### **CONserve KAIGANGAN**



A FIELD GUIDE TO SOME PLANTS
AND ANIMALS OF THE
FORESTS OVER LIMESTONE OF
GUIUAN MARINE RESOURCE
PROTECTED LANDSCAPE AND
SEASCAPE (GMRPLS), SAMAR
ISLAND, PHILIPPINES



# A FIELD GUIDE TO SOME PLANTS AND ANIMALS OF THE FORESTS OVER LIMESTONE OF GUIUAN MARINE RESOURCE PROTECTED LANDSCAPE AND SEASCAPE (GMRPLS), SAMAR ISLAND, PHILIPPINES

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### **FOREWORD**

This pioneering piece of work, A FIELD GUIDE TO SOME PLANTS AND ANIMALS OF THE FORESTS OVER LIMESTONE OF GUIUAN MARINE RESOURCE PROTECTED LANDSCAPE AND SEASCAPE (GMRPLS), SAMAR ISLAND, PHILIPPINES, presents data sets relevant to multiple sectors dependent on the Guiuan forests over limestone and the Guiuan Protected Landscape and Seascape as a whole. The field guide is very important to all private government and sectors education, agriculture, forestry, tourism, health and many others. The education sector from the pre-elementary, secondary, tertiary and post graduate levels can make this a reference, in topics under natural geography or natural heritage, inculcating awareness of the rich value of Guiuan forests over limestone in their community. The agroforestry sectors can initiate attempts in domesticating plants and animals, whenever possible, to minimize poaching in the wild. The tourism sector can highlight the sociocultural and economic importance of the native flora and fauna, as staff on the ground, tour frequent interested visitors in nature. Finally, the health sector can make use of the field guide in quickly diagnosing which poisonous plant or animal has caused ailments to patients rushed in clinics or hospitals for emergency treatments. The local People's Organization and advocacy groups, in partnership with the education sector or TESDA, can very well utilize this field guide as a springboard, in crafting and organizing training courses on native biodiversity conservation, which are vital to sustainability of the forests over limestone.

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### **FOREWORD**

Beyond the local communities in Guiuan, A FIELD GUIDE TO SOME PLANTS AND ANIMALS OF THE FORESTS OVER LIMESTONE of GUIUAN MARINE RESOURCE PROTECTED LANDSCAPE AND SEASCAPE (GMRPLS), SAMAR ISLAND, PHILIPPINES, should be of interest to researchers, scientists, educators and biodiversity practitioners in the Philippines, ASEAN and the globe, especially in the comparative inventory and analysis of biodiversity in forests over limestone which is one of the most special ecosystem landscapes in our planet.

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and Program Leader, CONSERVE-Kaigangan

### **ACKNOWLEDGEMENT**

The authors would like to express their sincere gratitude to the Guiuan Marine Resource Protected Landscape and Seascape (GMRPLS) PAMB, DENR Region 8, for the gratuitous permit (2019–16 and 2020–10) to conduct the study and collect soil, faunal samples and plant materials, to Barangays Baras, Ngolos, Pagnamitan, and Sulangan, to Tito Rambakod, and to the kind people of GMRPLS for their assistance and hospitality. The authors would also like to thank DOST-PCAARRD and DOST-GIA for funding the program (no. N9A6323), and DOST-SEI for allowing the sixth author to take part in this research program through the Career Incentive Program. We also thank the UPLB Institutional Animal Care and Use Committee for granting us permit no. CAS-2019-016.

### INTRODUCTION

Guiuan Marine Resource Protected Landscape and Seascape (GMRPLS) can be found in the south-eastern tip of Samar Island facing the Pacific Ocean. It is located in the municipality of Guiuan, in the province of Eastern Samar, Philippines, approximately 10°58'57.1"N latitude and 125°48'10.9"E longitude. It has a total area of 60,448 hectares covering the coastal areas of Guiuan and nearby islands of Calicoan, Manicani, Candulo, Suluan, Tubabao, and Homonhon and surrounding reefs.

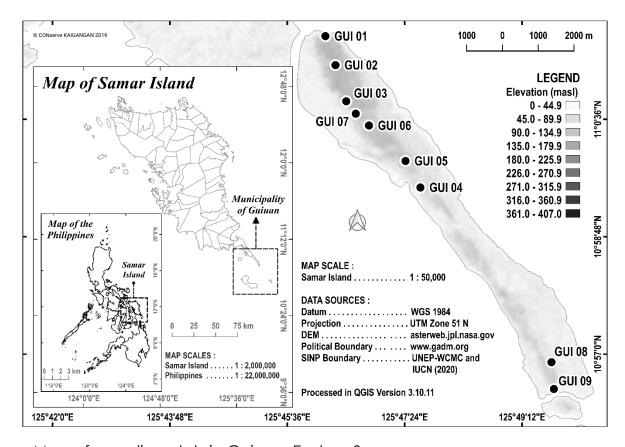
GMRPLS in Eastern Samar, Philippines was designated as a protected area by virtue of Presidential Proclamation No. 469 in 1994. It is notable for its rich marine resources which are utilized by local residents, the academe and surfers. Most of the terrestrial forest areas of this protected area remain largely unexplored and biological knowledge is deficient.

The GMRPLS is one of the study areas chosen for implementation of the CONserve-KAIGANGAN Program. This research program has mission to assess and conserve the biodiversity (plant, animal and microbial diversity) in kaigangan (Samar local dialect for forests over limestone) towards its sustainable management in Samar Island, Philippines, particularly in Paranas, Taft, and Guiuan. This is very important since the GMRPLS hosts one of the most extensive coastal and inland type of forests over limestone.

