

4.3.3 School of Earth and Environmental Sciences

Academic Staff

Head	Room	Telephone
Professor L. Head e-mail: lhead@uow.edu.au	41.G14	4221 3721

Professors

Professor A.R. Chivas	41.161B	4221 3263
Professor J. Morrison	19.G012	4221 4377
Professor M. Morwood	41.G23	4221 3189
Professor C.V. Murray-Wallace	41.G31	4221 4419
Professor G.C. Nanson	41.G33	4221 3631
Professor R.G. Roberts	41.G29	4221 5319
Professor C.D. Woodroffe	41.G05	4221 3359



Professor Lesley Head

Associate Professors

Assoc. Prof. C.L. Fergusson	41.159	4221 3860
Assoc. Prof. C. Gibson	41.G08	4221 3448
Assoc. Prof. B.G. Jones	41.168	4221 3803
Assoc. Prof. G. Waitt	41.G29	4221 3684

Senior Lecturers

Dr L. Chisholm	41.G25	4221 3765
Dr N. Gill	41.G16	4221 4165
Dr M. L. Puotinen	41.G34	4221 3589

Lecturers

Dr S. Buckman	41.163	4221 5950
---------------	--------	-----------

Student Liaison

Ms Marina McGlinn	41.G15	4221 4396
Ms Sandra Quin	41.G15	4221 4396

Course / Major Coordinators

Bachelor of Environmental Science, BSc (Environment)	Prof. Colin Murray-Wallace
BSc (Geology)	Assoc. Prof. Chris Fergusson
BSc (Geosciences)	Dr Marji Puotinen
BSc (Human Geography, Land and Heritage Management)	Assoc. Prof. Gordon Waitt
BSc (Physical Geography)	Dr Marji Puotinen
Honours Program	Assoc. Prof. Chris Fergusson

The School of Earth and Environmental Sciences comprises the disciplines of **Geography, Geology and Environmental Science**. Major studies in Geography and Geology may be undertaken in the following degrees:

Bachelor of Science (majors or prescribed interdisciplinary majors)

Bachelor of Arts (a major must be taken jointly with an Arts major)

Bachelor of Environmental Science (Earth Science and Land Resources strands)

Bachelor of Marine Science (Marine Geoscience strand)

Academic Advice

Regular academic advice is provided to undergraduate students who have indicated that they wish to pursue Geography and/or Geology majors. Each student is assigned to a member of the academic staff who will act as an academic coordinator and mentor. Staff members and students should meet at least twice a year to discuss, in particular, progress and course details.

Major Studies for the Bachelor of Science and Bachelor of Arts

Students may elect to complete one of the following majors or combined majors. Full course outlines are provided in Section 7.1.

Geology

Geosciences

Human Geography

Physical Geography

Bachelor of Science Prescribed Majors

The following prescribed majors are available in the Earth and Environmental Sciences. Entry to one of these majors must be approved by the Dean or Associate Dean. The details of these majors are given in Section 7.2.

Ecology (jointly with the School of Biological Sciences)

Environment (in conjunction with the other Science Schools)

Land and Heritage Management

All degrees can be taken on a part-time basis, but students must be able to organise their time to meet the scheduled class times.

Current Research Interests

This is useful information for students wishing to identify staff expertise in particular academic areas.

Dr Sol Buckman

Plate tectonics and mechanisms of intraplate mountain building. Crustal-scale processes involved in the formation of metallic ore deposits. Charcoal in Quaternary sedimentary sequences and paleofire studies.

Associate Professor Paul Carr

Mineralogy and igneous petrology, especially conditions of mineral formation; volcanology.

Professor Bruce Chappell

Geochemistry and genesis of granitic and associated volcanic rocks

X-ray Fluorescence (XRF) analysis

New England and Lachlan Orogens - tectonic and metallogenic evolution

Dr Laurie Chisholm

Application of remote sensing and GIS technologies to environmental management and resource assessment in general. Specific interests in hyperspectral remote sensing for discriminating vegetation stress, type and foliar biochemistry; sub-pixel analysis of hyperspectral imagery; integration of radar and optical data.

Professor Allan Chivas

Low-temperature geochemistry - Chemical, C-14, Cl-36 and stable-isotope studies of the formation and evolution of modern and ancient lake basins, coral reefs, near-shore and deep-sea sediments, weathering profiles and laterites. Chemical hydrology, palaeoceanography and atmospheric chemistry. Chemical and isotopic studies of ore deposits.

Associate Professor Christopher Fergusson

Regional geology and tectonics of the Tasmanides of eastern Australia; tectonic studies in the Appalachians of western Newfoundland and the Zagros mountain belt of western Iran; sedimentology of deep-marine sediments.

Associate Professor Chris Gibson

Social and Economic Geography; History and Philosophy of Geography; Creative Industries; Cultural Planning for Cities & Regions; Tourism.

Dr Nicholas Gill

Rural social and cultural change; cultural and historical aspects of arid zone pastoralism; Aboriginal land use; cultural geography and environment; environmental policy.

Professor Lesley Head

Australian prehistory and environmental change; cultural landscapes; past and present Aboriginal land use; pollen and charcoal analysis.

Dr Zenobia Jacobs

Development of optically stimulated luminescence dating techniques for individual sand grains

Extending the age range of luminescence dating of quartz

Timing of the anatomical and behavioural origins of Homo sapiens in Africa and their dispersal 'Out of Africa'

Quaternary environmental change and its impact on the evolution and dispersal of Homo sapiens

Associate Professor Brian Jones

Sedimentology of fluvial, fluvio-deltaic and volcanoclastic sequences; basin analysis; petrology of petroleum reservoir rocks; application of mathematical techniques to geological problems; coastal ecology.

Professor John Morrison

Estuarine science and management, especially nutrient budgeting; watershed management; soil genesis and management; pollution prevention and waste management; environmental chemistry, particularly in the area of coastal marine pollution; and Pacific small island environments.

Professor Mike Morwood

Archaeology of Southeast Asia and Australia; early hominin evolution and dispersals; origins of modern humans; rock art; Southeast Asian biogeography; ethnoarchaeology.

Professor Colin Murray-Wallace

Quaternary studies and global environmental change; sedimentology and stratigraphy; amino acid racemisation, electron spin resonance and radiocarbon dating; coastal evolution and sea-level change; neotectonics.

Professor Gerald Nanson

River channel erosion. Floodplain formation of rivers of arid and tropical regions. Quaternary environmental change. Thermoluminescence dating.

Dr Marjetta (Marji) Puotinen

Spatio-temporal modelling of the effects of natural disturbance impacts on ecological systems in both terrestrial (eg, fire) and marine (eg, cyclone impacts on coral reefs) environments using geographic information systems.

Professor Richard (Bert) Roberts

Application of luminescence dating methods in the Earth and archaeological sciences; development of optically stimulated luminescence dating techniques for individual sand grains; timing of human evolution, dispersal and impact in Southeast Asia and Australia; dating of prehistoric rock art and palaeoecological records; timing and causes of megafaunal extinction events; quaternary landscape evolution and environmental changes; sediment mixing in natural and anthropogenic deposits.

Associate Professor Gordon Waitt

Economic restructuring; international trade and tourism, marketing places.

Professor Colin Woodroffe

Coastal processes, estuarine studies, mangrove ecology, sea-level change, coral atolls. Geographic Information Systems.