



# Wildlife Toxicology Working Group Newsletter

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## From the Chair

**Brian Hiller**

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Greetings and Happy Summer...finally! I hope this newsletter finds you all enjoying a bit of warmer weather and some sunshine. Although we are firmly in the “dog days” of summer, there is quite a bit happening with the Wildlife Toxicology Working Group and the board has been working hard on a variety of fronts.

The first is an update on the status of the Lead Position Statement found here ([TWS Lead Position Statement](#)). This important document has technically expired (in July of this year) and my inquiry into the process of renewing the statement was fruitful, but will require some effort from all of us in the WTWG. National TWS has set up a committee that is currently in the process of examining the nearly 50 position statements currently on the books and deciding how to reorganize them in a sensible manner. Reviewing/revising 50 position statements has become a very time consuming task for the staff at TWS headquarters and the current review process is designed to sort out which statements will be kept, which ones will be rolled into an over-arching “TWS guiding” document, and which ones are no longer relevant and should be discarded. The Lead Position Statement is important to TWS and will be kept, but renewal cannot proceed without two things happening; first, the board needs member feedback on the Lead Position Statement as it is currently written, and second, once the WTWG board forwards the group’s recommendation to Council, we need members to contact their representatives to ensure forward progress on the renewal process. I will keep the membership informed as to the progress of the board and the Lead Position Statement in the coming months.

Other efforts the WTWG board has been involved in recently include increasing the group’s presence and activity on social media and volunteering to represent the group on the Editorial Advisory Board of “The Wildlife Professional” magazine. On the social media front Stephanie Baker has assumed the role of account manager for our Facebook page. The page has a total of 35 likes and new people discovering the group every week. If you haven’t gone to the page and checked it out, click here [WTWG FB page](#). The group is also now on Twitter and will be posting wildlife and environmental toxicology-related information and articles via the

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*...From the Chair, continued from page 1*

following handle @TWSWildlifeTox. We currently have only two followers, but one of them is noted author Lily Raff MCCaulou. This account is relatively new, but I will be keeping track of news items and relevant scientific journal articles and tweeting them. Our group will also be represented by Past-Chair, Dr. Jeff Levensgood, on the Editorial Advisory Board of the Wildlife Professional magazine. This will involve a three-year term with the potential to raise the profile of wildlife toxicology issues and increase coverage of these issues in the magazine. A big thanks to Jeff for volunteering for this role and his willingness to continue to work for a higher profile for the WTWG within TWS on a national level.

Wildlife toxicology has been in the news again recently and that is certainly a positive for the members of this working group. The issue of lead in scavenged carcasses was the focus of a paper in Conservation Biology ([link here](#)) and there are daily reports about the potential impacts of using neonicotinoid pesticides around bees, but a recent paper reported on the impacts of these chemicals on birds, too ([link here](#)). There are articles showing up in the popular media every day and you should feel free to email any articles you find to me or one of the other board members so that we can share it with the rest of the membership. This is a great way to keep in touch with everyone else and to keep everyone updated on happenings in the field.

I also have an update on the progress of TWS MN chapter and the “deer hunter” workshops that were proposed this past spring. The group is very dedicated to this topic and they have organized an opportunity for the general public to come to a “field day” where they can fire a few rounds through their own firearm to see how they like it and whether or not they would be willing to switch to non-lead ammo next fall. This ties in very nicely with the renewal of the Pb Position Statement.

The other key reminder at this time of year for the WTWG is that elections are just around the corner. We need to have as many people participate in this process so the board and other leadership are representative of how you would like this group to function and represent our specific areas of expertise. Louise Venne will be sending out a ballot on Survey Monkey soon, so please do our group a favor and participate in the voting.

Finally, I'd like to conclude by encouraging the membership of the WTWG to keep in touch between newsletters by passing along any toxicology-related issue in your local, national, or an international newspaper, send the link or a quick email to me or one of the other board members and we'll get it out to the rest of the group. Check out our Facebook page and follow us on Twitter. Given the prominence of toxicology-related issues in the news I feel that we are just starting to see the potential for our group to serve as an important resource for the rest of The Wildlife Society.

