

Curriculum Vitae – Wiebke J. Boeing

Wiebke J. Boeing
Professor, Aquatic Ecology
Department of Fish, Wildlife and Conservation Ecology
Agricultural, Consumer and Environmental Sciences
New Mexico State University

Educational Background:

2002: Ph.D., Aquatic Ecology, Louisiana State University
1996: M.Sc. (Diplom), Hydrobiology, Technische Universität Dresden, Germany
1993: B.Sc. (Vordiplom), Biology, Universität Potsdam, Germany

Previous Professional Experience:

8/2015-present Full Professor, New Mexico State University (NMSU)
8/2010 – 8/2015 Associate Professor, NMSU
8/2004 – 8/2010 Assistant Professor, NMSU
5/2004 – 8/2004 Post-doctoral Researcher, University of Illinois
9/2002 – 4/2004 Post-doctoral Researcher, National Oceanic and Atmospheric Administration (NOAA) and University of Washington
8/1997 – 8/2002 Teaching Assistant, Louisiana State University
1/1995 – 12/1996 Research Assistant, Environmental Analytical Institute, Germany
8/1994 – 12/1996 Research Assistant, Technische Universität Dresden, Germany

Peer-reviewed journal articles and book chapters

* - graduate student; ** - undergraduate student

Lammers, P.J., M. Huesemann, **W. Boeing**, D.B. Anderson, R.G. Arnold, X. Bai, K. Balachandran, M. Bohle, Y. Brhanavan, L. Brown, J. Brown, J.K. Brown, S. Chisholm, C.M. Downes, S. Fulbright, Y. Ge, J.E. Holladay, A. Khopkar, A. Koushik, P. Laur, B.L. Marrone, J.B. Mott, N. Nirmalakhandan, K.L. Ogden, R.L. Parsons, J. Polle, R.D. Ryan, T. Samocha, M. Seger, T. Selvaratnam, R. Sui, A. Thomasson, A. Unc, W. Van Voorhies, P. Waller, Y. Yao, J. Olivares. 2017. Review of the cultivation program within the National Alliance for Advanced Biofuels and Bioproducts. *Algal Research* 22: 166-186.

Bartley, M.L.*, **W.J. Boeing**, D. Daniels, B.N. Dungan and T. Schaub. 2016. Optimization of environmental parameters for *Nannochloropsis salina* growth and lipid content using the response surface method and invading organisms. *Journal of Applied Phycology* 28: 15-24.

Boeing, W.J. 2016. Antipredator Defenses: Defensive Avoidance. Reference Module in the Life Sciences. Elsevier

Smith, J.L.*, S.G. Platt and **W.J. Boeing**. 2015. *Kinosternon hirtipes* (rough-footed mud turtle) maximum size and habitat. *Herpetological Review* 46: 82-83.

Campos, H.***, **W.J. Boeing**, B.N. Dungan and T. Schaub. 2014. Cultivating the marine

