

# Wildlife Toxicology Working Group Newsletter

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Given the turn of events, we have decided to postpone the board meeting, i.e., it will not be held at the TWS meeting. We will hold the meeting by conference call as soon after the conference as the federal government is back in action. I will notify the membership. I will be in touch next week to set up a call for the meeting. - Jeff



## From the Chair

**Jeff Levensgood**

[jleven@inhs.uiuc.edu](mailto:jleven@inhs.uiuc.edu)

Well, from the just when you thought it couldn't get any worse department... Shutdown! As I am writing this the media of rife with news of the federal government shutdown and emails to federal colleagues are bouncing back with notices of closed offices and furloughs. The 800,000-odd federal employees not at work today include many of our colleagues here in WTWG and TWS. In addition to their unintentional sacrifice, others of us could see interruptions in funding, professional interactions, services, and other things we depend on to do our jobs effectively. If this government shutdown goes on for very long, the TWS conference next week will be less well attended; although university, state, and private folks will attend, the absence of our federal brethren will bring disappointment along with the disruption of schedules and planning.

Where am I going with this, rather than just telling you what you already knew and spreading doom and gloom? We know that in spite of such difficulties we as a group will persevere. The environment, biota, public, and the earth depend on us. I wonder if there is professional field with more-dedicated individuals than resource conservation/environmental protection. We will face funding irregularities, shifting political winds, government shutdowns, and all sorts of challenges with the will that comes from knowing we are doing important work that is right and necessary. *ne paveas!*

For those of you attending the 20th annual TWS conference in Milwaukee, Wisconsin next week, please note that there is a symposium "Impacts of Lead Ammunition and Fishing Tackle" at 8:30-12:20 on Sunday the 6th, and contributed paper sessions "Wildlife Disease and Toxicology" scheduled for 8:30-10:10 and 1:30-5:20 on Tuesday the 8th. On a disappointing note, our workshop "Pollutants and Wildlife Management", scheduled for Saturday the 5th, had to be cancelled due to too few registrants. Special thanks to members Tim Barger, Joe Sullivan, Brian Hiller, Katrina Leigh and Louise Venne for the work they had into planning the workshop. Hope to see some of you in Milwaukee!

## Newly Elected WTWG Executive Board Officers

In accord with the Charter of the WTWG, we held our annual election for Executive Board Officers. Elections were held August 4th to Sept. 3rd. The results are as follows: Louise Venne was elected as Chair-Elect, Katrina Leigh was elected to Vice Chair, and Stephanie Baker was elected as Treasurer. We thank all candidates for agreeing to run for office and for taking the time to prepare candidate statements.

Aside from the newly elected Executive Board Officers, for the forthcoming year Brian Hiller will transition to-Chair and Jeff Levengood to Past-Chair. Tom Augspurger completed his term as Past-Chair, Deb Rudis completed her term as Treasurer and Tim Bargar completed his term as Vice Chair. We thank all of them for serving our WTWG

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## Member Publications

Hinck, J.E., G. Linder, J.K. Otton, S.E. Finger, E. Little, and Donald E. Tillitt. 2013. Derivation of soil screening thresholds to protect chisel-toothed kangaroo rat from uranium mine waste in northern Arizona. *Archives of Environmental Contamination and Toxicology* 65:332-344.

Levengood, J., D. Soucek, A. Dickinson, G. Sass, and J. Epifanio. 2013. Spatial and interspecific patterns in persistent contaminant loads in bighead and silver carp from the Illinois River. *Ecotoxicology* 22(7): 1174-82. <http://dx.doi.org/10.1007/s10646-013-1105-6>

Rattner, B.A., R.S. Lazarus, G.H. Heinz, N. Karouna-Renier, S.L. Schultz, and R.C. Hale. 2013. Comparative embryotoxicity of a pentabrominated diphenyl ether mixture to common terns (*Sterna hirundo*) and American kestrels (*Falco sparverius*). *Chemosphere* 93:441-447.

