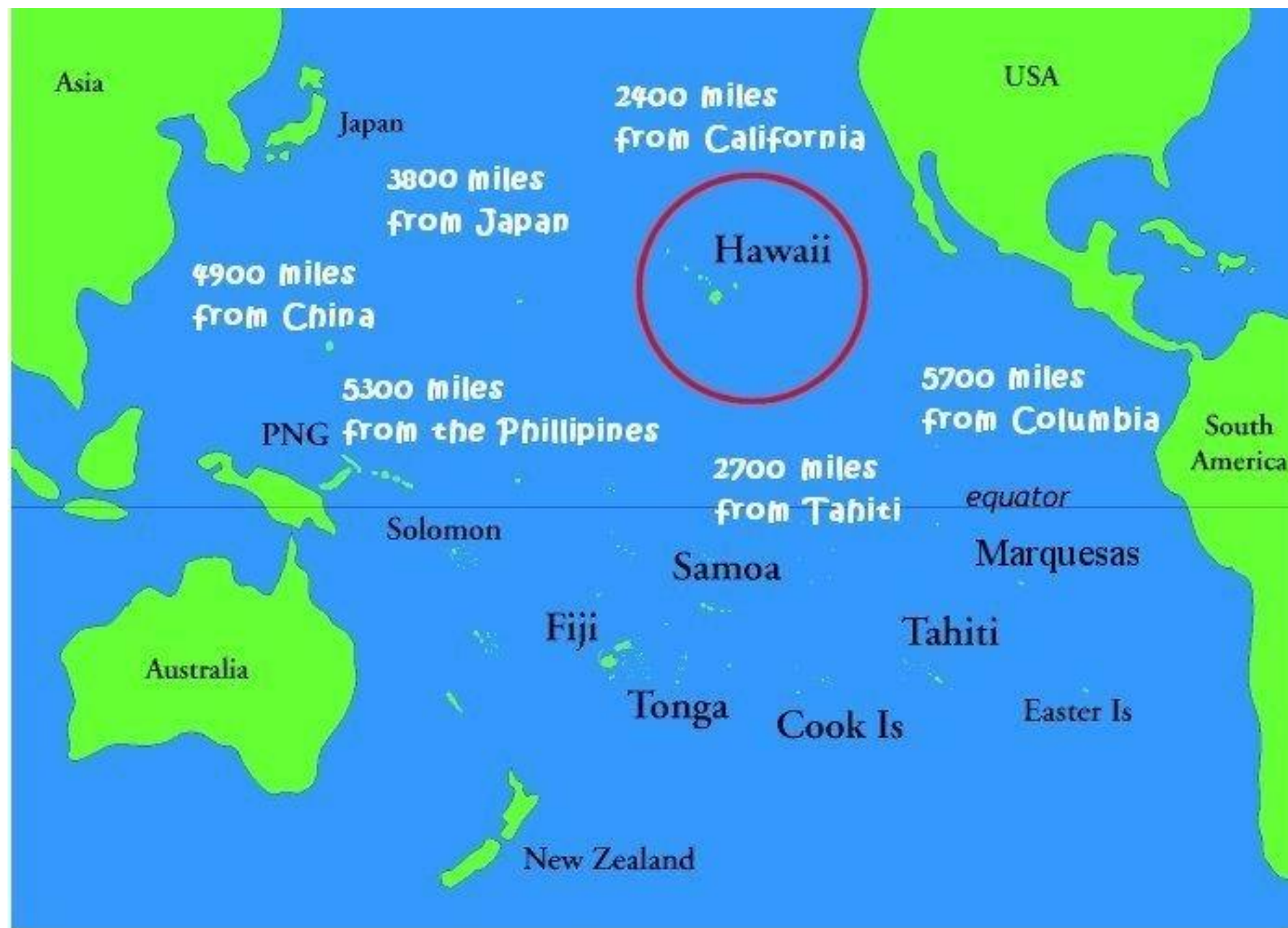


Lesson 4: Threats to Watersheds





Native Species

Wing



Wind



