

## EDUCATIONAL BACKGROUND

Ph.D. in biology, 1983, University of California at Santa Cruz  
M.Phil. in zoology, 1978, University of the West Indies in Jamaica.  
B.S. in zoology, 1976, Southern Illinois University at Carbondale.

## ACADEMIC/PROFESSIONAL APPOINTMENTS

Sabbatical, 2010-2011  
Chairman, Division of Natural Science & Math, Warren Wilson College 2005-2014  
Science Advisor/Program Director, Environmental Leadership Center, 1997-2004  
Sabbatical, 1993-1994  
Chairman, Biology Department, Warren Wilson College, 1986-1993, 1996  
Professor, Warren Wilson College, 1986-present (faculty not ranked)  
Visiting Assistant Professor, University of Illinois, 1985-1986.  
Visiting Lecturer, University of Illinois, 1984-1985.

## PUBLICATIONS

### REFEREED:

- Bartels, P.J. (1984). Extra-territorial movements of a perennially territorial damselfish, *Eupomacentrus dorsopunicans*. *BEHAVIOUR* 91:312-322.
- Bartels, P.J. (1985). Field observations of multiple mating in *Lasius alienus* (Hymenoptera: Formicidae). *AMERICAN MIDLAND NATURALIST* 113:190-192.
- Bartels, P.J. (1986). Sperm wars: a book review. *BIOSCIENCE* 36:687-688.
- Bartels, P.J. (1988). Reproductive caste inhibition in Argentine ants: new mechanisms of queen control. *INSECTES SOCIAUX* 35:70-81.
- Burley, N. & Bartels, P.J. (1990). Phenotypic similarities of sibling zebra finches. *ANIMAL BEHAVIOR*. 39:174-180.
- Bartels, P.J., Bruckner, A.W., Bruckner, R.J., & Williams, E.H., Jr. (1996). The cost of mutualism: cleaning symbiosis in Puerto Rican coral reef fish. *6TH SYMPOSIUM ON THE NATURAL HISTORY OF THE BAHAMAS*. 68-72.
- Bartels, P.J. (1998). Discovering the Bahamian Wilderness. *Bahamas Journal of Science*. 5(2):21-26.
- Williams, E.H., Jr., Bartels, P.J., & Bunkley-Williams, L. (1999). Predicted disappearance of coral reef cays: A direct result of marine major ecological disturbances. *Global change biology* 5:839-846.
- Bartels, P.J. & Nelson, D.R. (2006). A large-scale, multi-habitat inventory of the tardigrades in the Great Smoky Mountains National Park. *HYDROBIOLOGIA* 558:111-118.

Stultz, J. & Bartels, P.J. (2006). Predicting ciguatera poisoning in Bahamian barracuda. *Bahamas Journal of Science*. 1(1):46-51.

Bartels, P.J. and Nelson, D.R. (2007). An Evaluation of Species Richness Estimators for Tardigrades of the Great Smoky Mountains National Park, TN and NC, USA. *Proceedings of the Tenth International Symposium on Tardigrada*. *JOURNAL OF LIMNOLOGY* 66(Suppl. 1):104:110.

Nelson, D.R. and Bartels, P.J. (2007). “Smoky Bears”—Tardigrades of the Great Smoky Mountains National Park. *SOUTHEASTERN NATURALIST* 6(Special Issue 1):229-238.

Bartels, P.J., Nelson, D.R., Kaczmarek, L., & Michalczyk, L. (2007). *Doryphoribius smokiensis*, a new species of Eutardigrada (Hypsibiidae) from the Great Smoky Mountains National Park, TN, USA (North America). *ZOOTAXA* 1646:59-65.

Bartels, P.J., Nelson, D.R., Kaczmarek, L., & Michalczyk, L. (2008). Three new species and one new record of the genus *Doryphoribius* Pilato, 1969 (Tardigrada: Eutardigrada: Hypsibiidae) from the Great Smoky Mountains National Park (Tennessee, USA). *JOURNAL OF NATURAL HISTORY* 42:2595-2608.