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### STUDY SITE DESCRIPTION

The biodiversity assessment was conducted in the municipality of Guiuan, Eastern Samar. A total of nine (9) plots measuring 20x20m and eighteen (18) line transects were established in this municipality to assess the floral diversity of the area. On the other hand, transect and various trapping methods were used to assess the animal diversity in the study site. The sampling locations were identified using the presence and absence of anthropogenic disturbances, plant diversity heterogeneity, and topographic attributes of the area. Specifically, the sampling plots in Guiuan were laid out in Barangay Baras, Barangay Pagnamitan, Barangay Ngolos, and Barangay Sulangan. The map below shows the location of established sampling plots, represented as black dots, in the municipality of Guiuan, Eastern Samar.



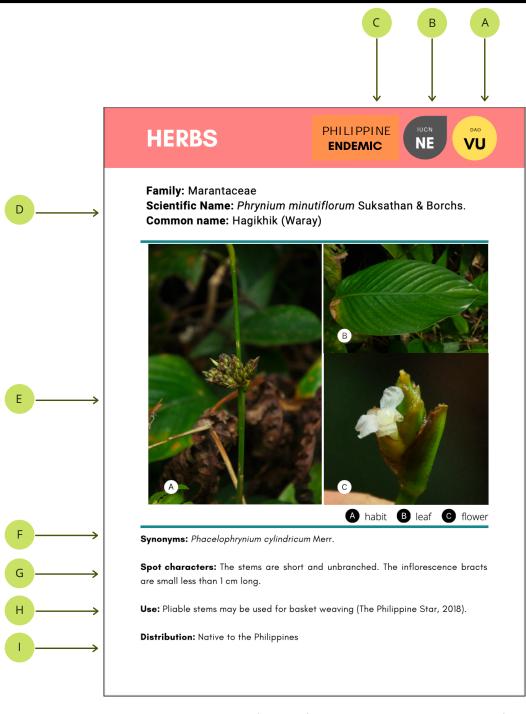
Map of sampling plots in Guiuan, Eastern Samar

### **HOW TO USE THIS BOOK**

This is the second installment of the field guide series produced by the **CONserve-KAIGANGAN program**. The field guide aims to enable the reader to identify some animals and plants found in Guiuan Marine Reserve Protected Landscape and Seascape (GMRPLS).

This book includes animal information such as distinguishing characteristics and ecological importance as well as plant information such as spot characters and economic uses.

### **HOW TO USE THIS BOOK**



#### A Status Based from the DAO 2017-11

CR = Critically Endangered, EN = Endangered, VU = Vulnerable, OTS= Other Threatened Species

### B Status Based from the IUCN RED List

$$\begin{split} NE &= Not \ Evaluated, \ DD = Data \ Deficient, \\ LC &= Least \ Concern, \ NT = Near \ Threatened, \\ VU &= Vulnerable, \ EN = Endangered, \ CR = \\ Critically \ Endangered, \ EW = Extinct \ in \ the \\ Wild, \ EX &= Extinct \end{split}$$

#### C Philippine endemic

#### **D** Taxonomic Notes

which includes: i) family, ii) scientific name with authorship, and iii) common name.

#### E Image of the species

#### F Synonyms

alternate and redundant name of the plant species

#### **G** Spot Characters

allows for quick scanning and species verification

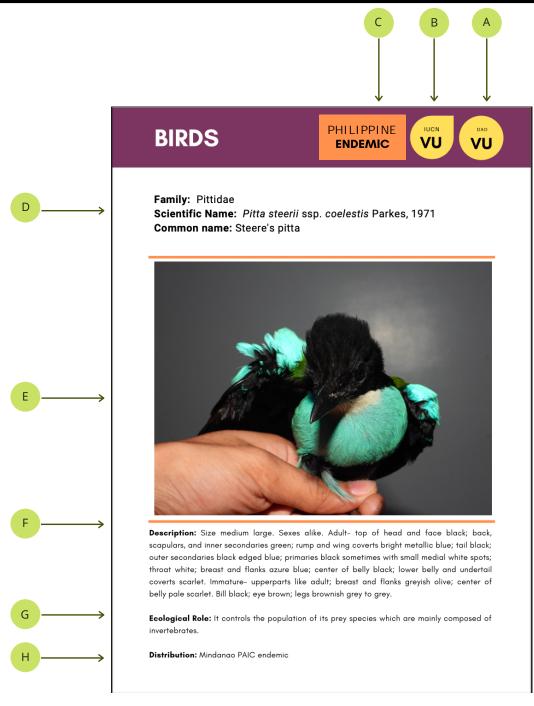
#### H Uses

contains information on ethnobotanical application of the species

#### | Distribution

provides range and species distribution

### **HOW TO USE THIS BOOK**



#### ▲ Status Based from the DAO 2019-09

CR = Critically Endangered, EN = Endangered, VU = Vulnerable, OTS = Other Threatened

### B Status Based from the IUCN RED List

NE = Not Evaluated, DD = Data Deficient, LC = Least Concern, NT = Near Threatened, VU = Vulnerable, EN = Endangered, CR = Critically Endangered, EW = Extinct in the Wild, EX = Extinct

