

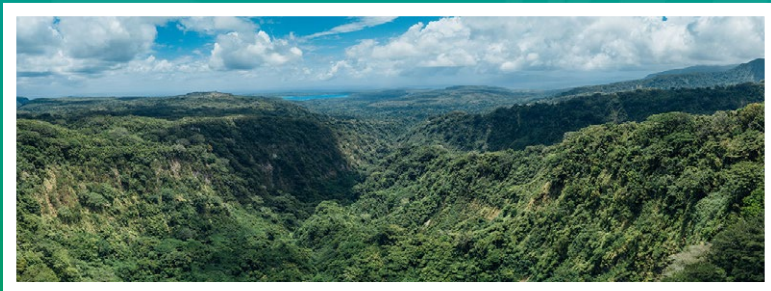


Pacific  
Community  
Communauté  
du Pacifique

# RESCCUE



## NORTH EFATE FOREST IDENTIFICATION BOOKLET



# INTRODUCTION

This North Efate Forest Identification Booklet was produced by the Vanuatu RESCCUE project led by the Government of Vanuatu and The Pacific Community (SPC) and with funding from the French Development Agency (AFD) and the French Global Environment Facility (FFEM).

## Acknowledgements

Thank you to all the people and organisations who have contributed to the development of this booklet. The Vanuatu RESCCUE project would like to acknowledge the following people and organisations for the important contributions:

- Chiefs and people of North Efate especially the Tasivanua communities
- Government of Vanuatu
- Department of Environment Protection and Conservation
- Department of Forests of Vanuatu
- SHEFA Province
- Representatives of Efate Land Management Area (ELMA)
- TASI-VANUA network
- Vanuatu Environmental Science Society
- Bird Life International
- Live & Learn Vanuatu
- WSP OPUS
- Ecology NZ
- Spatial Analysis Services

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## Background

Efate Island and Vanuatu's capital city of Port Vila is a focal point that draws people from islands across the nation, for improved education, employment and livelihood opportunities. Efate Island is about 890km<sup>2</sup> with the highest peak, Mt McDonald, about 647m high. Efate's population in 2018 was about 45,000 people and growing rapidly. This rapid population growth is putting pressure on the island's natural resources.

With this, the Vaturisu national council of chiefs have proposed to protect the remaining native forest and its resources for future generations. This is referred to as the Efate Land Management Area (ELMA) in Efate's forested interior. The area encompasses historic cultural sites and important areas of indigenous forest. The ELMA contains a major water catchment area, within which are the heads of all the major Efate rivers. The ELMA covers ground within a variety of customary chiefly titles on Efate.

To help the Vaturisu national council of chiefs protect the ELMA, a rapid biodiversity survey (a bioblitz) was undertaken in part of the ELMA in 2017. The bioblitz was a successful collaboration between local and international scientists and local community members involved in local conservation networks and efforts across North Efate.

The bioblitz established a baseline of flora and fauna species present across a two kilometres of ridgetop forest in north-west Efate. The survey used a variety of methodologies to observe, listen, record and collect evidence of bird, insect, bat, plant, amphibian and reptile species.

The survey team included scientists from the Vanuatu Department of

Forestry, WSP Opus, Ecology New Zealand, Vanuatu Environmental Science Society, Birdlife International and Spatial Analysis Services. Technical support was provided by Vanuatu Department of Environmental Protection and Conservation, Live and Learn Vanuatu, and Shefa Provincial Government. Community members from the ELMA Network and North Efate Tasivanua Environment Network came from the villages of Mangaliliu, Veden Lengi, Tanoliu, Saama, Emua, Ekipe, Epau and Pang Pang to shadow the technical specialists.

The collection of species in this booklet are a sample of those documented during the bioblitz in October 2017. This activity was made possible through the Vanuatu RESCCUE project, The Pacific Community and the Government of Vanuatu.

## Purpose of the Bioblitz Booklet

This booklet aims to:

- Increase awareness of the important biodiversity in the Efate Land Management Area (ELMA)
- Help local communities and visitors learn about the flora and fauna of the ELMA
- Increase support to protect the ELMA

## Who is this resource for?

The booklet is developed for the people of North Efate, the citizens of Vanuatu, researchers, tourists and anyone who is interested in studying and or knowing about the plants and animals of North Efate and especially the ELMA.



# FROGS

## Green and Golden Bell Frog (*Litoria aurea*)

### Look for:

- A White/creamy stripe along the side of its body
- Black line runs along the side of its body and extends past the eye to the nostrils
- Smooth white belly
- It can be a range of mottled colours from bright green to brown with patches of green, bronze or gold showing through

### Where you can find it:

Amongst the leaf litter in the forest eating insects, worms and even mice!



[www.inaturalist.nz/photos/1023256](http://www.inaturalist.nz/photos/1023256) © Mark O'Brien

# LIZARDS

## Giant gecko (*Gehyra vorax*)

### Look for:

- Broad rounded toe pads and a rounded body, head and tail
- Typically, it is light to dark brown in colour with specs of lighter/darker colouring all over its body
- Bright yellow/orange colouring under its tail

### Where you can find it:

Hiding amongst the bamboo walls, thatched rooftops and reed walls in buildings on the island or basking in the sun on large tree trunks during the day, waiting for a tasty insect, spider or even a smaller gecko to eat!