*Abstract* - Concentrations of polybrominated diphenyl ethers (PBDEs) in Forster's tern (*Sterna forsteri*) eggs from San Francisco Bay have been reported to range up to 63  $\mu\text{g g}^{-1}$  lipid weight. This value exceeds the lowest-observed-adverse-effect level (1.8  $\mu\text{g g}^{-1}$  egg wet weight;  $\sim 32 \mu\text{g g}^{-1}$  lipid weight) reported in an embryotoxicity study with American kestrels (*Falco sparverius*). As a surrogate for Forster's terns, common tern (*Sterna hirundo*) eggs were treated by air cell injection with corn oil vehicle (control) or a commercial penta-PBDE formulation (DE-71) at nominal concentrations of 0.2, 2, and 20  $\mu\text{g g}^{-1}$  egg. As a positive control, kestrel eggs received vehicle or 20  $\mu\text{g DE-71 g}^{-1}$  egg. In terns, there were no effects of DE-71 on embryonic survival, and pipping or hatching success; however, treated eggs hatched later (0.44 days) than controls. Organ weights, organ-to-body weight ratios, and bone lengths did not differ, and histopathological observations were unremarkable. Several measures of hepatic oxidative stress in hatchling terns were not affected by DE-71, although there was some evidence of oxidative DNA damage (8-hydroxy-deoxyguanosine; 8-OH-dG). Although DE-71 did not impair pipping and hatching of kestrels, it did result in a delay in hatch, shorter humerus length, and reduced total thyroid weight. Concentrations of oxidized glutathione, reduced glutathione, thiobarbituric acid reactive substances, and 8-OH-dG in liver were greater in DE-71-treated kestrels compared to controls. Our findings suggest common tern embryos, and perhaps other tern species, are less sensitive to PBDEs than kestrel embryos.

## Member News

**Don Sparling** has recently submitted the last chapters for a textbook entitled Administration of Natural Resources to be published by Elsevier. The book is geared for courses in wildlife, environmental science, forestry and other disciplines that require at least one course in administration. The book includes both the United States and Canada. It contains chapters on the history of natural resource conservation, especially wildlife in both nations; the structure mission, and function of federal, state and provincial conservation agencies; non-governmental organizations; the budget processes and funding of conservation; the need for public relations; profiles on users or stakeholders in natural resources; extensive descriptions of relevant conservation laws; and personal insights after working for more than 22 years for the federal government and teaching wildlife administration for 10 years afterwards.

**Jeff Levensgood** gave a presentation entitled "The role of ecotoxicology in ecosystem health: Challenges in the 21st century" as part of a symposium on conservation medicine at the 2013 International Congress for Conservation Biology held July 21-25 in Baltimore, MD. Sponsored by the Society for Conservation Biology, 1500 conservation biology professionals from around the globe attended the Congress. Val Beasley (UIUC) and **Barnett Rattner** (USGS) were co-authors on the presentation.

## ANNOUNCEMENT

### Raptors of the Northwest Symposium

February 5-7, 2014; Pasco, WA

The **Raptors of the Northwest Symposium** (RNWS) will be part of a Joint Meeting with several other meetings and symposia, including the annual meeting of the TWS Washington Chapter and the 4th International Burrowing Owl Symposium. The specific dates for the Raptor Symposium are February 5-7, 2014; other meetings/symposia will overlap and/or extend past these dates. The venue will be the Red Lion, in Pasco, WA, which is ¼ mile from the Pasco Airport.

The geographic areas to be focused on during the raptor symposium are the NW U.S. states, including Alaska, and the Western Canadian Provinces. Both diurnal and nocturnal raptors will be addressed. The theme is "**Linking Raptor Research to Critical Conservation and Management Needs.**"

We want there to be widespread and diverse geographical and organizational involvement and support from as many agency, academic, NGO, and other land management stakeholder groups as possible; so if you have suggested contacts, we would welcome them.

For more information on the Joint Meeting, or to submit an abstract (for all meetings), please see <http://wildlife.org/washington/sites/wildlife.org.washington/files/images/2014%20Joint%20Meeting%20Call%20for%20Papers.pdf>. Please specify that you are interested in the RNWS.

Jeffrey L. Lincer, Raptor Symposium Organizer  
SoCal Chapter Rep. to TWS WS  
[JeffLincer@gmail.com](mailto:JeffLincer@gmail.com); (619) 668-0032



Thank you to the following contributors to this newsletter.

Jo Ellen Hinck  
 Jeff Levensgood  
 Barnett Rattner  
 Don Sparling

**WTWG Executive Board**

|                             |                 |                                                                        |
|-----------------------------|-----------------|------------------------------------------------------------------------|
| Chair                       | Brian Hiller    | <a href="mailto:bhiller@bemidjistate.edu">bhiller@bemidjistate.edu</a> |
| Chair-Elect                 | Louise Venne    | <a href="mailto:lsvenne@gmail.com">lsvenne@gmail.com</a>               |
| Past Chair                  | Jeff Levensgood | <a href="mailto:jleven@inhs.uiuc.edu">jleven@inhs.uiuc.edu</a>         |
| Secretary                   | Carrie Marr     | <a href="mailto:Carrie_Marr@fws.gov">Carrie_Marr@fws.gov</a>           |
| Treasurer                   | Stephanie Baker | <a href="mailto:stephaniebaker@gmail.com">stephaniebaker@gmail.com</a> |
| Vice Chair                  | Beth MacCallum  | <a href="mailto:ovis@telusplanet.net">ovis@telusplanet.net</a>         |
| Vice Chair                  | Katrina Leigh   | <a href="mailto:kleigh@environcorp.com">kleigh@environcorp.com</a>     |
| 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 December 31 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*