

a letter from the field

For the Love of Ants

Through flood, drought, and revolution, the Ant Man delivers.

Text and Photographs by BRIAN FISHER

TRIED TO BALANCE AS THE river's current pulled at my chest, and my feet sunk deeper into the mud. I noted the position of holes, dead branches, and rocks, and the river's depth, which would come up to the car windshield. The steep bank at the far end of the 500-foot-wide Miharono River would be the most difficult part. We had two choices: wait three more months until the rains ended, or risk the crossing. I never thought it would be so hard to find ants.

It was late November 2001. We had just finished inventorying the insects and spiders at our third site, and still had 16 sites and five months more to go. I was leading a team of eight researchers, including five Malagasies, all of them piled into a single Toyota filled with six weeks' worth of gear and food. There was little we could usefully do here, so I decided to try to drive across. If we failed and got stuck, we would at least have something to keep us busy during the next three rain-trapped months. I got back into the Land Cruiser, rolled the window down for easy escape, focused on the opposite bank, and put my foot down. By midstream, waves were washing over the hood. At the far bank, we rammed up against the steep slope and stuck. Luckily, the engine air intake was above the water and we could use the winch to pull us out.

Rule number one in Madagascar: Never leave home without a winch.

We were here to provide an overview of the ants and other arthropods by eventually sampling 100 sites across the island. With funding from the National Science Foundation, as well as the McBean, Lakeside, and Schlinger foundations, and the California Academy of Sciences, my goal was to dig up data on insect and spider diversity to help prioritize conservation efforts on the

island, and finish the job in under five years. Little did we know that this river crossing was only the first hurdle in a journey that would take us through flood, drought, and a national revolution.

We should have known we were going to have trouble getting out of the Bemaraha region of central western Madagascar. On our way in, the largest river, the Manambolo, was flooded and too risky to cross. We chose to abandon the Toyota, and after seven days of ant collecting by oxcart, the waters subsided and we walked 30 km back to retrieve the car. From there we drove deeper into the region. But each day more rain fell, and when we returned to face the Manambolo, the bridge that had been unusable before was now completely swept away. But if we did not cross, a year of planning would be wasted.

After we set up camp, some of us scouted out alternative routes and the rest began cutting a 500-foot-long path to access the river at its narrowest but deepest point. Cattle had previously used this route through the flooded forest, but cutting branches and stems underwater was fraught with the constant danger of getting trapped. The next morning we drove down to our new trailhead and sent word on ahead that we might need help. A group of about 50 men and boys had gathered, and we explained that our plan was to waddle through this newly cut path of trees and mud and then shoot the vehicle off the bank into the river. If we got stuck anywhere, they were to help push us out.

This time, I strapped myself in securely, took yet another deep breath, and dropped the vehicle into the muddy road cut. The Land Cruiser crawled along what seemed an interminable path and then plunged into the fast-flowing current. I just had time to turn the engine



Top: The author descends from the forest canopy after a search for ants.

Above: Myrmecium ants bring their larvae out of the nest to feed on a centipede that the workers have paralyzed.



Above: It's difficult to assess Madagascar's road conditions in advance. Unusual flooding in the central part of the country created a few difficulties.



Left: Sometimes an oxcart makes for the surest 4 x 4. With the water too deep for a motorized vehicle, the team fell back on a more traditional way to cross the Mandrare River.

off before the air intake was submerged. A crowd of 50 people cheerfully pushed and pulled the vehicle to the far bank, where once more the winch pulled us clear. We advanced through the next mile of mud 25 feet at a time courtesy of that winch, until at the edge of the flooded grassland, the tires took hold. One man ran ahead to mark the path while the rest of the villagers and crew chased along behind. It was an amazing sight.

But now we were lost. When our oxcart trail ended at the village of an

oxcart driver, we decided to take on a guide. With four people in the front seats, plus a large spear, we were directed through a maze of fields to the main Morondava road. One last sharp left onto the road—and we were once again in a river. Too late to back out, and afraid to stop, we pushed forward like a speeding tortoise in low low gear. With the water level up over the windows and an entire village watching, those in the front seat quickly climbed out the window, leaving the others trapped in the

back of the Toyota submarine. But, by now we had a well-rehearsed routine and soon had the winch attached and the vehicle back on land.

All this in one day. All this just to catch ants. And there was much worse to come.

