



The commemoration of International Day for Biological Diversity

22 May 2014



In December 2000, the United Nations General Assembly adopted 22 May as International Day for Biological Diversity (IDB) to increase understanding and awareness of biodiversity issues as well as to commemorate the adoption of the text of the Convention on 22 May 1992 by the Nairobi Final Act of the Conference for the Adoption of the Agreed Text of the Convention on Biological Diversity.

“**Island Biodiversity**” is the theme for this year's IDB celebration. The theme was chosen to coincide with designation by the UN General Assembly of 2014 as the International Year of Small Island Developing States.

Islands and their surrounding near-shore marine areas constitute unique ecosystems often comprising many plant and animal species that are endemic and found nowhere else on Earth. They also play a key role in supporting livelihoods, economy, well-being and cultural identity of island inhabitants.

Island species are also unique in their vulnerability: of the 724 globally recorded animal extinctions in the last 400 years, about half were island species due to their small ranges and great pressures. Over the past century, island biodiversity has been subject to intense pressure from invasive alien species, habitat change and over-exploitation, and, increasingly, from climate change and pollution. This pressure is also keenly felt by island economies. Among the most vulnerable of the developing countries, small island developing States (SIDS) depend on the conservation and sustainable use of island biodiversity for their sustainable development.

Islands boast a truly unique assemblage of life. Species become island dwellers either by drifting on islands, like castaways, as they break off from larger landmasses (in the case of continental islands) or by dispersing across the ocean to islands newly emerged from the ocean floor (oceanic islands). As such, islands are confined to small, isolated areas located some distance from other large landmasses. Over time, this isolation exerts unique evolutionary forces that result in the development of a distinct genetic reservoir and the emergence of highly specialized species with entirely new characteristics and the occurrence of unusual adaptations, such as gigantism, dwarfism, flightlessness, and loss of dispersability and defense mechanisms. Genetic diversity and population sizes tend to be limited, and species often become concentrated in small confined areas.

The legacy of a unique evolutionary history, many island species are endemic - found nowhere else on Earth. Islands harbour higher concentrations of endemic species than do continents, and the number and proportion of endemics rises with increasing isolation, island size and topographic variety.

It has often been remarked that islands make a contribution to global biodiversity that is out of proportion to their land area. In this sense, they can be thought of collectively as biodiversity “hot spots”, containing some of the richest reservoirs of plants and animals on Earth. This year's theme provides a unique opportunity to strengthen the biodiversity conservation status of our Islands. South Africa has recently proclaimed the Prince Edward Islands as a Marine Protected Area (MPA).

The Prince Edward Islands Marine Protected Area is not only South Africa's first offshore Marine Protected Area but is also the seventh largest Marine Protected Area in the world. This is a major step towards realizing the global commitments the South Africa government made under the banner of the World Summit on Sustainable Development as well as the World Parks Congress, to improve the proportion of our oceans under protection.

The Prince Edward Islands Marine Protected Area will bolster the protection of the unique and fragile marine biodiversity of the islands, including more than 5 million seabirds, seals and whales that frequent the islands to breed, many of which are threatened. Notably, the Prince Edwards Islands are home to the largest breeding population of Wandering Albatross in the world, with approximately 40% of the global breeding population found on these islands. Yet, sadly, populations of the Wandering Albatross and other

albatross species have been largely affected by unregulated fishing practices. It is hoped that the establishment of Prince Edward Island Marine Protected Area will assist in halting this decline and provide a safe haven for these iconic species, recognized by centuries of mariners as birds of “good omen”.

Over the past decades, the Department of Environmental Affairs (DEA) has undertaken monitoring of seabirds around southern Africa and at South Africa’s Prince Edward Islands, *inter alia* to assess the conservation status of its seabirds, to advise means to mitigate factors that are adversely influencing its seabird populations and to contribute to international treaties to which South Africa is a party, including the Agreement on the Conservation of Albatrosses and Petrels (ACAP) and Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR). Apart from seabird’s working happening at the islands, a four decade of marine mammals monitoring has been done with estimates of an increase in growth of Antarctic fur seals while the sub Antarctic fur seals seems to be stabilising.



The global evaluation of the conservation status of the 29 birds that breed at the Prince Edward Islands noted three as Endangered, four as Vulnerable, four as Near Threatened, 17 as Least concern and one Crozet shag) was unclassified. The Department of Environmental Affairs’ SA Agulhas II returned from her logistical/scientific voyage from Marion Island on Tuesday 06 May 2014.



The Marion 70 Team returned from its 14 month research expedition at the Marion Island base. The Department is responsible for the day-to-day management and logistical support of the South African research bases, which include Marion Island. A number of multi-disciplinary scientific researches were conducted on board ship wherein biological, chemical and physical oceanographic variables were measured throughout the voyage that focused on links and interactions between air and sea, ocean physics, biogeochemistry, plankton and benthic communities and island-based top predators. The overall aim is to establish an oceanographic observation and monitoring system directed by South African research institutions in support of South Africa’s needs – and where possible, the global requirements of the Southern Ocean Observation System (SOOS), Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), Agreement on the Conservation of Albatrosses and Petrels (ACAP), etc., by documenting ship-board observations in the oceanic environment around the Prince Edward Islands in a holistic manner, from the sea floor, through water column and food-web dynamics, to air-sea interactions and their respective role in the general global thermohaline circulation realm.

The islands have witnessed a rapid increase in mean annual temperature by 1°C since their annexation by South Africa in 1947/48. Moreover, there is evidence of a gradual decade-scale southward shift in the position of the Sub-Antarctic Front in closer proximity of the islands. This is reflected in changes in the diversity of the local zooplankton community with more frequent intrusions of warmer-water species. Also, there have been decreases in inshore-feeding penguins and Crozet shags.

With increasing development pressures and climate change islands are now more threatened than ever before. Unless there is immediate action to save the remaining unprotected hotspot areas, the species losses will increase severely especially among those species that are endemic to these islands. Protecting them is vital and necessary, to ensure their conservation for future generations.

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