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NOTICE OF A NEW FOSSIL RHINOCEROS

FROM SIOUX COUNTY

NEBRASKA

BY

ERWIN HINCKLEY BARBOUR

Scientific Contribution
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NOTICE OF A NEW FOSSIL RHINOCEROS FROM SIOUX COUNTY, NEBRASKA

DICERATHERIUM ARIKARENSE

BY ERWIN HINCKLEY BARBOUR.

The Rhinoceros is represented in Nebraska by a number of species, beginning with the hornless type at the bottom of the bad lands, and extending upward to the horned type of later deposits.

It is the purpose of this paper to announce the discovery of a new fossil Rhinoceros with a pair of horns on its snout.

This was found in the Loup Fork deposits (Miocene), on the ranch of Mr. James Cook, at Agate, Sioux county, Nebraska, by the geological expedition sent from the University of Nebraska by the Hon. Charles H. Morrill, of Lincoln, summer of 1905.

Diceratherium, in America, was established by Marsh in 1875 on material from the Miocene beds near the John Day river in eastern Oregon, and two species, armatum and nanum were recognized. A third species, advenum, was based on material from the Eocene (possibly Miocene) of Utah. Difference of horizon, and distance seem to warrant the specific name herein proposed. In comparing numerous individuals such variation was noted as to justify the belief that this group might legitimately enough be divided into several species.

Many skulls were found, but unfortunately no single one was complete. They were found in a very limited area, and together

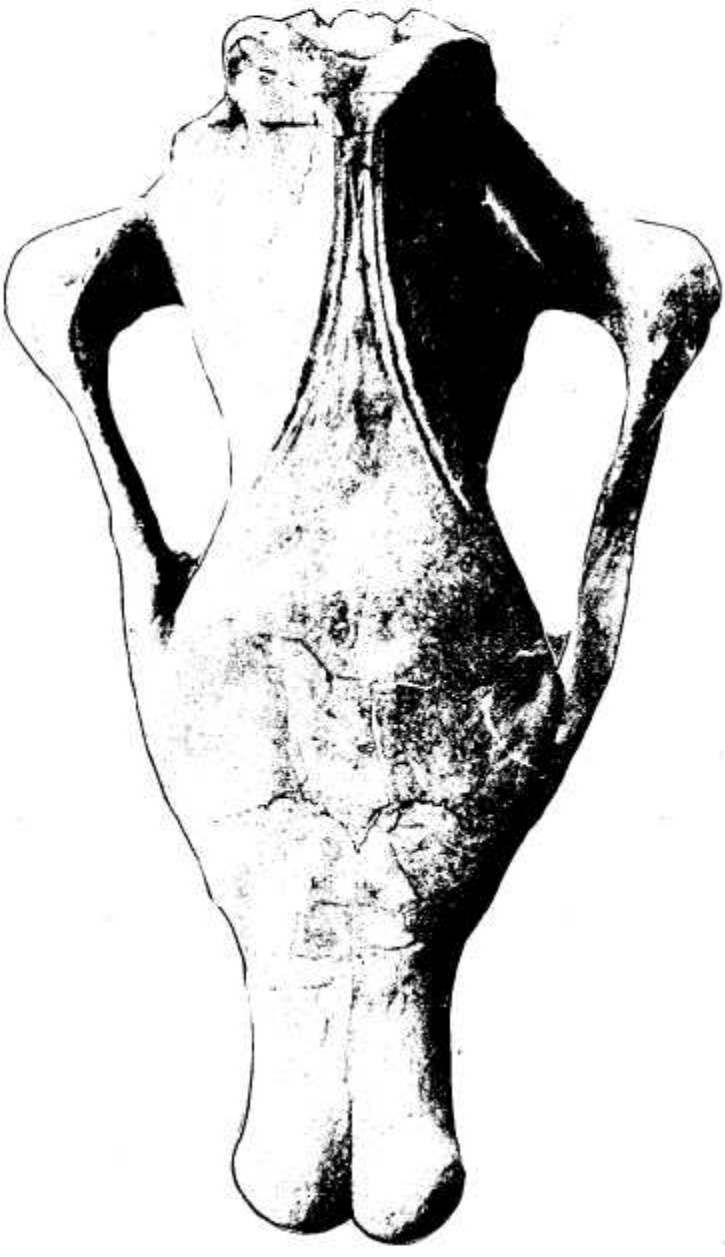

Fig. 1. Skull of Diceratherium arikarense, showing stout nasal horn cores, wide frontals, and pronounced temporal ridge 2-5 natural size. Top view of Fig. 2. From a specimen in the collections of Hon. Charles H. Morrill.

Fig. 2. Side view of a skull of Diceratherium arikarense, showing the tips of the nasals, the two nasal horn cores, the high occipital crest, occipital condyles, paroccipital process, squamous tuberosity, and a full set of maxillary teeth from another specimen, 2-5 natural size. From a specimen in the collections of Hon. Charles H. Morrill.

with them were great numbers of rhineroceros bones many of which presumably belonged to this genus, in which event a complete restoration is assured. The mandible is strong, and its angles are expanded and flare outward. The mandibular incisors, which are small, the crown being the shape and size of a pea, are worn but little, suggesting a rudimentary nature. Some crania are so short and saddle-shaped that they must belong properly to another species.

