

MARSDEN FUND TE PŪTEA RANGAHAU A MARSDEN

Rice and the Neolithic Revolution in Southeast Asia

The Neolithic Revolution was one of the biggest changes in human history, and followed several million years of slow evolution by hunters and gatherers. The period involved the domestication of plants and animals, and stimulated population growth, the expansion of human settlement, and deep-seated changes in the technology, economy, health and the social lives of the people involved.

University of Otago researchers, Professor Charles Higham from the Department of Anthropology, and Dr Nancy Tayles from the Department of Anatomy and Structural Biology, have been awarded a Marsden grant, to study this phase of human history in more detail. Specifically, the research will involve an investigation of the expansion of rice farming in Southeast Asia.

There were two major transitions during the Neolithic Revolution: in the Middle East, it involved wheat and barley, and in East and Southeast Asia, rice was the principal crop. Today, rice sustains up to 70 percent of humanity.

Recent research has traced the origins of rice farming to the valley of Yangtze River, over 10 thousand years ago, and from this point on, use of the crop spread widely. A model for this expansion suggests that farming groups expanded across broad regions from India to Japan, and from Madagascar to Easter Island, taking with them their languages and genes as well as their way of life.

Professor Higham and Dr Tayles will test this model by conducting an archaeological study of a newly discovered Neolithic settlement and cemetery in Northeast Thailand. The results will be linked with studies of historical linguistics and genetics, to provide a detailed picture of this interesting phase of human evolution.

Total Funding: \$777,288 over 3 years

Researchers: Professor Charles Higham
Department of Anthropology, University of Otago
03-479 8750 charles.higham@stonebow.otago.ac.nz

Dr Nancy Tayles
Department of Anatomy and Structural Biology,
University of Otago

Associates: Dr Alexander Bentley, University of Durham, United Kingdom
Dr Rachanie Thosarat, Fine Arts Department of Thailand
Dr Mim Bower, Cambridge University, United Kingdom
Dr Peter Forster, Cambridge University, United Kingdom

RSNZ contact: Lynley Hargreaves
Communications – Royal Society of New Zealand
04-470 5770 lynley.hargreaves@rsnz.org

For further information, contact the Manager of the Marsden Fund, Dr Don Smith (don.smith@rsnz.org) 04-470 5776, 021-984 873, or the Deputy Manager, Dr Peter Gilbert (peter.gilberd@rsnz.org) 04-470 5778, 025-614 1416

Full details of all Marsden grants: www.rsnz.org/funding/