

# Wildlife Toxicology Working Group Newsletter

## IN THIS ISSUE:

|                                |   |
|--------------------------------|---|
| From the Chair                 | 1 |
| Candidate Bios                 | 2 |
| Wildlife Tox<br>Certification? | 6 |
| Member News                    | 7 |
| Tox Post-Doc                   | 8 |
| Tox in the News                | 8 |
| Contributors                   | 9 |
| Officer Contact Info           | 9 |
| Newsletter Notes               | 9 |



## From the Chair

**Jeff Levengood**

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I hope this finds everyone well. Summer is in full swing and with it planning for the TWS conference October 5-10 in Milwaukee is heating up. Although the final program is not yet available (look for it around the 15th of July), I have it on good authority that there will be a number of sessions of special interest to wildlife toxicologists. We will offer

a full-day workshop **“Pollutants and Wildlife Management: Ecotoxicology for Biologists and Land Managers”**, scheduled for Saturday October 5th. On Sunday October 6 there will be a symposium **“Impacts of Lead Ammunition and Fishing Tackle – Current Issues in the Midwest”**, sponsored by WDNR, the Tufts Center for Conservation Medicine, and the Animal Foundation of Amery, WI. There will also be wildlife toxicology papers presented at the **Wildlife Diseases and Toxicology** session, and contributed posters in both the general and Student Research in Progress poster sessions (time and days TBA). The **Wildlife Toxicology Working Group board meeting** will likely be held (to be confirmed) on Mon., Oct. 7th at 7pm CDT, and there will be a phone line set up so members can participate without being there in person; we will send an email with the phone number to WTWG members prior to the conference.

This is a good segue into the issue of the **WTWG Student Travel Award**. In the past we have struggled to come up with applicants and in fact this year we did not have anyone apply even though there will be numerous student papers/posters at the conference. Consequently, this year we will select a recipient from the abstracts submitted to the program committee. Although it recognizes a student’s outstanding contribution, this doesn’t really meet our goal of promoting wildlife toxicology within TWS, i.e., by providing funds to encourage a student to attend and present at the annual conference. Between now and next spring (when we would normally announce the open period for applications) we will be considering our options for this award and your input is welcomed and encouraged. Some considerations are: should we more aggressively advertise the award availability? Is \$500 enough enticement, and if not, how will we come up with additional funds? Is it ok to select someone based upon their abstract and after it has been submitted? Are there other ways to use the money to promote wildlife toxicology within TWS? You can

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## Candidate Position Statements for WTWG Executive Board Positions

Candidates were asked a series of questions to answer in whatever form they wished. Candidates are listed in alphabetical order for each position.

Look for ballots in your inbox soon after you receive this newsletter. Follow the directions on the ballot to cast your vote for each of the following 3 positions: Chair-elect, Vice Chair, and Treasurer.

### Candidates for Chair-Elect

#### Tim Bargar



#### *What I do for a living:*

I am a research scientist (ecotoxicologist) with the US Geological Survey's Southeast Ecological Science Center, and have been with the USGS since 2008. My research of late has focused on issues related to mosquito control impacts to imperiled species, and on wastewater contaminant introduction and potential impacts in coastal estuarine/marine environments. While working with the USGS, I have been working on these issues with resource managers in the Everglades, Biscayne Bay, and Virgin Islands National Parks as well as at the National Key Deer Wildlife Refuge. Prior to working with the USGS, I was employed (2003-2008) in the contaminants biology program of the US Fish & Wildlife Service where I was involved with the Comprehensive Everglades Restoration Plan, and with the US Environmental Protection Agency (2000-2003) where I was involved in pesticide ecological risk assessment. I received my Ph.D. in environmental toxicology in 2000 from Texas Tech University where my dissertation research involved the non-lethal, non-invasive assessment of oviparous organism exposure to persistent chlorinated contaminants.

*Where I live/work:*  
Gainesville, Florida

*Why am I interested in helping with the WTWG?*  
I agree with the mission of the working group.

*As a WTWG officer, what goals do I have for the group?*  
I am interested in helping environmental resource managers understand and deal with contaminants-related issues. So my goal for the WTWG would be to reach out to resource managers and make them

aware of the WTWG's capabilities and provide examples of our experience so that they would understand the benefit of seeking the WTWG's assistance.

*Some of my personal hobbies include:*  
Bird watching, fishing, skiing, golfing....

