would probably prevent employment of the trained workers in many instances. In order to bring the demand and the supply together it may be desirable at a later time to make efforts to secure grants to enable small museums to employ directors for three or five years.

PROJECT IV—PUBLIC SUPPORT OF MUSEUMS

Success of *Project III* should equip a number of small museums for community service. In each of such museums the director would doubtless regard it as a first duty to place the finances of the institution on a safe permanent basis, and to this end help could be given.

Public support is the strongest financial bulwark of a small institution, but the success of any museum in securing county or municipal appropriations must depend upon the character of legislation in the state. There are only ten states in which the legislature has made provision for museums, and in five of these states the laws are quite inadequate. Therefore the association has determined to work for uniform and improved laws.

PROJECT V—COOPERATION OF MUSEUMS

The life and virility of any museum depends in part upon the relations which it maintains with other museums. Since small museums are more apt to be benefited by help from their near neighbors than from institutions far away, and since the expense involved in sending representatives to state conferences would be small, it seems desirable to promote the establishment of state or regional museums organiaztions. Although the American Association of Museums desires to give assistance to regional groups, it does not intend to exercise any centralized administrative control.

In undertaking this promotion, the association is mindful of the misfortunes that would attend standardization of museums, and therefore freedom of local initiative is to be safeguarded. However, the small museums of America do need counsel and help, and with just these abetments from the national body, they may ultimately attain to much importance.

LAURENCE VAIL COLEMAN,
Executive Secretary.

NEW YORK, N. Y.

DEFINITE EVIDENCE OF HUMAN ARTIFACTS IN THE AMERICAN PLEISTOCENE

GOOD, dependable definite evidence of human artifacts in the Pleistocene in America has at last been found. Many geologists and investigators have been expecting such evidence to be turned up, and many interesting discoveries are of course recorded, by many people from several states. Among the more important of these are the famous Vero and Melbourne, Florida, discoveries; those at Dallas Sand Pits, Texas, and the Nebraska Loess Man. But in most cases, however, these discoveries were made under conditions which make the geological evidence of their antiquity subject to possible question, in varying degrees.

In the present instance, fortunately, the evidence is so dependable that no reasonable doubt can exist that the artifacts and fossil animals found are contemporaneous, and that the animals and artifacts are in original, undisturbed Pleistocene deposits.

The first work leading up to this discovery was done early in the summer of 1924. After seeing pieces of fossilized bone from the locality, Director J. D. Figgins, of the Colorado Museum of Natural History, Denver, authorized and outfitted an expedition to southwestern Texas, under the leadership of Mr. H. D. Boyes; and the work of excavating was begun with the assistance of Mr. Nelson Vaughan, who made the original discovery, and reported it to Director Figgins. About the first of May, 1925, at the request of Director Figgins, the writer went to the locality, examined the quarry and vicinity and checked the geology of the region.

In 1924, Messrs. Boyes and Vaughan collected most of the associated skeleton of a splendidly preserved fossil bison and parts of other individuals and animals. In taking up a large block, with the articulated vertebrae and ribs in position, the first artifact was found, under the cervical vertebrae. A second similar point was found on the under side of the femur of this bison. A third point was found in position with the body of this skeleton; but this latter point was lost or stolen before it could be packed in the field for shipment. These artifacts are large arrow points or small lance points. They are, very unexpectedly, of very fine workmanship, much more refined and beautifully worked than the arrow and spear points of the more recent types in that region, and of quite distinct culture and design. Hundreds of examples of the stone artifacts of two more recent cultural stages were observed in that region by the writer, and there is no question that the more recent work is far more crude, and made by a distinct people, of distinct culture.

In examining the geology of the region it became apparent that the old eroded, rather shallow valleys, cut into Triassic and Cretaceous beds in that region, had for a while refilled during Pleistocene time; and

that subsequent erosion has recut the old valleys down to about the same point they originally were; but in so doing, the newer cut is often somewhat narrower than the former valley, leaving undisturbed Pleistocene remnants along the sides of the valleys. An area some hundred and twenty-five miles in extent was examined by the writer, and similar conditions were noted over quite an extended area, whose limits are not exactly known. The deposit in which the bison and artifacts noted was found is such an old remnant, and is obviously undisturbed. Only a narrow strip of Pleistocene beds remain between the present stream erosion and the old Triassic former valley wall.