[www.inaturalist.nz/photos/528812](http://www.inaturalist.nz/photos/528812) © Mark O'Brien

# SNAKES

## Pacific tree boa (*Candoia bibroni*)

### Look for:

- A variety of colours from brown/black to red/brown and mottled with greens, grays, pinks and reds.
- They can be up to 1.4 metres in length
- Its pointed head

### Where you can find it:

Amongst the leaf litter and up in trees, and in forest along riversides where it will often lie still to digest the large prey it has eaten such as geckos, birds and bats.



[www.inaturalist.nz/photos/1023256](http://www.inaturalist.nz/photos/1023256) © Mark O'Brien

## Slender Toed Gecko (*Nactus multicaarinatus*)

### Look for:

- Light to dark brown in colour
- Mottled "stripe" pattern on its body
- Underbelly is a uniform brown colour
- Thin, delicate digits (toes)

### Where you can find it:

Amongst the logs in the forest and woody material during the day and eating insects on the forest floor at night time. Look in some coconut husks and you may find me!



# LIZARDS

## Pacific Blue-tailed Skink (*E. caeruleocauda*)

### Look for:

- Long, tapering bright blue tail especially in the young ones!
- Three white stripes down its body
- Black to brown upper body parts
- Underbelly is a creamy white colour

### Where you can find it:

At the edges of forests looking for insects in the lower branches of shrubs and trees.



[www.inaturalist.org/photos/314983](http://www.inaturalist.org/photos/314983) © Carmelo Lopez

## Copper-tailed Skink (*Emoia cyanura*)

### Look for:

- Its body is dark brown to black on the top
- Underbelly is white
- Thin pale stripes along its body
- Blue and copper colourings on its tail

### Where you can find it:

Basking amongst the sunshine in low lying vegetation, waiting for a tasty insect or spider to eat.



[www.inaturalist.org/photos/8686112](http://www.inaturalist.org/photos/8686112) © Daniel George

# LIZARDS

## Teal Emo Skink (*Emoia cyanogaster*)

### Look for:

- Its body is light brown to green
- Underbelly is light green
- Light green under its head
- Dark brown to back line runs down half of its body in the sides

### Where you can find it:

Lying amongst the forest vegetation waiting for a tasty insect. Sometimes it likes to hang out in human's gardens, and especially loves vines!



[www.inaturalist.org/photos/4945262](http://www.inaturalist.org/photos/4945262) © Michael Pennay

## Sanford's Tree Skink (*Emoia sanfordi*)

### Look for:

- Vibrant green body
- Thick round body

### Where you can find it:

It can be very hard to spot these clutching onto the leaves of a tree!! They are often found amongst old coconut plantations and in overgrown food gardens.



[www.inaturalist.org/photos/11689970](http://www.inaturalist.org/photos/11689970) © Sarah Wyatt

# LIZARDS

## Vanuatu Silver Vineskink also known as Black Bordered Emo Skink (*Emoia nigromarginata*)

### Look for:

- Light brown body with darker spotted/stripe markings
- Small size

### Where you can find it:

Find these species looking for insects in open areas surrounded by trees, such as gardens, partially cleared forests and plantations.



[www.inaturalist.nz/photos/12606909](http://www.inaturalist.nz/photos/12606909) © Felix Fleck

# BIRDS

## Incubator Bird / Vanuatu Megapode (*Megapodius freycinet layardi*)

### Look for:

- Stocky round blue and black body with orange legs
- Bright red face with no feathers (bald)
- Large oval eggs – but don't touch them! Not many are left

### Where you can find it:

In the lowland hill forests, or in a coastal breeding ground. Listen out for the scratching of leaf litter as they forage for food, or short shrill calling then a series of chuckles at dusk and dawn.



© Dubi Shapiro



© Jessie Kampai

# BATS

## Little bent winged bat (*Miniopterus australis*)

### Look for:

- Small chocolate brown furry body
- Lighter fur on its belly
- Its tail is as long as its body!

### Where you can find it:

Sleeping the day away in caves, tree hollows or other dark cavities. During the night, it will forage for small bugs under canopy trees.



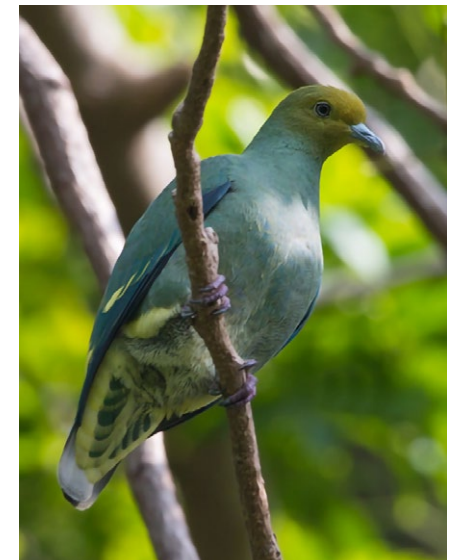
## Tanna fruit dove (*Ptilinopus tannensis*)

### Look for:

- Olive green to yellow head
- Olive green neck
- Yellow patches on the wings
- Pinkish red feathers on its head
- Pinkish/red feathers on its belly

### Where you can find it:

Searching for fruits high in the trees of wooded habitats, especially enjoying the fruits of vines, palms and ficus, calling through the forest in a slow repetitive trill.



