

U.S. Fish & Wildlife Service

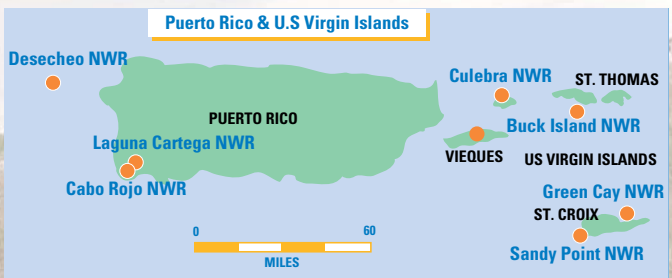
# Vieques

*National Wildlife Refuge*



*photo: Clare Mowbray*

*The Vieques National Wildlife Refuge (The Vieques NWR) is one of nine national wildlife refuges located in the Caribbean. Five of them are found within the Commonwealth of Puerto Rico: Cabo Rojo, Laguna Cartagena, Desecheo, Culebra and Vieques. Three more are located in the US Virgin Islands: Sandy Point, Buck Island and Green Cay. The remaining refuge is the island of Navassa and its surrounding waters located off the southwestern coast of Haiti.*





*This blue goose, designed by “Ding” Darling, has become a symbol of the National Wildlife Refuge System.*

## **Welcome to the Vieques National Wildlife Refuge**

Vieques Island, a municipality of the Commonwealth of Puerto Rico, is located approximately 7 miles east of the main island. It is approximately 22 miles long and is 4 miles wide at its broadest point. The Vieques NWR was established on May 1, 2001 when 3,100 acres from the western side of Vieques were transferred by the U.S. Navy to be managed by the U.S. Fish and Wildlife Service. On May 1, 2003, the U.S. Navy transferred an

additional 14,671 acres located on the eastern side of the island to the Service, bringing the total Vieques NWR acreage to 17,771 acres.

Excellent examples of subtropical dry forest are

found on the refuge. The refuge and its adjoining waters are home to at least 4 endangered plant species and 10 endangered animal species. Hot sands along its undeveloped beaches make The Vieques NWR an ideal nesting site for leatherback, hawksbill and green sea turtles. The sea grass beds along the coast serve as a refuge and feeding ground for hawksbill and green sea turtles and Antillean manatees. In addition to its

ecological value, the refuge contains important archeological and historic resources, including artifacts of the aboriginal Taino culture and the island’s sugar cane plantation era.



*Playa Caracas  
Refuge east side*



*Vieques NWR west view*



*Human  
Habitation on  
Vieques Begins*

**A Brief History of the Island**

The name, Vieques, is derived from the Taino word “Bieque”, meaning small island. This island was inhabited by people indigenous to South America. The first permanent inhabitants of Vieques are thought to be the Archaic. This culture was followed by other cultures, the Saladoid, Huecoid, Ostionoid and finally the Taino. The Taino occupied many of the islands in the Caribbean Sea. Within a very short period, the Taino people were subjugated by the Spanish, and their population was decimated by diseases, emigration, combat with the Spanish troops and assimilation into the colonizer population.

*Spanish Period*

Although the Spaniards considered Vieques important, they did not initially inhabit the island. The English, Dutch and French tried to settle the island at various times during the 17<sup>th</sup> and 18<sup>th</sup> centuries, but were all eventually evicted by the Spaniards.

*Plantations  
Widespread on  
Vieques*

In 1811, the Governor of Puerto Rico, Don Salvador Meléndez, sent the Spanish military commander, Juan Roselló, to organize the formal settlement of the island. After limited success, he was replaced by Teófilo José Jaime María Le Guillou, a French plantation owner and founder of Vieques. During this period, Vieques experienced an economic “boom” and various sugar plantations emerged.

Some “barrios” still bear the old mill names, Playa Grande, Santa Maria, Arcadia, Resolution, Santa Elena and Esperanza. After the Spanish American War, the United States assumed control of Puerto Rico under the terms of the Treaty of Paris. During the 30’s, there was a rapid decline of the sugar industry on Vieques.

*U.S. Navy Period* During the 40's, approximately 26,000 acres were expropriated by the U.S. Navy for use as a base and training facility. Many Viequenses were relocated to other areas of the island such as Monte Santo and Santa María. Later, others were displaced to St. Croix.

