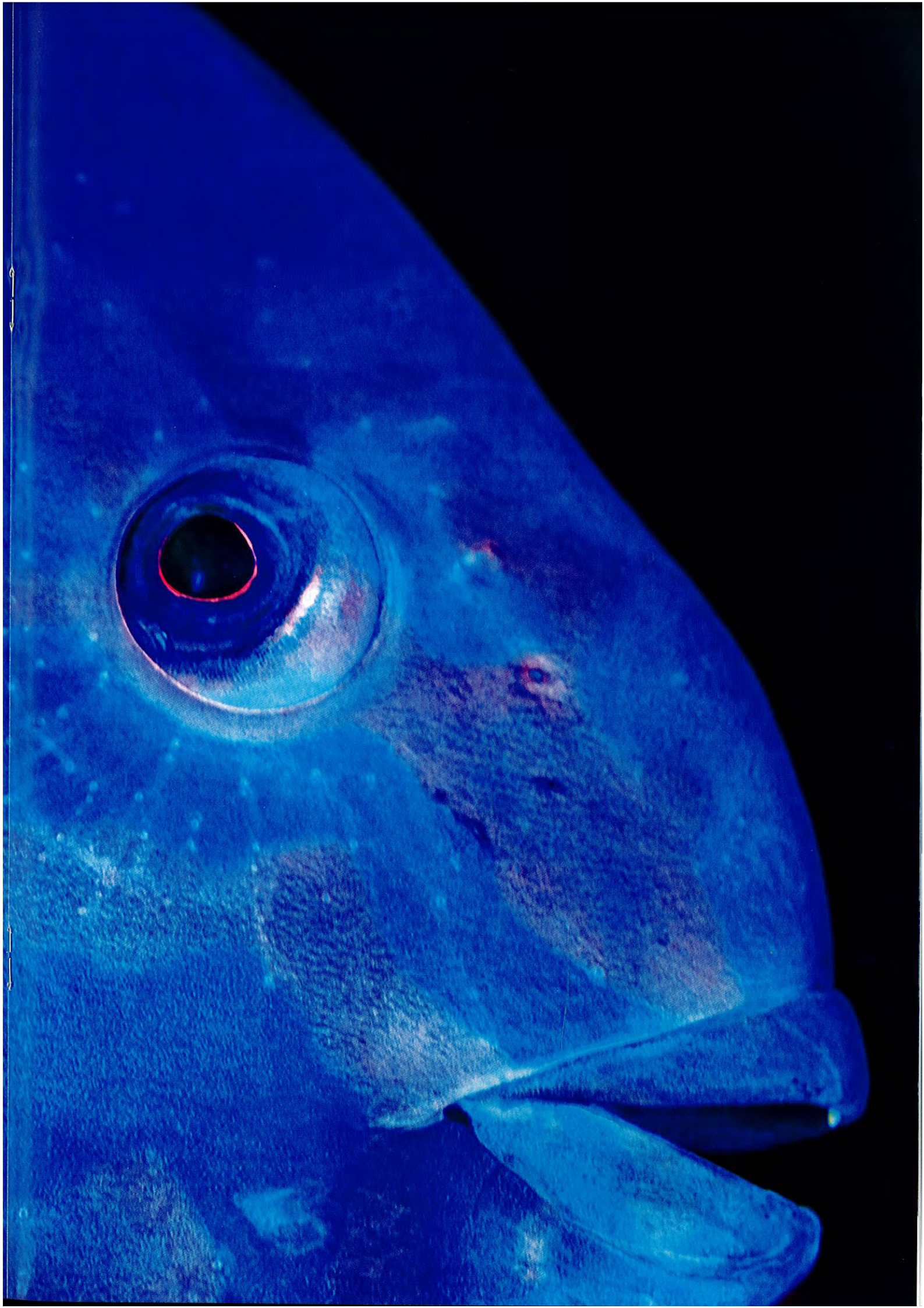
Slaughter, seabirds and ocean life at the Abrolhos

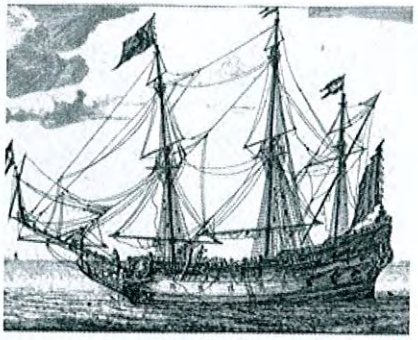
The Houtman Abrolhos Islands offer a wealth of species diversity—on the islands where birdlife feed and breed, as well as around them in the rich marine environment.
Add to this the intriguing past of the islands and there's plenty to discover.

