

# BIRTH OF A VOLCANO.

## Nature's Process in Forming a Mountain of Lava.

### THE FORCE OF AN ERUPTION.

Upheaval That Destroyed the East Indian Island of Krakatoa in 1883 Propelled an Air Wave Three and a Half Times Round the Earth.

Though volcanoes are often spoken of as burning mountains, they do not burn at all, nor, in the proper sense of the word, are they mountains at all. A volcano is really a flaw in the crust of the earth through which the glowing heat lying below the crust has managed to burst a hole. Through this hole great floods of melted rock spout up. Some volcanoes work at intervals; some are in eruption all the time.

As the melted rock jets up into the air and falls it naturally builds itself into a mountain round the hole. The next eruption has to burst its way through the heart of that mountain. The chimney it spouts through is usually called "the pipe."

Sometimes an eruption is so fierce that when the lava (another name for melted rock) spouts out it is burst into bits. When it falls it is sometimes as fine as dust, sometimes the size of cinders. Most volcanoes, indeed, are simply gigantic clinder heaps.

When the force is not so great the lava in the pipe simply bubbles over and flows down the sides of the mountain, exactly as porridge boils over the edge of a pot. As lava is liquid, the slope of a lava volcano (or lava cone, as it is usually called) is always very gentle. Falling cinders, on the other hand, pile themselves up quite steeply. A lava cone, then, is always less steep than a cinder cone.

And a volcano never burns. What looks like flame is only the glow of the white hot lava on the clouds of steam. The more steam there is forcing its way up the pipe the more the lava bubbles, just as in the case of the porridge. If the pressure of steam is very great, then you have the lava blown to bits and falling as cinders, while the mighty clouds of steam rise high above the mountain. It is this steam that is mistaken for smoke.

Sometimes a cone sends out lava and cinders alternately, so that you have a great mountain of cinders bound together by layers and walls of lava.

These walls of lava are due to the fact that sometimes more lava wants to come up the pipe than the pipe will hold, so the lava bursts its way out through weak spots in the sides of the mountain. Etna has no fewer than 700 of these cones on its slopes. One of them, Monte Rossi, is a hill in itself, being 450 feet high. Indeed, a model of Etna looks as if it were covered with pimples.

When Etna is really roused it is far more dangerous than Vesuvius. In 1169 it nearly destroyed the city of Catania, killing 15,000 people. In 1669 it found its pipe so inconveniently small that it had to crack one of its sides. This crack was no less than twelve miles long. At the bottom while hot lava could dimly be seen through the clouds of steam. In 1753 millions of gallons of boiling water were shot out of the Vat del Bove, which is a great circular pit on the slope of the mountain, four or five miles in diameter, its sides being cliffs nearly a mile high in places.

The greatest volcanic eruption ever known took place in the East Indies in 1883. The story makes almost incredible reading. The volcanic island of Krakatoa commenced proceedings by blowing half of itself into thin air. From the opening no less than a cubic mile of rock was shot out.

A column of steam and lava dust rose into the air to a height six times as great as that of Mount Everest. It swirled and spread all for hundreds of miles around the air was black as midnight. Sounds of distant cannonading were heard 2,000 miles off.

Sea waves fifty feet high killed 35,000 people and were felt as far off as California. Instead of an island half a mile high there was now a hole a quarter of a mile deep. The shock of the eruption sent air waves three and a half times around the earth. The fine dust in the upper atmosphere added for months afterward a strange glow to the sunsets in England and did not vanish completely for three years.

The exact cause of the eruptions is not known for certain. A popular theory is that they are caused by water getting in to the white hot mass which is supposed to lie under the outer crust of the earth. And it is certainly a fact that practically all volcanoes are close to the edge of the sea.

Some lava flows slowly, some quickly. Vesuvius in 1805 sent out a lava stream that in four minutes had reached a spot four miles off. The size of a lava stream is sometimes gigantic. In 1783 Skaptar Jokull in Iceland emitted two streams at one time. One was forty miles long by seven miles broad, the other fifty miles by fifteen. The average depth of both was about a hundred feet.

Lava cools very, very slowly, except on the surface, which cools at once. It is an extremely bad conductor of heat. Twenty years after a stream of lava was sent out from Jorullo, in Mexico, tourists could light their cigars through chinks in the surface, and the surface had been cold for twenty years.

In 1828 a layer of snow many feet thick was found under a layer of Vesuvian lava. It was still unmelting and is probably there still. — Pearson's Weekly.

### STRUCK A SNAG.

A Painful Jolt For the Good Roads Ambassador.

