

## Chapter 7 Fish Scales

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In the late summer of 1973, Paul Tasch discovered some fish scales in several hand samples of shale from the Ciniza Lake Beds which he was examining for conchostracans. The scales were turned over to Dr. Bobb Schaeffer of the American Museum of Natural History, New York City, for examination. This short note is based in part on his comments. The scales have been deposited in the American Museum of Natural History (AMNH).

In all, five scales were found (fig. 1), three isolated and two in juxtaposition. None of them is complete; nevertheless, they add an additional dimension to our knowledge of the life of Lake Ciniza.

The isolated scales were probably oval in outline, and it is estimated that they were about 7 mm long and 4 mm wide. The juxtaposed scales are much smaller: it is estimated that they were about 1.5 mm wide, and their length is unknown.

A varying number of closely spaced, irregularly branching hollow ridges occur on the exposed portions of all the scales. AMNH 5888 shows 7 ridges, but probably had 10 when complete. AMNH 5883 and AMNH 5884 each show about 20 ridges, and the two juxtaposed scales (AMNH 5889) have 6 each. As in other coelacanth, the scales are covered with fine parallel striae in addition to the ridges. These striae are much finer and more numerous on the exposed portion of the scales than on the embedded part. On the exposed portion, they seem to end abruptly and do not continue onto the embedded portion.

All the scales from the lake beds undoubtedly belong to a coelacanth. Although coelacanth scales are not usually diagnostic, we can tentatively refer the ones reported here to the genus *Chinlea* Schaeffer, 1967. Schaeffer (1967) established the species *C. sorensoni* for various skeletal remains from Upper Triassic deposits of Colorado, New Mexico, Utah, and Texas. On the basis of comparison between the Lake Ciniza scales and those of *C. sorensoni*, it seems reasonable to refer the Lake Ciniza specimens to *Chinlea* sp.

*Chinlea* was probably a fish feeder (Schaeffer 1967, p. 338) and in addition may have pursued baby phytosaurs and larval metoposaur amphibians. It was near the top of the food pyramid in the lake although the apex of the pyramid probably was occupied by phytosaurs, remains of which are occasionally found in and adjacent to the lake beds.

These scales were collected from the grey shale of the Ciniza Lake Beds at localities FW3, FW5, and FW7 in Eastern Wash. Although the distribution of the scales is localized just in Eastern Wash, I believe it only reflects the fact that more specimens of shale were collected in that wash than in the other one.

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### REFERENCE CITED

- Schaeffer, Bobb, 1967, Late Triassic fishes from the western United States: American Mus. Nat. Hist. Bull., v. 135, p. 287-342.

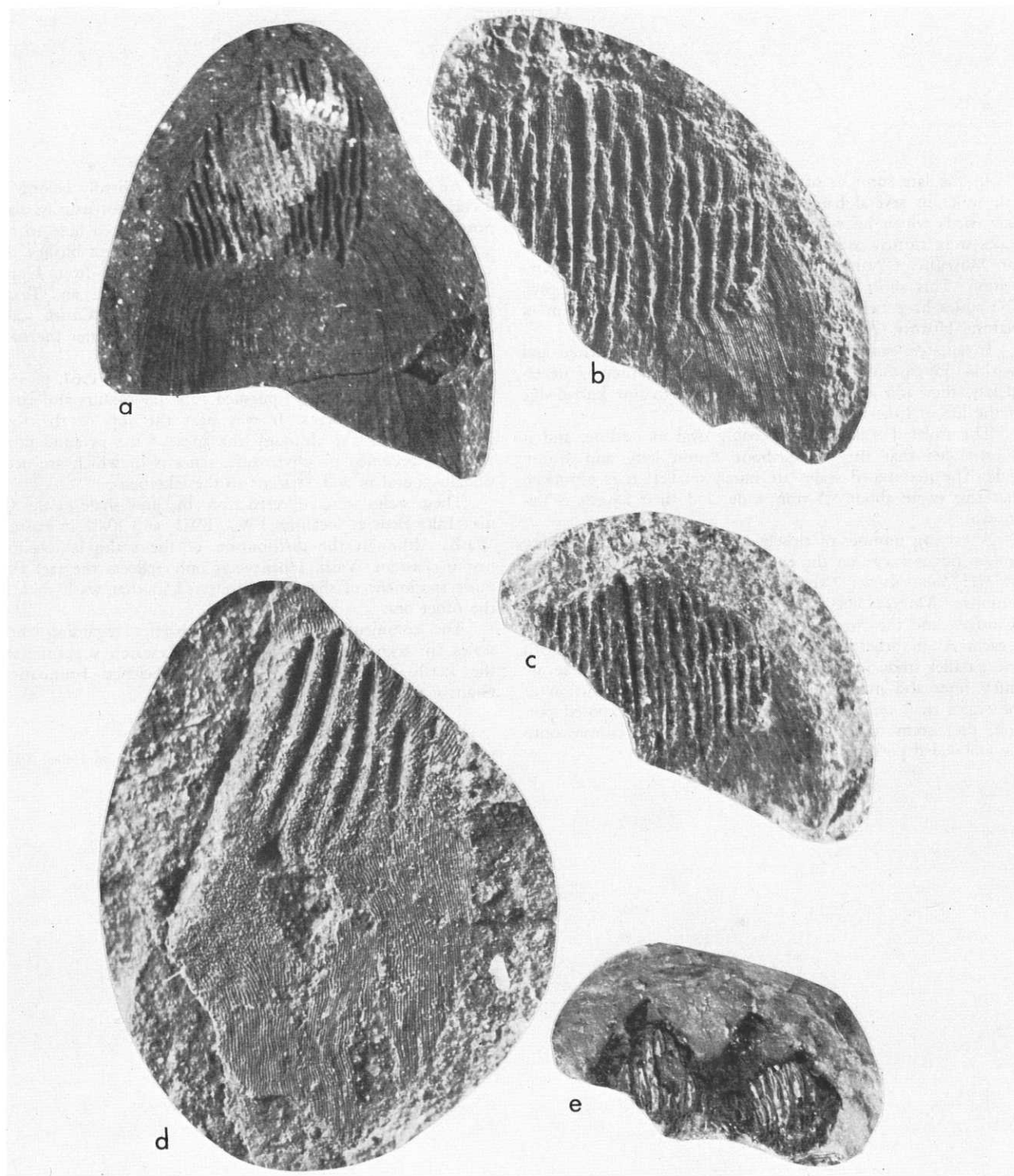


FIGURE 1.—Fish scales from the Ciniza Lake Beds. a-e.—*Chinlea* sp. a, AMNH 5883, X24. b, AMNH 5884, X28.8. c, AMNH 5884, X24. d, AMNH, 5888, X24. e, AMNH 5889, X20.