By the light, then, of these deliberate precautions, the cursory examination of all the material and the repeated critical study of the several suspect pieces were undertaken. The result is, in brief, that I find no positive evidence either of intentional design or of artificial workmanship.

It is true there are several pointed forms resembling awls and also some tubular bone sections resembling beads, which, if found, say, in an Indian shell-heap would cause a careful archeologist to look at them several times before discarding them. But, after all, aside from their suggestive shape—simulating not finished articles but rather improvised forms often adapted from accidental bone fragments—they carry none of the real telltale marks above enumerated. When, therefore, it is alleged (Science News, May 10, p. xiv) that "eighteen of the [Nebraska] types of tools have been matched with counterparts found in the ruins of cliff-dwellers," two observations become imperative. One is, that with two exceptions—awls and tubular beads—the "eighteen counterparts" are not designed tools or ornaments but merely accidental fragments, a few of which have served temporary purposes. The other is that the "matching process" referred to involved on the discoverer's part the culling over of many thousands of fossil bone fragments. We have here, in other words, a close parallel to the selective procedure of which Europeans have made so much in the accumulation of eoliths. But, as in the case of eoliths, it is pertinent here to remark that given the proper raw materials and the right natural conditions for their manipulation, nature produces many things more or less suggestive of human handiwork, and the collector by taking pains can easily gather an array of imitations which considered by themselves are sometimes deceptively impressive.

It is true also that the Nebraska collection affords several bone specimens marked by worn U-shaped grooves of varying and rather large dimensions and of unexplainable origin. These grooves are, however, weathered irregularly, and taken by themselves are meaningless, being in no sense characteristic of true artifacts.

Lastly, there are two, perhaps three, bone fragments which carry decidedly suggestive markings. Two of these specimens are so striking that once more the writer would say that if they had been found in a refuse heap one might conceivably have retained them as showing certain accidental and purposeless indications of human activity. One of these pieces is a rib fragment with some shallow irregular cut-like markings on the inner face. No one can say that these are or are not artificial. They may, however, be nothing but tooth marks. The other piece is a tibia fragment, the sharp natural angle of which carries four slantingly transverse chop-like marks. These markings, though fairly deep, are not sufficiently clean cut to enable any one to say positively that they are artificial; and close to them, moreover, are several other fainter and more irregular markings which are certainly not artificial and which therefore weaken the original possibilities.

There remains the difficult question of accidental fracture. The success of the collector's matching process is really dependent on this feature. And it can not be denied that some of the longitudinal and diagonal breaks exhibited by the Nebraska specimens resemble the breaks to be observed in the animal bones so abundant in our shell-heaps and ruins everywhere and which can with reasonable certainty be attributed to human agency. Some of these fractures in the Nebraska finds are probably old and may have been produced while the bone was green or fresh. But who is prepared to tell us of the finer distinctions—if any—between fresh bone crushed by a carnivor and fresh bone crushed by a man between two stones? Certain other longitudinal fractures characteristic of the Nebraska bones, especially those carrying the split clear through the condyles, are distinctly unhumanlike performances; besides, they seem to me to have been made since the bones were fossilized. Belonging to this latter class are also many clear-cut transverse fractures, which certainly could not have been produced in fresh bone. Finally, the various facets on the fractured pieces often show different degrees of wear and polish, suggesting again that the breaking-up process has been prolonged and at least in part subsequent to fossilization. The more or less uniformly worn or semi-polished condition of certain of the specimens is a matter which may be left for others to explain, but it can scarcely be regarded as the work of man.

The inevitable conclusion is, therefore, in my judgment, that the presence of artifacts in the Snake Creek deposits is not established and can not be established by the collections examined to date.

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THE LIFE HISTORY OF VARANUS NILOTICUS

A PAPER giving a detailed account of the entire life history of the Nile monitor, *Varanus niloticus*, is being prepared for publication, but a brief description of one of the most interesting chapters of its life will not be out of place at the present time.