"I'll never forget the night I called on the Widow Yarn. She owned forty acres on the main road, which I hoped to have improved. In practically every house in the county I had been hospitably received because I was a human being. A pioneer citizen, member of the Good Roads club, took me in a carriage to see the widow. 'I'll watch the horses,' this wise old citizen said. 'I don't know what would frighten them,' I suggested, but he seemed to expect a brass band or some other unusual sight, although it was 8 o'clock at night. I soon knew why he preferred to sit out there in the cold.

"Mrs. Yarn, I believe?" I began in-geratiously when the door was opened.

"Well," the person who stood there observed, "I've been here forty years. You ought to believe it."

"This," thinks I to myself, "is a strange place for carbstone humor." And then aloud: "I have been talking for good roads, madam. We have decided to run a rock road by here, and as—"

"Who has decided?" This in the voice of a conductor when he asks you how old your little boy is.

"Why," I stammered, "the Good Roads club, and—"

"I don't belong to it, do I? They wouldn't have a woman member, would they?"

"I'm sure I don't know. I have been chiefly—"

"Sure you don't!" the Widow Yarn snapped. "You're chiefly concerned about taxing my forty acres into the county treasury without letting me vote on it. What right have you to come over here to build roads? Are you a road builder? Did you ever build a road or pay for one?"

"Madam," I said, "you really do have a vote on this question if a road district is organized. You have forty votes—one for every acre you own, and—"

Her face lighted up with a light that never was seen before on human face unless perhaps in riding on an old transfer or getting rid of a bad nickel. She opened the door wider—I had not been admitted up to that moment—and asked me to enter.

"You say I have forty votes?" she inquired.

"You have," I assured her, feeling like the bearer of good news.

"Well, glory be!" the Widow Yarn sighed, rocking herself comfortably. "Glory be, say I! I'll cast them all against your old rock road. Now I must be getting ready for prayer meeting."—Charles Dillon in Harper's Weekly.

**The Terrors of Frankness.**  
"There is no worse vice than frankness," said a playwright. "How should I feel, for example, if I asked you for your opinion of my plays and you answered me frankly, quite frankly? Why, I should feel like the poor lady at the bridge drive who said to her hostess' little daughter:

"Your eyes are such a heavenly blue. And what color are my eyes, darling?"

"The child's high treble traveled easily to the farthest corner of the quiet room as she replied, looking earnestly up into her questioner's face: "Dwab middles, yellow whites and wed wims!"—Exchange.

**Ruskin and the Turners.**  
How closely famous pictures can be imitated by skillful artists was proved by an exhibition by Ruskin in 1875 of a series of facsimiles of Turner's pictures in the National gallery, London. The collection was accompanied by a characteristic note from Ruskin, in which he said, "I have given my best attention during upward of two years to train a copyist to perfect fidelity in rendering the works of Turner and have now succeeded in enabling him to produce facsimiles so close as to look like replicas—facsimiles which I must sign with my own name to prevent their being sold for real Turners."

### BROWN'S PARTNER.

The All Around Genius That Would Just Fill the Bill.

The following is quoted from the American Magazine and is signed by H. Lee:

"Here's the whole thing in a nutshell," said Brown to me. "I am now twenty-eight years old, have my own business and have brought it to such a state that I have decided to take a partner."

"Take one," answered I.

"There's the rub," he gave back. "My partner must be such an all around knowing one that I'm afraid I'll have hard work to fill the position."

"My partner must be able to make laws and to enforce them, must be able to carry out complicated chemical work, must be a skilled mechanic, must know something of economics, must be able to buy wares of all kinds with due consideration of my finances and must be able to do tailoring of a kind if necessary."

"Hold on, Brown!" said I. "Are you dippy, was the vulgarians say?"

"No," replied he. "I want a wife. Look around among your friends and see if any one man among them could do all that a good housewife should be able to do. She must make just laws for the family and enforce them. She must understand the complicated processes of cooking. Making, mending, washing, ironing and otherwise caring for the clothing of a family require mechanical skill. Bringing up a child properly requires far more knowledge and wisdom than selling dry goods of standard makes and prices year after year. Where are more science and skill required than in the sickroom? And if the wife does not know how to do all of these things how can she direct the work of her maid, help, especially if the help knows less than she does?"

"My dear boy," said I, "do the way 90 per cent of us do—marry and trust to luck."

**SAVAGE ATHLETICS.**  
Canary Islanders Who Would Have Made Good Ball Players.

In this age of athletics one might think that no people ever showed so much interest in feats of muscular might and skill as those who have perfected football, but modern games, and even the games of the Greeks at Olympia, may have been more than matched by the sports of peoples now held in light esteem. We have the accounts of excellent authorities for the contention that the athletic training of Canary Islanders makes even the college giants of today seem weak and effeminate.

