NEWS REPORT IN *NATURE*
Major UK journal of science cites new evidence against the Chicxulub cause for the dinosaur extinction event.
"Mass-Extinction Controversy Flares Again - Core from asteroid crater fuels debate on what wiped out the dinosaurs."

10 April 2003 *Nature* By Rex Dalton

A claim that the asteroid that struck Mexico 65 million years ago did not cause the mass extinction that wiped out dinosaurs triggered heated debate at a meeting this week.
The announcement is based on preliminary analysis of the first core drilled into the 185-kilometre Chicxulub asteroid crater near the Yucatan Peninsula. Gerta Keller of Princeton University in New Haven, Connecticut, says that she has found microfossils there hinting that abundant plankton survived for at least 300,000 years after the impact.
Many believe that the impact shrouded the Earth in dust and debris, shutting down plant photosynthesis and leading to the rapid demise of most creatures, from marine microorganisms to dinosaurs.
But Keller reckons that the signs of life in the crater core are "the K-T) boundary. What's more, a lack of evidence of compaction in the core hints that the impact crater was much smaller than was thought, says Keller's colleague Wolfgang Stinnesbeck at the University of Karlsruhe, Germany.

So the group subscribes instead to the idea that a series of asteroid impacts brought about the K-T boundary.
Jan Smit, a geologist at Vrije University in Amsterdam who is also studying the crater's sediments, disagrees. He counters that what Keller's team labels 'fossils' are simply spheres of crystal. Plus he cites seismology studies that support a major asteroid having created the Chicxulub crater.
These divergent views were aired at a joint conference of the European Geophysical Society, the American Geophysical Union and the European Union of Geosciences in Nice, France. Listeners were shocked and stunned that two groups could disagree so much.
But the story of the K_T boundary has been long been controversial. It was first suggested about 25 years ago that a life-obliterating asteroid plunged into the Earth to trigger the extinction.
Now dozens of scientists around the world are analyzing the results of the first drill of the crater, completed in February 2002, to glean new data on the events of 65 million years ago. Other drills are planned, including one closer to the centre of the impact point, to provide further fuel for debate.

REVIEW QUESTIONS
1. Popular understanding of the (main) cause of the major dinosaur extinction 65 mya is that an asteroid struck the Yucatan peninsula of Mexico (based on the presence of a certain uniquely asteroid-sourced element (iridium) in 65 my old deposits around the world, and a large crater (Chicxulub) off the Yucatan coast). What evidence to counter this understanding has been presented in this article?

2. What alternative hypothesis us offered by those who feel the popular idea has been challenged by new data?

3. How does the pro-Chicxulub group counter the anti-Chicxulub evidence?

4. What predictions can you think of which scientists can look for in future studies that would shed more light on the controversy

ANSWERS (reasonable responses to the questions):
1: a. preliminary analysis of core recently removed from the crater shows microfossils hinting that abundant plankton survived for at least 300k years after the impact. and...
b. lack of compaction evidence in the core hints that impact crater was much smaller than was thought.
2: a series of asteroid impacts produced the K-T boundary.
3: "fossils" found are simply spheres of crystal, and seismology studies point to a major asteroid.
4: a. look for more convincing (unquestionably valid) fossils in the cores, and crystal spheres, for comparison.
b. drill cores out away from the impact crater, and search for clear examples of microfossils at the K-T boundary.