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#### E Image of the species

#### F Description

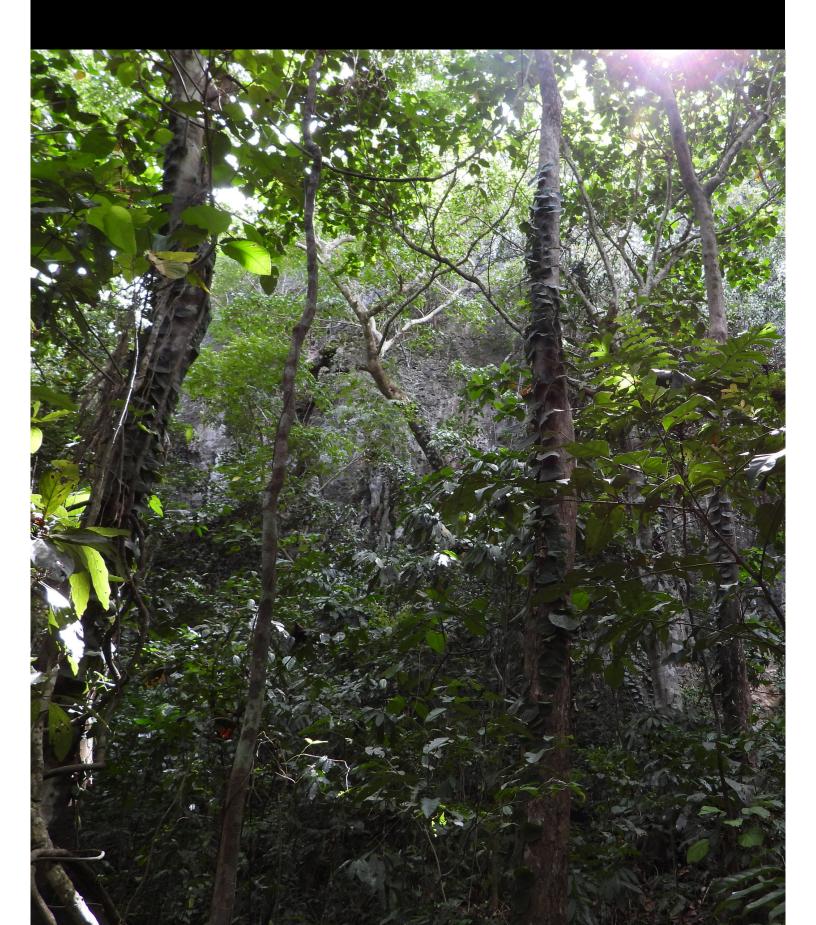
allows for quick scanning and species verification

#### **G** Ecological Role

#### H Distribution

provides range and species distribution

### FLORA OF GUIUAN



### **PLANT SPECIES LIST:**

Aglaonema commutatum Schott

Aquilaria cumingiana (Decne.) Ridl

Artocarpus rubrovenius Warb.

Bridelia glauca Blume

Calophyllum blancoi Planch. &Triana

Caryota rumphiana Mart.

Cyclopeltis crenata (Fée) C. Chr.

Ficus ampelas Burm.f.

Ficus minahassae (Teijsm & Vriese) Miq.

Gnetum gnemon L.

Greeniopsis multiflora (Elmer) Merr.

Hancea wenzeliana (Slik) S.E.C. Sierra, Kulju & Welzen

Wallaceodendron celebicum Koord.



Family: Araceae

Scientific Name: Aglaonema commutatum Schott

Common name: Pilako



**Synonyms:** Aglaonema commutatum var. commutatum, Aglaonema commutatum var. robustum (Alderw.) Nicholson, Aglaonema maculatum Blume, Aglaonema marantifolium var. commutatum (Schott) Engl., Aglaonema robustum Alderw.

Spot characters: Leaves are lanceolate to elliptic, erect and dark green in color

**Uses:** Cultivated and utilized as an indoor houseplant. Potential use as antimicrobial agent.

**Distribution:** Sulawesi & Philippines

Family: Polypodiaceae

Scientific Name: Cyclopeltis crenata (Fée) C.Chr.

Common name: Lukdo (Waray)



**Synonyms:** Cyclopeltis latupana Alderw., Cyclopeltis zamboangana Copel., Hemicardion crenatum Fée

**Spot characters:** Has elliptic-lanceolate fronds with a distinct blue-green iridescent sheen.

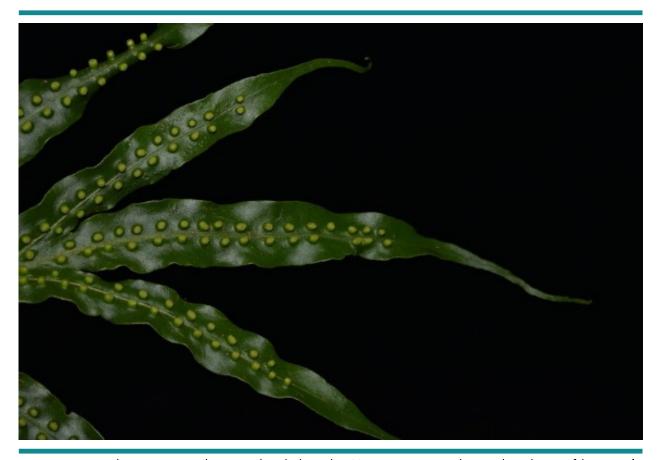
**Uses:** Ornamental plant

**Distribution:** Native to Borneo, Hainan, Java, Laos, Malaya, Myanmar, Philippines, Sulawesi, Sumatra, Thailand, Vietnam

Family: Polypodiaceae

Scientific Name: Phymatosorus scolopendria (Burm.F.) C.Chr.

