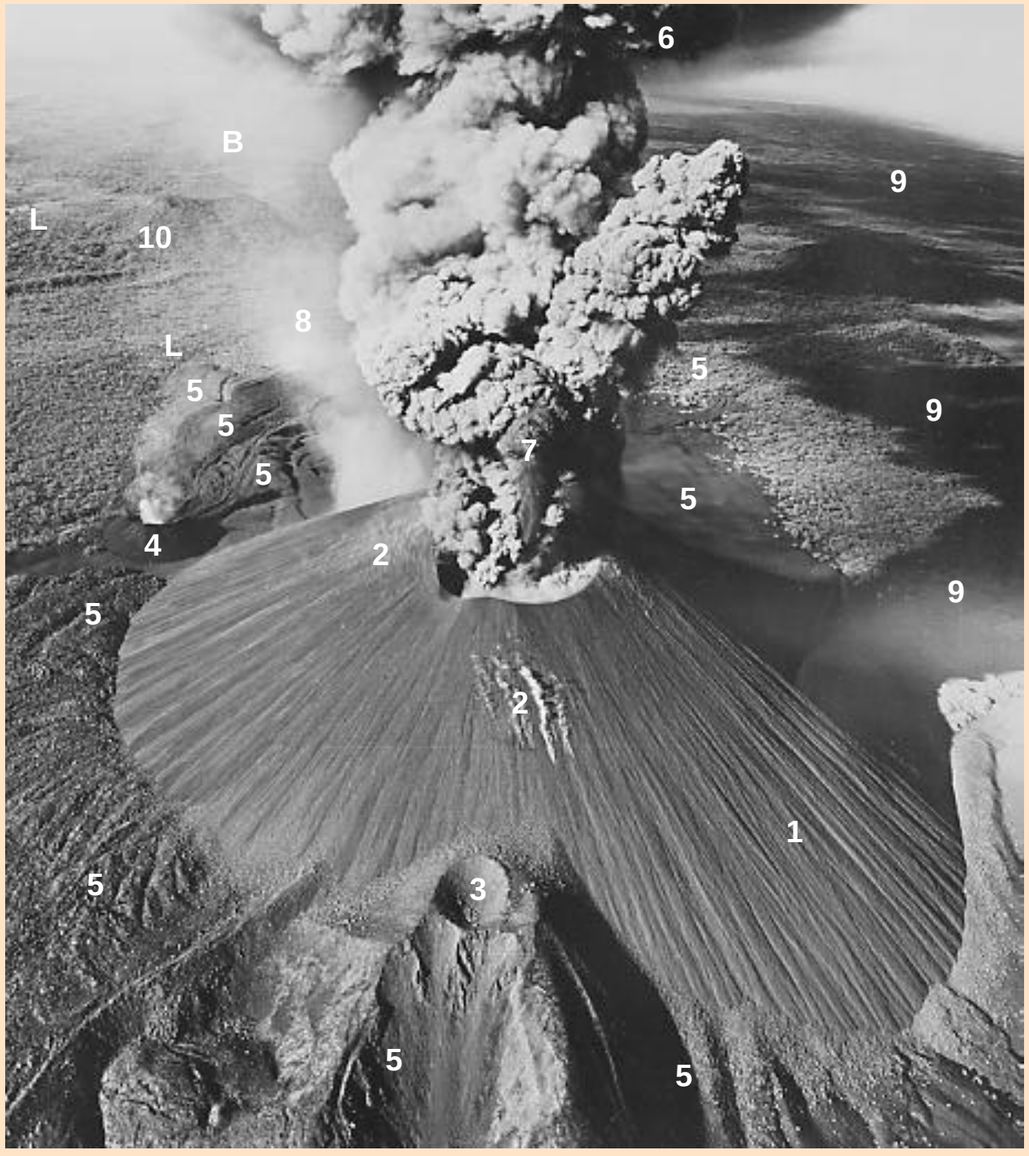
Teacher Feature

NICARAGUA'S CERRO NEGRO STRATOVOLCANO —

HOW DID IT BLOW ITS TOP???

Match the explanations with the numbers on the volcano and find out.



1) A stratovolcano or composite volcano is built of alternating layers of lava and pyroclastic (ash or ejected debris) deposits. These deposits accumulate around the central vent in a cone-shaped pile. Lava may flow from fissures (fractures or cracks) radiating from the central vent, whereas the multi-sized pyroclastics are ejected from the main vent.

2) Steam and other vapors rising from the large volcanic blocks erupted from the main crater recently. Compare with the older, cooler volcanic blocks at the ends of the tracks or furrows that run down the slope of the main cone. These tracks or furrows were plowed by the rolling blocks. Some house-size blocks now lie loosely at the bottom of the slope.

3) The crater of a dormant parasitic vent occurs on the side of the larger cone that is subsidiary to it. The parasitic and main craters may have a common source of magma.

4) Erupting parasitic vent, possibly a smaller stratovolcano in an earlier stage of development than the main cone.

5) Contacts between lava flows that emanated from the parasitic vent (4). These flows are small enough to be easily distinguished. The larger lava flows from Cerro Negro (left and right foreground) coalesce making it difficult to distinguish individual flows.

6) Large cloud of pyroclastic debris, steam, and other vapors erupted from Cerro Negro. The larger, heavier fragments fall back on the cone while the smaller, lighter ash fragments are carried great distances before they settle.

7) A smaller cloud of darker material indicates that a localized eruption has just occurred.

8) Cloud of vapors from the volcano is mostly steam and ash, but also contains chlorine, fluorine, sulfur, and their acids.

9) Shadow cast by the ash and vapor cloud from the volcano (6) carried by turbulent hot gasses and winds. When the volcanic ash settles, the pyroclastic deposit that forms is called an ash fall.

10) A dormant volcanic cone is old enough to have developed a soil profile and luxurious vegetation on its slopes. The crater rim has visible breach at (B) where lava poured from the cone. The lava flow turned at the base of the cone and formed levees (L) at the sides of the flow.

Cerro Negro, Nicaragua. December 4, 1968. Cerro Negro erupted again in 1972. Photo by R.L. Williams, courtesy of Dr. Ian Campbell.