Wave



Native Plants

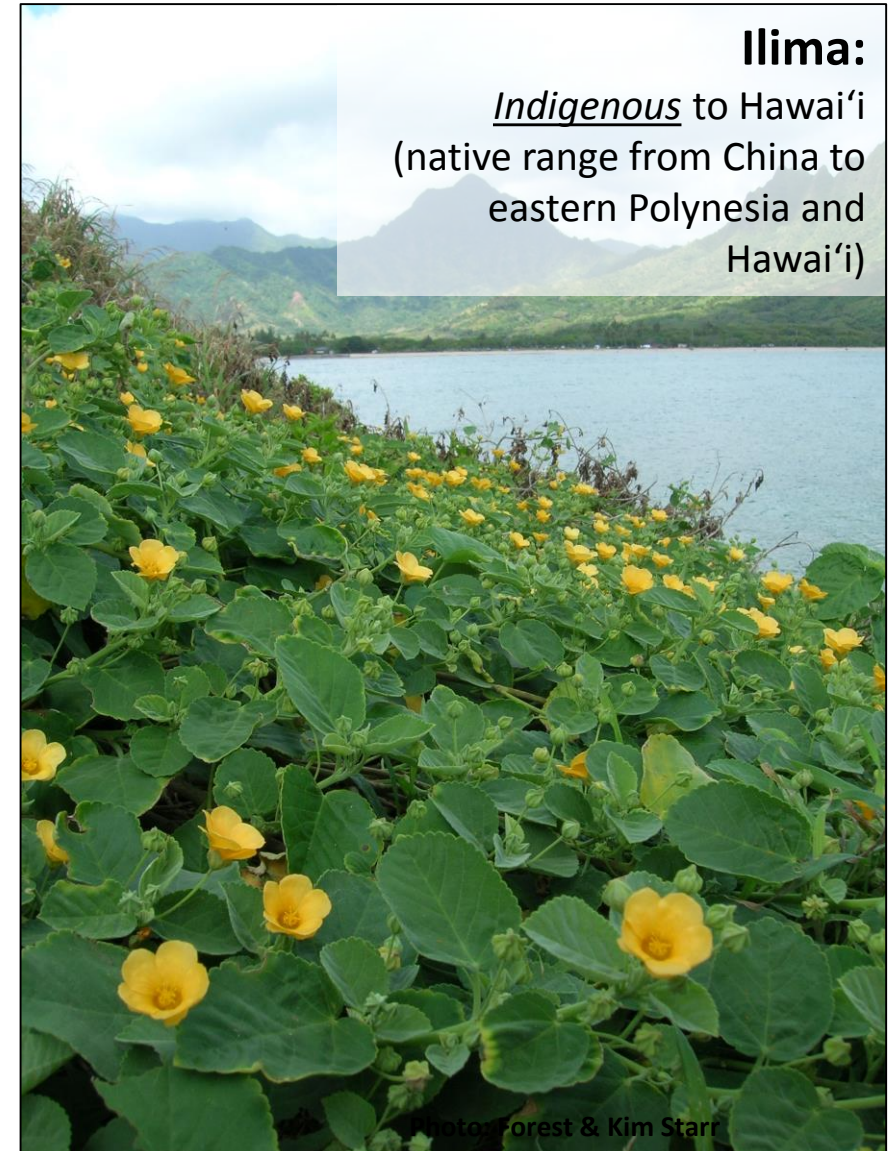
'Ōhi'a:

Endemic to Hawai'i
(found nowhere else)

