



- [Latest News](#)
- [Browse Topics](#)
- [Encyclopedia](#)
- [Health Center](#)
- [Videos](#)
- [Science Books](#)
- [Health & Medicine](#)
- [Mind & Brain](#)
- [Plants & Animals](#)
- [Space & Time](#)
- [Earth & Climate](#)
- [Matter & Energy](#)
- [Computers & Math](#)
- [Fossils & Ruins](#)

Show [menu](#) | [ScienceDaily home page](#) [RSS feeds](#) | [Free newsletter](#) [Print this page](#) | [Email to friend](#) | [Bookmark](#) Text: [small](#) | [med](#) | [large](#)

Source: [University of California - San Diego](#) More on: [Nature, Climate, Global Warming, Environmental Issues, Endangered Animals, Extinction](#)

Date: May 1, 2007

Lizards Prefer Islands, At Risk With Climate Change, Survey Suggests

Science Daily — A comprehensive survey of lizards on islands around the world has confirmed what island biologists and seafaring explorers have long observed: Animals on islands are much more abundant than their counterparts on the mainland.

Besides confirming that longstanding observation, the study signals an alarm for island populations in a rapidly warming world. It suggests that climate change may have devastating consequences for lizards and other animals that inhabit islands because their ecosystems are much more sensitive than those on the mainland to change.



The Tenerife lizard, *Gallotia galloti*, is only found within the Canary Islands and among the island lizard populations studied. (Credit: Credit: Allen Hurlbert)

Details of the study conducted by biologists at the University of California, San Diego will appear in a paper slated for publication in the June issue of the journal *Ecology Letters*, available online in May.

"We found that island populations are less resistant to biological invasions, which will likely increase dramatically with changing climate," says Walter Jetz, an assistant professor of biological sciences at UCSD and a co-author of the study.

"Climate change will drive animals to move to new places," says Lauren Buckley, a postdoctoral fellow at the Santa Fe Institute who is a visiting scholar at UCSD and the other co-author of the study. "Our research suggests that those animals that move to islands can strongly affect the sensitive animal communities on islands."

In addition to their increased sensitivity to biological invasions, populations on islands are more vulnerable than those on the mainland to sea level rise and increased storm activity, which are expected by many scientists to become worse as a result of global warming.

Jetz and Buckley gathered 643 estimates of lizard abundance from around the world for their survey, the first extensive global study of island densities for any animal group. Analyzing these estimates, they determined that lizards were consistently more than ten times more abundant on islands than on the mainland.

Previous research conducted by Ted Case at UCSD and others on small groups of islands had found that islands' limited areas and isolation can reduce predation and competition pressures. As a result, island animals were able to reach exceptionally high densities.

In their study, Jetz and Buckley confirmed that reduced numbers of predators and competitors accompany high lizard densities on islands across the world. The two biologists concluded that an average acre of mainland contains 52 lizards while an island acre contains 777 lizards. This difference in density persisted when the scientists controlled for location and environmental conditions.

"The ecology of islands is particularly important because, while the world's more than 100,000 islands constitute only 7 percent of the global land surface, they contain many of the earth's species with numerous species restricted to single islands," says Buckley. "500 million people depend on island ecosystems for their food and livelihoods."

The study suggests that islands are particularly sensitive to the loss and gain of species.

[Ads by Google](#) [Advertise on this site](#)

Reverse Global Warming
Take Real Action on Climate Change. Neutralize Your Carbon Footprint.
[www.DriveNeutral.org](#)

Global Warming Articles
One Easy Place For Current/Archived Articles From Leading Publishers!
[www.MyWire.com](#)

Global Warming
Global Warming Climate Change. Where Is It Occurring And Why?
[www.globalwarminggraph.com](#)

Global Warming Research
Find Global Warming Research 3000 Sources - Try It Out For Free!
[www.HighBeam.com](#)

Global Warming
Links To Sites About Global Warming And Climate Change
[www.globalwarmingdesign.com](#)

Science Video News

Detecting Deadly Chemicals
Investigators on a crime scene can now use a new tool for collecting chemical or biological samples. The sampler gun collects samples on a cotton pad ... > [watch video](#)

