



PaleoGeo: a Web based GIS database for paleoenvironmental studies

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Paleoenvironmental studies cover various fields such as paleohydrology, geomorphology, paleoceanology, paleobiology, palaeoclimatology, and chronology. It is difficult for an individual researcher to collect and compile enormous data regarding these fields. We have been compiling portal data and presenting them using a web-based geographical information system (Web-GIS) called PaleoGeo for the multidisciplinary project "Replacement of Neanderthals by Modern Humans". The aim of the project is to reconstruct the distribution of Neanderthals and modern humans in time and space in relation to past climate change. We have been collecting information from almost three thousand articles of 13 journals regarding paleoenvironmental research (i.e., *Boreas*, *Catena*, *Climatic Change*, *Earth Surface Processes and Landforms*, *Geomorphology*, *Journal of Quaternary Science*, *Palaeogeography*, *Palaeoclimatology*, and *Palaeoecology*, *Quaternary International*, *Quaternary Research*, *Quaternary Science Reviews*, *The Holocene*, and *The Journal of Geology*). The topics of the articles were classified into six themes (paleohydrology, earth surface processes and materials, paleoceanology, paleobiology, palaeoclimatology, and chronology) and 19 subthemes (hydrology, flood, fluvial, glacier, fluvial/glacier, sedimentology, soil, slope process, periglacial, peat land, eolian, sea-level, biology, vegetation, zoology, vegetation/zoology, archaeology, climate, atmosphere, and chronology). The collected data consist of the journal name, information about each paper (authors, title, volume, year, and page numbers), site location (country name, longitude, and latitude), theme, subtheme, keywords, DOI (Digital Object Identifier), and period (era). Location data are indispensable for paleoenvironmental studies. The PaleoGeo shows information with a map, which is an advantage of this database system. However, the number of the paleoenvironmental studies is growing rapidly and we have to effectively cover them as many as possible. We plan to simplify the input data (latitude, longitude, title and DOI only) to include more publications. So far information about >7500 sites has been collected and the number is increasing. The collected data are accessible via the internet (<http://neangis.csis.u-tokyo.ac.jp/paleogeo/>).