HEWHOEPEN INTRUSIVE: AN ALKALINE PLUTON ALONG THE STRIKE OF THE MAGALLANES-FAGNANO FAULT SYSTEM. TIERRA DEL FUEGO ISLAND. ARGENTINA

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The strike-slip Magallanes-Fagnano Fault System (MFFS) is thought to be the onland expression of the North Scotia Ridge which constitutes the tectonic boundary between the South America and Scotia plates. The Hewhoepen body is a reduced outcrop (10 km2) located at the southeastern edge of the Lago Fagnano; it is discordantly emplaced in the Cretaceous deformed mudstones of the Yahgán Formation. As revealed by a detailed magnetic survey, the Hewhoepen pluton might correspond either to a single cylindrical body or to a composite plug.Monzonite compositions dominate over subordinated diorite and syenite terms. The monzonite is mainly composed of large perthitic K-feldspar that encloses euhedral zoned plagioclase; the mafic minerals occupying interstitial spaces are clinopyroxene, hornblende and biotite. Euhedral sphene and opaque minerals occur in minor amounts. The pluton is composed of basic to intermediate (SiO2= 48-62%), metaluminous, K-series alkaline rocks. The K2O/Na2O ratios are generally 1 except for the most evolved rocks. The location of the intrusive body with respect to the trace of the MFFS, its shape and alkaline nature, and its relative isolation from the main belt of the Fuegian Cordillera, might suggest that it was emplaced in correspondence at a releasing bend along the fault. Localised brittle shearing affecting both the intrusive and the host indicates ongoing strike-slip activity after pluton emplacement.