

Kuroda (1926) found evidence that lizards, frogs and toads can hear, but found none for turtles or Urodeles (*Triton* and *Hynobius*).

The first noted Occurrence of *Dasypus bellus* in Texas

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A small group of persons, "The Dallas Prehistorical Society", has for several years been collecting fossil bones from the second of a series of alluvial terraces of the Trinity River. We have assembled a rather extensive fauna. Our faunal list has not been published in full, although some specimens have been reported as new species. As some time will elapse before the faunal paper will be ready for publication, it seems well to report here the first Texas record of *Dasypus bellus* (Simpson).

The "T-2 Terrace" (local usage) stands some 70 feet above the stream level at Dallas, and is divided into 4 easily recognizable units: in ascending order, (1) basal gravel (Hill), (2) clean laminated sand (lower Shuler), (3) sandy clay, becoming less sandy toward the top (upper Shuler), and (4) dark gumbo, separable from the upland soils only by the presence of small caliche nodules (Richards).

Although there are a few erosional exposures, most of the fossils have come to us from excavations to secure sand and gravel for construction. Crook & Harris (1958) concluded that deposition of the terrace deposits were made during an interglacial or interstadial. Certain faunal elements and two carbon dates (Brannon *et al.*, 1957)—both indicating an age in excess of 37,000 B.C.—suggest the last interglacial (Sangamon?). Both carbon dates were from the lower portion of the upper Shuler, while the specimen here described was collected by R. K. Harris and myself from the upper Shuler near its contact with the overlying "Richards", in association with *Mammut*, *Mammuthus*, *Bison* (large), *Camelops*, *Castor*, *Testudo*, and at least 2 species of horses. The locality is on Hickory Creek, near its junction with the Trinity River in southern Denton County. Our *Dasypus bellus* material was sent to Walter Auffenburg at the University of Florida for comparison with material from that State, and no important differences were noted.

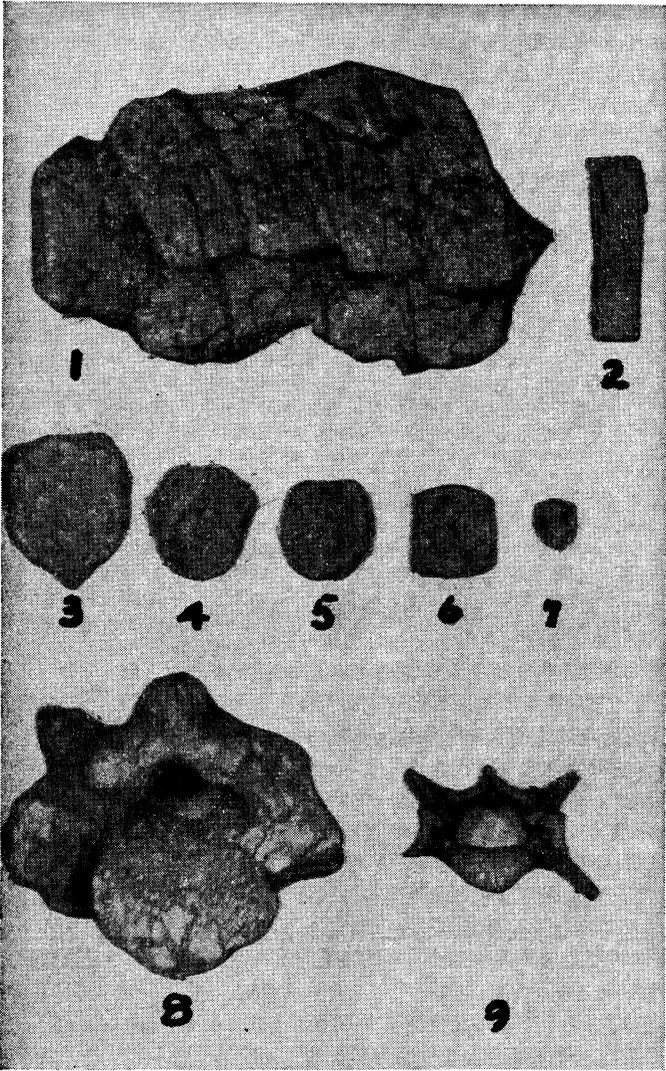


PLATE I. (X.1). 1, Two rows of *Dasytus bellus* movable ring scutes, cemented in more or less natural position by caliche. 2, Single movable ring scute of *D. novemcinctus*, showing size-difference. 3, 4, 5, Buckler scutes of *D. bellus*. 6, Leg scute of *D. bellus*. 7, Buckler scute of *D. novemcinctus*. 8, Caliche-incrusted thoracic vertebra of *D. bellus*. 9, Thoracic vertebra of *D. novemcinctus*.

Dasypus bellus (Simpson)

Over 100 buckler-, movable ring-, and leg scutes, plus 3 thoracic vertebrae belonging to a single individual represent this species in the Dallas collections. These carry in the Dallas Museum of Natural History the catalog number "705 us, D.P.S.C." While this is the first report of this species in Texas, we may note that Holmes Simkins, graduate student at the University of Texas, collected two movable ring-scutes from the "Cave Without a Name", in Bexar County. The inconspicuous size and appearance of scutes of this type could cause local collectors to overlook or cast them aside, thinking them merely bone-fragments or pieces of turtle carapace.

