

4,588

Species recorded in Cape Town in the 2019 City Nature Challenge.

53,763

Observations in Cape Town, the most logged in any of the more than 200 cities that took part.

815,258

Observations recorded worldwide in the 2020 Collective Challenge, in which five SA regions participated.

For nature fundis

The 2021 City Nature Challenge takes place from April 30 to May 3. Participants can register for their city or as individuals. Each participant has 96 hours in which to record as many wild plants, animals and fungi as possible. Visit www.naturalist.org

Smartphone apps are helping to fuel citizen science, writes Claire Keeton. Anyone can log flora and fauna sightings and contribute to conservation

The wind rustles through a reed bed in Hout Bay, the bass line to the warbling of birds. Standing very still, Garret Skead looks around and identifies more than a dozen bird species by sight or by their calls. "The habitat is a clue," he says, reeling off names. "Then you evaluate the major features to make an identification. It's like a diagnosis."

Rupert Koopman, conservation manager at the Botanical Society of SA, says its red list of South African plants is one of the projects assisted by amateur botanists. "There are not enough trained botanists and entomologists, and a lot of botany is seasonal. Citizen scientists are looking at things at any time of year."

Skead is a pathologist who spends his free time searching for rare birds and recording these sightings on the app BirdLasser. He is among a legion of "citizen scientists" in SA who observe flora and fauna and enter the information into biodiversity apps, helping to paint a picture of the country's species and where they are at risk.

Citizen science has picked up dramatically in the past five years as smartphones have made logging species easier, says Sanbi principal scientist Krystal Tolley, whose focus is reptiles and amphibians.

"Citizen science is growing substantially globally," says Suvarna Parbhoo Mohan, manager of the Custodians of Rare and Endangered Wildflowers (Crew) citizen science programme at the South African National Biodiversity Institute (Sanbi). In SA, more than 13,000 people have reported nearly 30,000 species in 1.2-million observations on iNaturalist, and the numbers rise every day. The app is one of several on which a sighting can be logged with an image, time and location. Conservationists and scientists use this data, which is also open to the public.

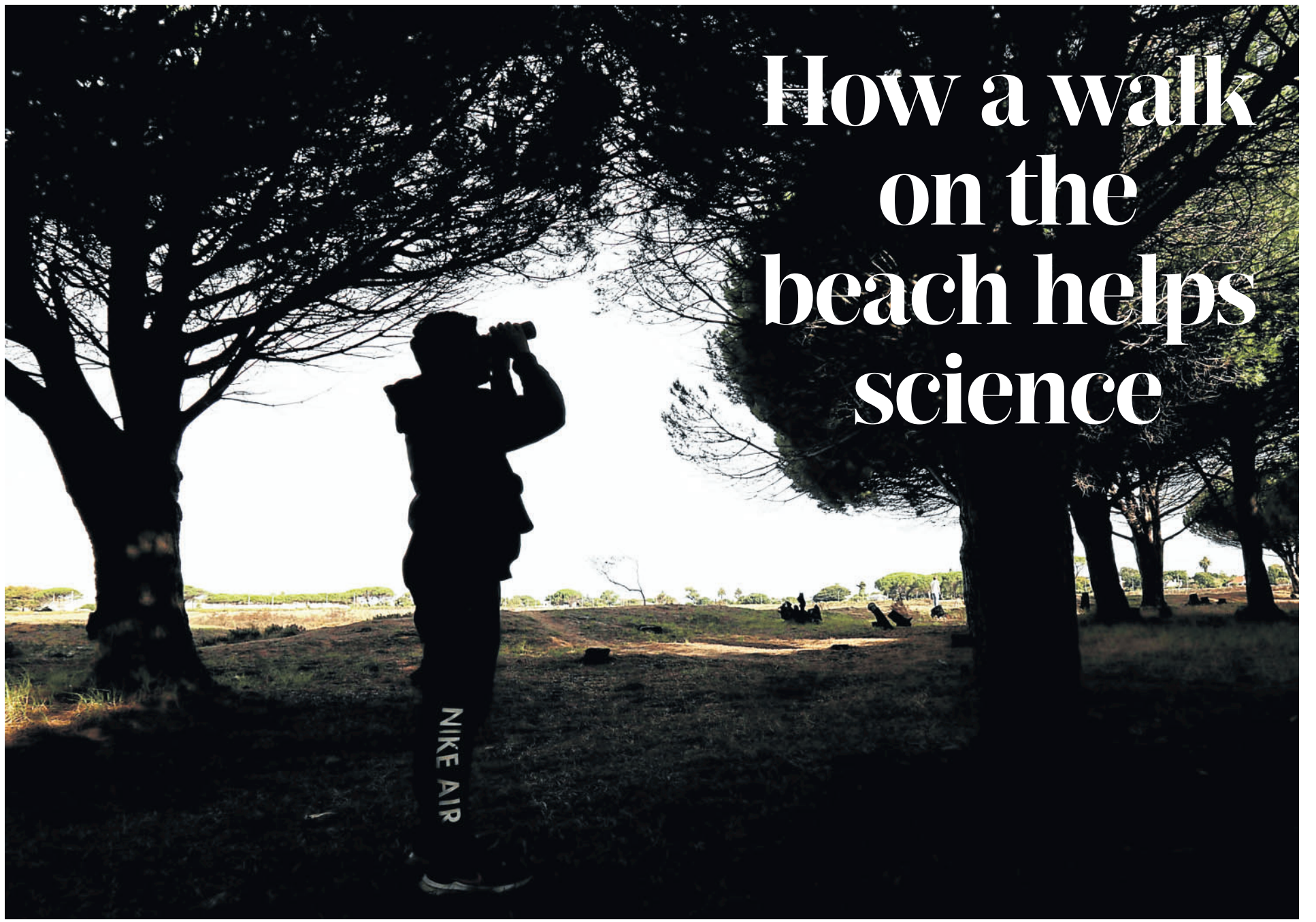
"The information from citizen scientists is key to assessing the status of reptiles and is incredibly valuable for making distribution maps," she says.

