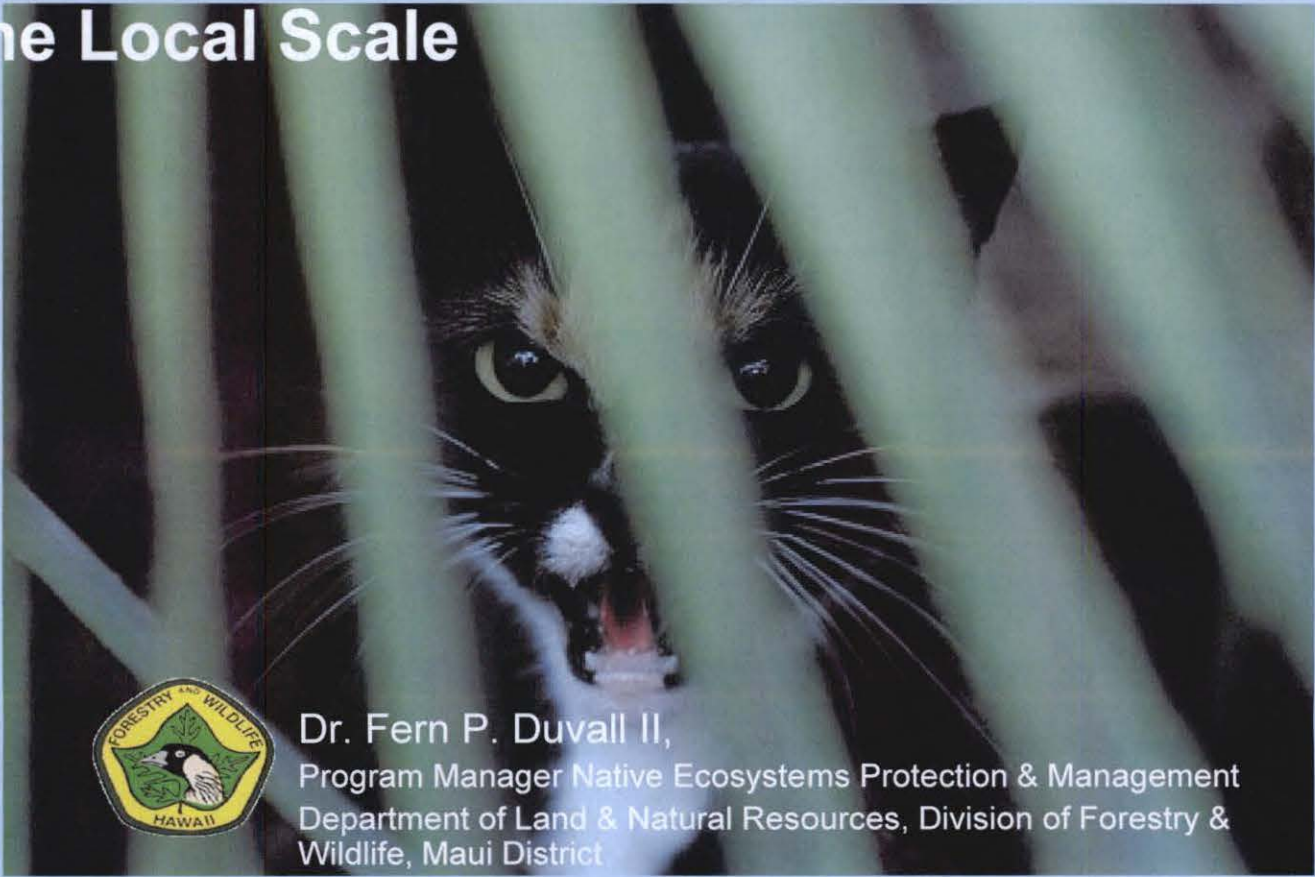




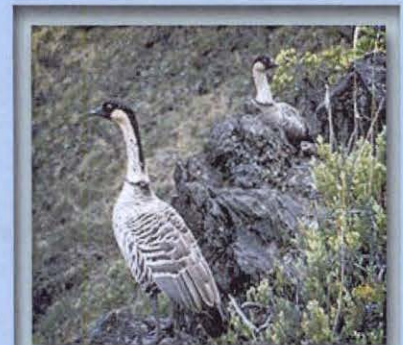
# Feral Free-ranging Cats on the Hawaiian Islands: Addressing Global Conflicts of Cats with Wildlife and Toxoplasmosis on the Local Scale



Dr. Fern P. Duvall II,  
Program Manager Native Ecosystems Protection & Management  
Department of Land & Natural Resources, Division of Forestry &  
Wildlife, Maui District

RECEIVED AT HFC MEETING ON March 10, 2020  
Dr. Fern Duvall, DLNR

The species of flora and fauna that evolved here are unique and can be found nowhere else in the world!



