INTRODUCTION.

The Cyprinodontinae are the oviparous Cyprinodonts, and are found at the present day in America from the Northern United States to Argentina, in Africa, and in Southern and Eastern Eurasia. Of nearly 120 species of this group, about 60 are North American, 20 South American, and 30 African.

Prolebias, with several species from fresh-water deposits of the Oligocene and Miocene of France, Germany, and Sicily, is probably not distinct from Fundulus, which is in some respects the most generalized of living genera. Fundulus includes a large number of species from the coasts and rivers of the United States; a few species occur in Mexico and Central America, Southern Europe, and Africa.

The North-American Cyprinodon is represented in the Mediterranean district by the living genus or sub-genus Lebias and the extinct Rachylebias of the Upper Miocene; several of the species enter brackish or salt water.

The Cyprinodonts of India, the Malay Peninsula and Archipelago, China, and Japan are few in number and belong to genera which differ from Fundulus but little. Some of the African species may be placed in Fundulus or in the allied Indian genus Haplochilus; the rest do not depart widely from this type. The South-American Cyprinodontinae are the genera Rimalus, Cynolebias, and Orestias, which differ from Fundulus in having the margins of the eyes not free and in other characters of specialization. Four species of Rivulus are known from Southern Mexico and Central America. A consideration of the distribution of the Cyprinodontinae leads us to suppose that they were originally a holarctic fresh-water group and that they have spread southwards; the African forms are probably derived from immigrants from Europe and India; the South-American genera have evolved from a North-American stock, which probably reached the southern continent by migration along the coast.

The viviparous Cyprinodontidae are exclusively American and may be arranged in three groups—Characodontinae, Peciliinae, and Anablepinae. The Characodontinae are characteristic of and almost peculiar to the system of the Rio Lerma (including the Valley of Mexico). Zoogoneticus comprises four species from the Lerma System, which may be defined as Funduli of the type of F. punctatus, but viviparous and with the anal fin of the male modified, the anterior 5 or 6 rays being short and stiff and separated by a notch from the rest of the fin. Fundulus punctatus is found in all the Pacific coast streams from Oaxaca to Ecuador, and probably enters the sea; it may be regarded as nearly representing the ancestral form from which Zoogoneticus has evolved.

Limnurgus (one species), Characodon (five species), and Goodea (seven species) differ from Zoogoneticus in their more specialized dentition. A species of Characodon