*The most memorable vacation I've taken was (where, when, why it was great):*

My favorite "vacations" were to Belize, Central America. I traveled to Belize on three different occasions in the early 1990's visiting Mayan ruins (Altun Ha, Xunantunich, Tikal [Guatemala]), the Howler Monkey Reserve at Bermudian Landing, Crooked Tree Wildlife Sanctuary, the Belize Zoo, the Mayan Mountains from the pinelands in the northwest to Cockscomb Basin Jaguar Reserve to the rain forests in the south, and the barrier coral reef along the central coast (South Water Caye). I'm sure things have changed considerably since then, but the country was amazing.

*If I could be any animal, I'd be a river otter, because they always seem to be having fun.*

#### Louise Venne



#### *What I do for a living:*

I am a senior toxicologist with the environmental consulting firm AMEC E & I. I primarily work on ecological risk assessments and remediation projects as part of a great team.

*Where I live/work:*  
near Atlanta, in Kennesaw

*Why am I interested in helping with the WTWG?*  
I've been involved with the WG as newsletter editor ever since I started in this field and found

*Candidate statements continued on next page...*

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this specialist group for wildlife toxicologists. I would like to take a larger role in the activities of the WTWG and work to continue our presence within TWS, become the “go-to” resource regarding ecotoxicology among our wildlife colleagues, and provide mentorship and support for students interested in wildlife toxicology.

*As a WTWG officer, what goals do I have for the group?*  
I want to maintain our presence within TWS by continuing to organize either a symposium or workshop at annual conferences as we have been doing for over 8 years. These would include collaboration with other WGs such as the Wildlife Diseases WG and Military Lands WG. Additionally, I would like to see the WTWG have a greater presence within TWS and be the “go-to” resource for our wildlife colleagues by increasing ecotoxicology publications and reviewers in TWS journals and articles in *The Wildlife Professional*. Finally, I also want to guide the WTWG into a larger role providing mentorship and support to students and professionals interested in wildlife toxicology by coordinating more with WGs such as the Student Development WG and Ethnic and Gender Diversity WG.

*Some of my personal hobbies include:*  
Birding, kayaking, hunting, hiking

*The most memorable vacation I've taken was:*  
A round-the-world trip visiting friends from grad school in their home countries - so much good food and so many cool birds!

*If I could be any animal, I'd be a snowshoe hare, because my coat would change colors, I could snowshoe everyday in winter without having to put on heavy winter clothing and tie things on my feet, and I could run and leap like the wind.*

## Candidates for Vice Chair

Katrina Leigh

*What I do for a living:*

I am a Manager at ENVIRON International Corporation, responsible for ecological risk projects, particularly within aquatic environments.

*Where I live/work:*

Burton, OH (near Cleveland)



*Why am I interested in helping with the WTWG?*

Over the past few years, I have thoroughly enjoyed my interaction with other members of the Toxicology Working Group. Group members are engaged and truly interested in encouraging interaction among other toxicologists, as well as increasing student involvement. I would appreciate the opportunity to become further involved with this working group and to continue to foster the relationships within the working group and The Wildlife Society.

*As a WTWG officer, what goals do I have for the group?*

The past leaders of the WTWG have done an outstanding job in laying a solid foundation for the group. My first goal would be simply to continue the tradition of promoting interaction and an exchange of ideas among colleagues (for example, at national meetings) and between members and students (workshops, scientific sessions). I would like to encourage active participation and interaction with other members of the working group by soliciting input to address the needs and concerns of the group as a whole. Other priorities would be to continue to build the position of the working group within TWS itself and to cross-pollinate members of the working group with other toxicologists outside of TWS in order to strengthen our perspective on the current state of wildlife toxicology issues.

*Some of my personal hobbies include:*

Kayaking, snow skiing, and baking/cake decorating

*The most memorable vacation I've taken was:*

My family and I went to Alaska in 2006. I have long believed that wildlife toxicology is an

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important, yet often overlooked, component of wildlife management. It is critical to build a strong group of toxicology oriented wildlife researchers and managers to maintain a robust toxicology peer review process within the field of wildlife; additionally it is vital to maintain a consistent, recognized roster of experts to consult on wildlife toxicology related issues. It was memorable mostly because the landscape is so different from anything that I have experienced so far. To be immersed in a place where often times the wildlife dominate—rather than the other way around—was truly a unique experience. My two best memories: (1) watching my husband run frantically back down a trail after being charged by a female moose with twins; and (2) seeing a huge flock of birds outside of a cannery in Ketchikan and realizing that they were ALL bald eagles!!