Common name: No associated common name



**Synonyms:** Chrysopteris phymatodes (L.) Link, Microsorum scolopendria (Burm.f.) Copel., Phymatodes phymatodes (L.) Maxon, Phymatodes scolopendria (Burm.f.) Ching, Pleopeltis phymatodes L., Polypodium scolopendria Burm.f.

**Spot characters:** Pinnatifid lamina, lanceolate, apex acuminate and midrib raised on both sides. Sori in 1 row on each side of the midrib. These sori are deeply hollowed and adaxially raised.

**Uses:** Young leaves are used to cure chronic diarrhea in Indo-China.

**Distribution:** Guangdong, Hainan, Taiwan, India, Japan, Malaysia, Myanmar, Papua New Guinea, Philippines, Sri Lanka, Thailand, Vietnam, Africa, Australia, & Pacific Islands



Family: Commelinaceae

Scientific Name: Tradescantia zebrina Bosse

Common name: Wandering jew



**Synonyms:** Cyanoris zebrina (Bosse) Nees

**Spot characters:** A trailing perennial plant whose leaves are green adaxially and purple abaxially.

Uses: Used in gardens as ground cover or bedding plant and used as an indoor houseplant.

**Distribution:** Mexico, Central America, Philippines, Tropical & Subtropical areas.







Family: Araliaceae

Scientific Name: Artocarpus rubrovenius Warb.

Common name: Antipolo



Synonyms: no synonyms are recorded at this time

**Spot characters:** A medium-sized, dioecious tree with grey and brown mottled bark which exudes a white latex when wounded.

**Uses:** Harvested for its wood and used in light construction. The bark has been reported to have medicinal uses and is used in manufacturing textiles.

**Distribution:** Endemic to the Philippines

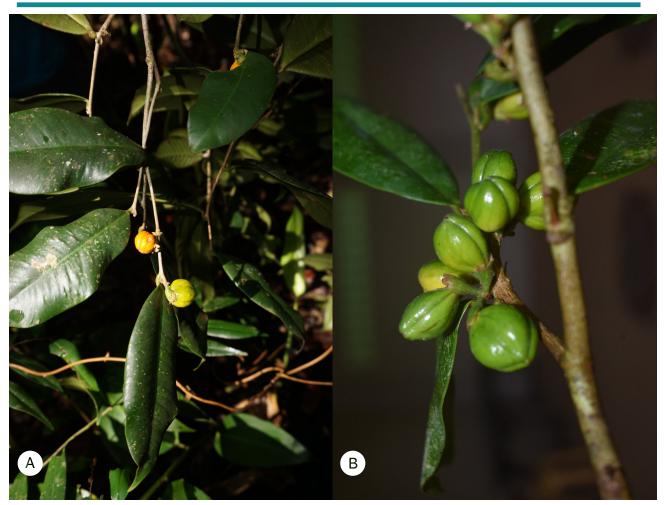




Family: Thymelaeaceae

Scientific Name: Aquilaria cumingiana (Decne.) Ridl.

Common name: Agar/Lapnisan



A mature fruit B unripe fruits

**Synonyms:** Aquilaria pubescens (Elmer) Hallier f., Decaisnella cumingiana (Decne.) Kuntze, Gyrinopsis cumingiana Decne., Gyrinopsis pubifolia Quisumb.

**Spot characters:** Has orange-red globose fruits to ellipsoid loculicidal capsules.

Uses: Highly demanded in several countries, agarwood is further processed into perfumes, incenses, and ornamental displays and used as a raw material in traditional and modern medicines (Lee & Mohamed, 2016).

**Distribution:** Borneo, Moluccas, and the Philippines



Family: Phyllanthaceae

Scientific Name: Bridelia glauca Blume

Common name: Anislag



**Synonyms:** Bridelia acuminatissima Merr., Bridelia glauca var. acuminatissima (Merr.) S. Dressler, Bridelia glauca var. glauca, Bridelia glauca f. laurifolia (Elmer) Jael., Bridelia glauca var. sosopodonica (Airy shaw) S. Dressler, Bridelia laurifolia Elmer.

**Spot characters:** A small tree with reddish brown pubescent to tomentose branches. Outer bark is dark greyish brown whereas inner bark is yellowish white with no exudates.

**Uses:** The wood is harvested and used for construction as well as for fuel. Its fruits are consumed.

**Distribution:** India, Bhutan, Myanmar, Thailand, Laos, Taiwan, Sumatra, Peninsular Malaysia, Java, Borneo, Philippines, Moluccas, & New Guinea





Family: Calophyllaceae

Scientific Name: Calophyllum blancoi Planch. & Triana

Common name: Pamintaogon



**Synonyms:** Calophyllum changii N.Robson, Calophyllum ferrugineum Merr., Calophyllum flavocortica Elmer, Calophyllum glabrum, Calophyllum megistanthum Quisumb. & Merr., Calophyllum mindanaense Elmer

**Spot characters:** An erect tree whose leaves are opposite with numerous parallel and closely set veins.

**Uses:** Has folkloric applications, wherein sap is mixed to sulfur and used to treat boils and wounds. Other studies have found it to have anti-plasmodial activity.

