

Aliens of Xamayca

A newsletter on non-indigenous species in Jamaica

IMPACT OF FERAL ANIMALS ON THE ENVIRONMENT

"Feral" is a terminology used to describe animals that were once domesticated but have now reverted to the wild. Feral animals impact on native species through predation on vulnerable plants and animals or by competition with native species, habitat destruction and introduction of diseases. They typically have few natural predators or fatal diseases and some may have high reproductive rates. As a result, their populations have not naturally diminished and they can multiply rapidly if conditions are favourable.

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FERAL PIGS

Feral populations of *Sus scrofa* (pigs) were established in the early years of Spanish colonisation of Jamaica. They have now expanded their range to the natural forests, including the Hellshire Hills, Blue and John Crow Mountains. The pigs compete with native herbivores such as the *Cyclura collei* (Jamaican Iguana) and the *Geocapromys brownii* (Jamaican Hutia) (National Strategy and Action Plan on Biological Diversity in Jamaica, 2016).



Figure 1: Feral Pig Eating Turtle Eggs

Rooting, wallowing, and trampling are just a few of the natural behaviours exhibited by the feral pig. During their feeding which involves grubbing up earth in pursuit of tubers and earthworms, feral pigs contribute to the destruction of vegetation, displacement of rocks and logs which result in soil erosions, trail formations and can ultimately lead to land degradation. Their impacts on the environment extend to the spread of invasive alien species (IAS) via seed dispersal (by eating weed fruits and pods and excreting the seeds) and by disturbing areas when they feed which makes it easy for IAS to become established. Major weeds such as *Annona glabra* (Pond Apple), *Mimosa pigra* (Mimosa) and *Prosopis sp.* (Mesquite) are a few of the IAS which are spread through this medium and colonises disturbed ground.

Of greatest concern to Jamaican conservationists is the feral pig's predation on the eggs and hatchlings of endangered species. Feral pigs have been documented to prey on the eggs and hatchlings of sea turtles as well as the eggs of the *Crocodylus acutus* (American Crocodile) and *Cyclura collei* (Jamaican Iguana) (Figure 1). This poses a major threat to biodiversity and the conservation of these species.

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The feral pig population may be reduced by hunting and trapping. Additionally, fencing ecological sensitive areas is a viable option to protect critical biodiversity.

Contributor: Samantha Grant, NEPA

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FERAL CATS

Felis catus (cats), is among the nomination of **100 of the World's Worst Invasive Species** (Invasive Species Specialist Group, 2022). Species on the list are classified into two ecologically significant categories based on their



Figure 2: A feral cat hunting

characteristics and impact on the environment. The categories relate to:

- ♦ serious impact on biological diversity and/or human activities,
- ♦ an illustration of important issues surrounding biological invasion

Globally, it has been documented that the impact of *Felis catus* on biodiversity includes predation, competition, disturbance, disease transmission and hybridization. Cats are opportunistic hunters, and prey items include a wide range of animals, including birds, mammals, reptiles, amphibians, fish, and invertebrates like butterflies and dragonflies

(McCormack et.al, 2020).

In Jamaica, feral cats are known to prey on native species. The Jamaican Iguana (*Cyclura collei*) and the Jamaican Boa (*Epicrates subflavus*) are two such animals whose populations are threatened due to feral cats; both are currently classified as “endangered”. The implication of this predation can result in population decline and may ultimately lead to species extinction (National Strategy and Action Plan on Biological Diversity in Jamaica, 2016).

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FERAL GOATS

Capra hircus (Goats) have been domesticated for hundreds of years and its meat is enjoyed by the masses. However, goats can become a major environmental and agricultural pest when in its feral state. Feral goats impacts on the environment has great economic implications.

Feral goat's have quite an appetite for plants and feeds on plant's leaves, twigs, flowers, fruit and roots (Figure 3). They are capable of climbing steep slopes, which enables them to graze at varying elevations. Adult trees may have a greater chance of surviving due to the presence of foliage that are outside their reach; however their seedlings most likely won't survive. Therefore the implications for survival of native plant species and to a greater extent plant communities are threatened.

