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## Morphometric analysis of the post-caldera monogenetic volcanoes at Deception Island, Antarctica: implications for landform recognition and volcanic hazard assessment

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Deception Island is one of the most active volcanoes in Antarctica, with more than 20 monogenetic eruptions during the Holocene. The latest episodes of 1967, 1969 and 1970 have shown that volcanic activity on Deception Island can become a concern for tourists, scientists, and military personnel working on or near the island.

The objective of this work is, therefore to identify eruptive processes and the evolution of post-caldera volcanic edifices at Deception Island by morphometric analysis, supported by field observations. This methodology has been used since the 1970s to analyse mafic monogenetic volcanoes but it has not been fully developed until recently.

Tuff cones and rings, as a result of magma-water interaction, represent the most common eruptive events occurring during Deception Island's recent geological past and are therefore the most likely to occur in the near future. This work provides an opportunity to incorporate for the first time at Deception Island geomorphological observations for a better comprehension of the potential evolution of a future eruption and for a broader understanding of volcanic hazards on this island.

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