These islands came into subjection to Spain about the time Columbus discovered America. The conquest was due solely to the superiority of European weapons and not to better skill and prowess. Native soldiers were trained athletes developed under a system that held athletic sports to be an important business, like military drill.

Spanish chroniclers have left accounts of sports of the Islanders. From babyhood they were trained to be brisk in self defense. As soon as they could toddle the children were pelted with mud balls that they might learn how to protect themselves. When they were boys stones and wooden darts were substituted for bits of clay.

In this rough school they acquired the rudiments of warfare which enabled them during their wars to catch in their hands the arrows shot from their enemies' crossbows.

After the conquest of the Canaries a native of the islands was seen at Seville who, for a silver piece, let a man throw at him as many stones as he pleased from a distance of eight paces. Without moving his left foot he avoided every stone.

Another native used to defy any one to hurl an orange at him with so great rapidity that he could not catch it. Three men tried this, each with a dozen oranges, and the islander caught every orange. As a further test he hit his antagonists with each of the oranges.—St. Louis Republic.

**Stopping Hiccough.**  
Hiccough is a distressing and sometimes a dangerous complaint. Many times a swallow of water will stop it. If simple measures fail the following has been found very efficacious: The nerves that produce hiccough are near the surface of the neck. They may be reached and compressed by placing two fingers right in the center of the top of the breastbone between the two cords that run up either side of the neck and pressing inward, downward and outward. A few minutes' pressure of this kind will stop the most obstinate hiccough.—Dr. Charles S. Moody in Outing.

**A Gentleman and Boots.**  
The "first gentleman in Europe" got the very worst definition of a gentleman from his valet when driving down to Brighton. The prince regent was arguing about the gentleman and finally turned to his valet. And the valet replied that a gentleman was one who did not clean his own boots. It was a funky's reply. One likes better the demand of the Duke of Wellington. "Give me men who can sleep in their boots."—London Graphic.

**Snubbed.**  
Ham—Do you recognize the professor? Ticket Man—Yes, but if you'll stand out of the line quietly I won't give you away.—Cleveland Leader.

**A Friendly Greeting.**  
"How did you enjoy your vacation?" "Fine! It made a new man of me!" "I congratulate your wife."—Exchange.

### TOWER OF LONDON.

The Picturesque Old Structure on the Banks of the Thames.

The Tower of London is one of the most picturesque places in all England. It is located on the north bank of the Thames and just east of the business district of London. It occupies about twelve acres and is surrounded by a broad and shallow moat. In feudal days it was one of the strongest fortresses in the country and was deemed impregnable. It is now a government storehouse and armory and, above all, one of the sights of London.

The moat, which, with the battlement and towers, makes the stone structure such a hoary antiquity, is bordered within by a lofty castellated wall. At frequent intervals of this part of the structure there are massive flanking towers.

Within this wall rises another of similar construction, but of greater height. Here are the various barracks and armories. In the center of all is the lofty keep or donjon known as the White tower. This was erected in the days of William the Conqueror and contains one of the most charming little chapels of Norman design which have remained till the present day.

The White tower was the court of the Plantagenet kings. In the northwest corner is St. Peter's chapel, now the garrison church. In another part is the jewel office, containing crown jewels of enormous value. One set which you see in the center of a case is said alone to be worth about \$15,000,000.

Nearby is the horse armory, containing a truly wonderful collection of ancient and mediæval arms and armor. In the court just beyond is a slab marking the spot where Anne Boleyn, wife of Henry VIII., was beheaded. Similar fates befell many other famous personages in English history within the great walls of the Tower of London.—Boston Herald.

**NIPPED THE REVOLT.**  
Dramatic Manner in Which Zelaya Caged the Conspirators.

Zelaya, the extraordinary man who for sixteen years retained the presidency of Nicaragua, only to lose it because he went too far in offending the government of the United States, was never satisfied unless he performed his coup d'etat in the most dramatic fashion possible. This story the New York Sun tells of him:

His spies once brought him information that a revolution was being planned by several of his army officers. They were to meet on a certain evening at the house of one of the conspirators to arrange the final details. While they were eagerly discussing the best way to seize the president the door opened and in walked Zelaya himself.

"Good evening, gentlemen," he said pleasantly. "I heard you had a party here this evening, and I have dropped in to share the fun. Quite a distinguished gathering. You are discussing military matters, no doubt?"

He went on, chatting affably for a half hour, while his enemies were torn with fear and suspense. Did he know of the plot? Most of them thought he did and wondered whether they had better not put a bullet in him at once. But he was so cordial, so thoroughly at ease, that they hesitated.

