



A Miner for Worms

**J**UST how many infuriated householders there are in the land at present, each cursing his pet mole and all his earthworks, is hard to say; but there are probably plenty of them. For wherever man has gone, and made lawns and planted gardens, he has found moles to work havoc among them.

At that the poor mole is not intentionally a despoiler of crops. His favorite food is worms, and if the misguided worms insist on patronizing cultivated ground, that is a pity, hardly to be helped. So the mole thrusts in his streamline nose, gouges with his trowel feet, and plows up another yard or two. And the householder sees molehills as large as mountains.

The American mole's works are hardly to be dignified with the name of molehills. They are really only incidental heaps of loose earth, thrown out of the tunnel at intervals, when the accumulated debris has become too much of a nuisance. The true molehill, as constructed by the European mole, is more in the nature of a permanent dwelling, with interconnecting galleries, and burrows leading out, partly as "get-aways" in case of an enemy raid, partly as highways to the individual diggings. The American mole is an individualist, and does not take to communal life.

Contrary to the common proverb, moles are not blind. Their sight is dim, to be sure, and they are helpless and bewildered when caught above ground, but they do have a pair of tiny, beady eyes, almost invisible in their fur. As dwellers in the dark, they depend more on their highly developed sensitiveness to vibration than on sight.

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## ARCHAEOLOGY

## Ancient Sun-Hole Device Added to Famous Calendars

**A** PREHISTORIC sun-hole calendar, in the Casa Grande Indian ruins, should take rank with world-famous calendars of ancient times, declares Robert H. Rose, Park Naturalist of the National Park Service.

Investigations indicate that long before the discovery of America, the Indians of Casa Grande reckoned time by sun-holes. In the mud walls of the Casa Grande watch tower are two of these holes, so placed that at certain times of the year the sun rising over a distant mountain crest comes into line with the holes.

The days of this phenomenon are March 7 and October 7 in all years except leap years, when it occurs a day earlier. The light striking the holes passes through the east wall and across the ten-foot width of a room. Thence it passes through another thick wall and

across the ten-foot width of the inner tower wall to a point on a third wall.

So, for about eight minutes, shortly after sunrise on these two dates, the gleam of light appears on the third wall, having been carried by the holes through eight feet of masonry wall and twenty feet of room space.

### Timed Harvest Festivals

It is believed that the prehistoric Indians timed their planting ceremonies and harvest festivals by this method of watching the sun. The buildings containing the sun-hole calendar were abandoned by their inhabitants some six hundred years ago.

Mr. Rose ranks the sun-hole calendar of the Southwest with famous devices for reckoning time by the sun known to the Egyptians, the Mayan Indians, and the ancient Britons.

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## EXPLORATION

## Shrunken Heads of Sloths Are Trophies of Expedition

**B**RINGING shrunken sloth heads and other articles collected from jungle tribes of South America, the Latin-American Expedition, Inc., is making ready to sail from Guayaquil to New York, according to a cabled report received at the Smithsonian Institution.

The message was dispatched from Lima by Matthew W. Stirling, chief of the Bureau of American Ethnology, who is in charge of scientific investigations of the expedition. Mr. Stirling expects to arrive in Washington about May 1.

In a longer communication sent by mail, Mr. Stirling reports that part of his collection was lost at the Pongo de Manseriche. This is a river gorge noted for its rapids and its other hazards. For the most part, however, he was able to bring the collections through in good shape, despite difficulties of transport.

Many of the scientific specimens obtained by Mr. Stirling and his associates

are articles used by the famous head-hunting tribe, the Jivaros of Ecuador. Others are from a related tribe, the Aguaruna. The collection includes feather and beetle-wing headdresses, drums and other musical instruments, blow-guns, shields, looms and textiles, pottery, and shrunken sloth heads.

The animal heads are taken and shrunken by the Jivaros in the same manner that they shrink the heads of their enemies. Sloths are looked upon by the Jivaros as once having been human beings. Consequently they are still Jivaros in animal form, but Jivaros of a foreign tribe and therefore enemies. A shrunken sloth's head is believed to give its possessor power and other good fortune, as does the head of a human enemy.

The expedition's journey involved an eight hundred mile trip by raft down stream.

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