

EDWARD O. WILSON

*Orizaba*

---

ALMOST ALL MY LIFE I have dreamed of the tropics. My boyhood fantasies drifted far beyond the benign temperate zone of Thoreau and Muir. Nor did I have any interest in arctic glaciers or the high Himalayas. I hungered instead for the frontiers of Frank Buck and Ivan Sanderson, hunters of tropical exotic animals, and William Beebe, naturalist-explorer of the Venezuelan jungle. My favorite novel was Arthur Conan Doyle's *Lost World*, which hinted that dinosaurs might yet be found on the flat summit of some unclimbed South American *tepui*. I was besotted with *National Geographic* articles on tortoise beetles and butterflies, winged jewels that entomologists—of the kind I hoped to become when I grew up—netted during journeys to remote places with unpronounceable names. The tropics I nurtured in my heart were the untamed centers of Creation.

When I was a boy most of the tropical forests and savannas were indeed still wildernesses in a nineteenth-century sense. They covered vast stretches of land waiting to be explored on foot, and sprinkled through them were unrafted rivers and mysterious mountains. In the farthest reaches of the Amazon-Orinoco basins and New Guinea highlands lived Stone Age peoples never seen by white men. But more compelling than all these wonders, more than white water, talking drums, arrows quivering in tent poles, and virgin peaks awaiting the flags of explorers' clubs, the fauna and flora of the tropics called to me. They were the gravitational center of my hopes, a vertiginous world of beauty and complexity I longed to enter. When I grew impatient during my late teens, I looked around for some passable equivalent nearer home. The Alabama bay-gum swamps and riverine hardwood forests, I realized, were somewhat like tropical forests writ small. After I entered college I explored the edges of the Mobile-Tensaw delta floodplain with that comparison in mind. I was attracted by the dense shrubby vegetation and meanders of unnavigable shallow mud-bottom creeks.

It was a place no field biologist had visited—and was seldom entered by anyone for any reason—and I wondered if it might contain undiscovered species of ants and other insects living in ecological niches new to science. I decided I would conduct a one-man expedition into the interior and thus inaugurate my career as a tropical explorer, at least in spirit.

I never made it into the delta. I was too occupied with the demands of college life at the University of Alabama and my ongoing studies of fire ants and other research projects across the state. Then successive transfers to the University of Tennessee and Harvard to continue graduate studies removed me from the region altogether.

In my first year at Harvard I was delayed further. I settled on a sensible thesis project that could be reliably finished in three or four years. *Then*, I figured, I could go to the tropics. My research would be on the ant genus *Lasius*, one of the most abundant but poorly understood assemblages of the north temperate insect fauna. The forty or more species are distributed through the cooler habitats of Europe, Asia, and North America. Their colonies excavate a large percentage of the little crater nests that dot cornfields, lawns, golf courses, and sidewalk cracks across the United States and Canada. If you go out and look for small brown chunky ants along the streets of cities such as Philadelphia, Toronto, and Boise, the first ones you are likely to see are foraging workers of a species of *Lasius*.

My project required a great deal of museum and laboratory work, but my explorer's urge destined me for the open air. I made it back decisively into the field in the summer of 1952 when I teamed up with Thomas Eisner. He was, like me, a first-year graduate student at Harvard. We found we had a great deal of scientific interests in common and soon became best friends. In one sense he was the perfect Harvard intellectual: multicultural and driven. His father, Hans, was a chemist and German Jew who, with his wife, Margarete, three-year-old Tom, and Tom's older sister Beatrice, left in 1933 when Hitler rose to power. They settled in Barcelona, only to witness the outbreak of the Spanish Civil War and the expansion of fascism. In 1936 Tom, then seven years old, heard the sound of dive bombers attacking the city, as the family prepared to flee to Marseilles

and then to Paris. In 1937 the elder Eisner took his family to Montevideo, Uruguay. In this neutral country Tom spent the rest of his childhood in relative peace. The war had been left largely beyond the horizon, but Tom was kept aware of its progress. He was one of the spectators who watched the distant smoke plume rising from the pocket battleship *Admiral Graf Spee* as it was scuttled in the River Plate outside Montevideo after being chased there by British cruisers.

