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IIC AUGUST, 1964 *YANKEE* IN EUROPE MOZAMBIQUE NORTHERN IRELAND PERUVIAN W

KODACHROMES BY PETER R. GIMBEL © N.G.S.

PARACHUTIST *Jack C. Joerns floats toward the unexplored Cordillera Vilcabamba, in the Peruvian Andes. A special high-altitude chute allows him to land safely two miles above sea level.*

By Parachute

By G. BROOKS BAEKELAND

CRAMPED IN THE AIRPLANE with our bulky gear, Peter Gimbel and I looked out of the open door and then, questioningly, at each other.

A year of careful preparation had brought us to this moment of decision far above a remote spur of the Andes of southeastern Peru. We planned to parachute through the thin air onto a 10,500-foot-high shelf in the wild, mysterious Cordillera Vilcabamba. So far as we knew, no man had ever set foot there. But now the lack of a brisk breeze to slow the landing speed of our gliding-type parachutes made jumping hazardous.

On this long step downward into unex-

Into Peru's Lost World

Photographs by the author and PETER R. GIMBEL

plored territory hung the success of the 1963 Vilcabamba Expedition, sponsored by the National Geographic Society and the New York Zoological Society.

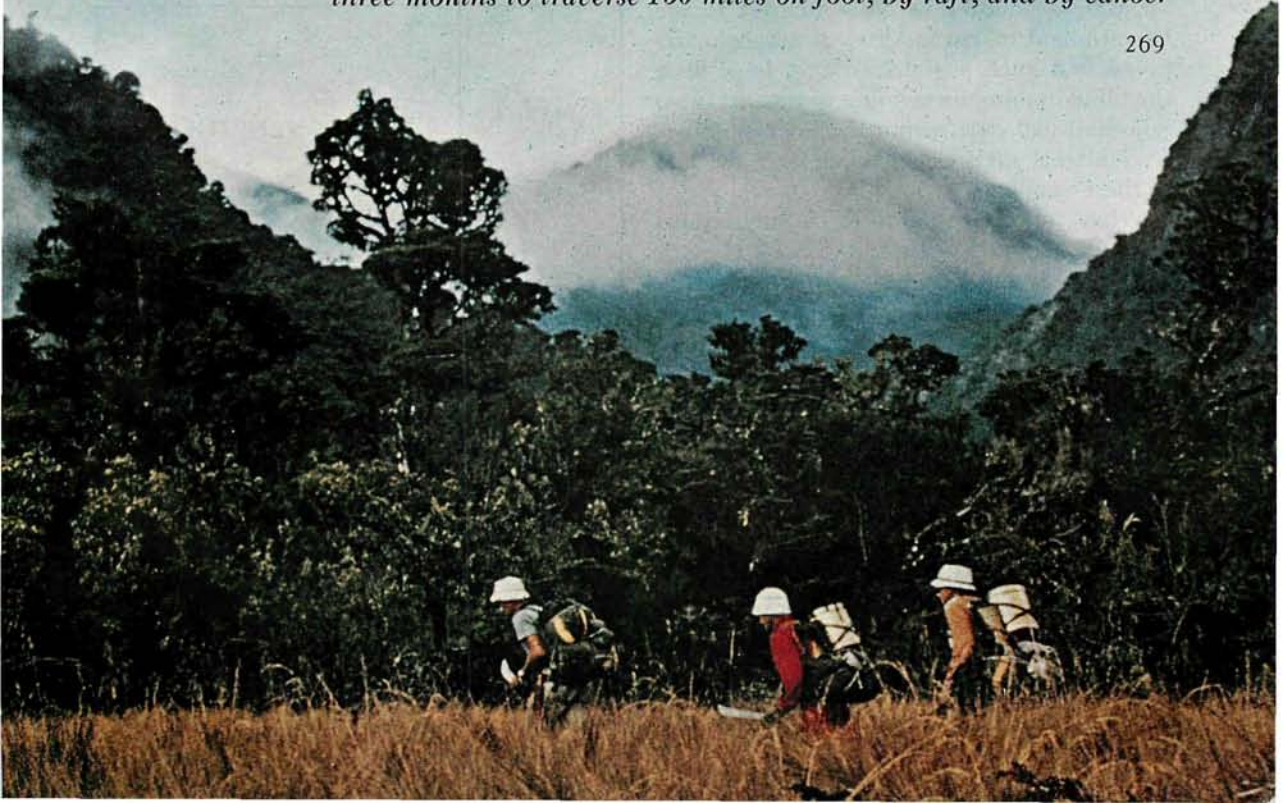
The northern two-thirds of the Vilcabamba range, cut off from the south by the deep gorges of the Cosireni River, rises like an island from a vast sea of jungle and juts out into the Amazon Basin. It embraces 9,000 square miles, roughly the area of New Hampshire (map, page 271).

When we arrived, only tantalizing parts of the high, rugged interior had been seen from the air. Rumors of ruins, Inca gold, Indian taboos, and sacrificial lakes in the sky shrouded it in mystery. No scientist had ever examined its plant and animal life. This would be one of our objectives.

But expedition co-leader Peter Gimbel and I planned as our major goal to traverse this wild range from the western side near the Apurimac River to the Urubamba River, its eastern boundary, which we would follow downstream to its confluence with the Sepahua. Two other expedition parachutists, Jack Joerns and Peter Lake, would join us for the 150-mile exploratory trek.

High in these mountains, according to vague reports, lay an extensive plateau, 50 miles long, fertile, temperate, ideal for colo-

MACHETE-WIELDING EXPLORERS *of the National Geographic Society–New York Zoological Society Vilcabamba Expedition struggled nearly three months to traverse 150 miles on foot, by raft, and by canoe.*



KODACHROME BY PETER R. GIMBEL © NATIONAL GEOGRAPHIC SOCIETY

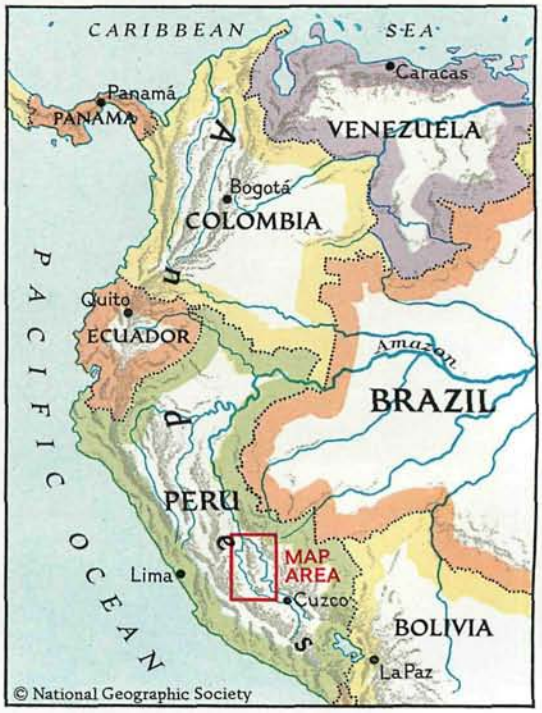
Snagging a line suspended between poles, a Helio Courier practices aerial pickups at the expedition base in Luisiana, Peru. Flying often in foul weather, two of these planes made dozens of bull's-eye cargo drops to the explorers and snared their packets of mail.

nization—a matter of great interest to the Government of Peru. Amateur archeologists noted that such a plateau might have been the fabled mountain redoubt of the last Incas who had fled north from the Spanish. Since 1572 a total silence had fallen over the fate of these people.

What awaited us in these mysterious heights? No one knew.

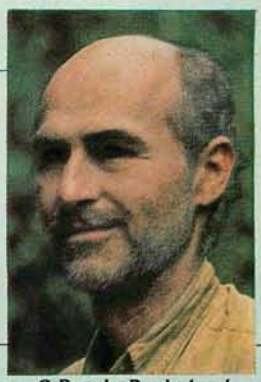
Now, at last, we were prepared to find out. Training for this day, each of us had made 67 practice jumps, the last ten with special high-altitude parachutes. To protect against a possible landing on rocks, we wore crash helmets and strapped football pads beneath our jump suits. Under thick-soled paratrooper boots my ankles were strongly taped. Shock-absorbent wrappings swathed our cameras.

Our calculations indicated that with no breeze the forward gliding speed of our new experimental parachutes in this rarefied atmosphere might bring us in at a dangerous rate—nearly twice that normally considered safe. A good ten-knot head wind would can-



THE VILCABAMBA

Four explorers surveyed the terrain from the air and on foot, collecting biological specimens and making notes for this map, the first to show actual outlines of the rugged Vilcabamba. The expedition achieved the first known traverse between the Apurimac and the Urubamba, tributaries of the Amazon.



G. Brooks Baekeland
Expedition Co-leader

Peter R. Gimbel
Expedition Co-leader

Peter A. Lake

Jack C. Joerns

0 10 20 30
STATUTE MILES

Main Party Route — Asheshov's Route ·····
Bush Settlements □ Expedition Stations □
Airstrips + Elevations in feet 14800

Map by John J. Brehm and John F. Dorr

cel out the forward speed and thus lighten impact. But there was only a light, variable breeze—perhaps two knots.

What to do? We hesitated, balancing the risks of injury against the time remaining for our first job on the ground: preparing an airstrip for the expedition's two planes.

The date was August 5, 1963. Our biologists and second exploring team would have to be flown in and all hands flown out before September's drenching rains. A year's work hung in the balance.

I asked Dick Tomkins, at the controls, for his opinion. He was our chief pilot and our most experienced parachutist.

"I'd say it's inadvisable," he replied. Then he laughed. "But I'd do it anyway."

We circled in the clouds as occasional rain splattered the windshield. I turned to Gimbel.

"I think we should," he said.

