Databases for palaeo-data: NUIG contribution to a global resource

I am prompted to write these few lines mainly by the most recent PAGES (Past Global Changes) Newsletter with the title: *Building and Harnessing Open Paleodata* (published 11/2018; see http://www.pastglobalchanges.org/).

This Newsletter gives a good overview of open-data resources that provide the foundation for the reconstruction of various aspects of environmental change involving climate, human impact, sea-level change, pollution studies, etc., and the possibilities afforded by such resources.

An important Irish resource are the pollen datasets that have been generated (they are still being generated!) over the past 40 years (approx.) in the Palaeoenvironmental Research Unit, NUIG. I have recently started, with the assistance of Dr Karen Molloy, compiling datasets held in the PRU and spanning the period ca. 1980 to 2011.

As these palaeo-datasets are being compiled, they are being submitted to PANGAEA, a palaeo-database maintained by the University of Bremen (www.pangaea.de). This database not only accepts and archives several types of palaeo-data, including fossil pollen data which are my specific interest, but also, and very importantly, it carries out basic checks on the data before they are archived and released for public use. In other words, personnel at PANGAEA does its best to ensure that the data are of an acceptable standard and are essentially correct.

PANGAEA also provides for the archiving of accompanying metadata, including geo-referenced locations for the investigations, when and by whom the investigations were carried out, chronological details including age/depth models for pollen and other profile types, details of relevant theses and publications, photographs, etc. of sites; the last mentioned being important especially in the case of investigations involving archaeological sites.

Well established linkages between PANGAEA and other major databases ensure that submitted data are shared across various platforms so that effectively any data submitted are widely available via not only PANGAEA but also other databases.

Assembling and checking the data for each site/investigation takes time but at least a start has been made and palaeodata from early investigations carried out in the PRU — these include some of the most detailed carried out in Ireland to date; many span the Holocene and/or the Late-glacial and include several multi-proxy datasets — are already available online as an open-data resource and more will become available in 2019. All that is requested of the potential user is that the origin of the data is acknowledged and appropriate references are cited.

Michael O'Connell, 9 December 2018