

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
WASHINGTON, D. C., 20240

December 5, 1963

In reply refer to:  
Y3415-CRP

Informational

Memorandum

To: All Field Offices

From: Assistant Director, Conservation, Interpretation, and Use

Subject: Tree Stones

Dr. Charles Milton, a geophysicist with the United States Geological Survey, recently contacted this Office in an effort to secure information concerning mineral deposits found in trees after forest fires.

Two publications which deal with this phenomenon are listed below:

1. Fused Wood-Ash Stones: Fairchildite (n.sp.)  $H_2CO_3 \cdot CaCO_3$ , Buetschliite (n.sp.)  $3K_2CO_3 \cdot 2CaCO_3 \cdot 6H_2O$  and Calcite,  $CaCO_3$ . Their Essential Components by Charles Milton and Joseph Axelrod. Reprinted from American Mineralogist, 32: 607-624 (1947).

2. Stones from Trees by Dr. Charles Milton, Geophysicist, U. S. Geological Survey, Washington, D. C. Reprinted from The Scientific Monthly, December 1944, Vol. LIX, pages 421-423.

Following are some statements taken from the above publications:

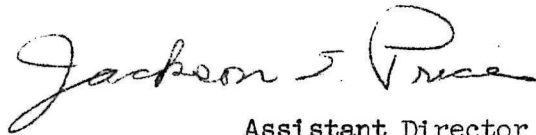
Stones of a peculiar type have been found within the trunks of standing partly burned trees at many localities in the forests of Western United States during the past twenty-five years.

The number of localities where these stones have been obtained is fairly large, and doubtless, once the nature of the stones is generally known, many more occurrences will be noted.

Kienholz cites various observers as having found the stones in deep cylindrical pockets from 2 to 40 feet deep, and from 4 to 40 feet above the ground, and always in trees a foot or more in diameter; younger trees had apparently not been subjected long enough to the action of fungus, in producing rotten heartwood. The stones varied in quantity in a single tree, from one to a hundred pounds or more; and a single chunk of 16 or 18 inches in diameter was found. The length of time that a tree burned could run into weeks or months, or even an entire winter. No clinkers ever formed in logs burning on the ground, or in trees that burned upwards from a rotten butt.

We should appreciate receiving any further information on this peculiar phenomenon from anyone who may have such knowledge or who might find such "tree stones" in the future.

This memorandum is informational and may be destroyed after its contents are noted.

A handwritten signature in cursive script that reads "Jackson S. Price". The signature is written in dark ink and is positioned above the typed name.

Assistant Director