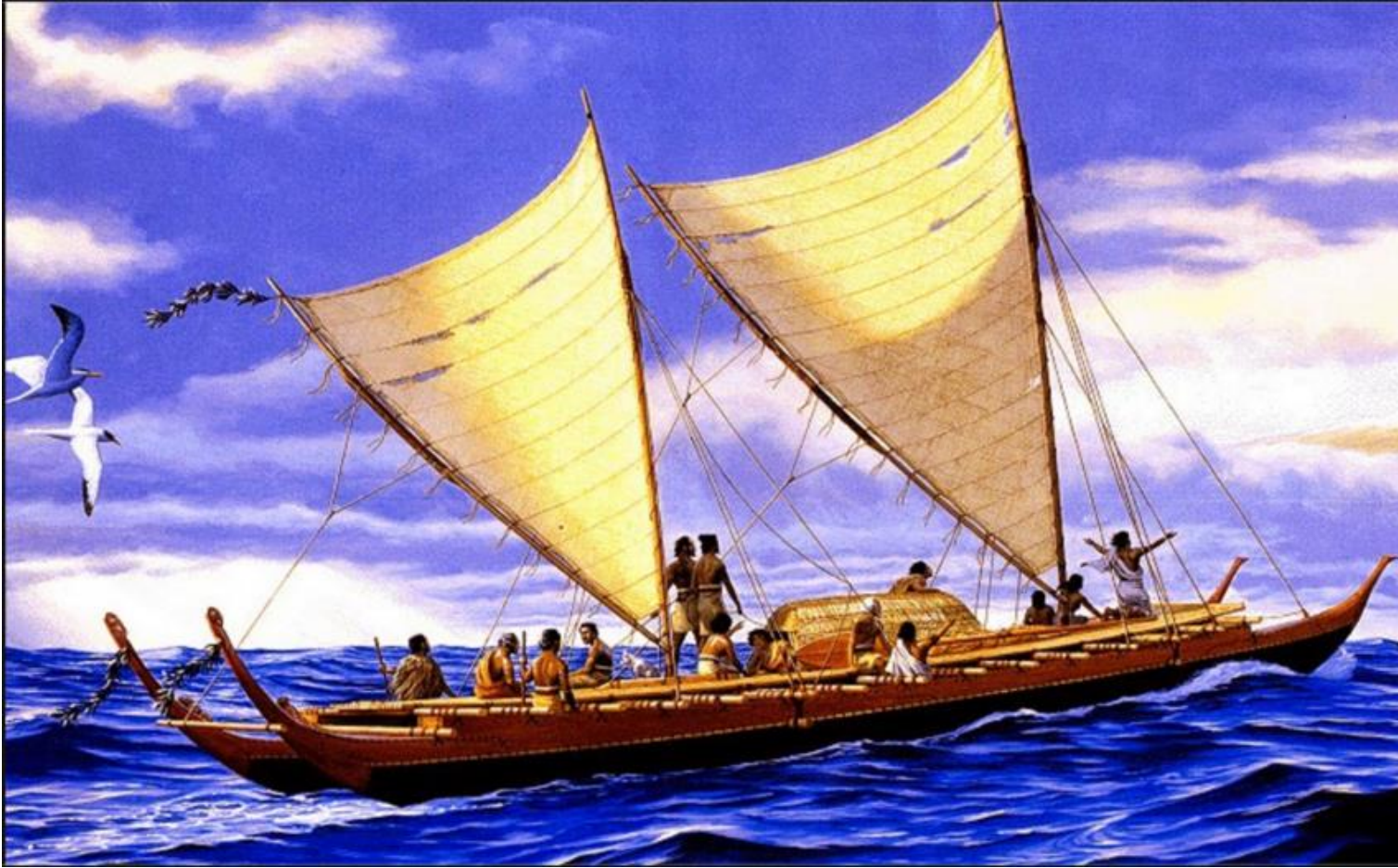


Ilima:

Indigenous to Hawai'i
(native range from China to
eastern Polynesia and
Hawai'i)

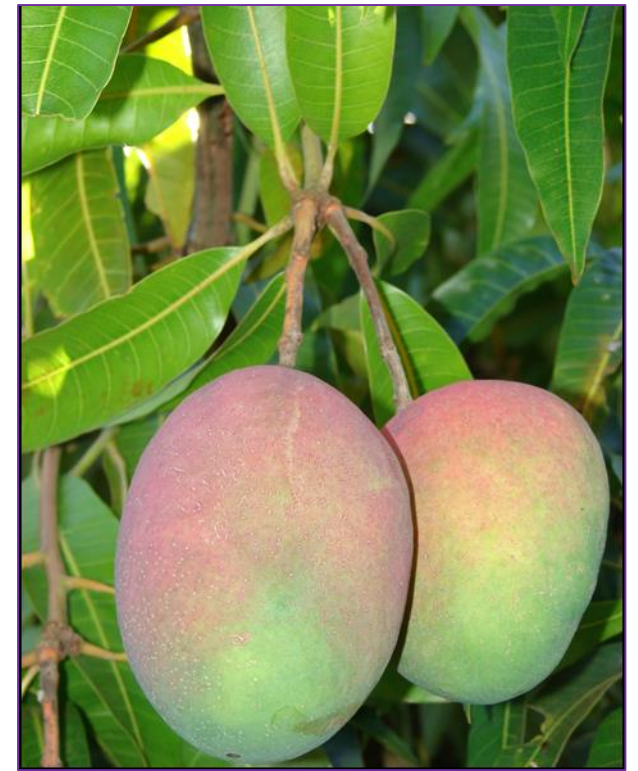


Non-Native Plants





**Are all non-native
species bad in
Hawai'i?**



Non-native: Introduced or Invasive

Plumeria:
Introduced, but **not** invasive



Octopus/Umbrella tree:
Invasive



How do non-native species become invasive?

- **Variety of Habitat**
 - Live just about anywhere
- **Reproduce quickly**
 - Lots of seeds, eggs, or babies
- **Out-compete for resources**
 - Use up food, water and space
- **Lack predators or natural enemies**
 - No disease and competition



What makes a non-native species, bad?