- microalga *Nannochloropsis salina* under various nitrogen sources: Effect on biomass yields, lipid content and composition, and invasive organisms. *Biomass & Bioenergy* 66: 301-307.
- Harings, N.M.* and **W.J. Boeing**. 2014. Desert anuran occurrence and detection in artificial breeding habitats. *Herpetologica* 70: 123-134.
- Bartley, M.L.*, **W.J. Boeing**, F.O. Holguin and T. Schaub. 2014. Effect of pH on growth and lipid accumulation of the biofuel microalgae *Nannochloropsis salina* and invading organisms. *Journal of Applied Phycology* 26: 1431-1437.
- Boeing, W.J.**, K.L. Griffis-Kyle and J.M. Jungels*. 2014. Anuran habitat associations in the northern Chihuahuan Desert. *Journal of Herpetology* 48: 103-110.
- Xu, Y. and **W.J. Boeing**. 2014. Modeling maximum lipid productivity of microalgae: Review and next step. *Renewable and Sustainable Energy Reviews* 32: 29-39. **Special recognition with Renewable Energy Global Innovations**
- Xu, Y. and **W.J. Boeing**. 2013. Mapping biofuel fields: A bibliometric evaluation of research output. *Renewable and Sustainable Energy Reviews* 28: 82-91.
- Macanowicz, N.*, **W.J. Boeing** and W.R. Gould. 2013. Evaluation of methods to assess benthic biodiversity in desert sinkholes. *Freshwater Science* 32: 1101-1110.
- Boeing, W.J.** 2013. Aquaculture: an Ecologist's Perspective. *Journal of Fisheries & Livestock Production* 1: e105.
- Bartley, M.L.*, **W.J. Boeing**, A.A. Corcoran, F.O. Holguin and T. Schaub. 2013. Effects of salinity on growth and lipid accumulation of biofuel microalga *Nannochloropsis salina* and invading organisms. *Biomass & Bioenergy* 54: 83-88. **Special recognition with Renewable Energy Global Innovations**
- Corcoran, A.A. and **W.J. Boeing**. 2012. Biodiversity increases the productivity and stability of phytoplankton communities. *PloS ONE*: e49397.
- Boeing, W.J.** and C.W. Ramcharan. 2010. Inducible defenses are a stabilizing factor for predator and prey populations: a field experiment. *Freshwater Biology* 55: 2332-2338.
- Jungels, J.M.*, K.L. Griffis-Kyle and **W.J. Boeing**. 2010. Low genetic differentiation among populations of the Great Plains Toad (*Bufo cognatus*) in Southern New Mexico. *Copeia* 2010: 388-396.
- Boeing, W.J.**, B. Wissel and C.W. Ramcharan. 2010. Can costs and benefits of *Daphnia* defense against fish be measured in a field experiment? *Fundamental and Applied Limnology* 176: 1-10.
- Boeing, W.J.** 2010. Sample portfolios across disciplines: Fish, Wildlife, and Conservation Ecology – Wiebke J. Boeing. *In*: Seldin, P., J.E. Miller and C.A. Seldin. The teaching portfolio: a practical guide to improved performance and promotion / tenure decisions. 4th edition. Josey-Bass, A Wiley Imprint.
- Boeing, W.J.** 2010. Antipredator Defenses: Defensive Avoidance. *In*: Breed M.D. and J. Moore (eds). *Encyclopedia of Animal Behavior*, 476-480 Oxford: Academic Press.
- Hylander, S.*, **W.J. Boeing**, W. Granéli, J. Karlsson, J. von Einem, K. Gutseit and L.-A. Hansson. 2009. Complementary UV protective compounds in zooplankton. *Limnology and Oceanography* 54: 1883-1893.
- Leech, D.M., **W.J. Boeing**, S. Cooke*, C.E. Williamson and L. Torres**. 2009. UV-enhanced fish predation and the differential migration of zooplankton to UV radiation and fish. *Limnology and Oceanography* 54: 1152-1161.
- Cooke, S.L.* , C.E. Williamson, D.M. Leech, **W.J. Boeing** and L. Torres**. 2008. Effects of temperature and ultraviolet radiation on diel vertical migration of freshwater zooplankton.

- Canadian Journal of Fisheries and Aquatic Sciences 65: 1144-1152.
- Boeing, W.J.** and J.T. Duffy-Anderson. 2008. Ichthyoplankton dynamics and biodiversity in the Gulf of Alaska: responses to environmental change. *Ecological Indicators* 8: 292-302.
- Cáceres C.E., A. Christoff** and **W.J. Boeing**. 2007. Variation in ephippial buoyancy in *Daphnia pulex*. *Freshwater Biology* 52: 313-318.
- Boeing, W.J.**, M.H. Martin and J.T. Duffy-Anderson. 2007. Groundfish. *In*: Spies, R.B. (ed) Long-term ecological change in the northern Gulf of Alaska. Elsevier, pp 200-311.
- Boeing, W.J.**, C.W. Ramcharan and H.P. Riessen 2006. Clonal variation in depth distribution of *Daphnia pulex* in response to predator kairomones. *Archiv für Hydrobiologie* 166: 241-260.
- Boeing, W.J.**, C.W. Ramcharan and H.P. Riessen. 2006. Multiple predator defence strategies in *Daphnia pulex* and their relation to native habitat. *Journal of Plankton Research* 28: 571-584.
- Boeing, W.J.**, B. Wissel and C.W. Ramcharan 2005. Costs and benefits of *Daphnia* defense against *Chaoborus* in nature. *Canadian Journal of Fisheries and Aquatic Sciences* 62: 1286-1294.
- Boeing, W.J.**, D.M. Leech, C.E. Williamson, S. Cooke* and L. Torres**. 2004. Damaging UV radiation and invertebrate predation: Conflicting selective pressures for zooplankton vertical distribution in the water column of low DOC lakes. *Oecologia* 138: 603-612.
- Wissel, B., **W.J. Boeing** and C.W. Ramcharan. 2003. Effects of water color on predation regimes and zooplankton assemblages in freshwater lakes. *Limnology and Oceanography* 48:1965-1976.
- Benndorf J., **W. Böing**, J. Koop and I. Neubauer. 2002. Top-down control of phytoplankton: the role of time scale, lake depth, and trophic state. *Freshwater Biology* 47: 2282-2295.
- Benndorf J., B. Wissel, A.F. Sell, U. Hornig, P. Ritter and **W. Böing**. 2000. Food web manipulation by extreme enhancement of piscivory: an invertebrate predator compensates for the effects of planktivorous fish on a plankton community. *Limnologica* 30: 235-245. (#7 most often cited for that journal)
- Böing, W.J.**, A. Wagner, H. Voigt, T. Deppe and J. Benndorf. 1998. Phytoplankton responses to grazing by *Daphnia galeata* in the biomanipulated Bautzen reservoir. *Hydrobiologia* 389: 101-114.
- Kamjunke, N., **W. Böing** and H. Voigt. 1997. Bacterial and primary production under hypertrophic conditions. *Aquatic Microbial Ecology* 13: 29-35.
- Böing, W.J.** 1997. Die Reaktion des Phytoplanktons auf den Frassdruck von *Daphnia pulex* in Enclosure Experimenten. DGL-Tagungsband: 544-549.

