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Life between tides: Spatial and temporal variations of an intertidal macroalgal community at Potter Peninsula, South Shetland Islands, Antarctica

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1 **Life between tides: spatial and temporal variations of an intertidal macroalgal**
2 **community at Potter Peninsula, South Shetland Islands, Antarctica**

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19 **Abstract.**

20 Intertidal zones are one of the most studied habitats in the world. However, in
21 Antarctica, further studies are needed for a more complete understanding of these
22 systems. When conspicuous Antarctic intertidal communities occur, macroalgae are a
23 key component. Given that intertidal communities have a fast response to variations in
24 environmental conditions and could reflect climate fluctuations, we conducted a non-
25 destructive study with photographic transects in an intertidal zone at Potter Peninsula,
26 Isla 25 de Mayo/King George Island, over four years and during five months of the
27 warm season. We tested the general hypothesis that macroalgal intertidal communities
28 are mainly structured by the vertical stress gradient and that changes in temperature
29 between seasons and between years have a great influence in the macroalgal
30 community structure. Spatial, seasonal and inter-annual variations were studied using

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