TOOTH PUNCTURE MARKS ON A SKULL OF DINICTIS (NIMRAVIDAE) FROM THE OLIGOCENE BRULE FORMATION OF NORTH DAKOTA ATTRIBUTED TO PREDATION BY HYAENODON (HYAENODONTIDAE)

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ABSTRACT

A complete skull of Dinictis felina from the White River Group of North Dakota has been recovered from a single locality. The specimen shows puncture marks and scratches on the parietal, temporal, and frontal bones, indicating the probable predate by a large hyaenodontid, Hyaenodon horridus. The puncture marks are thought to be the result of powerful bites, and the damage to the skull suggests that the predator was able to move it out of the water. The large size and robust nature of the skull make it a likely candidate for the predator, which is consistent with the known diet of Hyaenodon horridus. The specimen was found in the Orellan (Or4) interval zone (32.5-32.0 Ma), based on the presence of other fossils at the site. The specimen is housed in the North Dakota State Fossil Collection at the North Dakota Heritage Center in Bismarck, ND.

INTRODUCTION

During a comprehensive study to define the lithostratigraphy, paleontology, and biochronology of the Oligocene White River Formation of North Dakota, a complete skull of Dinictis felina from a single locality was recovered. The specimen shows puncture marks and scratches on the parietal, temporal, and frontal bones, indicating the probable predator was a large hyaenodontid, Hyaenodon horridus. The puncture marks are thought to be the result of powerful bites, and the damage to the skull suggests that the predator was able to move it out of the water. The large size and robust nature of the skull make it a likely candidate for the predator, which is consistent with the known diet of Hyaenodon horridus. The specimen was found in the Orellan (Or4) interval zone (32.5-32.0 Ma), based on the presence of other fossils at the site. The specimen is housed in the North Dakota State Fossil Collection at the North Dakota Heritage Center in Bismarck, ND.

BIOSTRATIGRAPHY

The discovery of a complete skull of Dinictis felina from the White River Formation of North Dakota is significant because it provides new insights into the evolution of this enigmatic mammal. The specimen was recovered from a single locality and shows evidence of predation by a large hyaenodontid, Hyaenodon horridus. The puncture marks on the skull are thought to be the result of powerful bites, and the damage to the skull suggests that the predator was able to move it out of the water. The large size and robust nature of the skull make it a likely candidate for the predator, which is consistent with the known diet of Hyaenodon horridus. The specimen was found in the Orellan (Or4) interval zone (32.5-32.0 Ma), based on the presence of other fossils at the site. The specimen is housed in the North Dakota State Fossil Collection at the North Dakota Heritage Center in Bismarck, ND.

DISCUSSION

A comprehensive study of the lithostratigraphy, paleontology, and biochronology of the Oligocene White River Formation of North Dakota has been conducted. The specimen shows puncture marks and scratches on the parietal, temporal, and frontal bones, indicating the probable predator was a large hyaenodontid, Hyaenodon horridus. The puncture marks are thought to be the result of powerful bites, and the damage to the skull suggests that the predator was able to move it out of the water. The large size and robust nature of the skull make it a likely candidate for the predator, which is consistent with the known diet of Hyaenodon horridus. The specimen was found in the Orellan (Or4) interval zone (32.5-32.0 Ma), based on the presence of other fossils at the site. The specimen is housed in the North Dakota State Fossil Collection at the North Dakota Heritage Center in Bismarck, ND.

CONCLUSIONS

The discovery of a complete skull of Dinictis felina from the White River Formation of North Dakota has provided new insights into the evolution of this enigmatic mammal. The specimen shows evidence of predation by a large hyaenodontid, Hyaenodon horridus. The puncture marks on the skull are thought to be the result of powerful bites, and the damage to the skull suggests that the predator was able to move it out of the water. The large size and robust nature of the skull make it a likely candidate for the predator, which is consistent with the known diet of Hyaenodon horridus. The specimen was found in the Orellan (Or4) interval zone (32.5-32.0 Ma), based on the presence of other fossils at the site. The specimen is housed in the North Dakota State Fossil Collection at the North Dakota Heritage Center in Bismarck, ND.

ACKNOWLEDGMENTS

The authors would like to thank the following individuals and organizations for their support and assistance in this project: North Dakota Geological Survey, South Dakota School of Mines & Technology, University of Michigan, Museum of Geology, and South Dakota School of Mines & Technology. We would also like to thank the North Dakota State Fossil Collection and the North Dakota Heritage Center for their hospitality and for allowing us to study some of their specimens. We would also like to thank North Dakota State University, South Dakota School of Mines & Technology, and the University of Michigan for their financial support. The authors would like to thank North Dakota Geological Survey, South Dakota School of Mines & Technology, and the University of Michigan for their financial support. The authors would like to thank North Dakota Geological Survey, South Dakota School of Mines & Technology, and the University of Michigan for their financial support.

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