

PALEONTOLOGY OF THE LOW HEAD MEMBER, POLONEZ COVE FORMATION (EOCENOZOIC) AT CAPE VAUREAL, KING GEORGE ISLAND, WEST ANTARCTICA

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Invertebrate fossils from the Low Head Member of the Polonez Cove Formation (Late Oligocene, King George Island, West Antarctica) are under revision both at the type-section (Low Head) and at Vaureal Peak. In the first locality the member is richly fossiliferous and contains marine invertebrate, macro- and microfossils, including nannoplankton, diatoms, foraminifers, polychaetes, worms, bryozoans, brachiopods, gastropods, ostracods and echinoderms. The Polonez Cove is a glacial-marine succession made up of diamictites at the base, followed up by interbedded coarse clastic and volcanoclastic rocks. Radiometric and paleontological data indicate an early Oligocene age for the unit. We present here for the first time paleontological data on new specimens of invertebrates identified in strata of the Low Head Member at Vaureal Peak sampled in the summer of 2004. Specimens identified include three bryozoan species of the Order Cyclostomata; one terebratulid brachiopod (*Paralidingia?* sp.); one indeterminate scaphopod, two bivalve species of the orders Pterioidea [*Limea?* (*Limea*) sp. and *Chlamys?* (*Chlamys*) sp.] and two *incertae sedis* Bivalvia species. Some of these taxa are known from Tertiary strata of other localities in Western Antarctica indicating a relative widespread fauna. The paleontological study is being complemented by Sr-Sr dating and stable isotopic analyses on skeletal parts of invertebrates in the fauna in order to refine the chronology of the Low Head Member and the understanding of the environment of deposition of the glacial-marine rocks. These data may help to clarify the correlation and affinities of the Low Head assemblage with regard to other southern hemisphere eocene faunas.