FACTSHEET
MANGROVES

SPECIES
~70 worldwide,
3 in the Caribbean

SIZE
8-10m (some reaching 60 m)

HABITAT
Shoreline of Intertidal zone
(low tide to high tide mark)

TAXONOMY
Common genera: *Rhizophora, Avicennia, Laguncularia*

GEOGRAPHIC DISTRIBUTION
Tropical and subtropical regions around the world

DESCRIPTION
Salt tolerant trees (halophytes) adapted to live in harsh coastal conditions. Contain a complex salt filtration system and complex root system to cope with wave action. Adapted to low oxygen (anoxic) conditions of waterlogged mud.

SPECIES IMPORTANCE
- Habitat for animals above and below the water
- Nursery area for juvenile animals
- Provide coastal protection from storm action
- Carbon sequestration
- Clean water and filter sediment before water reaches reef habitats

SPECIES THREATS
- ***Development***: Mangrove forests have declined by 30-50% in the last 50 years
- ***Resources***: Cut down for various uses
- ***Disease or death***: Causes from human fertilizers, pesticides, and other toxic chemicals

SOLUTIONS
- ✓ Establish marine protected areas
- ✓ Mangrove and habitat restoration
- ✓ Raise awareness to coastal communities about benefits of intact mangrove systems
- ✓ Participatory management and local stakeholder involvement in pro-active implementation of conservation efforts

COMMON CARIBBEAN MANGROVES:

RED MANGROVE *(Rhizophora mangle)*
Grow closest to the low tide line where conditions are harshest. Distinguished by red-tinted bark and distinct roots: prop and drop. Prop roots (arm-like from base of tree) increase the stability of the tree in soft sediments and from wind and wave energy. Drop roots (begin on branches and "fall" toward sediment) also increase stability from wind and wave energy. Leaves pointed, ~2-7 cm (2-3 in) and have a waxy surface. Red mangroves are salt excluders (filter out salt before entering the root system).

BLACK MANGROVE *(Avicennia germinans)*
Grow in mudflats typically inbetween low and high tide line. Distinguished by dark and scaly bark and long, horizontal roots with vertical projections emerging upward from substrate (pneumatophores "snorkel roots"). Roots allow for gas exchange through specialized pores. Leaves rounded, ~5-10 cm (2-4 in). Execrete salt from lenticels (small openings on the underside of the leaf).

WHITE MANGROVE *(Laguncularia racemosa)*
Typically grow above the high tide line. No visible aerial roots. Leaves broad, yellow-green, ~5-10cm (2-4in) with two glands at base of the leaf where the stem originates. Glands used in mutualistic symbiotic relationship with insects. Salt excreters.

KEY WEBSITES

NOAA: WHAT IS A MANGROVE FOREST?
www.oceanservice.noaa.gov/facts/mangroves

THE MANGROVE ACTION PROJECT | MANGROVE ECOLOGY
http://mangroveactionproject.org/ecology/

ENVIRONMENTAL LAW ALLIANCE | WORLDWIDE MANGROVE SCIENCE DATABASE WEBSITE
www.mangroves.elaw.org

AMERICAN MUSEUM OF NATURAL HISTORY: MANGROVE THREATS AND SOLUTIONS
www.amnh.org/explore/science-bulletins/bio/documentaries/mangroves-the-roots-of-the-sea/mangrove-threats-and-solutions

WETLANDS INTERNATIONAL
www.wetlands.org

VIDEO

MANGROVE ACTION PROJECT | *Why Invest in Mangroves?*
https://www.youtube.com/watch?v=KhLlqdPB_Rs

PBS: INTO THE MANGROVE FOREST
www.youtube.com/watch?v=4mSDrAQp4dQ

MANGROVE ACTION PROJECT | MANGROVES: THE ROOTS OF THE SEA (AMNH, SCIENCE BULLETINS)
www.youtube.com/watch?v=v0OG532oLsQ

WETLAND INTERNATIONAL: MANGROVE FORESTS FOR COASTAL PROTECTION
www.wetlands.org/WatchRead/tabid/56/mod/1570/articleType/ArticleView/articleId/1956/Mangrove-forests-for-coastal-protection-video.aspx

KAREN MCKEE | HOW MANGROVES ADJUST TO RISING SEA LEVEL (INTERACTIVE PRESENTATION)
prezi.com/df_gcbjrhiul/how-mangrove-forests-

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