



Marine algae inform past calving rates of a tide water glacier in western Greenland.

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Coralline algae are ubiquitous in marine environments worldwide acting as ecosystem engineers by cementing reefs together and providing habitat for local communities. The calcified thallus also makes coralline algae repository for past environmental conditions, providing information on the scale of 10s-100s of years. Free living coralline algae, or maerl, can dominate local habitats along the coasts and in fjord systems of western Greenland. Using the long lived maerl species, *Lithothamnion glaciale*, we present multi-proxy data sets for the large fjord system adjacent to the Kangiata Nunâta Sermia (KNS) glacier. This information provides a record of glacial movement (advance and retreat) and calving for the past 70+ years which can be correlated to records of glacial calving. The KNS glacier is one of the largest tidewater glaciers in western Greenland and contributes to the mass transfer of glaciers and ice sheets into the world oceans. The present data combined with terrestrial proxies within the CALVE research project will help inform policy and models focusing on future climate conditions.