The monitor is a large reptile which is fairly common in many parts of Africa, its range extending throughout the continent wherever proper conditions exist. Although it is one of the largest lizards within its range and is not rare even in the more settled districts, comparatively little is known concerning its more intimate activities. The few accounts dealing with the habits of the Nile monitor come from observers who have worked in the tropics rather than in the more temperate regions of South Africa, which probably explains the great difference between the following observations and those previously made by other observers. (For one account of the egg laying, see Roosevelt: "African Game Trails," pp. 411.)

Throughout the section of Natal, South Africa, where these observations were made, there are large numbers of hard clay nests made by one of the most common termites, *Eutermes trinervius*. These nests are cellular in structure, being perforated in all directions by numerous small intersecting passages. The outside of the nest is composed of the same material as that used within, clay, but becomes much harder and offers a good deal of resistance to penetration with a hoe or even a spade.

During the rains the outer covering of the nest becomes soaked with moisture and can be broken into very easily. At this season of the year the monitor digs its way to the center of the nest and lays from a dozen to thirty eggs, about the size of hens' eggs, covered with a tough, leathery integument. As soon as the parent is through laying she returns to her regular habitat, in some cases at least without having made any attempt to cover the eggs. The termites, which are always exceedingly active in a healthy colony, repair the break and in a few hours at most only the presence of a slightly damper area on the surface of the next remains as evidence of what has occurred.

At the end of ten months, which brings the date to the spring of the year, the eggs hatch out, and through their own efforts aided by the softening effect of the excess liquid contained in the old egg "shell," the young make a vertical tunnel and finally emerge from the top of the termite nest. As soon as they have left the nest they make for the nearest stream where they will be found hunting for food and basking on the banks or swimming and diving as readily as do the adults.

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TRINITASIA—A NEW MOLLUSCAN GENUS FROM SOUTH AMERICA

IN 1925, I described and figured from the Miocene of Manzanilla, Trinidad, W. I., a shell of very striking form, as *Thyasira sancti-andreæ* (*Bulletin of American Paleontology,* No. 42, p. 166, pl. 30, figs. 2, 3, 1925). The hinge of all the Trinidad specimens was concealed, and they were only provisionally referred to the genus *Thyasira,* on the advice of Dr. W. H. Dall, our greatest conchologist, to whom they were submitted because of their puzzling generic position.

Subsequently I studied a series of shells and molds from northern South America, which graded in size from small individuals to those equalling the Trinidad type and exactly like it in form. Several of the smaller molds showed in reverse traces of strong cardinal hinge teeth. These were certainly not *Thyasira,* which is practically edentulous; and Dr. Dall pronounced them unlike anything he knew. Clearly they represented a new genus, but the larger members of the series did not show their hinge characters, and although they had the same form, one could not be certain that they possessed hinge teeth like the smaller specimens.

Lately, however, I had in hand a full-sized shell, equaling the Trinidad type, and by a happy accident, its very thin and delicate substance was abraded at the beak and marks of about three strong, rather long, cardinal teeth were clearly shown in reverse upon the internal filling. I hope later to figure the hinge structure.

For this interesting Miocene genus of Trinidad and northern South America, I propose the name *Trinitasia,* the genotype being the form described, in the citation above given, as *Thyasira sancti-andreæ* Maury, from the Miocene of Manzanilla, Department of St. Andrews, in southeastern Trinidad.

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THE BEHAVIOR OF MALLARD DUCKS

DURING the recent cold period a very interesting experience was afforded by a flock of about twenty-five Mallard ducks who make their home in a small stream known as Muddy River, in the Fenway section of Boston. With the fall in temperature, and the consequent freezing of the water, it seemed inevitable that the ducks would be driven from their swimming pool. Yet, from watching them, it became apparent that they were not to be driven from their home without a struggle. The ducks began to circle round and round in a radius of about 15 feet with a speed and determination that was amazing. Throughout the entire night, they plied about in their little pool, and though the bitter cold and fast-forming ice, which tried to hem them in, were sufficient to discourage the