*Establishment of Vieques NWR* On May 1, 2001, the Navy lands on the western end of Vieques were transferred to the municipality of Vieques, the Puerto Rico Conservation Trust and the Service. On May 1, 2003, Navy lands on the eastern end were also transferred to the refuge.

### **Flora**

Vieques falls within the subtropical dry forest and subtropical moist forest life zones. The subtropical dry forest has a nearly total cover of small-leafed vegetation. These plant species typically have spines, and the leaves are often small and hard. Trees of the moist zone generally grow taller than those of the dry zones.

The refuge supports six vegetation communities: Beach, Coastal Strand Forest, Mangrove, Subtropical Dry Forest and Shrub, Mixed Evergreen-Deciduous Forest and Grassland.

**Beach** community vegetation exists in the salt spray zone. Typical species include the beach vines, sand spurs, sea grapes and coconuts.

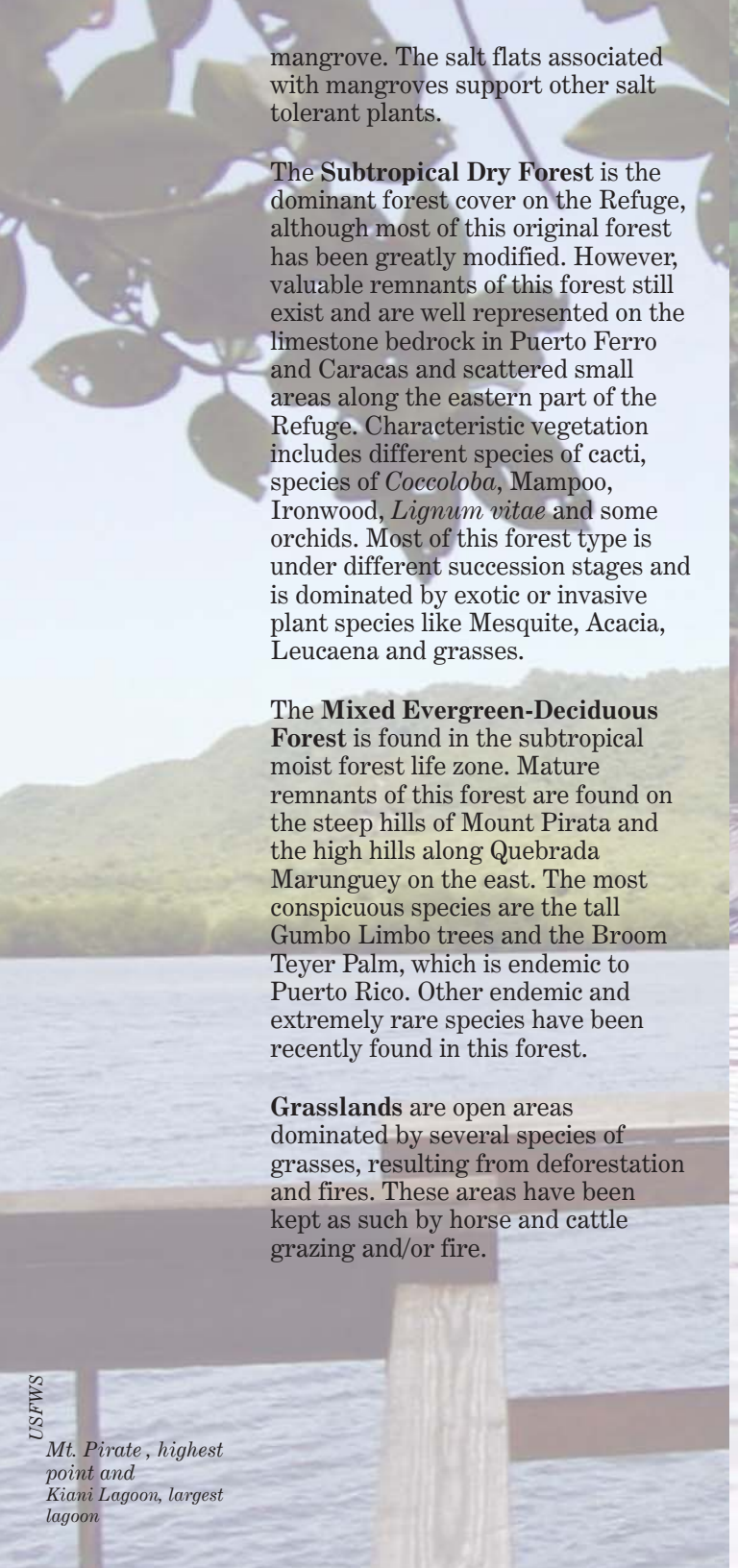
The **Coastal Strand Forest** is a very diverse community found behind the beaches and mangroves.

