PRELIMINARY RESULTS OF THE HISTOLOGICAL BONE STUDY OF MAASTRICHTIAN BIRD REMAINS FROM MARAMBIO ISLAND

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Cretaceous record of birds is scarce and poorly preserved in Antarctica, and includes the derived Ornithuromorph *Antarcticavis capelambensis* from the early Maastrichtian Snow Hill Island Formation, the neornithines *Vegavis iaai* and *Polarornis gregorii* from the late Maastrichtian López de Bertodano Formation, and many indeterminate remains. A new indeterminate specimen from Maastrichtian levels of the López de Bertodano Formation (Marambio Island, James Ross Archipelago, Antarctica) is here described. The partial skeleton MLP 1-I-24-55 is represented by the proximal fragment of left tibiotarsus, proximal epífisis of left fibula, incomplete synsacrum, and caudal vertebra. With the aim of complementing the growing knowledge of the anatomy and microstructure of Antarctic birds, here, we use comparative and osteohistological methods. Despite the uncertainties and the diverse proposals in regards to the pylogenetic position of *Vegavis* and *Polarornis*, available descriptions of these taxa include histological analyses of the humeri and femur that we use here for comparative purposes. MLP 1-I-24-55 belongs to a bird of the size of the modern Great Grebe *Podiceps major*, larger than *Vegavis iaai*, and smaller than *Polarornis gregorii*. These species are characterized by a certain degree of limb osteosclerosis, with an increase of bone inner compactness. In *Polarornis gregorii* and *Vegavis iaai*, osteosclerosis is due to inhibition of secondary remodelling, whereas in MLP 1-I-24-55 is due to the filling of inner cavities. The different degrees of osteosclerosis observed when *Vegavis, Polarornis,* and MLP 1-I-24-55 are compared, could indicate that the ornithofauna of Antarctica were ecologically and taxonomically more diverse than previously thought.

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