by Samille Mitchell and Anthony Desmond



Travel 60 kilometres west of the Midwest coast at Geraldton and an archipelago of 192 craggy, low-lying islands, islets and rocks rises from the windswept seas. At first sight, the islands appear stark, desolate, devoid of life: seemingly covered in nothing but scrub. But venture under the water and you'll discover riotously coloured coral gardens and fish. Or visit during the seabird breeding season in spring and summer and you'll see the skies come alive with a squawking, teeming, swirling mass of birdlife.

The Houtman Abrolhos Islands, often called simply 'the Abrolhos' or, locally, 'the islands', spread north-south across about 100 kilometres of ocean. They are clustered into three main groups: Wallabi, Easter and Pelsaert. The startling array of birds, fish, marine mammals and corals make the islands one of the State's most exciting diving and nature viewing hot spots. The Abrolhos Islands are also home to the State's most infamous maritime tale—the wreck of the *Batavia*.



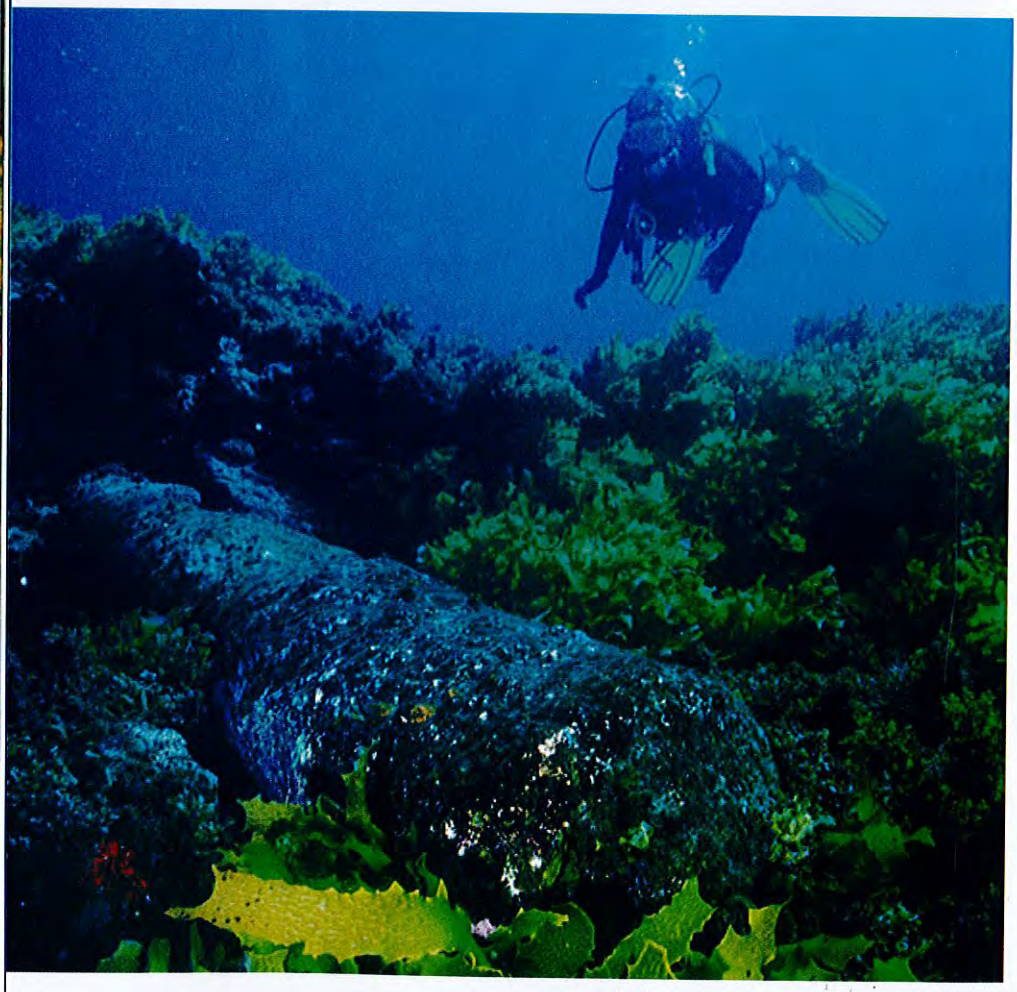
A gruesome past

The Abrolhos is renowned as resting place of the *Batavia*, which met its demise on Morning Reef near Beacon Island in the Wallabi Group in 1629. Survivors from the Dutch East India Company sailing ship scrambled ashore the rocky isles, faced with no shelter and little fresh water or food. This was nothing compared to the horrors to come.

