i>	Butitay	EC, EIS
242	<i>Nicotiana tabacum</i> L.*	Tabako	EIS
243	<i>Oleandra maquilingensis</i> Copel	Kaliskis ahas	EC, EIS
244	<i>Oleandra nitida</i> (Copel.) Copel.	Kaliskis ahas	EC, EIS
245	<i>Omalanthus alpines</i>	Bayante	EIS
246	<i>Omalanthus macradenius</i> Pax and K.	Balanti	EIS
247	<i>Omalanthus populneus</i> (Geisel.) Pax var. <i>laevis</i> (Bl.) Merr.	Bayanti	EIS
248	<i>Ophioglossum pendulum</i> Linn.		EIS
249	<i>Ophioglossum pistillaris</i> (Sw.) C. Chr.		EIS
250	<i>Ophioglossum reticulatum</i> Sw.		EIS
251	<i>Ormosia calavensis</i> Azaola	Bahal	EIS
252	<i>Osmelia philippina</i> (Turcz.) F.-Vill.		EC
253	<i>Osmunda banksiifolia</i> (Presl) Kuhn.	Lakno	EIS
254	<i>Piper catunigense</i> Merr.	Gapin-bakbak	EC
255	<i>Palaquim philippense</i> (Perr.) C.B. Rob.	Lucos	EC, EIS
256	<i>Palaquium foxyworthyi</i> Merr.	Nato	EC
257	<i>Palaquium luzoniense</i> (F.-Vill.) Vidal	Nato	VU, EC, EIS
258	<i>Pandanus mapula</i>	Pandan	EIS
259	<i>Pandanus zamboangensis</i> Martelli.	Pandan	EC, EIS
260	<i>Pangium edule</i> Reinw. Ex Bl.	Pangi	EIS
261	<i>Paraserianthes falcata</i> (L.) Nielsen	Falcata	EIS
262	<i>Perrottetia alpestris</i> (Bl.) Loes. subsp. <i>philippinensis</i> (Vid.) Ding Hou	Dapuan-siaw	EIS
263	<i>Persea Americana</i> Mill.*	Avocado	EIS
264	<i>Phrynium philippinensis</i> Ridls		EC, EIS
265	<i>Phyllocladus hypophyllus</i> Hook. f.	Magaringan	VU, EIS
266	<i>Pinanga insignis</i> Becc.	Timbangalan	EC, EIS

267	<i>Pinanga philippinensis</i> Becc.	Karupay	EC, EIS
268	<i>Piper retrofractum</i> Vahl.	Buyo-buyo	EIS
269	<i>Piperomia pellucid</i> L.	Sinaw-sinaw	EIS
270	<i>Pittosporum resiniferum</i> Hemsl.	Pospuron	EIS
271	<i>Podocarpus lophatus</i> de Laub.	Subing	EN, EC, EIS
272	<i>Podocarpus neriifolius</i> D. Don ex Lamb.	Subing diwata	R, EIS
273	<i>Podocarpus rumphii</i> Blanco.	Malakawayan	EIS
274	<i>Polyosma philippinensis</i> Merr.	Babasa	EC, EIS
275	<i>Polystichum elmeri</i> Copel		EC
276	<i>Pouteria macrantha</i> (Merr.) Baenth.	Nato	EIS
277	<i>Prosaptia pinnatifida</i> Presl.		EC
278	<i>Prunus grisae</i> (C. Muell.) Kalkm. Var. <i>grisae</i>	Tanga	EIS
279	<i>Psidium guajava</i> *	Bayabas	EIS
280	<i>Pteridium aquilinum</i> (Linn.) Kuhn.	Lakno	EIS
281	<i>Pteris dentata</i> Linn.	Lakno	EIS
282	<i>Pterocarpus indicus</i> forma <i>echinatus</i>	Narra	EN, EC, EIS
283	<i>Pterospermum obliquum</i> Bl.	Bayog	EC, EIS
284	<i>Pyrrosia piloselloides</i> (L.) Price.		EIS
285	<i>Pyrrosia tripartite</i> Sw.		EIS
286	<i>Pyrrusia vitata</i> Linn		EIS
287	<i>Quintinia apoensis</i> (Elm.) Schltr.	Manga-manga	EC
288	<i>Robiquetia cerina</i> Garay		EIS
289	<i>Rubus moluccanus</i> L.	Sampinit	EIS
290	<i>Rubus rosifolius</i> J.E. Sm.		EIS
291	<i>Saccharum officinarum</i> L.*	Tubo	EIS
292	<i>Salacca clemensiana</i> Becc.	Kalube	EC, EIS
293	<i>Salomonina ciliate</i>	Bino-bino	EIS
294	<i>Sandoricum koetjape</i> (Burm. f.) Merr.*		EIS
295	<i>Sandoricum vidalii</i> Merr.	Malasantol	VU, EIS, EC
296	<i>Sarcandra glabra</i> (Thunb.) Nakai var.	Sarchandra	EIS
297	<i>Saurauia involucrate</i> Merr.	Balangog balhibo-on	EC
298	<i>Saurauia latiflora</i>	Balangog	EC
299	<i>Schefflera alvarezii</i> Merr.	Tagima	EC
300	<i>Schefflera blancoi</i> Merr.*	Tagima	EC
301	<i>Sechium edule</i> Sw.	Sayote	EIS
302	<i>Selagenilla philippina</i>	Butitay	EC
303	<i>Setaria italic</i> (L.) P. Beauv.*	Dawa	EIS
304	<i>Shorea guiso</i> (Blco.) Bl.	Danlugan, Tumating	En, EIS
305	<i>Shorea assamica</i> Dyer subsp. <i>philippinensis</i> (Brandis) Sym.	Magasusu	EN, EIS, EC
306	<i>Shorea contorta</i> Vid.	Danlugan	EN, EIS, EC
307	<i>Shorea polita</i> Merr.	Danlugan	EN, EIS, EC
308	<i>Shorea palosapis</i> (Bl.) Merr.	Kalayan	EN, EIS, EC
309	<i>Shorea polysperma</i> (Bl.) Merr.	Balabaan	EN, EIS, EC
310	<i>Shorea</i> sp.		EIS
311	<i>Shorea</i> sp. 1	Tobongon	EIS
312	<i>Shorea</i> sp. 2	Lauan pino	EIS
313	<i>Shorea</i> sp. 3	Ganon	EIS
314	<i>Shorea</i> sp. 4		EIS
315	<i>Spaerostephanus spenceri</i> (Christ.) Holtt.		EC