The buckler-scutes are hexagonal and average 6 to 7 mm. in thickness, and 15 mm. in width. The smooth external surface is embossed with grooves that form a smaller hexagon slightly off-center of the scute itself. Radiating grooves connect each corner of this central figure to the border of the scute, thus creating 5 to 6 marginal areas. These grooves mark the boundary of the scales that covered the carapace in life. Small follicles arrange themselves in these depressions, several to a scute. One or two small punctations are present on the slightly concave, completely smooth, internal face.

The movable ring-scutes average about 15 mm. in width and 35 mm. in length. The anterior fourth of the external face is slightly elevated above the posterior portion. Follicle-filled grooves divide this posterior into 3 figures. The inner figure resembles an elongated triangle, and each of the outer figures approximates half of the size and shape of the former.

Leg-scutes are almost square, and often display the hexagonal central figure that occurs in the bucklers. These are approximately 5 mm. in thickness and 10 mm. in diameter.

The modern counterpart of *Dasypus bellus*, *D. novemcinctus*, has spread from south Texas to other States east of the Mississippi River in a little over a century, and would no doubt have completed the trip to Florida in another hundred years. Buchanan (1958), however, reports that *D. novemcinctus* is present and spreading today in Florida because of its translation by man. If this striking example of migration had not taken place in historic times, one would probably allot considerably more time for such a dispersing of a species.

LITERATURE CITED

- BRANNON, H. R., JR., A. C. DAUGHTRY, D. PERRY, L. H. SIMMONS, W. W. WHITAKER, & MILTON WILLIAMS: "Humble Oil Company Radiocarbon Dates, I" (*Science*, 125, 1957, 147-50).
- BUCHANAN, G. D.: "The current range of the armadillo, *Dasybus novemcinctus mexicanus*, in the United States" (*Texas Jour. Sci.*, 10, 1958, 349-51).
- CROOK, W. W., JR. & R. K. HARRIS: "A Pleistocene campsite near Lewisville, Texas" (*American Antiquity*, 23, 1958, 233-46).
- HOLMES, WALTER W. & GEORGE G. SIMPSON: "Pleistocene exploration and fossil Edentates in Florida" (*Bull. Amer. Mus. Nat. Hist.*, 59, 1931, 338-418).
- SIMPSON, GEORGE G.: "Pleistocene mammalian fauna of the Seminole Field, Pinellas County, Florida" (*ibid.*, 56, 1929, 561-99).

Note

OBSERVATIONS OF CAPTIVE HOG-NOSED SNAKES, *HETERODON PLATYRHINOS PLATYRHINOS* LATREILLE.—Much has been written about the gentleness of the hog-nosed snake and of its ability to flatten its head and hiss loudly and of its ability to "feign death". I thought it appropriate to record here observations of certain other habits of *Heterodon platyrhinos platyrhinos*. These observations were made of three individuals kept in captivity for periods of 13 months, 4 months, and 1 month. All three were collected in the southwest corner of Dallas County, an area characterized by limestone outcrops, "cedar brakes", and little water.

Due, perhaps, to the burrowing habits of this species, two of the three snakes were quite restless in their cages until some sort of cover material (pieces of bark or newspaper) under which they could crawl was provided. The third snake simply placed its head under its body and seemed to consider itself hidden or buried. All three remained quiet during the day but became quite active at night.

These snakes have eaten readily both during the day and at night throughout their periods of captivity. Of the several types of food offered (toads, frogs, mice, insects) toads are definitely preferred; the mice and insects were ignored completely. Each snake has devoured, readily, an average of two toads (*Bufo woodhousei* Girard) a week. During the winter months the one snake under observation went for periods of 6 to 8 weeks without food. In most instances the bodies of the toads were two to three times, in diameter, the bodies of the snakes.

In feeding the snakes approached the toads cautiously and slowly. There was, generally, no "strike". The snakes simply opened their mouths and grasped the toads firmly by the heads. In one or two instances a snake became excited and pursued a toad rapidly around the cage, grasping it by whatever part of the body it could. Even in these instances, however, the snake worked its mouth up to the head of the toad so that the head was swallowed first. In one instance a toad was swallowed sideways. On this occasion the pressure on the body of the toad was great enough to force one of its lungs out through its mouth.

Although the toads struggled vigorously, the snakes usually managed to swallow them without difficulty. The swallowing process in the case of a large toad lasted approximately 15 minutes. The snakes would push the toads against a coil of the body or against the side of the cage to help force the toad down the throat.

These snakes seemed to need little water and were actually seen to drink water only twice.

Ingestion of a meal seemed to cause defecation within a 48 hour period. The wastes passed at this time were undoubtedly the residues of food eaten prior to the last meal since digestion seemed to take place slowly. A "lump" in the body could be plainly seen for as long as 72 hours after ingestion.

In the act of defecation, the tail was held at a 45 degree angle above the floor of the cage. As the feces were passed from the vent, the snake crawled away from them.