



Summer 2017

Special points of interest:

- **WDWG Board Elections**
- **Herpetofauna Disease Alert System**

The Vector Timeline

Fall (Vol. 11, Iss. 3)	Winter (Vol. 11, Iss. 4)
Submissions Due 15-Sep-17	Submissions Due 15-Dec-17
Publication Date 29-Sep-17	Publication Date 29-Dec-17

The editors of The Vector welcome your contributions. If you wish to submit an article, but suspect you will not quite make the deadline, please contact Samuel M. Goldstein.

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Your membership in the WDWG can only be obtained by joining and renewing your annual TWS Membership each year. At the time that you join simply indicate that you want to be a member of this working group on the TWS application. Membership dues are \$5.

With your membership you will receive our quarterly newsletter to keep up-to-date with our group business and the most current disease issues. Your membership also provides an opportunity to work closely with other wildlife disease professionals.

The Vector

The Newsletter of The Wildlife Society
Wildlife Diseases Working Group

From the Chair:

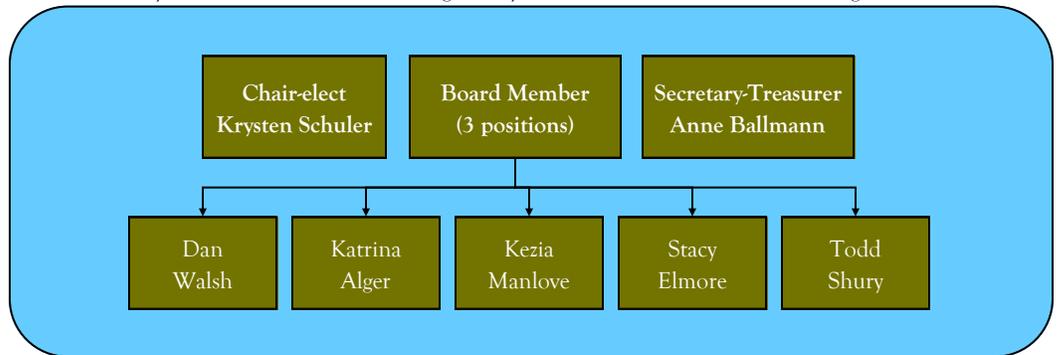


Happy summer! It seems as though work used to slow down in the summer, but at least for me that certainly isn't the case these days. And this year, we have one more exciting event to add to our summer: the annual conference of the Wildlife Society. I hope you'll be able to attend the conference September 23rd-27th in Albuquerque, New Mexico. There are always a great number of sessions, workshops, and receptions to attend; and of course, networking with old colleagues and meeting new friends. Our working group is a proud sponsor of two workshops this year. Board member Michelle Verant and Secretary-Treasurer Anne Ball-

mann are organizing *Bat White-Nose Syndrome: Best Practices for Surveillance and Management*, and we are partnering with our colleagues with the American Association of Wildlife Veterinarians in sponsoring *Free-Ranging Wildlife Health, Disease and Mortality Investigation – From Outbreaks to Surveillance*. Then, from 7:00-9:00PM on Tuesday, September 26th, we'll gather for our annual WDWG meeting. It will be a chance to meet current Officers and Board Members, and find out who your new officers and board members will be! I look forward to seeing you in Albuquerque. If you can't join in person, keep up with the working group's activities in The Vector, on our website, and now on Facebook at <https://www.facebook.com/TWSWildlifeDiseases>.

WDWG Holds Board Member Elections Learn About the Candidates on Page 3

The Nominations and Elections Committee of the Wildlife Diseases Working Group (WDWG) has lined up a slate of candidates for upcoming elections to fill the Chair-elect, a Secretary-Treasurer, and three Board positions. The polls are open now and will close at 11:59 pm on August 23rd. Please vote at the election website: <https://www.surveymonkey.com/r/QJRJY2W>. And don't forget to vote on the changes to the WDWG Bylaws! An email with the changes for your review was disseminated on August 2nd.



