

Unusual Pictures: “Calcified” Birds, Bats Found at African Lake

By Liz Langley
Published October 3, 2013

 NATIONAL GEOGRAPHIC Daily News

A “calcified” swallow sings in stony silence along northern Tanzania’s Lake Natron (map), which contains so much soda and salt that it would “strip the ink of my Kodak film boxes in a few seconds,” according to photographer Nick Brandt.

Brandt unexpectedly found the dead animals that had washed up on the shore, preserved by the lake, and posed them as they had been in life. The photographs, taken between 2010 and 2012, appear in Brandt’s new book *Across the Ravaged Land*. (Also see “Pictures: Best Wild Animal Photos of 2012 Announced.”)

Lake Natron’s unusually harsh composition comes from a unique neighboring volcano, Ol Doinyo, which spews alkali-rich natrocarbonatites that end up in Lake Natron via rainwater runoff.

Thure Cerling, professor of geology and geophysics at the University of Utah, said by email that the animals in Brandt’s photographs likely died of natural causes. Since there are few predators in the area, their bodies remain and become salt-encrusted when the lake’s water level drops.

However, Brandt said that many people in the region have seen birds crash-land into the water. So he believes the birds and bats were confused by the sky’s reflection in the lake and killed when they hit the water.

The animals probably aren’t truly calcified, but are coated with sodium carbonate or sodium bicarbonate, said Cerling, who has researched the chemistry of Africa’s Rift Valley lakes.

“There is almost no calcium in the lake, although the inflowing fresh waters have calcium, which precipitates as it mixes with the high-pH alkaline waters of the lake.”



Jaimi Butler, of the Great Salt Lake Institute at Westminster College in Utah, said that on the shoreline of the northern arm of the Great Salt Lake, she has found birds that are “pickled”—so encrusted in salt you can pick them up and they will stay in the same position they were lying in.

Butler added that healthy birds do frequent the lake, so the dead animals may be ones that succumbed due to sickness or other causes.

Because the water is so alkaline, the only fish that live in Lake Natron are alkaline tilapia (*Oreochromis alcalica*).

Not only is it salty, it’s also hot: Daily temperatures in the area routinely reach 104 degrees Fahrenheit (40 degrees Celsius).

The salty lake is important habitat for lesser flamingos—three-quarters of the bird’s population use the isolated lake, with its plentiful food supply, as a breeding site

Though not evident in these black-and-white photographs, Lake Natron has a distinctly red color, which comes from the lake’s cyanobacteria.