

PALEOBIODIVERSITY OF QUATERNARY FOSSIL TETRAPODS IN CONTINENTAL PORTUGAL

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Paleobiodiversity studies have been used to study the representativeness of the fossil record or to detect extinction events. The fossil fauna of the Quaternary is the most comparable to nowadays, thus can be used to test the representativeness of paleobiodiversity studies. However, studies of this type with Quaternary vertebrates are not widespread and usually focus into certain groups.

On this work, an inventory of all tetrapod taxa scientifically published as fossils in the Quaternary of continental Portugal will be provided, thanks to an extensive bibliographical research. Then they will be compared with the current biodiversity for the same groups (Taking into account the introduced species); inferring rates of extinction and representativeness of the fossil record.

There are 176 tetrapod species recognized in the fossil record of the Quaternary of Portugal (7 amphibians, 13 non-avian reptiles, 80 birds and 74 mammals). 125 species (71%) still live in the country today, while 49 (29%) are only known as fossils; 29 (17%) are locally extinct and 20 (11%) globally extinct. The 125 species detected as fossil that still live in the country represent 38% of the total 332 species. Most findings come from cave deposits, without them, the representativeness falls to 35 species (10%). Amphibians and non-avian reptiles do not suffer any kind of extinction besides turtles. Bird modern biodiversity is much higher than its paleobiodiversity, only 30% of the modern species were detected as fossils. Mammals suffered a high level of extinction with almost half of them being locally or totally extinct.