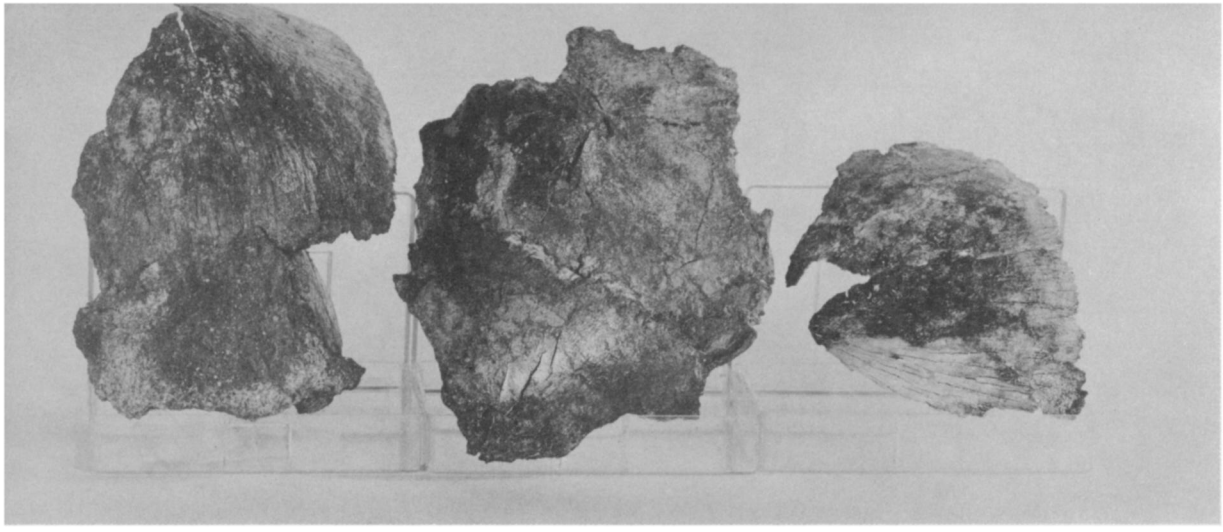

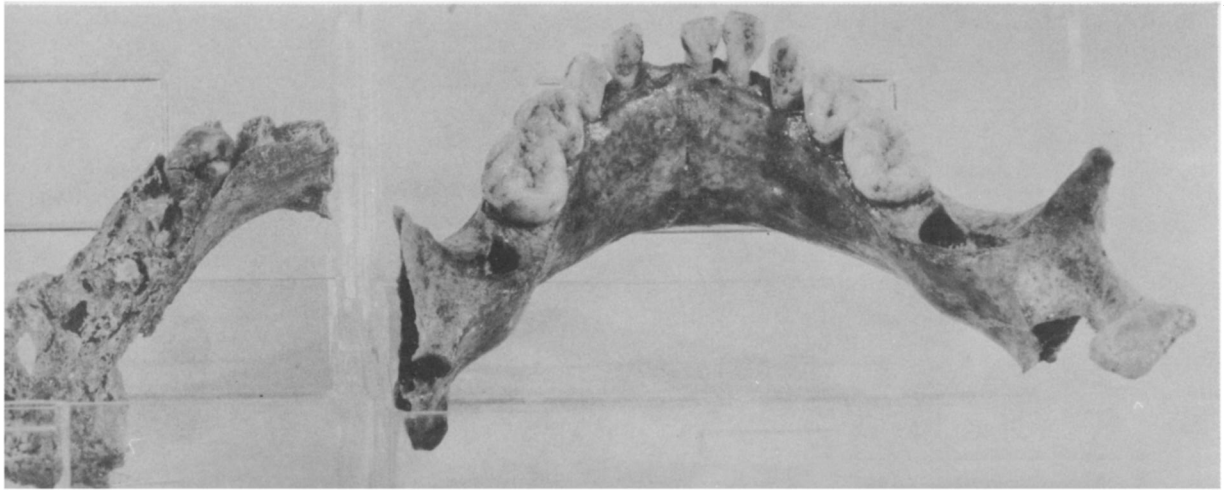

Plate No. 1

ABOVE: *Neuro-cranial fragments of the infant from the Taber Site.*

BELOW: (Left) *Left mandibular corpus of infant from the Taber Site.*
(Right) *Mandible of child from the Stott mound, southern Manitoba.*

Notes on Taber "Early Man" Site

BY WANN LANGSTON AND LAWRENCE OSCHINSKY

Part One

GEOLOGICAL BACKGROUND

by Wann Langston

On August 1, 1962, I visited the locality near Taber, Alberta, where Dr. A.M. Stalker and his field assistant collected part of a newborn human skeleton last year. I was accompanied by Dr. Stalker, Dr. Alexis Dreimanis, a well-known Pleistocene geologist with the University of Western Ontario, and Dr. Richard G. Forbis of the Glenbow Foundation, Calgary, Alberta.

The site is situated about in the SE corner of NE ¼ section 30, Tp. 10, Rge. 16 west of 4th meridian (Map 565A, Taber). This is about 4 ¾ miles north of the town of Taber, on the east bank of the Oldman River. To reach it, travel north, on the road nearest the river. (Refer to airphoto A 15129-169). At the fence indicated, walk due west over the rim of the valley wall down onto a steep sandy bank.

