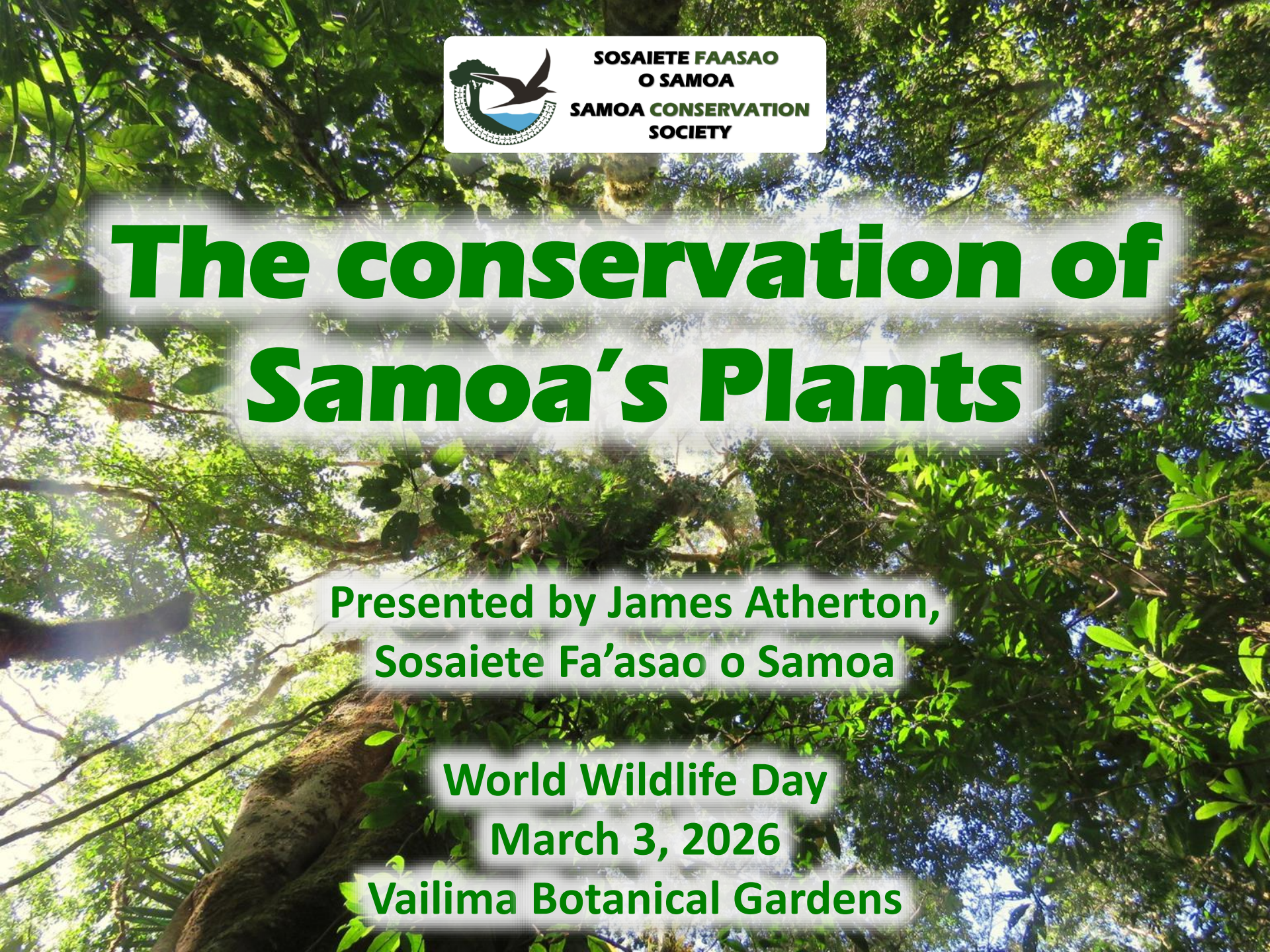

SOSAIETE FAASAO
O SAMOA
SAMOA CONSERVATION
SOCIETY
The conservation of
Samoa's Plants
Presented by James Atherton,
Sosaiete Fa'asao o Samoa
World Wildlife Day
March 3, 2026
Vailima Botanical Gardens

