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## DINOSAUR TRACKS AT THE FOURTH CROSSING OF THE PALUXY RIVER NEAR GLEN ROSE, TEXAS

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Erosion has laid bare at least eight localities in Somervell County, Texas, showing dinosaur tracks in the Glen Rose limestone. It is with keen regret that this article records the disappearance of one of the most notable of these exhibits, the well known track locality at the fourth crossing of the Paluxy River, about four miles west of the town of Glen Rose. Stream erosion, which brought to view there a superb collection of tracks, continued its work too well and wiped out the exhibit as an eraser wipes out a school-boy's blackboard drawing.

The writer, together with Professor J. D. Boon, Dr. Robert T. Hill, and Mr. Louis Kelsey, visited the locality in the summer of 1934. Twenty-six tracks were then exposed in the bottom of the Paluxy River just below the road crossing. With the aid of Mr. Kelsey and Professor Boon, each track was measured and a plane table map of the tracks drawn.

Plans were made to return to the locality for further studies along the Paluxy River, which at that time was very low. A whole year, however, elapsed, and then it was too late. An unusual flood had swept down through the river gorge and had broken dams and done much property damage. But of more interest to the writer, it had cut out the slabs of rock which held the dinosaur tracks and had lowered the river bed from one and a half to two feet.

The section at the fourth crossing is probably within the upper third of the Glen Rose formation. Fuller studies will be necessary to determine this. The layer containing

the tracks was a hard, fine-grained limestone, eight to ten inches in thickness, which much resembled the layer in which other tracks were found near Glen Rose.<sup>1</sup>

Three distinct types of tracks were noted: sharp, pointed toes with rounded heel; pointed toes with angular heel; and a series of tracks made by an individual which was designated in the field as "old club foot," a broad, rounded heel with stubby, rounded toes. The tracks varied in depth from four to eight inches.

It is the writer's opinion that the dinosaur tracks of the Somervell County area lie within beds which have a small vertical range. The area mapped by plane table had a total length of 105 feet and width of eighty-three feet. Twenty-six tracks were recognized and mapped. At least six dinosaurs were memorialized, and they probably belonged to at least three different species. The prevailing direction of the tracks was northeast and southwest.

Individual tracks were measured from heel to tip of toes and the widest part of the track. Sketches were made of each track shown in figure 1. Track measurements in inches follow:

No. 1—11x9	No. 8—13x11	No. 15—15x12	No. 22—17x16
No. 2—17x13	No. 9—14x12	No. 16— 9x10	No. 23— 8x8
No. 3—16x8	No. 10—16x13	No. 17—?	No. 24—13x8
No. 4—13x8	No. 11—16x12	No. 18—15x?	No. 25—12x10
No. 5—13x10½	No. 12— 9x10	No. 19—17x15	No. 26—12x10
No. 6—13x13	No. 13—17x13	No. 20—16x14	
No. 7—14x14	No. 14—15x14	No. 21—15x13	

The stride varied from four to six feet. The speed at which the dinosaur was moving was shown by the slope and depth of the track mold. It was noticeable that the club-footed dinosaur slid in the mud more than the others. No marks indicating dragging tails were seen. While no new light was thrown on the conditions under which the tracks were made, it strengthened the opinion that they were made in lime muds covered with water sufficiently deep to support the tail of the dinosaur.

The whole incident emphasized the fact that tracks exposed in streams and to open weathering are ephemeral

<sup>1</sup>Shuler, Ellis W.: "Dinosaur Tracks in the Glen Rose Limestone near Glen Rose, Texas," *American Journal of Science*, Vol. XLIV, October, 1917, pp. 294-297.