In Uruguay Eisner kindled a lifelong interest in butterflies and other insects. As he approached college age, his family moved to New York. Tom came to Harvard fluent in German, Spanish, French, and English, with a smattering of Italian. He was a virtuoso at the concert piano and, most important to me, a committed entomologist. We were kindred spirits in that one central pursuit. On a grander scale he had repeated the pattern of my own childhood, having been towed from one locality to another, anxious and insecure, turning to natural history as a solace.

Eisner was, and is (he has changed remarkably little over the years), a slender man with wispy hair and a tense and energy-charged manner, spinning in perpetual motion from one research scheme to another. He is a great biologist by virtue not just of extraordinary lifelong dedication but also of a masterly application of what I like to call the pointillist technique, which works wonderfully well in evolutionary biology. Eisner completes one meticulous study after another, usually a pinpoint analysis of some aspect of the way insects and other arthropods use chemical secretions to communicate and defend themselves. Taken separately, any one of the individual contributions may seem to apply to only a few species and hence to be of limited interest. Taken together and viewed from a distance, however, they form a novel evolutionary pattern of biology.

When I met him in the fall of 1951, Eisner was, like me, on the threshold of the serious part of his career. We had the good fortune to fall in together with other students destined for achievement and whose influence on us was immediate and considerable. They included Donald Kennedy, who became president of Stanford University; Howard Schneiderman, in later years vice president for research at Monsanto Company;

and Sheldon Wolff, destined for a distinguished career in cytology and medical research.

Tom and I decided to spend the summer of 1952 in search of insects across North America, traveling fast and free. In late June we took off in his 1942 Chevrolet, which he had named Charrúa II after the old Amerindian warrior tribe of Uruguay. We went north from Massachusetts to Ontario, then proceeded across the Great Plains states to Montana and Idaho, from there to California, Nevada, Arizona, New Mexico, through the Gulf states, and, finally, northward home in late August. We were naturalist hobos. We lived on the margin of society. Each night we slept on the ground, sometimes in the feeble camping areas of state parks, more often on the edge of open fields and woodlots off the side of the road. We ate canned food and washed our clothes under campground faucets, putting most of our negligible funds into the care and fueling of Charrúa II. The car required a quart of oil every hundred miles and frequent repairs of its frazzled tires. While I collected and studied ants, Eisner collected ants for his own future thesis research on anatomy, along with dustywings, snakeflies, and other insects of the order Neuroptera.

It was a time when national parks were uncrowded and many of the nation's major highways were still winding two-lane roads. We wandered almost aimlessly through cypress swamps, alpine meadows, and searing deserts, observing and collecting insects. On one ovenlike July night we made a swift traverse of Death Valley, cooled only by wet handkerchiefs tied around our heads. We saw most of the major ecosystems of North America close up, and all we learned in that remarkable summer cemented our lifelong passion for field biology.

A few months later, in the spring of 1953, I was handed the opportunity of a lifetime: election as a Junior Fellow in Harvard University's Society of Fellows. The Society, patterned after the prize Fellows of Trinity College in Cambridge University, gave three years of unrestricted financial support to young men (and, in later years, young women) who demonstrated exceptional scholarship potential. Junior Fellows were encouraged to study any subject, conduct any form of research, go anywhere in the world their interests directed them. The Society was made up of two dozen Junior Fellows and nine

Senior Fellows, the latter being distinguished Harvard professors who served as mentors and dinner companions to the younger men. Each year the Senior Fellows chose eight new members to replace the third-year, graduating class. In 1953, as one of the fortunate few, I found myself lodged free in Lowell House with a generous stipend, a book allowance, and travel funds available upon application.