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### **Postdoctoral Research Associate Position**

The Savannah River Ecology Lab (SREL) at the University of Georgia is soliciting applications for a Postdoctoral Research Associate in Ecological and Evolutionary Genomics, with a particular emphasis on amphibian adaptation to stressors. At this point there are three broad research avenues within which the accepted candidate could develop her/his specific project. One would involve investigations into variation within and among amphibian species in disease susceptibility using a genomics approach. The second would follow up on current studies examining variation in tolerance to contaminant stressors and local adaptation to heavy metals. The third would evaluate landscape genetic patterns of amphibians (multiple species) on the Savannah River Site (SRS) with an emphasis on how areas of contamination may impact gene flow. A majority of the samples for this third project have already been collected and we would likely use a 2bRAD-seq approach. Numerous opportunities exist to assist with other ongoing studies at SREL and to initiate additional side projects.

Qualifications: A Ph.D. in ecology, evolution or related field is required. Preference will be given to applicants possessing a strong molecular background, experience with genomics, and preferably experience

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## Retirement of Don Sparling

I guess for many of the members of WTWG this is a fare thee well. I'll be retiring from the Cooperative Wildlife Research Laboratory, Southern Illinois University, Carbondale, IL at the end of July. I feel particularly fortunate in that I'll be ending my research career where it started, even though it has been a very roundabout experience. Back in the late 1960's I transferred from Loyola University to SIU where I received my bachelor's degree. I then went on and got my master's from SIU in 1974. Both degrees were in Zoology. After a short sojourn at Michigan State I went up to the north country, "donta know", where I got my Ph.D. in biology at the University of North Dakota. My dissertation had no relation to what I did most of my research career for it was on behavioral isolating mechanisms between greater prairie chickens and sharp-tailed grouse. Contaminant ecology had not entered my thoughts at that time. In 1979 I came back to SIU to do a post-doc on an attempt to restore prairie chickens on reclaimed surface mined land. I was at SIU this time for only a year and then off to Ball State University for three years.

My career in the federal government began as a statistician at Northern Prairie Wildlife Research Center which was a bit ironic for after my doctorate Paulette, my wife, flatly said that wild horses couldn't get her to go back to North Dakota. Couldn't find any wild horses but a paycheck made up for the deficit. In 1986 we were rewarded (sort of) for surviving ND winters in that I was hired by Patuxent Wildlife Research Center to be the field station leader for the endangered forest bird program on Hawai'i. From there we moved to Maryland where my career in ecotoxicology began. At that time I didn't know a carbamate from an organophosphorus pesticide so virtually all of my training was OTJ (on the job). Thank goodness for a minor in chemistry!

Fortunately, at Patuxent I had a whole cadre of mentors and advisors who took this rather ignorant researcher and helped him learn the ropes (and terms) of ecotoxicology. My most important mentor at this time was Woody Hill who was also my group leader. To my benefit, Woody was known for being loquacious which means that at the drop of a hat he would gladly spend an hour or two talking about contaminants or almost anything else. In addition, I'm very grateful for what I learned from Barnett Rattner, Gary Heinz, Hank Pattee, Dave Hoffman, Russ Hall, and many others. Following the leadership of Lucille and Bill Stickel, these scientists were among the pioneers in the study of contaminant effects. Peter Lowe, Paula Henry, Dan Day and John French have been esteemed colleagues. Sherry Krest, Fred Pinkney, Gary Fellers and Dave Bradford have been collaborators and friends from outside of Patuxent. I know I'm forgetting many folks along the way, so please forgive me.



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*...Retirement Adieu, continued from page 3*

At first, funding was adequate at Patuxent, but after a few years there funding began to get tighter and it was at Patuxent that I first heard the phrase “Doing more with less” which I thought was a great idea. If we could in fact do more with less then the logical conclusion was that when we had nothing we could do everything. At times it seemed that the administration wanted to test that theory with the contaminants researchers.

During the 1990’s we were following the Chinese curse of “may you live in interesting times”. We were bounced around from the Fish and Wildlife Service to the National Biological Survey/Service to the U.S. Geological Survey. Initially the USGS was not a bad place to work but, in my opinion, as the new biology discipline was assimilated (as in the Star Trek Borg), the change in culture and the way research was construed was more than I could tolerate. Fortunately, a position came open at SIU and voila, the circle was completed.

