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NEW TAXA IN THE PALEOCENE FLORA FROM THE CROSS VALLEY-WIMAN FORMATION, MARAMBIO (= SEYMOUR) ISLAND, ANTARCTICA

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The Paleocene at the Marambio Island (James Ross basin) is represented by three marine sedimentary units. The uppermost unit corresponds to the Cross Valley-Wiman Formation (CVWF), which overlies previous units by a strong erosive discordance. Contrary to the underlayed units, the CVWF is characterized by the preservation of a richflora of compressions and petrifications; preserving leaves and seeds at it uppermost section (Bahía Pingüino Allomember), that corresponds to lagoon or protected bay facies and which age has been dated as upper Paleocene (C25n, Thanetian). Its fossil records are known since the Dusén studies from 1908, who proposed 87 leaf taxa. Despite its Southern Hemisphere importance, few studies has revised the plant type materials, recognizing a richness reduction from the originally proposed to three fern species, two conifers, and 14 angiosperms. New Argentina field works has permitted identify the 19 previous taxa, recognized two more from Dusén (Mollinedia seymourensis and Phyllites sp. 14), and adds seven new findings (a fertile fern, a filmy fern, and five angiosperms). The unbiased collection of 282 exemplars allows to measure the taphoflora relative abundance. It indicates the dominance (35 %) of ferns (Cladophlebis and Sphenopteris). The most common angiosperm families were Atherospermathaceae, Lauraceae, Moraceae?, Nothofagaceae, and Winteraceae. The Araucariaceae also were well represented, in agreement with wood studies. The CVWF taphoflora overpass the Paleocene known richness in all the Antarctic Peninsula, adds new elements, and quantify the relative proportion of taxa.

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