

News in Brief: Termites, not fairies, cause plant circles in African deserts | Zoology

Underground insect engineers create water traps, allowing rings of green grasses in the sand

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The Namib Desert's version of crop circles turns out to be the handiwork of sand-dwelling termites.

These "fairy rings" of perennial grass species dot arid, sandy sweeps from Angola to South Africa and have inspired ecological and mythological speculation about their origins. After 40 trips to study the water distribution and life around the fairy rings, Norbert Jürgens of the University of Hamburg in Germany concludes that the sand termite (*Psammotermes allocerus*) is the hidden force behind them.

Among the hundreds of species that thrive in these rings, the sand termite is the only one found throughout the range, he reports in the March 29 *Science*.

Termites unintentionally engineer these marvels by eating the roots of grasses, creating a bald patch that becomes the ring's center. The subsurface depths of that patch stay moister than neighboring areas, where plants draw the water out of the soil. The circles' bull's eye favors not only the moisture-loving termites, but also a belt around its edge of perennial grasses and many other species that couldn't survive baked sand.

As ecosystem engineers, Jürgens says, the sand termite rivals the beaver.



Natural rings of perennial grasses manage to survive in parched terrain of NamibRand, Namibia, thanks to a termite that creates areas of moisture within the sand.

Credit: N. Jürgens