As I write this it’s hard to believe that my return to SIU was more than 10 years ago. During that time I have taken great pleasure in working with graduate and undergraduate students both in the classroom and in research. Together we have worked on several amphibian-related projects. My primary colleague at SIU was Dick Halbrook who retired a couple of years ago, but the faculty within the Cooperative Wildlife Research Laboratory have been a great group to work with as well.

Notoriety within the research arena is very fleeting. If I’m remembered for anything after retirement I suspect it will be my work in amphibian toxicology. This research started way back in the mid 1990s’ when biologists were generally becoming aware of the global amphibian declines which were due to several factors including contaminants. In a few instances, I have evidence that the results from these studies actually contributed to tangible changes in application practices or registration of highly toxic pesticides. In addition to scores of scientific journal articles and book chapters, I’ve also been able to serve as editor on four books dealing with amphibian and reptile ecotoxicology. Recently, I’ve also capitalized on my years of experience working for agencies and teaching wildlife administration by publishing the book “Natural Resource Administration: Wildlife, Fisheries, Forests and Parks” through Academic Press and Karen Gaines from Eastern Illinois University and I are working on a book dealing with ecotoxicology which will also be published through Academic Press. So I haven’t completely hung up my notebook yet.

Some folks retire without any real plans. I think we’ve planned pretty well and I’ll still be teaching online courses for awhile and writing. Onward to a new chapter!

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*Post-Doc Position, continued from page 2...*

with bioinformatics analysis. The postdoc will assist with training graduate and undergraduate students. The successful applicant is expected to demonstrate commitment to timely completion of deliverables, publication of results in peer-reviewed outlets, and presentation of results at scientific conferences. Applications will be reviewed starting **August 11th** and will continue until a suitable candidate has been identified. Current funding is available for 1 year, with the possibility of extension pending renewal of funding and satisfactory performance. Salary will be \$35,000 per year plus benefits.

To apply, please send a 1) cover letter summarizing your qualifications for and interest in the position, 2) a CV, 3) scanned copies of transcripts, and 4) names and contact information for three references to Stacey Lance: [lance@srel.uga.edu](mailto:lance@srel.uga.edu).



## Member Publications

Levengood, J.M., R.V. Smith, D.A. Gay, M.A. Davis, J.D. Stafford. 2014. Mercury in Migrating Shorebirds in the Illinois River Valley. *Waterbirds* 37(2): 225-229

*Abstract*—Hepatic mercury concentrations of Pectoral Sandpiper (*Calidris melanotos*) and Killdeer (*Charadrius vociferus*) collected from the central Illinois River Valley, Illinois, during early fall migration in 2007 were examined. Mean and median mercury concentrations were significantly greater in the livers of Pectoral Sandpipers (0.30 and 0.28  $\mu\text{g/g}$  wet weight, respectively) than in Killdeer (0.07 and 0.06  $\mu\text{g/g}$  wet weight, respectively). Differences in foraging ecology between these species likely account for the observed differences in tissue mercury concentrations. In general, mercury concentrations were low in these species relative to other shorebirds and can serve as baseline for future monitoring.

Levengood, J.M., D.J. Soucek, G.G. Sass, A. Dickinson, J.M. Epifanio. 2014. Elements of concern in fillets of bighead and silver carp from the Illinois River, Illinois. *Chemosphere* 104 63–68

*Abstract*—Efforts to control invasive bighead (*Hypophthalmichthys nobilis*) and silver carp (*H. molitrix*) may include harvest for human consumption. We measured concentrations of arsenic (As), mercury (Hg), and selenium (Se) in fillets from silver and bighead carp collected from the lower Illinois River, Illinois, USA, to determine whether concentrations were of health concern and differed by species, size, and location. Concentrations of total As were below detection limits in most bighead (92%) and silver (77%) carp fillets, whereas inorganic As was below detection limits in all samples. Mean Hg concentrations were greater in bighead (0.068  $\text{mg kg}^{-1}$ ) than in silver carp (0.035  $\text{mg kg}^{-1}$ ), and were smallest in carp from the confluence of the Illinois and Mississippi rivers. Mercury concentrations in fillets were positively correlated with body mass in both species. Concentrations of Hg were below the US Food and Drug Administration's (USFDA) action level (1 ppm as methyl-Hg); however, concentrations in some bighead (70%) and silver (12%) carp fell within the range that would invoke a recommendation to limit meals in sensitive cohorts. Mean Se concentrations were greater in silver (0.332  $\text{mg kg}^{-1}$ ) than in bighead (0.281  $\text{mg kg}^{-1}$ ) carp fillets, and were below the 1.5  $\text{mg kg}^{-1}$  limit for an unrestricted number of meals/month. The mean molar ratio of Se:Hg in fillets was lower in bighead (14.0) than in silver (29.1) carp and was negatively correlated with mass in both species. Concentrations of Hg in bighead and silver carp fillets should be considered when assessing the risks associated with the use of these species as a protein source.

