

Roger Lewin, in his Research News notes in the Dec. 11, '987 issue of *Science*, discusses the so-called "key-stone herbivore hypothesis" as a third explanation for the massive die-off of large mammals during the latter part of the Pleistocene (ice age) period -- from 2 million to 10,000 years ago.

Climatic change and human predation (overkill) are the two most generally recognized hypotheses for describing the fully 50 percent extinction of large mammalian genera during that icy period. Now comes Norman Owen-Smith of the University of the Witwatersrand, Johannesburg, with a combination of explanations:

"once the extinction process has been initiated by the loss of the very large herbivores – those weighing more than 1000 kilograms – the hypotheses seeks to explain the disappearance of other, smaller species. Simply stated, it proposes that the normal feeding habits of very large herbivores, or megaherbivores, have a tremendous impact on the vegetational environment; often, this impact opens up habitats in which smaller herbivores can thrive; if the very large herbivores are removed for whatever reason, vegetation cover will close up, thus eliminating the smaller herbivores too."

The article, titled "Domino Effect Invoked in Ice Age Extinctions," examines the suggestion that the late Pleistocene extinctions differed from earlier episodes where radiation of new species replaced the old because Pleistocene extinctions coincided with human expansion into the continents where extinctions were most dramatic and that these predations could have set off the domino effects that are missing in earlier extinction episodes.