

Chapter 1 : John Pennekamp Coral Reef State Park - Key Largo FL

The impact of unprecedented back-to-back coral bleaching at two shallow Reef sites off Port Douglas. The Climate Council - headed by Professor Tim Flannery, author of the Great White Stumpy Reef.

The large flat area in the southeast of the island is called Marine Terrace. They are barely separated by a narrow gorge. It has a least depth of 20 feet 6. This island is informally known as "the pimple. Noonday Rock, which rises abruptly from a depth of 37 meters, with a least depth of 4 meters 13 feet over it at low tide, is the shallowest point of Fanny Shoal. Noonday Rock, formerly known as Fanny Rock, derives its name from that of the clipper ship that struck it on January 1, and sank within one hour. Flora and Fauna[edit] Seabirds[edit] The Farallon Islands are an important reserve protecting a huge seabird colony. Since the islands were protected, common murrelets, which once numbered nearly , pairs but suffered from the egg collecting, oil spills and other disturbances that had greatly reduced their numbers, recovered and climbed from 6, birds to , Additionally, since protection, the locally extinct rhinoceros auklet has begun to breed on the islands again. The island also is the wintering ground of several species of migrants , and regularly attracts vagrant birds about species of bird have been recorded on or around the island. Seals[edit] Five species of pinniped come to shore on the islands, and in some cases breed. American whalers took , northern fur seals *Callorhinus ursinus* from the Farallons between and , followed by Russian fur hunters who lived on the Farallons and extirpated the pinnipeds from the islands. In West End Island became the fourth American northern fur seal rookery when a pup was born. The recolonizers bore tags from San Miguel Island in the Channel Islands , which had been itself recolonized in The high count for was individuals, a 69 percent increase from the year before. Whales[edit] Several species of cetaceans are found near the Farallon Islands, most frequently gray whales , blue whales , and humpback whales. Blue whales and humpback whales are most frequently found near the islands in the summer and fall, when strong upwelling may support a rich pelagic food web. Orca whales are also found around the islands. Some gray whales may also be found during the summer, when a few whales skip the trip north to Alaska and spend the summer months off the coast of Canada and the continental United States. In December one humpback was rescued from netting entanglement east of the Farallones by staff of The Marine Mammal Center. The islands are in the Gulf of the Farallones National Marine Sanctuary , which protects the feeding grounds of the wildlife of the refuge. Sharks[edit] The elephant seal population attracts a population of great white sharks to the islands. During the next fifteen years, more than one hundred attacks on seals and sea lions were observed at close range. By the year , biologists were logging almost eighty attacks in a single season. The seasonal shark population at the Farallones is unclear, with estimates from thirty to one hundred. The Farallones are unique in the size of the great whites that are attracted. The average length of a full-grown great white shark is 4 to 4. The largest accurately measured great white shark was a female caught in August at Prince Edward Island off the North Atlantic coast and measured A killer whale was recorded killing a great white near the Farallones in Stumpy, an foot female great white, in particular was well known for her appearance in the BBC documentary "Great White Shark" narrated by David Attenborough and stock footage of her attacks on decoys is often utilized in more recent documentaries, and another example, Tom Johnson, a foot male white shark that was featured in an episode of the season of Shark Week called "Great White Highway" is believed to be the oldest living white shark so far documented returning to the Farallones, estimated at around 25â€”30 years old. The peak of activity at this location is from mid-April to Mid-July, but some shark spend up to eight months of the year there. Ocean disposal of radioactive waste In the above map the approximate locations of two major nuclear waste dumping sites, according to a United States Environmental Protection Agency report, are indicated. From to , the sea around the Farallones was used as a nuclear dumping site for radioactive waste under the authority of the Atomic Energy Commission at a site known as the Farallon Island Nuclear Waste Dump. Most of the dumping took place before , and all dumping of radioactive wastes by the United States was terminated in By then, 47, containers gallon steel drums had been dumped in the vicinity, with a total estimated radioactive activity of 14, Ci. The materials dumped were mostly laboratory materials containing

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traces of contamination. Much of the radioactivity had decayed by Containers were weighted with concrete. Those that floated were sometimes shot with rifles to sink them.

Chapter 2 : Scientists mobilize as bleaching resumes on Great Barrier Reef

Browsing the contents page, I found there was a whole chapter dedicated to the Great Barrier Reef - and it made for terrifying reading. To say the Barrier Reef will be dead in 50 years is an exaggeration - but not much.

