

# GLIDING BACK HOME

Up a tree without a parachute? At least you can climb down to safety. But what of the canopy ant stranded 30 metres above the forest floor? After all, for a tiny ant, a tumble from that height is akin to a human falling five kilometres. And even if the ant survives the fall, it must contend with the forest floor — a dark world of decomposition, scavengers and predators. Gulp.

Steve Yanoviak not only climbs to extremely high places all the time, he tosses ants from his perch among the tropical trees. What does Mr. Yanoviak have against the lowly canopy ant? Well, take heart; no ants were harmed in his experiment.

It seems that when jettisoned from branches 30 metres above the ground, canopy ant workers (*Cephalotes atratus*) glide backwards to the trunk of the same tree, with an 85 per cent rate of accuracy. “Marked ants often came right back to the branch where they started within 10 minutes of falling or being dropped off,” says Yanoviak, an ecologist at the University of Texas.

“I first noticed directed-descent behaviour in 1998,” he recalls. “Some spiny *C. atratus* workers got stuck in my hand while I was sitting in a tree crown. When I

brushed them off, they appeared to glide rather than fall haphazardly — I could see their very clear ‘J’ trajectory.”

Yanoviak caught the ants’ initial vertical drop on video. It could best be described as a quick swivel to

orient the hind legs in the direction of the trunk and a steep, directed glide and landing on the vertical surface. High-speed video enabled the recording of both the velocity and angle of the glide trajectory as ants dropped from the balcony of the lab against a backdrop of a white bedsheet.

“We still don’t understand exactly what mechanisms the ants use to change direction and to maintain a steady glide path through the air,” says Yanoviak, “but gliding is definitely the way to go, and we wouldn’t be surprised if more examples of this behaviour exist among wingless canopy insects.”  
Geronimoooooooooooo . . .

Steve Yanoviak / 2

