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Western Antarctic Peninsula shows one of the fastest responses to climate change on Earth. Glacier meltdown and freshening are perhaps the most conspicuous evidence of anthropogenic impacts, that together with ice scouring can strongly modify benthic communities. The spatial extension of these impacts has been rarely explored in rocky subtidal environments. This study describes changes in benthic communities across glacier and bathymetric gradient in Fildes Bay, Antarctica. Suction samples were taken from four different sites at increasing distance from the Collin glacier (0 - 2.5 – 5 - 7 km) and three depths (5 – 10 - 15 m). Macrofaunal diversity increased with depth across all distances from the glacier; these changes were associated with the increase in diversity of amphipods and echinoderms. The lowest and highest species diversity occurred at zero and two km from the glacier, indicating a strong, but localized, glacier effect. Variation in salinity tolerance and the abundance of key habitat forming algae could explain the spatial variation in these communities. This result remarks the importance of facilitation as a structuring force in Antarctic benthic communities. We suggest that the fate of communities in future climate-change scenarios will depend on how habitat-forming species respond to these environmental changes.