

plates are more suitable than bromide for obtaining an atmospheric corona, just as Mr. Huggins has claimed that they are more suitable for taking a solar one; hence I think one must not rely too much on the ultra-violet region sensitiveness of the chloride plate for a separation of the two; lastly, though my experiments fail to corroborate Mr. Huggins's results, they do not, of course, show that his corona may not be solar, but merely indicate that under very favorable circumstances I could obtain no trace of it.

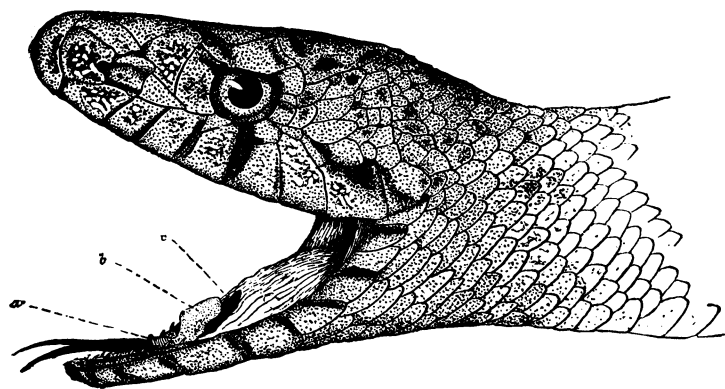
I have before me a print made from a negative by Dr. O. Lobse in October, 1878, showing effects very similar to those obtained by myself, except that his view was not taken during an eclipse. He considers that the halo is wholly atmospheric, and not coronal.

W. H. PICKERING.

Photographic laboratory, Mass. inst. technology.

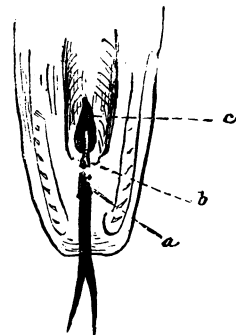
### The voice of serpents.

The interesting observations presented by Prof. C. H. Hitchcock on this subject, in No. 104, and the additional experiments made by Mr. H. H. Nicholson upon a specimen of *Pituophis Sayi*, and recorded in No. 109, open a very interesting field for research.



LEFT LATERAL VIEW OF THE HEAD OF *PITUOPHIS SAYI* BELLONA, LIFE-SIZE.

(From *American naturalist*.)



THE MOUTH PARTS FROM ABOVE.

a, tongue-sheath; b, epiglottis; c, rima-glottidis.

If it has not already met your correspondents' eyes, it may not come amiss for me to invite their attention to a very interesting and important article relating to this subject, contributed by Dr. C. A. White to the January number of the *American naturalist* for 1883. Dr. White here very concisely describes the peculiar structure of the vocal organs of *Pituophis*, which, so far as I am aware, he is the first to have noticed.

The character of the voice of the bull-snake is well known; and Dr. White clearly shows in his article how the peculiar form of the epiglottis contributes to its production.

It may not be out of place to reproduce the drawings here, that I was permitted to make for Dr. White, illustrating this structure of the epiglottis in *Pituophis*. They may be of interest to those who have the opportunities of seeing the pages of *Science*, where the *Naturalist* may not be available.

In again calling attention to this structure and its situation, it may induce others to make further investigations into a very inviting subject.

R. W. SHUFELDT, U.S.A.

Fort Wingate, N.Mex., March 19.

### The Indians are the mound-builders.

In No. 108 of *Science* there is a review of 'Prehistoric America,'—a work by the Marquis de Nadaillac,—and at the end of the review an editorial note which has challenged my attention. You say that the review "seems to maintain the identity of all peoples that ever inhabited the American continent up to the advent of Europeans," and base this upon the opinions of the reviewer, that the mound-builders were no other than the Indian tribes found in the country in post-Columbian time, and their ancestors. In this respect I most heartily agree with the opinions of your reviewer. There has never been presented one item of evidence that the mound-builders were a people of culture superior to that of the tribes that inhabited the valley of the Mississippi a hundred years ago. The evidence is complete that these tribes have built mounds within the historic period; and no mounds or earthworks have been discovered superior in structure or contents to those known to have been built in historic times. The theory that the country was inhabited by a people highly organized as nations, and having arts of a higher grade than those belonging to tribal society, is wild and

baseless; and the fruit of that theory is nothing but exaggeration and false statement.

All this being granted, your own conclusion, which is not found in the statements of the reviewer, is altogether inadmissible. "The identity of all peoples that ever inhabited the American continent, up to the advent of Europeans," is not and can not be held by any intelligent anthropologist, except in some very broad sense; as, for example, that they belonged to the human race, or that they occupied one continent. In respect to mythologies, languages, and institutions, there are, and have been, many distinct peoples; and in respect to arts there is much diversity, though arts travel from people to people with the greatest ease. At the present time we cannot have fewer than seventy distinct peoples among the tribes of North America, and in antiquity the number may have been greater. The mound-building peoples did not constitute a distinct race. Many peoples have built mounds on this continent, and some continue to build mounds to the present day. The writer has seen a tribe of Indians erect a mound.

J. W. POWELL.

Washington, March 24.