Sources of Funding

* - graduate student; ** - undergraduate student

2015: Habits and habitat of *Kinosternon hirtipes*. Texas Park & Wildlife Department, Conservation License Plate (PI: with J. Smith*) (\$30,000)

2013: Realization of Algae Potential (REAP). Department of Energy; \$5 million (co-PI with 18 others; 6 from NMSU) (\$130,000 to my lab)

2013: Energize New Mexico – Bioalgal Energy Development. National Science Foundation EPSCoR; \$3 million to NMSU (co-PI with 9 others from NMSU)

2012: Testing of a new shrimp diet (cottonseed meal and algae) to replace fish products. Cotton, Inc. (PI) (\$22,000)

2012: Effects of climate change on aquatic communities in the arid southwest. USDA Hatch (PI) (\$35,000).

2012: Life history requirements and suitable habitat for endangered invertebrates of Bitter Lake National Wildlife Refuge. NM Game & Fish, Share with Wildlife (PI: with N. Macanowicz*) (\$9,000)

2012: Relating benthic abundance and diversity to environmental factors in desert sinkholes. T&E, Inc. Grant (co-PI: with N. Macanowicz*) (\$2,500)

2012: Habits and habitat of the Chihuahuan Desert mud turtle, *Kinosternon hirtipes*. T&E, Inc. Grant (co-PI: with J. Smith*) (\$2,500)

2010: Environmental Factors Determining Lipid Content in *Nannochloropsis* and Limiting Undesired Organisms. Department of Energy (National Alliance for Advanced Biofuels and Bio-products, \$49 million, ~100 co-Pis) (PI) (\$450,000 to my lab) – **Team Leader**

2010: The Influence of Environmental Variable on Southwestern Toads. T&E, Inc. Grant (co-PI: with N. Harings*) (\$2,454)

2010: Examination of Channel Catfish (*Ictalurus punctatus*) Demographics in Response to Long-Term Removal Efforts in the San Juan River, NM, UT. T&E, Inc. Grant (co-PI: with J. Morel*) (\$2,500)

2009: La Mancha Wetland Project. (Contract – Southwest Environmental Center) (\$20,000)

2009: Gila River Planning Committee – New Mexico Interstate Stream Commission. (PI) (\$8,533)

2009: Influence of the Environmental Factors on the Toads *Spea Multiplicata* and *Gastrophyrne Olivacea* – T&E, Inc. (co-PI; with N. Harings*) (\$2,380)

2009: How do fish use UV radiation to hunt? NMSU NSF Undergraduate Research Initiative Grant (co-PI; with S. Carver**) (\$2,500)

2008: Environmental Factors Determining Lipid Content in *Nanochloropsis* and Limiting Undesired Organisms – NMSU Internal Research Grant (PI; with P. Lammers & W. Van Voorhies) (\$44,068)

2008: Student experiential learning in the Natural Resource science through summer internships and professional mentoring – a joint proposal. USDA Higher Education Challenge Grant (PI; with 10 co-Pis) (\$490,000)

2008: NMSU Graduate School (PI; with N. Harings*) (\$105,100)

2008: NMSU Advance of Minority Participation, Bridge to Doctorate (co-PI; with J. Morel*) (\$80,000)

