sounds has been most satisfactory they have been made up of the fundamental and *string* over-tones and not by the combination of the pitch tone with a 'characteristic pitch' having no harmonic relations between the two. In the case of spoken vowels it seems to me of fundamental importance that the individual should speak upon a known pitch, otherwise the case is hopelessly confused by a constantly changing fundamental. In a great many of the investigations involving the so-called characteristic pitch of the different vocal sounds, it seems uncertain as to whether or not this so-called 'characteristic pitch' may not be more directly due to some inherent rate in the apparatus itself, rather than in the sound which it is supposed to record impartially. In this connection it must be borne in mind that the widest possible variations in tone quality are still recognized as the same vowel spoken by different individuals under different conditions. This discussion has wandered from the musical instrument to the articulator. In music the vowel is everything, the consonant usually inconspicuous; in speech the vowel is secondary and the consonants all-important.

William Hallock.

Physical Laboratory,
Columbia University, June, 1901.

'Is larvæ contagious?'

The following cross interrogatories were prepared by the district attorney of a county in a western State for a deposition.

What is larvæ? What does larvæ come from? Is larvæ injurious to fruit trees? Is it contagious?

What is pupæ? Describe it fully? Is it injurious to fruit trees? Is it contagious?

It seems to me that the questions furnish an answer to the frequent question in the scientific laboratory, 'Will this ever be of any use to me?' If such knowledge furnish nothing else to a man, it would prevent him from making such questions as these. H. S. Gaus.

Current Notes on Physiography.

Glacial corries in the Bighorn Mountains.

The glaciated district near Cloud Peak, Bighorn Mountains, at altitudes above 10,000 feet, contains over forty corries or cirques of more or less pronounced form, as mapped and described by Matthes ('Glacial Sculpture of the Bighorn Mountains, Wyoming,' 21st Ann. Rep. U. S. Geol. Surv., 1900, pt. II., 167–190). A contour map shows the summit of the range in general with rounded forms free from sharp peaks and precipitous cliffs. The valleys on the slopes below 10,000 are usually broadly open; but on ascending towards the stream sources, the valley walls steepen on either side of a broad floor where rock basins hold many little lakes, and at or near the valley head the walls close in a great cliffed amphitheater. Highland streams cascade down from shallow hanging valleys into the deep cirques. It is concluded that these peculiar forms are here, as elsewhere, to be regarded as glacial modifications of preexistent valleys that once had more ordinary form. In a few cases, the widening and headward recession of the valley walls have resulted in the consumption of the rounded uplands of the mountains so far that only a narrow, sharp, serrate wall remains; this is well seen around Cloud Peak, thus giving support to Richter's views regarding the importance of glacial action in producing sharp peaks and arrêtes in the Alps. In a single remarkable example, an east-sloping valley (No. 20) receives the drainage of the uppermost mile of a southwest-sloping valley (No. 18) in such a way as to suggest very strongly the glacial capture of the latter by the former; and this is made the more probable when it is noted that the capturing valley has a distinctly stronger slope than the captured. If it be admitted that glacial erosion has made significant changes in the valley forms—and this does not seem to be open to dispute—the present pattern of drainage in these two valleys could not have existed in preglacial time.

It is a curious commentary on the education of our topographers that articles of the kind here referred to should be so rare.

The North German lowland.

The accounts of the North German lowland as a region of glacial topography by Berendt, Wahnschaffe, Keilhack and others are supplemented to an extraordinary degree of detail by