At the first dinner of the fall term we new Fellows stood as the Society chairman, the historian Crane Brinton, read the statement written by Abbott Lawrence Lowell, who as president of Harvard in 1932 had given a substantial portion of his fortune to found the Society:

You have been selected as a member of this Society for your personal prospect of achievement in your chosen field, and your promise of notable contribution to knowledge and thought. That promise you must redeem with your whole intellectual and moral force . . .

You will seek not a near, but a distant, objective, and you will not be satisfied with what you have done. All that you may achieve or discover you will regard as a fragment of a larger pattern, which from his separate approach every true scholar is striving to descry.

Fair enough. On that first evening I savored the expertly selected wine, the rare roast beef, the postprandial cigar, the self-conscious scholar's talk. Like Thackeray's Barry Lyndon, I was a happy indigent admitted to the company of lords. The Society proceeded to transform my self-image and my career. Its greatest immediate impact was a sharp rise in my expectations. I had been examined by first-rate scholars in diverse fields and judged capable of exceptional research across an expanding terrain. I thought, I have three years to justify the confidence placed in me, the same amount of time it took to make Eagle Scout. No problem. The Society's alumni and Senior Fellows were outstanding achievers; they included Nobel and Pulitzer winners. I thought, That's a reasonable standard to shoot for.

The second gift from the Society of Fellows was to place me in the weekly company of other young men, all in their twenties, who had begun to excel in widely diverse fields of

learning. My new companions included Noam Chomsky, with whom I discussed the instinctive behavior of animals; the poet Donald Hall; and Henry Rosovsky, economic historian and future dean of the Faculty of Arts and Sciences at Harvard. Among the many notable dinner guests I met during my three years as a Junior Fellow were Bernard DeVoto, T. S. Eliot, Robert Oppenheimer, and Isidor I. Rabi. I spent an especially memorable evening arguing with Rabi about the evolutionary consequences of atomic bomb tests; he defended the position that the explosions were good because radiation increases the rate of mutation, which can speed evolution. And that is a good thing, is it not? Was he serious? I was not completely sure, but the conversation was information-packed and exciting either way.

The final gift of the Society of Fellows was to launch me into the tropics at last. As quickly as I could arrange it, in mid-June, I departed for Cuba. On the flight from Miami to Havana the pilot invited the younger passengers into the cockpit, where I watched the Cuban coast come into view and my dream become reality.

In Havana I joined a small group of other Harvard graduate students to commence a course in tropical botany. We first traveled by car to the western province of Pinar del Río to visit patches of forest on the *mogotes*, outcroppings of limestone too rugged to convert into fields of sugarcane. The rest of the land had been cleared almost everywhere down to dirt and grass, left dotted for the most part only by towering royal palms. Several days later we proceeded to the Atkins Gardens, a Harvard-owned property at Soledad, near Cienfuegos on the southwestern coast forty miles east of the Bay of Pigs.

From the Gardens I traveled with three botanists, Robert Dressier, Quentin Jones, and the course instructor, Grady Webster, to search for remnants of the Cuban forest in Las Villas Province. The very difficulty of this quest bore shocking witness to the ecological destruction of the island. For centuries Cuban landowners had relentlessly cleared the forests with no concession to the native fauna and flora. To find the last refuge we had to go beyond the reach of bulldozers and chain saws, mostly up onto the slopes of steeper mountains and down the banks of river gorges. Traveling across the west central part

of the island in 1953, I began to undergo a fundamental change in my view of the tropics.