iNaturalist has more than 700 projects in Southern Africa to which people can contribute, ranging from rhinoceros beetles and freshwater fish to "champion trees of SA".

People have reported sightings of African rock pythons, black and green mambas and geckos and lizards that have been spotted outside their known range. Karoo farmers reported in a survey that they see Cape cobras all the time, even though formal records do not reflect this, Tolley says.

Also important is the absence of sightings of a species in places where it should be common, which acts as an early warning of potentially declining numbers.

A street, garden, park, beach, rock pool, mountain, game reserve – any place under the sun or moon – can yield vital information, Tolley says. "Whether you are out and about or at home in your garden, you can contribute. Even photos of roadkill



How a walk on the beach helps science

NAME THAT LBJ Aadam Abdullah, 17, focuses on a bird during a visit to Rondebosch common in Cape Town. He is a keen user of the BirdLasser app. Picture: Esa Alexander

PSRA GENERAL NOTICE ANNUAL FEE INCREASE 2021/2022 PRIVATE SECURITY INDUSTRY REGULATIONS ACT 56 OF 2001 AND SECURITY OFFICERS ACT NO. 92 OF 1987 PUBLICATION OF AMENDMENT TO THE REGULATIONS MADE UNDER THE SECURITY OFFICERS ACT (ACT NO. 92 OF 1987) PRIVATE SECURITY INDUSTRY REGULATORY AUTHORITY SCHEDULE AMENDMENT OF THE REGULATIONS MADE UNDER THE SECURITY OFFICERS ACT, 1987 (ACT 92 OF 1987)

are useful." Chantel Elston, marine ecologist at the South African Institute for Aquatic Biodiversity at Rhodes University, says: "Citizens see things that we would never be able to because we have very little time in the field. They make a big difference to science." Logging the "dirty dozen" – the 12 most common types of beach litter – is a critical contribution by volunteers, whose records feed research tracking marine pollution. Searching for and finding species can be its own reward for citizen scientists who do it as a hobby. "They become more aware of nature and interested in wildlife," says Elston. Crew links its volunteers with academics, plant specialists and conservation officials, says Parbhoo. "Another time in Jozini, northern KwaZulu-Natal, we were looking for a small, weedy plant whose flower is smaller than your nail. We had walked up the mountain, it was January and scorching hot... As we came down, we found the plant at the side of the road. The four-day trip yielded four different species of Thesium," says