

Earth wobbles linked to extinctions



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LONDON, England (Reuters) -- Wobbles or variations in the Earth's orbit and tilt are associated with extinctions of rodent and mammalian species, Dutch scientists said on Wednesday.

They studied rodent fossil records in central Spain dating back 22 million years and found that the rise and fall of mammal species was linked to changes in the Earth's behavior which caused cooling periods.

"Extinctions in rodent species occur in pulses which are spaced by intervals controlled by astronomical variations and their effects on climate change," Dr Jan van Dam, of the Utrecht University in the Netherlands, said.

The researchers found two cycles corresponding to the disappearance of rodent species. One lasts 2.4 million years and is linked to variations in the Earth's orbit. The other is a 1.2 million year cycle relating to shifts in the tilt on the Earth on its axis.

The cycles are associated with lower temperatures, changes in precipitation, habitats, vegetation and food availability which are the main factors influencing the extinction peaks, the study published in the journal Nature said.

"Rodents are very sensitive to seasonal changes because they have such a short lifespan," said Van Dam, adding that they represent one of the best mammal fossil records.

At the moment, the Earth is at the beginning of a cycle but the planet's climate system has changed so much in the past 3 million years that it is difficult to predict what will happen in the future.

"The environment is responsible to what happens to species," said Van Dam. "Biological factors are secondary, according to our results."



Scientists have linked the Earth's orbit and tilt to the extinction of mammals.