Rattner, B.A., R.S. Lazarus, J.E. Elliott, R.F. Shore, and N. van den Brink. 2014. Adverse outcome pathway and risks of anticoagulant rodenticides to predatory wildlife. *Environmental Science and Technology*

*A brief description of the paper:* Despite a long history of successful use, routine application of some anticoagulant rodenticides (ARs) may be at a crossroad due to new regulatory guidelines intended to mitigate risk. An adverse outcome pathway for ARs was developed that describes chemical properties of ARs, established macromolecular interactions by inhibition of vitamin K epoxide reductase, cellular responses including altered clotting factor processing and coagulopathy, organ level effects such as hemorrhage, organism responses with linkages to reduced fitness and mortality, and potential consequences to predator populations. There are significant data gaps related to exposure pathways, comparative species sensitivity, consequences of sublethal effects, potential hazards of greater AR residues in genetically-resistant prey, effects of low-level exposure to multiple rodenticides, and quantitative data on the magnitude of non-target wildlife mortality.

## Candidate Position Statements for WTWG Executive Board Positions

Candidates were asked to answer a series of questions.

Candidates are listed in alphabetical order for each position.

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

### Candidates for Chair-Elect

#### Kristin Falcone

*What I do for a living:*

I am a veterinarian. I currently work primarily with small animals at a privately owned emergency clinic. I do occasional volunteer work with the Arizona Game & Fish Department and I'm in the process of getting involved with some local wildlife centers as well.



*Where I live/work:* Phoenix, AZ

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

My passion has always been in wildlife and toxicology has always been one of my primary interests in veterinary medicine. I'm always looking for opportunities to get more involved with both fields.

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

To further assist in achieving the goals of the group and perhaps trying to get more information about the organization out to the general public.

*Some of my personal hobbies include:*

Hiking, backpacking, photography

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

South Africa - I went as part of a wildlife course in vet school. It was amazing to be out in open fields working with wild animals that not many people ever even get to see, let alone actually get to touch! I got to work with rhinos, cape buffalo, wildebeest, lions, etc.

*If I could be any animal, I'd be a...* Tough question! I think I'd be an elephant because of their social structure and emotional intelligence.

#### David Probasco

*What I do for a living:*

I am a wildlife biologist for the Bureau of Land Management, District Office in Lakeview Oregon.



*Where I live/work:* Lakeview, OR

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

My interest in toxicology began while working with Tri-State Bird Rescue and Research Oil Spill Response Team as wildlife rehabilitation/medical staff for an oil spill. In graduate school I furthered my interest evaluating mercury levels in the fur of river otters, along the Sabine River and Toledo Bend Reservoir, between Texas and Louisiana. I have developed a concern of toxicological effects on wildlife and recently began a study on heavy element deposition on vegetation surrounding evaporation pits in the oil and gas fields. I am interested in learning how toxic elements may be impacting wildlife on a broad scale. Working as a group, and compiling and sharing the information, we may better understand the effects, and suggest remedies for our environmental health.

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

My goals for the working group would be expanding outreach and collaborating with agencies to better share new findings. Toxicology is a subject, to many, not well understood or appreciated for its impact on life. I would like to bring, what cannot be observed readily and overlooked easily, to the attention of professionals in land and wildlife management and the public.

*Some of my personal hobbies include:*

My hobbies include wildlife, in every way, shape, and form. I enjoy centering myself in an

*Candidate statements continued on next page...*

*Chair-Elect Candidate Statements continued from previous page...*

ecosystem and observing all its dynamic wonders. I am an ethologist at heart.