2008: NMSU Minority Access to Research Careers Program (co-PI; with M. Silva**) (\$8,500)

2007: NM Energy Innovation Fund (co-PI; with P. Lammers & W. Van Voorhies) (\$150,000)

2007: The Impacts of Water Loss due to Irrigation on Aquatic Communities in Desert Sinkholes. USDA National Research Initiative (PI) (\$100,000)

2007: Managing Native Fish Species and Invertebrates in Desert Sinkholes. NM Game & Fish, Share with Wildlife (PI; with K. Swaim*) (\$22,000)

2007: Relating Native Fish Abundance and Condition to Environmental Factors in Sinkholes in New Mexico. WRRRI Grant (co-PI: with K. Swaim*) (\$5,000)

2007 : Relating Native Fish Abundance and Condition to Environmental Factors in Sinkholes in New Mexico. T&E, Inc. Grant (co-PI ; with V. Greif**) (\$2,500)

- 2007 : Does UV light facilitate fish predation ? NMSU NSF ADVANCE (co-PI ; with V. Greif**) (\$2,000)
- 2006 : Evaluation of global ocean nutrient profiles – SATOP/NASA Grant (PI) (\$4,000)
- 2006 : Chemical communication between male and female *Daphnia*. – NMSU NSF ADVANCE (co-PI ; with V. Zamora**) (\$2,000)
- 2006 : Habitat Barriers to dispersal and gene flow in the tree frog (*Hyla wrightorum*). T & E, Inc. Grant (co-PI ; with J. Jungels*) (\$1,995)
- 2005: NMSU Graduate School (PI; with K. Swaim*) (\$36,000)
- 2005: Temperature effects on larval development rate and survival of the endangered Rio Grande Silvery Minnow. T & E, Inc. Grant (PI) (\$2,500)

Paper and Poster Presentations

* - graduate student; ** - undergraduate student

- Boeing, W.J.** 2017. From Bacteria to Fish – What Spins the Food Web in Desert Sinkholes? Ningbo University, China. (**invited speaker**)
- F.O. Holguin, **W.J. Boeing**, C. Brewer, N. Nirmalakhandan, P. Lammers, T. Schaub, W. Van Voorhies. 2016. The green marathon: algae cultivation, crop protection, co-products and conversion at NMSU. 5th Pan-American Congress on Plants and BioEnergy, Santa Fe, NM, USA.
- Oyebamiji, O.* , **W.J. Boeing**, F.O. Holguin, G. Oyetibo, O. Amund, O. Ilori. 2016. Heavy metals bioremoval and biostabilization of wastewater from Nigeria traditional textile cottage industry using green microalgae. Society for Applied Microbiology, Edinburgh, Scotland (poster).
- Oyebamiji, O.* , **W.J. Boeing**, F.O. Holguin, P. Cooke, O. Amund, O. Ilori. 2016. Spectral imaging: Tools for detection, distribution and correlation of secondary pigment and pollutants in microalgae. Society for Applied Microbiology, Edinburgh, Scotland (poster).
- Canton, M.C.* , F.O. Holguin, **W.J. Boeing**. 2016. Allelopathic organic alkaloid Gramine: Efficacy as an algae inhibitor and degradation. Association for the Sciences of Limnology and Oceanography, Santa Fe, NM, USA.
- Boeing, W.J.**, F.O. Holguin, R. Niu, M. Seger, G. Chavez**, P.J. Lammers. 2016. Direct competitive contact needed for production of allelopathic chemical. Association for the Sciences of Limnology and Oceanography, Santa Fe, NM, USA.
- Smith, J.* and **W.J. Boeing**. 2015. Habits and habitat of the rough-footed mud turtle, *Kinosternon hirtipes*. Texas Herpetological Society Symposium, San Marcos, TX, USA.
- Oyebamiji, O.O.* , **W.J. Boeing**, O. Holguin, O.O. Amund and M.O. Ilori. 2015. Heavy metal removal ability of two microalga species. 5th International Conference on Algal Biomass, Biofuels & Bioproducts, San Diego, CA, USA (poster).
- Oyebamiji, O.O.* , **W.J. Boeing**, O. Holguin, O.O. Amund and O. Ilori. 2015. Microalgae growth in untreated textile wastewater. 5th International Conference on Algal Biomass, Biofuels & Bioproducts, San Diego, CA, USA (poster).
- Holguin, F.O., R. Nui, M. Seger, **W.J. Boeing**, G.J. Chavez, B. Dungan, N.A. Csakan, J. Jarvis, T. Schaub, and P.J. Lammers. 2015. Microalgal crop protection by allelopathic control. 5th International Conference on Algal Biomass, Biofuels & Bioproducts, Sand Diego, CA, USA.