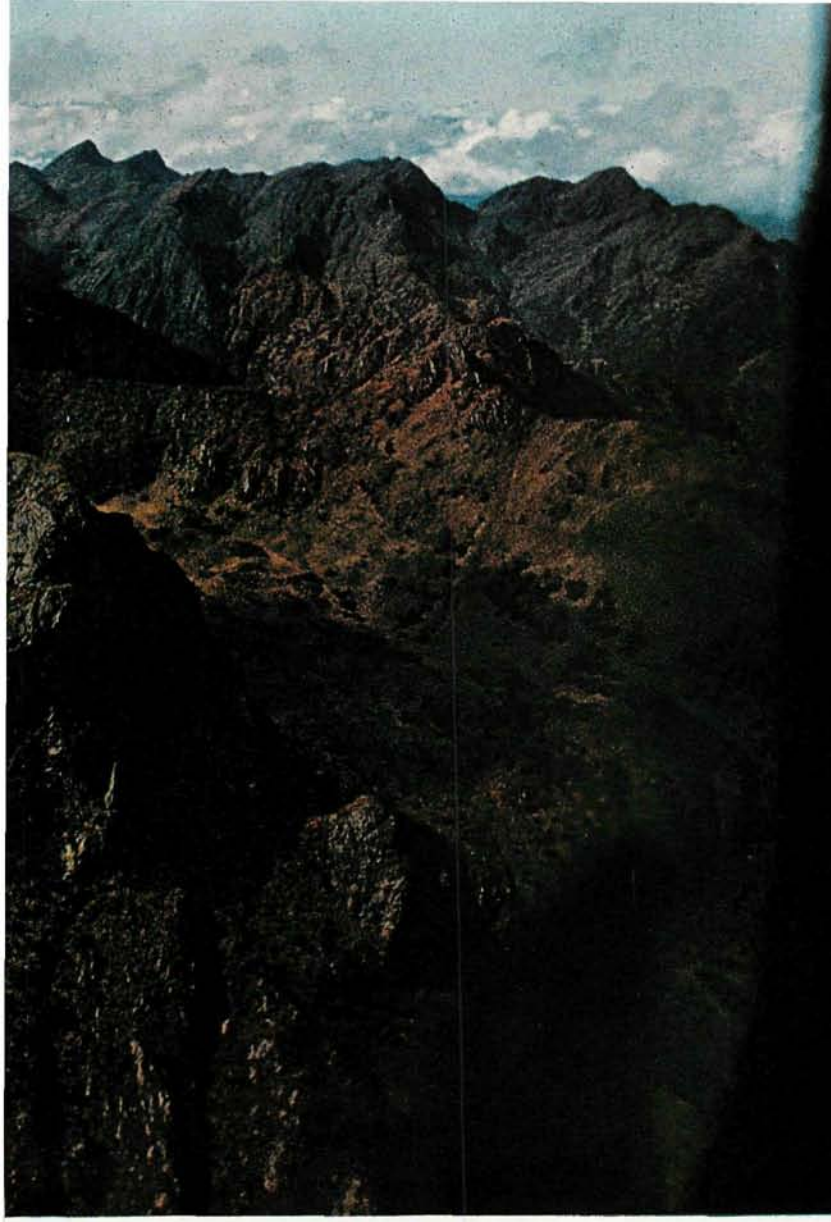
For a few more thoughtful moments we studied the terrain through breaks in the cloud cover.

"O.K.," I said. "Let's drop our duffel bag and panel markers."

Soft Ground Poses a Hard Problem

The plane came in 300 feet above the central clearing, one of three we had spotted on the mountain shelf. As the first grass appeared under us, we pushed out the heavy duffel bag containing our sleeping bags and personal gear, and watched it fall until it hit the earth with terrific impact, half burying itself. We could see that a dark flower had opened around it. It looked like mud—a built-in cushion for a parachute landing.

Our reaction to this sight was a simultaneous guffaw of relief. But now there was another problem: Ground that might be per-



MOST MAPS *still picture this land as a plateau, flat enough to serve as a landing field. Instead, the explorers found these nameless mountains, "magnificent, varied, awe-inspiring in their loneliness." Expedition planes flew back and forth over jagged peaks and steep-walled valleys, photographing and making radar profiles of the ground. Nothing indicated that the area surveyed had ever been inhabited, although legends claim that Inca rulers, fleeing the conquistadors, built cities of refuge in the northern Vilcabamba.*

KODACHROME BY
G. BROOKS BAEKELAND © N.G.S.

fectly safe for parachuting might also be too soft for an airstrip.

There was only one sure way to find out. We dropped the bag of panel markers, long strips of red and yellow cloth for ground-to-air signaling, and climbed to 14,500 feet for our first jump run.

My hands tightened on the door jambs as I felt the blast of air against my cheek. A cloud drifted toward us and passed swiftly underneath.

Then, three-quarters of a mile below, I saw the valley and wooded shelf to its north with three slanted, grassy clearings, one of which already contained our duffel and panel-marker bags. I could see nothing moving.

I had hoped to think of something amusing and memorable to say to my companions before I jumped. Peter and I exchanged a last smile. All I said was, "I'm going."

With that I pushed hard with both hands and was gone, launching myself outward and downward in a spread-eagle posture.

The roar of the aircraft engine died rapidly as I fell toward the Vilcabamba.

I allowed myself to fall free—perhaps for 2,000 feet—before I pulled my rip cord. I felt a tremendous jerk. Earth, sky, and horizon blurred together, swaying up and down. The swaying stopped.

I looked down. The valley seemed dark and bristly, like the mouth of a Venus flytrap waiting to catch me.

The plane buzzed faintly somewhere above the big nylon canopy. I grasped the parachute's two wooden steering toggles and maneuvered back and forth over the shelf. From 500 feet I saw small game trails running through the grass. The woods were a tangle

(Continued on page 278)

MOMENT OF DECISION: *Baekeland prepares to jump. Shortly after, his parachute (opposite) lowers him toward an unknown wilderness of green. "Whatever's down there," he thinks, "I'm committed now."*

KODACHROMES BY PETER R. GIMBEL © N.G.S.

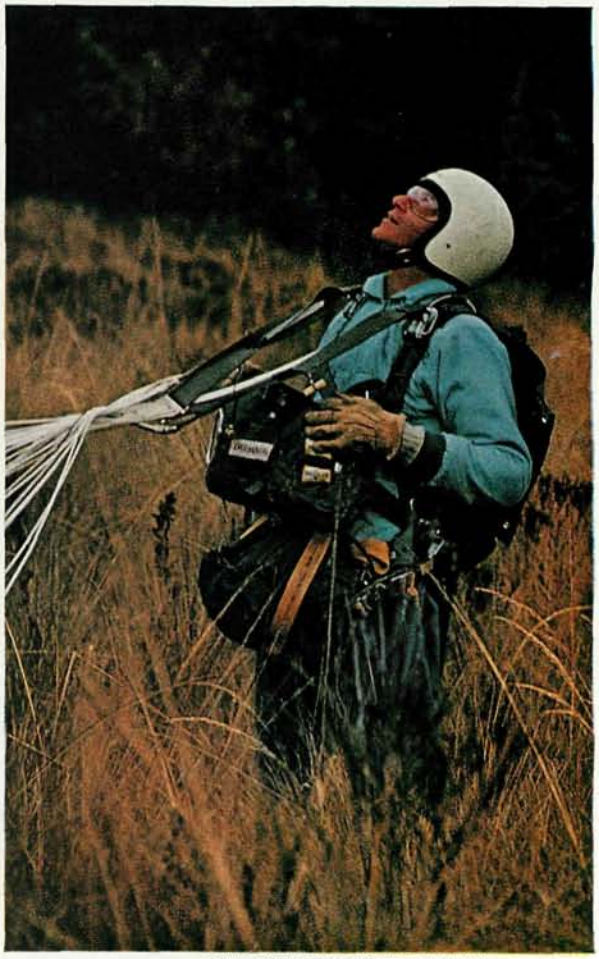
Chutists jump through holes in the clouds

BAEKELAND and Gimbel dropped onto a 10,500-foot shelf in the Vilcabamba on August 5, 1963. Four days later, Joerns (left) and Lake (bracing for impact) joined them in the unexplored highlands.

Landings in the thin air of such elevations became feasible only with the development of a novel type of parachute, the Para-Commander. Dozens of slots exhaust air out the back of the canopy, giving the chute the lifting effect of an airfoil and the forward motion of a glider. Control lines to canopy openings permit turns and some braking of the forward motion.

Jumpers intended to prepare an airstrip but had to rely on airdrops when soggy ground thwarted the project.

Wearing plastic helmet and goggles, Gimbel looks skyward at the plane that dropped him. Parachute lines trail away at left.



KODACHROMES BY G. BROOKS BAEKELAND (ABOVE) AND PETER R. GIMBEL © N.G.S.

of gnarled, stunted trees, covered with moss. In a gully I saw bamboo.

I aimed for a spot near our duffel bag. Tall grass came rushing up and engulfed me.

My 68th parachute landing was a good one.

Disentangling myself from the lines, I waved at the plane overhead. The waist-high grass around me seemed strange, unreal.

Down the clearing, which was as flat and unobstructed as any airfield, I could see more than 600 yards to the edge of the shelf. Beyond that was the wide glacial valley.

Dry Moss Conceals Black Mud

I was just thinking that this was even better than we had dreamed, when I felt cold water seeping in through the knees of my jump suit. I was kneeling on a layer of moss, perfectly dry on top. Thrusting a hand down into it, I discovered it was about a foot deep and covered a substratum of black mud soft enough to be squeezed between the fingers.

Ten minutes later Peter landed and rolled a short distance from the duffel bag. We shook hands and embraced, each grateful to find the other unhurt.

