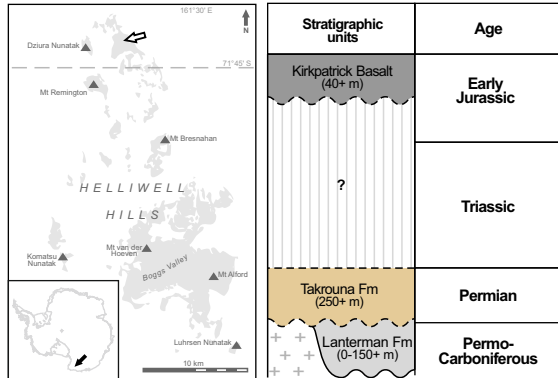


NEW PERMIAN—JURASSIC DEPOSITS IN THE FAR NORTH OF VICTORIA LAND, EAST ANTARCTICA

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START



The geology of the Transantarctic Basin in the remote far north of Victoria Land is still poorly understood. Only Permo-Carboniferous glacial diamictites and the Permian Takrouna Fm had been known to occur below Kirkpatrick Basalt in the area.



In the 2015-2016 field season, a joint Korean-Italian-German team set out to conduct detailed geological and palaeontological field work in the central Rennick Glacier area.



Early visits to known localities in the Boggas Valley area and in the Morozumi Range confirm the presence of the typical Takrouna Formation and yield first finds of Permian Gondwanan index fossils.



A cliff west of our campsite in the northern Helliwell Hills, however, exposes ca. 50 m of previously unknown deposits that are reddish-weathering, barren of coal and plant fossils, and instead containing various types of trace fossils.



all scale bars = 1 cm

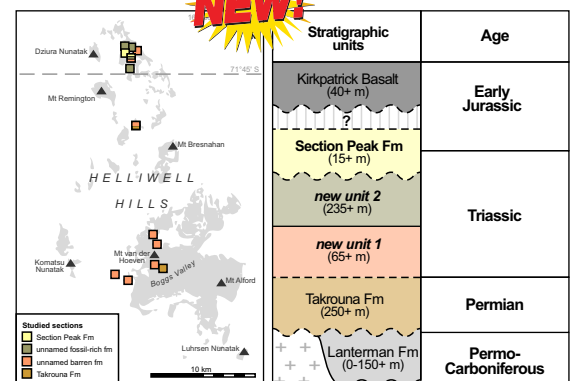


This unit is overlain by ca. 235 m of slope-forming silt- and mudstone, with minor intercalations of coal and of cliff-forming, olive-weathering fine-grained sandstone with coaly intraclasts—a further previously unknown unit.



FINISH

The top of the cliff section is formed by about 15 m of whitish quartzose sandstone reminiscent of the Section Peak Formation (Rhaetian-Early Jurassic) further south.



Altogether, we logged about 350 m of stratigraphic sections in the study area and collected ~500 kg of fossil samples. Preliminary results of on-going palynological analyses indicate a latest Permian to earliest Triassic age for the lower new unit and an Early to mid-Triassic age for the upper new unit. Formal revision of the regional stratigraphy is in preparation.



Here, abundant plant fossils began to turn up, including leaf compressions, fossil wood, and silicified peat with beautifully preserved rhizomes of Royal Ferns (Osmundaceae), together indicating a mid- or Late Triassic age for this part of the section.



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