On one memorable morning, we climbed into a Jeep to visit Blanco's Woods, a locally famous woodlot left uncut because its wealthy absentee owner had for some reason neglected to "develop" it. Blanco's Woods was one of the few parcels of relatively undisturbed lowland forest remaining in all of Las Villas Province, and probably all of Cuba. We drove for miles along rutted dirt roads through sugarcane fields and cattle pastures, crossing small fordable streams lined with corridors of weeds and second-growth woody vegetation. Occasionally we had to stop to open cattle gates and shut them behind us. We found it next to useless to probe the baked clay ground along the way for native plants and insects, of which there were few to none. It was equally pointless to look for endemic Cuban birds and other vertebrates. Among the few to be seen in the vicinity were the abundant brown anole lizards on the fence posts and, once in a great while, a giant Cuban anole in the crown of a royal palm.

When at last we came to Blanco's Woods it seemed unprepossessing, not a rain forest of popular expectation, but a stand of small to medium-sized trees, mostly torchwood, undergirded by dense shrubby undergrowth. If we had not been able to identify the trees, we might have imagined ourselves to be on the edge of an Iowa woodlot. Still, the little forest proved to be rich in representatives of the original Cuban fauna and flora, and we reveled in the discovery of one native species after another. While mosquitoes feasted on my sweating face and arms, I turned up two treasures of the ant world: the Cuban species *Thaumatomyrmex cochlearis*, its proportionately huge pitchforklike jaws wrapping all the way around the head so that the longest tines stick out beyond the rear border; and *Dorisdoris nitens*, one of the rarest ants in the world, a shiny black species of a genus and species also found only in Cuba—and then known from only one previous collection. These specimens and others gathered in a few hours made valuable additions to the Museum of Comparative Zoology ant collection.

We decided to visit next the nearby Trinidad Mountains to study residues of forest still surviving there. Our car trip was even more difficult than the one to Blanco's Woods. We

drove southeast along the uncertain two-lane, mostly unpaved highway from Cienfuegos to the town of Trinidad, and we were held up for an hour at a ford on the Rio Arimao jammed with trucks and cars. We had heard that a new road was being cut up the east slopes of the massif, and now we resolved, in order to make up lost time, to take it as a short cut to the vicinity of San Blas, where we knew forest was most likely to be found. The route proved to be a muddy nightmare. We toiled up it, occasionally pushing our four-wheel-drive vehicle out of the deeper ruts. We passed treaded earth-moving equipment and trucks loaded with newly cut logs (our forest!) on the way down. At the top, where we stopped at last to rest and to collect specimens, groups of people came from their houses to offer congratulations: ours was the first vehicle to make it up the new road.

Across the island on this day, young Fidel Castro was preparing to storm the Moncada Barracks in Santiago de Cuba, which was defended by 1,000 of Batista's troops. His near-suicidal attack would be launched a week later. Seven years later the Harvard station would be appropriated and Cuba largely closed to American naturalists.

The groves of trees we encountered in the Trinidad Mountains were mostly *cafetals*, small family-owned coffee plantations. I found and duly sampled a few native Cuban ants and other insects living there. We then hiked off the road to higher slopes, working our way along the edges of bluffs and around spurs of dogtooth limestone. The land was either too steep or too rugged to support agriculture, yet fertile enough to shelter patches of native rain forest and other vegetation. If it were not for mountains and limestone, I reflected, all of Cuba would be a sugarcane field. At Mina Carlota we found ourselves at last in the midst of an abundance of the old fauna and flora of the Cuban mountains. Forty years earlier William Mann, then a Harvard graduate student studying ants and now, in 1953, director of the National Zoo, had traveled to this exact spot. After a few hours of random collecting, he stumbled upon a new species of ants, which he later named *Macromischa wheeleri* in honor of his sponsoring professor, William Morton Wheeler. In 1934 he recounted his discovery thus in the *National Geographic*:

I remember one Christmas Day at the Mina Carlota, in the Sierra de Trinidad of Cuba. When I attempted to turn over a large rock to see what was living underneath, the rock split in the middle, and there, in the very center, was a half teaspoonful of brilliant green metallic ants glistening in the sunshine. They proved to be an unknown species.