After ship commander Francisco Pelsaert and a small crew set sail for Batavia, now Jakarta, to seek rescue for the survivors, a group of mutineers embarked on a gruesome slaughter that resulted in the death of 125 men, women and children. Remarkably, Pelsaert returned from Batavia with a rescue team on the very day the mutineers faced a stand-off with a group of defenders, led by Wiebbe Hayes. Outraged at the slaughter, Pelsaert condemned chief mutineer Jeronimus Cornelius and several of his cronies to the gallows on the lonely isles. Two other mutineers were marooned on the mainland at a beach thought to be Wittecarra Creek in Kalbarri, making these men Australia's first European settlers.

Fast forward through the years to the 1960s and fishermen on Beacon Island in the Wallabi Group stumbled across a mass grave of the *Batavia* victims. More bodies were discovered in the 1990s—evidence of Australia's most horrific maritime tale. The wreckage of the ship, discovered in 1963, now forms a popular dive site.

Nearly 100 years after the *Batavia* tragedy, another Dutch East India Company sailing ship, the *Zeewijk*, met its demise at the Abrolhos. The ship struck Half Moon Reef in the Pelsaert Group during the night on 9 June 1727 but did not break up immediately, so many of the 208 crew were able to survive. The survivors built a second ship from wreckage and mangrove timber, enabling 82 of the crew to reach their intended destination, Batavia, on 30 April 1728.



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Main Moon wrasse.
Photo – Shannon Conway/Sallyanne Cousans Photography
Insert Lesser noddy tern
Photo – Chris Surman/Lochman Transparencies

Above Illustration of the *Batavia*.
Courtesy – WA Maritime Museum.

Left One of the encrusted cannons from the *Batavia* wreck site.
Photo – Glen Cowans

Above Western rock lobster fishing huts on Burnett Island.
Photo – Chris Surman/Lochman Transparencies

Right Western rock lobster.
Photo – Alex Steffe/Lochman Transparencies

Below Abrolhos spiny-tailed skink.
Photo – Jiri Lochman

Island isolation and livelihoods

Captain John Lort Stokes encountered artefacts from the *Zeewijk* wreckage on his journey aboard HMS *Beagle* in 1840, and the shipwreck was discovered in 1968. Stokes was also the first to note the Abrolhos's unique flora and fauna. His observations lead the endemic Abrolhos spiny-tailed skink (*Egernia stokesii stokesii*) to be named in his honour. As Darwin observed during his voyages on HMS *Beagle*, island environments cause evolutionary pressures on species, resulting in significant changes in the species' genetics, body shape and even physiology over time. The Abrolhos spiny-tailed skink is a good example of this, with differences in colour and size evident in comparison to the closely related mainland western spiny-tailed skink (*Egernia stokesii badia*).

Three years later John Gilbert, who worked for the famous naturalist John Gould, visited the Abrolhos and became the first to write of its extensive seabird population. Seabirds on the islands include several species of shearwater, tern and gull.

Much later, a guano industry started at the Abrolhos, followed by the western rock lobster (*Panulirus cygnus*) fishing industry. Today, lobster fishers and their families live on about 20 of the 192 islands during the Abrolhos fishing season from March to June each year. The Abrolhos lobster stock is regarded as highly important to the State fishery, with 40 to 50 per cent of the State's lobster spawning estimated to come from the area. The industry is worth an average of $300 million to the State each year with 15 per cent of this amount coming from the Abrolhos. Management of the rock lobster industry is based on counts of puerulus, a stage in the rock lobster life cycle. Counts undertaken during the last two years show unprecedented low numbers, indicating difficult times ahead for the industry. Scallop, finfish and black pearl industries also operate at the Abrolhos.

Natural riches

The remarkable marine life of the Abrolhos is brought about by the southward flowing waters of the Leeuwin Current which bathe the otherwise temperate zone in warmer waters. This results in an unusual mix of temperate and tropical species. The spectacular coral reefs of the Abrolhos are the southernmost significant coral reef system in the Indian Ocean. Unusually, the corals here grow in close association with temperate algae, and colourful tropical fish live alongside temperate water sea lions.

