

Expedition: Plastic Oceans

Clearing Plastic Pollution on a UNESCO World Heritage Atoll

Summary: Conservation biologist April Burt led a 12-member team on a five-week expedition to the Aldabra coral atoll, a remote biodiversity hotspot in the Seychelles, to clear plastic pollution, conduct waste surveys, investigate waste management solutions, and raise awareness of the impact on surrounding near-pristine ecosystems. The team was able to remove 28 tons of plastic; 500 tons remain on the UNESCO World Heritage site.

THE EXPEDITION

Plastic production has increased from 1.7 million tons in 1954 to 335 million tons in 2016, with approximately 8 million tons of plastic entering the ocean annually – largely as a result of mismanaged waste.



Before the clean-up

A study of the world's waste management shows that the Indian Ocean is fringed by countries with 100% mismanaged waste. This plastic is transported by currents and winds throughout the world's oceans, with the end point for some being remote islands in biodiversity hotspots like Aldabra Atoll UNESCO World Heritage Site.

Aldabra is an outstanding example of a raised coral atoll and has remained largely untouched by humans and is highly protected today. It is home to the world's largest giant tortoise population and contains near-pristine marine ecosystems, teeming with sharks, turtles, and fish. But Aldabra's coastlines have been accumulating large quantities of plastic pollution and this is impacting the wildlife. Tortoises are eating plastic, the turtle beaches were clogged with plastic debris – offshore turtles were getting entangled in discarded fishing gear – and the islands land and seabirds are being impacted.

The Aldabra Clean-Up Project (ACUP), a collaboration between SIF and The Queen's College, University of Oxford, was formed in May 2018 to tackle the issue of plastic pollution through action, education, and research.



A map of the Aldabra Atoll

The expedition consisted of a team of 12 young people based for five weeks on Aldabra. The majority of the time was based on three remote field camps with no electricity, running water and limited communication with the outside world.

The expedition's aim was to remove plastic pollution from the endangered green turtle nesting beaches and key tortoise grazing areas along the south coast of Aldabra. It was decided for research and reprocessing purposes that the marine debris collected would be sorted at source into the major categories, including fishing gear, (buoys, ropes), flip-flops, bottles and miscellaneous/fragments.

Surveys to assess quantity, composition, accumulation rate, attached biota, and removal effort were conducted alongside the clean-up.

WHO
April Burt

WHAT
Clearing 28 tons of plastic pollution from Aldabra's endangered green turtle nesting beaches and tortoise grazing areas

WHEN
February 22 – March 29, 2019

WHERE
Aldabra Atoll (a UNESCO World Heritage Site), Indian Ocean, Seychelles

WHY
To address the increasing damage to our oceans, beaches and endangered species by increased plastic production and mismanaged waste



April Burt

EXPEDITION GOALS

The goals of this expedition were to: clear Aldabra's turtle nesting beaches and tortoise grazing areas of plastic pollution; raise awareness of the impact of plastic pollution locally and internationally; reprocess the plastic, investigate solutions for re-use and re-cycling; conduct research to inform ongoing management of the threat.

EXPEDITION FUNDING

55% of funds raised were through nine companies CSR funding, 7% was raised via Crowdfunding and 9% directly from SIF, 29% of funds were from grants. April Burt will also receive a WINGS WorldQuest Flag Carrier grant.

CHALLENGES FACED

Aldabra's size, extreme terrain, climate, tides, and remoteness presented several serious logistical challenges as well as health and safety hazards. The team suffered under the heat, long walks with heavy equipment, and basic food though planning and training ensured everyone stayed healthy.

The last phase of the project was the riskiest; moving trash from shore to ship with the expedition team, the Aldabra team and Seychelles coastguard. Despite sea conditions being extremely calm outside the reef, there was strong onshore swell, which made things very challenging.

A lot was learned from the expedition. The sheer effort and finance required to remove accumulated plastic pollution was immense, and there is no easy way of doing it except by sheer physical exertion.

EXPEDITION RESULTS



After the cleanup

April's team was responsible for the removal of 26 tons of marine debris from Aldabra. Their survey results estimate around 500 tons of marine plastic pollution remain on Aldabra; on average one person could collect 27.65 kg of pollution per hour; at the above rate it would take a team of 12,172 days to completely clear Aldabra's shores marine plastic pollution.

It cost £186,000 to remove 25.75 tons. To remove it all would cost an estimated £3.6 million. 52% of the collected marine plastic pollution is fishing gear while 22% is flip-flops! The team collected 5,926.5 kg of flipflops – that's around 60,000 individual flipflops!



The cleanup team

The Seychelles government was unaware of the extent of the problem on their outer islands – they are now rewriting their waste management plans to take account of the need to collect and dispose of it. The President of Seychelles has taken this project to the G7 meeting and to the Our Ocean Wealth Summit in Ireland. New money has come into Seychelles to help tackle the problem. A feature on Sky News reached tens of thousands of people worldwide.

ABOUT THE FLAG CARRIER

April Burt is a conservation biologist, specialising in island ecosystem management. Originally only marine focused, her work has taken her to Jordan, Patagonian Chile, Madagascar and eventually to Seychelles. The combination of marine and terrestrial conservation experience as well as years of working in remote and isolated sites landed her the 'best conservation job in the world'; Scientific Coordinator of Aldabra Atoll UNESCO World Heritage Site. She lived here for two and a half years before winning her scholarship to study for her PhD at Oxford University in 2017. She has led a number of teams across the years, and her work has led to several scientific publications, videos, magazine articles and presentations.

EXPEDITION TEAM

Team Leader: April Burt

Supporting Members:

Jeremy Raguain (Co-lead)
Kalsey Belle
Sheena Talma
Craig Francourt

Sam Ramkalawan
Ivan Capriceiuse
Ash Antao
Becca Goldberg

Josie Mahony
Maryna Sypoze
Thomas Zillhardt



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