

PROFESSIONAL PROFILE

Dr Volker Framenau is one of Australia's leading arachnologists and has significant research experience in the taxonomy, distribution, biology and collection of spiders and other arachnids. He was the inaugural Curator of Short-range Endemic (SRE) Invertebrates at the Western Australian Museum and remains one of the foremost experts on SREs in Western Australia, in particular mygalomorph spiders (leading expert in this group for the Pilbara region), schizomids and millipedes. He is an Adjunct Lecturer at the School of Animal Biology (University of Western Australia), Research Associate at the Western Australian Museum and is Species Advisor for spiders for ClimateWatch. He is the lead author on the most comprehensive field guide on Australian spiders, has published over 50 peer-reviewed papers on invertebrate ecology and systematics in international scientific journals and authored or co-authored more than 150 reports on terrestrial short-range endemic and troglifauna in Western Australia.



Volker has designed and managed a large number of invertebrate survey projects across the mining, infrastructure, planning and government sectors in all regions of Western Australia. He is well-known for a flexible survey approach that allows last-minute adaptations based on late changes in project design. Project management experience includes in particular large-scale mining and linear infrastructure projects.

Volker's specialties include the species-level identification of many of key terrestrial and troglifauna SRE invertebrates and putting these into a regional contexts for a sound understanding and management of project impacts; the statistically sound design of surveys and field experiments, and excellent scientific writing skills based on stringent publication principles. Volker has a strong drive for procedural improvements; he introduced a number of widely-adapted practices into invertebrate survey protocols in Western Australia, including the WA Museum morphotype coding system and well-defined categories of short-range endemism.

QUALIFICATIONS

Ph.D. (Zoology), University of Melbourne

M.Sc. (Conservation Biology), Philipps-University, Marburg (Germany)

B. Eng. (Process Engineering), Baden-Wuerttemberg Cooperative State University, Mannheim (Germany)

EMPLOYMENT HISTORY

2012 – present	Director at Phoenix Environmental Sciences
2011 – present	Principal Zoologist; Manager, Invertebrate Sciences and Taxonomic Services Unit at Phoenix Environmental Sciences
2009 – 2011	Curator – Short-Range Endemic Invertebrates at the Western Australian Museum
2002 – 2009	Postdoctoral Research Fellow at the Western Australian Museum
1988 – 1989	Process Engineer at BASF AG, Ludwigshafen (Germany)

TECHNICAL EXPERTISE

- Design and implementation of terrestrial invertebrate surveys, including long-term monitoring programs (mark & recapture of invertebrates)
- Design and implementation of Level 1 and Level 2 short-range endemic invertebrate surveys
- Design and implementation of Level 1 and Level 2 subterranean fauna surveys (stygofauna and troglofauna)
- Invertebrate taxonomy and systematics (arachnids and insects, including troglofauna)
- Invertebrate behavioural ecology
- Statistics, including multivariate statistics