Remember:

Only NATIVE mammals are a small bat, and the Monk Seal

More than 50% of US Endangered Birds are Hawaiian Birds

Once 129 bird species – 95 have now disappeared;

70% (24 species) are federally listed as **ENDANGERED SPECIES**



# The Toll of Toxoplasmosis: Protozoal

Disease has Now Claimed the Lives of 12 Monk Seals  
and Left Another Fighting to Survive

- In 2018, 3 Hawaiian monk seals on Oahu were found dead from toxoplasmosis within a single week.
- Now, in 2020, a cluster of 2 additional cases has occurred.
- It is becoming increasingly clear that Hawaiian monk seals are suffering from



## Toxoplasmosis is a Serious Disease that Kills Endangered Hawaiian Monk Seals and Other Marine Mammals

- Toxoplasmosis (Toxo) is a leading cause of monk seal mortality
  - 12 confirmed monk seal deaths to date, including 8 female seals.
- Infections are difficult to detect, and infected seals typically die rapidly.
- Treatment options are extremely limited and no vaccine exists.
- 3 Hawaiian spinner dolphins have also died from toxoplasmosis.





**MORE NUMEROUS THAN STRAY CATS – FERAL CATS RANGE THE WHOLE ISLAND**



***Feral cats are unowned , free-ranging, untamed cats separated from domestication. Feral cats may be born in the wild and never socialized, or may –rarely near habitation- be abandoned or lost pets that have become wild.***

**Cats Also in Our Wettest Mountains**  
Feral Cat in Waikamoi Rainforest  
(300" rain/year)





## The Lana`ihale Project

- Staff works to protect one of the largest known colonies of Endangered Hawaiian Petrels or `Ua`u in the State (World)
- Monitor individual Petrel burrows during the breeding season to determine success of egg laying, hatching and chick fledging
- Have SADLY documented repeated feral cat predation at the colony



Tragedy in our most pristine mountains!





Cats are excellent hunters.





***As Excellent  
Hunters,***

***•Feral and free-ranging cats are one of the greatest threats to our native Hawaiian birds.***

***•At the National Level more than 500 MILLION birds may be killed by cats annually***



# A Cat tracked by satellite







And cats kill even when  
well fed as pets, or  
spayed/neutered and re-  
released!



Percent Predator Stomachs with Prey Item  
 % with Rodents Birds ES Bait

Predator:

CATS (22)

100

50

12

13

RATS\*

R. exulans (33)

88

12

nd\*\*

100

R. rattus (45)

100

18

nd

94

R. norvegicus (3)

100

1 of 3

nd

100

MONGOOSE (28)

16

24

6

53

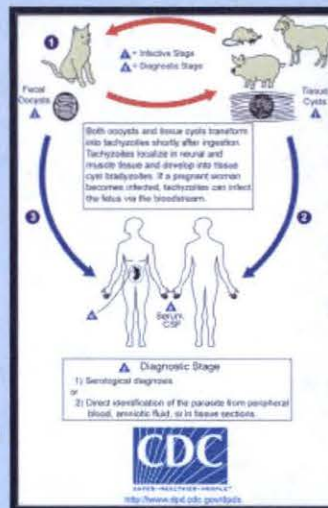
\* Rodents eaten mostly *Mus musculus*

\*\* Not determined: Down observed may have been HAST or gamebird chick in origin



# So the problem with feral and free-ranging cats?

- **Skilled hunters**
  - Obligate Carnivores
  - Opportunistic Killers
- **High reproductive rates**
  - Capacity for exponential population growth
- **Introduced predators**
  - Native species are often unaccustomed to cats and do not avoid them
- **Spread diseases**
  - Toxoplasmosis
  - Feline Aids & Leukemia
  - Cat Scratch Fever
- **Public Nuisance**
  - Loud Nocturnal Mating Calls
  - Scent Marking
  - Feces