316	<i>Sphenomeris chinensis</i> (Linn.)	Lakno	EIS
317	<i>Swietenia mahogany</i> Jacq.	Mahogany	EIS
318	<i>Syzygium aqueum</i> (Burm. f.) Alst.*	Tambis	EIS
319	<i>Syzygium cumini</i> *	Lomboy	EIS
320	<i>Syzygium hutchinsonii</i> (Merr.) Merr.	Magatambis	EIS
321	<i>Syzygium macgregorii</i> (C.B. Rob) Merr.	Magatambis	EIS
322	<i>Syzygium samarangense</i> *	Macopa	EC, EIS
323	<i>Syzygium simile</i> (Merr.) Merr.	Polayo puti	EIS
324	<i>Tapeidium luzonicum</i> (Hook) Kramer		EC
325	<i>Tectaria angulata</i> (Wild)		R
326	<i>Terminalia nitens</i> Presl.	Talisay	EC, EIS
327	<i>Terminalia calamansanai</i> (Blaco.) Rolfe.	Nangka-nangka	EC, EIS
328	<i>Ternstroemia megacarpa</i> Merr.	Tagilumboy	EC
329	<i>Thayeria cornucopia</i> Copel.	Pagaypay	EC
330	<i>Theobroma cacao</i> L.*	Kakaw	EIS
331	<i>Tmesipteris lanceolata</i> Dang.	Latigo	EN, EIS
332	<i>Toona calantas</i> Merr. and Rolfe	Dyak	EN, EIS
333	<i>Trichadenia philippinensis</i> Merr.		EC
334	<i>Usnea longissima</i>		EIS
335	<i>Vaccinium jagorii</i> Warb.	Gamaw	EC, EIS
336	<i>Vatica</i> cf. <i>odorata</i> (Griff.) Sym. subsp. <i>mindanaensis</i> (Foxw.) Ashton	Magasusu	VU, EIS
337	<i>Vatica</i> sp.	Magasusu	EIS
338	<i>Vatica</i> sp. 1		EIS
339	<i>Viburnum luzonicum</i> Rolfe	Mamali	EC
340	<i>Vigna unguiculata</i> ssp <i>sesquipedalis</i> Fruw*	Sitao	EIS
341	<i>Vigna unguiculata</i> *	Cowpea	EIS
342	<i>Weinmania negrosensis</i> Elm.	Sesengan	EC, EIS
343	<i>Xanthomyrtus diplycosiifolia</i> (C.B. Rob.) Merr.	Ligad	EIS
344	<i>Zea mays</i> L.*	Mais	EIS
345	<i>Zingiber officinale</i> L.*	Luy-a	EIS

Legend:

EIS – Economically Important Species
 EC – Endemic
 EN – Endangered

VU- Vulnerable
 R – Rare
 D - Depleted

Table 18. List of Mammals found in Mt. Malindang Range Natural Park

FAMILY / SPECIES	Common name	Local Name	Conservation Status
Soricidae			
1. <i>Crocidura beatus</i>	Common Mindanao shrew	Imyak	vulnerable
2. <i>Crocidura sp.</i>			
Tupalidae			
3. <i>Urogale everetti</i>	Mindanao tree shrew	Mugsao	vulnerable
Cynocephalidae			
4. <i>Cynocephalus volans</i>	Flying lemur	Gagwang	Vulnerable
Pteropodidae			
5. <i>Haplonycteris fischeri</i>	Philippine pygmy fruit bat	Laknit	Vulnerable
6. <i>Harpyionycteris whiteheadi</i>	Harpy fruit bat	Laknit	Vulnerable
7. <i>Macroglossus minimus</i>	Dagger-toothed flower bat	Laknit	
8. <i>Ptenochirus minor</i>	Lesser Musky fruit bat	Laknit	
9. <i>Ptenochirus jagori</i>	Musky fruit bat	Laknit	
10. <i>Pteropus vampyrus</i>	Large flying fox	Kabug	
11. <i>Cynopterus brachyotis</i>	Common Short-nosed Fruit Bat	Laknit	
12. <i>Rousettus amplexicaudatus</i>	Common Rousette	Laknit	
Rhinolophidae			
13. <i>Rhinolophus subrufus</i>	Small Rufous Horseshoe Bat	Laknit	Vulnerable
Vespertilionidae			
14. <i>Murina cyclotis</i>	Round-eared tube-nosed Bat	Laknit	
15. <i>Pipistrellus javanicus</i>	Javan Pipistrelle	Laknit	
Tarsiidae			
16. <i>Tarsius syrichta</i>	Philippine Tarsier	Basiang	
Cercopithecidae			
17. <i>Macaca fascicularis</i>	Long-tailed Macaque	Gutong	
Sciuridae			
18. <i>Exilisciurus concinnus</i>	Philippine Pygmy Squirrel	Laksoy	
19. <i>Sundasciurus philippinensis</i>	Philippine Tree Squirrel	Laksoy	
20. <i>Petinomys crinitus</i>	Mindanao Flying Squirrel	Kawug	
Muridae			
21. <i>Apomys hylocoetes</i>	Mindanao Mossy Forest mouse	Gibas-gibas	
22. <i>Apomys insignis</i>	Mindanao montane forest mouse	Gibas-gibas	
23. <i>Apomys musculus</i>	Least Philippine forest mouse	Gibas-gibas	
24. <i>Bullimus bagobus</i>	Large Mindanao forest rat	Blabao	
25. <i>Crunomys sp. "Spiny rat"</i>		Gibas-gibas	
26. <i>Crunomys sp. "Smooth rat"</i>		Gibas-gibas	
27. <i>Limnomys sibuanus</i>	Long-tailed moss	Gibas-	

	mouse	gibas	
28. <i>Rattus everritti</i>	Common Philippine Forest Rat		
29. <i>Rattus argentiventer</i>	Rice field rat		
30. <i>Rattus tanezumi</i>	Oreintal Houserat		
31. <i>Tarsomys apoensis</i>	Mindanao dusky rats		
<i>Viverridae</i>			
32. <i>Paradoxurus hermaphroditus</i>	Common Palm Civet		
33. <i>Viverra tagalunga</i>	Malay Civet		
<i>Suidae</i>			
34. <i>Sus philippinensis</i>	Phil. Warty pig		
<i>Cervidae</i>			
35. <i>Cervus marrianus</i>	Phil. Brown deer		

