

biodiversity hotspot with as many as 90% of the endemic species. 90% of Hawaiian island species are endemic. In Mauritius, some 50% of all higher plants, mammals, birds, reptiles and amphibians are endemic, Seychelles has the highest level of amphibian endemism in the world.

Island Biodiversity in India

The two prominent groups of islands (archipelago) in India are Andaman & Nicobar islands and the Lakshadweep Island. Andaman and Nicobar Islands are a global biodiversity hot spot recognized by conservation international. Some bird species here are found nowhere else like the Narcondam Hornbill, Nicobar pigeon, Nicobar Bulbul, Andaman Scops-owl, Nicobar Parakeet and Andaman Drongo. There are 12 endemic bird species in Andaman Islands, and nine in Nicobar Islands, which occur nowhere else.

Island Wealth Under Threat

Islands claim the greatest number of extinctions in the world and are home to greater concentrations of threatened species. Islands harbour more than 50% of world's known marine biodiversity, seven of world's ten coral reef hot spots and ten of its 34 conservation hotspots. Islands constitute less than 5% of the Earth's Landmass but they have been the location of more than 80% of the known species extinctions. Extinction rates for mammals are 177 times higher in Island ecosystem.

Reasons of Island Biodiversity Loss

Invasive alien species, Habitat loss and fragmentation, Over-exploitation, Climate change, Pollution. And natural calamities like hurricanes are the major threats faced by Island biodiversity. Most islands evolved over

thousands of years in great isolation from continental land masses, and their plants and animals have had to compete with only a limited range of species. Island species populations tend to be small, localized and highly specialized. They often have both not developed or lost dispensability and defence mechanisms against a broad range of potential predators, competitors and disease organisms.

Global Call For Action

Islands are repositories of genetic information whose present-day biodiversity stands as a record of millions of years of evolution. Most islands have identified and made commitments to implement clear goals and priority actions towards the conservation and sustainable use of their unique and fragile, biodiversity. Establishment of gene banks for in-situ reintroduction, Preserving Keystone and Endangered Species, regional action to protect biologically significant sites and Protection from the introduction of alien invasive species are some of the thrust areas identified, "Island Conservation" has led the development of databases – the Threatened Island Biodiversity (TIB) Database and the Database of Island Invasive Species Extinctions (DIISE) – to help prioritize future activities.

Island ecosystems have become unbalanced and several unique endemic species are threatened with extinction. The future of this unique and fragile ecosystem depends on increasing public awareness on the major drivers of Biodiversity loss and hence the international day for Biodiversity 2014 focused as this.



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ISLAND
BIODIVERSITY HOTSPOT



ISLAND

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Islands have always received attention for their natural beauty, unique landscapes and exotic wildlife. However, they deserve global attention as a conservation priority for they are unique and vulnerable. The uniqueness of Island Biodiversity was first recognized by Charles Darwin during his exploration of Galapagos Island. At Galapagos, Darwin wrote that he had entered a "world unto itself," with species found nowhere else on Earth such as the Land Iguanas and the Giant Tortoises. Islands are home to a world of specialized creatures adapted to their harsh environment in variety of ways. During the year 2014 the International Day for Biological Diversity was focused on the theme - "Island Biodiversity".

Islands Ecosystems – Unique, Vulnerable, Irreplaceable

Islands are unique ecosystems with many endemic species which are among the most threatened in the world due to their low population, isolation, vulnerability and less genetic diversity. Islands are more vulnerable to natural disasters than continental systems and are prone to erosion. Over time, this isolation exerts unique evolutionary forces that result in the emergence of highly specialized species with entirely new characteristics. These characteristics make island ecosystems especially vulnerable and island species prone to extinction rates that often exceed those of continental systems.

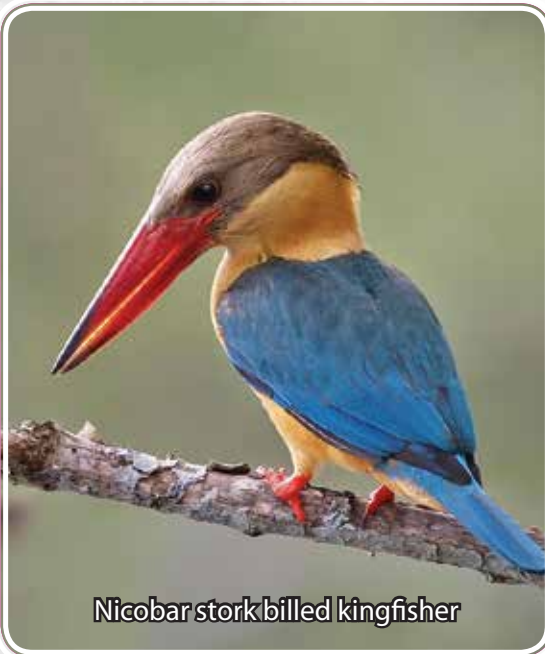
Features of Isolated Island Endemics

The limited size of islands and their distance from the mainland are the main causes

of the unique evolutionary dynamics that characterize island biota. This lead to unusual phenomena such as gigantism, dwarfism and flightless character. Birds may become giant and/or flightless. (Giant Earwig of St Helena, Dodo of Mauritius, Elephant bird of Madagascar). Mammals if present may become dwarf like the Pygmy hippos of Cypress and pygmy elephants of Borneo.

Islands – Biodiversity Hot Spot

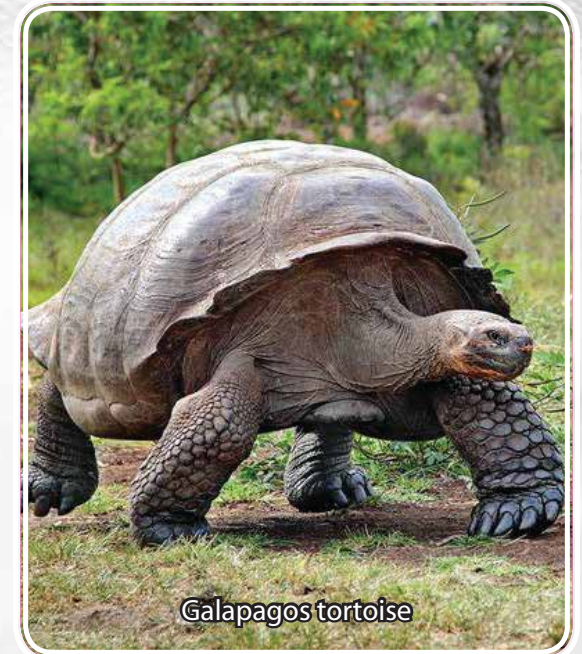
The Galapagos, Hawaiian Islands and Madagascar are centres of considerable biodiversity globally. Galapagos Islands was designated as our planets, first World Heritage site in 1978 and is home to one of the rarest creature in the world, a conservation icon- Pinta tortoise (*Chelonoidis abingdoni*). The unique Galapagos species includes Flightless cormoran, Galapagos finches, Galapagos penguin, Galapagos fur seal (smallest eared seal in the world.) Madagascar is a



Nicobar stork-billed kingfisher



Red spotted sand perch



Galapagos tortoise