"Well, we're in, Brooko," he said, grinning.

He knelt down and parted the grass.

"Is it this wet everywhere?"

"Yes."

"Holy smokes!"

For the next half hour we tested the soggy ground. It would never take the weight of a plane, we concluded.

We discussed the possibility of using helicopters, which we had arranged to charter from the Peruvian Air Force if the terrain proved unsuitable for our fixed-wing Helio Couriers. These light craft need little take-off space—particularly with rocket assistance; slotted wings and oversize flaps permit landing at extremely slow speeds.

From exhaustive aerial surveys we knew the valley had some bushes and rocks. Surely it offered firmer ground than we had found so far. We decided to investigate.

"Better stop Dick before he drops any equipment here," said Peter. Tomkins had gone back to our headquarters, Hacienda Luisiana, 13 miles to the southwest, to pick up the first load of supplies and equipment for the advanced base we had planned for the clearing. With the panel markers we laid out two signals: a long arrow pointing toward the valley and an L with a bar under it, meaning: "We are going in this direction. Landing strip impossible here."

The plane reappeared after we had staggered halfway down the clearing with our heavy bags of duffel and signal panels. Dick dropped a canister containing a message: "Where shall I drop equipment and food?"

We had only nine small chocolate bars, but we didn't mind going hungry a little while. Until we had examined the valley floor, we didn't want any premature cargo drops.

Quickly we laid out another signal, a large N for negative.

Picking up our awkward loads, we continued down the clearing, panting in the thin air and swatting the swarm of gnats that formed what Peruvian highlanders call the *manta blanca*—the white blanket—on our faces and necks. Dick circled over us.

Soon we were wrestling the heavy bags downhill in a jungle of roots, small bamboos, and wiry vines. We were in dense cloud forest. Moss-covered holes swallowed us to the thighs. Ahead we heard the plane gun its engine once; then we heard it no more.

Airstrip Planned for Second Team

As night fell, an icy cloud enveloped us. We were drenched by perspiration and finally by rain. The tangle increased. When the rain stopped, a full moon rose, glowing in the fog. The valley floor was still somewhere below. We bedded down for the night. Sleep came slowly; Peter and I talked at length, reviewing the plans and decisions we had made, and the progress of our expedition thus far.

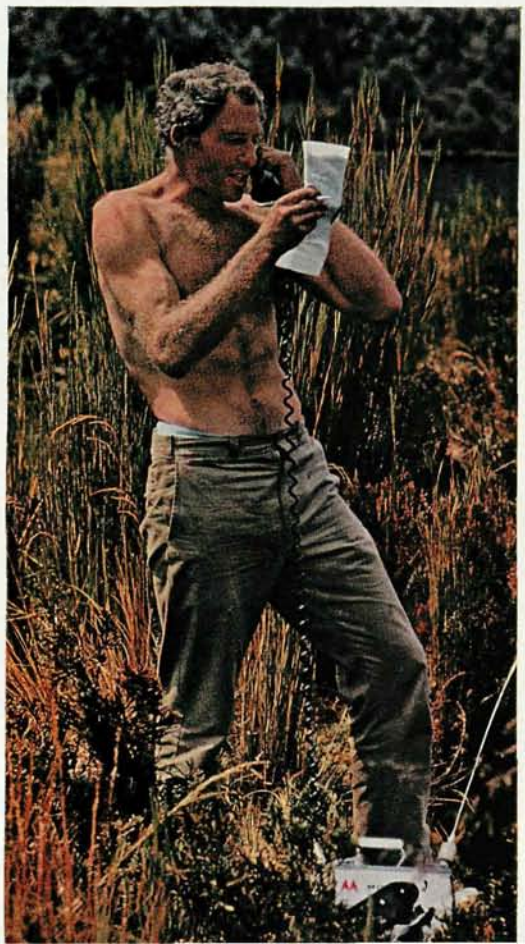
First of all, no attempt to penetrate the heart of the Vilcabamba on foot had ever succeeded. We had decided that the first exploring team of four men would enter by parachute. They would prepare an airstrip so that the second team, including two biologists, could be flown in either by Helio Courier or by helicopter.

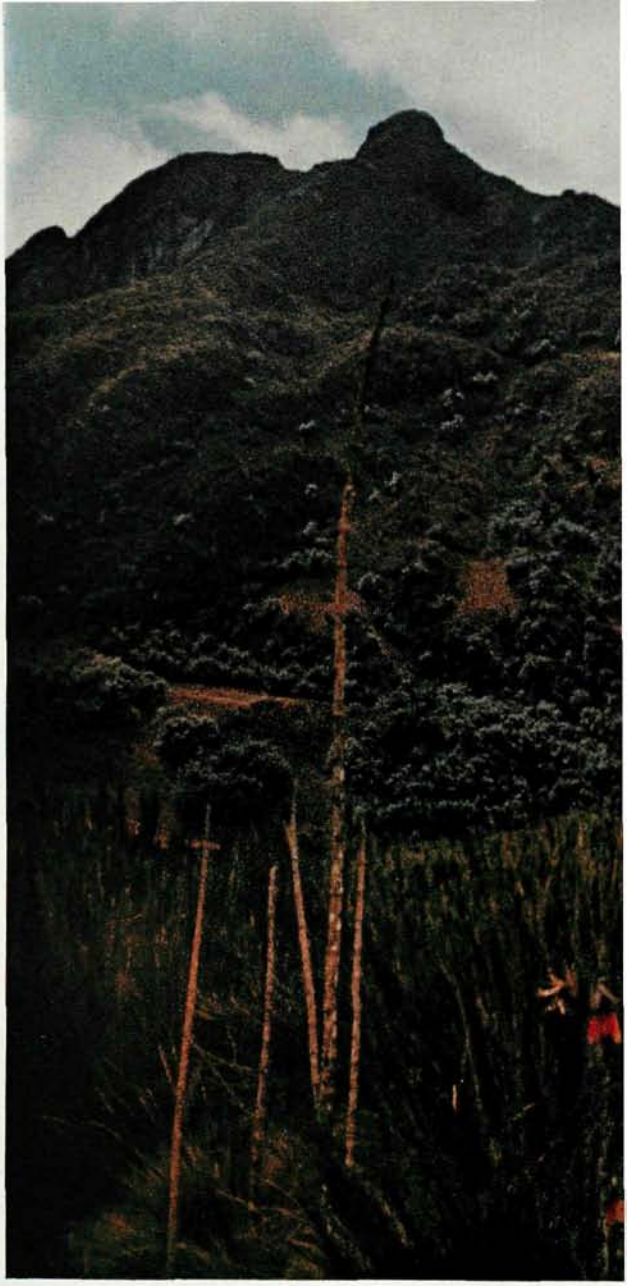
(Continued on page 284)

Tangled as a witch's dream, a nightmare landscape confronted the explorers. "Carrying packs weighing 60 to 90 pounds," says the author, "we hacked our way with machetes in freezing rain. We walked on tree roots; otherwise, we would have sunk in ooze. Several times we nearly marched off precipices suddenly revealed through gaps in the roots." In 1912 Hiram Bingham explored similar terrain 85 miles southeast of the parachute zone when he led a Yale University–National Geographic Society expedition to Machu Picchu, the Inca city he had discovered a year earlier.

Explorers had to climb to retrieve this parachuted package of equipment.

Using a radiophone, co-leader Peter Gimbel reads request for fresh supplies.





Radiophone and airplane: only links with the world

UNABLE TO LAND, support planes picked up mailbags from a loop between two poles. Jack Joerns, wearing the jump suit of his Las Vegas skydiving club, directs the pilot of this plane skimming a ridge to drop supplies.

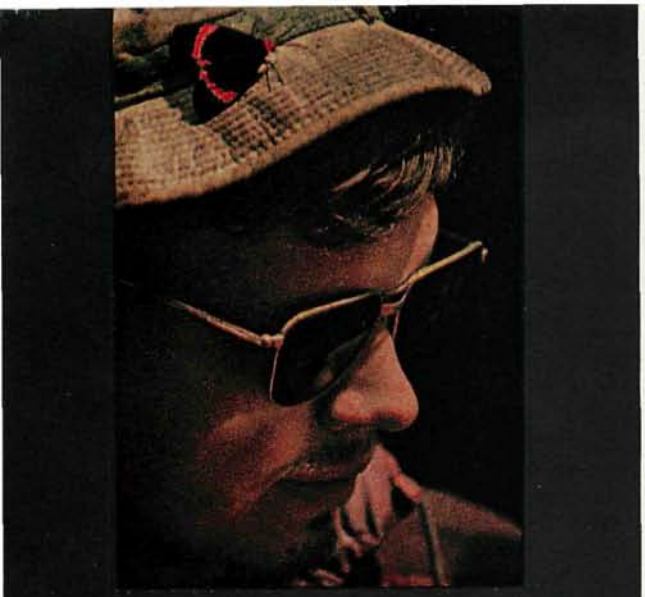
Transceiver at left weighs 20 pounds with spare batteries. "A real back-buster," reports Baekeland, "but it saved our bacon. If the planes had lost contact, they might never have found us."

Smoke bomb held by Peter Lake guides a pilot on a supply drop. Flares and bright signal panels were soon abandoned because of their weight.

KODACHROMES BY PETER R. GIMBEL (ABOVE AND BELOW) AND G. BROOKS BAEKELAND © N.G.S.

Lake Parodi Lends Beauty to a Peruvian No Man's Land

Map makers had no idea that so many lakes sparkled unknown in the Vilcabamba wilderness. The explorers informally named this one Parodi after the owner of Hacienda Luisiana. The expedition's tents (left center) seem lost in a patchwork of grass, trees, pygmy bamboo, moss, and orchids. Gnarled branches of an "ogre's orchard" writhe on the right.