- Campos, H.** , **W.J. Boeing**, B. Dungan and T. Schaub. 2015. Nitrogen media affects the productivity of *Nannochloropsis salina* cultures: algal biovolume, lipid signatures, and densities of invasive organisms. AZ/NM Joint Meeting of the Wildlife Society and American Fisheries Society, Las Cruces, NM, USA.
- Brusuelas, J.** , N. Harings* and **W.J. Boeing**. 2015. Response of spotted salamander larvae to salinity and temperature. AZ/NM Joint Meeting of the Wildlife Society and American Fisheries Society, Las Cruces, NM, USA.
- Boeing, WJ** and N. Macanowicz*. 2015. Habitat diversity, water quality, and biotic factors drive benthic macroinvertebrate communities in desert sinkholes. AZ/NM Joint Meeting of the Wildlife Society and American Fisheries Society, Las Cruces, NM, USA.
- Lammers, P.J., M. Seger, G. Chavez**, N. Csakan, R. Niu, **W. Boeing**, O. Holguin and T. Schaub. 2014. Quality control systems reveal the *Yin* and *Yang* of outdoor algae cultivation. International Conference on Algal Biomass, Biofuels & Bioproducts, Santa Fe, NM, USA.
- Bennett, J.** , N. Harings* and **W.J. Boeing**. 2013. Response of spotted salamander (*Ambystoma maculatum*) to salinity and temperature. Joint Meeting of Ichthyologists and Herpetologists, Albuquerque, NM, USA.
- Harings, N.* and **W.J. Boeing**. 2013. Desert anuran occurrence and detection in artificial breeding habitat. Joint Meeting of Ichthyologists and Herpetologists, Albuquerque, NM, USA.
- Macanowicz, N.* and **W.J. Boeing**. 2013. Unique habitats for unique communities: what factors drive benthic macroinvertebrate communities in desert sinkholes. Association for the Sciences of Limnology and Oceanography, New Orleans, LA, USA.
- Xu, Y.Y. and **W.J. Boeing**. 2013. Modelling maximum lipid productivity of microalgae: review and next step. Association for the Sciences of Limnology and Oceanography, New Orleans, LA, USA.
- Boeing, W.J.**, M. Bartley*, P. Lammers and W. van Voorhies. 2013. Ecological dynamics and invasion rates of algae production systems under varying environmental conditions. Association for the Sciences of Limnology and Oceanography, New Orleans, LA, USA.
- Boeing, W.J.**, A.A. Corcoran and M.L. Bartley*. 2013. Biodiversity and environmental conditions that increase productivity and stability of *Nannochloropsis salina* and limit invading organisms. National Alliance for Advanced Biofuels and Bioproducts (NAABB) symposium, Tempe, AZ, USA.
- Lammers, P.J., W. Van Voorhies, **W. Boeing** and T. Dale. 2012. Repeated nutrient additions enhance growth rate and reduce invader population during outdoor photobioreactor cultivation of *Nannochloropsis salina*. Conference on Algal Biomass, Biofuels and Bioproducts, San Diego, CA, USA.
- Macias, D.** , N. Harings* and **W.J. Boeing**. 2012. The effects of salinity on hatching and larval growth rates in *Spea multiplicata* and *S. bombifrons*. Annual Biomedical Research Conference for Minority Students. San Jose, CA, USA.
- Arviso, E.** , Z. Brecheisen** and **W.J. Boeing**. 2012. Resistance and resilience of algae poly-versus monocultures in response to salinity stress. SACNAS National Conference, Seattle, WA, USA.
- Bartley, M.L.* and **W.J. Boeing**. 2012. Predicting optimum growth and lipid accumulation of the microalgae *Nannochloropsis salina* and minimizing invading organisms with a response surface model. Ecological Society of America, Portland, OR, USA.