WITH ROUGHLY 96 PERCENT of Madagascar's original habitat destroyed, what remains is usually far from roads and villages, which is why it survives. We often had to hike three days to reach a patch of forest. This was nineteenth century biology with twenty-first century urgency. Even after 200 years of exploration, much of the life on this planet is still unknown.

What kinds of ants exist? Where do they live? How are they related? These are the questions I wake up to every day. They are simple questions, but we have few answers. The answers to these questions will help conserve the remaining habitat.

The Malagasy government is committed to doubling the number of protected

areas over the next ten years. Each site we visit brings us one step closer to mapping the diversity of Madagascar. So far we have discovered over 800 new ant species. What keeps us excited are the discoveries we make at each site and the need to save these forests. Little did we know how difficult our task would become.

In January 2002 we arrived at another extreme—the country's most arid region, with a twelve-month dry season. The heat of the day begins at seven and doesn't end until after sunset. In addition to the normal logistic hassles of moving food, equipment, and people into the field, we now had to carry all our own water. We used over half a ton of water every three days, and all of it had to be carried in by oxcart or porters from brackish wells. Even the coffee tasted like a salt lick.

When we were in the rainforest, we often dreamt of the next time we could drink a cold beer. But here in southwestern Madagascar, all we thought about were the wonders of bottled water. This fixation on clean, fresh water lasted the entire time in the field, day and night, and each moment of the long drive back to town. But as soon as we reached the first bar, the crew's thoughts returned to beer; after all, it's about the same price.

As the months went by, we began adapting to the aridity. We moved slower, talked less, and needed less to drink. But there were two habits of the local people I did not understand. First was their taste for a yogurt-cheese-like substance called "abobo." It looked like blobs of Elmer's glue floating in yellow dishwater, and I couldn't understand its appeal.

Then came one hot day after we had just got our third flat tire and lacked sufficient supplies to repair it. Because of simmering political and economic troubles, there was no hope that a bush taxi or tourist might come by. The locals claimed it would be at least two weeks before we could get help.

Being stranded at a beautiful fishing village was not bad in concept, but we did

Right: Theraphosidae tarantula, the largest spider of Madagascar, appears enormous beside this tiny gecko.



Above: A snake has found an unfortunate chameleon. Fifty percent of the world's chameleon species are found in Madagascar.



It took the entire village's fleet of dugout canoes to move the ant researchers up the Manambolo River to Vazimba, where they camped below a rock face that contained the ancestral bones of nearby villagers.



The honey brought immediate relief. Now I make sure I always hire at least one of "the possessed."



Centipedes are voracious predators that live in the leaf litter.

have work to do. Within minutes of deciding the crew could use a break and that swimming and resting would be a welcome change, a vehicle pulled up. It was driven by a missionary returning to Androka, and was piled high with people and equipment.

After some negotiations, the tires were tied atop the equipment on the roof, and I was wedged in the back. As we careened along the dirt road, I strained to keep my head from pounding against metal shovels. I had drunk nothing all day except

a cup of salty coffee, and exposed to the hot air and sun, I felt my insides growing prune-like. When we arrived in Androka after six hours, I was so thirsty I could barely open my mouth. A young boy made his way over to me carrying a jug of "abobo." I took a large bowl and slurped it down. It did not taste like glue after all, and it cooled the body like a soothing ointment, lifting the fog of dehydration and fatigue. I was an instant convert.

A second strange behavior I had noticed was the uncontrollable desire for honey. At each camp, we would hire a few locals to help with fieldwork and cooking. I was always most careful to hire helpers who were not overly obsessed with honey. The “possessed” would not catch your eye but instead constantly scan the sky for honeybees. They were useless as field assistants, but despite my best efforts, a honey addict occasionally slipped through.

One evening, high up on a mountain at dusk, someone spotted a bee. Moments before, we had all been worried about reaching base camp safely because of the approaching darkness and steep terrain. Now everyone changed course to find honey. As they approached the nest, one porter sacrificed a pant leg, which he lit to ward away the bees. Without seeming to notice the bees stinging his face and arms, he slowly filled a rice sack with gallons of honey and combs. It seemed like enough honey to last months, but within minutes the entire amount was consumed. I was appalled to witness such carnage.

But I was not immune. At a camp where the water was exceptionally bad, the temperature exceptionally hot, the thorn-laced bushes exceptionally sharp, I was approached by a local offering a gourd of honeycombs. He had obviously walked a great distance through the sand and heat and felt he was doing us a great service. I

picked up a large comb and began eating. The cool honey and juicy comb brought immediate relief. I was transported to Shangri-la, to a land of pleasure, coolness, and water. Now, I make sure I always hire at least one of “the possessed.”

