

# U.S. Virgin Islands Least EXOTIC INVASIVE SPECIES

# WANTED

**E**ach year invasive species cause billions of dollars of damage and cause the extinction of many native species. In the U.S. alone, invasive species cost \$138 billion annually in economic damage and control costs. Invasive species are considered a major factor in the decline of half of all threatened or endangered species. The Virgin Islands are not immune to the harm caused by invaders. But how do you know if a plant or animal is going to be harmful? The purpose of this publication is to review the problem of invasive species around the world and take a detailed look at how they effect the US Virgin Islands. The introduction defines important terms and concepts. The following pages provide information on the invasive species most effecting Virgin Islands' forests. Species are grouped together based on common characteristics and their preferred habitats (vines, pasture pests, forest invaders and harmful animals).



**U.S. Executive order 13112 defines invasive species as “alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.”**



**E**very species that is invasive in one place is also a harmless native within its home range. Natural populations of these species are controlled by the other animals and plants in their environment and are also limited by environmental factors such as rainfall or soil type. When a plant or animal is brought to a new environment without a natural predator, they are ‘released’ from that control and their population can explode and spread without check.

## How Are They Harmful?

**I**nvasive species cause harm to the environment or the economy. They harm native organisms directly by eating or smothering them or indirectly, by out-competing them for natural resources and crowding them out. Some species can completely alter their environment, such as the water hyacinth that blocks out sunlight from reaching lakes and kills native plants and animals living in them. Other plants alter the environment by causing increased frequency of fire and thus killing native organisms that are not adapted to fire.

The National Invasive Species Council estimates that hundreds of millions of dollars are spent each year on invasive species control projects. Billions are lost every year in decreased agricultural production.

## How Are They Introduced?

**E**xotic species are introduced to new regions and habitats by humans both intentionally and accidentally. Many invaders begin as useful agricultural species that eventually escape and become harmful. Goats and pigs, for example, are highly beneficial when raised on farms, but become environmentally destructive when they escape captivity. Many plants have been introduced around the world as ornamentals for their showy blooms, only to escape cultivation and spread out of control in new habitats.



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### How Do They Spread?

Today, international shipping and travel is common and uncounted millions of organisms hitch a ride on the mud flaps of trucks, inside shipping containers and the ballasts of ocean going ships. Humans are by far the world's greatest spreaders of invasive species. The recently arrived and highly invasive lionfish likely came from aquariums and then spread on its own.



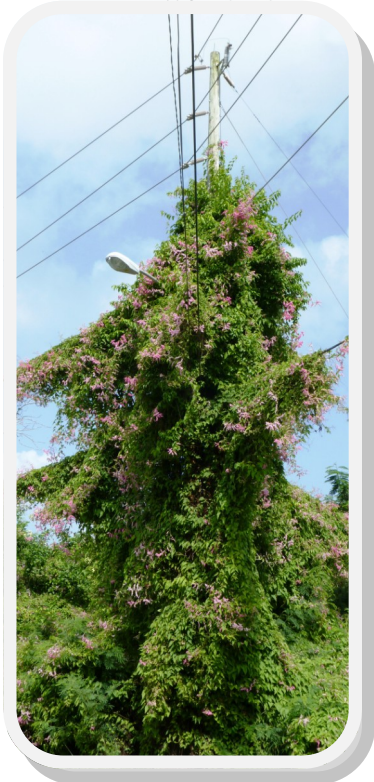
### How Do We Manage Them?

**Prevention**—The cheapest and most effective method of controlling invasive species is to prevent them from being introduced in the first place. This requires vigilantly inspecting containers and plants upon entering the Virgin Islands for the presence of invasive species. Education and management are critical tools for effective prevention.

**Eradication**—Complete removal of an organism from an area can be extremely difficult, expensive or impossible. It took years of organized, vigilant rat trapping by National Park Service on Buck Island to eradicate them.

**Control/Containment**—When land managers acknowledge it is impossible to eradicate a species, the goal is to prevent the population from growing or spreading.

**Biological Control**—Introducing a new organism to attack the invasive one is an effective, but also dangerous method of control. Pink mealy bug in the US Virgin Islands is controlled with an introduced parasitic wasp.



### Definition of Terms

*These terms are commonly used when discussing species origin. Not all professionals agree on the exact terms and definitions, but the following list is generally considered helpful.*

**Native**—Organisms found within what is considered their natural range.

**Endemic**—Similar to native but refers to a smaller, more specific geographic range.

**Exotics**—Exotic species are any organism taken by humans from their natural range and transported to a new area. It does not include natural migrations like birds or fish that travel great distances.

**Naturalized**—An organism that is able to reproduce itself unassisted in their new habitat is considered naturalized.

**Invasive**—An organism that grows or spreads aggressively in its new environment, causing harm to the environment or economy.

#### Series: Exotic Invasive Species in the US Virgin Islands

- **Vines:** Coral, Rubber, Dodder
- **Pasture Pests:** Tan-tan, Casha, Guinea Grass, Manjack
- **Forest Invaders:** Neem, Sweet Lime
- **Harmful Animals:** Rat, Mongoose