Ever since reading that passage as a ten-year-old, I had been enchanted by the idea of prospecting in a faraway place for ants that resembled living emeralds. Now here I was at the very same place, climbing the steep forested hillside of Mina Carlota. Searching for ants, I turned over one limestone rock after another, perhaps a few of the very ones that Mann had handled. Some cracked; some crumbled; most stayed intact. Then one rock broke in half, exposing a cavity from which poured a teaspoonful of the beautiful metallescent *Macromischa wheeleri*. I took a special satisfaction in repeating Mann's discovery in exact detail after such a long interval of time. It was a reassurance of the continuity of both the natural world and the human mind.

As my companions and I proceeded across the Trinidad massif on our way to Mayarí, I encountered another ant, *Macromischa squamifer*, whose workers glistened golden in the sunlight. The color resembled the scintillations of tortoise beetles found in many parts of the world. This striking and unlikely color is most likely produced by microscopic ridges on the body that refract strong light. Bright colors are a widespread trait among West Indian species of *Macromischa* (the genus has since been reclassified as a group with the genus *Leptothorax*), and it is a fair guess that the ants use their raiment to warn predators of strong stings at the tips of their abdomens or poisonous chemicals held within the glands of their bodies. In the natural world, beautiful usually means deadly. Beautiful plus a casual demeanor *always* means deadly.

On this special day the old Cuban animals and plants continued to reveal themselves, like surviving spirits in a sacred ruin. On a tree fern near Naranjo, at 1,000 meters altitude, I found a species of anole lizard new to science, light brown with a greenish tinge, overlaid by cream rectangles along the

back. While trying to escape me, it hopped like a frog instead of running like most of the other members of its genus.

The botanists brought me another kind of anole, a giant by the standards of its group of lizards, nearly a foot in length. Its eyelids were partly fused, giving it a permanently sleepy look, and it bore a strange crescent-shaped ridge along the back of its skull. The creature was very slow-moving for an anole and had the unique ability to rotate its eyes in different directions independently. I later found that my little monster was a known species, *Chamaeleolis chamaeleontides*, the sole member of an endemic Cuban genus. As the nineteenth-century zoologist who named it was aware, the species resembles the true chameleons of Africa and Madagascar in the traits I have just cited. Its superficially similar anatomy is not due to kinship with these lizards, however: it did not descend from an African species that rafted from Africa across the Atlantic to the West Indies. Rather, its peculiarities are the product of convergent evolution, a true all-Cuban creation.

I named the lizard Methuselah for its craggy features and gray wrinkled skin, and kept it as a pet for the rest of my summer's travels. I was fond of Methuselah but also recognized an unusual opportunity for original research. No one had previously studied a live *Chamaeleolis*. Was the species convergent with the true chameleons in behavior as well as in anatomy? In the fall I brought Methuselah back to Harvard, continued to study it daily, and found that its behavior was indeed convergent with that of the chameleons, as I had guessed. It stalked flies and other insects with extremely slow movements of its body, following its targets by a covert rotation of its eyes and then seizing them with startling speed by a forward lash of tongue and snap of jaws. Methuselah's manner was strikingly different from that of other anoles, which dash forward from their resting place to catch prey, then back again, like flycatchers. It diverged even though the species is related to them by common ancestry. I thus held in my possession an important bit of Cuban natural history never before reported. I subsequently published an article on my findings. Only later did I come to appreciate that *Chamaeleolis chamaeleontides* is probably a threatened species; as a consequence, having removed an

individual even for scientific study is not something of which I can be proud.

In late July, accompanied by Robert Dressler, Quentin Jones, and Methuselah, I flew from Havana to Mérida, on Mexico's Yucatán Peninsula. We departed immediately for a week's collecting in the thorn forest along the Progreso–Campeche Road, with a side trip to the ruins at Uxmal. We found the great temples and courtyards of the Mayan city only partly cleared of vegetation. No tourists or guides were present, and we enjoyed a free run of the grounds. Ants abounded on and among the crumbling edifices, as no doubt they had done 1,400 years previously when the first stones were laid. I climbed the stairs of the Temple of the Magician to a fig tree growing on its apex, and from the branches of the tree collected workers of *Cephalotes atratus*, a large, shiny black ant with compound spines. Resting briefly by the tree, I reflected on this triumph of the ever-abounding life of insects over the works of man.

