

# Yoav Daniel Bar-Ness

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Hobart, Tasmania AUSTRALIA

Born April 10<sup>th</sup> 1979

<http://www.treeoctopus.net>



## Education:

- ▶ **School of Geography and Environmental Studies, University of Tasmania**, Hobart, Australia  
**Masters of Science (research) in Environmental Studies** 2002-2005  
Candidature researching crown structure and treetop invertebrates of *Eucalyptus* forests  
*More information at* <http://www.geog.utas.edu.au/yoav>  
*Project resources at* <http://scidb.evergreen.edu/databank/studycenter/ydbtasmania>

Leadership and communication skills for complex and dangerous situations  
Rigging, climbing, and working in the treetops of the world's tallest flowering plants  
Surveying, measurement and 3-d computer illustration of forest trees  
Experience with museums and insect collections  
Immersion in forest management issues of Australia  
Teaching data collection, access skills, and safety at heights  
Patience and good humor when faced with daunting tasks  
Invertebrate trapping protocols, trap design and construction  
Arthropod biodiversity research and statistics  
Multivariate statistics and literature search  
WWW design, oral, poster, and written data presentation

- ▶ **College of Forest Resources, University of Washington**, Seattle, USA  
**Bachelor of Science in Wildlife Sciences** 1997-2001  
Minor in **Conservation of Wildland Resources**  
Minor in **Quantitative Science (Statistics)**  
Minor in **Botany**  
Dean's High Scholarship list. Xi Sigma Pi Forestry Honors Society.

Live animal handling, radio tracking, field survey skills  
Zoo and wild animal behavior, sociobiological and genetic theory  
Wildlife ecology, population dynamics, monitoring, management- esp. avian and mammal  
Forest ecology, silviculture, management, disturbance ecology  
Conservation biology issues and strategies, human impact on natural populations  
Exposure to botanical gardens, zoological gardens, aquariums, and museums  
Basic and advanced statistics for wildlife populations  
Senior thesis on crow social behaviour

- ▶ **Wilderness Medical Institute, National Outdoor Leadership School** Portland, Oregon  
**Wilderness First Responder Certificate** 2006

Medical field training for remote areas  
Class held at Opal Creek Ancient Forest Center, Oregon  
Tied for first-in-class on written exam



## Experiences:



- ▶ **Pollen and Seed Paleocology Laboratory, University of Washington - Palynology Lab Technician.** Preparation of fossilized Quaternary pollen samples. Organization of publications collection and web page design for Dr. Estella Leopold. Through U. of Washington Biology, Seattle, WA, northern autumn 2005- ongoing.  
<http://protist.biology.washington.edu/eleopold>
- ▶ **Center for Conservation Biology, Northern Spotted Owl Vehicle Disturbance Experiment - Crew Leader.** Led interns in surveying and sampling of owls. Responsibilities included logistics, safety, field training, daily coordination. Extensive use of GIS, GPS, overland navigation, behavioral observation, data management. Fieldwork in extreme record-breaking rain/snow spring and record-breaking heat wave summer. Liaised with US Forest Service, US Fish & Wildlife. In the Trinity Mountains, CA. Center for Conservation Biology, Seattle, WA, 2006.  
<http://www.ohvstudy.com>
- ▶ **Cross-country travel in North America:** Diagonal transects from NW corner of Washington State to SE corner of Florida, and back again. Exposure to coast, mountain, desert, city, prairie and forests on a continental scale. Extensive natural landscape appreciation, intense metropolitan experiences, and repeated problem solving skills. Surrounding New Years 2006.
- ▶ **International Canopy Network Lab - Consultant, 3-d Tree Structural Metadata Archival** Synthesis and archival of Tasmanian canopy research data and resources. Formal computer database design. Through Evergreen State College, Olympia, WA, autumn 2005.  
<http://scidb.evergreen.edu/databank/studycenter/ydbtasmania>
- ▶ **Idaho Department of Fish and Game - Northern Goshawk Surveyor:** Landscape scale audio-playback detections of forest raptor in Northern Idaho. In conjunction with US Forest Service survey efforts, bird identification and observation, navigation through untracked forests and mountains country, exposure to management issues associated with a species of management concern, team skills in remote areas. At the Clearwater National Forest, northern summer 2005.  
[http://avianscience.dbs.umt.edu/research\\_pub/html/methMan.htm](http://avianscience.dbs.umt.edu/research_pub/html/methMan.htm)
- ▶ **University of Tasmania - Raven Nest Camera Monitoring:** Treeclimbing to set raven nest cameras. Monitoring of baby ravens for study of breeding and social habits. For U. of Tas. Zoology, Hobart, TAS, southern spring 2004.
- ▶ **University of Tasmania - Moth Biodiversity Insect Technician:** Forest insect biodiversity surveys using light-attraction traps. For U. of Tas. Geography & Environmental Studies, Hobart, TAS, southern spring 2004.
- ▶ **Cross-country travel across Australia's Southern Seaboard:** From Perth, SW corner of Western Australia, to Melbourne, SE Victoria. Treeclimbing in the karri and tingle forests, visit to thrombolite living fossils, Margaret River Caves, Flinder's Ranges and Naracoorte paleo-zoological sites. Early 2003.
- ▶ **Cross-country travel down Australia's Pacific Coast:** From Cape Tribulation, NE Queensland, down the coast to SE Victoria. Including Canopy Conference in Cairns, snorkelling on Barrier Reef, volunteer experience at Cape Tribulation Bat House Field Research Station, visit to Undara and Capricorn Caves, and treeclimbing experience in tropical Australian Daintree forests. Mid- 2002.
- ▶ **International Canopy Network Lab—Treetop Mapping Intern.** Rope techniques for accessing forest canopy at Mt. Rainier National Park and Wind River Experimental Forest. Measurements

