

SOME FOSSIL FISH SCALES FROM PERU.

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Some time ago Messrs. K. C. Heald and K. F. Mather collected some fossil fish scales at Huacho, Peru. The locality is on the coast, about 70 miles north of Callao. As it was desirable to determine the age of the rocks if possible, Dr. T. W. Stanton forwarded the material to me for identification.

The scales are well preserved and apparently represent a single species belonging to the family Characidae (or Characinidae). They do not agree with any modern genus known to me but are related in a general way to several. The deposit is doubtless fresh water and of Tertiary age, but beyond this it is unsafe to make any positive statement. The general similarity of the scales to those of modern genera and the high degree of specialization of structure would suggest rather late Tertiary, possibly Miocene. Berry¹ has described a series of Miocene plants from northern Peru.

CHARACILEPIS, new genus.

Scales small, subquadrate to transversely elongate; apical field broadly sculptureless, without radii, circuli, or etenoid structures; basal field with broadly spaced transverse or arched circuli (sometimes angulate in middle), but no radii; between the basal and apical fields a variable area (sometimes only narrowly developed, and at sides) of transverse circuli set very close together, and quite independent of the other series. Lateral line very distinct.

Type of the genus.—*Characilepis tripartitus*, new species.

CHARACILEPIS TRIPARTITUS, new species.

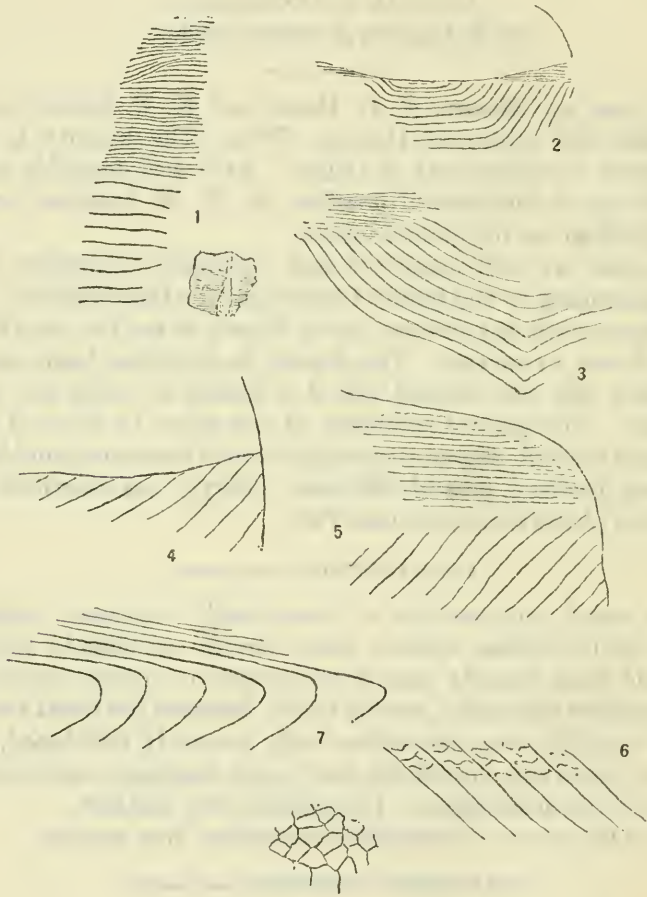
Scales, 3 to 4 mm. broad, polished.

Huacho, Peru.

A lateral line scale (fig. 1) may be considered the type. The scale shown in figure 2 illustrates the sharp limitation of the sculptured area, as in the modern *Bryconamericus*. In the marine genus *Hyporhamphus* (fig. 7) there are two sets of circuli, broadly and narrowly spaced, but one series is directly continuous into the other, as the

¹ Proc. U. S. Nat. Mus., vol. 55, 1919, p. 279.

figure shows. In the Characidae the two sets have become entirely distinct, as is shown in *Acanthocharax microlepis* (fig. 5) and in *Characilepis*. In *Bryconamericus* (fig. 4) the condition resembles that of the *Characilepis* scale in figure 2, except that the transverse closely placed circuli have disappeared. In *Charax gibbosus* (fig. 6)



FIGS. 1-7.—LATERAL LINE SCALE OF *CHARACILEPIS TRIPARTITUS* NEW SPECIES; TYPE. THE ENLARGED DRAWING SHOWS THE SCULPTURE. 2, SCALE OF *CHARACILEPIS TRIPARTITUS*, NEW SPECIES. 3, SCALE OF *CHARACILEPIS TRIPARTITUS*, NEW SPECIES. 4, PART OF SCALE OF *BRYCONAMERICUS HYPHESSUS* EIGENMANN. 5, PART OF SCALE OF *ACANTHOCHARAX MICROLEPIS* EIGENMANN. 6, DETAILS OF SCULPTURE IN SCALE OF *CHARAX GIBBOSUS* (LINNÆUS). 7, PART OF SCALE OF *HYPORHAMPHUS UNIFASCIATUS* (RANZANI).

there is a peculiar broken transverse sculpture along the line limiting the widely spaced circuli, and near the nucleus this sometimes takes the form of a network. It seems to be derived from the other set of circuli.

Holotype and paratypes.—Cat. Nos. 9615, 9616, 9617, U.S.N.M.