**Warning: More Graphic Pictures**

**Ahead**



**year 1903**

*“On Lanai in walking up a single ravine, I counted the remains of no less than twenty-two native birds killed by cats, and these must all have been destroyed within two days as previously the whole gulch had been washed out by a heavy flood.”*

*“...owing to the fact that they [cats] are extremely shy and mostly nocturnal in habits, few people who have not lived much in the woods have any idea of their numbers.”*      -R.C.L. Perkins

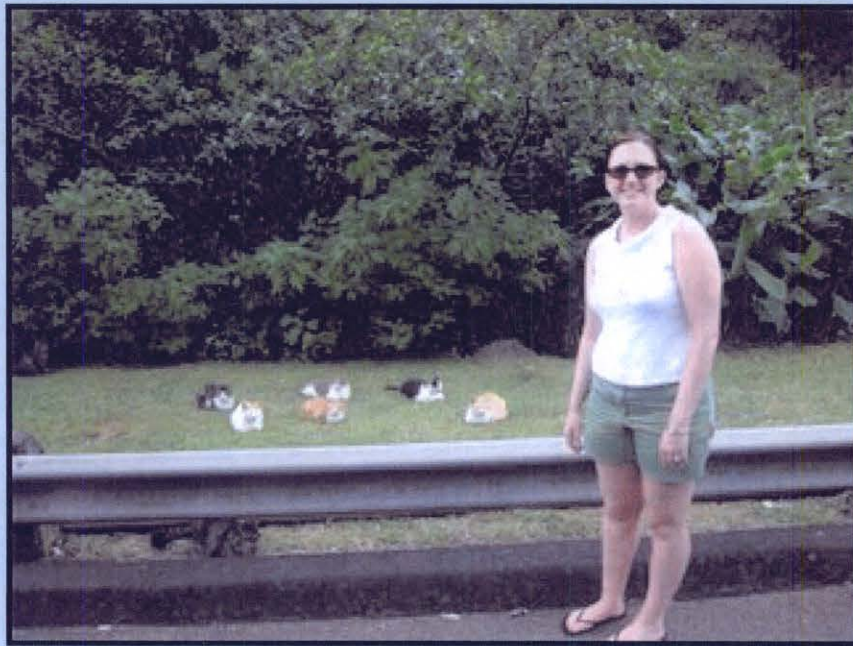






On Maui Island alone, feral free-ranging cats are now estimated to number approximately **300,000-400,000** animals! That is 413 to 550 cats per square mile!

That means that for every 1 resident on Maui Island there are more than 2 feral free-ranging cats



AND the number of cats getting neutered/spayed, is less than 1 percent annually! This rate of sterilization DOES NOT affect the population growth of free-ranging cats!



# Kanaha Pond Wildlife Sanctuary

## Traps with 10-60 Cats & Colony Locations







***Feeding of feral and free ranging cats not only bolsters cat numbers, but also attracts mongoose and other introduced predators to an area. It often concentrates cats near native wildlife habitat at very high densities.***



## Wedge-tailed Shearwaters

- Long-lived seabird(40+yrs)
- Come to land once a year to breed nesting along the coasts of the Main Hawaiian Islands
- Monogamous species that form long-term pair bonds
- Lay only **one egg** and raise **one chick** per year, it takes **SEVEN plus** years for the birds to mature and start to breed!
- It takes **both parents** to raise the chick – loss of one is fatal to the chick.



**Warning: More Graphic Pictures**

**Ahead**





Wedge-tailed  
Shearwater colonies  
on all islands are  
facing tremendous  
pressure from feral  
and free ranging  
cats





Especially ones near Cat Colonies...



*Wedge-tailed Shearwaters killed by feral cats on the island of Maui*



**Warning: Graphic Pictures**



Remains of 2 wedge-tailed shearwater  
chicks in feral cat stomach.

Kilauea Point NWR, Kauai, HI

Brenda Zaun, USFWS



AUG 23 200





**Fledgling Hawaiian Petrel at its burrow  
in Haleakala National Park, Maui Island**













**Before it's too late!**

Extinct Species of Hawaiian Birds



We can't keep looking the other way.