© Dubi Shapiro

# BIRDS

## Vanuatu white-eye or yellow-fronted white-eye (*Zosterops flavifrons*)

### Look for:

- Small songbird
- Yellow green body
- Bright yellow to yellow green underparts
- White ring around the eyes

### Where you can find it:

Searching for small fruits, insects and nectar in trees and bushes of forests, gardens and plantations.



© Berguilla

## Grey Fantail (*Rhipidura albiscapa*)

### Look for:

- Small bird
- Fan shaped tail
- Mid to dark grey on top of its body and lighter underneath
- White patch at its throat

### Where you can find it:

Actively flitting around - this bird never sits still! Searching for flying insects in the trees and bushes of forests, gardens and plantations to eat.



www.inaturalist.org/photos/2883008 © Jakob Fahr

# BIRDS

## Long-tailed triller (*Lalage leucopyga*)

### Look for:

- Thin bird
- Creamy light coloured under body
- Dark brown to black upper body and a brown head
- Long tail compartmented to its body

### Where you can find it:

Searching for invertebrates and small fruit amongst open patches of forest - they like the sunshine and don't go too far into the forest!



www.inaturalist.org/photos/2866339 © Jakob Fahr

# NATIVE PLANTS

## *Smilax vitiensis*

### Look for:

- Thick green glossy leaves
- Arrow shaped leaves
- Dark purple to black round fruit
- Thin green vine

### Where you can find it:

Throughout thick forested areas of the island.



www.publish.plantnet-project.org/project/vanuaflora\_en © Birnbaum Philippe

# NATIVE PLANTS

## *Calamus vanuatuensis*

### Look for:

- Bright green leaves
- Oval Shaped
- Black thorns on the stem

### Where you can find it:

It is a climbing species, and you can find it climbing up through the forest layers!



© CSIRO

## *Anthocarapa nitidula*

### Look for:

- A strong incense smell from twigs and leaves when crushed
- Little white flowers on long stalks

### Where you can find it:

It is often in the drier parts of the rain forest and grows into a tree.



© CSIRO

# NATIVE PLANTS

## *Pittosporum campbellii*

### Look for:

- Bright green thin glossy leaves
- Bright orange oval fruits
- Bright red fleshy seeds inside the fruit
- White flowers

### Where you can find it:

A small tree found in the understorey of the forest, keep a nose out for a strong smell!



© EDA



© Cateble Gildas

## *Macropiper latifolia*

### Look for:

- Heart shaped large leaves
- Large veins
- Twisted Stick like fruit
- White flowers

### Where you can find it:

This small shrub can be found in the forest edges and in partial shade.



# INSECTS

## Canopus Swallowtail

*Papilio hypsicles (fuscus)*

### Look for:

- White dots along wing
- Orange spots at the bottom of the wings
- Bottom of wings an irregular rounded and long shape called tails

### Where you can find it:

Find these feeding on citrus plants!  
Especially sweet grapefruit.



## Pacific crow butterfly

*(Euploea sp.)*

### Look for:

- Black butterfly with small white spots on the wings

### Where you can find it:

Flitting around the forest on a sunny day.



# INSECTS

## Spiny Orb Weaver

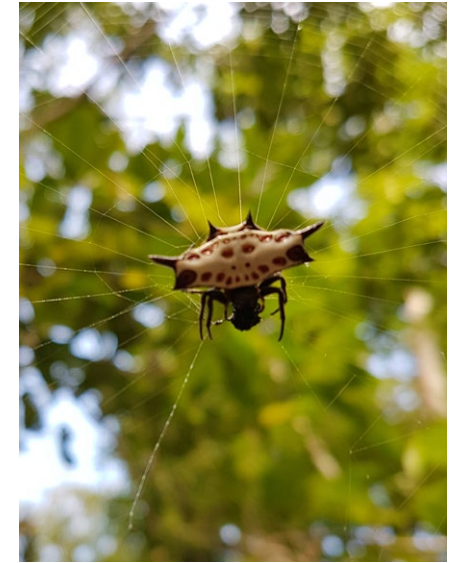
*Gasteracantha cancriformis*

### Look for:

- Dark coloured spider
- Large white and maroon body part
- Dark red to black "spines"

### Where you can find it:

Look out for large fragile orb spiderwebs in the trees – they will be in the middle of it!



## White lipped snail

*(Capea hortensis)*

### Look for:

- Glossy smooth shell
- Brown and white striped

### Where you can find it:

Hanging out on the undersides of large leaves, or slowly making my way to a new patch of vegetation!



[www.inaturalist.nz/observations/14494415](http://www.inaturalist.nz/observations/14494415) © Christina





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