- Macanowicz, N.H.* and **W.J. Boeing**. 2012. Macroinvertebrate populations in desert sinkholes: Assessment of abiotic and biotic factors on assemblage and trapping methods. Society for Freshwater Science, Louisville, KY, USA.
- Boeing, W.J.**, J. Jungels* and K.L. Griffis-Kyle. 2012. Chihuahuan desert toad association with habitat. AZ/NM Joint Meeting of the Wildlife Society and American Fisheries Society, Phoenix, AZ, USA.
- Macanowicz, N.* and **W.J. Boeing**. 2012. Relationships of biotic and abiotic factors with benthic organisms in a desert wetland. AZ/NM Joint Meeting of the Wildlife Society and American Fisheries Society, Phoenix, AZ, USA.
- Campos, H.** and **W.J. Boeing**. 2012. Media assessment for *Nannochloropsis salina* algae cultures. AZ/NM Joint Meeting of the Wildlife Society and American Fisheries Society, Phoenix, AZ, USA (poster – **awarded best student poster**).
- Chavez, L.** and **W.J. Boeing**. 2012. Invader variability in raceway ponds for production of marine algae *Nannochloropsis salina*. AZ/NM Joint Meeting of the Wildlife Society and American Fisheries Society, Phoenix, AZ, USA (poster).
- Macias, D.**, N. Harings* and **W.J. Boeing**. 2012. The effects of salinity on larval growth rates in Southwestern toads *Spea multiplicata* and *S. bombifrons*. AZ/NM Joint Meeting of the Wildlife Society and American Fisheries Society, Phoenix, AZ, USA (poster).
- Pardee, R.**, H. Chaparro**, Z. Brecheisen**, L. Chavez**, M. Bartley* and **W.J. Boeing**. 2012. Manipulating pH and its effects on growth and lipid accumulation in marine microalgae *Nannochloropsis salina* and invaders. AZ/NM Joint Meeting of the Wildlife Society and American Fisheries Society, Phoenix, AZ, USA (poster).
- Villalobos, J.**, N. Macanowicz* and **W.J. Boeing**. 2012. Influence of temperature on growth of *Nannochloropsis salina* in algae production ponds and invasion of undesired organism. AZ/NM Joint Meeting of the Wildlife Society and American Fisheries Society, Phoenix, AZ, USA (poster).
- Harings, N.* and **W.J. Boeing**. 2011. Development and survival response of *Spea multiplicata* to pH and UV-radiation. NM The Wildlife Society Meeting, Albuquerque, NM, USA.
- Corcoran, A. and **W.J. Boeing**. 2011. Biodiversity increases productivity and stability of algal communities subject to predation by the rotifer *Brachionus plicatilis*. Ecological Society of America, Austin, TX, USA.
- Boeing, W.J.**, J.A. Mapula** and D.E. Cowley. 2011. Temperature and salinity influence egg hatching and larval survival of Rio Grande silvery minnow. Sustainability on the Border: Water, Climate, and Social Change in a Fragile Landscape Conference, El Paso, TX, USA.
- Boeing, W.J.**, M.J. Desmond, R. Valez, M.K. Carroll, V. Lombrana, A. Sells, J. Smith, R. Wiedenmann and J.P. Zebrowski. 2010. Student experiential learning in the natural resources. North American Colleges and Teachers of Agriculture Conference, State College, PA, USA (poster).
- Boeing, W.J.** and K.M. Swaim*. 2010. Influences of biotic versus abiotic variable on various trophic levels in an aquatic desert ecosystem. Joint Meeting of American Society of Limnology and Oceanography and North American Benthological Society, Santa Fe, NM, USA.
- Harings, N.* and **W.J. Boeing**. 2010. The influence of environmental variables on Southwestern toads. AZ/NM Joint Meeting of the Wildlife Society and American Fisheries Society, Flagstaff, AZ, USA.