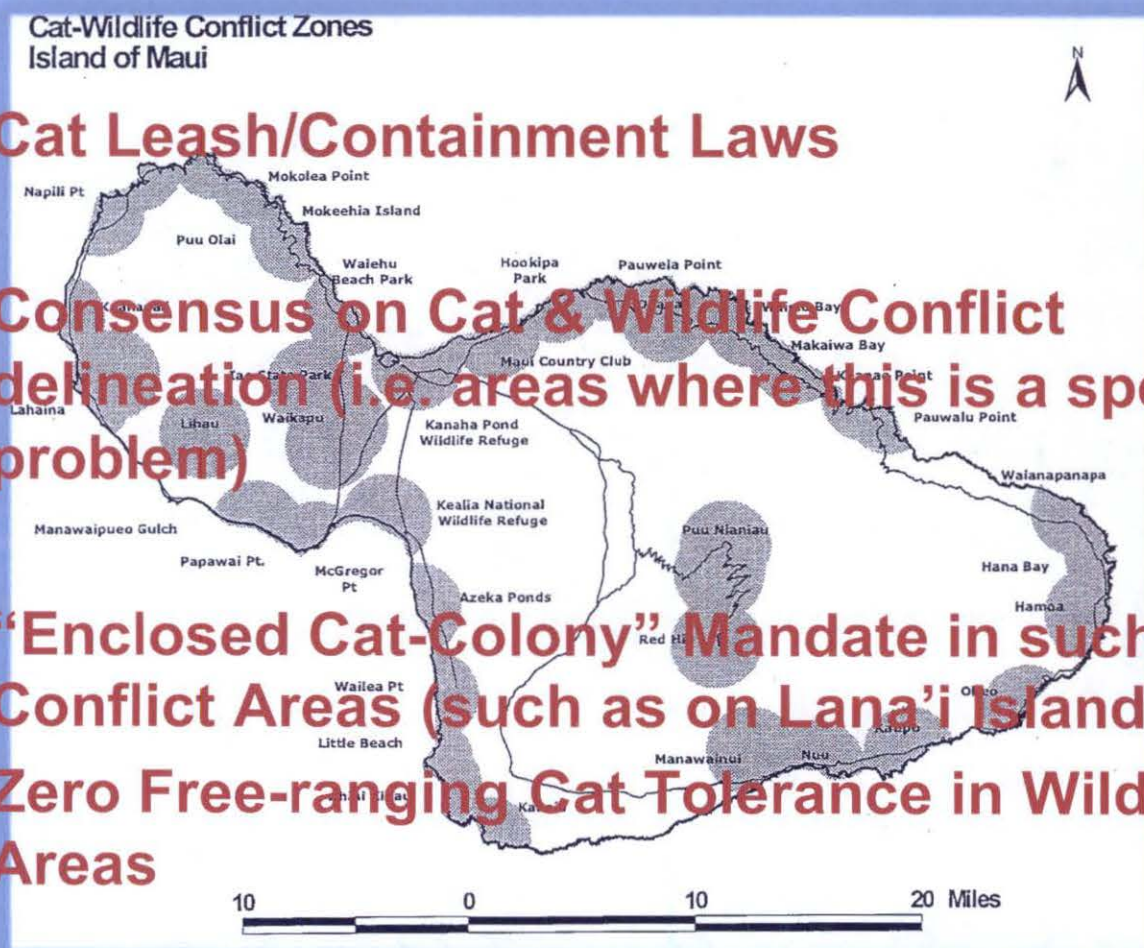


# CHALLENGES

- Continuous need for Cat Trapping
- Return to bird Colonies if re-released
- Cat Colonies near Wildlife areas
- Anonymous cat Colony “Owners” (no responsible party for actions of cats)
- Contention over what to do with Cats
- No Benefits to Bird Management/Recovery

# MAUI NEEDS (at Landscape Level):

- **Cat Leash/Containment Laws**
- **Consensus on Cat & Wildlife Conflict delineation (i.e. areas where this is a special problem)**
- **“Enclosed Cat-Colony” Mandate in such Conflict Areas (such as on Lana’i Island)**
- **Zero Free-ranging Cat Tolerance in Wildlife Areas**





**We must act now, as we are the human voice for our truly irreplaceable native, threatened, and endangered species.**



Do the Right Thing, Do it Right!

Seabirds assisted the Polynesians in finding the islands in centuries past... they now need our help!

***“Ua Mau ke Ea o ka ‘Aina i ka Pono”***  
- our State ES law mandates care

