Thriving in Tidewaters: The Sumiyo Mangrove Forest

The Sumiyo Mangrove Forest is Japan's second-largest mangrove forest, covering 0.7 square kilometers, or about 175 acres, on the southeastern coast of Amami-Oshima. A mangrove forest is one that grows in coastal intertidal zones, where the land is above the water at low tide and submerged at high tide. "Mangrove" is also a general term for the varied species of trees and shrubs that grow there, adapting to salt levels that would be challenging for most other plant species. Mangroves play an important role in the coastal ecosystem, protecting shorelines from erosion caused by wind and waves. They form a habitat for many birds and marine animals such as crabs and small fish, and act as a filter that improves the water quality. They also absorb and store large amounts of carbon, performing a crucial role in mitigating climate change.

Adapting to a toxic environment

Mangrove forests are far less diverse than broadleaf forests, but very adaptive. The only plants that can grow here have developed unique methods to survive the daily inundation of seawater and the high salinity of the soil. Their roots have cork-like layers that filter out much of the salt, and they can excrete excess salt through their leaves, which turn yellow and fall off the tree. Some have "knee roots" that protrude above the mud to absorb air through the tissue. The mangrove forest is a rich environment for exploring these unique life forms and the ecosystem they support.