Health

Environment

Economy

Quality of Life



INVASIVE SPECIES COME TO HAWAI'I WITH PEOPLE



Native: The 'Ōhi'a Lehua Tree :



Holds the forest together...connecting plants and animals with each other.

Native Plants & Animals

I'iwi bird in an 'ōhi'a tree.



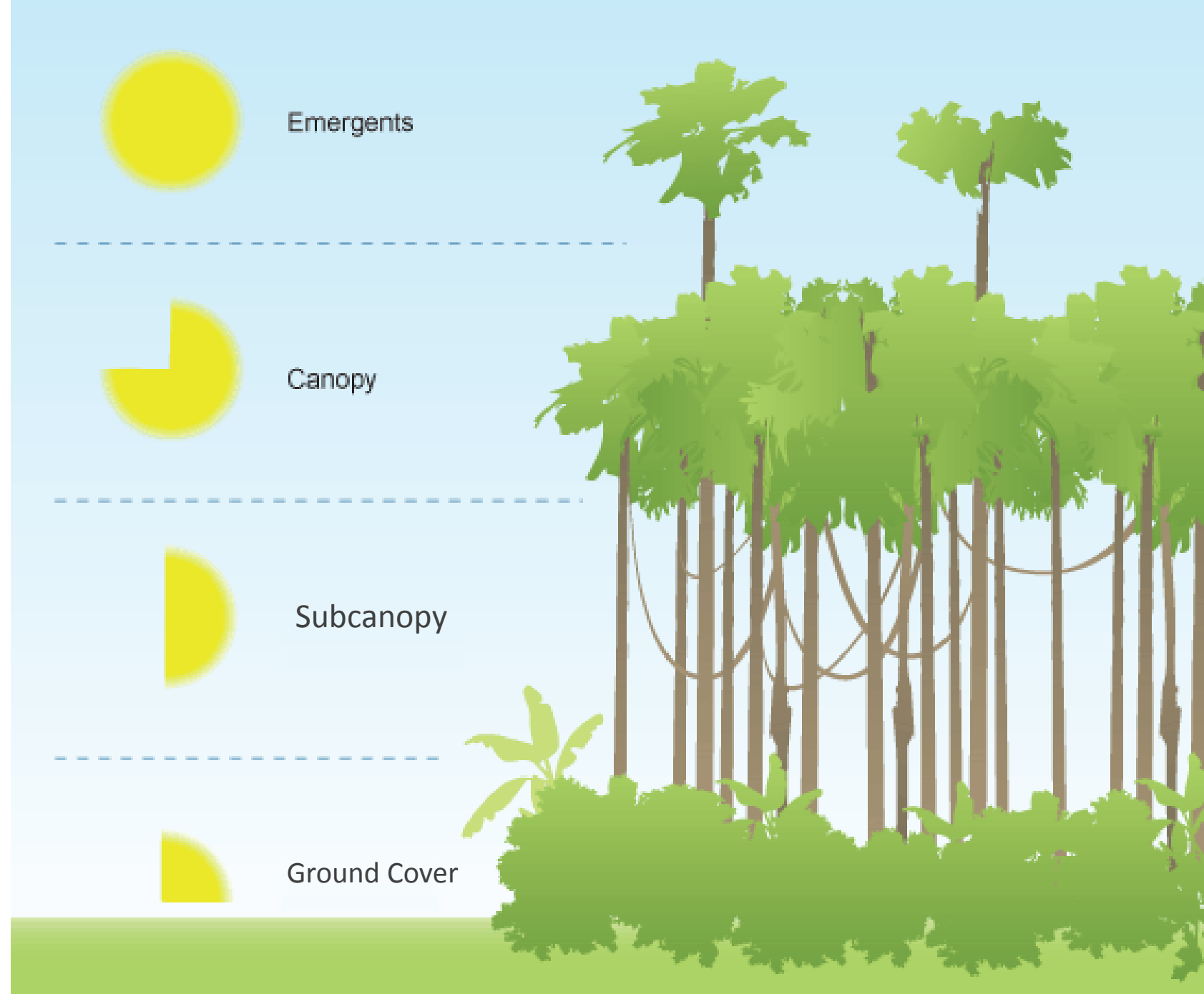
Strawberry guava: Invader!



