Reconstructing lake ecosystem change in response to land use intensification - PhD position

We are seeking an enthusiastic and highly motivated student to undertake a fully-funded PhD project investigating lake health and ecosystem function through time in response to land use intensification. This PhD project is part of an internationally unique study 'Lakes380—*Our Lakes' Health: past, present, future*' that aims to collect and analyse sediments cores from 10% of New Zealand's 3,800 lakes (www.lakes380.com). Lakes380 involves collaborators and partners from over 30 national and international organisations.

Land use intensification in New Zealand over the last ~150 years has been implicated as a key driver of decline in lake health but the specific relationships between land use, lake ecosystem trajectories and water quality remain poorly defined. The PhD research will integrate high-resolution chronology (^{14}C, ^{210}Pb and ^{137}Cs) from sediment cores with novel (eDNA, hyperspectral imagery) and traditional (diatom, chironomid, cladocera) proxies of water quality and ecosystem function.

Members of the Lakes380 team taking sediment cores from Lake Wai Raupo in the far north of New Zealand.

We are looking for a candidate with a background in paleoecology/paleolimnology and geochronology. The ideal candidate would have previous experience in paleoevironmental reconstructions using diatoms and other zooplankton indicators such as cladocera, although this is not essential. The candidate will be expected to participate in field work associated with lake sediment core recovery from a range of environments throughout New Zealand.

The candidate will be based at Victoria University of Wellington under the supervision of Dr's Jamie Howarth and Andrew Rees. They will also work closely with Dr Susie Wood of Cawthron, Dr Marcus Vandergoes of GNS Science and Assoc. Prof. John Tibby of University of Adelaide.

Candidates should submit to jamie.howarth@vuw.ac.nz a; complete CV (including academic transcripts) and a letter containing the following information - motivation for applying, research interests and experience, and the name and contact details of two or more academic referees. Applications received on or before 1st Nov 2019 will be considered. The successful applicant will be expected to take up the position no later than the 1st of March 2020.