

ACADEMIC QUALIFICATIONS

Bachelor of Science, Macquarie University NSW, 1981
 Master of Tropical Environmental Management, Northern Territory University, 1999
 Doctorate of Philosophy– Charles Darwin University, 2007

EMPLOYMENT HISTORY

2013- Director, Principal Environmental Scientist, *EcoScience NT Pty Ltd*
 1997 - 2013 Consultant Environmental Scientist, *EcoScience NT*
 1995 – 1997 Vegetation Ecologist, *EcOz Australia*
 1991 - 1994 Director, *EcoSystems Pty Ltd*
 1987 - 1991 Associate and Vegetation Ecologist, *EcoSystems Pty Ltd*
 1982 - 1987 Research Assistant, North Australia Research Unit, Australian National University
 1981 - 1982 Field and Laboratory Assistant, CSIRO, Darwin.
 1980 - 1981 Technical Assistant, The Australian Museum, Sydney.

SELECTED PROFESSIONAL EXPERIENCE**1997 - 2014 Consultant Environmental Scientist, *EcoScience NT***

Summary of Research & Monitoring Darwin Harbour, Jan 2015 – NTG Dept Land Resource Management
 Monitoring of Mangrove Rehabilitation, Gas Export Pipeline Project, Sept 2014 to Dec 2016– INPEX
 Mud Wave Formation and Impacts to Mangroves, GEP, May 2014 – Boskalis.
 Mangrove Rehabilitation Project, Ichthys INPEX Gas Export Pipeline, Dec '13 – Jan 2015 – Boskalis/Saipem
 Monitoring of Mangrove Community Health, Ichthys Onshore Project, Nov '13 to present – AEC & JKC.
 Mangrove Monitoring Program, Ichthys INPEX Gas Export Pipeline Project – Feb '12 to present – Boskalis.
 Mangrove Health Monitoring Program, Ichthys Nearshore EMP, Mar 2012–Dec '14 - Cardno & INPEX.
 Monitoring of Mangrove Flora & Fauna at WPIAF, Oct 2011 – Oct 2013, Wickham Point Development.
 Weddell Baseline Environmental Studies, Mangrove Fauna, July 2011–Northern Territory Government.
 Weddell Baseline Environmental Studies –Mangrove Flora, Mar 2011 – Northern Territory Government.
 Mangrove survey & impact assessment, Weddell EIA, April 2011 – DPI, NT Government.
 Conoco Phillips DLNG Plant, Monitoring of Mangrove Flora & Invertebrates, Nov 2010—URS, Perth
 Rehabilitation of Mangroves, Inpex LNG Project, Blaydin Point, June 2008 – INPEX Corporation, Perth
 Conoco Phillips Darwin LNG Plant, Monitoring of Mangrove Flora & Invertebrates, 2008—URS, Perth
 Wild River Farmed Seafood – Mangrove monitoring program—2001-2005— Phelps/Panizza
 Conoco Phillips Darwin LNG Plant, Monitoring of mangrove soils & flora 2004-08—URS Perth
 APPL Aquaculture Project- PER and Mangrove Monitoring 2002-2007—KBR, Perth
 Blacktip Development - Intertidal Survey for EIS—SKM Perth, for Woodside Energy Australia.
 Conoco Phillips Darwin LNG Plant, Monitoring Program – Mangrove Invertebrates, 2002-06—URS, Perth
 Darwin City Waterfront Redevelopment Project EIS– Flora Survey and Impact Assessment—URS
 PWC Transmission Line and Switchyard, Wickham Point – Fauna and Flora Survey—SKM, Darwin
 Mangrove monitoring program, Blackmore River Aquaculture Project—Phelps/Panizza partnership
 Flora survey and ecological assessment, Blackmore River Aquaculture Project EIS—Phelps/Panizza
 Mangrove Survey, Norman River, Gulf of Carpentaria—Pasminco Century Mine
 Flora survey and ecological assessment, Howard River Aquaculture Project EIS—Phelps/Panizza.

1995 -1997 Vegetation Ecologist and Environmental Consultant, *EcOz Australia*

Flora survey & environmental impact assessment projects include:

LNG plant EIS, Wickham Point, Darwin Harbour—Phillips
 Marrakai Rural Subdivision—Connell Wagner.
 Maud Creek Gold Project, EIS, Katherine, NT—Dames and Moore.
 Exercise Leopard Rage military training July 1996—Defence Dept
 Impacts of tourism on Christmas Island National Park, Indian Ocean—ANCA
 Proposed fish hatchery project, Channel Is, Darwin Harbour—Dames & Moore.

Bukbukluk realignment of Kakadu Highway, Kakadu National Park—ANCA
Fairway Waters Subdivision. Survey of soils and vegetation—GHD

1989 - 1994 Director and Environmental Consultant, *EcoSystems*.

Flora survey & environmental impact assessment projects include:

Daly Waters to McArthur River Gas Pipeline PER—Dames and Moore.
Darwin South Baseline Studies- The Mangrove Community—NT Government
Darwin South Environmental Studies Stage 1—NT Government.
Eco-tourism and cultural development Kulaluk—Vysrose Developments.
Micket Creek Shooting Range PER—Dames and Moore .
Environmental Management Plan Close Training Area Litchfield Barracks—Dames and Moore.
Darwin South Project, Review of Existing Data on Flora—Dames and Moore.
McArthur River Mine and Proposed Port facility, EIS—Dames and Moore
Environmental report, Howard Peninsula Drainage Study—Acer Vaughan.
Donkey Camp Weir EIS, Katherine River—Dames and Moore.
Cox Peninsula Drainage Study—Acer Vaughan
Bayview Haven Canal Estate, PER—Dames and Moore.
East Arm Port Development, PER—Dames and Moore.
Seven Spirit Wilderness, PER Cobourg Peninsula.
Marrakai to Jabiru 132 kV Transmission Line PER—PAWA, NT
Territory Wildlife Park Master Plan—Clouston Landscape Architects.