- Boeing, W.J.**, J.M. Jungels* and K.L. Griffis-Kyle. 2010. Chihuahuan desert toad habitat association and genetic differentiation of the Great Plains Toad (*Bufo cognatus*). Chihuahuan Desert Conference, El Paso, TX, USA.
- Bartley, M.L.*, A.A. Corcoran and **W.J. Boeing**. 2010. Effects of salinity on growth of marine microalgae *Nannochloropsis*. WRRRI Symposium, Socorro, NM, USA.
- Mapula, J.A.** , **W.J. Boeing** and D.E. Cowley. 2008. Temperature and salinity influence egg hatching rate and survival of Rio Grande silvery minnow. AZ/NM Joint Meeting of The Wildlife Society and American Fisheries Society, Prescott, AZ, USA (poster – awarded best student poster).
- Boeing, W.J.** and M.J. Desmond. 2008. Combining scholarship and teaching with recruitment – how to kill two birds with one stone. Western Region Teaching Symposium, Las Cruces, NM, USA (poster).
- Swaim, K.M.* and **W.J. Boeing**. 2007. Relating fish abundance and condition to environmental factors in desert sinkholes. North American Benthological Society, Columbia, SC, USA.
- Boeing, W.J.** and K.M. Swaim*. 2007. How environmental variables influence biodiversity in 40 sinkholes in New Mexico. American Society of Limnology and Oceanography, Santa Fe, NM, USA.
- Swaim, K.* and **W.J. Boeing**. 2007. Relating fish abundance and condition to environmental factors in desert sinkholes. WRRRI Symposium, Las Cruces, NM, USA.
- Boeing, W.J.** 2007. From abiotic factors to fish: What spins the complexity of a food web? Lund University, Lund, Sweden. (**invited seminar**)
- Boeing, W.J.** 2007. Food web complexity and diversity – What actually matters? University of Texas El Paso, El Paso, TX, USA. (**invited seminar**)
- Swaim, K.M.* and **W.J. Boeing**. 2006. Favorable environmental conditions for management of native fishes in desert sinkholes. International Center for Arid and Semiarid Land Studies, Lubbock, TX, USA.
- Boeing, W.J.** and K.M. Swaim*. 2006. Food web complexity and zooplankton diversity in 40 sinkholes in New Mexico. Deutsch Gesellschaft für Limnologie / Societas Internationalis Limnologicae, Dresden, Germany.
- Boeing, W.J.** 2006. Increasing fish production. National Ocean Industries Association, Washington, DC, USA.
- Kithil, P. and **W.J. Boeing**. 2006. Ocean carbon sequestration concept using wave-driven deep ocean pump system. Ocean Carbon Biogeochemistry Workshop, Woods Hole, MA, USA. (poster)
- Boeing, W.J.**, J.T. Duffy-Anderson and K.M. Bailey. 2004. Ichthyoplankton dynamics and diversity: prospects and limitations as ecosystem indicators. Quantitative Ecosystem Indicators for Fisheries Management, Paris, France. (poster)
- Boeing, W.J.** and J.T. Duffy-Anderson. 2004. From patches to ecosystems: the importance of scale in recruitment dynamics. Hatfield Marine Science Center, Newport, OR, USA. (**invited seminar**)
- Boeing, W.J.**, J.T. Duffy-Anderson and K.M. Bailey. 2004. Responses of ichthyoplankton biodiversity and dynamics to environmental change. Marine Science in Alaska Symposium, Anchorage, AK, USA. (**invited speaker**)
- Boeing, W.J.**, J.T. Duffy-Anderson and K.M. Bailey. 2003. Responses of ichthyoplankton biodiversity and dynamics to environmental change. Larval Fish Conference, Santa Cruz, CA, USA.

- Boeing, W.J.**, J.T. Duffy-Anderson, K.M. Bailey, A.C. Matarese, J.M. Napp, S.J. Picquelle and B.A. Megrey. 2003. New metrics for ecosystem change: biodiversity and dynamics of ichthyoplankton assemblages. Steller Sea Lion Symposium, Anchorage, AK, USA. (poster)
- Boeing, W.J.** and J.T. Duffy-Anderson. 2003. New metrics for ecosystem change: biodiversity and dynamics of ichthyoplankton assemblages. Symposium on Ecosystem Indicators, Seattle, WA, USA. (**invited speaker**)
- Boeing, W.J.**, D.M. Leech and C.E. Williamson. 2002. Sunburn or risk of predation: balancing conflicting evils in the water column. American Society of Limnology and Oceanography, Victoria, Canada.
- Leech, D.M., **Boeing, W.J.** and C.E. Williamson. 2002. The effects of UV and fish on zooplankton vertical migration. American Society of Limnology and Oceanography, Victoria, Canada.
- Boeing, W.J.** 2002. Consequences of predator-prey interactions for community stability. National Oceanic and Atmospheric Administration (NOAA), Seattle, WA, USA. (**invited seminar**)
- Boeing, W.J.** 2002. Antipredator defenses and community stability. Iowa State University, Ames, IA, USA. (**invited seminar**)
- Boeing, W.J.**, B. Wissel and C.W. Ramcharan. 2001. The stabilizing role of prey defense in a pelagic food web. Ecological Society of America, Madison, WI, USA.
- Wissel, B., **W.J. Boeing** and C.W. Ramcharan. 2001. Effects of water color on predation regimes and zooplankton assemblages in freshwater lakes. Ecological Society of America, Madison, WI, USA.
- Boeing, W.J.**, B. Wissel and C.W. Ramcharan. 2001. Costs and benefits of *Daphnia* antipredator behavior toward fish in nature. American Society of Limnology and Oceanography, Albuquerque, NM, USA.
- Wissel, B., **W.J. Boeing** and C.W. Ramcharan. 2001. Efficiency of fish predation at various light levels. American Society of Limnology and Oceanography, Albuquerque, NM, USA.
- Boeing, W.J.**, B. Wissel and C.W. Ramcharan. 2001. Constraints by an invertebrate predator on the antipredator defense of *Daphnia*. Canadian Conference for Fisheries Research / Society of Canadian Limnologists, Toronto, Canada.
- Wissel, B., **W.J. Boeing** and C.W. Ramcharan. 2001. *Chaoborus* predation on zooplankton along a water color gradient. Canadian Conference for Fisheries Research / Society of Canadian Limnologists, Toronto, Canada.
- Boeing, W.J.** 2000. Variable behavioral, morphological, and life-history responses of *Daphnia* to predator kairomone. Aquatic and Marine Science Symposium, LUMCON, Cocodrie, LA, USA.
- Böing, W.J.** 1996. Struktur und Biomasseänderung des Phytoplanktons in Abhängigkeit des Fraßdrucks (*Daphnia* spp.) und Nährstoffgehaltes. Deutsche Gesellschaft für Limnologie / Societas Internationalis Limnologicae, Schwedt, Germany.