Presentation Outline

- Samoa's Flora and its origins
- Samoa's Plant Communities
- Threats to plants
- Threatened plants
- Conservation efforts to save Samoa's threatened plants
- Questions

Aute Samoa
(*Hibiscus samoensis)*

The Origin of Samoa's Plants

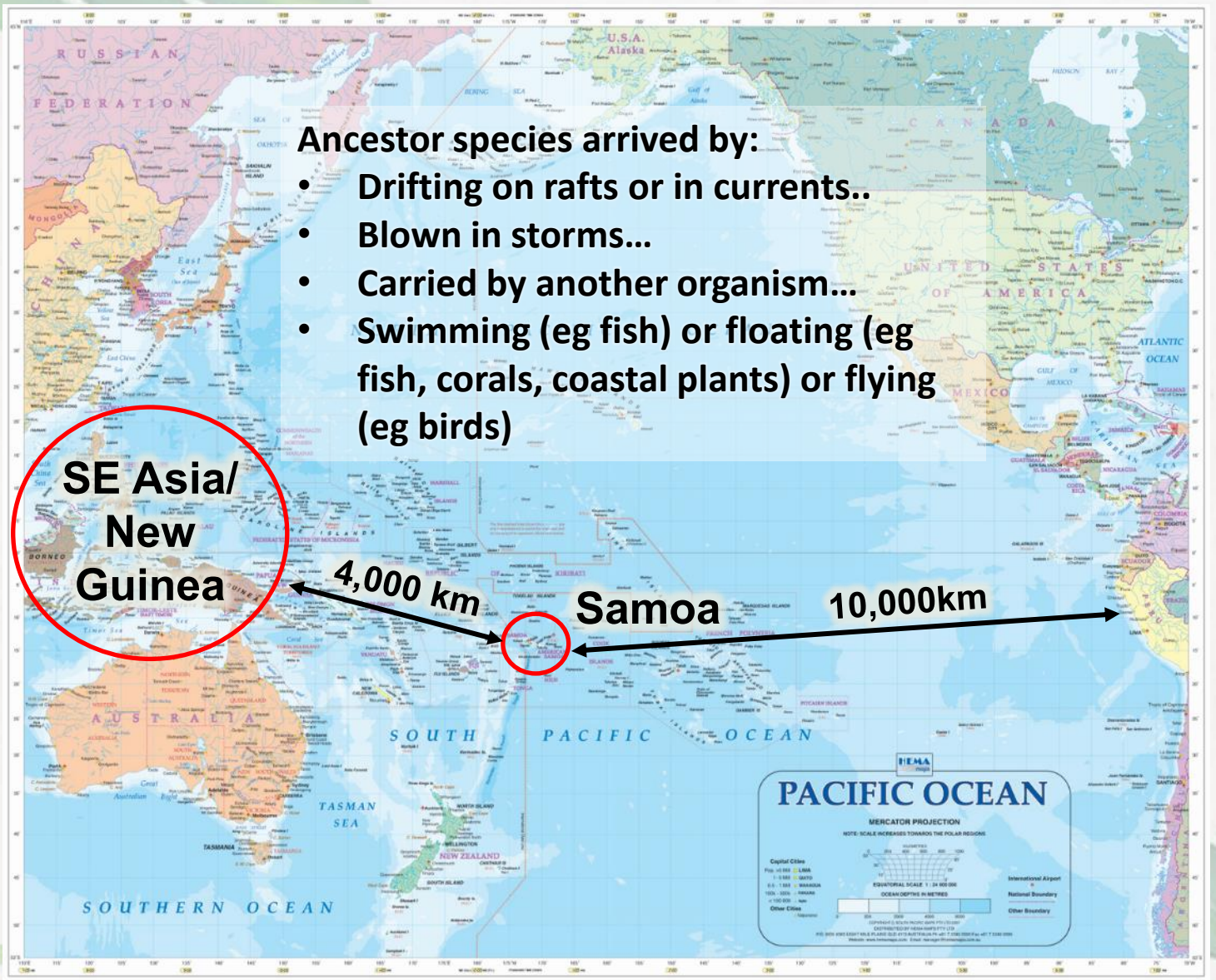
Native

- Naturally occurring in Samoa (i.e., arriving here by means other than human transport)
  - Endemic—Found only in Samoa
  - Indigenous—Found elsewhere as well
- All the plants occurring in Samoa when the first humans arrived ca. 3000 years ago are by definition "native"

Introduced

- Not of natural occurrence in Samoa i. e., arriving by human transport accidentally or on purpose
- Most of these are crop plants, ornamentals or weeds
- Some become invasive and cause problems… (eg Pulu vao, Pulu mamoe, Fa'apasi, Tamaligi etc)

Origins of our plants and other biodiversity…