While renowned among Western Australians for its fishing and diving opportunities, the Abrolhos also has many land-based natural attractions. The seemingly uniform isles are home to a range of vegetation and landforms, including mangroves, dwarf eucalypt stands, salt lakes, saltbush flats and one priority flora species. The islands also provide refuge for an endemic bird sub-species: the Houtman Abrolhos painted button-quail (*Turnix varius scintillans*). Islands with long sandy beaches such as East and West Wallabi are important for wading birds that migrate from the northern hemisphere each year.

In addition to the Houtman Abrolhos spiny-tailed skink, the islands are home to 26 species of reptile. These include important populations of two species: the specially protected carpet python (*Morelia spilota imbricata*) and the endemic Abrolhos dwarf bearded dragon (*Pogona minor minima*).

The Abrolhos are also home to two native mammal species: the tammar wallaby (*Macropus eugenii derbianus*) and southern bush rat (*Rattus fuscipes*). The tammar wallaby once occurred over a large area of south-western Australia but is now known only from seven islands and some scattered mainland populations in the south-west of Western Australia. Survivors of the *Batavia* shipwreck recorded the wallabies on West Wallabi Island in 1629. The wallabies are thought to have survived on the islands after rising sea levels left the archipelago surrounded by sea. Abrolhos wallabies have been shown to be different morphologically and genetically between the different islands and more distinctly from populations on the mainland and islands elsewhere.

Tammar wallabies gain most of their water requirements from the foliage of the shrubs they eat, enabling them to survive on the often waterless isles. They have also been observed drinking sea water. The wallabies were introduced to North Island from the Wallabi Group of islands in 1985 and are adversely affecting the vegetation there. With few predators and food and water readily available from humans for part of the year, the population has grown beyond the capacity of what the island can support. Their grazing and trampling appear to have almost wiped out the population of the Abrolhos painted button-quail. Wallabies are being progressively removed from North Island to enable the island to regenerate.

The Abrolhos population of the southern bush rat was once found on two islands, East and West Wallabi. However, recent surveys on East Wallabi have failed to relocate the species, leading to the conclusion that this population is now extinct, though no cause is known.

Seabirds

Visit the Abrolhos during the seabird breeding season—as John

Above Tammar wallaby.
Photo - Dave Watts/Lochman Transparencies

Below Carpet python.

Below right Southern bush rat, one of the two species of native mammals found on the Abrolhos.
Photos - Jiri Lochman

Above left Lesser noddy tern.

Above Lesser noddy terns at dusk.

Below left Osprey with fish.
Photos – Chris Surman/Lochman Transparencies

Below Little tern sitting on eggs.
Photo – Dave Watts/Lochman Transparencies

Gilbert did back in 1843—and you may be overwhelmed by the sheer mass of birdlife. The Abrolhos is home to the biggest seabird breeding colony in the eastern Indian Ocean and one of the most important in the country. Pelsaert Island, in particular, comes alive with colour and sound as more than one million birds from 18 species construct more than 400,000 nests during the breeding season. There's a frenzy of activity as the birds build nests, incubate eggs, feed young and hunt in the adjacent ocean.

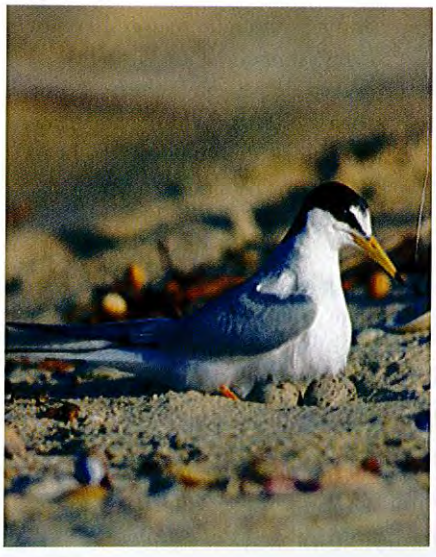
So significant are the bird populations that the Abrolhos is regarded as highly important to the conservation of several seabird species, including the wedge-tailed shearwater, little shearwater, roseate tern, sooty tern and fairy tern. Two tern species, the common noddy and the lesser noddy, are particularly significant, with the lesser noddy regarded as rare or likely to become extinct. In recent years growing numbers of common noddies and sooty terns have begun nesting on Lancelin Island, perhaps an indication of a changing marine environment for all tern species.