Wildlife specimens go into the collecting bag

SLOGGING through the wilderness, expedition members gathered animals and plants for the New York Zoological Society.

As the men descended to lower altitudes, clusters of moths and butterflies approached, attracted apparently by salt from their bodies. Here *Coreura simsoni,* a little-known moth, perches on Lake's sweaty hatband.

Hummingbird of the genus *Metallura,* held between fingertips, lives at 10,800 to 12,000 feet, where temperatures often drop below freezing.

"One night," says the author, "we spotted the silhouette of a frog on our tent. Peter Lake later found it in the grass." It turned out to be this strange tree frog. Instead of laying eggs in ponds, *Gastrotheca* stows them, with her mate's help, under the loose skin on her back. Carrying the moist eggs in a grotesquely bulging pouch, the frog nimbly climbs trees.

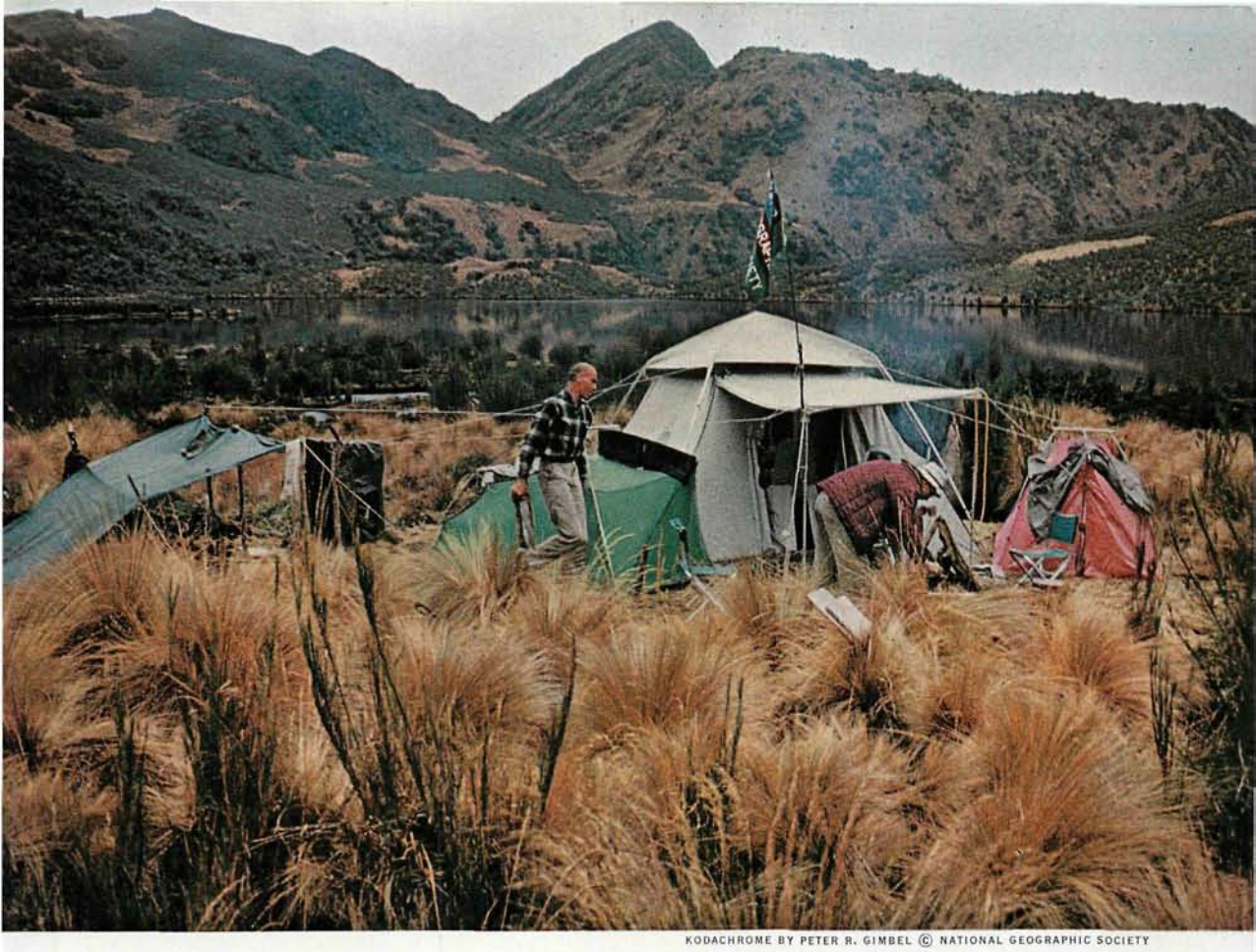
Diminutive *Lycopodium,* or club moss (half life-size), is not a moss but a living representative of a primitive plant group 300 million years old.

G. BROOKS BAEKELAND (UPPER TWO) AND PETER R. GIMBEL © N.G.S.

When we began our planning, both parachutes and helicopters presented problems. The only suitable copters were owned by the Peruvian Air Force. They would be more costly to fly than planes. They were limited in range, load, and reliability. And the government could withdraw them at any time.

Parachuting at first had seemed too perilous. No chute yet developed could promise relatively safe landings in the thin air at 12,000 feet—our expected height of entry. This problem, however, was solved by Jacques André Istel, who introduced sport parachuting to the United States and was a leader of our expedition until taken seriously ill.

Early in 1963, Istel jumped onto 10,000- and 12,000-foot elevations in Mexico with a radically new parachute, the Para-Commander (page 277). It looks much like other chutes, but has many slots, mostly in the back of the canopy. Air flowing through these openings creates the lifting, gliding effects of an airfoil, slowing descent. The Para-Commander was the answer to our problem.



KODACHROME BY PETER R. GIMBEL © NATIONAL GEOGRAPHIC SOCIETY

Camping in comfort for once, Baekeland (left) and Lake go about their chores beside newly discovered Lake Parodi. Here, at about 13,000 feet, the men observed numerous small birds, plus ducks and a gull-like species. They saw no fish.

Our final plan, then, combined the use of parachutes, short-landing-and-take-off Helio Couriers, and helicopters if necessary. A disassembled 700-pound tractor with a bulldozer blade was to be dropped to help prepare the landing strip for the planes.

The first exploring team—parachutists Gimbel, Peter Lake, Jack Joerns, and I—would traverse the region along the long diagonal of the Alto Picha River (map, page 271). A second group, including the expedition's biologists, would land by plane; some members would attempt a traverse by way of the Mantalo River. Both teams would be followed and supported from the air.

Thus, another main purpose of the expedition was to develop a technique for penetrating inaccessible mountain regions and for supporting work parties there over extended periods. The United States Army gave us generous aid in the form of experimental light-weight rucksacks, which needed testing, and cargo parachutes.

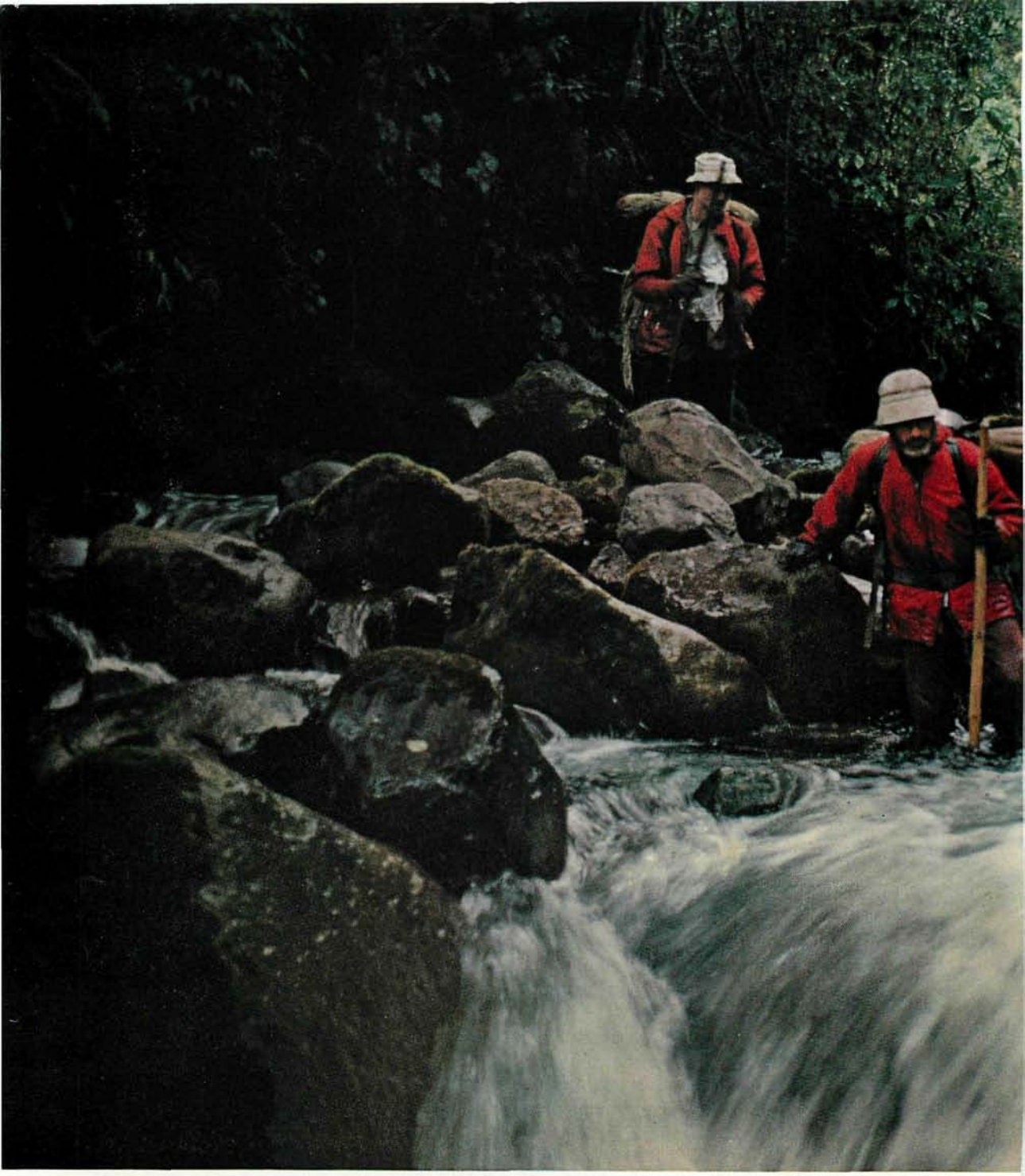
For a month before our jump we had flown a systematic aerial survey of the Vilcabamba. We carefully recorded ground profiles with radar and sensitive barometric altimeters, provided by Honeywell Inc. and the Bulova Watch Company. Peter and I took hundreds of photographs and wire-recorded a verbal description of everything we saw.