Samoa's Native Flora

	Flowering Plants	Ferns/Fern Allies
Families	96	24
Genera	306	81
Species	540	228
Endemics	174	40
Endemism	30%	18%



Psychotria **(matalafi) in the Rubiaceae is the largest genus in Samoa, with 20 species, 17 of them endemic. Matalafi is also one of the most popular plants in Samoan traditional medicine**

Plant Communities (Vegetation) in Samoa

Littoral Vegetation

1. Littoral Strand and Forest

Wetlands

2. Marshes
3. Mangroves
4. Freshwater Swamps

Native Rainforest

5. Lowland Forest
6. Montane Forest
7. Cloud Forest

Upland Scrub Vegetation

8. Summit Scrub
9. Montane Scrub

Volcanic Vegetation

10. Volcanic Scrub

Disturbed Vegetation

11. Managed Land
12. Successional Vegetation
13. Secondary Forest
14. Fernland

Tropical Rainforest

Three main types in Samoa

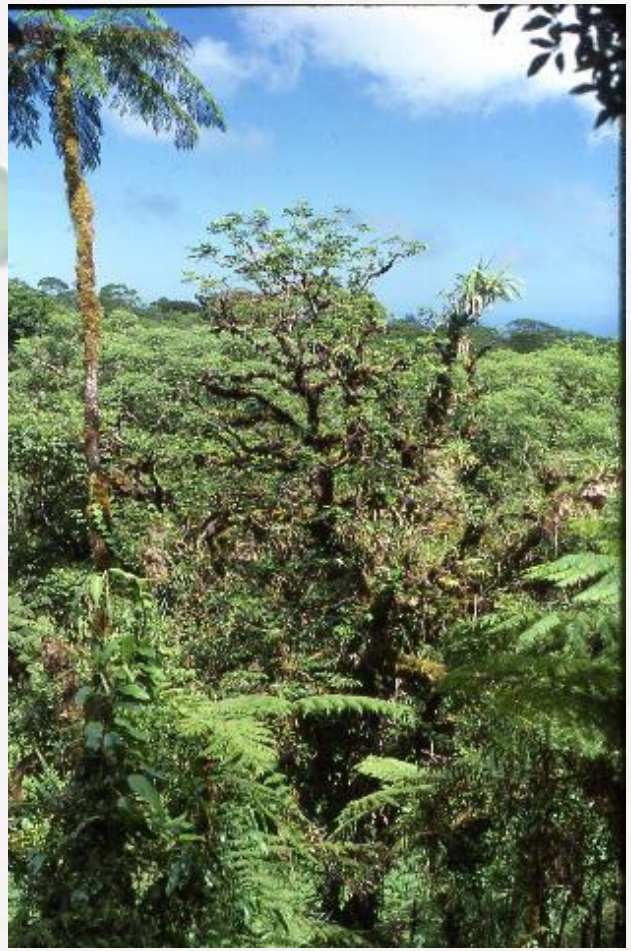
- Lowland rainforest
- Montane rainforest
- Cloud forest

