

Among the Stupendous Volcanoes of Java



TOSARI, ONE OF JAVA'S MOUNTAIN TOWNS.

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TOSARI, Java, Oct. 19.—(Special Correspondence of The Bee.)—In the heart of the Tengger mountains, more than a mile above the level of the Indian ocean, surrounded by some of the mightiest volcanoes upon earth, I write these notes for my American readers. I am in the town of Tosari, in the wildest section of east Java. I can hear the rumbling and grumbling of the mighty volcano of Smeroe, and by going outside can see it sending vast volumes of steam into the air. I have just returned from a visit of exploration to the active volcano of Bromo, which has sprung up in the mighty crater of the Tengger, the greatest volcanic crater on earth.

In the Land of Fire.

This island has been called the land of fire. It has more volcanoes in proportion to its area than any other part of the globe, and almost every other island of this great archipelago from the Philippines to Australia has its mountains which spout forth steam, fire and volcanic mud. In crossing Java I was in sight of volcanoes all the way. The island, as I have said, is about as big as New York state, but it has more than fifty mountain peaks which end in craters, some sleeping, some dead and some still breathing forth volumes of sulphur and steam. It has ten volcanoes, each of which pierces the clouds at over 12,000 feet. There are five other volcanoes which are more than 9,000 feet high, and ten each of which is 7,000 feet and upward.

I could see the volcanoes of Salak and Gedeh at Batavia, and in coming eastward

of that time an earthquake came and the whole top of the mountain shot into the air. The mud flowed for weeks, burying 114 villages, killing 4,000 people and covering the whole country about with a layer of greenish blue mud, which in places was fifty feet deep.

Volcanoes Which Vomit Mud.

These rivers of mud are a characteristic of the Java volcanoes. The whole island is covered with the soil thrown out by them. It comes forth boiling hot, but dries into a kind of ash and eventually forms the richest land upon earth. With the mud come stones and ashes and steam. Papan-dayang covered the earth about it for seven miles with five feet of mud in one of its eruptions and drowned 3,000 people.

Near Bandung I saw the volcano of the upturned boat, a mountain whose top looks just like a boat turned upside down. You make your way to the volcano through quinine plantations and in the peak find two craters, each about 600 feet deep, both seething and boiling and spitting out mud, steam and gas. In the sides of the craters are sulphuric crystals and flowers. Near Djokjakarta I saw the volcano of Merapi, down which the lava is still running, and further on I saw a half dozen other great peaks, each sending forth its column of steam.

I have come here to describe the Tengger and I send you the notes as they were written right on the ground, part of them with a handkerchief over my mouth to keep out the fumes of the brimstone which were coming up from the hell pit below. The Tengger volcano is older than the records of history. Its crater is so large that

early morning, when the world below us was hidden in clouds. We seemed to be traveling over a sea of clouds and there were other clouds above us nestling here and there in the mountains. As the sun broke forth it painted these masses of vapor with different tints and shades of gold and as it rose higher the mountains to the eastward leaned, as it were, against the walls of molten gold, the rich dark blue of their sides backed by the gorgeous yellow. A moment later a black sheet of clouds came right in the face of the sun, which shot its rays through a place in the center where the sheet was thinnest. In a few moments it bored a hole, as it were, through this sheet and made a funnel-like road of blue through the golden wall of the sky. It seemed a very road to heaven itself. Our ponies dragged us through clouds like these climbing up the steep hills. We wound this way and that, now crawling up steps of corduroy and now hanging over the edges of ravines, down which we could look for 1,000 feet into beds of snowy lavender clouds, while above us were the mountains piercing the blue.

Java's Mountain Farms.

