

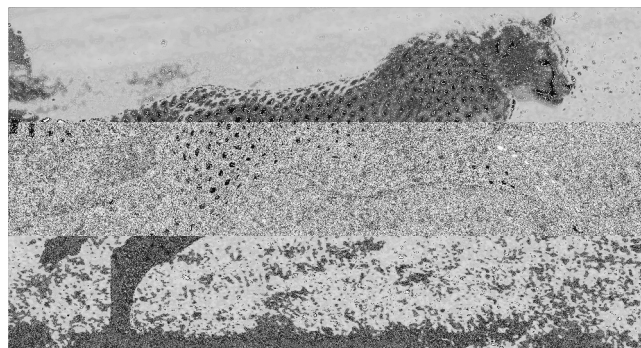
Move over cheetah: Mite sets new speed record

This California critter would outrun all other land animals, if you scaled them down to its size

BY CAMERON WALKER (MAY 7, 2014)

SAN DIEGO — Tough luck, tiger beetle. A tiny mite found in Southern California has just smashed your land-speed record for animals.

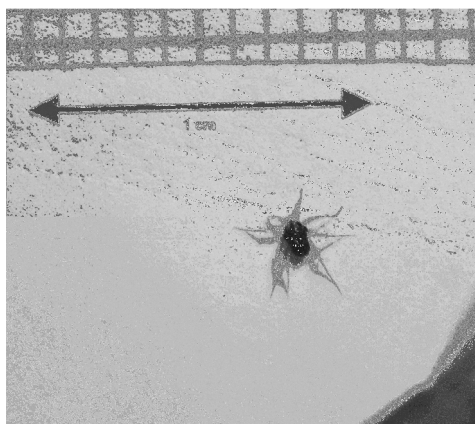
At first glance, this mite may not seem so fast. It's only about the size of a sesame seed. Yet that would be one fast seed: At top speed it can zoom at about 30 centimeters (11.8 inches) per second.



At its fastest, this mite can cover a distance 322 times its body length in a single second. The previous land-speed record holder, an Australian tiger beetle, moves at a more leisurely 171 body-lengths per second. And the supposedly ultra-fast cheetah? It can manage short sprints at 93 kilometers (58 miles) per hour. That's fast, but the big cat covers a mere 16 body lengths or so per second.

If the mite were scaled to the size of a human, its speed would be equivalent to a person running at 2,092 kilometers (1,300 miles) per hour. That would mean it could easily outrun a moving car, high-speed train — or even a commercial jet.

Jonathan Wright and Samuel Rubin reported the mite's land-speed record last week at the Experimental Biology meeting in San Diego, Calif. The species, *Paratarsotomus macropalpis* (PARE-uh-tar-SO-toh-miss MAC-ro-PAL-piss), resembled blowing bits of dust when Wright first spotted them. The biologist works at Pomona College in Claremont, Calif., about an hour's drive from downtown Los Angeles. Rubin is a student studying physics at Pitzer College, also in Claremont.



The mites don't belong to a new species. Scientists discovered them back in 1916. But until recently, no one seems to have studied the tiny arachnids. People sometimes run across these mites skittering over concrete driveways, rocks and sidewalks in Southern California.

Rubin collected some last summer for this study. He used a tool called an aspirator to suck up and capture the tiny creatures without choking on them. "The hose you breathe in through has a mesh filter on the bottom, inside the chamber," he explains. That way "you don't inhale mites."

The researchers then turned the mites into film stars. In the lab, they recorded the animals on high-speed video to zero in on how the mites move their legs and turn. They also filmed some mites in the field to catch them barreling along at top speed.