Don't Miss Out! TWS Annual Conference September 23, 2017

The WDWG is supporting a workshop entitled "Free-Ranging Wildlife Health, Disease and Mortality Investigation—From Outbreaks To Surveillance" to discuss the salient points of disease investigation, e.g., how to approach cases with legal implications, how to collect environmental data, appropriate and safe biological sample collection and storage, and advances in diagnostic assays. The objective will be to provide biologists general training for safe and systematic wildlife health investigations.

Recently Formed Team Develops Herpetofauna Disease Alert System

by Tracy Thompson



With disease at the forefront of herpetofaunal decline issues, the Partners in Amphibian and Reptile Conservation (PARC) formed the Disease Task Team (DTT) to facilitate and guide communication and collaboration on herpetofaunal diseases among PARC regions, Federal and State agencies, and other partners. Today, the DTT is comprised of 16 experts from the United States, Canada, and Mexico, and is focused on executing strategies to forestall disease impacts.

To facilitate communication with the relevant authorities, the DTT created the Herpetofauna Disease Alert System

(HDAS). The HDAS involves submitting a report of a disease event (see information below) to the DTT, a panel of experts reviews the submission, and the appropriate authorities will be notified. In some cases, the DTT may provide information on possible causes for reported concerns, but primarily will act to connect individuals that might see problems in the field with those experts and authorities who can provide an appropriate and timely response.

When an agency or authority is contacted, the response and decision to communicate with others is theirs to make – the DTT is

only a conduit, but can serve as consultants or subject matter experts if asked.

Many in the wildlife community have assisted in developing the contact list for HDAS referrals which includes State, Federal, and Provincial representatives with interest in and/or authority for herpetofaunal disease response. A survey will be distributed soon to specific entities and authorities to continue to refine this list.

We invite any of our colleagues with expertise and interest in identifying and responding to herpetofaunal disease concerns to provide input to the DTT on this alert system, and if you would be interested in serving as a point of contact. For more information regarding who is notified upon receipt of a valid report, please contact the DTT at:

<http://www.parcplace.org/parcplace/resources/disease-task-team.html>.

To submit an observation of a possible disease case in amphibians or reptiles, simply send an email to: herp_disease_alert@parcplace.org.

IMPORTANT: Include in your email:

1. Your name and e-mail address (for any follow-up questions);
2. Date of observation;

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Call for Written Contributions to The Vector

The Wildlife Diseases Working Group is just one of 27 working groups in TWS, but it has one of the largest memberships—close to 200!! You should be proud to be part of a group with such a dedicated group of researchers, biologists, managers, students, and others who have a commitment to furthering our mission. That being said, let's share our knowledge and passion with each other!

Each quarter, the WDWG distributes The Vector showcasing the wonderful work of our students, ongoing research, and current topics related to wildlife disease. We need your help!! With writings contributed from our large and diverse membership, we can supplement the content of The Vector and augment the number of informative articles disseminated through the newsletter. This is an opportunity for you to share information on a topic you find important and valuable to our members.

Please consider providing a short article about your profession or path to becoming a wildlife disease expert, major projects, research findings, or a hot topic in the wildlife disease field. Senior-level professionals may feel free to share lessons learned in their career to benefit students and early career professionals. Please encourage your students or technicians to do the same. Articles are not only a great way to share your current work, but they can also open doors for future collaboration. Articles need not be long or formal, and will go through an editing process by the editors and/or Student Affairs Committee upon submission. We encourage you to submit a few photos to accompany your writing.

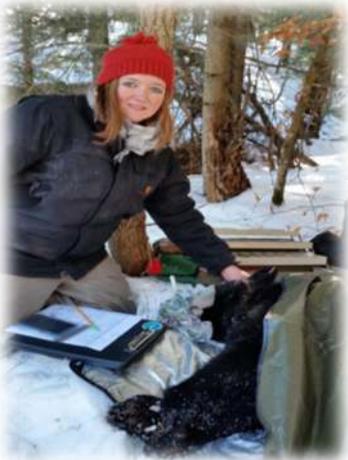
Please jump at this opportunity to get involved, give back to your profession, share a little bit about what you do, and help shape your working group for the future. Inquiries and articles can be submitted at any time to Sam Goldstein (Samuel.M.Goldstein@aphis.usda.gov) or Brianna Williams (williamsbriannam@gmail.com).

