The Santorini Volcano: Its Stratigraphy and Palaeontology

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Late Quaternary plant remains from Santorini have been useful tools for establishing a stratigraphy of the youngest part of the volcanic edifice and for analyzing the climatic conditions of that period. A series of new radiocarbon data has been used to date several volcanic marker horizons. Charcoal from small trees found in the Fira plant horizon gave radiocarbon ages of around 40 000 to 50 000 years BC. The discovery of plant fossils of *Tamarix*, *Olea*, *Phoenix* and *Chamaerops* indicates that the climatic conditions during this period were nearly the same as at present, since similar plant communities exist on Crete today. The remains of twigs and branches found in molds in the Cape Riva Ignimbrite gave radiocarbon ages of 18 000 BC, corresponding to the calibrated value of 21 000 calendar years BC. Blocks of calcareous stromatolites thrown out in the third phase of the Minoan eruption (1645 ± 4 BC) give useful information on the form that the water-filled caldera had prior to the eruption. The stromatolites gave radiocarbon ages of around 13 000 BC. Combined with observations on the caldera walls of the Santorini caldera this information was used to reconstruct the form of the island before the Minoan eruption. The reconstruction shows that the shape of Santorini before the eruption was quite similar to that of the island today.

Literature: Walter L. Friedrich and Alexander McBirney (Translator), Fire in the Sea. The Santorini Volcano: Natural History and the Legend of Atlantis, Cambridge University Press, 2000. ISBN: 0521652901.