The bison and other fossils occur in solidly cemented gravels, overlain by about five to seven feet of undisturbed Pleistocene sands and gravels, that are cemented so hard by calcareous cement that the beds are worked with difficulty, especially when dry. On top of these sands is a disturbed bed of uncertain age, and above this several feet of worked-over sands, silts and soil. The bones found are all well fossilized, and in a state that it would be utterly impossible for erosion to have moved them, without breaking them up and disarticulating the bones, and largely destroying them. Every observed condition clearly points to an undisturbed deposit, and free from such cross-channeling as has worked the materials over at Vero, Florida. The bison pertains to one of the earliest stages of the refilling process in laying down these Pleistocene gravels and is just above the old Triassic floor. It is probable that the bison had been shot and carried these flint points with him to the place where he finally died and was entombed.

Mr. Vaughan went with the writer to this locality and over the region. Further excavation showed the presence of other bones in position; and the deposits were examined for more than a mile up the little valley of Lone Wolf Creek, above the quarry site. Similar bones and associated types of animals were found in all places where fossils could be located. In these lower beds, beside the extinct bison, a large species of *Elephas*, *Equus* and a camel probably belonging to the genus *Camelus* or *Camelops* were discovered, and some other unidentified bones. All fossils found were broken up and scrappy, with the exception of the bison—as is usually the case and to be expected in beds containing so much coarse gravel. Only in isolated cases is it possible to hope to find an associated skeleton in these deposits. The bison belongs to a large species, considerably larger than the modern species, but as yet it has been impossible to give it comparative study and accurate identification. It is mounted and on exhibition in the Colorado Museum of Natural History, Denver, and is a beautiful specimen. The *Elephas* has as yet only had field determination, but belongs to the type closely related to what has been commonly considered the *Elephas columbi* type. The *Equus* is a large species and is represented, as is the *Elephas*, by teeth and lower jaws and odd fragments of bone; but in view of the large number of proposed species in that genus, until close comparisons can be made, no more exact identification is desirable. It is probable that a detailed study of this fauna will make it possible to assign the beds to a definite stage in the Pleistocene.

Mr. Nelson Vaughan has been scouring the region this summer (1925) for further material. As yet his collections are not unpacked for study; but no further articulated skeletons have been found. More detailed reports will shortly appear in the publications of the Colorado Museum of Natural History.

The location of these finds is a point near the Colorado River, near the southeastern end of the Staked Plains, and near the little town of Colorado, Texas, on Lone Wolf Creek.

At present the following points stand out clearly. There is no possibility of accidental inclusion of these artifacts with the bison, or of their being of later age. *They are certainly and positively contemporaneous with that fossil bison and the associated fauna of mammoths, camels and extinct horses*—of a type found elsewhere in beds of known Pleistocene age. Until more detailed studies are made, however, it is not possible to state the age of the deposits more definitely, or to what phase of the Pleistocene they belong.

HAROLD J. COOK

AGATE, NEBRASKA

EGGS SUPPOSED TO BE LUMINOUS

IN my study of Semitic superstitions (comparative religion) I have accumulated a large body of information from many lands relative to *cultus* offered to the "Jack-o'lantern" as a ghost of the dead. In all this lore it is associated with decomposing animal matter, garbage heaps, shallow graves, old privies, kitchen middens, shell-mounds, etc., as well as with marshlands, etc. (The savage mind does not distinguish between the "Jack-o'lantern" drifting in the air as high as the treetops sometimes, and the stationary electric phenomena known as "St. Elmo's Fires," and the local phosphorescence of decayed wood, putrid fish, etc.)

Now, some of the old oriental myths associate mysterious "divine" lights with swan's eggs in the marsh, roc's eggs (see the geni of Aladdin's "lamp" whose "father" was a "roc's egg") and ostrich eggs, which are to-day hung in oriental tomb shrines. This leads me to think that such luminous exhalations or emanations had certainly been observed in connection with