Indian Farmers Shun Vilcabamba Heights

The needlelike peaks were higher than we had supposed, and thrust up through great tilted sedimentary layers. One peak, measuring 14,800 feet, we later named for Melvin M. Payne, Executive Vice President of the National Geographic Society. Knifelike walls of glittering shale rose everywhere above grasslands, low bush, and dozens of black tarns. Many of the lakes, we were to learn, froze every night.

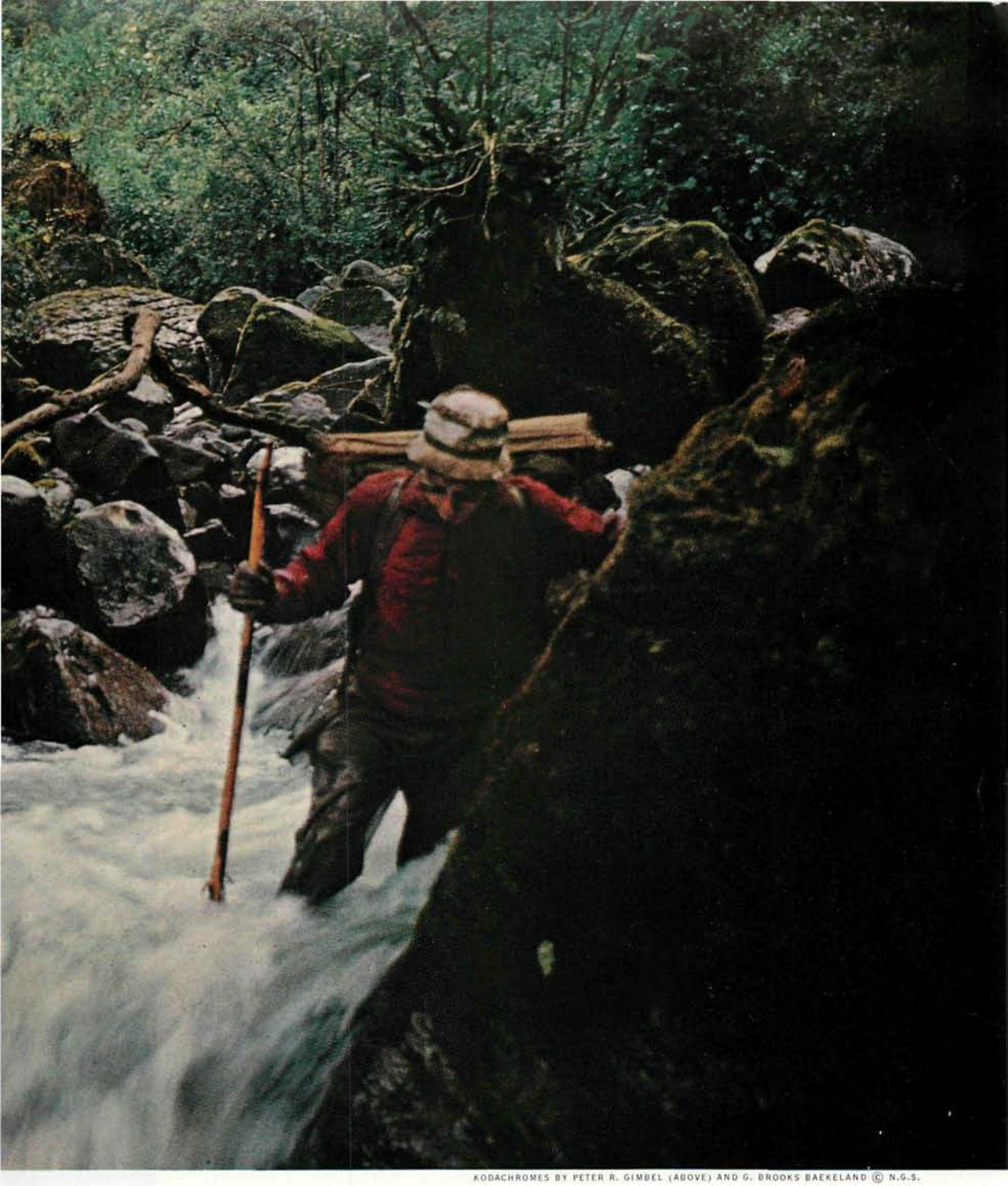
Our aerial survey showed isolated *chacras,* or jungle clearings, of Piro, Campa, and Machiguenga Indians—but only at elevations below 6,000 feet.

Why no higher? Dense jungle crept up to



A false step on these slippery rocks could be a man's last. Carrying his heavy pack, Lake (right) cautiously feels his way along a cascade on the Picha River. One such hazard after another faced the explorers as they blazed a trail across the Cordillera Vilcabamba.

Parachute line lashes a sole to Baekeland's foot. He wore out five pairs of shoes. New sneakers were air-dropped from time to time.



KODACHROMES BY PETER R. GIMBEL (ABOVE) AND G. BROOKS BAEKELAND © N.G.S.

10,000 feet on the Vilcabamba's flanks. Was the belt from 10,000 feet down to 6,000 really deserted? Why? And why in the higher grassy regions above 10,000 feet were there no people farming or raising livestock? Similar heights are widely populated by the Quechua and Aymará Indians elsewhere in the Andes.

After a chilly night on the lofty slope, Peter and I scrambled down to the valley floor and found a planeload of supplies and equipment dropped by Dick Tomkins after our jump.

Then we explored the valley. We photographed the topography and flora; recorded azimuths of the feeder valleys; took notes on the varieties of small birds, and hunted vainly for a mysterious animal that left tiny two-toed tracks and deerlike droppings.

Our survey revealed that no airstrip was possible here either—something we could never have determined from the air. Like

the shelf above, the valley was semibog; nothing short of a major engineering feat could drain it.

The first cargo drop included a walkie-talkie, and on August 9, in a message relayed from Luisiana to our expedition agent in Lima, we requested a helicopter.

On the same day Peter Lake and Jack Joerns parachuted in to join us. The first exploring team was now united in the Vilcabamba. Its initial job was to carry 500 pounds of gear to 13,000-foot-high Lake Parodi, nestled in a basin, where we planned to rendezvous with the helicopter.

Starting higher than 10,000 feet, we chopped through dense cloud forests with machetes, struggling hip-high in the "deep snow" of grass and moss (page 269), and fought insects, rain, and cold, always climbing with packs that weighed up to 90 pounds.

For three days the radio brought encouraging news about our helicopter, and Dick managed to drop us some mail.

And then the bad news came. The Peruvian Air Force could not let us have a helicopter. Thus it appeared that there was no possibility of landings in the Vilcabamba for our two biologists, Dr. Hans W. Koepcke of the University of San Marcos in Lima and Dr. Carl B. Koford of the National Institutes of Health near Washington, D. C.

Stygian Gorge Defies Penetration

Eventually we learned that Koepcke and Nicholas Asheshov, a young English jungle expert and newspaper correspondent, were attempting to reach our drop zone on foot via the Pichari River—a climb of some 8,000 feet. With two guides, one of them a Campa Indian, they had already been under way for three days.

The Pichari! Our hearts went out to them. We, who had just returned from three agonizing days in the upper Pichari gorge, had cut our way down into it through a bamboo forest, vainly searching its northern wall for a valley that we knew led up to Lake Parodi. Harrowed by rushing icy waters, constant rain, and the gorge's Stygian darkness, we had been forced to retreat.

Later we referred to it as the Valley of the Shadow of Death, for in the Pichari gorge we were constantly aware of the consequences of an injury. A man with a broken leg could never have been brought out.

On we climbed, often in the clouds. Daily the air grew thinner. We lost weight from exposure and exertion. Only at night, when huddled in our sleeping bags and dry woolens, could we ever escape the permanent wetting cold. As we approached the basin containing Lake Parodi, our camps became perches. We joked at night about falling out of bed without a parachute.

Jack always wore his shoulder holster and a .38 automatic, even to bed. One black night he woke us up with an urgent whisper.

"I smell an animal. It's very close." The animal turned out to be Peter Lake's sneakers—very close to Jack's nose.

At these altitudes we were astonished to see hummingbirds; one of them was large—six inches from beak to tail. Now and then we came upon areas where a bear had pawed up the ground in search of hibernating lizards, roots, and perhaps small rodents.

Thirteen days after leaving our drop zone, we reached Lake Parodi. There Dick Tomkins and the second pilot, Frank Hay, dropped us food and tents—a welcome luxury.

From the pilots we learned that Asheshov and Koepcke had failed to reach the drop zone on their first attempt. Now a new effort by Asheshov, accompanied only by two guides, was under way. It succeeded; he reached our drop zone in the second week of September.