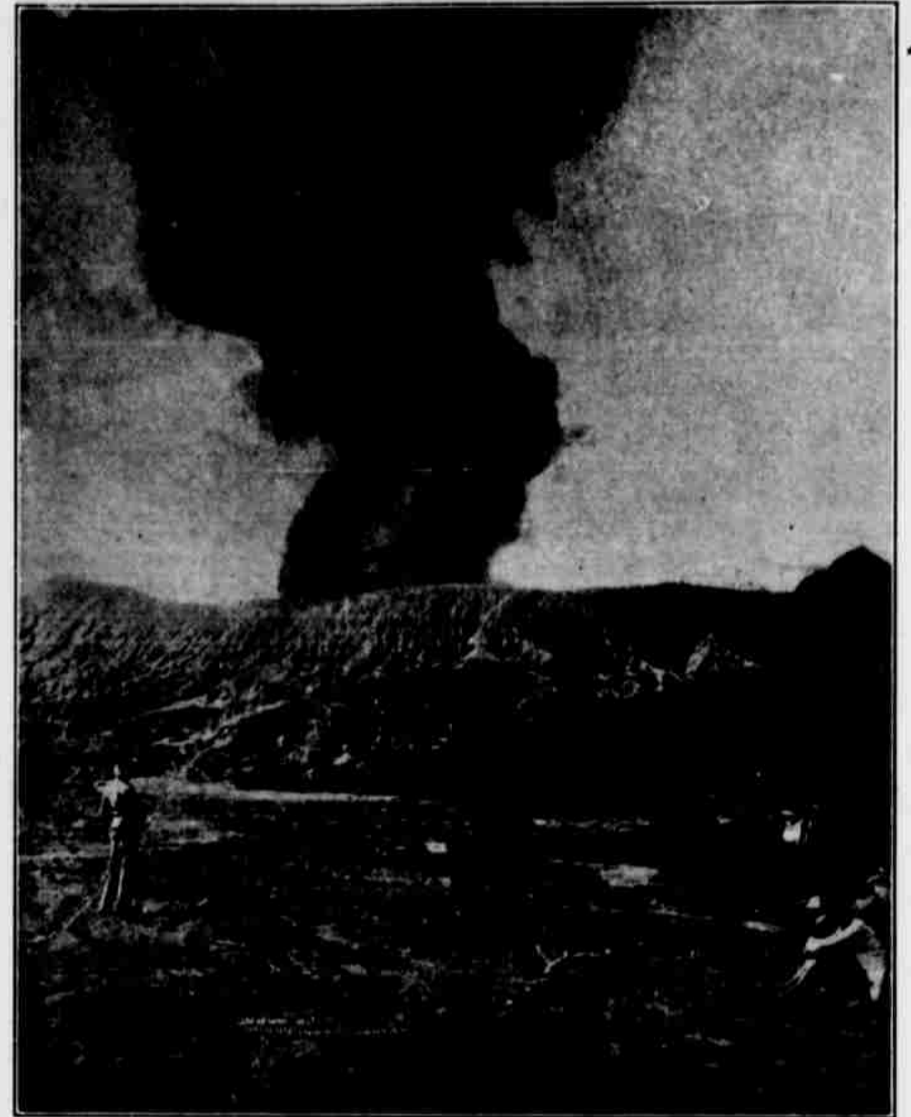
The scenes of the earth were quite as wonderful as those of the heavens. Some of the canyons were 1,000 feet deep and so steep that you would think the crops would fall out of the ground. Still these canyons were cultivated clear to the roadway and on high above it. The crops were Indian corn, cabbages and potatoes. The mountains are cut up with drains and the cabbage and potato patches are spaded and hoed. You could not possibly plow them without tying your horse to a tree to keep him from falling down the mountain. The cabbages and potatoes are carried down to the lowlands to market. The potatoes are delicious, as are also the cabbages, but the latter grow on trees, as it were. Each cabbage has a stem two, three or four feet long and my guide told me that when you cut off the head from a stem another cabbage head will grow upon it. I don't think he lied.

The vegetation grew scantier as we climbed on up the mountains. At the start we rode a long distance through fern trees. The road itself is lined with ferns and these and the orchids hanging in the trees made the country a garden more wonderful than the hanging gardens of Semiramis at Babylon.

Look at the Smeroe.