Bartels, P.J., Nelson, D.R., Pilato, G, & Lisi, O. (2009). The genus *Macrobotus* (Tardigrada: Eutardigrada: Macrobiotidae) from the Great Smoky Mountains National Park (Tennessee and North Carolina, USA), with a description of two new species. *ZOOTAXA* 2022: 45-57.

Bartels, P.J., Nelson, D.R., & Exline, R.P. (2011). Allometry and removal of body size effects in the analysis of tardigrades. *JOURNAL OF ZOOLOGICAL SYSTEMATICS AND EVOLUTIONARY RESEARCH* 49 (1):17-25.

Bartels, P.J., Nelson, D.R., Kaczmarek, L., & Michalczyk, L. (2011). *Ramazzottius bellubellus*, a new species of Tardigrada (Eutardigrada: Hypsibiidae) from the Great Smoky Mountains National Park, NC, USA. *PROCEEDINGS OF THE BIOLOGICAL SOCIETY OF WASHINGTON* 124(1):23-27.

Bartels, P.J. & Nelson, D.R. (2012). An Online Key and Field Guide to the Tardigrades of the Great Smoky Mountains National Park (North Carolina & Tennessee, USA, North America) with Taxonomic Revisions of Two Species. *ZOOTAXA* 3249:67-68.  
[http://www.warren-wilson.edu/~pbartels/E-Guide/Read\\_First!.html](http://www.warren-wilson.edu/~pbartels/E-Guide/Read_First!.html)

Nelson, D.R. & Bartels, P.J. (2013). Species richness of soil and leaf litter tardigrades in the Great Smoky Mountains National Park (North Carolina/Tennessee, USA). *J. Limnol.* 72(s1):144-151.

Bertolani, R., Bartels, P.J., Giudetti, R., Cesari, M., and Nelson, D.R. (2014). Aquatic tardigrades in the Great Smoky Mountains National Park, North Carolina and Tennessee, U.S.A., with the description of a new species of *Thulinus* (Tardigrada, Isohypsibiidae). *Zootaxa* 3764(5):524-536.

Bartels, P.J., Nelson, D.R., Kaczmarek, L., & Michalczyk, L. (2014). The genus *Milnesium* (Tardigrada: Eutardigrada: Milnesiidae) in the Great Smoky Mountains National Park (North Carolina and Tennessee, USA), with the description of *Milnesium bohleberi* sp. nov. *Zootaxa* 3826:356-368.

Bartels, P.J., Fontoura, P. & Nelson, D.R. (2015). New records of marine tardigrades from Moorea, French Polynesia, with the description of *Styraconyx turbinarium* sp. nov. (Arthrotardigrada, Halechiniscidae). *Zootaxa* 3955:389-402.

Kaczmarek, L., Bartels, P.J., Roszkowska, M. & Nelson, D.R. (2015). The zoogeography of marine tardigrada. *Zootaxa* 4037:1-189.

Bartels, P.J., Apodaca, J.J., Mora, C., & Nelson, D.R. (2016). A global biodiversity estimate of a little known taxon: Phylum Tardigrada. *Zoological Journal of the Linnean Society*. 178:730-736.

Roszkowska, M. Bartels, P.J., Goldyn, B., Ciobanu, D.A., Fontoura, P., Michalczyk, L., Nelson, D.R., Ostrowska, M., Moreno-Talamantes, A., & Kaczmarek, L. (2016). Is the gut content of *Milnesium* (Eutardigrada) related to buccal tube size? *Zoological Journal of the Linnean Society* 178:794-803.

#### UN-REFEREED:

Bartels, P.J. (1996). Fragile reefs: handle with care. *CRUISING WORLD* (January):31-33.

Kalinowski, F.A., Huie, J.C., Bartels, P.J., & Rossell, C.R., Jr. (1997). Creating the environmental campus: lessons from Warren Wilson College. *Proceedings of the Greening of Campus II*, Ball State University.