Table 19 List of Amphibians of Mt. Malindang Range Natural Park

	SPECIES	CN/LOCAL NAME	CONSERVATION STATUS
1.	<i>Ansonia mcgregori</i>	Tikatik	Vulnerable
2	<i>Limnonectes magnus</i>	Dampawang/Baki/Bak-Bak	Vulnerable
3	<i>Limnonectes parvus</i>	Baki/Bak-Bak	Vulnerable
4	<i>Megophrys stejnegeri</i>	Baki/Bak-Bak	Vulnerable
5	<i>Nyctixalus spinosus</i>	Baki/Bak-Bak	Vulnerable
6	<i>Philautus poecilus</i>	Baki/Bak-Bak	Vulnerable
7	<i>Philautus surrufus</i>	Baki/Bak-Bak	Endangered
8	<i>Philautus worcesteri</i>	Baki/Bak-Bak	Vulnerable
9	<i>Rana grandocula</i>	Baki/Bak-Bak	
10	<i>Rhacophorus</i>	Baki/Bak-Bak	Vulnerable

Table 20. List of Birds found in Mt. Malindang Range Natural Park

	SPECIES	LOCAL NAME	Conservation Status
1.	<i>Buceros hydrocorax</i>	Kalaw	
2	<i>Penelopides affinis</i>	Tagiptip	
3	<i>Haliastur Indus</i>	Banog	
4	<i>Pithecophaga jefferyi</i>	Agila/Tipule	Critically Endangered
5	<i>Spizaetus cirrhatus</i>	Mangurong	Vulnerable
6	<i>Gallus gallus</i>	Manok lhalas	
7	<i>Chalcophaps indica</i>	Manatad	
8	<i>Macropygia phasianella</i>	Takwaw/Manokon/Manok-manok	
9	<i>Aceros leucocephalus</i>	Angik	
10	<i>Trichoglossus johnstoniae</i>	Pestra	
11	<i>Prioniturus montanus</i>	Pestra	
12	<i>Phapitreron amethystine</i>	Mangutot	

13	<i>Phapitreron leucotis</i>	Alimukon/Limukon/Alimukin	
13	<i>Loriculus philippensis</i>	Kolasisi/Kusi	
14	<i>Prioniturus discurus</i>	Pestra/Kalawihan	
15	<i>Centropus Viridis</i>	Kokok/Sibukok/Saguksok	
16	<i>Alcedo argentata</i>	Tabantis	Endangered
17	<i>Actenoides hombroni</i>	Bukla	Vulnerable
18	<i>Ficedula basilanica</i>	Pirot	Vulnerable
19	<i>Lonchura malacca</i>	Maja	Vulnerable
20	<i>Lonchura leucogastra</i>	Maja	
21.	<i>Accipiter trivirgatus</i>	Philippine Sparrow Hawk	
22.	<i>Arthopyge shelleyi</i>	Lovely Sun bird	
23	<i>Amauromis phoenicuros</i>	White-breasted swamphen	
24	<i>Aplonis panayensis panayensis</i>	Phil. Glossy Starling	
25	<i>Arachnothera elarae</i>	Naked faced Spider Hunter	
26.	<i>Artamus leucorhynchus</i>	White-breasted wood Swallow	
27	<i>Bulbulcus ibis coromandus</i>	Cattle Egret	
28	<i>Caprimulgus macrurus manillensis</i>	Long tailed night jar	
29	<i>Centropus sinensis</i>	Common Coucal	
30	<i>Cesticola jundcidis tinnabulane</i>	Common Fantail Warbler	
31	<i>Centropus sinensis</i>	Lesser Coucal	
32	<i>Chelcophaps indica indica</i>	Green winged ground dove	
33	<i>Collocalia brevirostris</i>	Himalayan Swiftlet	
34	<i>Collocalie troglodytes</i>	Pygmy Swiftlet	
35	<i>Corvus macrorhynchus</i>	Large billed crow	
36	<i>Dendrocopos maculatus</i>	Pygmy Wood Keeper	
37	<i>Dendrocygna arcuata arcuata</i>	Whistling duck	
38	<i>Dicaeum australe</i>	Philippine Flower Picker	
39	<i>Eudynamys scolopaceae</i>	Philippine Koel	
40	<i>Eurystamus orientalis</i>	Dollar bird	
41	<i>Geopelia striata Gonzales et al (1988)</i>	Zebra bird	
42	<i>Halcyon chloris collaris</i>	White collared kingfisher	
43	<i>Halcyon lindsaye</i>	Spotted Kingfisher	
44	<i>Halcyon smymensis</i>	White throated kingfisher	
45	<i>Harpactes ardens ardens</i>	Phil trogon	
46	<i>Hemiprocne comata</i>	Lesser tree Swift	
47	<i>Hirundo rustica gutturalis</i>	Barn swallow	
48	<i>Hysipetes philippinus</i>	Short Crested Monarch	
49	<i>Hysipetes philippinus</i>	Phil. Bulbul	
50	<i>Ixobrychus cinnamomeus</i>	Cinnamon least:Bittern	
51	<i>Lalage nigra nigra</i>	Pied Triller	
52	<i>Lanius cristatus luciorensis</i>	Brown Shrike	
53	<i>Lanius schach nastus</i>	Schach Shrike	
54	<i>Lonchura malacca jajorii</i>	Chestnut manikin	
55	<i>Lonchura punctulata</i>	Nutmeg Manniki	
56	<i>Loriculus philippinensis</i>	Phil. Hanging Pareket	
57	<i>Macrophygia phasianella</i>	Slender billed Cuckoo	
58	<i>Megalaima haemacephala</i>	Crimson Breasted Barbet	

