

To: The National Science Foundation

I am pleased to write in support of the application by Candace Gossen.

The collapse of the Easter Island megalithic civilization around 1650-1680 AD is a matter of very great interest. It is not merely of archaeological significance, but has also been frequently quoted as a significant model for planet Earth and for our own western civilization. My own work has tended to emphasize the significance of the over-use of resources as the fundamental cause, but I have always been open to the possibility that climatic changes, perhaps those associated with the Little Ice Age of the Northern Hemisphere, could be at least the proximal cause, and possibly a major cause. At least this possibility must be investigated.

The work proposed by Ms Gossen will address this possibility, and will also serve to confirm (or otherwise) my palynological work which was done 20 years ago and with rather widely spaced sampling. Another problem with this early work was the radiocarbon dating which was done using state-of-the-art bulk sediment C14 assay. Since then we have in my own laboratory pioneered the extraction of pollen-rich fractions by flotation techniques, and have found these generally more satisfactory. They are now in general use by Dr Christine Prior at the Rafter Radiocarbon Laboratory, New Zealand, and will be available for use by Ms Gossen. It seems clear that many of my dates were vitiated by downward root penetration and/or by inwash of old soil carbon following forest destruction. There is also the possibility that, at least in the large caldera, Rano Kau, there are occasional releases of ancient carbon dioxide by residual volcanic activity. It is therefore highly desirable that my work should be repeated and augmented using the most modern techniques.

I am therefore very pleased to see this application, and have agreed to make Ms Gossen welcome in my laboratory., and that our skilled coring technician, Mr David Feek, would be available to help her obtain the necessary samples.

I hope that it will be possible to fund Ms. Gossen.

Yours sincerely,

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