

### PROFESSIONAL PROFILE

Anna is a Senior Zoologist with a breadth of experience in a variety of fauna surveys, including short-range endemic invertebrate (SRE), subterranean, aquatic macro-invertebrates, waterbird, marine infauna, diatoms and aquatic microalgae.

Anna has been involved in fauna surveys with both private and government institutions for over nine years. At the Department of Environment and Conservation Anna worked in science and research, specialising in projects researching biodiversity and ecological requirements of aquatic systems throughout the state. Anna also co-authored a booklet describing the invertebrate fauna and avifauna found in and around wetlands in the Avon region, published taxonomic keys for the south-west Diptera, and has contributed to many scientific papers on wetland ecology.



At Phoenix, Anna's roles include undertaking fauna surveys, taxonomy, data analysis and reporting for linear port, road, rail and trail projects and mining tenement projects. She is also the Laboratory Manager and Occupational Health and Safety Officer for the company.

### QUALIFICATIONS

Bachelor of Science (Environmental Science) (Environmental biology) (Honours), Curtin University

### EMPLOYMENT HISTORY

2011 – Present	Zoologist at Phoenix Environmental Sciences
2007 – 2011	Technical Officer at Wildlife Research Centre, Department of Environment and Conservation
2005 – 2007	Environmental Officer at Dalcon Environmental

### TECHNICAL EXPERTISE

- Level 1 and 2 vertebrate fauna surveys
- Avifauna and migratory Shorebird surveys
- Short-range endemic (SRE) invertebrate and subterranean fauna surveys
- Targeted species surveys, experience includes *Idiosoma nigrum* (Shield-back Trapdoor spider), *Synemon gratiosa* (Graceful Sun-moth), Northern Quoll, Northern Marsupial Mole, Pilbara Olive Python, Bilby and Mulgara
- Flora and vegetation surveys
- Design and implementation of fauna monitoring programs
- Aquatic macro-invertebrate monitoring and taxonomy
- Wetland ecology, mapping, monitoring and research
- Algae and Diatom taxonomy
- Occupation Health and Safety Officer
- Laboratory Manager

### SELECTED PROJECT EXPERIENCE

- Waterbird, aquatic invertebrate and terrestrial fauna surveys for the Beyondie Potash Project, Kalium Lakes Potash Pty Ltd, 2015–ongoing (Little Sandy Desert)
- Approvals for Pinjar Yellow Sands Project, Pinjar Metro Sands Pty Ltd, 2014–2015 (Swan Coastal Plain)

- Level 2 flora and level 1 fauna for the Great Northern Highway Upgrades Project Muchea to Wubin, 2014–2015 (Swan Coastal Plain)
- Targeted *Idiosoma nigrum* survey for the Square Kilometre Array, AECOM Ltd, 2014 (Murchison)
- Aquatic biota monitoring program of St Ives Gold Mine, St Ives Gold Mining Company, 2014 (Goldfields)
- Targeted Northern Quoll and troglofauna surveys for the Pannawonica Tenements, Red Hill Iron Ltd, 2013–2014 (Pilbara)
- Level 1 fauna, SRE, shorebird, and targeted species surveys for the Rutila Rail Project, Rutila Resources Ltd, 2014 (Pilbara)
- Troglofauna survey for the Wonmunna Iron Ore Project, Ascot Resources Limited, 2014 (Pilbara)
- Subterranean fauna surveys of the Rabbit and Rooster Projects, Iron Ore Holdings Ltd, 2014 (Pilbara)
- Troglofauna survey for the Extension Project, Australian Aboriginal Mining Corporation, 2014 (Pilbara)
- Terrestrial invertebrate monitoring program of St Ives Gold Mine, St Ives Gold Mining Company, 2013–ongoing (Goldfields)
- SRE invertebrate fauna survey for Western Hub, FMG, 2012-13 (Pilbara)
- SRE invertebrate fauna survey for the Lake Disappointment Potash Project, Reward Minerals, 2013 (Pilbara)
- Conservation management plan and flora and fauna survey for the Mt Andrew Project, Ashburton Minerals, 2013 (Goldfields)
- Subterranean fauna survey for the Rocklea Project, Dragon Energy, 2012 (Pilbara)
- Migratory shorebird survey for the Balla Balla Magnetite Project, Forge Resources, 2012-13 (Pilbara)
- SRE invertebrate fauna survey for the Varanus Island Fill Project, Apache Energy, 2012 (Pilbara)
- Subterranean fauna survey for the Jigalong Project, Atlas Iron/ Pilbara Project, FerrAus, 2011-13 (Pilbara)
- Subterranean fauna survey for the Mulga Downs Project, Hancock Prospecting, 2011-12 (Pilbara)
- *Idiosoma nigrum* monitoring program and clearance surveys for Weld Range Iron Ore Project, Sinosteel Midwest Corporation, 2012 (Murchison)
- *Idiosoma nigrum* monitoring program for Jack Hills Iron Ore Project, Crosslands Resources, 2012 (Murchison)
- Subterranean fauna survey for the Wonmunna Project, Rico Resources, 2011 (Pilbara)
- SRE invertebrate fauna survey of Roy Hill rail alignment, Roy Hill Infrastructure, 2011 (Pilbara)
- Shorebird monitoring for the Shorebirds 2020 Program, 2011 (south-west)
- SRE invertebrate fauna survey for the SREs in the Central Pilbara Project, Department of Environment and Conservation, 2011, (Pilbara)
- SRE and targeted invertebrate surveys of Roe Highway Extension Project for South Metro Connect, 2011 (Perth Metropolitan Area)
- Waterbird monitoring of the Lake Warden and Lake Gore wetland systems near Esperance, Department of Environment and Conservation, 2010-11 (South Coast)