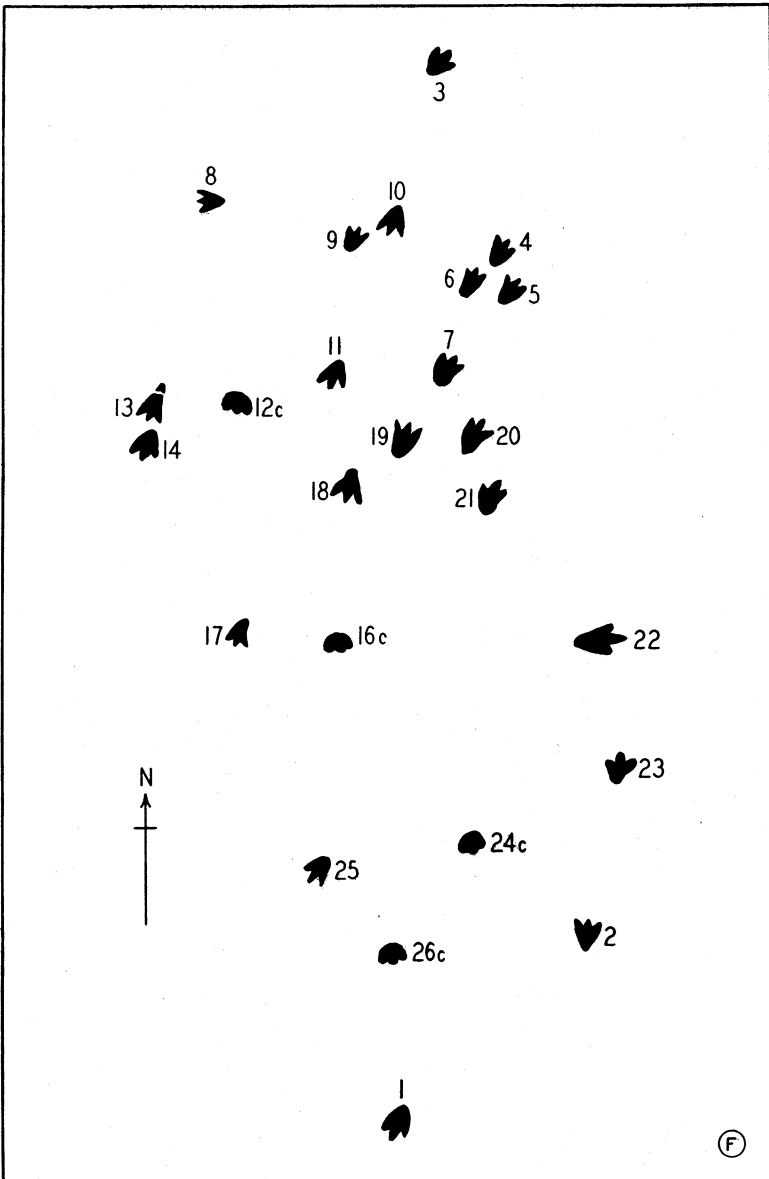


Fig. 1. Dinosaur tracks at the fourth crossing of the Paluxy River near Glen Rose, Texas.

exhibits and should be studied at the earliest possible time. It adds to the growing conviction of the writer that erosion is a much more rapid and effective process than has been supposed in the past. It also emphasized the pulsatory character of the events of erosion, an item which has not yet been given full recognition.

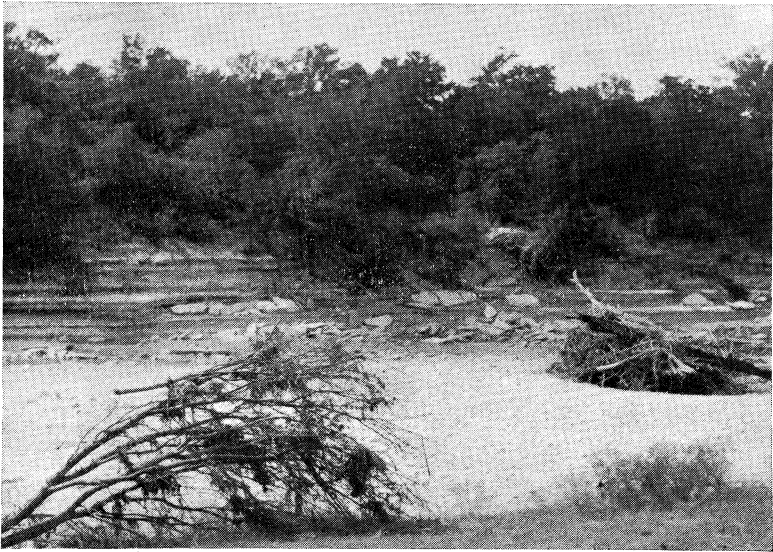


Fig. 2

The above photograph of the locality (Fig. 2), taken after the tracks were eroded, is printed as a record of this extraordinary flood which swept down the canyon of the Paluxy River during the early spring of 1935.