SELECTED PROJECT EXPERIENCE

- Aquatic and terrestrial fauna surveys for the Beyondie Potash Project, Kalium Lakes Potash Pty Ltd, 2015–ongoing (Little Sandy Desert)
- Targeted *Idiosoma nigrum* survey for the Square Kilometre Array, AECOM Ltd, 2014–2015 (Murchison)
- Review of the effects of light pollution by the Curtis Island LNG Project on terrestrial fauna, Pendoley Environmental Pty Ltd, 2015 (Queensland)
- Troglofauna survey for the Pannawonica Tenements, Red Hill Iron, 2013–2014 (Pilbara)
- Troglofauna survey for the Wonmunna Iron Ore Project, Ascot Resources Limited, 2014 (Pilbara)
- Subterranean fauna surveys of the Rabbit and Rooster Prospects, 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)
- Review of terrestrial invertebrate monitoring program of St Ives Gold Mine, St Ives Gold Mining Company, 2013 (Goldfields)
- SRE survey for Lake Disappointment Potash Project, Reward Minerals, 2013 (Little Sandy Desert)
- SRE survey for Pannawonica Project, Red Hill Iron, 2013 (Pilbara)
- Level 2 SRE survey of East Pilbara Independent Rail Line, Aurizon Operations, 2013 (Pilbara)
- Level 2 SRE survey for the Varanus Island Fill Project, Apache Energy, 2012 (Carnarvon)
- Level 2 SRE surveys of Western Hub, and Turner Syncline and Turee, Fortescue Metals Group, 2012–13 (Pilbara)
- Level 2 SRE survey of East Pilbara Independent Rail Line, QR National, 2012 (Pilbara)
- Level 2 SRE survey for Kathleen Valley Project, Xstrata, 2012 (Goldfields)
- Targeted *Idiosoma nigrum* clearance surveys for Blue Hills Project, Sinosteel Midwest Corporation, 2011 (Midwest)
- Level 2 SRE survey for Rocklea Project, Dragon Energy, 2011 (Pilbara)
- Level 2 SRE survey for Bauxite Area Expansion Project, BHP Billiton Worsley Alumina, 2011–12 (Perth-Peel)
- Level 2 SRE survey for Wonmunna Project, Rico Resources, 2011 (Pilbara)
- Level 2 SRE survey of Roy Hill Bonney Downs rail alignment, Roy Hill Infrastructure, 2011 (Pilbara)

- Level 2 SRE survey of Fitzgerald River National Park proposed walk trail, Department of Environment and Conservation, 2010–11 (Great Southern)
- Targeted *Idiosoma nigrum* surveys and burrow mapping at Jack Hills, Crosslands Resources, 2010–11 (Midwest)
- Targeted *Idiosoma nigrum* surveys and burrow mapping at Weld Range, Sinosteel Midwest Corporation, 2010–12 (Midwest)
- SRE and targeted invertebrate surveys for Roe Highway Extension Project, South Metro Connect, 2010–12 (Perth Metropolitan Area)

SELECTED PUBLICATIONS

- Framenau, V.W. and Lehtinen, P.T. 2015. *Nukuhiva* is a troglobitic wolf spiders (Araneae: Lycosida), not a fishing spider (Pisauridae). *Zootaxa*, in press.
- Framenau, V.W. 2015. Review of the Australian wolf spider genus *Venator* (Araneae, Lycosidae). *Zootaxa*, in press.
- Framenau, V.W., Baehr, B. C. and Zborowski, P. 2014. *A Guide to the Spiders of Australia*. New Holland Publishers, London.
- Miglio, L. T., Harms, D., Framenau, V.W. and Harvey, M.S. 2014. Four new mouse spider species (Araneae, Mygalomorphae, Actinopodidae, *Missulena*) from Western Australia. *ZooKeys* 410, 121–148.
- 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.
- Harms, D. and Framenau, V.W. 2013. New species of mouse spiders (Araneae: Mygalomorphae: Actinopodidae: *Missulena*) from the Pilbara region, Western Australia. *Zootaxa* 3637, 521–540.
- Harvey, F.S.B., Framenau, V.W., Wojcieszek, J.M., Rix, M.G. and Harvey, M.S. 2012. Molecular and morphological characterisation of new species in the trapdoor spider genus *Aname* (Araneae: Mygalomorphae: Nemesiidae) from the Pilbara bioregion of Western Australia. *Zootaxa* 3383, 15–38.
- Langlands, P. R., Brennan, K. E. C., Framenau, V.W. and Main, B. Y. 2011. Predicting the post-fire responses of animal assemblages: testing a trait-based approach using spiders. *Journal of Animal Ecology* 80, 558–568.
- Harvey, M.S., Rix, M.G., Framenau, V.W., Hamilton, Z.R., Johnson, M.S., Teale, R.J., Humphreys, G., Humphreys, W.F. 2011. Protecting the innocent: studying short-range endemic taxa enhances conservation outcomes. *Invertebrate Systematics* 25, 1–10.
- Durrant, B.J., Harvey, M.S., Framenau, V.W., Ott, R. and Waldock, J.M. 2010. Patterns in the composition of ground-dwelling spider communities in the Pilbara region, Western Australia. *Records of the Western Australian Museum, Supplement Series* 78, 185–204.
- Framenau, V.W. 2010. Revision of the new Australian wolf spider genus *Kangarosa* (Araneae, Lycosidae). *Arthropod Systematics and Phylogeny* 68, 113–142.
- Main, B.Y. and Framenau, V.W. 2009. A new genus of mygalomorph spider from the Great Victoria Desert and neighbouring arid country in south-eastern Western Australia. *Records of the Western Australian Museum* 25, 277–285.