Awards and Recognition

2015: Association for the Sciences of Limnology and Oceanography Fellow

2015: Biomass & Bioenergy Outstanding Reviewer

- 2010:** NMSU, College of Agriculture, Consumer and Environmental Sciences Team Award: Desmond, M.J., W.J. Boeing, M.K. Carroll, V. Lombraña, A. Sells, J. Smith, K. Smith, R. Valdez, and R. Wiedenmann. – Natural Resources Consortium.
- 2010:** NMSU Teaching Academy Most Distinguished Member
- 2002:** American Society for Limnology and Oceanography Travel Award (\$400)
- 2001:** McDaniel Scholarship for Student Travel Award (\$450)
- 2000:** Best Presentation, Louisiana State University BioGrads Symposium (\$200)
- 1999:** Sigma Xi Graduate Student Research Grant-in-Aid (\$930)
- 1999:** Association for Women in Science Educational Foundation Predoctoral Fellowship Award (\$1,000)
- 1994:** DAAD (German Academic Exchange Program) Travel Award (\$500)

Classes taught

Journeys of Discovery (HON 115)
 Principles of Fish and Wildlife Management (FWCE 255)
 Wildlife Ecology (FWCE 301)
 Professional Experience and Communications (FWCE 393)
 Aquatic Ecology (FWCE 459)
 Ichthyology (FWCE 482)
 Graduate Seminar (FWCE 515)
 Graduate Research (FWCE 598)

Graduate students completed

- Canton, Michael. 2016. Alkaloid gramine as a modle for allelopathy: algae inhibition, removal, and applications. NMSU Master's Thesis, 78 pp.
- Smith, Jennifer. 2016. Habits and habitats of the rough-footed mud turtle, *Kinosternon hirtipes*, and outlook for its survival. NMSU Dissertation, 149 pp.
- Macanowicz, Neeshia. 2013. Benthic macroinvertebrates in extreme environments: Sampling methods and influencing factors on benthic macroinvertebrate communities in desert sinkholes. NMSU Master's Thesis, 94 pp.
- Bartley, Meridith. 2012. Optimization of environmental parameters for microalga *Nannochloropsis salina* growth and lipid accumulation, and minimizing of invading organisms. NMSU Master's Thesis, 59 pp.
- Harings, Nicole. 2012. Southwestern desert anuran response to environmental variables. NMSU Dissertation, 150 pp.
- Morel, James R. 2010. Survival trends and matrix projections of channel catfish (*Ictalurus punctatus*) population dynamics in the San Juan river, Utah-New Mexico. NMSU Master's Thesis, 104 pp.
- Swaim, Kristin M. 2008. Relating fish abundance and condition to environmental factors in desert sinkholes. NMSU Masters Thesis, 71 pp.
- Jungels, Jeremy. 2008. Habitat association and genetic similarity among populations of the Great Plains toad (*Bufo cognatus*) in the Chihuahuan Desert. NMSU Masters Thesis, 48 pp.