

Mysterious fairy circles demystified: it's termites (Update)

March 28 2013



Numerous tracks of Oryx antelopes crossing fairy circles in an interdune pan. Aerial view of Namibrand, Namibia. Credit: N. Juergens

They appear in the desert in southwest Africa and persist for decades: so-called fairy circles, or puzzling rings of grass with a barren center.

Now a new study, published Thursday in the US journal *Science*, purports to end the enigma and explain just what is going on: it's the

work of termites.

The fairy circles, which can stretch up to around 50 feet (15 meters) in diameter, are especially common in Namibia, where the indigenous Himba people attribute them to [divine intervention](#).

Among scientists, the termite theory had been proposed previously but put aside for a lack of evidence.

But botanist Norbert Juergens of Germany's University of Hamburg plunged into the investigation and has offered convincing evidence that the [critters](#) behind fairy circles are likely a particular termite species called *Pсамmotermes*.



A fully developed fairy circle with a green perennial belt (living grass plants) and a yellowish matrix (dead short-lived plants), both formed by the same species of grass (*Stipagrostis ciliate*). Farm Dieprivier / Namib Desert Lodge, Namibia.

Credit: N. Juergens

By studying a strip of desert 1,200 miles (2,000 kilometers) long, stretching from mid-Angola down to northern South Africa, Juergens determined that these termites were the only organisms consistently present when the circles were in the earliest stages of forming.

The researcher observed that the termites feed off the roots of perennial grasses, effectively wiping out the plant life nearby.

But the bare patch is then able to hold on to moisture better, because the [rain water](#) is not used and evaporated by plants. That helps the termites—and the vegetation around the edge of the circle—thrive, even during the dry season.

The result is an ecosystem, engineered by [termites](#), transformed from a desert into a [grassland](#), Juergens explained.

More information: "The Biological Underpinnings of Namib Desert Fairy Circles," by N. Juergens, *Science*, 2013.

(c) 2013 AFP

Citation: Mysterious fairy circles demystified: it's termites (Update) (2013, March 28) retrieved 17 April 2024 from

<https://phys.org/news/2013-03-mysterious-fairy-circles-demystified-termites.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.