Next Asheshov made a forced march to Lake Parodi —following trails we had cut a month before—explored to the east, then returned to the drop zone with the intention of descending the Mantalo River to the Urubamba.

Fate, however, was preparing a checkmate. The rainy season had come. Mounting cloud cover now made it impossible for our planes to find Asheshov and his two freezing companions. They had already discovered that they could not live off the country. Their radio had gone bad; it was doubtful that, once they started down the Mantalo gorges, Dick and Frank could ever find them again. Indeed, at this time, Dick had no idea where Asheshov was.

Asheshov retreated. Half-starved and in physical distress, he retraced his steps down the Pichari, now in flood.

Although Asheshov failed to explore the Mantalo, one of the expedition's aims, he had found and proved a way 8,000 feet up the steepest flank of the cordillera. By so doing, he had filled in the missing link of our traverse across the Vilcabamba.

On September 2, with 15 days' rations and heavy packs, our own party had crossed the divide and headed down the gorges of the Alto Picha, on the first leg of our tedious descent to the Urubamba. We were to find dramatic changes at successively lower altitudes.

At last we knew the answer to what had puzzled us from the air: The region between 6,000 feet and timberline at 10,000 feet was uninhabited by man because of rain, cold, and scarcity of game. Above timberline the soil

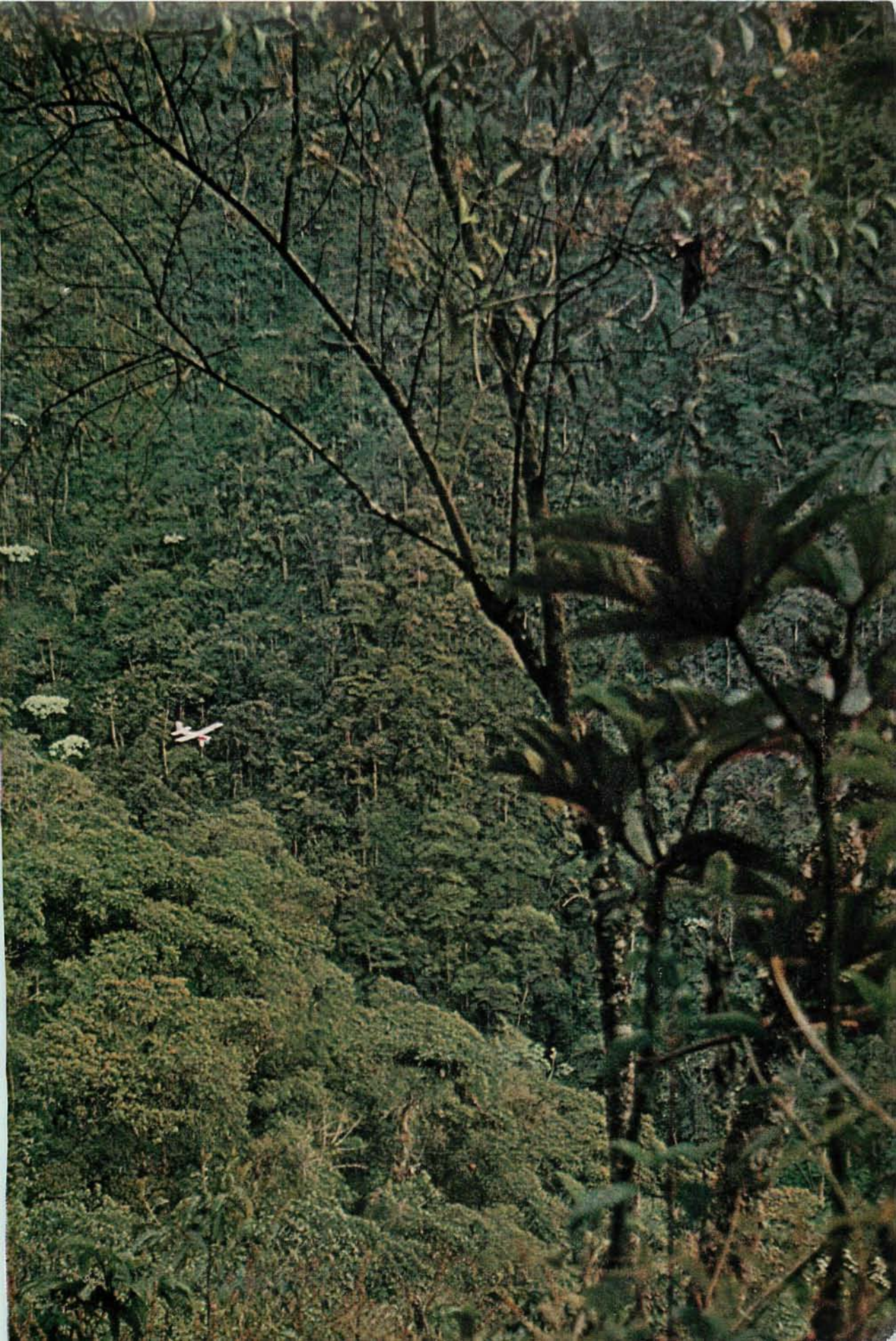
Blinded by Wasp Stings, Baekeland Sinks Into a Coma

When the venomous insects zeroed in on him as he climbed a cliff, the co-leader reports, "I felt as if I were being lashed with a cat-o'-nine-tails and tried to strip off my clothes. I thought I was going to die, but I was not much concerned. I thought of the irony of having avoided serious accidents only to have tiny insects put me out. Then I noticed that I was going blind. Everything slowly went white, until I could see nothing at all. My strength ebbed away, and I passed out for about 30 seconds. If three or four more wasps had stung me, they probably would have done me in."

KODACHROME BY PETER R. GIMBEL © N.G.S.

FLASH OF WHITE *in a verdant canyon (opposite), a plane drops supplies along the Picha River. Lake and Baekeland (below) eat canned tuna with improvised bamboo spoons. Preparing for possible loss of contact with support aircraft, Gimbel and Baekeland tested jungle fare—wild fruits, tubers, and bamboo shoots.*

KODACHROMES BY PETER R. GIMBEL © N.G.S.



was a sort of muskeg, unfit for agriculture. Although equal elevations elsewhere in the Andes are temperate and relatively dry, this range collected the first deluge of water from air flowing in over the Amazon Basin.

With very little game and intense cold, we felt there was no reason for people to settle in this region, now or 400 years ago.

As we descended the winding canyon where the first trickle of the Alto Picha began, we had no idea of what was in store for us. We thought we did, but these were judgments made from the air, as if we were giants with seven-league boots. It was to take us not 15 days to reach our destination on the Urubamba, but 61; most of these were days remembered now as though in a nightmare. We were to live with the untried and unforeseeable. What else is terra incognita?

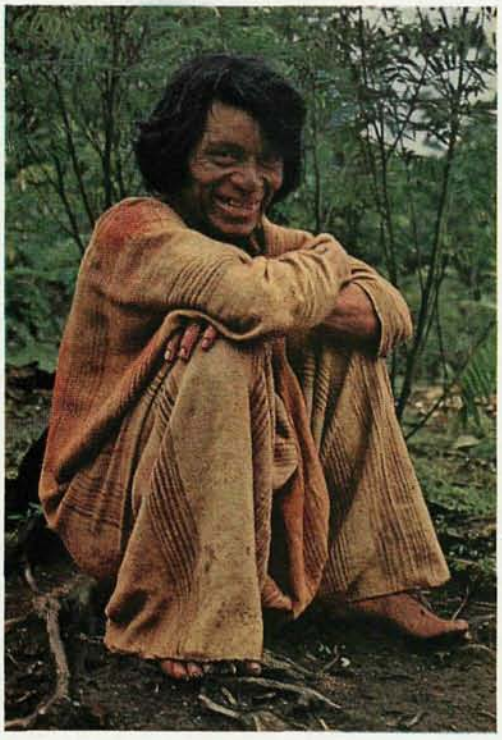
During much of this descent our lives depended on the uncanny skill and courage of Dick Tomkins and Frank Hay. They flew through the vilest weather and into some of the worst mountain country in the world to find us. Twice they had complete engine failures—fortunately not over the Vilcabamba—and still they kept flying, dropping food and replacements for our rotted clothing. Sometimes many days passed before they could reach us, but they always came.

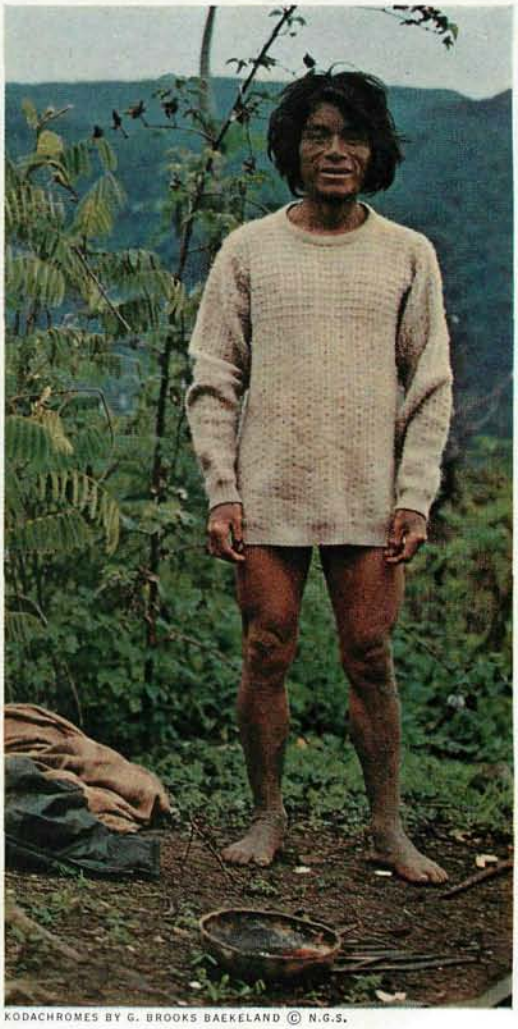
Wasps Leave Victim in a Coma

When food drops became more difficult, hunger set in. As our supply of dehydrated foods dwindled, we spent much time dreaming and talking of great meals we had eaten in the past and hoped to eat again.