- Framenau, V.W., Moir, M. L. & Harvey, M. S. 2008. *Terrestrial invertebrates of the South Coast NRM Region of Western Australia: short-range endemics in Gondwanan relictual habitats*. Western Australian Museum, Welshpool, WA. Report prepared for South Coast NRM.
- Framenau, V.W. and Thomas, M.L. 2008. Ants (Hymenoptera, Formicidae) of Christmas Island (Indian Ocean): identification and distribution. *Records of the Western Australian Museum* 25, 45–85.
- Hosseini, R., Keller, M.A., Schmidt, O. and Framenau, V.W. 2007. Molecular identification of wolf spiders (Lycosidae) by Multiplex Polymerase Chain Reaction. *Biological Control* 40, 128-135. (January).
- Framenau, V. W. 2006. *Mainosa*, a new genus for the Australian ‘Shuttlecock Wolf Spider’ (Araneae, Lycosidae). *Journal of Arachnology* 34, 206–213.
- Framenau, V. W. 2006. Revision of the Australian wolf spider genus *Diahogna* Roewer, 1960 (Araneae, Lycosidae). *Journal of Natural History (London)* 40, 273–292.
- Murphy, N. P., Framenau, V. W., Donnellan, S. C., Harvey, M. S., Park, Y.-C. & Austin, A. D. 2006. Phylogenetic reconstruction of the wolf spiders (Araneae, Lycosidae) using sequences from 12S rRNA, 28S rRNA and NADH1 genes: implications for classification, biogeography and the evolution of web-building behaviour. *Molecular Phylogenetics and Evolution* 38: 583–602.
- Framenau, V. W. 2005. Gender specific differences in activity and home range reflect morphological dimorphism in wolf spiders (Araneae, Lycosidae). *Journal of Arachnology* 33: 334–346.
- Thomas, M. L. & Framenau, V. W. 2005. Foraging decisions of individual workers vary with colony size in the greenhead ant *Rhytidoponera metallica* (Formicidae, Ectatomminae). *Insectes Sociaux* 52: 26–30.
- Framenau, V. W. & Elgar, M. A. 2005. Cohort dependent life history traits in a wolf spider (Araneae, Lycosidae) with bimodal life cycle. *Journal of Zoology, London* 265: 179–188.
- Framenau, V. W., Manderbach, R. & Baehr, M. 2002. Riparian gravel banks of upland and lowland rivers in Victoria (South-east Australia): Arthropod community structure and life history patterns in a longitudinal gradient. *Australian Journal of Zoology* 50: 103–123.

PROFESSIONAL TRAINING AND CERTIFICATIONS

- Drive vehicles in 4WD, 2011, Shawsett
- Emergency First Response Instructor
- PADI Master Scuba Diver Trainer

AFFILIATIONS

- ClimateWatch, Earthwatch Institute, Species Advisor (spiders)
- Society of Australian Systematic Biologist (SASB), General Member, Past-President
- Vale of York River Conservation Society, Scientific Advisory Committee
- Environmental Consultants Association (WA), Associate Member
- Australasian Arachnological Society, Membership Administrator
- British Arachnological Society
- European Society of Arachnology
- International Society of Arachnology
- American Arachnological Society