

Environment News Futures

Half Century of Protection Pays Off for Sea Turtles

March 9, 2022—University of Exeter

Green turtle numbers continue to rise on a group of islands where the species has now been protected for more than 50 years, new research shows.

Turtles were hunted at Aldabra Atoll in the Seychelles until a ban in 1968.

The population has been tracked by estimating how many clutches of eggs are laid — and that figure has risen from 2,000-3,000 per year in the late 1960s to more than 15,000 per year in the latest data (2014-19).

The study was carried out by a team of researchers from the Seychelles Islands Foundation with analytical support from the University of Exeter.

“Green turtles have suffered massive historical population declines due to intensive harvesting of nesting females,” said lead author Adam Pritchard, from the Centre for Ecology and Conservation on Exeter’s Penryn Campus in Cornwall.

“Aldabra Atoll was the first green turtle nesting site to be protected in the Western Indian Ocean, with a ban on turtle capture in 1968, followed by continued long-term monitoring by Seychelles Islands Foundation researchers.”

Professor Brendan Godley, who helped supervise the research, added: “It’s been an honour to support the analysis of the decades of work by the Seychelles team.”

“The ongoing population increase of Aldabra’s green turtles is testament to long-term protection, and offers some clear evidence of the fact that we can be optimistic about marine conservation, well enacted.”

The study’s results reveal that green turtle clutches have increased at Aldabra by 2.6% per year overall, with the greatest increase at Settlement Beach on Picard, where exploitation of nesting females was historically the most intense.

Preparing for When Lightning Strikes the Same Place Twice, then Strikes Again

Study offers new framework for improving disaster science and community preparedness

March 8, 2022—Cary Institute of Ecosystem Studies

Disasters such as hurricanes, wildfires, floods, tornadoes, and droughts are not only increasing in intensity and frequency, they are also striking the same place multiple times. Yet, to date, disaster research largely focuses on individual events, and fails to account for legacy effects that leave

people vulnerable in the wake of repeated disasters. To improve predictive capacity to better prepare for future disasters, an interdisciplinary team of researchers has developed a novel framework for improving scientific understanding of ‘recurrent acute disasters’ (RADs). Their work was published today in *Science Advances*.

Giant Impact Crater in Greenland Occurred a Few Million Years After Dinosaurs Went Extinct

March 9, 2022—University of Copenhagen - Faculty of Science

Danish and Swedish researchers have dated the enormous Hiawatha impact crater, a 31 km-wide meteorite crater buried under a kilometer of Greenlandic ice. The dating ends speculation that the meteorite impacted after the appearance of humans and opens up a new understanding of Earth’s evolution in the post-dinosaur era.

Largest Ever Human Family Tree: 27 Million Ancestors

February 24, 2022—University of Oxford

Researchers have taken a major step towards mapping the entirety of genetic relationships among humans: a single genealogy that traces the ancestry of all of us.

Researchers from the University of Oxford’s Big Data Institute have taken a major step towards mapping the entirety of genetic relationships among humans: a single genealogy that traces the ancestry of all of us. The study has been published today in *Science*.

The past two decades have seen extraordinary advancements in human genetic research, generating genomic data for hundreds of thousands of individuals, including from thousands of prehistoric people. This raises the exciting possibility of tracing the origins of human genetic diversity to produce a complete map of how individuals across the world are related to each other.

The study integrated data on modern and ancient human genomes from eight different databases and included a total of 3,609 individual genome sequences from 215 populations. The ancient genomes included samples found across the world with ages ranging from 1,000s to over 100,000 years. The algorithms predicted where common ancestors must be present in the evolutionary trees to explain the patterns of genetic variation. The resulting network contained almost 27 million ancestors.

Stream Flows Declining in River Basins, Affecting Agriculture: IPCC Author

The latest report of the Intergovernmental Panel on Climate Change indicates the effectiveness of most adaptation measures falls sharply at higher levels of global warming above 1.5-degree C.

World Poverty to Rise as Climate Change Hits Food Supplies, says UN Panel

The finding was part of a report by the Intergovernmental Panel on Climate Change (IPCC) that concluded there remained only “a brief and rapidly closing window of opportunity to secure a liveable and sustainable future for all”.