*If I could be any animal, I'd be a seal, because let's face it, they are cute, and they look like they are enjoying life!*

#### Nina Schoch

*What I do for a living:*

Coordinator,  
Biodiversity Research  
Institute's Adirondack  
Center for Loon  
Conservation:  
coordinate research on  
Common Loons in the  
New York's  
Adirondack Park,

investigating the reproductive and health impacts of environmental mercury pollution to the Adirondack loon population, and other anthropogenic impacts to Adirondack wildlife and ecosystems, as well as research on Adirondack loon migration. Wildlife Veterinarian: Initiate the development of a Wildlife Health Assessment Program for Biodiversity Research Institute. This program will include an in-house and field veterinary diagnostic laboratory and mobile surgical unit, an IACUC committee, and veterinary staff with expertise in conservation medicine, including field sampling techniques for free-ranging wildlife.



*Where I live/work:*

Ray Brook, NY (Adirondack Park)

*Why am I interested in helping with the WTWT?*

I have always been intrigued with ecotoxicology and the impacts of environmental contaminants to wildlife and ecosystems. As my career continues to develop, I would like to become more actively involved in, and contribute more to, the fields of conservation and wildlife health by expanding my participation in such organizations as TWS' Wildlife Toxicology Working Group.

*As a WTWG officer, what goals do I have for the group?:*

I would like to continue to increase public and scientific awareness and understanding of the impacts of environmental contaminants through such opportunities as:

Continuing to expand our collaboration with SETAC, and encourage more active participation of SETAC members in TWS and the WTWG.

Continuing to offer training opportunities for WTWG members and others through workshops and special sessions at TWS conference, our newsletters and website, and identifying resources for learning more about this field.

Increasing public awareness of ecotoxicology through public media – e.g.: web and press articles, perhaps developing a slide show or TV program about ecotoxicology?

*Some of my personal hobbies include:*

Nature/wildlife photography, paddling, x-c skiing, quilting, knitting

*The most memorable vacation I've taken was:*

Australia & New Zealand, 1999, 5 weeks of watching fascinating new animals and exploring amazing new habitats!

*If I could be any animal, I'd be a bat or migratory bird, because bats are REALLY cool! and it would be amazing to fly for thousands of miles freely and soar.*

*Candidate statements continued on next page...*

## Candidates for Treasurer

### Stephanie Baker

#### *What I do for a living:*

Ecotoxicologist and Wildlife Biologist in the Ecological Division of GEI Consultants, Inc.

#### *Where I live/work:*

Denver, CO

#### *Why am I interested in helping with the WTWG?*

Member-run groups only succeed if everyone contributes to the operation in some way. I think it's important to give back somehow to those who have built the WTWG to what it is today. In addition, being on the board would be a great way for me to get to know more of our group's members.

#### *As a WTWG officer, what goals do I have for the group?*

I would like to see the group continue to grow and become more active. The WTWG is full of brilliant scientists, giving us the ability to continue to do really great things to increase connections between members and contribute to our science.

#### *Some of my personal hobbies include:*

Most of my free time is spent training for marathons and triathlons (allowing me to maintain a fairly high ice cream intake). With any remaining free time, you'll find me hiking, at concerts, backpacking, traveling, snowboarding, and searching for delicious margaritas around Denver.

#### *The most memorable vacation I've taken was:*

Last summer, I traveled around Italy for a couple weeks. It was a whirlwind trip with the goal of seeing as many places as possible. Between the endless gelato, beautiful art and buildings, feeling overwhelmed by the depth of the country's history, and the stunning, colorful towns of Cinque Terre, I know I'll never forget this trip. I can't wait to get back there!

*If I could be any animal, I'd be a flying squirrel, because they are like little ninjas -- how awesome would it be to spend every night hopping around the forest canopy?*



### Richie Erickson

#### *What I do for a living:*

I am currently a Quantitative Ecologist with the USGS Upper Midwest Environmental Science Center in La Crosse, WI. I am studying the effects of wind turbines on populations of Indiana and little brown bats.



#### *Where I live/work:*

La Crosse, WI

#### *Why am I interested in helping with the WTWG?*

I have been a member of the WTWG for several years and would like to help the WTWG.

#### *As a WTWG officer, what goals do I have for the group?*

My goals as treasure would be to help the other officers. Also, I will help bridge our group with SETAC.