Two nasal horn cores constitute the most conspicuous feature of the genus. The cranium is thin, the occiput high and flaring, the condyles large and separated by a notch, and the zygomatic arches are thickened into a tuberosity at the angle.

The temporal ridges, which are double and very pronounced some times unite to form a sagittal crest, and sometimes are widely separated. There are so many intermediate stages that this feature may perhaps be considered a variation rather than a specific difference.

Dental formula: $I\ \frac{?}{1},\ C\ \frac{?}{0},\ P\ \frac{4}{3},\ M\ \frac{3}{3}$

Diceratherium, Elothrieum, Moroprus, Syndyoceras, Oxydactylus, Daimonelix, a species of horse, tapir, rhinoceros, etc., being associated constitute an interesting new fauna for the region.

The specific name *arikarense* is proposed for this new Rhinoceros.

Measurements: — Length of skull, 14.75 inches (375 mm.); extreme width across cheek bones, (zygomatic arches) 8.75 inches (220 mm.); distance between post-orbital processes, 5 inches (130 mm.); width across horn cores, 2.75 inches (68 mm.). The brain cast is of good size, showing a brain well developed and convoluted.

In their day the carcasses of rhinoceros, giant hog, horse, and related forms must have drifted into coves, where their skeletons were deposited in heaps, constituting the bone beds, which are now quarried around Agate.

Work will be resumed in this region early in the summer, and many new facts will be obtained respecting this species. Citizens are again reminded that the fossil fields of Nebraska are famous; that the universities and museums of the world have for years been collecting and shipping our best material east to

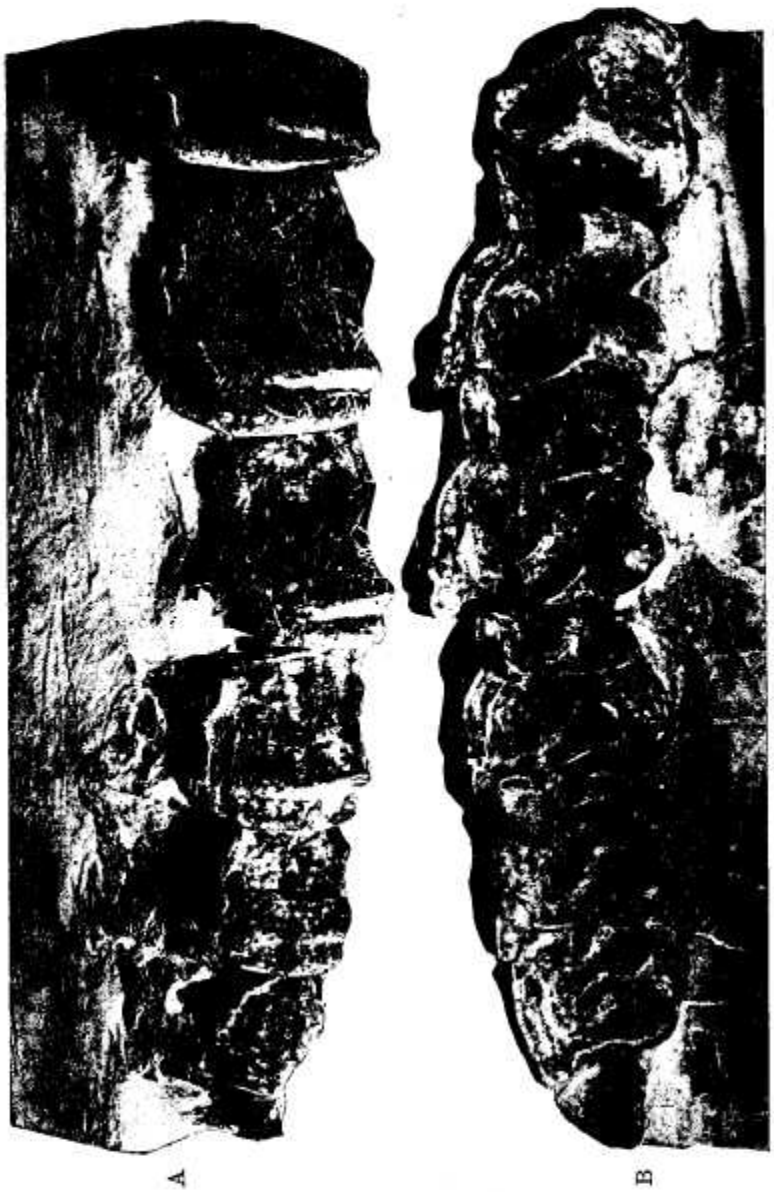

Fig. 3. A. Maxillary teeth of Diceratherium arikarense, side view, etched by Daimonelix "fibers" B. Grinding surface showing four pre-molars and three molars, 5-6 natural size. From a specimen in the collections of Hon. Charles H. Morrill.

Fig. 5. Mandible of Diceratherium arikarense, showing three molars and three premolars, right side, ¼ natural size. From a specimen in the collections of Hon. Charles H. Morrill.

enrich other museums, and that, due to the generosity of Hon. Charles H. Morrill, liberal sums are now available with which to secure these excellent specimens for our own state collections.

The University of Nebraska,
June 15, 1906.