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

Tanzania! I went on a wildlife safari in 2006 and observed many species of flora and fauna. My interest in animal behavior was fulfilled with the wildebeest migration and breeding season for many species. I enjoyed spending time with Datooga and Maasai people, experiencing their culture and food.

*If I could be any animal, I'd be a wolverine!* Having a home range that allows you to explore vast distances, and fear nothing, wow! Unlike the wolverine, I am a team player, they are self-sufficient. Imagine a world where you can do everything yourself without the assistance of many. I recognize the need to work together to make and meet goals for the benefit of our future, but I appreciate the wolverine's ability to go on an amazing solo mission!

## **Candidates for Vice Chair**

### **Carrie Marr**

*What I do for a living:*

I am an Environmental Contaminant Specialist with the U.S. Fish and Wildlife Service in Phoenix, Arizona.



*Where I live/work:* I live and work in Phoenix, AZ. I have been in Phoenix for 14 years, all with the FWS.

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

I have enjoyed working with the WTWG as Secretary and look forward to contributing in a different capacity as a Vice Chair.

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

My goals for the WTWG are getting and keeping members engaged and educating TWS about who we are.

*Some of my personal hobbies include:*

My personal hobbies include walking, mountain biking, hiking, and watching my boys play sports.

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

I've had the opportunity to visit many great natural places around the US, and my favorite memories are from the times I was outdoors, enjoying the natural wonders, and watching wildlife. I've been fortunate enough to visit several wonderful natural places like the Corkscrew Swamp Sanctuary, Okefenokee NWR and Cumberland Island, snorkel in Hawaii and in California, and camp/hike/raft in the Grand Canyon.

*If I could be any animal, I'd want to be my dog. He has the best life! If I had to choose a wild animal, I would want to be a soaring bird. It would be so much fun to be able to fly!*

### **Katie Zeeman**

*What I do for a living:*

I've been a Natural Resource Contaminants Specialist for the US Fish and



Wildlife Service for seventeen years. In that position, I provide technical assistance on fish and wildlife toxicology and ecological risk assessment at Superfund or other contaminated sites, oil and chemical spill response, assessment and restoration of habitat for USFWS trust resources, and actions under the Clean Water Act including consultations in accordance with the Endangered Species Act. Part of the technical assistance has included design and implementation of studies to characterize nature, extent and potential impacts of contaminants on species of concern and their habitats. Currently, I'm involved in design and implementation of numerous investigations, including the seabird component of for a regional monitoring program, and a assessment of wildlife risks for San Diego Bay shallow water habitats. I work with Regional Water Quality Control Boards on cleanup actions and the development of water quality objectives, and I conduct investigations that support habitat management decisions on National Wildlife Refuges in southern California. I also

*Candidate statements continued on next page...*

*Vice Chair Candidate Statements continued from previous page...*

work with NOAA and State partners on development of standard protocols for oil and chemical spill response and assessment of natural resource damages.

*Where I live/work:* I work at the FWS Carlsbad Fish and Wildlife Office in Carlsbad, CA

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

I've been a toxicologist for decades and only recently joined TWS. The Wildlife Toxicology Work Group offers opportunities to interact with colleagues in my specialty, but also within the context of interests of the larger organization. I would like to take this opportunity to become more actively involved with the workgroup, and in fostering interaction between the field of wildlife toxicology and other aspects of wildlife biology.

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

My goal would be to help promote interaction between the work group and TWS as a whole, as well as with other societies that have wildlife toxicology interests (e.g., SETAC). Another goal is to increase awareness of work group science and potential contributions to private organizations and government agencies considering resource certain management actions such as habitat restoration and establishing environmental regulations.

*Some of my personal hobbies include:*

Day hikes, cooking, reading, needlework, listening to live music

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

I don't know that I have a most memorable vacation. But, when I was very young (a long time ago) I went with my mother and my brother on a family visit to Cachoeira do Sul, Brazil. We took a passenger freighter that stopped at a number of islands in the Caribbean. Between the Caribbean islands and Brazil I was introduced to lots of new kinds of wildlife (and parasites), and experienced new sights and smells, including oil on the water. It ignited my lifelong interest in biology, especially in fields relating to fate and effects of chemicals in the environment.

