

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Papers in Natural Resources

Natural Resources, School of

April 1984

FURTHER COMMENTS ON THE NATURE AND DEVELOPMENTAL HISTORY OF QUATERNARY PUMPKIN CREEK, BANNER AND MORRILL COUNTIES, NEBRASKA

Robert F. Diffendal

University of Nebraska - Lincoln, rdiffendal1@unl.edu

Follow this and additional works at: <https://digitalcommons.unl.edu/natrespapers>



Part of the [Natural Resources and Conservation Commons](#)

Diffendal, Robert F., "FURTHER COMMENTS ON THE NATURE AND DEVELOPMENTAL HISTORY OF QUATERNARY PUMPKIN CREEK, BANNER AND MORRILL COUNTIES, NEBRASKA" (1984). *Papers in Natural Resources*. 85.

<https://digitalcommons.unl.edu/natrespapers/85>

This Article is brought to you for free and open access by the Natural Resources, School of at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Papers in Natural Resources by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

Published in *Proceedings of the Nebraska Academy of Sciences, including the GNATS & TER-QUA Divisions, and Eight Affiliated Societies*, 94th Annual Meeting, April 13–14, 1984, p. 44.

Copyright © 1984 Robert F. Diffendal.

FURTHER COMMENTS ON THE NATURE AND DEVELOPMENTAL HISTORY OF QUATERNARY
PUMPKIN CREEK, BANNER AND MORRILL COUNTIES, NEBRASKA

R. F. Diffendal, Jr., Conservation and Survey Division, IANR,
University of Nebraska-Lincoln, Lincoln, Nebraska 68588-0517

The occurrence of Quaternary anorthosite-rich sand and gravel deposits in south-central Morrill County, Nebraska, supports the idea that Pumpkin Creek formerly flowed farther east than it does today. This eastern extension of the creek was abandoned when another headward cutting tributary of the North Platte River cut through the divide between Pumpkin Creek and the North Platte just east of Jail and Courthouse rocks and captured Pumpkin Creek.

Unusual clast types found in Quaternary deposits along Pumpkin Creek in Banner County may be used to determine some characteristics of the streams that carried them. For example, armored mud balls and friable sand megaclasts occur in exposures of a complex sand and gravel alluvial fill which caps a strath terrace in southwestern Morrill County, Nebraska. The mud balls are limited to a tributary arroyo. The sand megaclasts occur in sediments deposited along a trunk stream. Size and sphericity of mudballs and coherency of the sand megaclasts may be used to determine distance of transport of the clasts and velocity of the streams which transported them.