Then, on September 22, I thought I was going to die.

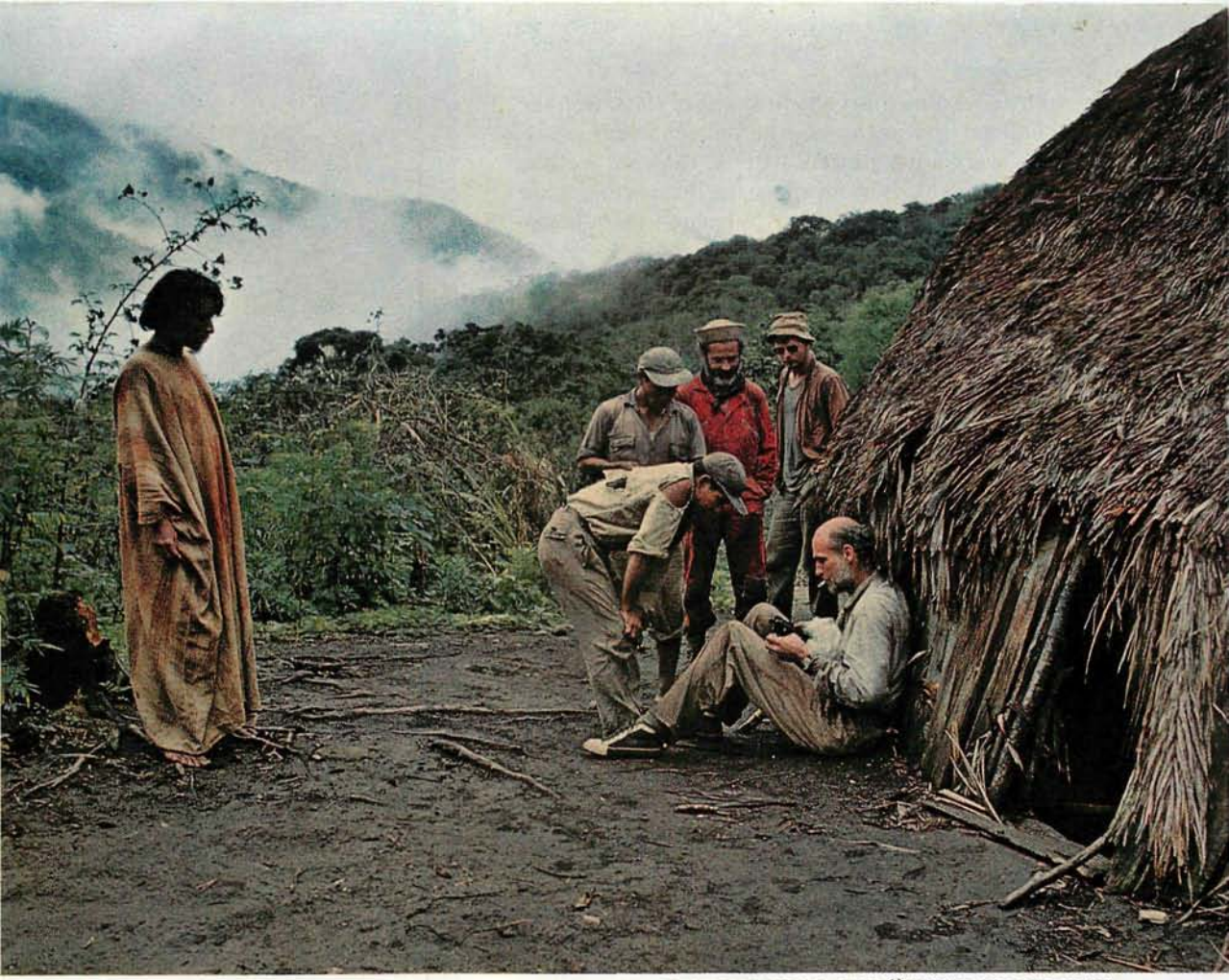
As I climbed a rock face, a swarm of small





Two months passed before the expedition met its first Indian. The Machiguenga refused to reveal their names; the men called this one Marino. Seated, he wears an ankle-length *cushma* of wild cotton and (standing) a sweater traded for food. Bowl holds *masato*, a beer made from starchy yuca chewed by the women.

KODACHROMES BY G. BROOKS BAEKELAND © N.G.S.



KODACHROME BY PETER R. GIMBEL © NATIONAL GEOGRAPHIC SOCIETY

Marino (left) plays host to Baekeland (seated) and companions at his highland home. The thatched roof leaks but lets smoke escape without a chimney. Here the explorers rested from their arduous trek and prepared for a raft journey back to civilization. In such clearings the little-known Machiguenga, who live as isolated families rather than in tribal groups, raise papaya, yuca, plantain, and corn.

wasps attacked me, stinging my neck and cheek repeatedly. Soon my whole body was on fire. Peter Gimbel lowered me to a ledge, where I slowly went blind, lost all power of movement, and had great difficulty breathing. Stabbing pain shot through my chest. I felt no great fear of death, which seemed so near; only dumb astonishment that it should come in this strange way.

As Peter prepared to give me artificial respiration, I blacked out (page 289). Half a minute later I revived. In an hour I was almost recovered. Peter eased me to the river bank, and we walked back to the camp.

The weather grew warmer as we moved north. All of us occasionally suffered from weakness, cramps, and nausea. Ahead we could often see blue sky. The jungle changed strikingly throughout our descent. We suddenly observed new trees, new vines, new orchids; as suddenly, the old disappeared.

At Lake Parodi we had glimpsed a large black bear and a Peruvian puma, and had found tracks of a ratlike animal. Otherwise we saw no mammals in the high country. Not until we had descended to 4,000 feet did we find snakes—the deadly fer-de-lance and bushmaster. And then suddenly there were signs of game of all kinds: wild pigs, monkeys, tapirs, ocelots, jaguars, and a cacophony of birds, including toucans and parrots.

On October 13 the first evidence of men appeared. Lake and Gimbel came across an Indian trail. For two days we followed it cautiously to the top of a 1,000-foot cliff.

Far below, like a silver thread, the Picha ran through a typical huge V. It was the end of the high country—and of our life under rain, fog, and cold. Behind us now lay the dark rocky waves of the cordillera rising to the clouds. Up there we had felt an uncanny sense of hostility to life. Here, after passing

the great tilted sedimentary shield at about 4,500 feet, the feeling changed. It was the sun that made the difference.

All of us were a little awed, I think, by what we had done. In the bright, blue distance to the northeast we could see the low foothills; shortly beyond them began the Amazon plain.

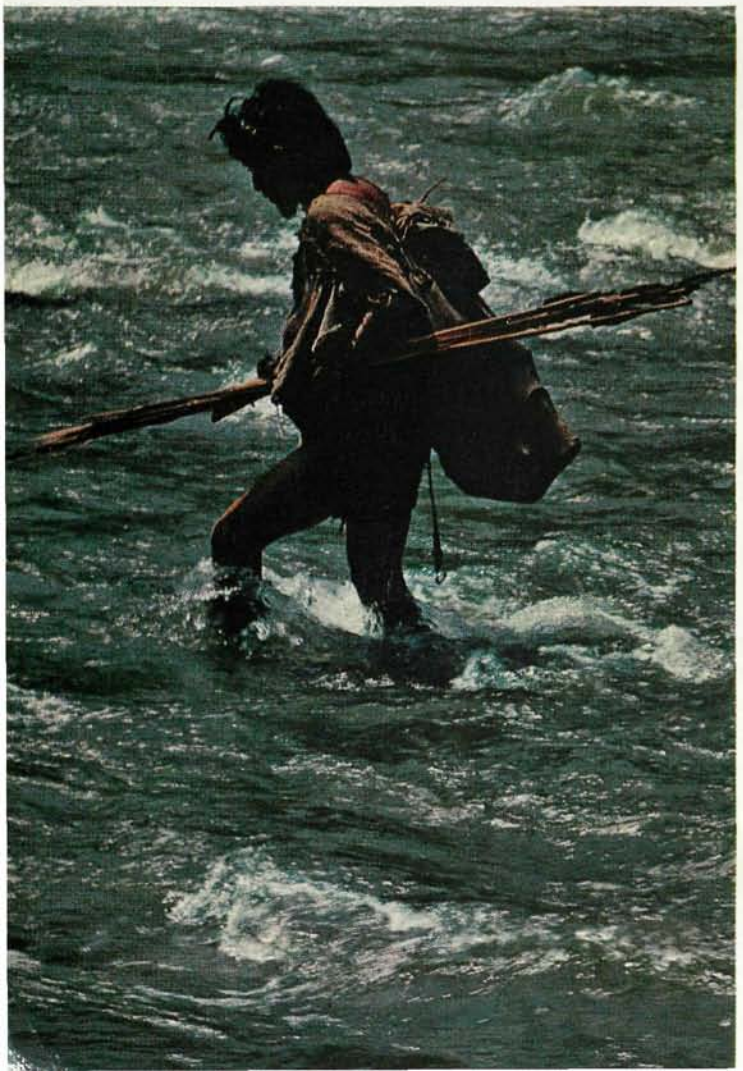
Though we felt we had been observed, we couldn't be sure. Three days later we knew it.