Election Excitement!!

Candidate for Chair-elect:

Krysten Schuler

I am a wildlife disease ecologist interested in the health of wildlife populations and associations with human and domestic animal activities and diseases. My focus is conserving free-ranging species for current and future generations' use and enjoyment. This involves a multi-disciplinary approach involving risk analysis, field studies, human dimensions, and laboratory experiments. As the co-director of the Cornell Wildlife Health Lab, I work closely with the New York State Department of Environmental Conservation on their wildlife health program. Prior to relocating to New York, I served as a field epidemiologist with the U.S. Geological Survey - National Wildlife Health Center in Madison, Wisconsin investigating



wildlife mortality events and training biologists in wildlife health around the country.

I am a charter member of the Wildlife Disease Working Group and have served two-terms previously on the Board so I appreciate the importance of this body to TWS and wildlife conservation. One of the things I enjoy most is working with wildlife professionals and the public on wildlife health and understanding the contributing factors to disease outbreaks. Increasing my involvement in the working group will allow a greater opportunity for outreach in TWS. My goal is to move the need in wildlife health from an attitude of helplessness or apathy to a precautionary principle (prevent introduction of new pathogens that may represent a risk for wildlife without delaying action until scientific consensus is available) that involves all affected parties and examines a suite of options for risk mitigation. One of the themes I've recently been exploring is the public trust responsibilities of agencies in addressing wildlife health as part of their mandate to protect both present and future resources. I think this could be a powerful tool for the Working Group to use in advancing our mission.

Candidate for Secretary-Treasurer:

Anne Ballmann

I am a wildlife disease specialist/field epidemiologist at the USGS-National Wildlife Health Center (Madison, WI), a federal diagnostic and research laboratory dedicated to assisting state, federal and tribal management agencies investigate disease in free-ranging North American wildlife. I earned my DVM at the University of Tennessee-Knoxville and my PhD in Comparative Medicine-Population Health at North Carolina State University (Raleigh). I am actively involved in research and multi-agency coordination for bat white-nose syndrome (WNS) and currently serve as the Lead for the WNS Diagnostic Work-



ing Group as well as on the WNS National Coordination Team. In addition to TWS, I am a member of the Wildlife Disease Association, the American Association of Wildlife Veterinarians, and the American Veterinary Medical Association. I have participated as an instructor or co-organized several wildlife disease workshops and symposia sponsored by the Wildlife Diseases Working Group (WDWG) at annual TWS Conferences as well as workshops sponsored by the Wisconsin Chapter of TWS. I am currently serving my first term as the

WDWG Secretary-Treasurer and would welcome the opportunity to continue serving the organization in this capacity for a second term.

Candidate for Board Member:

Dan Walsh

Greetings! My name is Dan Walsh and I am a quantitative ecologist at the USGS National Wildlife Health Center. My research interests involve quantitative aspects of disease ecology with a special focus on spatial epidemiology. I work on a suite of wildlife diseases including bighorn sheep respiratory disease, chronic wasting disease, Newcastle disease, plague and others. I received a B.S. and Ph.D. in Fisheries and Wildlife from Michigan State University; a M.S. from Colorado State in Fish and Wildlife Biology; and a M.S. in Statistics from Michigan State University. I have been involved with TWS and the Wildlife Disease Working Group (WDWG) for some time, but I have not previously served in a leadership role with WDWG. I am interested in serving

with the WDWG because I strongly believe in the importance of its mission, and feel that contributing my time, enthusiasm and energy to the activities of the WDWG is a means to help fulfill it. If elected I will work diligently to meet the needs of WDWG members and address disease issues facing the wildlife profession.



(Continued on page 4)

Election Excitement!!