Characteristic trees include the Snakebark, Black torch and Bay cedar and many species of vines.

**Mangroves** are often tidal areas dominated by trees tolerant to saltwater intrusion. These trees are the red mangrove, black mangrove, white mangrove and button



*sea grapes*



mangrove. The salt flats associated with mangroves support other salt tolerant plants.

The **Subtropical Dry Forest** is the dominant forest cover on the Refuge, although most of this original forest has been greatly modified. However, valuable remnants of this forest still exist and are well represented on the limestone bedrock in Puerto Ferro and Caracas and scattered small areas along the eastern part of the Refuge. Characteristic vegetation includes different species of cacti, species of *Coccoloba*, Mampoo, Ironwood, *Lignum vitae* and some orchids. Most of this forest type is under different succession stages and is dominated by exotic or invasive plant species like Mesquite, Acacia, Leucaena and grasses.

The **Mixed Evergreen-Deciduous Forest** is found in the subtropical moist forest life zone. Mature remnants of this forest are found on the steep hills of Mount Pirata and the high hills along Quebrada Marunguey on the east. The most conspicuous species are the tall Gumbo Limbo trees and the Broom Teyer Palm, which is endemic to Puerto Rico. Other endemic and extremely rare species have been recently found in this forest.

**Grasslands** are open areas dominated by several species of grasses, resulting from deforestation and fires. These areas have been kept as such by horse and cattle grazing and/or fire.





*White-cheeked Pintail*

*Wading Birds  
and Waterfowl*



*Great Egret*

*Sea Birds*



*Short-billed Dowitcher*

**Fauna**

*Birds*

About 170 bird species, both migratory and resident, have been reported to occur on Vieques.

Grebes, waterfowl, rails and shorebirds abound in the shallow water of the lagoons. These include species such as the Pied-billed Grebe, Clapper Rail, White-cheeked Pintail, Ruddy Duck, Blue-winged Teal, Common Gallinule and Caribbean Coot.

Resident herons and egrets, are the Tri-colored Heron, Little Blue Heron, Snowy Egret, Yellow-crowned Night Heron and Great Egret.

Resident shorebirds include the Wilson's Plover and Killdeer. Migrant shorebirds known to occur include Black-bellied Plover, Semipalmated Plover, Greater Yellowlegs, Lesser Yellowlegs, Spotted Sandpiper, Ruddy Turnstone, Semipalmated Sandpiper and Short-billed Dowitcher.

At least 14 species of marine seabirds occur as permanent or migrant residents. These species use near shore and offshore marine habitats to feed. Species known to occur include the Magnificent Frigatebird, White-tailed Tropicbird, Red-billed Tropicbird, Brown Pelican, Brown Booby, Laughing Gull, Royal Tern, Least Tern, Sooty Tern, Roseate Tern, Sandwich Tern, and Bridled Tern. These birds use rocky shores, cliffs, cays, sandy beaches and the lagoons to nest and/or roost.



*Yellow Warbler*

Shorebirds found in non-vegetated habitats, e.g., mudflats, beaches, rocky shores, include the American Oystercatcher and Spotted Sandpiper.

Common terrestrial birds that occur in all types of upland scrub habitats

*Land Birds*

include the Common Ground Dove, Zenaida Dove, Caribbean Elaenia, Gray Kingbird, Mangrove Cuckoo, Bananaquit, Black-faced Grassquit, Yellow Warbler, Greater Antillean Grackle, Green-throated Carib Hummingbird, Northern Mockingbird, Pearly-eyed Thrasher, Antillean Crested Hummingbird and Smooth-billed Ani.



*Smooth-billed Ani*

Puerto Rico's endemics found in Vieques are Adelaide's Warbler, Puerto Rican Woodpecker and Puerto Rican Flycatcher.

*Mammals*

A number of marine mammals are known to occur near the shore and in the deeper offshore waters surrounding Vieques Island. These include the Antillean manatee, the blue whale, fin whale, humpback whale, sei whale and several dolphin species.

