

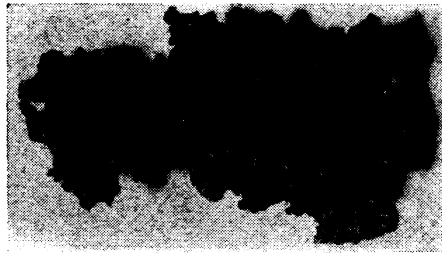
Nature Note

Petrified Lightning

Along the ocean beaches, sandy hills or dunes, people sometimes come across a strange hollow tube of cemented sand, sometimes in the shape of a tree branch, sometimes like a small straight rod.

This is a piece of "petrified lightning"—created in a fraction of a second when lightning struck the earth and fused sand particles into silica glass. Scientists call these fragile objects fulgurites, from the Latin word fulgur, meaning lightning.

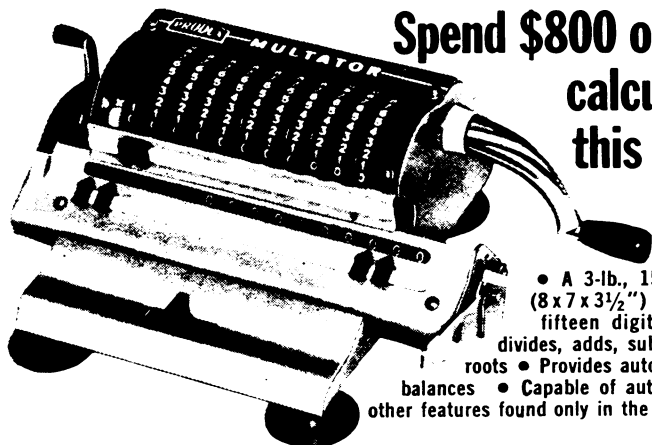
When a bolt of lightning strikes an area of dry sand, the intense heat, with temperatures as high as 3,272 degrees F., melts the sand surrounding the stroke into a rough glass tube. In as short a time as 100-millionths of a second, a stroke of lightning pierces the earth and leaves this fused record of its searing path. With diameters from one-half inch to two inches, some fulgurites are ten or more feet long, although most are less than a foot. They are nearly always found in pieces, for the brittle cast breaks easily if jarred, dropped or stepped upon. The inside walls of the tube are glassy and



Interior

lustrous, while the outside is rough with sand particles adhering to it. They are usually tan or black, but an almost translucent white fulgurite has been found in Florida. They have been found in almost all parts of the United States, wherever people happen to recognize what they are.

Lightning also leaves its mark on rocks, usually on mountain summits. Pieces of rocks may be fused together by a stroke, or the surface of a boulder may be fired to a lustrous glassy material. One rock fulgurite was described as a "white incrustation . . . as if white paint had either been splattered about or had been spread over as a rough branching straggling line."



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