Presently he rose, poured out some wine and raised his glass.

"A toast, gentlemen," he said. "Here's long life to the president of Nicaragua and confusion to all traitors!"

As he spoke he hurled the glass against the window, where it smashed in pieces with a crash. The door flew open, and thirty or forty soldiers, who had been waiting outside for the signal, rushed in. All the plotters were convicted, but the president dealt leniently with them. Some were imprisoned and some exiled, but none was shot.

**How Weasels Carry Eggs.**  
One morning a weasel was surprised crossing the public highway leading from Jedburgh into Oxnam Water. It was observed to be carrying something under its chin and pressed against its slender neck, and when a collie dog belonging to one of the onlookers made a dash at the little creature it dropped its burden—a hen's egg—and, gliding under the roadside hedge, disappeared in the woodland. On being picked up the egg was found to be without a crack. The nearest poultry run is about 300 yards distant from the place where the weasel was intercepted.—Scotsman.

**Spiteful.**  
Patience—I hear you're engaged to be married.  
Patrice—Where in the world did you hear that?  
"My maid told me."  
"How did she hear it?"  
"A policeman told her."  
"More mystery. How came a policeman to know it?"  
"Why, the man you're engaged to told him when the officer was taking him home!"—Yonkers Statesman.

**The Judge's Joke.**  
Sheriff Guy is responsible for a court of session story. Once when the present lord justice, Clerk, was conducting a jury trial he made a small jest. The audience thought it its duty to laugh. "Silence!" shouted the mace in measured tones. "There's nothing to laugh at!"—Westminster Gazette.

**A Shocking Question.**  
Traveling Man (to hotel clerk at counter)—Can I take a bath here?  
Clerk (indignant)—No, sir; hire a room.—Lippincott's.

### Party's Fate on One Vote.

Instances are common enough in elections when a single vote turns the scale, but for that vote to decide not only the fate of a candidate, but of a party as well, is rare. Yet a majority of one in parliament, which may logically depend on a majority of one in the country, has worked some of the most momentous results possible. The classical example is the act of union of 1706, certainly among the largest, most important and most remarkable changes ever accomplished by a legislative body. One hundred and six voted for it and 105 against. Then a majority of one carried the great reform bill in 1832.

Majorities only a little bigger have again and again been responsible for far-reaching consequences. A majority of five threw out the Melbourne government in 1830. By the same figure Lord John Russell's government was defeated in 1866. Gladstone went out of office in 1873 because he lacked three votes, and the public education act, one of the most important ever passed, was placed on the statute book by a majority of two.—London Chronicle.

**Wild Dogs of Asia.**  
The whole tribe of wild dogs, which in closely allied forms are to be found in the wildest jungles and woods of Asia, from the Himalayas to Ceylon and from China to the Taurus—unless the "golden wolves" of the Roman empire are now extinct in the forests of Asia Minor—show an individual and corporate courage which entitles them to a high place among the most daring of wild creatures. The "red dogs," to give them their most characteristic name, are neither large in size nor do they assemble in large packs. Those which have been from time to time measured and described seem to average some three feet in length from the nose to the root of the tail. The pack seldom numbers more than nine or ten, yet there is sufficient evidence that they are willing and able to destroy any creature that inhabits the jungle, except the adult elephant and perhaps the rhinoceros, creatures whose great size and leathery hide make them almost invulnerable to such enemies as dogs.—London Spectator.

**London's Big Ben.**  
Why is the large bell in the tower of the house of parliament in London called Big Ben? The average Londoner himself seems to have no idea how it got its name. When the building was designed Sir Benjamin Hall had a great deal to do with carrying out the plans of the architects, being high commissioner of public works, and his coworkers appreciated the fact that to him the city of London was largely indebted. So when the question came up in parliament as to the name of the enormous bell that was to be hung in the tower a member shouted, "Why not call it Big Ben?" This suggestion was received with much applause as well as with roars of laughter, for Sir Benjamin was an enormous man, both in height and girth, and had often been called Big Ben. From that day on the bell whose peal every Londoner knows has been known only as Big Ben.—Harper's Weekly.

**Mighty in Titles.**  
The ruler of Turkey, in addition to the titles sultan and kha-khan (high prince and lord of lords), also claims sovereignty over most districts, towns, cities and states in the orient, specifying each by name and setting out in each of his various titles "all the forts, citadels, purlieus and neighborhood thereof" in regular legal form. His official designation ends, "Sovereign also of diverse nations, states, peoples and races on the face of the earth." All this is in addition to his high position as "head of the faithful" and "supreme lord of all the followers of the prophet," "direct and only lieutenant on earth of Mohammed."

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