We next flew out of Mérida to Mexico City, where I left Dressler and Jones and began a solitary all-entomology expedition. I took a bus eastward, through the pine-dotted uplands of the Mexican Plateau and down the winding road that drops thousands of feet to the coastal plain and city of Veracruz. I arrived for the first time in what I like to call the *serious* tropics: not the island habitats of the West Indies, with their eccentric and interesting but limited fauna and flora; not the mangrove fringes of the Florida Keys and Caribbean coasts, however verdant; but the inland continental lowland tropics, the true Neotropics, with its vast biota deployed in endless combinations of species from Tampico in Mexico through Central and South America to Misiones Province in northern Argentina. Here in almost any patch of moist forest I could find more species of ants in an hour than would be possible in a month's travel through Cuba.

I searched for residues of the vanishing rain forest along the coast, finding them in the vicinity of El Palmar, Pueblo Nuevo, and San Andrés Tuxtla. All were under heavy siege, already cut back along the edges and high-graded in the interior. Off the highway other such refugia could be seen on distant hilltops

and the slopes of steep ravines. Such was and remains the pattern of access left to visitors everywhere in the tropical world. It can be expressed in the form of a standard route: leave the road, climb through a barbed-wire fence, hike across a pasture, and slide down a slope to the edge of a stream. Cross the stream—if it is shallow enough—and start up the other side to the edge of the forest. Cut through fringing second growth until you reach the shade of trees. At this point you have arrived at your destination but are likely to be on an incline so steep that it is necessary to hold on to the trunks and exposed roots of bushes and small trees to avoid tumbling head over heels back down to the bottom.

How much longer will these precarious refuges last until they too are cut away? It was frustrating and heartbreaking to travel in Mexico with such thoughts in mind. When at last I made it into the rain forests of Veracruz State I operated like a vacuum cleaner, taking samples of every kind of ant I could find. At night I identified species, labeled my vials, and wrote natural history notes. I had remarkably quick success by entomological standards: I captured colonies of two genera, *Belonopelta* and *Hylomyrma*, that had never been studied before, and recorded my observations on their social organization and predatory behavior for later publication.

As I prepared to leave the Veracruz coast two weeks later, my attention was drawn to Pico de Orizaba, the great volcanic mountain just north of the city of Orizaba. Its beautiful symmetric cone rises 5,747 meters—18,855 feet—above sea level to a permanently snow-covered peak. Orizaba is not just a prominence atop an already towering mountain range or plateau like Popocatepetl and mighty Aconcagua, but a mountain of more solitary and mystic qualities, a lone giant born of Mexico's ring of fire, standing sentinel over the southern approaches of the central plateau.

I was drawn not just by the amazing sight but also by the very concept of Orizaba. I thought of the mountain as an island. It was isolated from the plateau, yet I believed that a lone climber could travel in one relatively short straight pass from tropical forest to cold temperate forest and finally into the treeless arctic scree just below the summit. The cooler habitats constituted the island. The surrounding tropical and

subtropical lowlands were the sea. Orizaba's uplands were close enough to the plateau to receive immigrant plants and animals adapted to the middle and upper slopes, yet isolated enough for unique races and species to have evolved and dwell only there.