**Distribution:** Taiwan, Indonesia, Malaysia, Philippines, & Northeastern Borneo





Family: Arecaceae

Scientific Name: Caryota rumphiana Mart

Common name: Pugahan



**Synonyms:** Caryota rumphiana var. moluccan Becc., Caryota rumphiana var. papuana Becc.

**Spot characters:** Evergreen, solitary-stemmed palm tree.

**Uses:** Often grown as ornamentals. Apical buds are steamed and enjoyed as a vegetable when eaten with rice, in soups, or fried with coconut milk and spices. The pith is extracted from the stem and used to make *sago*.

**Distribution:** Indonesia, Philippines, Papua New Guinea, Northern Australia, & Solomon Islands





Family: Moraceae

Scientific Name: Ficus ampelas Burm.f.

Common name: Laniti



**Synonyms:** Ficus ampelas var. bandana (Miq.) Miq., Ficus ampelas f. bogoriensis Koord. & Valeton, Ficus ampelas var. bogoriensis (Koord. & Valeton) Hochr., Ficus ampelas f. incrassata Hochr., Ficus ampelas var. laevior Miq., Ficus ampelas var. rugosa Miq.

**Spot characters:** Tree with dark brown to blackish branchlets. Leaves are distichous and glabrous.

**Uses:** The fruits and young leaves are eaten as a vegetable by the locals.

**Distribution:** Taiwan, Borneo, Lesser Sunda Is., New Guinea, Philippines, Indonesia, Japan, Sulawesi, China, & Brazil



Family: Moraceae

Scientific Name: Ficus minahassae (Teijsm. & Vrise) Miq.

Common name: Hagimit



Synonyms: Bosscheria minahassae de Vriese & Teijsm, Ficus glomerata Blanco

**Spot characters:** A buttressed tree at the base with long and setosely hairy branches. Fruits are small, stalkless, and angularly obovoid.

**Uses:** Its fruits and sap are harvested for food. Vegetative parts are used as medicine i) leaves topically used as anti rheumatic; ii) bark is used for its astringent properties; iii) roots are boiled and drank to enhance milk production in lactating women.

Distribution: Philippines, Malaysia, Sulawesi, & Indonesia



Family: Gnetaceae

Scientific Name: Gnetom gnemon L.

Common name: Bago



**Synonyms:** Gnetum ovalifolia (Poir.) Kuntze, Gnetum acutatum Miq., Gnetum gnemon var. gnemon

**Spot characters:** an evergreen tree with petiolate, ovate-oblong or elliptic, reticulately veined, glabrous and shiny, dark green mature leaves; young leaves are reddish purple.

**Uses:** Its tender parts (young leaves) are blanched and braised in small bamboo pots.

**Distribution:** East Asia, China, India, Bangladesh, Myanmar, Thailand, Cambodia, Vietnam, Malaysia, Indonesia, Philippines, New Guinea to Fiji.







Family: Rubiaceae

Scientific Name: Greeniopsis multiflora (Elmer) Merr.

Common name: Hambabalud



**Synonyms:** Greeniopsis philippinensis Merr., Mussaendopsis multiflora Elmer

**Spot characters:** A small tree with elliptic to obovate leaves. Leaves are glabrous with hairs on midrib.

**Uses:** Methanolic crude leaf extract exhibits antibacterial and antioxidant activities.

**Distribution:** Endemic to the Philippines

PHILIPPINE ENDEMIC



Family: Euphorbiaceae

Scientific Name: Hancea wenzeliana (Slik) S.E.C. Sierra, Kulju &

Welzen

Common name: Apanang



**Synonyms:** Cordomova wenzeliana (Slik) S.E.C. Sierra, Kulju & Welzen, Mallotus wenzelianus Slik

**Spot characters:** A small dioecious tree with smooth, pustular, reddish orange branches. Stipules are narrowly triangular and persistent in the upper leaves.

Uses: No recorded uses.

**Distribution:** Endemic to the Philippines (Mindanao & Samar)

Family: Fabaceae (Mimosoideae)

Scientific Name: Wallaceodendron celebicum Koord.

Common name: Banuyo



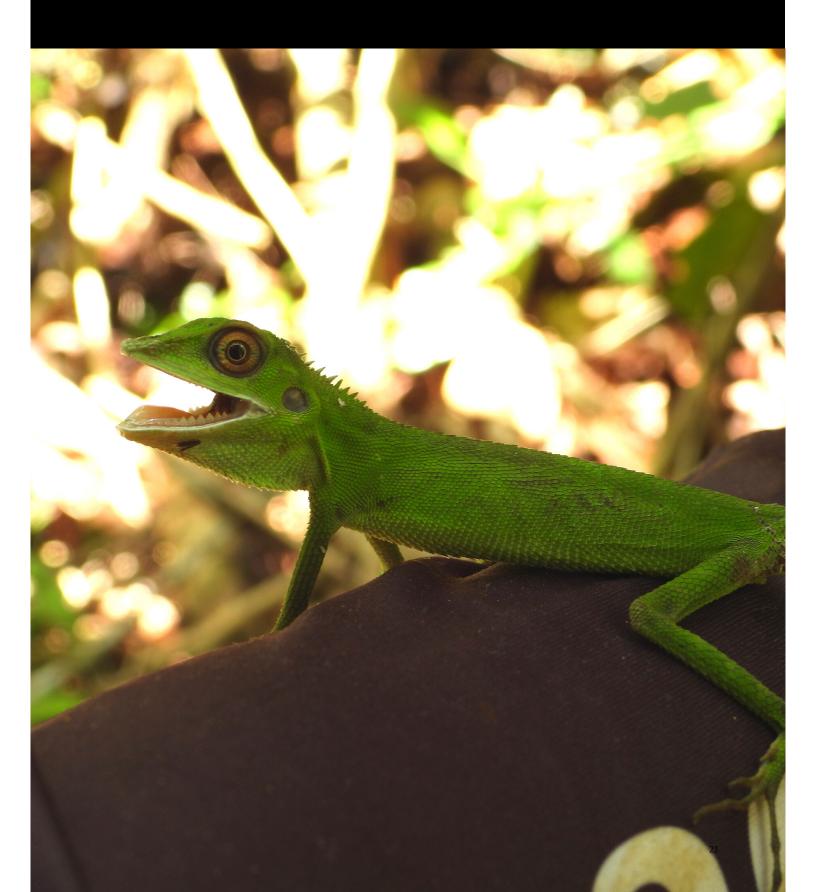
**Synonyms:** Pithocellobium williamsii Elmer