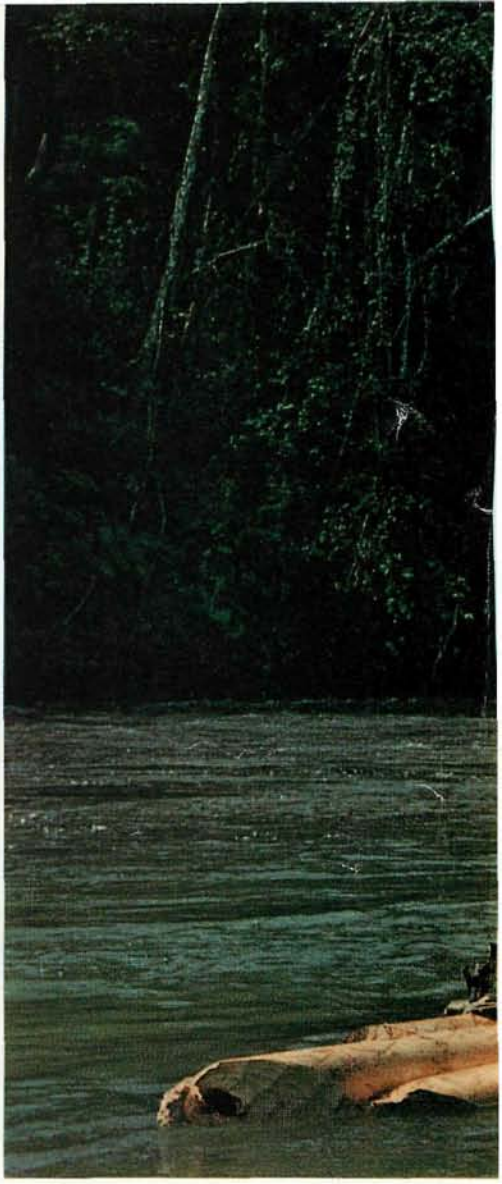
Gimbel, Joerns, and Lake were washing their clothes in the Picha when I decided to join them. At the top of a ten-foot bluff above the river, I surprised two armed Indians spying on them from behind a screen of giant cane. They drew their bows on me.

At 15 feet, I could almost feel their barbed arrows in my stomach. Completely at a loss, I grinned and waved at them. They bolted and ran like deer. I had never seen humans so terrified.

Some hungry weeks before, Peter Gimbel had said: "I'll be so glad to see Indians that even if they shoot an arrow through me, I'll die smiling."

Whenever possible, we wanted to make contact with the Indians; it was part of our job. A few days before, we had learned by radio that a Peruvian Air Force helicopter was operating on the Urubamba. We asked that it





Lighter than cork, stout balsa logs were lashed together to form a raft for the expedition's journey downstream to rendezvous with a canoe. Besides four explorers, the raft carried three Machiguenga Indians, who departed without a word of farewell to their relatives. By river the trip took one day; on land it would have required three weeks.

Barbed hunting arrows under his arm, Marino leads expedition members down the Picha River toward his home. "Trotting ahead, he at first waited for us but soon disappeared," says Baekeland. "He covered ten miles in a few hours. It took us a day and a half to catch up." Marino carries a duffel bag filled with tin cans, bottles, and other discarded items. "To him the stuff was precious."

KODACHROMES BY G. BROOKS BAEKELAND © NATIONAL GEOGRAPHIC SOCIETY

be chartered to bring us two Spanish-speaking Indian guides. With their help we hoped to study the wild people we had just seen.

The helicopter, guided by Frank Hay, arrived on October 18 at our camp number 31, a mile below the sedimentary shield. It carried the guides we had requested: Juanito, a Machiguenga Indian, and Julio, a Campa.

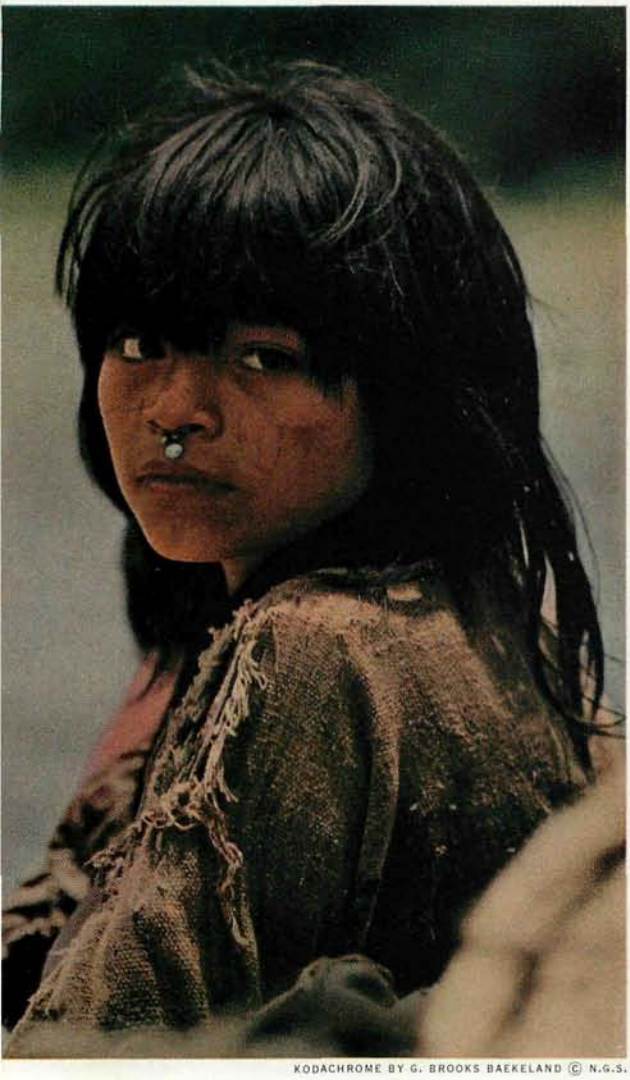
Returning from an afternoon's search for local Indians, they reported that all had fled into the jungle. Yes, the people up here were Machiguenga. They were very shy.

Next morning at dawn we were awakened by a deep-voiced jabbering. A tall, handsome Indian, armed with a bow and arrows, emerged from the cane. He looked at us steadily as he palavered with our two guides.

This man, whom we called Marino, had been attracted by all the air activity. He had a chacra, or burned-out clearing, nearby, but he lived at another "a few hours away." He would take us now to his house. We broke camp at once and followed him (opposite).

"A few hours away" was for Indians only. At a breakneck pace we made it, exhausted, by midmorning of the following day. We arrived in a steady rain. The house and the chacra—planted with papaya, yuca, plantain, and corn—stood 1,000 feet above the river (page 293).

My notes describe the interior of the long thatched house: "In the dark I cannot see anything at first. . . . I notice the figures of Marino and his wife. I later see three small children, one a suckling babe hung in a shoulder strap on mama, who sits with her back to us. Juanito and Julio are squatting on the log ends of a small fire in the center of the hut; Marino sits cross-legged in a new *cushma,* an ankle-length garment of cotton. He faces us



KODACHROME BY G. BROOKS BAEKELAND © N.G.S.

Silver nose pendant decorates a tattooed Machiguenga. Like the men of her tribe, she keeps her name secret. Although only 13, she has a husband and daughter. The family floated downstream on the expedition raft.

with negligent grace: Jean-Jacques Rousseau's 'noble savage.'

"In the rafters I see bundles of five-foot arrows of three distinct types: One with an eight-inch bamboo blade, razor sharp, for hunting pigs, tapirs, and jaguars; one, which is barbed, for birds; and one, multi-pronged, for fish. Except for the bamboo-bladed ones, the arrows are tipped with the hard wood of the chonta palm, also used for bows.

"Small parrots shiver on perches against the wall.... The guides occasionally take food—plantains, beans, yuca—and roast it in the coals of the small fire. A pipe is passed around; its stem is made from the hollow bone of a monkey's forearm. *Masato* and honey are both offered around and we drink politely. [Masato is a beer made by the women; they chew yuca, spit it out, and let the result ferment.]

"From our tents we hear Marino's deep voice rising and falling all night.... An aristocrat of the jungles, an old-fashioned orator, spellbinding his two visitors."

Indians Part Without Farewells

Because these wild Indians are shy and guarded under direct questioning, it was hard to learn much about them. They live not in tribes but in small, widely scattered family groups. Linguistically they are related to the Campa of the Apurímac Valley.

The people we met are the result of a movement away from the Urubamba that began long ago. They and their ancestors fled white man's civilization—largely to avoid the rubber slavers.

Although they have no memory of it, their blue facial tattoo, we were told, dates back to the rubber-hunting days of the 1800's. An Indian who had a specially fine nose for wild rubber trees was tattooed thus by his owners. The mark is now purely decorative.

After leaving Marino, we lived and traveled with small bands of upriver Machiguenga, finally taking a young man and his wife and child out to civilization with us by balsa raft and canoe. The Indian wished to work at a mission downriver so he could buy a machete. This Machiguenga family taught us an interesting thing about their jungle tribe: They may greet each other volubly, but they do not say goodbye.

The three Indians knew they might never make the long journey back to the Alto Picha. But when they got on our raft, neither they nor the relatives they left behind smiled, waved, or spoke a word. No one looked back.

We reached our goal—the Dominican Mission at the confluence of the Sepahua and Urubamba Rivers—on November first, 89 days after we had jumped into the cordillera.

A thin line had been laid across the map of the Vilcabamba by our two small teams, supported by another in the air. The Vilcabamba had been crossed.

It has been seen in a first small glimpse that will be followed, I am sure, by other, more leisurely eyes. Eventually all parts of the world are opened up and used in ways undreamed of by the men who were first interested enough to go.

But the first trip through is never easy.