Candidate for Board Member:

Katrina Alger



I am an early career professional in the field of wildlife disease research and management. I have an MS in conservation biology from the State University of New York College of Environmental Science and Forestry (SUNY-ESF), where I managed a collaborative research project between SUNY-ESF, Cornell University, and the New York Department of Environmental Conservation. Our work explored the diagnostics and epidemiology of lymphoproliferative disease virus in wild turkeys and investigated the potential role of this pathogen in

the decline of turkey populations in New York State. Since graduating in 2015, I have worked as a biological science technician at the National Wildlife Health Center in Madison, Wisconsin, as part of the joint USDA-USGS national avian influenza surveillance project. I was also recently selected as a finalist for the Presidential Management Fellowship, and hope this unique opportunity will allow me to continue developing my leadership skills within the realm of wildlife and disease management. I have been an active member in TWS and the working group since 2013, and served as the student representative to the WDWG board for two years. I have a special interest in interdisciplinary approaches to wildlife health and, if elected, would like to help the working group look for new ways to engage professionals from other fields (both within the TWS community, and externally) on this topic. I am passionate about supporting the mission of the working group, and proud of the voice we have had in national conversations regarding disease management. Serving this fantastic organization is an honor and I am excited for the opportunity to step back into a more active role.

Candidate for Board Member:

Kezia Manlove

I am a disease ecologist and biometrician who lives and works in Bozeman, MT. She has a B.A. in biological modeling from St. Olaf College in Northfield, MN, and an M.S. in statistics from Montana State University. By October, she hopes she will also have a Ph.D. in biology from Penn State, focused on pneumonia dynamics in bighorn sheep. Following defense, she will start a postdoctoral position with the USDA, USGS, and Washington State University studying the relative value different data streams (spatial, cross-sectional, captive trials, wild longitudinal, etc.) bring to disease management at the livestock/wildlife interface. Her work on the bighorn system involved close collaboration with veterinarians, agency wildlife biologists, and academics, and drove her interest in disease research and communication across the participating disciplinary interfaces. The less-sheepy aspects of her research focus on predicting wildlife contact structures using readily available data

sources, and understanding the long-term dynamics of chronic pathogens. Kezia spends her (mostly hypothetical) free-time trail running, skiing, and enjoying the Montana side-country with the all the other Bozeman ex-urbanites. She regularly attends national and chapter TWS meetings, and would be very excited for an opportunity to serve on the Wildlife Disease Working Group board.



Candidate for Board Member:

Stacy Elmore

I began working in wildlife disease research in 2005 as a student volunteer at USDA/APHIS/WS National Wildlife Research Center. I completed a BS in wildlife biology and a MS in ecology at Colorado State University, followed by a PhD in Veterinary Microbiology at the University of Saskatchewan. My research experience includes studying the ecology of *Toxoplasma gondii* in the remote Canadian Arctic, and more recently, the ecology and management of wildlife rabies in



North America. I am a 2017 fellow in TWS Leadership Institute and I am currently helping the WDWG board organize a publication for the Wildlife Professional. I am interested in running for a Board Member position with the WDWG so that I can learn leadership and communication skills from more seasoned wildlife disease professionals, and also add my voice to the working group as an early career professional.

Election Excitement!!

Candidate for Board Member:

Todd Shury

Hello, my name is Todd Shury and I would like to include my name as a potential candidate for a position on the Wildlife Disease Working Group board. I have been the sole wildlife veterinarian for the Parks Canada Agency for the past 12 years based out of the Western College of Veterinary Medicine in Saskatoon, Saskatchewan, Canada. I have a DVM from the same institution and a PhD in epidemiology (University of Saskatchewan as well), where I am also an adjunct professor in veterinary pathology. I work closely with other wildlife agencies in Canada on infectious diseases of wildlife including bovine tuberculosis, brucellosis, chronic wasting disease, white-nosed syndrome and sylvatic plague. I also work closely with the Canadian Wildlife Health Cooperative (CWHC) where I am an associate member and was previously an associate veterinarian with



the Calgary Zoo for six years. I am a fairly recent member of the TWS and WDWG and became a member after attending the annual conference in Winnipeg in 2015, but have been involved with other wildlife disease organizations including the Wildlife Disease Association, American Association of Wildlife Veterinarians and the Canadian Association of Zoo and Wildlife Veterinarians (past president) for many years. I would like to help the working group achieve its goals of facilitating information exchange and communication with other organizations and agencies involved in prevention, research, surveillance and management of wildlife diseases in North America. I think I can bring a unique Canadian perspective that will help increase the effectiveness and broaden the reach and perspective of the working group. I hope you will allow me to sit on the board and I look forward to help the working group achieve some of its objectives in the future.