Most of the birds nest close to or on the ground, putting their nests at risk of the trampling feet of human visitors. Crested terns nest in sand in the open while roseate and fairy terns lay eggs on small stones among coral rock. Bridled terns build their nests under overhanging cliffs, low mangroves or under large slabs of coral; shearwaters dig burrows and ospreys and sea eagles build large stick nests. Common noddies nest on low shrubs and lesser noddies build on mangrove branches.

The seabirds of Rat Island were once described as numbering in their millions, but today only a handful of seabirds breed on the island. As its name suggests, the island was once infested by introduced black rats. These predators of eggs and young seabirds, along with the cats introduced to eat the rats, can be blamed for the destruction of one of the greatest seabird breeding populations in Australia. The rats were eradicated in 1991.

While boardwalks have been built on some islands to reduce trampling by visitors, the effects of disturbance of nesting birds also requires careful management. Disturbed birds vacating their nests allows silver gulls and other scavenging species the opportunity to predate eggs and young birds.

Intensive studies on terns by Dr Chris Surman have shown a close link between the breeding success of noddies and the El Nino-Southern Oscillation Index (a climatic pattern that occurs across the tropical Pacific Ocean). During 20 years of studies, there has been a progressive shift in the breeding time of the birds as their food items (small fish such as beaked salmon, black-spotted goatfish and Hawaiian bellowfish) arrive later. This climate change effect has grave implications for the future of these species, with later breeding demonstrated to be less successful.



Above left Australian sea lion.
Photo – Eva Boogaard/Lochman Transparencies

Above Clarks anemonefish.
Photo – Glen Cowans

Below left Aerial view of Beacon Island and reefs in the Wallabi Group.
Photo – Eva Boogaard/Lochman Transparencies

Underwater

Descend beneath the waters of the Abrolhos Islands and you'll be overwhelmed by a fantasia of marine life. Elaborate coral castles harbour colourful tropical fish such as clownfish, while deeper waters support many highly sought-after finfish including dhufish (*Glaucosoma hebraicum*), pink snapper (*Pagrus auratus*), coral trout (*Plectropomus leopardus*) and baldchin groper (*Choerodon rubescens*), also known locally as bluebone groper. Such species make the Abrolhos a highly desirable destination for fishers.

Recreational and commercial fishing pressure has led to the strict management of the Abrolhos's delicate marine environment. Waters here are a Fish Habitat Protection Area. Each island group also features one reef observation area—no-take zones to anyone except licensed lobster fishers. The 6,859 hectares of reef observation area are the site of long-term studies on populations of key fish species such as baldchin groper, dhufish, red throat emperor and coral trout. The studies have found that population numbers and mean lengths of these fish are in decline.

Marine mammals also abound at the Abrolhos. Migrating humpback whales (*Megaptera novaeangliae*) pass by in winter and spring, giant pods of common (*Delphinus delphis*) and bottlenose (*Tursiops aduncus*) dolphins cruise the seas and the rarely seen Bryde's whales (*Balaenoptera edeni*) make annual visits. Threatened Australian sea lions (*Neophoca cinerea*) frolic in the waters, haul out on the beaches and use the dense vegetation of the islands to raise their young.

The sea lions here form the northernmost breeding population of this species. Despite their popularity—many divers and swimmers have delighted in an encounter with an inquisitive Australian sea lion—the population is thought to number just 70 to 80 animals. The Abrolhos is estimated to have once been home to 500 to 600 of these creatures. Unfortunately, no pups have been observed in the Wallabi Group in the past 15 years. The reduced populations may be caused by entanglements in fishing gear and debris, as well as disturbance to breeding areas. The trapping of sea lions in lobster pots has been an issue in the Jurien Bay area with Sea Lion Exclusion Devices, or SLEDs, developed by the Department of Fisheries to prevent the juveniles from being caught. This issue is not known to exist in the Abrolhos.

Balancing act

An increasing number of people are attracted to the Houtman Abrolhos Islands each year, to dive among the rich fish life and coral formations, to explore the history, or to witness the beauty and birdlife. Commercial fishing brings further crowds of people whose livelihoods depend on the collection of islands, and they bring with them additional visitors.

Balancing the competing needs of a fragile yet highly important ecosystem with those of tourists and the fishing industry is no easy task. The Fisheries Minister receives advice on management from the Abrolhos Islands Management Advisory Committee (AIMAC), established in 1995. The Department of Fisheries manages the islands as a class 'A' reserve and the Department of Environment and Conservation provides advice to AIMAC on protection of the environment.

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