

Beach litter distribution in Admiralty Bay, King George Island, Antarctica

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Abstract

In the Antarctic Peninsula, most important activities are touristic visits, from the second half of the 20th Century, and scientific investigation linked to 75 research stations. Beach litter content/abundance was investigated at 17 beaches in Admiralty Bay (King George Island, Antarctica) and the type of plastic material was determined by Raman spectroscopy. An average value of 0.16 items m⁻¹ was observed. Wood items consisted of processed wood fragments representing 47.27% of the total. Foam represented 21%, hard plastic pieces 9.68% (consisting of polyvinyl chloride or high density polyethylene), metal 3.37%, rubber fragments 2.81%, foamed plastic pieces 2.66% (composed by polystyrene), the rest of categories representing less than 2% of the total. Wood debris and metal are essentially remnant objects of ancient whaling activities and research expeditions, polyurethane and expanded polystyrene materials have different origins and hard plastic, rubber, paper/cardboard and paint fragments seem mostly linked to present research activities.

Keywords

Wood fragments; Plastic items; Foam; Raman spectroscopy