Feral Pigs

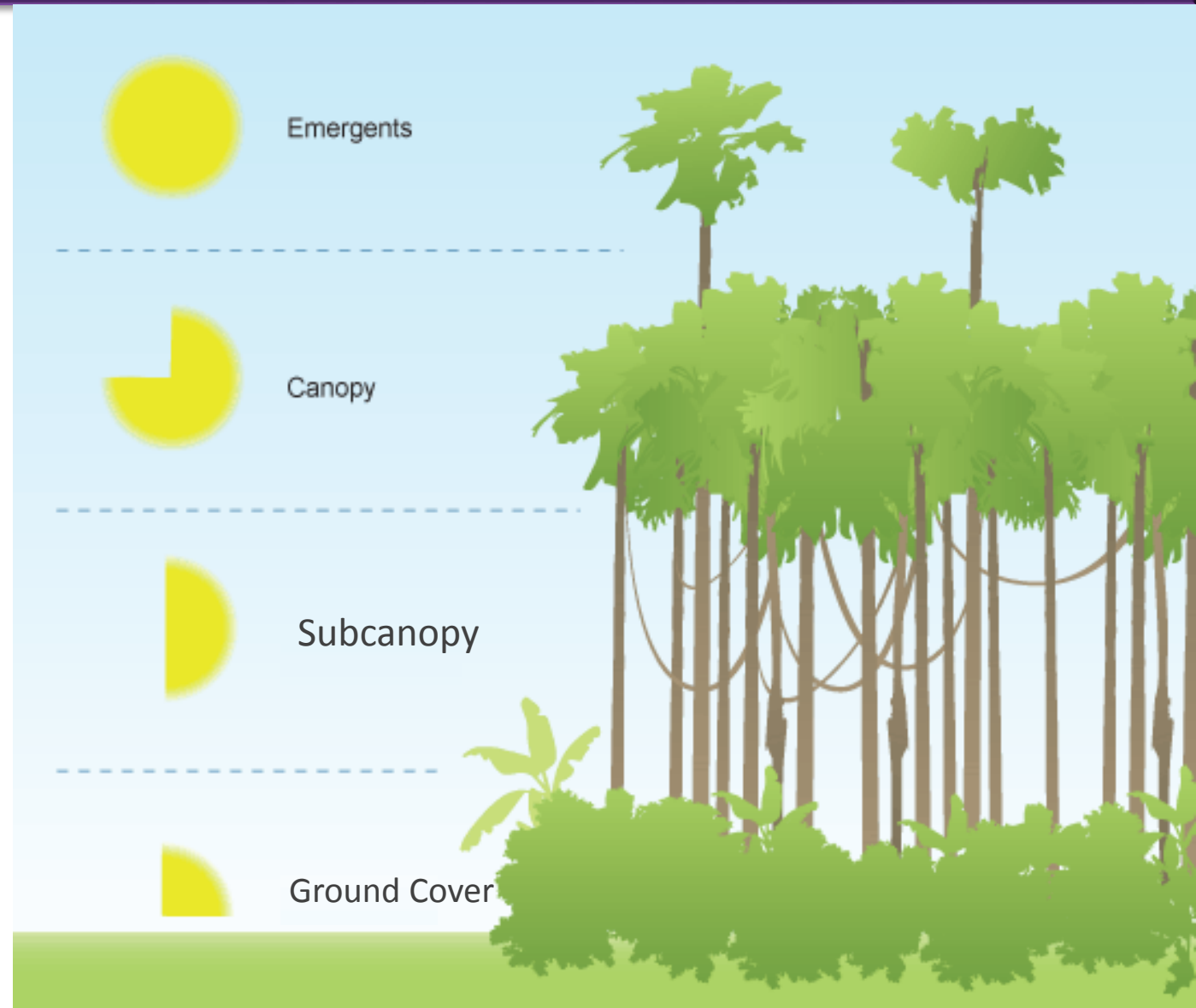


- Emergent: These are the tallest trees in the forest slow down heavy raindrops and pull moistures from passing clouds.
- Canopy: This layer catches most of the raindrops and water flows down the branches, to its trunk and to the ground.
- Subcanopy: This layer absorbs tree drips from the layers above. It also covers the layer below to slow evapotranspiration.
- Ground Cover: Mosses and ferns form a spongy layer that holds water and covers the soil so it doesn't wash away into streams and oceans. This is the darkest part of the forest. The less sun's energy means less evaporation and evapotranspiration.



Losing forest layers

Canopy: This layer catches most of the raindrops and water flows down the branches, to its trunk and to the ground.



Loss of Habitat



Erosion



What's being done?



Results!



What can you do to help?



Clean hiking shoes.



Volunteer!



REPORT INVASIVE SPECIES
643-PEST
643pest.org
CALL OR CLICK TO PROTECT HAWAII

Island Fresh
Buy Local  **It Matters**
Join the movement!