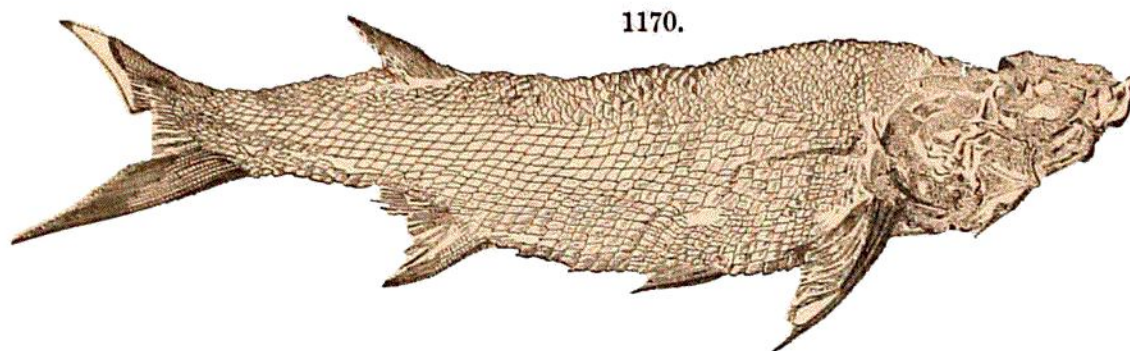


valley beds, referred by E. Hitchcock to Insects, and the others (1168, 1169) are regarded by him as made by Crustaceans. Nearly 30 species of these delicate tracks are described by Hitchcock.

2. Fishes.—The Fishes of the era were Ganoids and Sharks, but only remains of Ganoids have been found in the American rocks; one of them, from black shales at Durham, Conn., is represented, reduced, in figure 1170. The largest species found is *Diplurus longicaudatus* Newb., about three feet long. Unlike Paleozoic Ganoids, the Triassic species are not all heterocercal; many have the tails partly, or not at all, vertebrated; and this is the last period in which the old Paleozoic characteristic appeared. Thus, as Agassiz first observed, the progress of the ages was marked in the tails of the fishes.



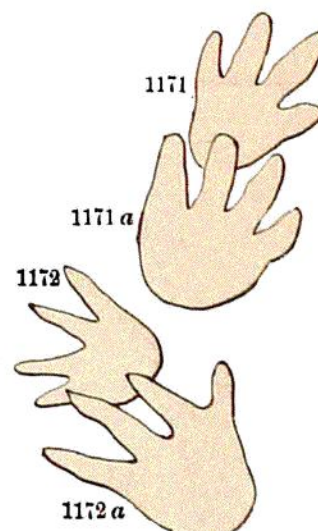
GANOID. — *Catopterus gracilis* ($\times \frac{1}{2}$). J. H. Redfield.

3. Amphibians.—Portions of large crania have been found in black shale in Chatham County, N.C., and in a literal "bone-bed" at Phoenixville, Pa. With the latter were teeth two inches long, of a species named *Eupelor durus* by Cope. The figures of footprints annexed, 1171, 1171 *a*, and 1172, 1172 *a* (half to two thirds the natural size), are the fore and hind feet of probably two Amphibians (Hitchcock). The tracks were from the Connecticut valley beds.

4. Reptiles.—The Reptiles pertain to the two grand divisions of Dinosaurs and Crocodilians.

Dinosaurs.—The Dinosaurs are mostly of large size, and were so named by Owen, from *δεινός*, *terrible*, and *σαῦρος*, *lizard*. They are more or less bird-like in some characteristics; these all having (1) the posterior limbs the stouter, as in Fig. 1179, page 753, and sometimes these are the only locomotive limbs, the Reptiles in that case being bipeds in walking, like birds; (2) the bones of the limbs, especially the anterior, often hollow; and in some, the vertebræ of the neck very cellular and light; (3) of the pelvic bones the ischium (*is*, Fig. 1179) is a long and often slender bone projecting backward, and the pubes also are long. Many herbivorous Dinosaurs that were not biped in locomotion used their strong hind limbs for

1171-1172.



AMPHIBIANS.—Fig. 1171, 1171 *a* ($\times \frac{1}{2}$), *Amsopus Deweyanus*; 1172, 1172 *a*, *A. gracilis* ($\times \frac{1}{2}$). E. Hitchcock.