

A DESCRIPTION OF THE PARADOXICALLY DIFFERENT VERTEBRATE PALEOENVIRONMENT OF THE JURASSIC UPPER SUNDANCE FORMATION OF WYOMING, WITH A COMPARISON TO THE LOWER OXFORD CLAY OF ENGLAND, EMPHASIZING SMALL PLESIOSAURS AND MARINE CROCODILES.

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The paleoenvironment of the Upper Redwater Shale of the Late Jurassic Sundance Formation is dramatically different from the well described marine environment of the Lower Oxford Clay of the Late Middle Jurassic, England. This difference is shown in a reduced variety of vertebrates and invertebrates as well as differences in the body size and populations of these life forms in the compared paleoenvironments.

A rich quarry of Upper Jurassic marine reptiles has recently been collected and studied by the Tate Geological Museum of Casper College. This discovery will be valuable for further research in the low marine diversity faunas due to the number of individuals present, including portions of juveniles and larger adults. Emphasis is placed on the description of dozens of small bodied plesiosaurs found in the Upper Sundance as well as a lack of marine crocodiles.

These specimens and the supporting environment are compared to similar fossil material from the Oxford Clay collections at the British Museum of Natural History, University of Wyoming Sundance collections and literature descriptions of known species.