RESEARCH EXPERIENCE

- 1999-2007** **Doctorate studies, Charles Darwin University**
PhD topic: *The Biological Diversity, Recovery from Disturbance and Rehabilitation of Mangroves, Darwin Harbour, NT.*
Designed to provide baseline information on biodiversity and disturbance to assist in conservation, planning and management of the mangrove resources of Darwin Harbour.
Sponsors: NT Parks & Wildlife Commission & ConocoPhillips Pty Ltd
<http://espace.cdu.edu.au/view/cdu:6553>
- 1997 - 1999** **Dissertation for Master of Tropical Environmental Management, NTU.**
Masters topic: *The Productivity of Mangroves, Darwin Harbour.*
Two year study of mangrove productivity and phenology.
Sponsor: NT Department of Lands Planning and Environment.
<http://espace.cdu.edu.au/view/cdu:38880>
- 1982 - 1987** **Research Assistant, North Australia Research Unit, Australian National University**
Hydrology, geomorphology, vegetation ecology and plant ecophysiology studies within the *Mangroves and Tidal Wetlands Research Program*. Involving extensive field experience in Darwin Harbour, the Daly & South Alligator Rivers, NT.
Individual research on the impacts of Cyclone Kathy on the mangrove vegetation of the McArthur River delta, Gulf of Carpentaria.
- 1981 - 1982** **Field and Laboratory Assistant, CSIRO, Darwin.**
Vegetation and fauna surveys at Kapalga Research Station. Laboratory analysis of research data.
- 1980 - 1981** **Technical and Field Assistant, The Australian Museum, Sydney**
Ornithological and mangrove studies Department of Vertebrate Ecology

AWARDS & SCHOLARSHIPS

- 1997-8 **Australian Postgraduate Equity Scholarship**
1997-9 **Research Grant – NT Department of Lands Planning and Environment (\$10,000)**
1999-2002 **Australian Postgraduate Award**
1999-2002 **Research Grant – Parks and Wildlife Commission of the NT (\$30,000)**
2000 **Postgraduate Research Grant – Centre for Tropical Wetlands Management**
2001 **Australian Federation of University Women Postgraduate Scholarship**
2002 **Finalist Environment Institute of Australia Student Award**
2003 **Research Scholarship funded by Conoco Phillips Pty Ltd**
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PROFESSIONAL AFFILIATIONS

Environment Institute of Australia and New Zealand (1999-2011)
 Australian Marine Science Association
 Australian Mangrove and Saltmarsh Network

PUBLICATIONS (nee Bardsley)

- Chappell, JMA and Bardsley, KN** (1985). Hydrology of the Lower Daly River, Northern Territory Australian National University North Australia Research Unit Monograph 41 pp.
- Bardsley, KN** (1985). 'The Effects of Cyclone Kathy on Mangrove Vegetation', Coasts and Tidal Wetlands of the Australian Monsoon Region. A collection of Papers presented at a Conference in Darwin, November 1984, Bardsley, KN, Davie, JDS and Woodroffe, CD (eds) Mangrove Monograph No 1. pp 167-185
- Bardsley, KN** (1987). Mangroves of the Darwin Region, poster featuring text and illustrations of the morphology of 23 mangrove species. North Australia Research Unit, ANU.
- Metcalfe, KN** (1989). 'The Mangroves - Where Land Meets Sea', World issue No. 30, London.
- Metcalfe, KN** (1999). Mangrove Litter Production in Darwin Harbour, NT. A study of litter fall as a measure of primary productivity in the mangrove communities of Darwin Harbour. Masters Thesis, Northern Territory University. <http://espace.cdu.edu.au/view/cdu:38880>
- Metcalfe KN**, (2007) The Biological Diversity, Recovery from Disturbance and Rehabilitation of Mangroves in Darwin Harbour, Northern Territory. PhD Thesis, Charles Darwin University, Darwin. <http://espace.cdu.edu.au/view/cdu:6553>
- Metcalfe, KN, Franklin D and McGuinness, K** (2011) Mangrove Litter Fall: Extrapolation from traps to a large tropical macrotidal harbour. *Journal of Estuarine, Coastal and Shelf Science* **95** (2011): 245-252.
- Metcalfe KN and Glasby CJ** (2008) Diversity of Polychaeta (Annelida) and other worm taxa in mangrove habitats of Darwin Harbour, northern Australia. *Journal of Sea Research* **59**, 70-82.
- Metcalfe KN, Gordon DP and Hayward E** (2007) A uniquely amphibious bryozoan from living mangrove leaves - *Amphibiobeania* new genus (Beaniidae). *Zoological Research*, **24**: 563-570.
- Metcalfe KN, Bourke AJ and Willan RC (in prep.)**. The Mangrove Molluscs of Darwin Harbour, Northern Territory.
- Neusser TN, Bourke AJ, Metcalfe KN and Willan RC** (in press). First record of Aitengidae sp. (Mollusca: Panpulmonata: Acochlidia) for Australia. *Northern Territory Naturalist*.
- Woodroffe, CD and Bardsley, KN** (1988). The Distribution and Productivity of Mangroves in Creek H, Darwin Harbour, Darwin Harbour, Larson HK, Michie MG and Hanley JR (eds). Australian National University North Australia Research Unit Mangrove Monograph No.4.
- Woodroffe, CD, Bardsley, KN, Ward, PJ and Hanley, JR** (1988) Production of Litter in a Macrotidal Embayment, Darwin Harbour, NT, Australia. *Estuarine, Coastal and Shelf Science*, Volume 26, pp 581-598.
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