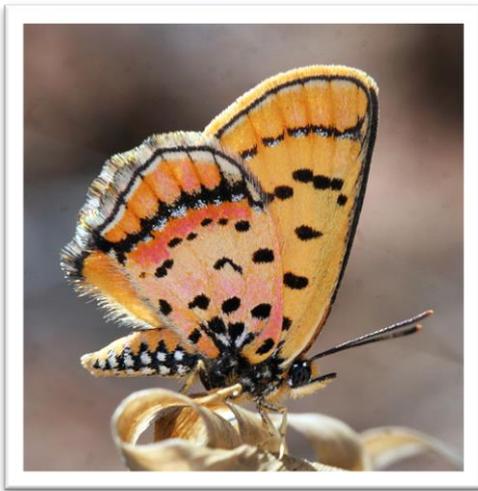


KROONVLEI

WILDERNESS ESTATE

WATERBERG COPPER

The Waterberg Copper butterfly, listed extinct almost 30 years ago, has been re-discovered at Kroonvlei, its only known location in the world.



The Waterberg copper butterfly (*Erikssonia edgei*)—a spectacular yellow-orange species roughly 16 millimeters wide with black spots and stripes on its wings - had only been known from a single microhabitat in the Alma District of the Waterberg Mountains. Discovered in 1980, the butterfly disappeared soon after South Africa's first democratic elections in 1994 when what was previously known as Transvaal Province was split into three new provinces. The man who had been monitoring the colony for the Transvaal Nature Conservation Department was transferred to one of the new provinces. Meanwhile the 10 years after the end of apartheid saw a big shift in South Africa's human population, with many people moving away from the segregated rural townships where they had lived for many decades. By the time lepidopterists visited Alma in 2004, they found that it had undergone a massive ecological change. The agricultural grazing and burning that had kept grass in Alma at short heights ideal for the butterflies had been abandoned. In its

place dense swaths of two-meter-tall turpentine grass had replaced the short grass and other plants that the butterflies had depended on. The flowering plants that the butterflies used as hosts for their larvae were suffering in the new environment and the ants that served a similar hosting role were completely gone. As a result of these habitat changes, the butterflies, too, had disappeared.

Members of the Lepidopterists' Society of Africa (LepSoc) spent the next eight years looking for the Waterberg copper throughout the region, to no avail. But earlier this year LepSoc member Mark Williams—who has previously rediscovered two other “extinct” butterfly species—was searching the Waterberg region on Google Earth, the 3-D map program that combines satellite data and other information from around the world. He noticed an isolated plateau near the town of Bela Bela, about 50 kilometers from the Waterberg copper’s previously known habitat. Located in the Kroonvlei wilderness Estate, the habitat matched the original conditions in Alma.

Williams talked with other LepSoc members and found that the reserve had already been searched for the butterfly. He decided to go there anyway for a vacation weekend. That ended up being a fortuitous decision. While walking along a nature trail with his wife on March 2, he struck gold. “We were walking through open grassland and had covered scarcely a kilometer when a small orange-winged insect flew up off the path in front of me, fluttered to the left, and dived into the grass a few meters away,” he wrote in an account to be posted on the LepSoc web site. “I swiveled to my left and my eyes focused on the little creature that sat perched on a grass stem with closed wings. The underside coloring and pattern left no doubt.” It was a Waterberg copper.

After he calmed down—there was much whooping and jumping around, he wrote—they searched the area for more of the butterflies. They found “about half a dozen specimens,” including one female, all in an area just 50 meters in diameter. A kilometer away they found another small group of about 20 butterflies. They

even witnessed a female lay a dozen eggs in a dead plant that contained a colony of black ants, which would serve as hosts for hatching larvae. Other LepSoc members quickly descended on the reserve to take photos and study the butterflies.

The discovery may have had been aided by more than Google Earth. At the original site in Alma, the butterflies typically appeared in late January and early February and would have ended their life cycles by March. LepSoc member Jeremy Dobson says this was a drier-than-normal season, which may have delayed their emergence by a few weeks and allowed the insects to be seen this late in the year. Dobson will now serve as one of the “custodians” of the species—LepSoc has appointed people to be responsible for all of South Africa’s critically endangered moths and butterflies—and will develop a conservation plan.

There’s still a lot to learn about the Waterberg copper and how it relates to its habitat at Kroonvlei - Williams says they still don’t know which plants the butterfly is using as its larval host at Kroonvlei but now that lepidopterists know it is there it can be studied and preserved. Meanwhile the question remains if the Waterberg copper moved to this new location after its last habitat became inhospitable or if its range had always been larger than previously known. You can bet some lepidopterists will be looking for additional colonies in the hopes of saving these rare butterflies before they disappear once again.