- Aquatic invertebrate survey of the Lake Warden and Lake Gore wetland systems near Esperance, Department of Environment and Conservation, 2010 (South Coast)
- Aquatic invertebrate monitoring for the Mound Springs Project, Department of Environment and Conservation, 2008-11 (Wheatbelt)
- Avifauna and aquatic invertebrate survey for the Pilbara River Pools Project, Department of Environment and Conservation, 2008 (Pilbara)
- Avifauna and aquatic invertebrate survey at significant wetlands for the Resource Conditioning Project, Department of Environment and Conservation, 2008 (South Coast, Southwest, Midwest, Wheatbelt, Goldfields, Pilbara and Kimberley)
- Avifauna and aquatic invertebrate survey for the Avon Baseline Project, Department of Environment and Conservation, 2008 (Avon-Wheatbelt)
- Aquatic invertebrate monitoring for the Forest Monitoring Program, Department of Environment and Conservation, 2007-11 (south-west)
- Algal monitoring from drinking water sources, 2005-07 (South Coast, Southwest, Midwest, Wheatbelt, Goldfields, Pilbara and Kimberley)
- Avifauna and diatom survey at natural, altered, and created wetlands, 2005 (South-west)

#### **PUBLICATIONS**

- Framenau, V.W. and Leung, A.E. 2013. *Costacosa*, a new genus of wolf spider (Araneae, Lycosidae) from coastal north-west Western Australia. *Records of the Western Australian Museum, Supplement* 83, 173–184.
- Leung, A. E., Pinder, A., & Edward, D. E. (2013), Photographic guide and keys to the larvae of Chironomidae (Diptera) of south-west Western Australia. Part II. Orthoclaadiinae. Department of Environment and Conservation
- Leung, A. E., Pinder, A., & Edward, D. E. (2011), Photographic guide and keys to the larvae of Chironomidae (Diptera) of south-west Western Australia. Part I. Tanyptodiinae. Department of Environment and Conservation
- Jones, S., Francis, C., Leung, A. & Pinder, A. (2009) Aquatic invertebrates and waterbirds of the wetlands in the Avon region. Department of Environment and Conservation.

#### **PROFESSIONAL TRAINING AND CERTIFICATIONS**

- Oligochaete identification workshop, 2012
- Apply First Aid, 2013 Red Cross
- Cert IV Occupational Health and Safety, 2012, Scope Training
- ArcMAP training, 2007, DEC
- Operate a 4WD, 2011, Shawsett
- Defensive driving, 2007, Shawsett
- Construction industry whitecard, 2013, Aveling