Feral goats cause land degradation through soil damage, over grazing and strip browsing. The soil's crust and its protective cover of vegetation are disturbed through trampling by the goat's hooves. Goats also pose a biosecurity risk as vectors of many livestock diseases namely Leptospirosis, Rabies and Salmonellosis, just to name a few.

The impacts of feral goats supersede just plants as native animals are also affected. Goats compete with many animals species for food, water and shelter.

Economic losses as a result of the impact of feral goats include:

- ◆ **Costs to primary production**– Foresters incur cost due to damage to seedlings.
- ◆ **Costs associated with land degradation** -This cost is

incurred as a result of the monetary resources needed to rehabilitate degraded lands.

- ◆ **Costs associated with management of goats by the public** .– This cost is incurred through the installation of exclusion fences for feral goats.

WHAT TO DO?

The management of feral goals may be achieved through the erection of exclusion fences around areas sensitive to the impacts. Additionally, owners of domestic goats should ensure they are properly secured within the boundaries of their private property and are not freely roaming in the wild.

Contributor: Samantha Grant, NEPA

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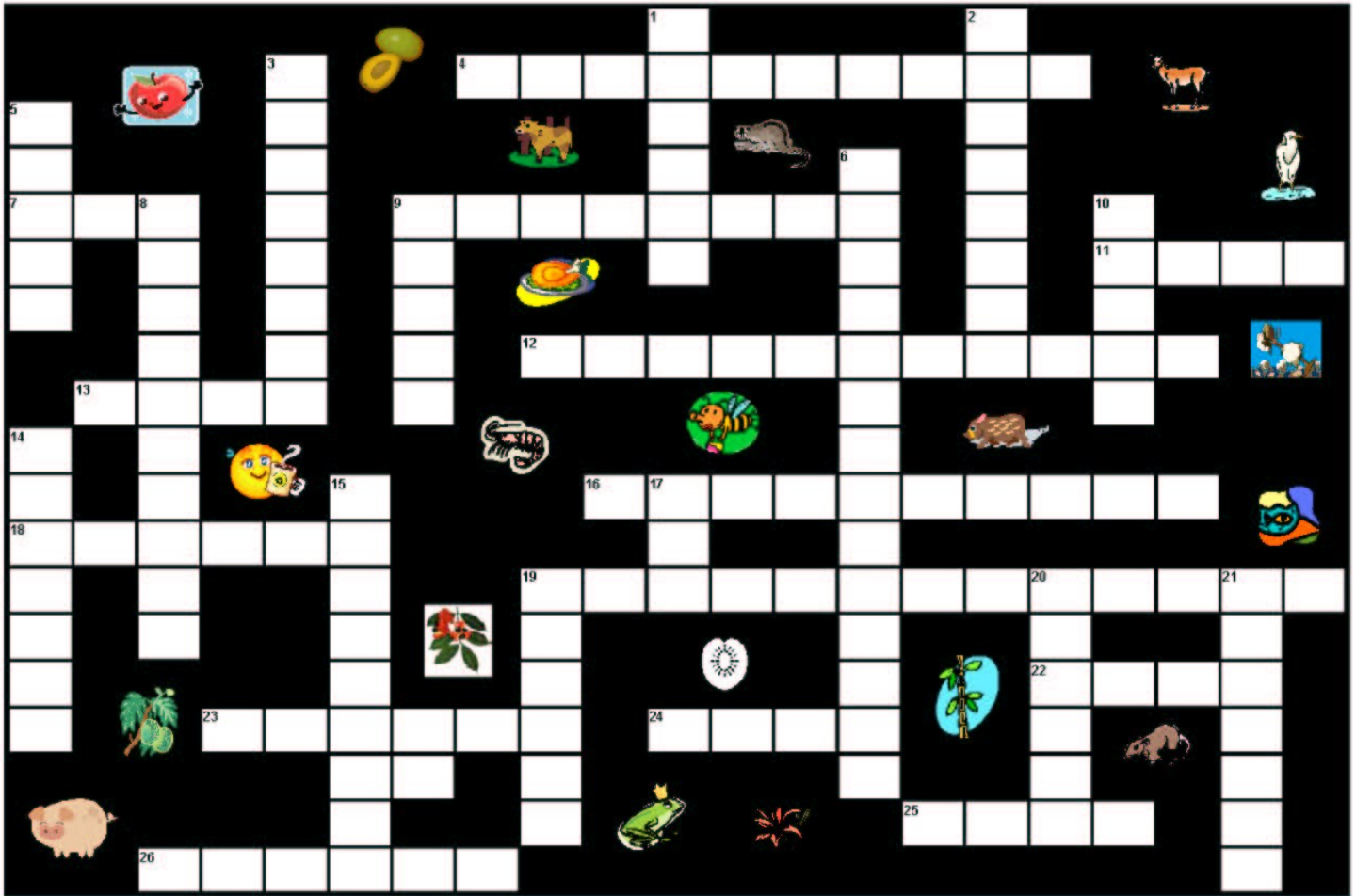
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Figure 3: Feral goat eating plants in forested area.