of branch structure of conifers, study across forest age gradient. Tree physiology, climbing techniques, surveying, team skills, remote field conditions. Through Evergreen State College, Olympia, WA, northern summer 2001.

[http://canopy.evergreen.edu/research\\_dataArchives\\_1kcs.asp?Id=2](http://canopy.evergreen.edu/research_dataArchives_1kcs.asp?Id=2)

▶ **Oregon High Lakes Amphibian Survey - Volunteer Field Technician:** Salamander and newt ecology. Mark recapture study of the ecological impacts of introduced brook trout on subalpine aquatic amphibians. Handling of live amphibians. Remote field locations. Short term volunteer work. For US Forest Service, Olympia, WA, northern summer 2001.

▶ **Pacific Crest Biodiversity Project** - Educational outreach, Seattle, WA, 1999 & 2000.



## Publications & Presentations:

▶ Bar-Ness, Y. D., Kirkpatrick, J.B., & McQuillan, P.B. (2007) **Crown structure mapping of *Eucalyptus obliqua*: Quantitative differences between 100 year old and old-growth trees linked to branch competition dynamics.** (Submitted for peer review)

▶ Bar-Ness, Y.D., Whitman, M., Junker, R., McQuillan, P.B., Cracknell, M. & Barrows, A. (2007) **Sampling forest canopy arthropod biodiversity with three novel minimal-cost trap designs.** (Submitted for peer review)

▶ Bar-Ness, Y. D., Kirkpatrick, J.B., & McQuillan, P.B. (2006) **Age and distance effects on the canopy arthropod composition of old-growth and 100-year old *Eucalyptus obliqua* trees.** Forest Ecology and Management 226: 290-298  
<http://tinyurl.com/w886a>

▶ Bar-Ness, Y. (2005). **Crown structure and the canopy arthropod biodiversity of 100 year old and old-growth Tasmanian *Eucalyptus obliqua*.** MSc thesis, University of Tasmania, Hobart  
<http://scidb.evergreen.edu/databank/studycenter/ydbtasmania>

▶ Bar-Ness, Y. (2004). **Crown Structural Attributes & the Canopy Invertebrate Fauna Of 100 year-old & Old-growth Tasmanian *Eucalyptus obliqua*.** 22<sup>nd</sup> International Congress of Entomology, Brisbane, August 2004.  
<http://www.geog.utas.edu.au/yoav/res/ppt/YoavDanielBarNessICE2004.htm>

▶ Grove, S.J., Bashford, R., Bar-Ness, Y., Harrison, K., Yee, M., & Mohammed, C. (2004). **Arthropods in Tasmanian *Eucalyptus obliqua*: how unique is the canopy fauna?** 22<sup>nd</sup> International Congress of Entomology, Brisbane, August 2004.