59	<i>Megalurus palustris forbesi</i>	Striated Canegrass Warbler	
60	<i>Merops philippinus philippinus</i>	Green-headed Bee eater	
61	<i>Merops viridis americanus</i>	Pisutin	
62	<i>Microhierax erythrogonyx</i>	Philippine Falconet	
63	<i>Motacilla cineria</i>	Gray wagtail	
64	<i>Nectarinia sperata</i>	Purple-throated Sun bird	
65	<i>Nycticorax caledonicus</i>	Rufous Night Heron	
66	<i>Orioles chinensis Rabor 1977</i>	Black Naped Oriole	
67	<i>Orthotomus nigreiceps nigreiceps</i>		
68	<i>Parus elegans</i>	Elegant Tilmous	
69	<i>Paser Montanus</i>	Tree sparrow	
70	<i>Pericrocotus flammeus</i>	Flame Manivet	
71	<i>Pycnonotus goiavier</i>	Yellow Vented Bulbul	
72	<i>Rallus striatus striatus</i>	Slaly Breasted Rail	
73	<i>Rallus torquatus</i>	Barred Rail	
74	<i>Rhipidura javanica</i>	Black and White Fantail	
75	<i>Sarcopa calvus melanonater</i>	Coletto	
76	<i>Streptopelia bitorquata dusumieri</i>	Philippine Turtle Dove	
77	<i>Terpsiphone cinnamomea</i>	Rofous Paradise Flycatcher	
78	<i>Treeron pompadora</i>	Punay	







Table 21 List of Priority Species for Biodiversity Monitoring System

	SPECIES	Common Name
1	<i>Buceros hydrocorax</i>	Philippine Hornbill
2	<i>Cervus mariannus</i>	Philippine Brown Deer
3	<i>Pithecophaga jefferyi</i>	Philippine Eagle
5.	<i>Haliastur indus</i>	Brahminy Kite
6	<i>Macaca fascicularis</i>	Philippine Macaque
7.	<i>Tarsius syrichta</i>	Philippine Tarsier

Table 22. List of Potential Tourism Sites

1. Lake Duminagat	Barangay Lake Duminagat, Don Victoriano, Misamis Occ
2. Sebucal Hotspring	Barangay Sebucal, Oroquieta City
3. Piduan Falls	Lalud, Don Victoriano, Misamis Occ
4. Guiban Falls	Barangay Guiban, Concepcion
5. Kalatungan Falls	Carmen, Jimenez, Mis Occ
6. Hoyohoy Highland Park	Hoyohoy, Tangub City
7. North Peak	Lake Duminagat, Don Victoriano, Misamis Occ
8. Nesting Site of Philippine Eagle	Lalud, Don Victoriano, Misamis Occ.

Photos of Flora found in MMRNP

	
<p><i>Dendrobium bullenianum</i> (Photo by M. Ignacio)</p>	<p><i>Paphiopedilum spp.</i> <i>Lady slipper</i> (Photo by M. Ignacio)</p>
	
<p><i>Phaius sp.</i> (Photo by M. Ignacio)</p>	<p><i>Paphiopedilum haynaldian</i> (Photo by M. Ignacio)</p>
	
<p><i>Dendrobium stella-silvae</i> (Photo by M. Ignacio)</p>	<p>Pitcher plant (Photo by M. Ignacio)</p>



(Photo by M. Ignacio)



Epidendrum hybrid



Medinilla malindangnensis
(Photo by M. Ignacio)



Pholidota ventricosa
(Photo by M. Ignacio)



(Photo by M. Ignacio)



(Photo by M. Ignacio)



BIODIVERSITY RESEARCH PROGRAMME FOR DEVELOPMENT IN MINDANAO

SOME ENDEMIC PLANTS IN MALINDANG RANGE



J.B. Arances, V.B. Amaroso, G.S. Opiso, J.B. Galvezo, J.V. Ruffla
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Elaeocarpus calomala
ELAEOCARPACEAE
Babate
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1625 masl
Island Endemic (Luzon)



Vaccinium jagori
ERICACEAE
Lalumaw
Palo 6, Brgy. Mansawan
1605-1625 masl
Island Endemic (Luzon)



Sapium luzonicum
EUPHORBIACEAE
Baho-baho
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1625 masl
Widespread



Cyrtandra cumingii
GESNERIACEAE
Lalago dako
Palo 6, Brgy. Mansawan
1605-1625 masl
Widespread



Cyrtandra parvifolia
GESNERIACEAE
Pure salisip
Palo 6, Brgy. Mansawan
1605-1625 masl



Cyrtandra umbellifera
GESNERIACEAE
Lalago pino
Palo 6, Brgy. Mansawan
1585-1650 masl



Agalmyla sp.
GESNERIACEAE
Palo 6, Brgy. Mansawan
1605-1625 masl
Widespread



Cinnamomum mercadoi
LAURACEAE
Kalingag
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1650 masl
Widespread



Cinnamomum mindanaense
LAURACEAE
Mana-mana
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1650 masl
Island Endemic (Mindanao)



Neolitsea vidalii
LAURACEAE
Magamatong
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1650 masl
Widespread



Talauma reticulata
MAGNOLIACEAE
Bunot-bunot
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1650 masl
Endemic



Astronia cumingiana
MELASTOMACEAE
Hantutungaw
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1615-1625 masl
Widespread



BIODIVERSITY RESEARCH PROGRAMME FOR DEVELOPMENT IN MINDANAO

SOME ENDEMIC PLANTS IN MALINDANG RANGE



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Oleandra nitida
OLEANDRACEAE
Kaliskis halas
Palo 6, Brgy. Mansawan
1605-1625 masl



Freycinetia multiflora
PANDANACEAE
Pandan
Mt. Ginanlajan, Brgy. Lake
Duminagat - 1615-1625 masl
Widespread