Dominant species change based on differences in soil, elevation and climate

Often no distinct boundaries between types- each type grades into the next…

Lowland Slope Forest (0-800m elevation)

Mostly cleared in Samoa for agriculture.
Dominated by several species, especially *Pometia pinnata* (tava) *Syzygium inophylloides* (asi toa), *Calopphllum neo-ebudium* (Tamanu) and *Planchonella samoensis* (Mamalava) depending on topography and soil

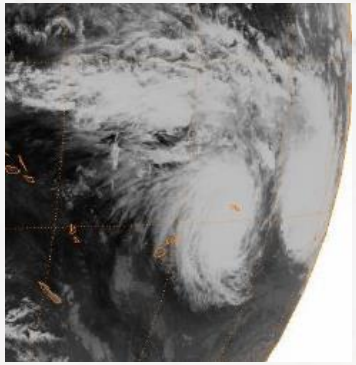

Montane Forest (600 to 1200m)

Occurs on all the high islands
Heavy year-round rainfall
Typically dominated by *Dysoxylum huntii* (maota mea)
Still relatively intact, especially on Savaii

Cloud Forest (above 1000m)

Occurs only at high elevations of Savai‘i and ‘Upolu
Often hard to distinguish from Montane forest
Dominated by several species, including *Reynoldsia pleisosperma* (vī vao) and *Dysoxylum huntii* (maota mea)
Threatened by climate change!

Threats



- **Natural threats:** cyclones, tsunami, fire
- **Man-made threats**:
  - Habitat loss/damage
  - Invasive species
  - Pollution
  - Population Growth
  - Overharvesting or use of destructive harvesting techniques
- **Climate Change**
- Islands are particularly vulnerable: small size, isolation and few natural resources

Threatened Plants

108 plants were identified by Dr Art Whistler in 2011 as rare and endangered, including native as well as rare introduced plants

We have collected 6 of them and are growing them in the VBG nursery or garden, along with another 46 other plant species (52 species are growing in the nursery)

Currently there are 15 Samoan plants identified on the 2025 IUCN Red List considered to be at a high risk of extinction in the wild (Vulnerable, Endangered and Critically Endangered). We have 5 of them growing here including Maniuniu, Niu Vao and Pau

We are proposing an additional 46 trees for threatened status on the IUCN Redlist including a number of *Psychotrias*, *Balaka* palms and Manapau. We are waiting for MNRE to approve this list

A big challenge is plant ID- especially for the *Psychotrias* and orchids... and finding the best place to plant them…

Pau
(*Manilkara samoensis)*

Manapau
(*Mammea glauca)*

Rare Plant Conservation Work



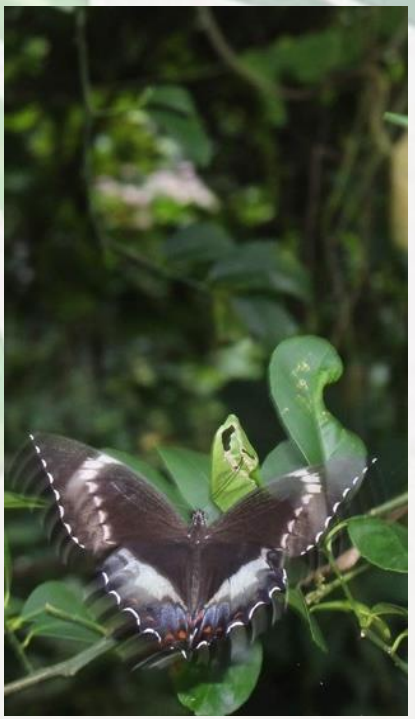







Process: 1. Research the target plants location. 2. Collect it with village agreement, 3. Propagate it at VBG 4. Put it on display in the gardens

Some special plants…



Micromelum minutum
Talafalu- food for swallowtail butterflies!

Dysoxlum maota
Maota fruits- food for Manumea!

Vaccinium whitmeei
Samoan blueberry- only grows above 600m on Savaii…

Dendrobium mohlianum
Cloud forest orchid- one of 102 native orchids


Fa’afetai Lava
Questions?