

In size, the animal was about as large as a rabbit, but the fore limbs were proportionately much smaller. As the present specimen is the only one known, it is important to place on record its distinctive characters.

The scapula is of moderate length, and its upper portion broad and thin. The humerus is slender, with a strong radial crest. The shaft is very hollow, with thin walls, and the cavity extends almost to the distal end. The latter is but little expanded transversely. The radius and ulna are short, and were closely applied to each other. There were but four digits in the manus, the first being short and stout, and the others slender.

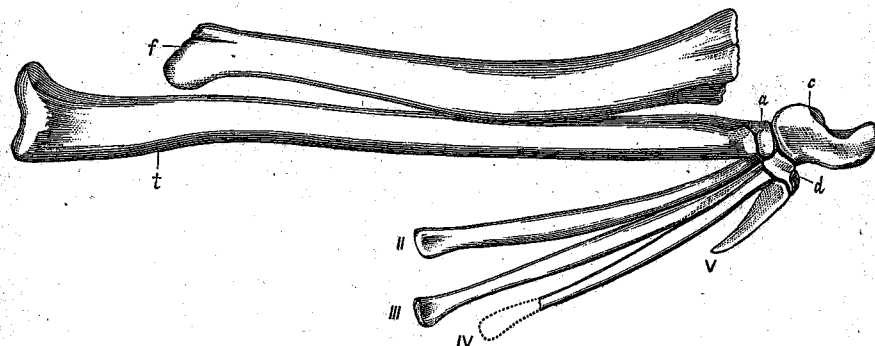
All three pelvic bones aided in forming the acetabulum, as in typical Dinosaurs. The ilia are of the carnivorous type, and resemble in form those of *Megalosaurus*. The pubes are rod-like, and projected downward and forward. The distal ends are closely applied to each other, but not materially expanded, and in the present specimen are not coössified with each other. The ischia projected downward and backward, and their distal extremities are expanded, somewhat as in the *Crocodylia*.

The femur is comparatively short, with the shaft curved and very hollow. The tibia is nearly straight, much longer than the femur, and its shaft equally hollow. The fibula was slender and complete, but tapered much from above downward. Its position was not in front of the tibia below, as in all known Dinosaurs, but its lower extremity was outside, and apparently somewhat behind, the tibia.

The astragalus is large, and covered the entire end of the tibia, but was not coössified with it. The calcaneum is compressed transversely, and much produced backward. It was closely applied to the outside of the astragalus, and although agreeing in general form with that of a crocodile, strongly resembles the corresponding bone in some mammals. The tarsal joint was below the astragalus and calcaneum. There appears to be but a single bone in the second tarsal row, although this may be composed of two or more elements.

There were but three functional digits in the hind foot, and their metatarsals are greatly elongated. The first digit was entirely wanting, and the fifth is represented only by a remnant of the metatarsal. The posterior limbs, as a whole, were especially adapted for leaping, and are more slender than in almost any other known reptile.

The main characters of the posterior limbs are shown in the figure below, which represents the bones of the left leg and foot, natural size, in the position in which they lay when uncovered. All the bones figured are still firmly embedded in the matrix.



Left leg and foot of *Hallopus victor*, Marsh; natural size; side view. a, astragalus; c, calcaneum; d, tarsal; f, femur; t, tibia; II, second metatarsal; V, remnant of fifth metatarsal.

There are but two vertebræ in the sacrum. The other vertebræ preserved have their articular faces bi-concave. The chevrons are slender and very elongate.

Taken together, the known characters of *Hallopus* indicate Dinosaurian affinities rather than those of any other group of reptiles, and if the *Dinosauria* are considered a sub-class, the *Hallopoda* at present may be regarded as an order of Dinosaurs standing more apart from typical forms than any other.

The characters which now indicate the position of the *Hallopoda* among the *Reptilia*, living and extinct, are given below. The discovery of more perfect specimens, however, especially of the skull, must be awaited before their nearer affinities can be determined.

DINOSAURIA ?

Order HALLOPODA (Leaping Foot). Carnivorous.

Feet digitigrade, unguiculate. Fore limbs very small, with four digits in manus. Hind limbs very long, with three digits in pes, and metatarsals greatly elongated. Calcaneum much produced backward. Vertebræ and limb bones hollow. Two vertebræ in sacrum. Acetabulum formed by ilium, pubis, and ischium. Pubes rod-like, projecting downward, but not coössified distally. No post-pubis. Ischia with distal ends expanded, meeting below on median line.

New Haven, Conn., April 21st, 1890.