Children's Corner



ACROSS

4. Used to clear sinuses and to aid in breathing
7. My dishes are loved by many Jamaicans
9. Introduced to control rats in sugarcane fields
11. Young cow
12. Often seen hitching a ride on cattle
13. Found in Portland and known to drive Santa's sleigh
16. Introduced by Captain Bligh and often eaten with ackee and saltfish
18. Grass often termed 'sharp as a razor'
19. Blocks waterways and is used as animal feed
22. Another word for chicken
23. Used to make a drink around Christmas time
24. Tree that "runs" flies, mosquitoes and other insects
25. Makes honey and stings
26. Tree used to make boats, coffins, shirts and is linked to the dead

DOWN

1. Used to make furniture and my name, Holland _____ is an attraction in St. Bess
2. Spotted animal with "warts" and is identified by its call "rrr rrbtt"
3. Relative of pig gone wild
5. Otaheite or American
6. Popular spicy food sold in Middle Quarters, St. Elizabeth
8. I am a plant and the first part of my name is a spice used in food and drinks
9. "Beefy" and "Stringy" are examples
10. National fruit
14. Provides dye and a famous brand of honey has this name
15. Looks like an elongated breadfruit
17. Frequent passenger on ships and loves cheese
19. A plane was lodged in these trees after Hurricane Gilbert
20. Attacked by the Berry Borer
21. Red and black aquaculture fish

ANSWERS

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|--------|------------|-------------|--------------|---------------|------------|--------------------|-----------|-----------------|-----------|-----------------|---------------|--------------------|-----------|-------------|---------------|----------------|-----------|
| DOWN | 1. Bamboo | 2. Bullfrog | 3. Wild Boar | 4. Eucalyptus | 5. Apple | 6. Peppered Shrimp | 7. Fig | 8. Cattle Egret | 9. Guinea | 10. Ackee | 11. Catf | 12. Water Hyacinth | 13. Deer | 14. Logwood | 15. Jackfruit | 16. Breadfruit | 17. Rat |
| | 18. Willow | 19. Coffee | 20. Cotton | 21. Tilapia | 22. Sorrel | 23. Fowl | 24. Neem | 25. Bees | 26. Mango | 27. Ginger Lily | 28. Broomrape | 29. Snake | 30. Snake | 31. Snake | 32. Snake | 33. Snake | |
| | 34. Snake | 35. Snake | 36. Snake | 37. Snake | 38. Snake | 39. Snake | 40. Snake | 41. Snake | 42. Snake | 43. Snake | 44. Snake | 45. Snake | 46. Snake | 47. Snake | 48. Snake | 49. Snake | |
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The Aliens of Xamayca is a quarterly newsletter that features non-native species in Jamaica. Persons interested in writing articles for the newsletter may submit them to the editor at samantha.grant@nepa.gov.jm.