**Spot characters:** Perennial tree with a straight and branchless bole.

**Uses:** The tree is harvested for its good quality timber.

**Distribution:** Philippines, Indonesia, Sulawesi

### FAUNA OF GUIUAN



### **ANIMALS SPECIES LIST**

### **Amphibians**

Platymantis guentheri (Boulenger, 1882)

#### **Reptiles**

Bronchocela cristatella (Kuhl, 1820)

Cyrtodactylus sumuroi Welton, Siler, Linkem, Diesmos & Brown, 2010

Draco bimaculatus Günther, 1864

Lamprolepis smaragdina philippinica (Mertens 1928)

Sphenomorphus jagori Steineger, 1908

Tropidolaemus subannulatus (Kuch et al., 2007)

#### **Birds**

Cyornis rufigastra philippinensis Sharpe, 1877

Halcyon coromanda bangsi (Oberholser, 1915)

Hypisepetes Philippines saturatior (Hartert, 1916)

Lanius cristatus L.

Monticola solitarius philippensis (Statius Müller, 1776)

#### **Non-volant Mammals**

Bullimus bagobos Mearns, 1905

Rattus everettii Günther, 1879

#### **Volant Mammals**

Ptenochirus jagori Peters, 1861

Rousettus amplexicaudatus Geoffroy, 1810

# **AMPHIBIANS**





Family: Ceratobatrachidae

Scientific Name: Platymantis guentheri (Boulenger, 1882)

Common name: Gunther's Wrinkled Ground Frog



**Description:** Moderately expanded digital discs and well-defined limb bands. Usually found on the forest floor among leaf litter or on shrubs and small trees.

**Ecological Role:** It controls the population of its prey species such as small insects. It also serves as prey for larger animals.

**Distribution:** Philippine endemic. Biliran, Bohol, Dinagat, Leyte, Mindanao, Samar (Endemic). (Mindanao PAIC endemic)





Family: Agamidae

Scientific Name: Bronchocela cristatella (Kuhl, 1820)

Common name: Green crested lizard



**Description:** This bright green lizard can change color into dark brown when threatened. Their tail is usually three times as long as their body, and males have a crest on the back of the neck. They are typically found on tree trunks and branches.

**Ecological Role:** It is a carnivore that controls the population of its prey species, which may include mayflies, beetles, flies, ants, stick insects, caterpillars, or even skinks. It also serves as prey for larger animals.

**Distribution:** Southeast Asia



Family: Agamidae

Scientific Name: Cyrtodactylus sumuroi Welton, Siler, Linkem, Deismos, &

Brown, 2010

Common name: Samar bent-toed gecko



**Description:** This small gecko has a pair of canthal stripes present on the face and dark-colored bands enclosing light-colored bands on the back forming "bow-tie"-like shapes. They are typically found on the forest floor and in limestone crevices.

**Ecological Role:** Very little is known about this species, but it likely serves as both a predator and prey item in the ecosystem.

**Distribution:** Samar and Calicoan islands (Mindanao PAIC endemic)





Family: Agamidae

Scientific Name: Draco bimaculatus Günther, 1864

Common name: Two-spotted flying lizard



**Description:** This slender lizard has a pale brown body with flecks of green, white, and black. It has a pair of wing-like patagia that is blue in males and yellow in females ventrally. These structures allow it to glide from tree to tree. Males have a rounded, off-white dewlap on the neck.

**Ecological Role:** It is a carnivore that controls the population of its prey species such as ants and termites. It also serves as prey for larger animals.

**Distribution:** Mindango PAIC endemic

Family: Scincidae

Scientific Name: Lamprolepis smaragdina philippinica (Mertens 1928)

Common name: Emerald tree skink



**Description:** This lizard has an emerald green head and upper body and a brownish lower body. This arboreal species is often observed basking or foraging on trees during the daytime. It is not unusual to find several individuals on a single tree.

**Ecological Role:** It is a carnivore that controls the population of its prey species such as insects and smaller skinks. It also serves as prey for larger animals.

Distribution: Southeast Asia and Oceania

### **REPTILES**





Family: Scincidae

Scientific Name: Sphenomorphus jagori Stejneger, 1908

Common name: Jagor's sphenomorphus



**Description:** This large and stocky skink has a lighter brown upper body and darker brown lower body with light stripes. Dark stripes are also present on the upper lip, up to the posterior of the eye. It is typically found on the forest floor.

**Ecological Role:** It is a carnivore that controls the population of its prey species such as termites, beetles, slaters, and smaller vertebrates. It also serves as prey for larger animals.