*If I could be any animal, I'd be a horseshoe crab, because, as ancient as they are, they are still around.*

## Candidates for Secretary

Tim Bargar

*What I do for a living:*

**R e s e a r c h**  
Ecotoxicologist – I conduct research in the the effects of contaminants in the environment. My current projects

involve evaluating the risk of pesticides to imperiled species and am beginning to look at the risk of emerging contaminants in coral reefs.



*Where I live/work:* Gainesville, FL

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

I believe it is important to assist resource managers with issues related to the risk of contaminants in the environment. That has been the focus of my research efforts, and it is one of the purposes of the WTWG.

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

My goal for the group is to help resource managers understand that they can come to the WTWG when there are contaminant issues with which they need assistance.

*Some of my personal hobbies include:*

Coaching my son's baseball teams, fishing, golfing

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

My most memorable vacation was several years ago when we went downhill skiing in Steamboat Springs because the mountain scenery was amazing and the skiing was great.

*If I could be any animal, I'd be a river otter because it seems like they are always having fun.*

Andrea Erichsen

*What I do for a living:*

Since March 2013 I have been employed as Faculty at Kauai Community



*Candidate statements continued on next page...*



*Secretary Candidate Statements continued from previous page...*

College under the Chancellor and Vice Chancellor of Academic Affairs. I coordinate a Science Technology Engineering and Math (STEM) grant program aimed at Native Hawaiian students. I manage funds and track goals, objectives and tasks and coordinate special events, trainings, STEM internships and STEM peer and alumni mentors.

However, for most of my professional career (20 yrs), I have made an enthusiastic living as an ornithologist, environmental consultant-ecologist/wildlife biologist, and QA/QC Scientist (gram neg bacteria). I also spent 11 yrs. working as a research assistant and student supervisor at the UC Davis E.P.A. Center for Ecological Health Research studying the physiological and behavioral effects of environmental contaminants on birds. Prior to my current position, I coordinated the planning, analysis, and writing of an island-wide habitat conservation plan (HCP) for listed seabirds that are disoriented by light pollution.

*Where I live/work:* I live in Koloa, HI – on the “garden island” of Kauai.

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

Wildlife Toxicology has always been a primary passion and interest for me since I first realized there was a Superfund Site in my neighborhood in NJ and witnessed the terrible biological effects of an oil spill on the Arthur Kill estuary. As a graduate student, I focused on ecotoxicology. I participated regularly in TWS meetings and workshops in California, but after I moved to Hawaii in 2005, it became harder to participate. I also have been blessed with two small children. Now that my children are older and more independent, I would like to renew and/or expand my involvement in the area of professional development and community service. I would like to connect with peers, and help mentor younger scientists. I enjoy working on teams, taking notes, paying attention to detail, organizing events, and I would like to learn through the process of becoming more actively involved.

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

My goals as Secretary would be to effectively, responsively and reliably support the regular and annual activities of the group as part of TWS, to be responsive to the needs of the group, and to

foster a sense of community within the group and with TWS as much as possible. I also am interested mentoring younger/new wildlife toxicology students and professionals, examining ways to work and contribute to solving environmental problems in today’s “market”, and supporting or fostering any needed professional development for new and continuing Wildlife Toxicologists.

*Some of my personal hobbies include:*

My favorite hobbies include bird watching, botanizing, natural history, ballroom dancing, snorkeling, sea kayaking, cycling, back country skiing (not so much in HI), rock hounding, art history, piano, and ukulele. I am an avid horseman with a passion for dressage and teaching horsemanship to children and adults with physical, mental and emotional challenges. I also have also been a long time foster parent for dogs and cats at the Kauai Humane Society as well as in California. I also am a trained volunteer/respite provider for Kauai Hospice. As a wildlifer, I always find many ways to volunteer with organizations and agencies wherever I live. On Kauai, my children and I volunteering with the HI Monk Seal Hui (Group), Save Our Shearwaters, the Forestbird Recovery Project, Surfrider Foundation, and NOAA.