Freycinetia negrosensis
PANDANACEAE
Bara-as
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1615-1625 masl
Widespread



Dacrycarpus cumingii
PODOCARPACEAE
Pine tree
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1625 masl



Psychotria diffusa
RUBIACEAE
Bagun
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1615 masl
Widespread



Saurauia elegans
SAURAUACEAE
Balangog dako
Mt. Ginanlajan, Brgy. Lake
Duminagat - 1585-1625 masl
Widespread



Saurauia fasciculiflora
SAURAUACEAE
Balangog lagwis
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1625 masl
Site Endemic (Palawan)



Saurauia glabrifolia
SAURAUACEAE
Balangog di balhibo-on
Mt. Ginanlajan, Brgy. Lake
Duminagat - 1585-1625 masl
Site Endemic (Surigao)



Saurauia involucreta
SAURAUACEAE
Balangog balhibo-on
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1605-1625 masl
Site Endemic (Davao)



Dichroa philippinensis
SAXIFRAGACEAE
Mote-mote
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1605-1625 masl



Polyosma philippinensis
SAXIFRAGACEAE
Babasa
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1625 masl
Widespread



Symplocos villarii
SYMPLOCACEAE
Lanutan
Mt. Ginanlajan, Brgy. Lake
Duminagat - 1585-1625 masl
Widespread



BIODIVERSITY RESEARCH PROGRAMME FOR DEVELOPMENT IN MINDANAO

SOME ENDEMIC PLANTS IN MALINDANG RANGE



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Adinandra montana
THEACEAE
Tabantis
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1625 masl
Widespread



Gordonia luzonica
THEACEAE
Sabon-sabon
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1625 masl
Widespread



Pyrenaria mindanaensis
THEACEAE
Darikpol
Palo 6, Brgy. Mansawan
1585-1625 masl
Island Endemic (Mindanao)



Dendrocnide densiflora
URTICACEAE
Lingatong punay
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1605-1625 masl

ENDANGERED PLANTS IN MALINDANG RANGE

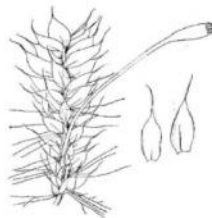
Tmesipteris lanceolata
PSILOTACEAE
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1600-1620 masl



Bryum russulum
BRYACEAE
Mt. Ginanlajan, Brgy. Lake
Duminagat - 1630 masl

NEW RECORDS OF PHILIPPINE MOSSES

*Metadistichophyllum
rhizophorum*
HOOKERIAEAE
Mt. Ginanlajan, Brgy. Lake
Duminagat - 1615 masl



*Camptochaeta
subporotrichoides*
LEMBOPHYLLACEAE
Mt. Ginanlajan, Brgy. Lake
Duminagat - 1620 masl



BIODIVERSITY RESEARCH PROGRAMME FOR DEVELOPMENT IN MINDANAO



SOME ECONOMICALLY IMPORTANT PLANTS IN MALINDANG RANGE

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Calamus ornatus
ARECACEAE
Oway
Palo 6, Brgy. Mansawan
1610-1620 masl
Raw material for handicraft



Diplazopsis javanica
ATHYRIACEAE
Butitay
Palo 6, Brgy. Mansawan
1615-1625 masl
Food plant



Hoya sp.
ASCLEPIADACEAE
Christmas tree
Palo 6, Brgy. Mansawan
1615-1625 masl
Ornamental



Sarcandra glabra
CHLORANTHACEAE
Babakag
Palo 6, Brgy. Mansawan
1615-1625 masl
Medicinal



Cyathea contaminans
CYATHEACEAE
Gantaw
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1625 masl
Medicinal, Food plant



Dioscorea sp.
DIOSCOREACEAE
Magulemon
Mt. Ginanlajan, Brgy. Lake
Duminagat - 1605-1625 masl
Medicinal



Aeschynanthus sp.
GESNERIACEAE
Christmas tree
Mt. Ginanlajan, Brgy. Lake
Duminagat - 1605-1625 masl
Ornamental



Hydrangea chinensis
HYDRANGEACEAE
Sallsip
Mt. Ginanlajan, Brgy. Lake
Duminagat - 1600-1615 masl
Medicinal



Molinaria capitulata
HYPOXIDACEAE
Karrot
Mt. Ginanlajan,
Brgy. Lake Duminagat
1605-1625 masl
Ornamental, Food plant



Dianella caerulea
LILIACEAE
Limbas-limbis
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1605-1625 masl
Ornamental



Melastoma malabathricum
MELASTOMACEAE
Malatungau
Mt. Ginanlajan, Brgy. Lake
Duminagat - 1605-1625 masl
Medicinal



Dendrobium sp.
ORCHIDACEAE
Salapid
Palo 6, Brgy. Mansawan
1600-1630 masl
Ornamental



BIODIVERSITY RESEARCH PROGRAMME FOR DEVELOPMENT IN MINDANAO

SOME ECONOMICALLY IMPORTANT PLANTS IN MALINDANG RANGE

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Phyllocladus hypophyllus
PODOCARPACEAE
Tungog
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1650 masl
Lumber



Dacrydium elatum
PODOCARPACEAE
Lomot
Palo 6, Brgy. Mansawan
1585-1650 masl
Lumber



Podocarpus nerifolius
PODOCARPACEAE
Subing diwata
Mt. Ginanlajan, Brgy. Lake
Duminagat - 1585-1650 masl
Lumber



Callicarpa eriocloma
VERBENACEAE
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1600-1630 masl
Medicinal

RARE AND VULNERABLE PLANTS IN MALINDANG RANGE



Sapium luzonicum
EUPHORBIACEAE
Baho-baho
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1625 masl



Cinnamomum mercadotii
LAURACEAE
Kalingag
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1650 masl



Cinnamomum mindanaense
LAURACEAE
Mana-mana
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1650 masl

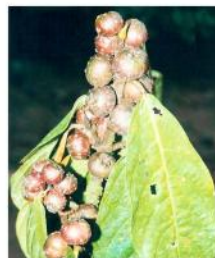


Neolitsea vidalii
LAURACEAE
Magamatong
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1585-1650 masl