**Distribution:** Endemic to the Philippines (except Palawan)

## **REPTILES**





Family: Viperidae

Scientific Name: Tropidolaemus subannulatus (Kuch et al., 2007)

Common name: Keeled green pit viper



**Description:** This highly venomous snake has a triangular head and light to bluish green coloration with blue, white, and/or red bands. It has strongly keeled head scales, narrow vertical pupils, and a red, black, or white tail. It is usually found resting on bushes and trees.

**Ecological Role:** It is an apex predator that controls the population of its prey species such as rodents and smaller herpetofauna.

Distribution: Indonesia, Malaysia, and the Philippines





Family: Muscicapidae

Scientific Name: Cyronis rufigastra philippinensis Sharpe, 1877

Common name: Mangrove blue-fly catcher



**Description:** This small bird has dark blue upperparts and rufous throat and breast. Its belly and undertail coverts are white. Females have duller coloration and a white chin.

**Ecological Role:** This insectivorous bird controls the population of its arthropod prey.

**Distribution:** Southeast Asia. Subspecies philippinensis is endemic to the Philippines.



Family: Alcedinidae

Scientific Name: Halcyon coromanda bangsi (Oberholser, 1915)

Common name: Ruddy kingfisher



**Description:** This bird has rufous upperparts heavily washed with bluish violet iridescence. Its throat is whitish buff, and its breast and belly are rufous with bluish violet wash which is more pronounced on the breast. Juveniles are similar with black crescent-shaped edges to the feathers of their underparts.

**Ecological Role:** It controls the population of its prey such as fish, insects, crustaceans, and small vertebrates. It can also serve as prey for larger animals such as snakes.

**Distribution:** East and Southeast Asia. Race bangsi(migrant) is found in Batan, Calayan, Cebu, Luzon, Mindanao, Negros, Siquijor, and Samar.





Family: Pycnonotidae

Scientific Name: Hypsipetes philippinus saturatior (Hartert, 1916)

Common name: Philippine bulbul



**Description:** This bird has a brownish grey crown with feathers that have light grey edges. Its back and rump are olive brown, and its tail and wings are brown edged with olive.

**Ecological Role:** It controls the population of its prey such as fish, insects, crustaceans, and small vertebrates. It can also serve as prey for larger animals such as snakes.

**Distribution:** Endemic to the Philippines



Family: Laniidae

Scientific Name: Lanius cristatus L.

Common name: Brown shrike



**Description:** This bird has a pale grey forehead leading into a greyish brown head and back. Its rump and tail are reddish brown, and its mask is black bordered above by variable white eyebrows. Its wings are dark brown with buffy edges. Its throat is white, and its breast and belly are pale golden buff. Females have barring on the breast and flanks.

**Ecological Role:** It controls the population of its prey, which are mainly composed of insects. It also sometimes feeds on small birds and lizards.

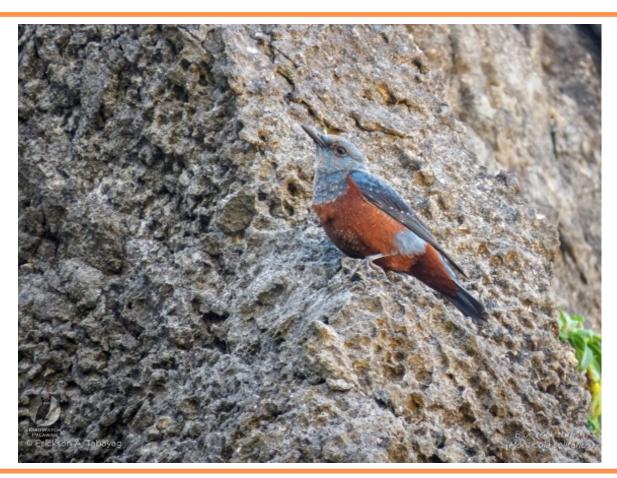
Distribution: Breeds in northern Asia, winters in South and Southeast Asia



Family: Muscicapidae

Scientific Name: Monticola solitarius philippinensis (Statius Müller, 1776)

**Common name:** Eastern blue rock-thrush



**Description:** This bird has slate blue upperparts, throat, breast, and edges to tail feathers. Its wings and tail are black, and its belly, undertail and underwing coverts are chestnut. Females have more bluish grey upperparts and generally bluish grey underparts with whitish spots bordered by black.

**Ecological Role:** This bird eats fruits and insects. It helps in shaping plant life of ecosystems by dispersing seeds. It also controls the population of its insect prey.

Distribution: Breeds in Eurasia, winters in Africa and South and Southeast Asia

# NON-VOLANT MAMMALS





Family: Muridae

Scientific Name: Bullimus bagobus Mearns, 1905

Common name: Bagobo rat



**Description:** Dark brown fur on the dorsal side and pale silvery brown on the ventral side. The tail is shorter than the combined head and body length; tail usually dark brown for its entire length with some individuals having white on the posterior end.

**Ecological Role:** They are omnivores which help in dispersing seeds and fruits through foraging on the ground and trees. It also controls the population of its prey such as invertebrates.

**Distribution:** Mindango PAIC endemic

# NON-VOLANT MAMMALS



Family: Muridae

Scientific Name: Rattus everetti Günther, 1879

**Common name:** Philippine forest rat



**Description:** Dark brown dorsal fur and long black guard hairs. Ventral fur usually white, with orange or yellow. Tail is longer than the combined length of the head and body; base and most of the tail is dark brown with a white tip.

**Ecological Role:** They are omnivores which help in dispersing seeds and fruits through foraging on the ground and in trees for food. It also controls the population of its prey species such as invertebrates. The species is sometimes preyed upon by larger predators.