As the team moved from site to site, we had the impression that no other world existed, that we were a self-contained unit, free of the cares of civilization. Our routine became ingrained. After arriving in camp each afternoon, we ran around putting in pitfall traps, malaise traps, butterfly traps, black light traps, and leaf litter transect flags. Then we had to set up the kitchen, leaf litter lab, our tents, and prepare hundreds of vials for collections. We would not have time for lunch, but we had an early dinner at five—leaving us enough time to put up our tents and prepare for the nighttime spider collecting and black lighting. Coco, my fix-anything field hand, complained that the last time he had a good night’s sleep was just before he met me.

BUT GRADUALLY, THE POLITICAL troubles of Madagascar began to intrude on our private world. The country was caught in a tug-of-war between rival governments, two capitals, and splits in the armed forces. Supporters of past president Mr. Ratsiraka based in the port city of Tamatave imposed an economic blockade of the capital Antananarivo (Tana), which was controlled by the recently elected president Mr. Ravalomanana. The conflict had grown increasingly bloody and did not seem like it would end soon.

The country was under military curfew, checkpoints blocked city streets, the capital was without fuel, and law was under the control of bandits. As we approached the end of the fieldwork, I communicated each day with our office in Tana via satellite phone. The latest news was that

the road back to the capital was closed. Rebels had destroyed bridges, set up blockades and checkpoints. Three people, including a general, had been killed in Fianarantsoa. We were warned that any fuel or supplies found in vehicles headed to the capital would be confiscated. Worst of all, we risked losing our carefully collected specimens.

But we weren’t about to give up now. Not after spending six months facing endless challenges and difficult odds, six months of not spending more than five days in one place, six months away from family on a diet of rice and beans.

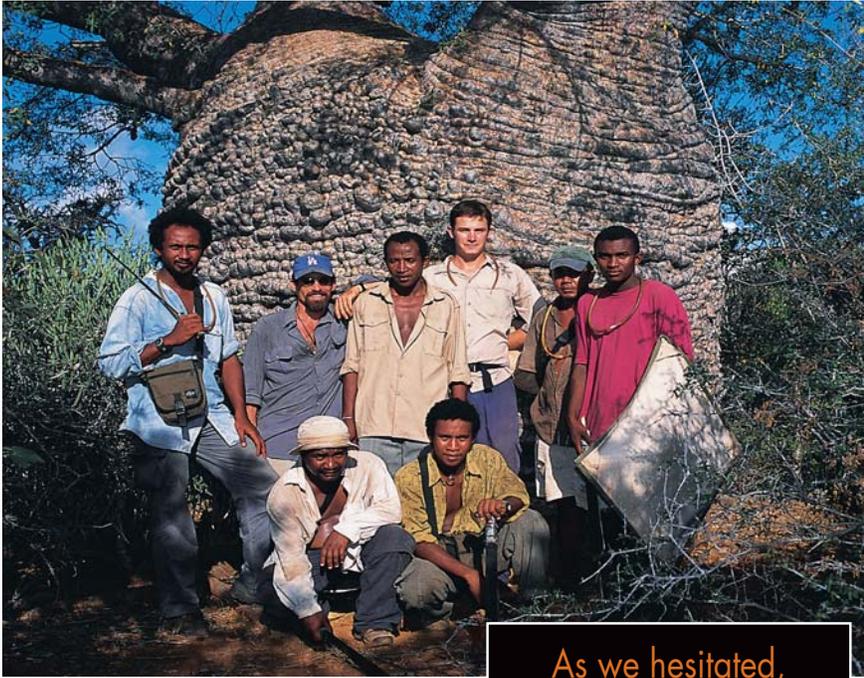
We left our last camp while it was still dark, determined to reach Tana within three days. It was strange to be alone along one of Madagascar’s major roads with scarcely a person in sight. We met one other driver—an expat gem smuggler—and asked about our chances of getting through. He described a 100-mile detour around the first heavily guarded roadblock at a bombed-out bridge. With only a vague notion of what route this might be, we attempted to follow his tire tracks.