SOCIO-CULTURALLY IMPORTANT PLANTS IN MALINDANG RANGE



Impatiens montalbanica
BALSAMINACEAE
Silangka
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1600-1615 masl
Used in giving birth



Ficus sp.
MORACEAE
Mt. Ginanlajan, Brgy. Lake
Duminagat; Palo 6, Brgy.
Mansawan - 1600-1630 masl
Used in farming



Habenaria sp.
ORCHIDACEAE
Mt. Ginanlajan, Brgy. Lake
Duminagat - 1600-1625 masl
Used during courtship,
For personal charm



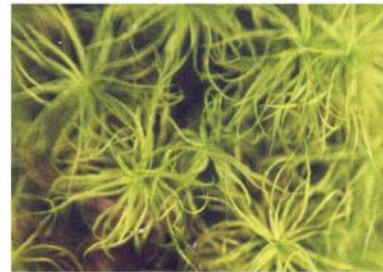
BIODIVERSITY RESEARCH PROGRAMME FOR DEVELOPMENT IN MINDANAO

SOME RARE & ORNAMENTAL BRYOPHYTES IN MALINDANG RANGE

J.B. Arances, V.B. Amoroso, G.S. Opiso, J.B. Galvezo, L.V. Ruffla
Central Mindanao University, Musuan, Bukidnon



Leucobryum javense



Calymperes sp.



Treubia insignis



Dumortiera hirsute



Neckera warburgii



Hypnodendron dendroides









Trismegistia sp.



Pterobryella longifrons

Photos of Fauna found in MMRNP

	
Philippine Brown Deer	Philippine Frogmouth
	
Serpent Eagle <i>(Photo by M. Ignacio)</i>	Philippine Tarsier <i>(Photo by M. Ignacio)</i>
	
Wild Chicken	Philippine Long Tailed Macaque



The Philippines-Netherlands Biodiversity Research Programme (BRP)
for Development in Mindanao: Focus on Mt. Malindang and Environs



SOME ENDEMIC SPECIES IN MT. MALINDANG RANGE

O.M. Nuñez, S.M. Dejarme, Y.I. Labajo, Mindanao State University - Iligan Institute of Technology, A.A. Alicante, Mindanao State University Marawi, F.B. Ates, University of the Philippines Mindanao, A.G.T. Bruno, Central Mindanao University, R.C. Enguito, Misamis University

Birds



Scolopax bukidnonensis
Bukidnon Woodcock
Tomogsook
Order Charadriiformes
North Peak - Lake Duminagat
1600 - 2175 masl
Philippine Endemic



Centropus viridis
Philippine Coucal
Kokok/Sibukok/Saguksok
Order Cuculiformes - Cuculidae
Mialen, Ulohan sa Dapitan - Lake Duminagat
300 - 1790 masl
Philippine Endemic



Caprimugus manillensis
Philippine Nightjar
Torlor
Order Caprimulgiformes - Caprimulgidae
Bunga, Lake Duminagat
100 - 1790 masl
Philippine Endemic



Harpactes ardens
Philippine trogon
Dalamanobo
Order Trogoniformes - Trogonidae
Mt. Capole - Sebucaal
700 - 1400 masl
Philippine Endemic



Penelopides affinis
Tarctic Hornbill
Tagitip/Tagitip
Order Coraciiformes - Bucerotidae
Tollyok, Mamalad, Mt. Capole - Sebucaal
195 - 1400 masl
Philippine Endemic



Parus elegans
Elegant Tit
Kalambangay
Order Passeriformes - Paridae
Mt. Capole - Sebucaal
600 - 1400 masl
Philippine Endemic



Pycnonotus urostictus
Yellow-Wattled Bulbul
Boluntarya/Bulyong/Balyong
Order Passeriformes - Pycnonotidae
Bunga, Tollyok, Mialen, Péniel, Mamalad
100 - 885 masl
Philippine Endemic



Terpsiphone cinnamomea
Rufous Paradise Flycatcher
Order Passeriformes - Muscicapidae
Tollyok, Mialen, Mt. Capole - Sebucaal
195 - 1400 masl
Philippine Endemic



Sarcops calvus
Coletto
Sal-ing
Order Passeriformes - Sturnidae
Tollyok, Mialen, Lake Duminagat, Mansawan,
Sebucaal
195 - 1550 masl
Philippine Endemic



SOME THREATENED SPECIES IN MT. MALINDANG RANGE

O.M. Nuñez, S.M. Dejarme, Y.I. Labajo, Mindanao State University - Iligan Institute of Technology, A.A. Alicante, Mindanao State University Marawi,
F.B. Ates, University of the Philippines Mindanao, A.G.T. Bruno, Central Mindanao University, R.C. Enguito, Misamis University

Amphibians

Philautus acutirostris
Pointed-Snouted Tree Frog
Baki/Bak-bak
Family Rhacophoridae
Toliyok, Mialen, Peniel, Mt. Capole - Sebuca, Mansawan,
Ulohan sa Dapitan, North Peak - Lake Duminagat
195 - 2175 masl
Mindanao Island Endemic and Vulnerable



Ansonia mcgregori
McGregor's Toad
Tikatik
Family Bufonidae
Bungá, Ulohan sa Dapitan, North Peak - Lake
Duminagat, Mansawan, Mamalad, Sebuca
100 - 2175 masl
Mindanao Island Endemic and Vulnerable



Rhacophorus bimaculatus
Asiatic Tree Frog
Baki/Bak-bak
Family Rhacophoridae
Mt. Capole, Sebuca, Mansawan
800 - 1290 masl
Vulnerable



Nyctixalus spinosus
Spiny Tree Frog
Baki/Bak-bak
Family Ranidae
Mt. Capole - Sebuca
700 - 1400 masl
Philippine Endemic and Vulnerable



Limnonectes parvus
Philippine Small-disk Frog
Baki/Bak-bak
Family Ranidae
Mt. Capole - Sebuca
700 - 1400 masl
Mindanao Endemic and Vulnerable



