AN ECOLOGICAL COMPARISON OF THE GREEN RIVER AND FLORISSANT INSECTS

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ABSTRACT

The Green River and Florissant formations are separated by a span of 16 million years. The Green River Formation consists of basin deposits from a series of three lakes that existed around 50 million years ago in the Middle Eocene Laramide from western Wyoming, western Colorado, and northern Utah. The deposits at Florissant are from a lake in the vicinity of a volcano about 34 million years ago in the Late Eocene Priabonian. Based on past analysis of flora, the Green River Formation had been described as the more tropical of the two locations. The Florissant Fossil Beds appear to have been at a higher elevation, with flora of a more temperate climate. However, the insect fauna from the two locations appears to reflect ecologies opposite to those interpreted through the flora.

Around 300 species have been identified from the Green River Formation, while around 1,500 species have been identified at Florissant. Research in the Green River insects has been somewhat neglected since 1890, partially due to a research bias towards increasing interest in the Florissant Beds insects. A study of Green River insects in the collections at the South Dakota School of Mines and Technology is establishing groundwork for an overdue review. The work could provide new information for insights on insect diversification and paleoecology through the progression of the Eocene Epoch.