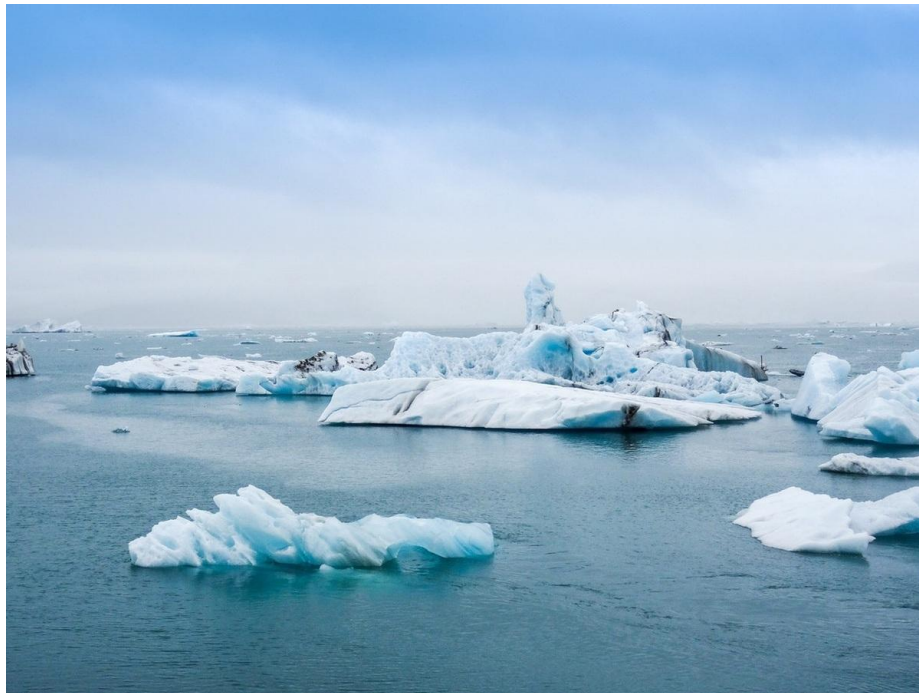


# 生物学家：气候变暖或使人类变小 Climate

crisis could make humans shrink in size, says fossil expert

据英国《卫报》6月7日报道，生物学家表示气候危机可能导致人类体型缩小，因为体型较小的哺乳动物似乎能够更好地适应全球气候变暖。

爱丁堡大学古生物学家史蒂夫·布鲁萨特教授称，变小是“哺乳动物应对气候变化的常见方式”。



[Photo/Pexels]

The climate crisis may lead the human race to shrink in size, as mammals with smaller frames appear better able to deal with rising global temperatures, a leading fossil expert has said.

一位顶尖化石专家表示，气候危机可能导致人类体型缩小，因为体型较小的哺乳动物似乎能够更好地适应全球气候变暖。

Prof Steve Brusatte, a palaeontologist at the University of Edinburgh, suggested that the way in which other mammals have previously responded to periods of climate change could offer an insight into humans' future.

爱丁堡大学古生物学家史蒂夫·布鲁萨特教授认为，其他哺乳动物此前在气候变化时期的反应可以预示人类的未来。

He likened the potential plight of people as similar to that of early horses, which became smaller in body size as temperatures rose around 55m years ago, a period called the Paleocene Eocene Thermal Maximum.

他将人类的潜在困境比作早期马的困境，早期马的体型随着 5500 万年前气温的升高而变小，这一时期被称为古新世-始新世极热事件时期。

Writing in *The Rise and Reign of the Mammals*, Brusatte notes that animals in warmer parts of the world today are often smaller than those in colder areas, an ecological principle known as Bergmann's rule. "The reasons are not entirely understood, but it is probably, in part, because smaller animals have a higher surface area relative to their volume than plumper animals and can thus better shed excess heat," he writes.

布鲁萨特在《哺乳动物的崛起和统治》一书中指出，当今世界较温暖地区的动物通常比寒冷地区的动物小，这一生态学原理被称为伯格曼法则。

他写道：“我们还不清楚为什么，但部分原因可能是与大型动物相比，体型越小的动物，其体表面积与体积的比率则越大，因此可以更好地排出多余的热量。”

Brusatte said that becoming smaller was “a common way that mammals deal with climate change” . He added: “That’ s not to say every species of mammal would get smaller, but it seems to be a common survival trick of mammals when temperatures spike pretty quickly. Which does raise the question: if temperatures do spike really quickly might humans dwarf, might humans get smaller? And I think that’ s certainly plausible.”

布鲁萨特表示，变小是“哺乳动物应对气候变化的常见方式”。他还表示：“这并不是说每一种哺乳动物都会变小，但当温度迅速升高时，这似乎是哺乳动物常见的生存技巧。这确实提出了一个问题：如果温度真的迅速升高，人类会变小吗？我想这是很有可能的。”

In a recent study, researchers studying human remains over the past million years have also suggested that temperature is a major predictor of body size variation, while scientists studying red deer have said that warmer winters in northern Europe and Scandinavia may lead to the body size of these animals becoming smaller.

研究数百万年前人类遗骸的研究人员在最近的一项研究中指出，温度是体型变化的主要预测因素，而研究马鹿的科学家则表示，北欧和斯堪的

纳维亚地区的暖冬可能会导致马鹿的体型变小。

However, not all experts agree that rising temperature causes mammals to shrink. Prof Adrian Lister, of the Natural History Museum in London, said the relationship shown by the recent human remains study is weak, while the strong correlations between temperature and mammal body size may often be down to the availability of food and resources.

然而，并非所有专家都同意温度升高会导致哺乳动物体型缩小的观点。伦敦自然历史博物馆的阿德里安利斯特教授表示，最近的人类遗骸研究显示两者之间的关联很弱，而温度与哺乳动物体型之间的密切关系可能往往取决于食物和资源的可获得性。

Lister is also sceptical that humans will shrink as the climate heats. "We are not really controlled by natural selection," he said. "If that was going to happen, you' d need to find large people dying before they could reproduce because of climate warming. That is not happening in today' s world. We wear clothes, we have got heating, we have got air conditioning if it is too hot."

李斯特也对人类体型会随着气候变暖而缩小的观点表示怀疑。"我们并没有真正受到自然选择的控制。如果真的发生这种情况，需要有证据证明，体型大的人类因气候变暖灭绝了。这在当今世界是不可能发生的。我们穿衣服，有暖气，如果天气太热，我们还有空调。"