Philautus poecilus
Mottled Tree Frog
Baki/Bak-bak
Family Rhacophoridae
Ulohan sa Dapitan, North Peak - Lake Duminagat
1450 - 2175 masl
Mindanao Island Endemic



Philautus worcesteri
Smooth-skinned Tree Frog
Baki/Bak-bak
Family Rhacophoridae
Mialen, Mt. Capole - Sebuca, Mansawan,
Ulohan sa Dapitan, North Peak - Lake Duminagat
300 - 2175 masl
Mindanao Island Endemic and Vulnerable



SOME ENDEMIC SPECIES IN MT. MALINDANG RANGE

O.M. Nuñez, S.M. Dejarne, Y.I. Labajo, Mindanao State University - Iligan Institute of Technology, A.A. Alicante, Mindanao State University Marawi, F.B. Ates, University of the Philippines Mindanao, A.G.T. Bruno, Central Mindanao University, R.C. Enguito, Misamis University

Birds



Dicaeum australe
Red-keeled Flowerpecker
Pipit/Tamsi/Tagiti/Tagtap
Order Passeriformes - Dicaeidae
Bunga, Toliyok, Mialen, Mamalad
100 - 475 masl
Philippine Endemic



Macronous striaticeps
Brown-tit Babbler
Lalasi
Order Passeriformes - Timaliidae
Bunga, Toliyok, Mialen, Mt. Capole - SebucaI, North Peak, Ulohan sa Dapitan - Lake Duminagat, Peniel
100 - 2175 masl
Mindanao Faunal Region Endemic



Aethopyga boltoni
Apo Sunbird
Sumuson
Order Passeriformes - Nectaridae
Ulohan sa Dapitan, North Peak - Lake Duminagat, SebucaI
800 - 2175 masl
Mindanao Island Endemic



Rhipidura nigrocinnamomea
Black and Cinnamon Fantail
Gupa
Order Passeriformes - Muscicapidae
Mt. Capole - SebucaI, North Peak, Ulohan sa Dapitan - Lake Duminagat
700 - 2175 masl
Mindanao Island Endemic



Rhabdornis inornatus
Stripe-breasted Rhabdornis
Mangante/Mangantai
Order Passeriformes - Rhabdornithidae
Mt. Capole - SebucaI
700 - 1400 masl
Mindanao Faunal Region Endemic



Trichoglossus johnstoniae
Mindanao Lorikeet
Pestra
Order Psittaciformes - Psittacidae
Mt. Capole - SebucaI
700 - 1400 masl
Mindanao Island Endemic

Non-volant Mammals



Tarsius syrichta
Philippine Tarsier
Basing
Family Tarsiidae
Toliyok, SebucaI
195 - 1200 masl
Philippine Endemic



Bullimus bagobus
Large Mindanao Forest Rat
Lantotan
Family Muridae
Bunga, Mialen, Ulohan sa Dapitan - Lake Duminagat
100 - 1790 masl
Philippine Endemic



Rattus everetti
Common Philippine Forest Rat
B'labaw/Balagtok/Ilaga
Family Muridae
Toliyok, Mialen, Mamalad, Mt. Capole - SebucaI, Ulohan sa Dapitan, North Peak - Lake Duminagat
175 - 2175 masl
Philippine Endemic



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SOME ENDEMIC SPECIES IN MT. MALINDANG RANGE



O.M. Nuñez, S.M. Dejarne, Y.I. Labajo, Mindanao State University - Iligan Institute of Technology, A.A. Alicante, Mindanao State University Marawi,
F.B. Ates, University of the Philippines Mindanao, A.G.T. Bruno, Central Mindanao University, R.C. Enguito, Misamis University

Volant Mammals



Eonycteris robusta
Philippine Nectar Bat
Kuwaknit
Family Pteropodidae
Bunga, Mt. Capole - Sebucal, North Peak,
Lake Duminagat, Mansawan
100 - 1550 masl
Philippine Endemic



Harpyionycteris whiteheadi
Harpy Fruit Bat
Kuwaknit
Family Pteropodidae
Bunga, Toliyok, Mialen, Mamalad, Mt. Capole -
Sebucal, Mansawan
100 - 1290 masl
Philippine Endemic



Ptenochirus minor
Lesser Musky Fruit Bat
Kuwaknit
Family Pteropodidae
Bunga, Toliyok, Mialen, Mamalad, Peniel,
Mt. Capole - Sebucal, Mansawan, Ulohan sa
Dapitan - Lake Duminagat
100 - 1790 masl
Mindanao Faunal Region Endemic

Amphibians



Limnonectes magnus
Giant Philippine Frog
Baki/Bak-bak
Family Ranidae
Bunga, Toliyok, Mialen,
Mamalad, Mt. Capole -
Sebucal, Lake
Duminagat, Mansawan
100 - 1550 masl
Mindanao Island Endemic



Philautus surdus
**Common Forest Tree
Frog**
Baki/Bak-bak
Sebucal, Ulohan sa
Dapitan, North Peak -
Lake Duminagat
800 - 2175 masl
Philippine Endemic

Reptiles



Cyrtodactylus annulatus
Small Bent-toed Gecko
Family Gekkonidae
Mialen, Sebucal, Mamalad
300 - 1290 masl
Philippine Endemic



Sphenomorphus fasciatus
**Banded
Sphenomorphus**
Tabill
Family Scincidae
Peniel, Mansawan, Lake
Duminagat, Mt. Capole -
Sebucal, Toliyok
195 - 1550 masl
Philippine Endemic



Tropidophorus misaminus
Misamis Waterside Skink
Manantay
Family Scincidae
Mialen, Mt. Capole - Sebucal, Mamalad
165 - 1400 masl
Philippine Endemic



Calamaria gervaisi
Gervai's Worm Snake
Family Colubridae
Mansawan
1235 - 1290 masl
Philippine Endemic



Rhabdophis auriculata
White-lined Water Snake
Family Colubridae
Toliyok, Mialen, Mt. Capole - Sebucal,
Lake Duminagat
195 - 1550 masl
Philippine Endemic



The Philippines-Netherlands Biodiversity Research Programme (BRP)
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SOME THREATENED SPECIES IN MT. MALINDANG RANGE