#### *Some of my personal hobbies include:*

I enjoy outdoor activities including sea kayaking, Nordic skiing, and biking.

#### *The most memorable vacation I've taken was:*

My semester in New Zealand.

*If I could be any animal, I'd be a bat, so I could have echolocation.*

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contact a board member directly to share your views or participate in a discussion of this topic during our upcoming board meeting.

Stay tuned to the TWS webpage for more conference program information. Hope to see you in Milwaukee!

## Should We Have a Certified Wildlife Toxicologist Program?

*Contributed by Don Sparling*

The Wildlife Society has had a program to certify wildlife biologists since 1977. There is a wide range of opinions about the certification program from those who have seen no benefits in the certification they received to those that attribute at least part of their career start to being certified (Maehr et al. 2002, Crossley 2008, Decker 2008). The most obvious potential benefits are obtaining those early jobs – some state agencies require certification – to giving professional witness testimonies. In general, however, there does not seem to be a consensus on the value of certification for professional wildlife biologists. Another certification program of possible interest to the members of the Wildlife Toxicology Working Group is the Diplomat Certification provided by the American Board of Toxicology, a program that is considered to be a successful (ABT 2005).

In 2007 the Smithsonian Institute and EPA sponsored a conference to evaluate the field of wildlife toxicology and to brainstorm ways of enhancing the profession and promoting its importance. Several suggestions were made including developing a certification in wildlife toxicology. Among the reasons given for a certification were that the discipline is complex, involving several areas of science and a certificate could show a minimal level of expertise; enhancing the legitimacy to the profession, especially in terms of consultants was another reason. As a result of this recommendation we initiated a survey of professionals in the field of wildlife toxicology to assess the need and desired composition of a certifying program (Moss, Seekamp and Sparling 2013).

### Brief Methodology

Hailey Moss, working on her master's degree, developed a questionnaire through the Delphi process that utilized expert opinions to identify the specific certification variables that should be explored in the full questionnaire. Details of this and subsequent methodology is in the paper. The completed questionnaire was sent via SurveyMonkey™ to 181 members of the Society of Environmental Toxicology and Chemistry and The Wildlife Society who identified an interest or expertise in wildlife and fisheries toxicology in the respective membership rosters. Follow-up reminders were sent at 7 and 14 days after the initial posting.

### Summary of Results

Of the 181 surveys sent out, 121 (67%) were returned. Respondents identified themselves as having expertise in various subsets of wildlife toxicology including risk assessment (34%), birds (18%), mammals (6%), fish (5%), amphibians (5%), reptiles (1%), and other (10%). They came from federal sectors (22%), private consulting firms (25%), public academia (21%), private academic institutions (2%), state agencies (8%), city/county governments (1%), not-for-profit organizations (1%) and other (20%).

Of the survey respondents 41% were unsure whether there should be a wildlife or fisheries toxicology certificate; 36% thought that there should be and 23% thought that there should not be a certificate. Of those who thought a certificate would be useful most supported their belief by saying that a certificate could provide professional recognition; help gain employment; provide a need and direction for continuing education; and lead to increased salaries. Benefits to the profession included increased credibility and accountability; standardization of minimum skills and knowledge; increased speed of screening job applicants; and providing a qualified employee pool. Of those who disagreed with having a certificate 24%

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were not able to provide a reason why they thought that way; others saw no benefit; a few thought that the field was too diverse to have a single certificate. Cost, preference for college transcripts over a certificate, injustice to existing practitioners, and an artificially produced homogeneity among certified toxicologists were other reasons for not approving a certificate.

A subset of the survey questions tried to establish what would be needed in a certifying program. Thirty-nine percent of the respondents thought that the certification program should require at least a master's degree in some related field, 13% thought a bachelor's degree sufficient and 39% thought that a particular degree was unimportant if the applicant had relevant courses and work experience. Fieldwork experience was rated very highly on other questions as well.

In a somewhat tangential set of questions respondents were asked to assess the current and future opportunity for professional wildlife toxicologists. Responses ranged from 0 for no opportunity to 6 for abundant opportunity. For current wildlife toxicology opportunity the mean score (+ SD) = 3.03 + 1.23 and for future opportunity the mean was 3.59 + 1.33. Ratings of current fishery toxicology opportunities were a bit higher: for current: 3.53 + 1.32 and for future 3.99 + 1.33. Thus, there was a weak consensus that employment opportunities were adequate but that they will get better within the next 10 years.