About an hour before coming to the sand sea I got a fine view of the highest volcano of Java. This is the Smeroe, whose crater kisses the sky at two miles and half above the level of the Indian ocean. I saw the volcano on rounding a bend in the mountain path. It lay behind green hills, a navy blue cone pointed, as it were, on the lighter blue of the clouds. There were other mountains at its feet, also blue, in the distance, and out of its top as I looked came a pillar of steam. This pillar came forth in thin wreaths. I stopped my pony and watched it. As I looked it thickened and darkened, the volume increasing and at last a great mass of smoke of black clouds shaped like two human heads, back to back, shot forth and rested against the blue—a two-headed Janus, a guardian of the gates of heaven born of Smeroe. As the smoke rose it grew thicker, until at last it formed a great cloud over the crater, rising high above it. In a few moments it separated from the mountain and Smeroe itself looked dead. It seemed to me a little eruption gotten up by the great volcano for my especial benefit and I thanked Vulcan for it. As I still looked another cloud came out and took the form of Punch, a big-headed, fat-bellied man of the clouds, rising into the heavens and there losing his shape.

Passing on, I had to descend about a half mile through fern forests loaded with orchids and then climb another mountain, going up, up, up until I pierced the very clouds. The country was wilder, the vegetation



VIEW OF BROMO FROM THE SAND SEA.

scantier and the earth was all rock and volcanic ash.

Wonderful Sand Sea.

My pony slid backward as he climbed, but at last we came to a break in the top of the wall of the mountains, a little crack on what seemed to me to be the edge of the roof of the world. I rode my pony into the crack and looked down. Below me was the Sand sea, one of the most wonderful formations nature has ever made. I was in the Moengal pass, on the rim of the mighty crater of the Tengger. About me as far eye could reach volcano piled itself upon volcano, and below me, surrounded by an almost circular wall of volcanoes, lay a vast expanse of dark brown sand as level as the floor you are sitting on as you read this letter. Yes, level, but only so where it was free from volcanoes, for out of the sand rose other volcanoes—volcanoes which have burst forth from age to age since the days of the far-gone-by, when this mighty Tengger shot its deluge of fire and stone and steam and mud into the air, making the richest of the lowlands of eastern Java.

Right in front of me, in the center of the Sand sea, I could see the Batok. This is a symmetrical volcano or mighty cone of dark brown, which looks as though it had been plowed from peak to foot by the god of fire. Its sides are in perfect ridges, mighty gutters down which flowed the molten lava at the time of its eruption.

Beyond the Batok I could see a dense smoke rising out of the top of another mountain. That was the Bromo, which is still active and which I visited a little later on. At the right of this there was a third volcano, the Widodaren, and farther on the Girl. As I looked I saw two of the natives kneel down and pray to the mountains. They had made holes in the walls of the Moengal pass, in which I was standing, and in them had placed their offerings of coffee and corn. They were on their knees praying and with the convulsions of nature about them and the wonderful grandeur of all the surroundings it did not seem strange.

In the Crater of the Tengger.

The way down to the Sand sea was almost precipitous. It was, I judge, at least 1,000 feet and there was a winding path with railings here and there to the foot. This path is cut out of the side of the crater and as I slipped and slid and crawled down, leading my pony, I could see the different layers of volcanic sand showing the several deposits. Some were as fine as the finest sea sand, some strata were of pebbles the size of a lima bean and above all lay a mass of cold lava of a rich copper color. The pebbles were of ashy gray, dark brown and sulphur yellow.

I could not appreciate the size of the crater until I got to the bottom and began to cross the sea of sand, which is, perhaps, the greatest amphitheater on earth. The walls are precipitous. They are covered with vegetation and they seemed to be roofed with the clouds. The men at the top of the path looked like pygmies when I was in the crater and as I rode on and on over the sand they grew smaller until they were almost lost to view.

I skirted the Batok volcano. There was thin grass upon its brown sides near the foot of the mountain and the sun shining

upon this gave it a carpet of green velvet to a height of several hundred feet.

At the Fiery Bromo.

Riding around Batok, a distance of several miles, I suddenly came in sight of the Bromo, which is still spitting forth fire and steam and volcanic stones. The mountain is of bare gray lava; its foot and side corrugated with lava streams and the wrinkles of the neck filled with volcanic sand. The crater is like an irregular bowl and the whole looks like a mighty bowl as you stand at the foot and look at the volumes of vapor rising from it.