But we were a day late. Rebels had already set up more checkpoints and we quickly had our first lesson in negotiation. Not knowing who was manning the barricade, we drove up slowly to the first stop. They knew we were trying to avoid the main blockade and assumed we were guilty of something. The show of rifles was intimidating. The guards wanted an enormous fee, equivalent to a good month’s salary, to let us through. After a lengthy three hours of negotiating, we paid a reduced amount and drove through.

For a while we thought we were home free and began enjoying the wild country ride, but at the next river, as we scouted out a way to cross, we met our second group of gunmen. Though we were verbally challenged and taunted, we paid much less to cross this river. At the next barricade we were met by villagers demanding money to pass through their village. I refused to pay but my team backed down and we moved on. At the last village before the main road, we came to a barricade manned by a single guard holding a large spear; we veered around him and kept going.



Just one of the many trials and tribulations of an ant collector. Sometimes, with only the winch to supply forward progress, it might take twelve hours to travel one mile along the floodplain.



Surely we were through the last major obstacle before Tana. Little did we know that we had at least 25 more roadblocks to overcome and would barely cross a bridge before it was blown up behind us.

We arrived on the country's high plateau only to be stopped by a long line of trucks and cars blocking the entrance to Fianarantsoa. The city was shut down. At every corner, bricks, rocks, trunks, shipping containers, or other metal objects were piled up to freeze movement in, out, and around the city. Since dark was approaching, our immediate concern was to avoid spending the night among the mobs of angry truck drivers and rebels. We were told that the roadblocks were not negotiable and that they were not even accepting money. A student volunteer from the University of California at Davis was not feeling well, and I was worried that he could have malaria. At the first roadblock, I insisted we be allowed into the city because we had to get him to a hospital. His sickness, we were told, had to be verified by a doctor.

Twice we sought one out, but the doctors were afraid to leave their homes. Finally, a doctor agreed to look at him, and we were let through—only to be stopped 20 feet further on. These guards, irate that the previous barricade had let us through, refused to even discuss our passage. After a heated discussion, we were allowed through only to be stopped by yet a third group. We could not go on like this. We had no idea what to do for the night and

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were surrounded by rebels who could take anything, anytime they wanted. They would check for hidden fuel. The last time they had found extra fuel in a car, they burned it. Our fuel container was well hidden but the guards moved closer and closer to the 50-liter jerrican.

Just as we parked at the third barricade, not more than 150 feet into the city, the radio announced that our white Toyota Land Cruiser was to be allowed through all barricades on the road to the hospital. Not understanding how or who arranged this announcement, we passed smoothly through this and the next six barricades, arriving at the city center just as it got dark. The city was deserted. Everyone was scared to move. In the darkness, we filled the gas tanks with our extra fuel, and threw away the rest.

The next day we tried everything to get out of the city, including offering our services to transport important rebel figures. At the rebel headquarters, the guards ordered us to unload everything for inspection. As we hesitated, they reminded us that they were holding the guns, and they were the law. Luckily, Pascal Rabesson, our field team coordinator, who was

After six months' travel, the field team (author, second from left) celebrates at the last site with a photograph in front of a baobab.

from the same region as the inspector, convinced them to hold off.

After six tense hours, we were finally allowed to leave. The roadblocks became routine, each one leaving us more exhausted and our funds a little lighter. At Ambositra we met an extremely aggressive group just ahead of the last major bridge before Tana. But by then we were hardened negotiators and held our ground despite the guns in our ears. An hour after we crossed the bridge, it was blown up, completely sealing off the capital from the south.

We arrived back in Tana at the peak of rush hour but there was no rush. Nor was there the usual smell of diesel and exhaust. There was no fuel.

The crew and the millions of insects and spiders we had collected made it safely back, but I was still a long way from home. All flights were cancelled, the airport closed. I was tipped off that there would be a flight the following Thursday; it was fully booked but I got onto the waiting list. On Monday night I was told that the flight was moved to Tuesday night. But at 2:30 am I was awakened by a call from our travel agency in the United States alerting me that takeoff had been advanced to 7 a.m. I rushed to the airport and boarded a nearly empty plane.

Back in Tana, fuel prices continue to soar, destroying the country's two biggest industries, tourism and textiles. But our project is still making progress. The government has begun to repair the damage, with Ravalomanana becoming president and Ratsiraka fleeing for France. The lab is processing the millions of specimens we collected, despite the temporary destruction of the capital's main electric plant and a lack of fuel to run generators.

My team is adjusting to "Tana after Crisis" and, with great optimism, we are already planning our next field season in the spring. 

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