Bats are the only native terrestrial mammal on Vieques. Confirmed species are the fisherman bat, red fruit bat, free-tailed bat and the fruit bat.



*Bat*



Erick Bermúdez



Green sea turtle

All other mammals were introduced by man to the island and include the house mouse, black rat, small Indian mongoose and domestic animals such as cattle, horses, dogs and cats.

### *Amphibians and Reptiles*

Twenty two species of amphibians and reptiles are found on the Refuge. They include four species of marine sea turtles (three of which nest on Vieques), four frogs, an introduced toad, a native species of fresh water turtle, 11 lizards and geckos and a worm snake. Although snakes have been reported for Vieques, its presence has not been confirmed during recent surveys.

Erick Bermúdez



Leatherback nesting

### *Aquatic Organisms*

Due to the limited freshwater habitats on the Refuge, most aquatic organisms are either estuarine or marine species. Among the species of mollusks, known to occur in near shore marine habitats of Vieques NWR are the octopus, coquina clam, queen conch, Mangrove oyster and the West Indian Top shell.

Nelimar Peterson



Common Land Crab

Various species of crustaceans are known to occur in the coastal waters and in near shore marine

habitats off Vieques Island. These species include the Caribbean spiny lobster, estuarine and freshwater shrimp and other types of crabs such as the ghost crab, fiddler crab and common land crab.

Nelimar Peterson



Ghost Crab

Approximately 800 species of fish are known to inhabit the coastal waters around Puerto Rico and surrounding islands. Mangroves, lagoons, sea grass beds, coral reefs and open waters support different fish families.

## Endangered Species

The Vieques NWR supports important habitats for native, migratory, rare and protected species. Sixteen federally-listed plant and animal species occur on the refuge and its surrounding waters.

### *Plants*

Four species of federally listed plants occur in the Vieques NWR, the cóbana negra (*Stahlia monosperma*), *Calyptranthes thomasiana*, *Chamaecrista glandulosa* var. *mirabilis*, and the matabuey (*Goetzea elegans*).

### *Reptiles*

Four species of sea turtles: Hawksbill, Leatherback, Green and Loggerhead. The loggerhead sea turtle occurs in waters near Vieques, but no nests have been documented in Vieques.

### *Birds*

Brown Pelican and Roseate Tern. The migratory Peregrine Falcon may be seen during the winter.

Species of concern are the following: Puerto Rican Broad-winged Hawk and White-cheeked Pintail.

### *Marine Mammals*

Antillean manatee, blue whale, fin whale, humpback whale and sei whale. The Vieques NWR does not manage these species.



Marcos Caraballo

*Goetzea elegans* fruit



Nelimar Peterson

*Brown Pelican*



*Antillean Manatee*



*Kiani Lagoon kiosk  
and boardwalk*

## Visitor Opportunities

The Vieques NWR is open to the public year-round from 6 am until dark. Recreational activities include bicycling, wildlife observation, wildlife photography, environmental education, interpretation and access to kayaking, fishing and beach use. The beaches that are open to public access are considered by many to be among the most beautiful in the world and are one of the chief aesthetic attractions to the area. In addition to the beaches, there are also various marine ecosystems such as lagoons, salt flats and mangrove forests. The expanses of subtropical dry and subtropical moist forest are other ecosystems of the areas that can be appreciated.

The refuge can be visited on both the western and eastern sides of Vieques. The recreational areas at the western side of the refuge are known as Playa Grande, Punta Arenas (Green Beach) and Kiani Lagoon. Also, the eastern side of the refuge offers recreation at various beaches, especially at Playa Caracas (Red Beach) and Playa La Chiva (Blue Beach). Currently, a major portion of the eastern refuge is closed due to the danger of unexploded ordnance and the cleanup process occurring in that area.

The U.S. Fish and Wildlife office in Vieques is open Monday through Friday from 8:00 am to 3:00 pm, excluding Federal holidays.

Near-term plans include creating a visitor center and increase visitor facilities. It is an important part of the Service to educate the public about the conservation mission of Vieques natural and cultural treasures.



*Birding*



*Fishing pier at Kiani Lagoon*



## Refuge Regulations

The mission of the Service is to conserve, protect, and enhance natural habitats and their plants, fish and wildlife for the benefit of current and future citizens.

