

*GENERAL NOTES*

ORIGINALLY PUBLISHED IN  
*THE AMERICAN NATURALIST*  
V. XXI, NO. 5

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Fulgurites.—Although the interesting bodies known as lightning-tubes have been the subjects of numerous papers during the past century, it must be confessed that our knowledge in regard to them is not very extensive. The United States National Museum having recently become possessed of several fine specimens of the tubular varieties formed by lightning striking in loose sand, Mr. G. P. Merrill<sup>1</sup> has been enabled to study these microscopically, and thus to add something to our previous knowledge of them. In all the cases examined, the walls of the tubes consisted of glass, in which there were no traces of crystallization. Analyses of the glass and of the sand in which the fulgurites are found and by the fusion of which they were produced, show that in every case the former contains more silica than the latter. The author argues that “had the lightning shown no selective power the resultant glass would possess the same composition as the sand in which it formed. Had it exercised such power one would naturally expect the most fusible miner-

<sup>1</sup> Proceedings of the United States National Museum, 1886, p.83.

als to be first acted on, and hence that the glass would approach them in composition." But the contrary of this seems to have taken place, the ordinarily infusible quartz having been most acted upon. This may probably be explained by supposing the quartz to offer the greatest resistance to the passage of the electric current, —ie., to be a very poor conductor of electricity. It would then in consequence of this resistance become heated even to the point of fusion, while the better conductors would escape with little injury. The resulting glass would in this case have a higher percentage of silica than the surrounding sand. The actual composition of glass and sand from Union Grove, White sides County, Ill., yielded Professor Clarke:

	Loss on Ignition	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub> , Al <sub>2</sub> O <sub>3</sub>	CaO	MgO	K <sub>2</sub> O	Na <sub>2</sub> O
Fulgurite glass.....	0.33	91.66	6.69	0.38	0.12	0.73	0.77
Sand.....	1.01	84.83	9.88	1.16	0.13	1.13	1.50

*THE EVENT*

*PETRIFIED LIGHTNING FROM CENTRAL FLORIDA*

A PROJECT BY ALLAN MCCOLLUM

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