Bartels, P.J. (2001). Have you seen this creature? *ATBI Quarterly* 2(2):1.  
[http://www.discoverlifeinamerica.org/atbi/quarterly\\_newsletter/pdfs/spring\\_2001.pdf](http://www.discoverlifeinamerica.org/atbi/quarterly_newsletter/pdfs/spring_2001.pdf)

Bartels, P.J. (2005). Little Known Water bears? *ATBI Quarterly* 6(2):4.  
[http://www.discoverlifeinamerica.org/atbi/quarterly\\_newsletter/pdfs/spring\\_2005.pdf](http://www.discoverlifeinamerica.org/atbi/quarterly_newsletter/pdfs/spring_2005.pdf)

#### FORTHCOMING:

Bartels, P.J., Mormino, C., & Nelson, D.R. (accepted ms). Aquatic tardigrades of North Carolina with a new North American record of a lotic tardigrade, *Dactylobiotus haplonyx* Maucci, 1980 (Eutardigrada: Macrobiotidae). *Journal of the North Carolina Academy of Science*.

Fontoura, P., Bartels, P.J., Hansen, J.G., & Kristensen, R.M. (accepted ms). An illustrated dichotomous key to the genera of the marine heterotardigrades (Tardigrada). *Zootaxa*.

Nelson, D.R., Bartels, P.J., & Guil, N. (submitted ms). Ch 7. Tardigrade ecology. In: *The biology of tardigades*, ed. Ralph Schill.

Bartels, P.J., Bradbury, L.J., & Nelson, D.R. (submitted ms). Marine tardigrades from South Carolina, USA. *Zootaxa*.

Bartels, P.J., Fontoura, P., & Nelson, D.R. (in prep). New records of marine tardigrades from the Bahamas, with the description of three new species.

Bartels, P.J., Fontoura, P., & Nelson, D.R. (in prep). A comparison of intertidal and subtidal marine tardigrades from the British Virgin Islands.

Kaczmarek, L., Gawlak, M., Bartels, P.J., Roszkowska, M., & Nelson, D.R. (in prep). A revision of the genus *Paramacrobotus* Guidetti et al., 2009 with the description of new species, re-descriptions, and a key.

Santos, E., Rubal, M., Veiga, P, Bartels, P.J., da Rocha, C.M.C., & Fontoura, P. (in prep). On the distribution of *Batillipes tubernatis* Pollock 1971 (Arthrotardigrada: Batillipedidae) in the Atlantic Basin.

#### COURSES TAUGHT:

##### UNDERGRADUATE:

Vertebrate Behavior, Sociobiology, General Biology, Vertebrate Zoology, Invertebrate Zoology, Entomology, Ornithology, Animal Behavior, Evolution, Human Biology (Non-majors), Field Natural History (Non-majors), Introduction to Environmental Studies, Coral Reef Conservation (field course), Fragile Oceans (First Year Seminar), Marine Biology Seminar

#### RECENT PRESENTATIONS & WORKSHOPS

"GLOBE program". Developed and ran workshops for high school teachers training for GLOBE program in Asheville, NC. 1999

"Putting a Thaw on Global Warming". Invited presentation. Appalachian State University, Univ. of Tennessee, UNC Chapel Hill, UNCA, 2001

"Tardigrade Inventory Status". ATBI annual conference, Gatlinburg, TN 2002-2009

"A largescale multi-habitat inventory of Tardigrades in the Great Smoky Mountain National Park"

9<sup>th</sup> Int. Symp. on Tardigrada, Pensacola, FL 2004.

"Estimating Biodiversity in Cryptic Microorganisms". Western Carolina University, 2006

“A computer-based multichotomous key to the tardigrades of the Great Smoky Mountains National Park”. 10<sup>th</sup> Int. Symp. on Tardigrada, Catania, Sicily, 2006.

“An evaluation of species richness estimators for tardigrades.” 10<sup>th</sup> Int. Symp. on Tardigrada, Catania, Sicily, 2006.

“An ecological analysis of soil tardigrades in the Great Smoky Mountains National Park.” 10<sup>th</sup> Int. Symp. on Tardigrada, Catania, Sicily, 2006.

“Smoky Bears: tardigrades of the Great Smoky Mountains National Park.” with Diane Nelson, 2008 ASB Meeting.

“Tardigrade named after Mr. Robert Martin of Martin Microscopes.” with Diane Nelson, 2009 ASB meeting (poster presentation).