**Distribution:** Endemic and widespread in the Philippines, excluding Palawan faunal region, Sulu and Batanes/Babuyan isaland groups, and most or all of

<sup>38</sup> Greater Negros-Panay.

## **VOLANT MAMMALS**





Family: Pteropodidae

Scientific Name: Ptenochirus jagori Peters, 1861

Common name: Greater musky fruit bat



Description: Fruit bat with broad, dark head; short, stout muzzle; nostrils not elongated into tubes. Distinctive odor of "sweet musky cinnamon" present. Tail present. Claws present on both thumb and second digit and larger than Ptenochirus minor.

Ecological Role: It acts as a key seed disperser and serve as prey item for other carnivorous animals.

Distribution: Endemic to the Philippines, but absent in Batanes/ Babuyan and Palawan Faunal Regions.

# VOLANT MAMMALS



Family: Pteropodidae

Scientific Name: Rousettus amplexicaudatus Geoffroy, 1810

Common name: Common rousette

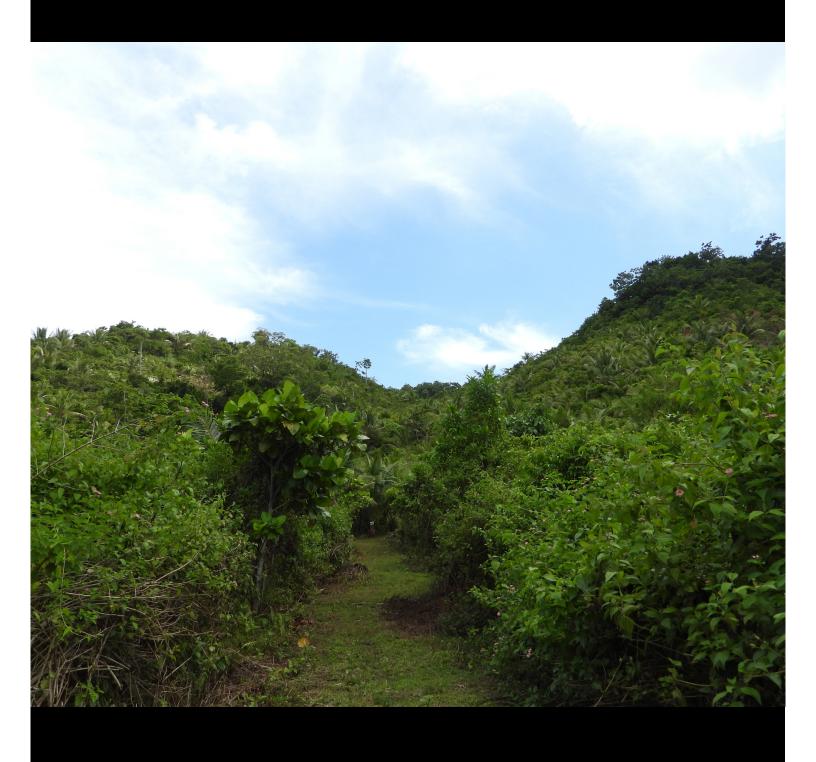


**Description:** This bat has short and sparse dark brown or gray dorsal fur, often with hairs having a gray tip, giving it a silvery appearance. It has a long and tapering snout with ears that are long and bluntly pointed. Its wing membranes are dark brown and nearly translucent over the white bones, giving appearance of white stripes.

**Ecological Role:** This cave-roosting bat consumes nectar, pollen, and overripe fruits. It acts as a seed disperser and pollinator. It is also preyed upon by larger animals such as snakes that inhabit limestone caves.

**Distribution:** Thailand to the Solomon Islands and the Philippines

# THE UNIQUE FORESTS OVER LIMESTONE OF GUIUAN MARINE RESERVE PROTECTED LANDSCAPE AND SEASCAPE (GMRPLS)



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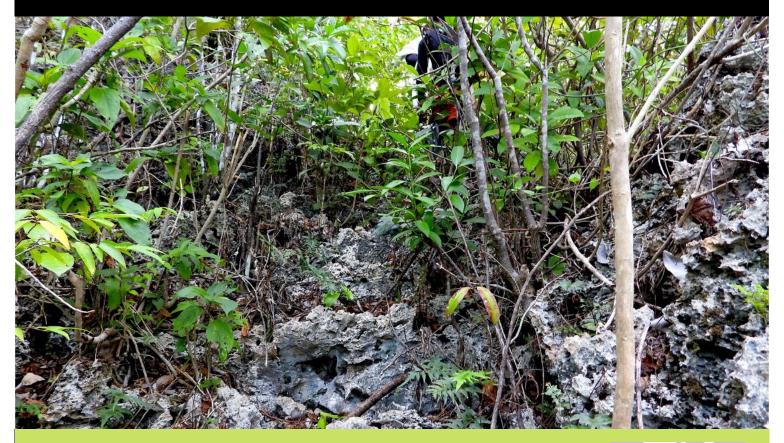
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A field guide to some plants and animals of Guiuan Marine Resource Protected Landscape and Seascape (GMRPLS), is the third installment of the field guide series produced by the **CONserve-KAIGANGAN** program. This field guide is user-friendly and sheds light on the plants and animals in the lesser-known forests over limestone of Guiuan, Samar Island.

- Plants and animal species are featured on a single page with a fill plate of colored photographs
- 17 Animal information such as descriptions and ecological roles
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