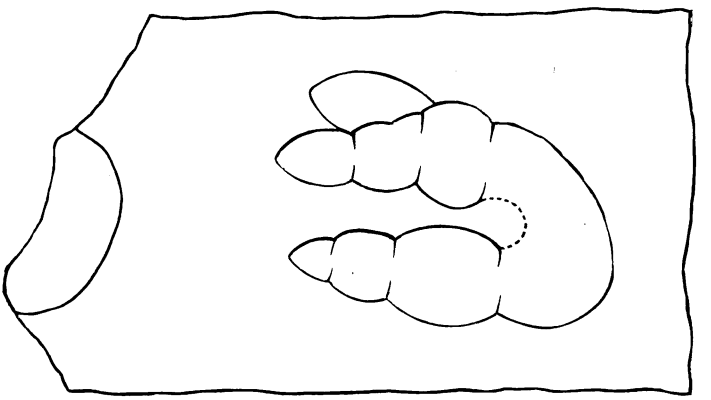
Art. LV.—*Amphibian Footprints from the Devonian;* by O. C. Marsh.

No evidence of vertebrate life higher than that of Fishes has hitherto been found in the Devonian formation. In the Carboniferous next above, however, many characteristic remains of Amphibians have long been known, proving that this form of vertebrate life was comparatively abundant at that period.

The Yale Museum has recently secured from the upper Devonian strata of western Pennsylvania, a specimen that shows one vertebrate footprint in fair preservation, and with it part of another of the same series. These impressions are of much interest, both on account of their geological age and the size and character of the footprints themselves. The one best preserved is nearly four inches in length, two and a quarter in width, and was apparently made by a left hind foot. On the inner side in front of the heel, a portion of the margin is split off, and this may have contained the imprint of another toe. The other footprint was a short distance in front, but only the posterior portion is now preserved in the present specimen. It is probably the imprint of the fore foot. The figure shown below represents these two impressions.



Outline of Devonian footprints (*Thinopus antiquus*, Marsh). One-half natural size.

The specimen here figured was recently found in the town of Pleasant, one mile south of the Allegheny River, Warren County, Pennsylvania, by Dr. Charles E. Beecher, who presented it to the Yale Museum, and also furnished the present information in regard to its geological position.

The geological horizon is near the top of the Chemung, in the upper Devonian. In the same beds are ripple marks, mud cracks, and impressions of rain drops, indicating shallow

water and shore deposits. Land plants are found in the same general horizon. Marine mollusks also occur, and one characteristic form (*Nuculana*) is preserved in the footprint slab.

This specimen, although not important in itself, is worthy of record as indicating the existence of an air-breathing vertebrate, apparently amphibian, in the Devonian, and also as offering an incentive to further exploration in the same horizon.

Yale University, New Haven, Conn., October 16, 1896.