Jump to: < [prev](#) | [next](#) >

- [Canary Islands](#)
Know Before You Go. Read Reviews from Real Travelers.
[www.TripAdvisor.com](#)
- [St. John Condominiums](#)
Inexpensive rentals of condominiums at St. John's most popular resort.
[www.stjohncondos.com](#)
- [Visit the Faroe Islands](#)
Travel from the US - 2007 North Atlantic Travel Specialist
[www.faroesagatravel.com](#)
- [Hip Hotels in Canaries](#)
Detailed reviews and booking of stylish hideaways in the Canaries
[www.i-escape.com](#)



Related News Sections

- [Plants & Animals](#)
- [Earth & Climate](#)

Related News Topics

- [Nature](#)
- [Climate](#)
- [Global Warming](#)
- [Environmental Issues](#)
- [Endangered Animals](#)
- [Extinction](#)

Related Science Stories

- [Study 'Gone With The Wind' Provides Stellar Ecological Example](#)
- [Study Shows Top Predator Makes Prey Population Vulnerable In Catastrophe](#)
- [Lizards 'Shout' Against A Noisy Background](#)
- [Pressured By Predators, Lizards See Rapid Shift In Natural Selection](#)
- [Mammoths Stranded On Bering Sea Island Delayed Extinction](#)

Related Encyclopedia Articles

- [Consensus of scientists regarding global warming](#)
- [Scientific opinion on climate change](#)
- [Shield volcano](#)
- [Antarctic ice sheet](#)
- [Tundra](#)
- [Instrumental temperature record](#)
- [Wildlife gardening](#)
- [Great Barrier Reef](#)
- [Invasive plants](#)
- [Komodo dragon](#)

Related Book Reviews

- [The Winds of Change : Climate, Weather, and](#)

Search Archives

Find: [> options](#)

[JobStream](#) [Quick Search](#)

Science Jobs

[R&D - Ph.D, Medical Science Liaison - Kansas City & St.](#)

[careerbuilder.com](#)

Wherever you are,

Debbie Macomber

takes you home.

Bring Debbie home on April 24!

[www.DebbieMacomber.com](#)

- In Other News ...**
- [India, U.S. open nuke deal talks](#) (2 hours ago)
 - [Italy, Romania at odds over fatal brawl](#) (2 hours ago)
 - [Political crisis continues in Turkey](#) (2 hours ago)
 - [Cannabis chemical](#)

Species introductions have had dramatic consequences for islands. Introduced mongooses have devastated island populations of lizards and introduced snakes have caused the loss of birds and lizards on islands.

"Cases of species introductions wreaking havoc on islands are likely to become more common as the islands face increasing pressures from population growth, tourism, development, and climate change," says Jetz. "The consequences of island vulnerability have already been observed as island species account for half of known animal extinctions and a full 90 percent of known bird extinctions in the last 400 years. Our study suggests that islands will continue to be vulnerable worldwide."

"Many people, myself included, enjoy visiting islands for their spectacular wildlife," adds Buckley. "Our research suggests that we must be particularly careful to limit the movement of animals between islands if islands are to remain special places to visit."

Note: This story has been adapted from a news release issued by University of California - San Diego.

[Ads by Google](#)

[Advertise on this site](#)

Global warming is good

Climate change is a fact - without it there would be another Ice Age
[www.thefirstpost.co.uk](#)

Global Warming Pollution

Selected Listing For Global Warming Pollution
[aywoh.com/air-pollution-control](#)

- [the Destruction of Civilizations](#)
- [The Weather Makers : How Man Is Changing the Climate and What It Means for Life on Earth](#)
- [The Little Ice Age: How Climate Made History, 1300-1850](#)
- [SuperFoods Rx : Fourteen Foods That Will Change Your Life](#)
- [8 Weeks to Optimum Health](#)

may help schizophrenia
 (2 hours ago)

Waiting time for U.S. visa applicants
 (2 hours ago)

Bear snared with tasty treats
 (3 hours ago)

Student loan industry warned of conflicts
 (3 hours ago)

Perino: Dems staging 'trumped up' stunt
 (3 hours ago)

U.S.-EU summit supports U.N. Kosovo plan
 (3 hours ago)

School took favors from loan firms
 (3 hours ago)

... more breaking news at **NewsDaily** -- updated every 15 minutes

New! Search [Science Daily](#) or the entire web with Google:

Google

Web ScienceDaily.com

Copyright © 1995-2007 ScienceDaily LLC — All rights reserved — Contact: editor@sciencedaily.com
[About This Site](#) | [Editorial Staff](#) | [Awards & Reviews](#) | [Contribute News](#) | [Advertise With Us](#) | [Privacy Policy](#) | [Terms of Use](#)