It was far too steep for my pony, so I left him with the guide and, staff in hand, I climbed my way over the lava up to a great ladder which was built from the peak of the crater hundreds of feet down the mountain to aid the climb of the Dutch governor general, who was recently here. I found my breath growing shorter and shorter as I made my way up the volcano. There were fumes of sulphur in the air and I coughed repeatedly.

Resting from time to time I at last reached the very edge of the crater and stood there upon volcanic ash looking down into a mighty caldron, which bubbled and steamed and sent up geysers of steam and flame. All about and below me was the hardened lava, once molten, but now black and rusty and cold. I walked carefully for a mile, perhaps, along the edge of the crater, trying to get to the windward of the sulphur fumes and looking down as I did so into the great brown funnel in which the steaming yellow sulphur was bubbling forth blue flames. I took a stone and rolled it down. I could see it jumping from level to level until at last it made a splash in the sea of sulphur at the bottom.

In the Ruins of the World.

I picked my way around the narrow rim of the crater, now through walls of lava ash, so precipitous that had I missed my footing I should have rolled down into that steaming pit beneath me. As I stood there the wind came up. It roared as it wound its way around the funnel of the crater and whirled itself about its sides. At the same time the steam increased. It burst forth in a roaring, hissing sound like the blowing off of 1,000 engines at once. It soon filled the crater and burst forth in great volumes, enveloping the mountain top, including myself, and rolling on up into clouds.

A few moments later it had passed away and I could again see the vast crater filled with sand and the mighty volcanic wonders about me on every side. I could imagine the day when the vast amphitheater was one great mass of lava, when the air for miles above me was filled with fire, steam, stones and volcanic ash, when over those great walls were flowing perhaps the greatest rivers of lava and mud the world has ever known. I could see the great volcano of the Batok opposite me now dead, ridged with streams of flame and the other volcanoes nearby spouting forth their terrible fires. As I thought thus I felt something upon my hand. I looked down—a bug as big as the head of a pin was crawling over it and below I could see a white butterfly sitting upon a lump of sulphur on the very edge of the crater. The contrast was impressive. It was God's greatest and His smallest work side by side and as I looked I reverently raised my hat.

FRANK G. CARPENTER.



BATOK VOLCANO, WITH THE SMEROE IN THE DISTANCE.

I stopped off to investigate the great tea and coffee plantations upon their slopes. Gedeh is twice as high as Mount Washington and Salak kisses the clouds at a mile and a half above the sea. A little farther on I came to an enormous mountain which the natives call the Forge. The Javanese name is Papan-dayang. It is an active volcano which is always grumbling, a mighty anvil upon which Vulcan is always striking his hammer. There is a health resort near it and you can drive almost to the crater in a carriage, and by a short walk look down into the pools of mud and sulphur which boil and spit.

Further still is Mount Galunggung, which has had some terrible eruptions in the present century. About the time that Monroe was president it vomited a deluge of hot water and mud, sweeping away trees, houses, beasts and human beings. It sent up so many stones that they fell like rain and within three hours the rivers of boiling mud which came forth destroyed everything within a radius of twenty miles. Then there was a rest of four days. At the close

other volcanoes have burst forth in it and of these one, the Bromo, is still active. The Tengger itself is covered with a sea of sand and the Sand sea, or, as the Dutch call it, Zand Zee, forming the bed of this mightiest crater is one of the wonders of the world.

Traveling Among the Clouds.

This town of Tosari is the starting point for the volcano. It is situated in the Tengger mountains, higher above the sea than the top of Mount Washington, in a region covered with luxuriant vegetation. The town is one of thatched huts, with a Dutch sanitarium on the hill over it. The inhabitants are Javanese mountaineers, some of them nature worshippers, who live on the edge of the volcano and who sacrifice to it. It is at the sanitarium I am staying and it was from here that I started yesterday morning with my guide for the Bromo. We had two ratty Javanese ponies and three mountain coolies to take care of the horses and carry the lunch.

We left Tosari in the ghostly light of the