Adding a new dimension to marine restoration: From the deck of a small motorboat, scuba divers grabbed odd chunks of ceramic “ which could be described as rocky brains stuck on stumpy stilts ” and plunged into the aquamarine waters. The dive team assembled the pieces as a few triggerfish circled around to investigate the commotion. After just two air tanks about an hour each , they had locked all of the items together into the final product: The 3D-printed reef, installed at Summer Island Maldives resort earlier this month, is the first of its kind on any of the 1, islands of the Maldives. Images by Alex Goad. Australian entrepreneur Alex Goad had a more ambitious application: So we gave it a go. Instead of using steel or concrete, popular substrates for artificial reefs, RDL prints hollow blocks of ceramic, which can be molded into complex shapes, and fills them with concrete for stability. Divers bring these blocks underwater and fit them together like LEGOs to form a cohesive and resilient structure. Coral begins its life cycle as drifting larvae that search for an unexposed place buffered from predators and water currents. Within minutes, the small alcoves and overhangs of the Maldivian MARS also began attracting curious fish; it may someday provide shelter to crustaceans, sponges and anemones to form a marine community. A previous MARS installation, a few months after it was deployed, became the home for various marine species. Although 3D printing will not solve the global threats that reefs face, it can support targeted, small-scale restoration efforts. Image by Alex Goad. The advantage provided by MARS is convenient installation. Reef Design Labs has applied its technology to support other marine life as well. In April , the lab teamed up with Riot Games to design marine sculptures, including a character from a popular online video game, as appealing hideouts for fish communities. This is one of the sculptures, on the day of installation and 15 months later. Goad acknowledges there are limitations to the practice. This is to be used for small coral nurseries. I was interested in how MARS could help this cause: Prints can be tailored to specific experiments, for instance testing how different techniques of attaching coral fragments affect growth. Such research may help scientists better understand and adjust to the threats faced by coral reefs. Warm ocean temperatures stress corals and cause them to eject the algal cells living inside them, which they rely on to produce energy. Prolonged separation kills both coral and algae, leaving nothing but a bone-white skeleton. Image by Aminath Shauna. Shauna recalled the summer of distinctly. And within a week, we saw it go completely white. The Maldives is particularly vulnerable to sea level rise: Shelves created by coral growth act as a wall that buffers the impact of waves, reducing constant flooding as well as erosion of beaches, of which there are precious few left in the Maldives. Goad maintains optimism in the toughest of times. There is work on understanding heat-tolerant corals and identifying the genetic make-up that resists warming climates—there are also groups looking at how to start coral farms en masse. Goad said he hopes this work will engage researchers and local communities, demonstrating how easy coral restoration can be and inspiring others to follow. Everyone was just loving it.

Chapter 3 : in Moorooduc, Porepunkah and Yering | Kazzit US Wineries & International Winery Guide

By , if we do not take action now, the Great Barrier Reef will become, in Flannery's words, "The Great Stumpy Reef." III. After 22 chapters of evidence demonstrating that global warming is a real threat, the final third of the book discusses solutions.

Chapter 4 : Fish - Photon Flakes Clownfish Breeder | The Reefuge | Marine Aquarium / Reef Aquarium Co

"It was the third major bleaching to affect the Great Barrier Reef, following earlier heatwaves in and Now we're gearing up to study a potential number four." Captain Stumpy. 3 / 5.

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Chapter 5 : 16 best Great Barrier Reef images on Pinterest | Great Barrier Reef, The reef and Environment

Crown-of-thorns starfish are one of the greatest natural threats to the Great Barrier Reef, and have destroyed around 40% of coral cover in the last 30 years.

Chapter 6 : Australian Dog Names Perfect for the Aussie and non-Aussie Puppy

In this October photo provided by ARC Center of Excellence for Coral Reef Studies scientist Andrew Baird survey healthy reefs between Mackay and Townsville on Australia's Great Barrier Reef.

Chapter 7 : The Weather Makers by Tim Flannery | Quarterly Conversation

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Chapter 8 : Adding a new dimension to marine restoration: 3D printing coral reefs

Went snorkeling and did a drift and shallow dive - all great. Saw a shark and lots of reef life while snorkeling. Lots of fish/eel and plant life on the drift dive - current was manageable.

Chapter 9 : Farallon Islands - Wikipedia

Other partners include the City of Virginia Beach, Lynnhaven River NOW, Virginia Institute of Marine Science, Chesapeake Bay Foundation, Oyster Reef Keepers of Virginia, and National Oceanic and Atmospheric Administration.