So what might I hope to discover if I climbed Orizaba? No one had toiled up the slopes of the mountain to study ants, generally the most abundant of small terrestrial animals, with the possible exception of the much smaller mites and spring-tails. For every bird there might be a hundred thousand or million ants, and I could reasonably expect to sample the species effectively during a single fast traverse. I knew that the change in fauna and flora from tropical to temperate was likely to be dramatic. The southeastern face of the Mexican escarpment, where Orizaba sits, is the site of the most abrupt changeover of biogeographic realms found anywhere in the world, except perhaps in the Indian and Bhutanese Himalayas. On the plateau live large numbers of plants and animals typical of the Nearctic Region, a realm extending northward to encompass all of North America. While descending earlier the tortuous road from Puebla over the plateau to the Veracruz plain, I had left this world of beech, oak, sweetgum, and pine and entered the Neotropical Region, where aroids and orchids cling in masses to arrow-straight tree boles and lianas hang like ropes from the lofty horizontal branches.

I expected to find all this and more if I climbed Pico de Orizaba. Let me put it more strongly: I was foreordained to try it. I would start at La Perla, at 3,000 feet, and follow a donkey trail I had heard about to the hamlet of Rancho Somecla, at 11,000 feet. I would simply ask for the hospitality of the people there, who were rumored to be friendly to strangers, and proceed the next day on up to the snow line, at about 16,000 feet. I would collect ants and make notes on the environment all along the way.

I was a fool of course, traveling alone on foot up a high mountain without a map and no more than phrasebook Spanish. But I did make it most of the way. Early in the morning of a beautiful late August day, I took a bus from the city of Orizaba to La Perla and started walking. The mountain's south slope was mostly uninhabited; I encountered no one on the

trail until I reached Rancho Somecla, my destination, late that afternoon.

My journey began in subtropical vegetation. At 5,500 feet I entered a forest dominated by hornbeam and sweetgum, both temperate-zone trees, with tree ferns abundant in the understory. Scattered through the habitat at lower elevations were dense, wet patches of tropical hardwoods. The ants in this transition belt, which composed nothing less than the passage from the Neotropical to the Nearctic regions, were a mix of tropical and temperate species: army ants and fire ants mingled with species of the typical north temperate genus *Formica*. Two of the *Formica* species later proved new to science. At 8,000 feet I found a mixture of pines, making their first appearance along the ridges, and broadleaved trees dominated by hornbeam on the slopes. The woodland was tessellated by pastures and stump-filled glades recently cleared by woodcutters.

When I arrived at Rancho Somecla, which turned out to be a collection of about a dozen houses, I was close to exhaustion. To the people who came out to meet me, I explained as best as I could why I was there. I doubt that they really understood my words or gestures, but one family promptly offered me lodging. I rested while they prepared a chicken dinner. Then, as the light failed, I headed out for one more try at ant collecting in the surrounding pine forest, this time accompanied by several young men who listened gravely as I explained why I was tearing up the bark of rotting logs and putting insects in bottles. One of my companions agreed to guide me to the snow line the next day.

That night I slept not at all. My bed was a table, and the single blanket given me offered little warmth when the temperature fell into the forties Fahrenheit. Occasionally I rose to look through the door at the brilliant full moon in a cloudless sky. It would be a wonderful place to live, I thought, if you brought a lot of blankets.

At dawn the next morning, after pressing some pesos on my hosts, I headed on up the mountain with my guide. When we reached an elevation of between 12,000 and 13,000 feet, we entered open cloud forest, where the pine trunks were gnarled and the branches draped with epiphytes. My excitement was growing, but I could go no further. The air was too thin for

---

someone who had been living at sea level, and I was gasping for breath. I estimate that I had come to within 400 feet of timberline and perhaps 3,000 to 4,000 feet below the snowcap. Of course I was at my physical limit. I had been entirely naive to suppose that anyone could walk three miles from the lowlands straight up into the air in thirty-six hours and keep on going.

In any case ants had become very scarce, even in the clearings warmed by the morning sun. I searched for an hour before finding one colony nesting beneath a wood chip. Then I turned around and started walking back down. At Rancho Somecla I shook hands with my guide and headed alone down the trail to La Perla, moving rapidly now, then to my hotel in Orizaba, where, the sated adventurer, I slept for twelve hours.