

TEXTO

Double meteorite strike 'caused dinosaur extinction'

The dinosaurs were wiped out 65 million years ago by at least two meteorite impacts, rather than a single strike, a new study suggests.

Previously, scientists had identified a huge impact crater in the Gulf of Mexico as the event that spelled doom for the dinosaurs.

Now evidence for a second impact in Ukraine has been uncovered.

This raises the possibility that the Earth may have been bombarded by a whole shower of meteorites.

The new findings are published in the journal *Geology* by a team lead by Professor David Jolley of Aberdeen University.

When first proposed in 1980, the idea that a meteorite impact had killed the dinosaurs proved hugely controversial. Later, the discovery of the Chicxulub Crater in the Gulf of Mexico, US, was hailed as "the smoking gun" that confirmed the theory.

Double trouble

The discovery of a second impact crater suggests that the dinosaurs were driven to extinction by a "double whammy" rather than a single strike.

The Boltysch Crater in Ukraine was first reported in 2002. However, until now it was uncertain exactly how the timing of this event related to the Chicxulub impact.

In the current study, scientists examined the "pollen and spores" of fossil plants in the layers of mud that infilled the crater. They found that immediately after the impact, ferns quickly colonised the devastated landscape.

Ferns have an amazing ability to bounce back after catastrophe. Layers full of fern spores - dubbed "fern spikes" - are considered to be a good "markers" of past impact events.

However, there was an unexpected discovery in store for the scientists.

They located a second "fern spike" in a layer one metre above the first, suggesting another later impact event.

Professor Simon Kelley of the Open University, who was co-author on the study, said: "We interpret this second layer as the aftermath of the Chicxulub impact."

This shows that the Boltysch and Chicxulub impacts did not happen at exactly the same time. They struck several thousand years apart, the length of time between the two "fern spikes".

Uncertain cause

Professor Kelley continued: "It is quite possible that in the future we will find evidence for more impact events."

Rather than being wiped out by a single hit, the researchers think that dinosaurs may have fallen victim to a meteorite shower raining down over thousands of years.

What might have caused this bombardment is highly uncertain.

Professor Monica Grady, a meteorite expert at the Open University who was not involved in the current study, said: "One possibility might be the collision of Near Earth Objects."

Recently, Nasa launched a program dubbed "Spaceguard". It aims to monitor such Near Earth Objects as an early warning system of possible future collisions.

Fonte: www.bbc.co.uk

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Double meteorite strike 'caused dinosaur extinction'

Impacto de dois meteoritos causou a extinção dos dinossauros

The dinosaurs were wiped out⁽¹⁾ 65 million years ago by at least two meteorite impacts, rather than a single strike, a new study suggests.

Os dinossauros foram extintos⁽¹⁾ 65 milhões de anos atrás por pelo menos dois impactos de meteoritos, em vez de um simples impacto, sugere um novo estudo.

Previously, scientists had identified a huge impact crater in the Gulf of Mexico as the event that spelled doom for the dinosaurs.

Previamente, os cientistas tinham identificado uma cratera de grande impacto no Golfo do México como o evento que condenou os dinossauros.

Now evidence for a second impact in Ukraine has been uncovered.

Agora evidências de um segundo impacto na Ucrânia foram reveladas.

This raises the possibility that the Earth may have been bombarded by a whole shower of meteorites.

Isto aumenta a possibilidade de que a Terra pode ter sido bombardeada por uma grande chuva de meteoritos.

The new findings are published in the journal *Geology* by a team lead by Professor David Jolley of Aberdeen University.

As novas descobertas foram publicadas no jornal *Geology* pela equipe liderada pelo Professor David Jolley da Universidade de Aberdeen.

When first proposed in 1980, the idea that a meteorite impact had killed the dinosaurs proved hugely controversial. Later, the discovery of the Chicxulub Crater in the Gulf of Mexico, US, was hailed as "the smoking gun" that confirmed the theory.