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

It's tough but I'd have to say Costa Rica because of the incredible biological diversity and wilderness that just blew my mind. I have been there three times (2002, 2003, 2004) and stayed with Tico families while I learned Spanish. I love the people, culture, food, music, and was in heaven amidst the amazing avifauna. I fell in love with orchids at Monteverde and sloths in Cahuita where I helped at a rehab facility. In 2004 my most memorable time was embarking on a pretty risky and challenging expedition to see a Harpy Eagle. Pura Vida!

*If I could be any animal, I'd definitely be a raptor... probably a peregrine falcon because they are top of the food chain (and eat mostly bird vs. snakes, rodents, or monkeys!), they are fast and furious fliers, people think they're awesome, and they migrate. I was a hack site attendant for the Peregrine Fund and could not help but develop a profound admiration and affection for peregrines.*

*Candidate statements continued on next page...*

*Secretary Candidate Statements continued from previous page...*

### Jeff Van Zant

*What I do for a living:*

Associate professor of biology at Hillsdale College

*Where I live/work:*  
Hillsdale, MI

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

I teach a field techniques class and advise many pre-vet and pre-med students. Working in the group allows me to help myself, my students, and, hopefully wildlife.

*As a WTWG officer, what goals do I have for the group?*  
To keep the group viable and relevant.

*Some of my personal hobbies include:*

Making beer, metal detecting, hiking and hunting.

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

The Grand Canyon in 1985 from my motorcycle.

*If I could be any animal, I'd be a bear, because... What could be better?*

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## **New EPA Proposed Revisions to National Water Quality Criteria for Selenium**

EPA last revised national water quality criteria for selenium in 1987. In 2004 EPA proposed a new fish-tissue-based approach to setting selenium criteria, but ultimately withdrew that proposal after receiving public comments.

Last May, EPA released a revised fish-tissue-based approach to setting national water quality criteria for selenium. The initial 60-day public comment period on the new 637-page proposal closed July 28th. EPA's proposal, along with initial public comments, will now be provided to an

independent expert peer review panel. Upon completion of the expert peer review, EPA will revise the proposal and offer a final 60-day public comment period on the revised proposal (this next public comment period is expected to occur near the end of this calendar year).

The new proposal is constructed around a proposed fish tissue chronic criterion for eggs and/or ovary tissue in recognition that reproductive toxicity is the most sensitive endpoint. Tissue chronic criteria for fish whole-body and fish muscle are tiered off of the egg/ovary criterion. Likewise, separate chronic water-based criteria for lotic and lentic waters are also tiered off of the egg/ovary criterion.

The new proposal includes a first of its kind innovative non-traditional approach to setting an acute water-based criterion; an approach that addresses the fact that traditional methods for deriving acute criteria are not valid for strongly bioaccumulative pollutants such as selenium. Another major departure from the 2004 proposal for selenium criteria and from virtually all other water quality criteria documents currently on the books is the use of EC-10 point estimates of toxicity, rather than EC-20 point estimates, for the purpose of constructing the chronic toxicity database. The new proposal still does not include national guidance on how to implement a fish-tissue-based chronic criterion. The new proposal also still does not address protection of aquatic-dependent wildlife, although EPA announces in the proposal that they are considering preparation of national wildlife criteria for selenium in the future.

EPA's proposal and the initial review comments that have been posted so far can be viewed on EPA's docket for this proposal:

<http://www.regulations.gov/#!docketDetail;D=EPA-HQ-OW-2004-0019>

As of August 4th, review comments submitted by the USFWS had not yet been posted to the docket. Anyone wishing to view those comments can either wait until EPA posts them or can send an email to: [Joseph\\_Skorupa@fws.gov](mailto:Joseph_Skorupa@fws.gov).



Thank you to the following contributors to this newsletter.

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- Joe Skorupa
- Don Sparling
- Jeff Van Zant
- Louise Venne
- Katie Zeeman

**WTWG Executive Board**

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| Vice Chair of Communication | Stephanie Baker | <a href="mailto:stephaniebaker@gmail.com">stephaniebaker@gmail.com</a> |



**WTWG NEWSLETTER NOTES**

The WTWG newsletter is a quarterly publication. Email contributions 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://wildlife.org/toxicology/index.php>

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Louise Venne, *Editor*