

A major threat to a unique ecosystem

Along the Atlantic shore of northern Patagonia there is a rare hard-bottom ecosystem known as rocky marsh, representing a unique and striking environmental intersection between a rocky shore and a salt marsh. It is characterized by the presence of *Spartina* cord-grasses (*Ecology* 2019; doi.org/10.1002/ecy.2863) that, in the absence of a muddy substrate, manage to subsist as hydroponic cultures of dwarf plants anchored to the bottom with a massive root system that harbors a diverse macrofaunal community. Several non-native species, including the acorn barnacle (*Balanus glandula*), an amphipod (*Orchestia gammarellus*), and the orange-striped anemone (*Diadumene lineata*) have been found thriving in these communities. Recently, we detected an alarming increase in the abundance of the



European green crab (*Carcinus maenas*) in Patagonia's rocky marsh. This aggressive and voracious predator has been successively introduced in many regions worldwide. After establishment, it induces direct and indirect changes at multiple scales. It can potentially have strong top-down effects that affect multiple trophic levels, reshaping entire communities and altering associated ecosystem services. The integrity of this long-overlooked ecosystem is certainly threatened, and while some species seem to have negligible effects, the presence of others can potentially lead to radical environmental shifts. Will researchers be able to understand these unique ecosystems before they are completely altered by invasive species? Or shall we assume they will never be the same again?

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