Other objectives were addressed and I refer the interested reader to the paper itself for more details. The bottom line of this survey is that the field of professional toxicologists seems to mirror that of wildlife biologists in general. Some thought that a certificate was very good, others saw it as detrimental to the profession. If certification is ever offered survey results suggest that it could be administered either by The Wildlife Society or by SETAC and there should only be one certificate as opposed to separate certificates for wildlife and fisheries.

## References

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- Crossley A. 2008. Questioning certification. *Wildlife Professional* 2(4):43-44.
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- Maehr DS, Thompson BC, Mattfield GF, Montei K, Haufler JB, Kerns JD, Ramakka J. 2002. Directions in professionalism and certification in The Wildlife Society. *Wildlife Society Bulletin* 30:1245-1252.
- Moss HN, Seekamp E, Sparling DW. 2013. Assessing the necessity of a wildlife toxicology certificate: a survey of professional perceptions. *Human Dimensions of Wildlife* 18:68-80.

## Member News

**Richie Erickson** defended his doctoral dissertation in April from Texas Tech and will be graduating in August. His dissertation research examined the effects of pesticides on the population dynamics of *Daphnia*. He started a Quantitative Ecologist postdoctoral fellowship at the USGS Upper Midwest Environmental Science Center in La Crosse, WI. For the fellowship, he will be examining the effects of wind turbines on the bat populations.

## Toxicology Related Post-Doc Position

POSTDOCTORAL TEACHING FELLOW: Villanova University, Department of Geography and the Environment is seeking applicants for a Postdoctoral Teaching Fellow position beginning August 2013. This is a three-year appointment.

Requirements: the successful candidate will possess a Ph.D. (or nearcompletion) in environmental science or closely related discipline, and have the training and background to teach environmental science, elective courses on environmental topics, and environmental chemistry. We are particularly interested in candidates with a background in environmental chemistry (i.e., biogeochemistry, emerging contaminants, toxicology, etc.) who can develop an active research program that involves undergraduate students. The position entails a 50% teaching and 50% research workload. Applications (i.e., letter of application, teaching and research statement, curriculum vitae, recommendations, and sample publications) should be submitted via <https://jobs.villanova.edu> (direct link: <https://jobs.villanova.edu/postings/5681>).

Documents that cannot be submitted electronically should be sent to Dr. Francis A. Galgano, Chair, Department of Geography and the Environment, Villanova University, Villanova, PA, 19085. Three letters of reference are requested. Villanova is a Catholic University sponsored by the Augustinian order. An AA/EEO employer, Villanova seeks a diverse faculty committed to scholarship, service, and especially teaching, who understand, respect, and can contribute to the University's mission and values. Review of applications will begin immediately and continue until the position is filled. Please consult <http://www.villanova.edu/artsci/geoenv/> or send questions to [angelina.fondaco@villanova.edu](mailto:angelina.fondaco@villanova.edu).

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## Toxicology in the News

UPDATE: European Commission May Ban Three Neonicotinoids to Protect Bees

<http://news.wildlife.org/featured/update-european-commission-may-ban-three-neonicotinoids-to-protect-bees/>





Thank you to the following contributors to this newsletter.

- Stephanie Baker
- Tim Bargar
- Richie Erickson
- Katrina Leigh
- Jeff Levengood
- Nina Schoch
- Don Sparling
- Louise Venne

**WTWG Executive Board**

|                             |                |                                                                        |
|-----------------------------|----------------|------------------------------------------------------------------------|
| Chair                       | Jeff Levengood | <a href="mailto:jleven@inhs.uiuc.edu">jleven@inhs.uiuc.edu</a>         |
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| Vice Chair of Communication | Louise Venne   | <a href="mailto:lsvenne@gmail.com">lsvenne@gmail.com</a>               |



**WTWG NEWSLETTER NOTES**

The WTWG newsletter is a quarterly publication. Email contributions such as citations, member news, research highlights, and conferences by September 30 to Louise at [lsvenne@gmail.com](mailto:lsvenne@gmail.com).

The WTWG is online. Archived newsletters, meeting minutes, and more are included at <http://joomla.wildlife.org/toxicology/index.php>

The WTWG is now on Facebook. Visit and/or “Like” us, even if you don’t have a Facebook account. [www.facebook.com/WildlifeToxicology](http://www.facebook.com/WildlifeToxicology)

*Louise Venne, Editor*