Quando propuseram pela primeira vez em 1980, a ideia de que o impacto de um meteorito tinha matado os dinossauros provocou grande controvérsia. Mais tarde, a descoberta da Cratera Chicxulub no Golfo do México, nos EUA, foi saudada como “fumaça do revólver” que confirmava a teoria.

Double trouble

The discovery of a second impact crater suggests that the dinosaurs were driven to extinction by a "double whammy" rather than a single strike.

A descoberta da cratera de um segundo impacto sugere que os dinossauros foram levados para a extinção por “dupla devastação” em vez de um impacto singular.

The Boltysh Crater in Ukraine was first reported in 2002. However, until now it was uncertain exactly how the timing of this event related to the Chicxulub impact.

A Cratera Boltysh na Ucrânia foi relatada pela primeira vez em 2002. Contudo, até agora era incerto exatamente como datar este evento relacionado com o impacto Chicxulub.

In the current study, scientists examined the "pollen and spores" of fossil plants in the layers of mud that infilled the crater. They found that immediately after the impact, ferns quickly colonised the devastated landscape.

No estudo atual, os cientistas examinaram o “pólen e esporos” de fósseis de plantas nas camadas de barro que infiltraram a cratera. Eles encontraram que imediatamente após o impacto, samambaias colonizaram rapidamente o lugar devastado.

Ferns have an amazing ability to bounce back⁽²⁾ after catastrophe. Layers full of fern spores - dubbed "fern spikes" - are considered to be a good "markers" of past impact events.

As samambaias tem um incrível habilidade para recuperar-se⁽²⁾ após uma catástrofe. As camadas cheias de esporos de samambaias – apelidadas de pregos de samambaias – são consideradas por ser uma boa marca de impactos de eventos passados.

However, there was an unexpected discovery in store for the scientists.

Contudo, houve uma descoberta inesperada no depósito pelos cientistas.

They located a second "fern spike" in a layer one metre above the first, suggesting another later impact event.

Eles localizaram um segundo “prego de samambaia” em uma camada um metro abaixo da primeira, sugerindo outro impacto posterior.

Professor Simon Kelley of the Open University, who was co-author on the study, said: "We interpret this second layer as the aftermath of the Chicxulub impact."

O Professor Simon Kelley da Open University, que foi co-autor no estudo, disse: “Nós interpretamos essa segunda camada como uma consequência do impacto de Chicxulub.

This shows that the Boltysch and Chicxulub impacts did not happen at exactly the same time. Isso mostra que os impactos de Boltysch e Chicxulub não aconteceram exatamente ao mesmo tempo.

They struck several thousand years apart, the length of time between the two "fern spikes".

Eles aconteceram muitos milhares de anos separados, o lapso de tempo entre os dois “pregos de samambaias”.

Uncertain cause

Professor Kelley continued: "It is quite possible that in the future we will find evidence for more impact events."

O Professor Kelley continuou: “É muito possível que no futuro nós encontremos evidências para mais eventos de impactos”.

Rather than being wiped out by a single hit, the researchers think that dinosaurs may have fallen victim to a meteorite shower raining down over thousands of years.

Em vez de serem extintos por uma simples batida, os pesquisadores pensam que os dinossauros podem ter caído vítimas de uma chuva de meteoritos por milhares de anos.

What might have caused this bombardment is highly uncertain.

O que pode ter causado esse bombardeio é altamente incerto.

Professor Monica Grady, a meteorite expert at the Open University who was not involved in the current study, said: "One possibility might be the collision of Near Earth Objects."

A Professora Monica Grady, uma especialista em meteoritos da Open University, que não estão envolvida no estudo corrente, disse: “Uma possibilidade pode ser a colisão de objetos próximos da Terra”.

Recently, Nasa launched a program dubbed "Spaceguard". It aims to monitor such Near Earth Objects as an early warning system of possible future collisions.

Recentemente, a Nasa lançou um programa apelidado de “Spaceguard” (guarda especial). Ele almeja monitorar os objetos próximos da Terra bem como ser um sistema de advertência para possíveis futuros colisões.