Herpetofauna Disease Alert System (Cont.)

3. What you saw;
4. Where it was;
5. What types of animals were involved: species (if you are sure of the identification) and life stage (eggs, larvae, subadults, adults);
6. Whether or not it is ongoing (only dead or decayed animals, some sick-looking animals that are alive); and,
7. Any photos or other relevant information.

The Federal, State, or Provincial contacts for herpetofaunal diseases will be alerted, and they may contact you for additional information. Following the report, the managing agency will make a decision on whether a follow-up action is needed. The HDAS will facilitate early detection and rapid response actions, where possible. It will also aid our understanding of the scope and severity of emerging infectious diseases. Thank you in advance for your help to keep our herps healthy!

In addition to the HDAS, the PARC DTT has produced a number of outreach resources, which are available on their website, including a recent publication providing guidance on how to design field surveillance studies for herpetofaunal pathogens (Gray et al. 2017).

Gray, M. J., A. L. J. Duffus, K. H. Haman, R. N. Harris, M. C. Allender, T. A. Thompson, M. R. Christman, A. Sacerdote-Velat, L. A. Sprague, J. M. Williams, and D. L. Miller. 2017. Pathogen surveillance in herpetofaunal populations: guidance on study design, sample collection, biosecurity, and intervention strategies. *Herpetological Review* 48:334-351. (available online at: <http://parcplace.org/parcplace/images/stories/pdfs/Grayetal2017.pdf>)

WNS Workshop at the TWS Conference

Registration is open for the Bat White-nose Syndrome Workshop on Saturday, Sept 23rd sponsored by the WDWG, USGS National Wildlife Health Center, National Park Service, and Bat Conservation International. This workshop will provide knowledge and hands-on training from topic experts on WNS surveillance, sampling techniques, and decontamination procedures. Management alternatives for minimizing impacts to bat populations and reducing spread of the disease will also be discussed with participation from multiple State and Federal agencies involved in WNS response efforts. <http://twsconference.org/workshops/>



Photo: Al Hicks



Officers and Board Members

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Richard Chipman (Past-Chair) Richard.B.Chipman@aphis.usda.gov
Anne Ballmann (Secretary/Treasurer) tws.wdwdwg@gmail.com

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Newsletter Editor: Sam Goldstein Samuel.M.Goldstein@aphis.usda.gov
Webpage Editor: Stacy Samuelson desert_bnd@hotmail.com

Mission Statement

The mission of the Wildlife Diseases Working Group is to promote better scientific understanding of the causes and consequences of disease in ecosystems and wildlife populations; to apply the principles of wildlife science, ecology, and epidemiology to the prevention and management of diseases in wildlife; to foster education and transfer of information on diseases to wildlife management professionals and the public; and to apply this knowledge to enhance the health and conservation of wildlife populations and their interactions with humans and domestic animals.

Have you worked on a wildlife disease research project?
Have you engaged in a wildlife-related veterinary externship?
We want to hear about it!

Here is a short list of all the things we like to publish right here in The Vector:

- Abstracts or summaries and URL for recently published articles
- Summaries of ongoing research or management projects
- Field observations and photos with captions
- Press releases of scientific articles
- Meetings and conferences
- Lessons learned from your project or career

We accept topics from all-comers: students, technicians, biologists, managers, researchers, etc.

**For student and postdoctoral authors whose article gets published in The Vector, the WDWG is happy to sponsor a 1-year membership to both TWS and WDWG!

Interested in learning more?

Contact the WDWG Student Affairs Committee Chair:

Brianna Williams: williamsbriannam@gmail.com