The following rules apply to those Vieques NWR areas that are open to the public – the areas not open to the public **shall not be visited by land or sea at any time.**

- Visit from 6 am until dark.
- Obey traffic control and Law Enforcement Officers.
- Obey posted speed limits.
- Drive on designated roads – Not on beaches or off-road.
- Pets must be leashed or confined at all times.
- No camping is allowed.
- No firearms are allowed.
- No open fires are allowed.
- Do not litter or dump garbage.
- Do not operate a vehicle under the influence of alcohol or drugs.
- Do not search for, or remove, objects of antiquity.
- Do not use artificial lights to locate wildlife.
- Do not remove any plant or remove or harass wildlife.
- Do not engage in indecent or disorderly conduct.
- Do not interfere with persons engaged in authorized activities.



- Do not tamper with any vehicles or equipment.
- Do not destroy or remove any public or private property.
- Do not construct, install or occupy a private structure.

Obtain a permit from the Refuge Manager for any commercial filming, photography, etc.

Prior to initiating any activities that might violate these regulations or if in doubt, please contact the refuge management at 787/741 2138 Monday through Friday 8:00 am to 4:30 pm. Thank you for your cooperation!

### **Visitors' Tips**

We understand that you are here to relax and enjoy the refuge, nature and beaches. Vieques is a beautiful and safe island with wonderful people. As with any other places throughout the world, it is recommended to use good safety practices to ensure that your stay is a safe and happy one. After all, we care about you, and we want you to visit us again! Here are some simple tips:

- Leave unneeded valuables at your residence/hotel.
- Bring only small amounts of money – There is nothing to buy on the refuge.
- Do not leave belongings in your vehicle.
- Park vehicles in plain sight.
- Carry waterproof or disposable cameras.
- Use a waterproof container to keep items with you or take turns watching valuables while others swim.

USFWS



*Environmental Education*

Report any emergency immediately by calling the U.S. Fish and Wildlife Service office at 787/741 2138 (Monday to Friday between the hours of 8:00 am and 4:30 pm).

You may also contact the Puerto Rico

Commonwealth Police Department (PRPD) in Vieques at 787/741 2020.

Immediately report the incident and ask them to contact the federal officer on duty. This officer will coordinate efforts with the PRPD and respond to the situation.

USFWS



*Bird banding project*

### **Refuge Management Programs**

The Vieques NWR

is responsible for the conservation and protection of its cultural and natural resources and provides a safe environment for wildlife-oriented public use and enjoyment.

The Vieques NWR resources are managed through some of the following programs:

- Management of Exotic and/or Invasive Plant and Animals.
- Sea Turtle Management Program
- Fire Prevention
- Law Enforcement

Al Woodson



*Fire Program*

*La Rampa, Refuge east side*

*Nelimar Peterson*



- Environmental Education/  
Interpretation

- Volunteer Program

- Partnerships

The Vieques NWR and its surrounding waters were designated as a superfund site by the U.S. Environmental Protection Agency (EPA). The U.S. Navy is the Principal Responsible Party (PRP) for the cleanup on Vieques. The U.S. Fish and Wildlife Service, as the land managers, will continue to work closely with the Navy, the EPA, the Commonwealth of Puerto Rico, Municipality of Vieques and the community to ensure expedited and appropriate cleanup of the NWR lands within the site.

### **Other Conservation and Historical Groups on Vieques Island**

- Ticatove

Vieques non profit sea turtle conservation organization working closely with the Vieques NWR.

Contact Person: Julián García

Tel: 787/485 3024

Mailing Address:

P.O. Box 741, Vieques, PR 00765

- Vieques Conservation and  
Historical Trust

Location: Esperanza, Vieques

Tel: 787/741 8850

- PR Department of Natural and  
Environmental Resources

Location: Sunbay - Esperanza,

Vieques, Tel: 787/741 8606

- PR National Park Company

Location: Sunbay Esperanza,

Vieques, Tel: 787/741 8198

■ Bio Bay Conservation Group

Location: Esperanza, Vieques  
Tel: 787/741 0205

■ Fort Count Mirasol Museum  
Vieques Historic Archives

Location: Isabel Segunda, Vieques,  
Tel: 787/741 1717



*Al Woodson*

*Sunset at Playa Caracas*



Map  
here

goes

**Vieques  
National Wildlife Refuge  
P.O. Box 1527  
Vieques, Puerto Rico 00765**

**U.S. Fish & Wildlife Service  
1 800/344 WILD  
<http://www.fws.gov/caribbean/refugesvieques>**

**August 2008**

