

## ✓ VOLCANOES

A VOLCANO is an opening in the earth's crust from which hot rock is thrown. Usually—but not always—the hot rock is melted, and is then known as lava. The lava may flow out quietly, or it may be thrown out forcibly. When thrown out forcibly much or all of it may be solid.

Small pieces of solid lava are called cinders, but if the pieces are small as sand or dust, they are called ashes or volcanic dust. Besides the lava which issues from volcanoes either in liquid or solid form, many gases or vapors escape from the openings.

Steam is the most abundant vapor which escapes. Steam is the principal force which causes materials to be thrown out. Chlorine, sulphur, and carbon dioxide are the most common gases escaping from volcanoes.

The solid material and the liquid lava which escape from the volcanoes accumulate about the openings, and build up volcanic cones. In the top of a volcanic cone there is usually a depression called the crater. When a volcanic cone becomes high, the lava may break through its sides instead of flowing over the top. Cones built up by lava flows have low slopes; cones of cinders have steeper slopes. Sometimes the old cone of a volcano is wholly or partly blown away. Even large parts of islands where they occur are sometimes blown away.

When the activity of a volcano stops only for a time, the volcano is dormant.

If it stops permanently, the volcano is extinct.

When a volcano is no longer active its crater may be occupied by water. This is called a crater lake.

Volcanoes are often associated with earthquakes, and the violent eruptions of volcanoes sometimes are the direct cause of earthquakes.

Volcanoes are sometimes very destructive on account of the material blown out rather than the flow of lava. The flow of lava is usually slow, and in most cases it flows only a short distance before it hardens. At the

eruption of Mayon Volcano in the Philippines in 1814 churches and other buildings were destroyed by rocks which were thrown a distance of fifteen miles.

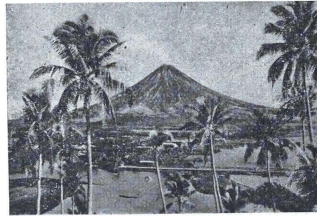
The solid matter thrown out of a volcano may be widely

distributed. Ashes thrown from Vesuvius Volcano in 79 A.D. buried the Italian town of Pompeii and killed 2,000 people.

Often during a volcanic eruption torrents of rain, due to condensing of the escaping water-vapor, fall with the ashes, changing them into a sort of hot fluid mud, and this sometimes is most destructive in its flow.

In the great eruption of Krakatoa Volcano between Sumatra and Java in 1883, it is thought that pieces of pumice (light, spongy lava) and dust were sent up into

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*An active volcano is often quiet.*

## MANILA AQUARIUM

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travels overland to other ponds. It is well known as a food fish in the Philippines.

Some very noticeable fish are the scalares which have long appendages on the upper and lower parts of their bodies. This fish is most attractive in appearance. It is sometimes called the "king" of fishes on account of its beauty and royal, dignified manner.

I was interested in looking at the climbing perch which also can live for a while out of water. This fish can crawl up trees for six or seven feet by using its fins. In the same way it can crawl on land.

A curious specimen on display is the archer fish (*cataba*). When it sees an insect on a leaf or a branch, it "shoots" from its mouth drops of water which bring the insect down. This fish is a very accurate marksman, I read on the placard of the tank.

I was interested in looking at a queer, rather pretty specimen known as the scorpion fish. It is striped and has many feather-like appendages or frills. It is dreaded by fishermen on account of its venomous spines.

In another of the tanks are several specimens of the

moray, a very long, slim fish which looks somewhat like a snake. It is a fierce, biting creature.

There is a pool of running water in one of the corners filled with a number of fine looking food fish. In another similar place there are some large turtles.

I saw several banded water snakes in one of the tanks. Although this snake is poisonous, it is caught in large numbers for its skin which is made into leather. This snake is found in all parts of the Philippines.

Other tanks contain specimens of dwarf gourami fish, surgeon fish, many mullets, some carp, many specimens of beautifully silvered tarpon, a leaf fish, so called because it is shaped like a leaf, and numerous other species.

Outside the Aquarium are some crocodiles and a monitor lizard (*bayawak*). This kind of lizard sometimes attains a length of two meters, and is thought to be semi-aquatic. It is found in swamps and along rivers.

I enjoyed my visit to the Aquarium very much, and advise every boy and girl who can possibly do so to go there if they have not already paid a visit to the place. It is well worth the time and effort.

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the air 20 miles by the violent explosion; some of the dust was carried by currents in the upper air completely around the earth.

The picture on the cover of this issue of *The Young Citizen* shows Mayon Volcano in eruption. A short history of Mayon Volcano will be found on page 144 of *The Young Citizen* for April, 1939.

## POET OF THE PHILIPPINES

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this experience, although it was brief, he took keen interest in the many and various peoples of the canneries. There he worked side by side with Greeks, Italians, Mexicans, Koreans, Kanakas, Puerto Ricans, Chinese, Japanese, Americans, Alaskan Indians, Panamanians, Canadians, and Filipinos.

The money saved from his earnings in the salmon canneries enabled him to enter college. First he attended the University of Washington, and later the University of California at Los Angeles.

During Mr. Concepcion's attendance at the University of California he began to develop his latent ability as a writer. He became associated with the

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