O.M. Nuñez, S.M. Dejarme, Y.I. Labajo, Mindanao State University - Iligan Institute of Technology, A.A. Alicante, Mindanao State University Marawi, F.B. Ates, University of the Philippines Mindanao, A.G.T. Bruno, Central Mindanao University, R.C. Enguito, Misamis University

Non-Volant Mammal

Urogale everetti
Mindanao Tree Shrew
Mugsaw
Family Tupaiidae
Toliyok, Mialen, Mt. Capole - SebucaL, Mansawan, Ulohan sa Dapitan,
North Peak - Lake Duminagat
195 - 2175 masl
Mindanao Faunal Region Endemic and Vulnerable



Volant Mammals



Acerodon jubatus
**Golden-capped Fruit Bat/
Zorro Volador Filipino**
Kabog
Family Pteropodidae
Mt. Capole, SebucaL, Ulohan sa Dapitan,
North Peak - Lake Duminagat
700 - 2175 masl
Philippine Endemic and Endangered



Rhinolophus subrufus
Smaller Rufous Horseshoe Bat
Kuwaknit
Family Rhinolophidae
Bunga, Mt. Capole - SebucaL, Ulohan sa Dapitan -
Lake Duminagat
100 - 1790 masl
Philippine Endemic and Vulnerable



Haplonycteris fischeri
Fischer's Pygmy Fruit Bat
Kuwaknit
Family Pteropodidae
Mamalad, Peniel, Mt. Capole - SebucaL, Mansawan,
Ulohan sa Dapitan, North Peak - Lake Duminagat
175 - 2175 masl
Philippine Endemic and Vulnerable

Birds



Otus mitus
Mindanao scops-owl
Longmok/Bongkaw
Order Strigiformes - Strigidae
Mt. Capole - SebucaL, North Peak - Lake Duminagat
700 - 2175 masl
Mindanao Island Endemic and Vulnerable



Alcedo argentata
Silvery Kingfisher
Tabantis
Order Coraciiformes - Alcedinidae
Toliyok
195 - 445 masl
Mindanao Faunal Region Endemic and Vulnerable



Actenoides hombroni
Blue-capped Kingfisher
Bukla
Order Coraciiformes - Alcedinidae
Toliyok, Mt. Capole - SebucaL, North Peak -
Lake Duminagat
195 - 2175 masl
Mindanao Island Endemic and Vulnerable



SOME ENDEMIC WEEVILS IN MT. MALINDANG

M.G. Ballentes, A.B. Mohagan, M.C.P. Espallardo and M.O. Zarcilla, *Central Mindanao University*
V.P. Gapud, *University of the Philippines Los Baños*



Calidiopsis sp.
Curculionidae: Otiorynchinae
Mamalad; Peniel
450–900 masl
8 mm



Alcidodes sp. 1
Curculionidae: Gymnetrinae
Mt. Guinlajan, Lake Duminagat
1700–1900 masl
18 mm



Alcidodes sp. 2
Curculionidae: Gymnetrinae
Bunga; Peniel
120–900 masl
18 mm



Pachyrrynchus sp. 1
Curculionidae: Entiminae: Pachyrrynchini
Sebucal; Gandawan; Sitio Pungol, Gandawan;
Mt. Capole, Brgy. Lake Duminagat; Ulohan sa
Dapitan, Lake Duminagat
900–1700 masl
11 mm



Pachyrrynchus sp. 2
Curculionidae: Entiminae: Pachyrrynchini
Ulohan sa Dapitan, Lake Duminagat
1450–1700 masl
11 mm



Pachyrrynchus sp. 3
Curculionidae: Entiminae: Pachyrrynchini
Peniel
450–900 masl
11 mm



Pachyrrynchus sp. 4
Curculionidae: Entiminae: Pachyrrynchini
Peniel
450–900 masl
12 mm



Pachyrrynchus sp. 5
Curculionidae: Entiminae: Pachyrrynchini
Peniel
450–900 masl
11 mm



Pachyrrynchus sp. 6
Curculionidae: Entiminae: Pachyrrynchini
Mt. Capole, Sebucal
900–1100 masl
14 mm



Metapocyrtus sp. 1
Curculionidae: Entiminae: Pachyrrynchini
Mt. Guinlajan, Lake Duminagat
1700–1900 masl
5 mm



Metapocyrtus sp. 2
Curculionidae: Entiminae: Pachyrrynchini
Peniel 450–900 masl
12 mm



Metapocyrtus sp. 3
Curculionidae: Entiminae: Pachyrrynchini
Mialen; Toliyok; Mansawan
220–1290 masl
13 mm



Metapocyrtus sp. 4
Curculionidae: Entiminae: Pachyrrynchini
Toliyok; Mialen
220–500 masl
11–12 mm



Metapocyrtus sp. 5
Curculionidae: Entiminae: Pachyrrynchini
Mialen; North Peak, Lake Duminagat
220–2185 masl
9 mm



Metapocyrtus sp. 6
Curculionidae: Entiminae: Pachyrrynchini
Peniel
400–900 masl
10 mm



Metapocyrtus sp. 7
Curculionidae: Entiminae: Pachyrrynchini
Bunga; Peniel; Toliyok; Mialen; Mamalad
120–900 masl
10 mm



Metapocyrtus sp. 8
Curculionidae: Entiminae: Pachyrrynchini
Lake Duminagat
400–1550 masl
10 mm



Metapocyrtus sp. 9
Curculionidae: Entiminae: Pachyrrynchini
Mialen; Toliyok; Mamalad; Peniel; Mt.
Capole, Sebucal; Mansawan; Gandawan;
Sitio Pungol; Mt. Guinlajan, Lake Duminagat
220–1900 masl
5–7 mm



Metapocyrtus sp. 10
Curculionidae: Entiminae: Pachyrrynchini
Gandawan; Ulohan sa Dapitan,
Lake Duminagat
1000–1700 masl
7 mm



Metapocyrtus sp. 11
Curculionidae: Entiminae: Pachyrrynchini
Mamalad
220–500 masl
8 mm

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