▶ Bar-Ness, Y. (2003). **Tiny Animals & Titan Trees** Invertebrate Biodiversity and Conservation Conference, Hobart, Australia, October 2003.  
<http://www.geog.utas.edu.au/yoav/res/ppt/tinyanimalstitantrees.htm>  
<http://www.geog.utas.edu.au/yoav/res/Posterconference.pdf>

▶ Bar-Ness, Y. (2003) **Report from the Canopy Down Under.** International Canopy Network Newsletter What's Up 10 (1), Fall 2003.  
<http://www.evergreen.edu/ican/pdfs/Newsletter%20pdfs/whatup10.1.pdf>

▶ Attended 3<sup>rd</sup> International Canopy Conference, Cairns, Australia, June 2002

▶ Attended Cavemania:2<sup>nd</sup> Aus. Speleological Federation, Hobart, Australia, Jan 2005

▶ Reviewer of articles for: Forest Ecology & Management, and Ecological Monographs



## Research Support:

- ▶ **Warra LTER** (Long Term Ecological Research and Monitoring) **Research Grant**, 2003-5  
[http://www.warra.com/warra/docs/research\\_projects/docs/research\\_project\\_0202.htm](http://www.warra.com/warra/docs/research_projects/docs/research_project_0202.htm)
- ▶ **Australian Geographic Society Grant and sponsorship** for *Eucalyptus* research, 2002-5  
<http://www.australiangeographic.com.au>
- ▶ **University of Tasmania School of Geography and Environmental Studies** Research Infrastructure support, 2002-5
- ▶ **Vertical Safety (Western Australia) sponsorship** for climbing equipment, 2002  
<http://www.verticalsafety.com> (offline)
- ▶ **University of Tasmania School of Geography and Environmental Studies** Conference attendance funding: 22<sup>nd</sup> International Congress of Entomology, Brisbane, August 2004.



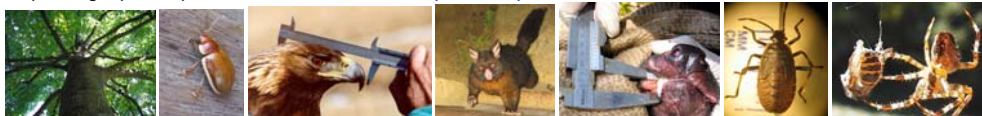
## References:

- ▶ **Dr. Peter McQuillan**, Lecturer, Geography and Env. Studies, U. of Tasmania, Australia  
[p.b.mcquillan@postoffice.utas.edu.au](mailto:p.b.mcquillan@postoffice.utas.edu.au)
- ▶ **Ms. Cindy Updegrave**, Biology, U. of Washington. Seattle, USA  
[cupdegra@u.washington.edu](mailto:cupdegra@u.washington.edu)
- ▶ **Dr. Jamie Kirkpatrick**, Head of School, Geography and Env. Studies, U. of Tasmania, Australia  
[j.kirkpatrick@postoffice.utas.edu.au](mailto:j.kirkpatrick@postoffice.utas.edu.au)
- ▶ **Dr. Estella Leopold**, Professor emeritus, Biology, U. of Washington. Seattle, USA  
[eleopold@u.washington.edu](mailto:eleopold@u.washington.edu)



## Other:

- ▶ Active walker, mountaineer, and caver. Seeks to use naturalist skills in new situations
- ▶ Member of International Canopy Network
- ▶ Member of Cascade Grotto of the National Speleological Society and the Southern Tasmanian Caverneers.
- ▶ Outgoing, cheerful, patient and enjoys working in groups. Freely admits and corrects mistakes
- ▶ Experienced in wilderness/remote areas. Familiarity with minimal-impact practices
- ▶ Aware of necessity for careful data recording; familiar with ecology statistics
- ▶ Familiar with plants and animals of USA and Australia
- ▶ Beachwood High School, Ohio, USA Honors Diploma, 1993-1997 National Merit Scholarship Finalist
- ▶ Experience teaching skills for maps, compass, tracking, altimeter, GPS, GIS, and surveying
- ▶ Ridden in two canopy research cranes: Wind River, NW USA, and Cape Tribulation, NE Australia
- ▶ Subject of article "Ground-breaking Research" in Australian Geographic #70, April 2003
- ▶ Outreach on Master's research on several Australian radio interviews
- ▶ Computer literate- please visit [www.treeoctopus.net/services.htm](http://www.treeoctopus.net/services.htm)
- ▶ Knowledge of techniques for tree, glacier, rock, cave, & industrial rope access & rescue
- ▶ Mountain and underground experience resume available on request
- ▶ Extensive experience climbing the Cascade Volcanoes of Western USA
- ▶ Strong interest in geology, meteorology, and hydrology of terrestrial ecosystems
- ▶ keen photographer- please visit [www.treeoctopus.net/pho.htm](http://www.treeoctopus.net/pho.htm)