The exposure is a shallow notch in the river bank. The sediment is mainly a yellow to buff, fine to coarse, cross-bedded sand. The colour is brighter here than in adjacent exposures. The area has been affected by slumping and the sand contains great numbers of small faults. We were unable to locate the exact spot from which the specimen came, but Stalked pointed out the approximate level, which he believed to be accurate within five feet. There is a thin zone at about this level, slightly to well indurated with calcium carbonate, seemingly similar to that surrounding the specimen. Such induration was not seen at higher levels. This horizon is about 65 feet below the prairie level. Above the sandy section and forming the prairie surface, is what Stalker and Dreimanis believe to be a till. This contains a mixture of fine silty-clay and metamorphic pebbles and boulders.

Exposed, in the side of the exposure between the supposed

till and the sandy section, is a thin intermittent layer of white, massive-jointing gritty sediment that may be a tuff. Large boulders in the till above have penetrated this stratum which has compacted and bent beneath their weight. One large boulder has been faulted *en echelon* and the faults carry through the tuff-like layer into the sand below. These faults are part of the general system developed in the area in association with slumping of the river banks.

In my opinion, geological consideration completely exclude the possibility that the burial was intrusive. The specimen comprised the skull and jaws and the upper part of the articulated skeleton. Whether more was originally present is unknown. All bones were surrounded by calcaneous concretionary material which cemented the enclosing sand into a hard sandstone and prevented complete development of the relatively soft bones. The skull had been completely disrupted by egg-shell fracturing. The broad cranial bones had slipped within one another, the maxillae had separated and one lay within the parietals and occipital. The remainder of the skeleton recovered had not suffered in this fashion. I believe shifting in the consolidated sand would not have disrupted the skull to this extent while leaving the rest of the bones undisturbed. It is more likely that the head was crushed before or at the time of burial.

There is no trace of fissure-filling in the sands above the horizon and the possibility that the skeleton might have been dropped into a natural opening 65 feet deep need not be considered. So far as I could determine the strata above the horizon are undisturbed except by faulting. The specimen might have been inserted from the face of the bank, but the rate of erosion of this face is obviously rapid and no horizontal excavation of any depth would be possible in the unconsolidated sands comprising the section. Although the existence of concretionary material surrounding the bones is not *ipso facto* evidence of antiquity it seems highly improbable that this would have formed in the time that erosion was reaching the burial had it been effected out by horizontal tunneling.

I am convinced that this burial is very old. There is no way to estimate its age in useful terms from evidence observed in the

field. If the supposed tuff is in fact of igneous origin radiogenic material may be present which would permit absolute dating. Unless uncontaminated carbonaceous material can be found at or above the fossil horizon there is no possibility of obtaining a dating by carbon isotope analysis (flakes of carbon in the sand are almost certainly derived from Cretaceous coal deposits which underly the Pleistocene sediments of this region). Teeth in the jaws of the specimen might provide sufficient material carbon for an analysis, but on the other hand the obvious activity of carbonate-containing ground water around the pecimens raise a strong possibility of contamination.

It is practically certain that this burial was accidental. The body may have been washed in onto a sandy bar in a river and buried after partial decomposition. I see no reason to expect any further discoveries at the site. On the other hand the sediment is easily excavated and some attempt to locate organic material suitable fort dating might be attempted. Approximately four miles southwest of this site (Sec. 12, Tp. 10, Rge. 17) willow twigs have been found in a till. These have been dated by C14 methods as about 10,000 years B.P.

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Part Two

SKELETAL REMAINS

by L. Oschinsky

The skeletal remains from the Taber site consist of fragments of the parietal bones, the occipital, the left corpus and ascending ramus of the mandible, a portion of the roof of one of the orbits, an almost unrecognizable portion of the maxilla in a very crushed state lying within the parietals and occiput. In the mandible, the break has been at the mandibular symphisis and the alveolae contain two unerupted deciduous molars. There is an apparently free upper left enamel second molar cap.

The post cranial skeleton consists of a right clavicle, a portion of a left scapula, a fragment of the distal end of the left

femur, two crushed vertebrae hidden still in the matrix, two ribs, probably a first and second, and the corpus of a vertebra.

In cusp pattern, the free upper left second molar enamel cap, corresponds to type "4" of Hanihara's classification (1961:35). All the main cusps are well developed and the distal marginal ridge from the hypocone to the metacone shows a slight interruption.

It is interesting to note that the cusp pattern of the second molar of the Stott Mound infant shows a similar configuration. Hanihara (1961:36) states:

> The tendency that the well-developed hypocone is more frequent in the Mongoloids than in the White race is also repeated in the decidious upper 2nd molar. The frequencies of the type '4' are approximately 74% in the American White, 82% in the Pima Indians and 84% in the Japanese.

It is unfortunate that these remains are so fragmentary and so few conclusions can be drawn form them. Racial characteristics are not very evident in immature specimens even under optimum conditions.

Since the fragments were not found in any archaeological context the cultural affinity of the specimens could not be determined.

The authors wish to thank Dr. A.M. Stalker of the Geological Survey of Canada who discovered the remains and brought them back to Ottawa, Dr. A. Dreimanis of the University of Western Ontario and Dr. R.C. Forbis of the Glenbow Foundation, Calgary, for their cooperation. The specimens were prepared by Harold Shearman, technician attached to the Laboratory of Paleontology at the National Museum of Canada.

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Plate No. 2

(Left) *Upper Left deciduous molar, Taber Site.*

(Right) *Maxilla & dentition of child from the Stott mound, southern Manitoba.*