

## NEW AVIAN TRACKS FROM KING GEORGE ISLAND, ANTARCTICA.

Mansilla, H.<sup>1</sup>, Leppe, M.<sup>1</sup>, de Valais, S.<sup>2</sup>, Varela, N.<sup>3</sup>.

<sup>1</sup> Paleobiology Laboratory, Chilean Antarctic Institute. Punta Arenas, Chile.

<sup>2</sup> Institute of Investigation of Paleobiology and Geology, National University of Río Negro, Argentina.

<sup>3</sup> Earth Sciences Department, University of Concepción, Chile.

**[mansilla\\_83@yahoo.com](mailto:mansilla_83@yahoo.com)**

**Keywords:** Vertebrate and invertebrate trace fossils, Fossil Hill Formation; middle Eocene, King George Island, Antarctica.

Trace fossils are known to exist in the type locality of the Fossil Hill Formation (Middle Eocene) at Fossil Hill, King George Island, Antarctica, since at least four decades. However, during fieldwork in 2009, abundant new avian tracks and invertebrate traces have been recovered, which are analyzed here.

Three avian ichnotaxa are distinguished in this study. The most common tracks are tridactyl or tetradactyl, with the slender digit II to IV imprints anteriorly directed and a posterior hallux impression, and are included in *Gruipeda*. The rest of the footprints have tentatively been assigned to *Presbyoniformipes* which includes four wide, short digit impressions with present of webbing mark, and to *Avipeda*, composed of a tetradactyl track with a prominent claw; both being documented in the locality for the first time.

The invertebrate traces include simple structures, such as *Helminthoidichnites* and *Skolithos*, and at least an undetermined arthropod trace, composed of a slightly sinusoidal trail, characterized by oblique and parallel to irregular marks. Both invertebrate and avian traces are preserved in a volcanoclastic sediment sequence intercalated with fine grained agglomerates. They support a lacustrine environment which seasonally dried and was episodically refilled. The trace fossil assemblage from Fossil Hill displays a typical *Scoyenia* ichnofacies setting, particularly of a shorebird ichnofacies.

Further detailed studies of this site will be useful to the recognition of subdivisions of the *Scoyenia* ichnofacies and will allow us to reconstruct the paleocommunity and paleoenvironment during the Eocene in Antarctica.

Funds by FONDECYT 11080223.