## Selection of previous ecology experiences:

**-Spotted Owl Off-Highway Vehicle Study:** Working with the Center for Conservation Biology, I was a crew leader in a landscape scale study in the extremely rugged Shasta-Trinity and Mendocino Forests, California. We performed an experiment –a rarity for ecology work- in which we measured the stress levels of the endangered Northern Spotted Owl when exposed to noise disturbances from nearby roads. Our early sampling periods were subjected to the rainiest and snowiest winter ever recorded in Northern California, which involved 18 hour days watching Owl pairs in the snow. Our later sampling periods were in a record-breaking heatwave- 21 hour days in 115 F/ 46 C sunshine. With the help of some fantastic interns, our collected data far exceeded our expectations.

**-Northern Goshawk Surveys:** The 2005 field season in the Rocky Mountains saw the largest raptor survey project yet performed in the USA. The USFS and Idaho Fish and Game conducted a randomized and replicated survey through Idaho and Montana in each of the National Forest lands. Working alone in the forest, each technician spent the entire day navigating and orienteering through the mountains sending out goshawk calls, searching for nests, and performing vegetation surveys. I was working in a region of Northern Idaho between Missoula and Coeur d' Alene, in a variety of habitats from subalpine forests to wet old growth valleys and recent regeneration.

**-Tasmanian Devil Trapline:** Volunteering on a project monitoring the health of the Tasmanian devil's on the east coast of the island. These animals are the largest surviving marsupial carnivores, and exist only in Tasmania. They are threatened by feral animal competition, habitat change, and the recent spread of a facial tumor disease. During this project, we maintained 40 traps per day and microchip marked/recaptured every new devil.

**-Canopy arthropods of *Eucalyptus obliqua*:** Set and processed hundreds of traps in the crowns of sixteen *Eucalyptus obliqua* trees reaching 75 metres in height. Research project on the biodiversity of young and old trees and the influence of branching architecture. More at [www.geog.utas.edu.au/yoav](http://www.geog.utas.edu.au/yoav)

**-Crow behavior research:** My senior thesis at UW investigated crow behavior at an early morning congregation within the city of Seattle. I worked in close proximity to large groups of crows in an urban setting.

**-Tasmanian nest cameras:** Arboreal camera installations to study *Corvus tasmanicus*, the Tasmanian Forest Raven. To the best of our knowledge, this is the first time this technology had been used in Tasmania to study birds. After the nest was spotted, the tree was climbed to mount a small camera above the nest.

**-Oregon High Lakes Amphibian mark/recapture:** On the divide of the Oregon Cascades along the Pacific Crest Trail. We maintained underwater traps, performed regular sweep-netting through the aquatic vegetation, and ran snorkel transects to capture newts, salamanders, and frogs. Experience with handling fragile live animals.

**-Exposure to wildlife survey statistics, mark-recapture, telemetry studies:** Studies UW and UTas has given me a good foundation in the statistics and assumptions involved in wildlife monitoring. Hands-on experience with techniques such as point surveys, mark-recapture, radio tracking, and the processing of this data, were a core component of the wildlife studies program. Current conservation biology concepts such as habitat suitability appraisal and environmental impact assessment were covered as well. I am interested in animal population monitoring and management, as well as plant and insect biodiversity interactions.

**-Paleoecology:** Field trips and studies at UW offered a chance to study the past and present distribution of plants and animals throughout the United States and the world. Opportunities to dig for fossils cemented the lessons. In Tasmania, a sharp contrast between modern, fire adapted flora (30 million years) and ancient Southern Hemisphere Gondwana flora (250 million years), is apparent. Underground in Tasmanian caves, ancient spiral seashells are evidence of the calciferous origins of the limestone. Appreciation of the time scale on which organisms have evolved and become extinct has greatly enhanced my understanding of the natural world.

**-Pacific Northwest forest ecology and management:** Undergraduate education at UW included several field classes with Dr. Jerry Franklin. We traveled throughout the Northwest and studied several forest ecosystems, including the canopy crane at Wind River, on the lava plains at St. Helens, the pine and sage forests of Eastern Washington, the Olympic coastal forests, and at various government and non-government agencies. During these classes, we learned about the management and political histories of endangered species such as the Northern Spotted owl and Marbled Murrelets.