“Biodiveristy of microscopic organisms in the Great Smoky Mountains National Park.” Teacher workshops at Tremont Institute, GSMNP, 2004-2009.

“Allometry and the Removal of Body Size Effects in the Morphometric Analysis of Tardigrades.” 2009 11<sup>th</sup> International Symposium on Tardigrades, Tübingen, Germany.

“The All Taxa Biodiveristy Inventory and the Phylum Tardigrada”. 2010. Winthrop University, invited lecture.

“Tardigrades: the Final Chapter”, invited speaker ATBI annual conference, Gatlinburg, TN 2010a

“Biodiveristy of microscopic organisms in the Great Smoky Mountains National Park.” Workshop at Annual ATBI meeting, Gatlinburg, TN 2010

“The Genus *Milnesium* in the Great Smoky Mountains National Park and the Rise of Endemism” Annual ATBI meeting, Gatlinburg, TN 2012

“2012 Update on the Large-Scale Multihabitat Inventory of Tardigrades in the Great Smoky Mountains National Park”. With Diane Nelson. 12<sup>th</sup> International Symposium on Tardigrades, Porto, Portugal. 2012

“The distribution and diversity of soil tardigrades in the Great Smoky Mountains National Park using MaxEnt Modelling.” 12<sup>th</sup> International Symposium on Tardigrades, Porto, Portugal 2012.

“The Magic in Water: Invisible Multitudes, Infinite Ignorance.” Keynote address NC Science Teachers Association annual meeting. Raleigh, NC 2012.

“Charismatic Mircofauna: Big Questions about Little Tardigrades”. Magnarella Family Faculty Scholarship Award Presentation. WWC. 2013

“How many tardigrades are there on land and in the sea?”. 13<sup>th</sup> International Symposium on Tardigrades, Modena, Italy, 2015. (oral presentation plus co-author on three posters)

“The Big Tardigrade Party”. Invited Speaker: Asheville Science Tavern, WCQS, Asheville, NC, 5-Mar-16

“Meiofauna and Water Bears”. Workshop for Artspace Charter School’s after school science club. Feb 2016

“Meiofauna and Water Bears”. Workshop for high school interns in inner city program with Asheville Greenworks, WWC, Asheville, NC. Jul 2016

“Tardigrade Biodiversity”. Workshop and invited presentation for Bioblitz at Reinhardt University, Waleska, GA. April 2016.

#### AWARDS & GRANTS

1972-1976, Zoology Honor Society, President's Scholar, and graduated with  
at Southern Illinois University.

1979-1981, NIH Biomedical Support Grants at the University of Cal. at Santa Cruz.

1989, Weisenblatt grant from Warren Wilson College, Southern Regional Educational Board  
research grant, Burroughs-Wellcome research grant .

1993, Burroughs-Wellcome Research Grant

1994, Burroughs-Wellcome Research Grant

1998, Eisenhower Grant for GLOBE franchise

1999, Burroughs-Wellcome Grant for Environmental Science Summer Camp

2003, Community Foundation Grant of WNC for “Mapping Change in Buncombe County”

2004, USFW grant for GIS index of development impacts on water quality of WNC

2001-2008, Discover Life in America Grants for Inventory of Tardigrades in Great Smoky  
Mountain Nat. Park

2007, NC Biotechnology Center Grant to develop photomicroscopy center at WWC

2007, Discover Life in America, Outstanding Scientist of the Year for Biodiversity Education

2009, NC Biotechnology Center Grant to host NC Academy of Science Meetings at WWC

2009, Co-author Cargill Foundation Grant Proposal for Environmental Studies Department

2010, Research Fellowship from Appalachian College Association

2013, Magnarella Family Faculty Scholarship Award

2015, Windgate Grant allocation from Art Department for collaborative effort to upgrade the  
Microscopy Lab with a drawing tablet

2016, Pugh Grant for upgrading microscopy facility

2016, Awarded sabbatical for 2017-18

2016, Research Fellowship from Appalachian College Association for 2017-2018 sabbatical

2016, Fulbright Specialist

#### Professional Affiliations

Sigma Xi, currently vice president of University of North Carolina, Asheville Chapter.