

Man landing on Madeira could be four centuries prior to its colonization by the Portuguese

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According to the results, published in the *Proceedings of the Royal Society B* journal, house mice may have landed on the island before 1036, most likely transported by a ship. The article suggests that the introduction of this species would result in an ecological disaster.

Until now, the arrival of the man to Macaronesia was documented in two waves: one being aboriginal, limited to the Canary Islands about two millenniums ago; and the other colonial, from the 14th century onwards, which took place in every island of the archipelago. According to historical data, the Portuguese took official possession of Madeira in 1499, when the colonization was started.

The team of researchers, which is also composed of scientists from Germany and the University of La Laguna (Canary Islands, Spain), has analyzed two samples of bones found in Ponta de São Lourenço. The tiny size of the first sample has made impossible to date it, but the second sample has been dated between 900 and 1030, which leads to the earliest evidence for the presence of mice on Madeira Island.

Josep Antoni Alcover, CSIC researcher at the Mediterranean Institute for Advances Studies (a joint center of CSIC and UIB-University of the Balearic Islands), explains: "Current populations of house mice on Madeira show similarities in mitochondrial DNA with those in Scandinavia and northern Germany, but not with those in Portugal.

Therefore, this second analyzed sample suggests that it was the Vikings who took the house mice to the island. However, this conclusion must be ratified by future morphologic and genetic studies of the fossils found in Ponta de São Lourenço, as there are no historical references so far about the Vikings traveling to Macaronesia".

Ecological impact on the island

Besides modifying historical data, the new dating extends the time frame in which the most significant ecological changes occurred on the island. According to the researchers, the arrival of the man would have triggered the extinction of several endemic species of birds on the archipelago of Madeira (composed of Madeira and Porto Santo) Once mice population (which barely differs from current [house mice](#)) was settled, it would have reached a high density because of their reproductive potential and the absence of rats. Their predatory activity would be focused on eggs and chicks of small and medium birds, such as quails or water rails. The bones obtained from the Holocene sites show that at least two thirds of the endemic birds and two non-endemic species became extinct. They would also have played a significant role in enabling the prosperity of other predators such as owls.

CSIC researcher highlights: "The introduction of mice probably resulted in an ecological catastrophe based on the extinction of endemic species and on the modification of the island ecology four hundred years earlier than thought so far".

More information: Juan Carlos Rando, Harald Pieper y Josep Antoni Alcover. Radiocarbon evidence for the presence of mice on Madeira Island (North Atlantic) one millennium ago. *Proceedings of the Royal Society B*. [DOI: 10.1098/rspb.2013.3126](https://doi.org/10.1098/rspb.2013.3126)

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