

# NEWSLETTER



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EWDA Student Chapter Update







We are looking to improve the newsletter and we are open to suggestions! Please contact the editors if you have ideas

(contact details on the last page of this newsletter)



# President's corner

Another year is coming to its end, and as usual, it is an opportunity to look back and to plan for the future. I have personally had the great honor to be nominated and elected as chair of our association, and I would like to warmly thank you all for your support, and also thank the past and new board members for their commitment. It is very lucky to be able to count on competent, enthusiastic and efficient colleagues ready to do more work than their routine for the benefit of the EWDA.



Right after I officially took over the chair position at the conference in Berlin, several participants came to me to express their expectations or give me recommendations. I was told, more or less seriously: «you should solve all problems», «you can do whatever you want», «whatever you do, it will be appreciated», «you will have a challenging job, because the level of the conference has decreased»; and I was given a number of ideas about potential future workshops and conference topics. There were also people mentioning their interest to become more actively involved in the EWDA, and people who wished that the EWDA would become more visible. This sounded like a lot!

I thought about the conference, which emphasised the topic of wildlife conservation, in particular negative anthropogenic influences on wildlife health. It was characterized by a larger number of presentations on small scale studies and reports on unusual pathological findings compared to conferences of the past years; it was not only about infections but also about poisoning, habitat loss and reproduction failure, and «big diseases» were less represented. It addressed the health of the planet and of wildlife as a whole rather than focusing on infectious disease disasters at the wildlife-livestock-human interface. I wondered how many of us can afford to put conservation in their work priority list and how much funding is attributed to health issues relevant only to nature conservation.

I thought about the advantages of being an EWDA member. The EWDA is such an open association that all newsletters and proceedings are publicly accessible, and it is even possible to become a member of the EWDA network without being an EWDA member. I thought about the lack of general wildlife health surveillance programmes in Eastern European countries and the small number of EWDA members in these regions. I wondered how the EWDA could become more attractive and visible.

I also thought about the expectations and good will of so many members. I wondered how to go forward, as a team. Overall, we describe many problems, but we speak too little about solutions. I thought that a question we should address more is "How to make a difference?"

The EWDA board has decided to soon offer two small grants. Thanks to our current and past treasurers, the association can now afford this. There will be one research grant dedicated to a health topic relevant to wildlife conservation; and one grant fostering activities in wildlife health in Eastern European countries. The main applicants will have to be EWDA members, and the EWDA support will have to be acknowledged wherever appropriate. And EWDA members will be asked to help evaluating the grants. Is it a drop in the ocean? Yes of course. But would there be an ocean without many drops? And doesn't a drop make a difference for those who have no water?



Marie-Pierre Ryser

EWDA president

FIWI, University of Bern

I wish you a happy new year 2017!



# **News from the Board**

Winter is coming. Not in the sense that the Game of Thrones fans may be thinking of. But more in the literal sense of : it's getting cold! But your newly elected board is far from going into hibernation.



Only a few days after the Berlin conference, our new chair was bustling with new ideas and projects for the board and we got to work immediately and held a teleconference mid November.

- ★ First exciting perspective is the creation of two small grants that will be encouraging research in wildlife conservation and participation by researchers from the eastern European countries. These grants will be supervised respectively by Andrew Breed (research advisor to the board) and Marie-Pierre Ryser (chair) and Karoly Erdelyi and Gabor Czirjak (Eastern countries liaison officers). The guidelines of the grants are currently being worked on and should be finalized by next Spring. The goal is for all grant recipients to present their work at the upcoming 2018 conference in Greece. A committee will be put together to review applications and decide how to allocate funds. Nomination for the committee members will be made by the chair, Marie-Pierre Ryser, and vice-chair, Erik Agren, based on recommendations from the board.
- ★ As presented at the Berlin conference, the EWDA network is evolving and is looking to become established in the long term within the EWDA. As a first step, the ad hoc committee has been officially made into a permanent committee by the board. This means members of the committee will be nominated, by the chair and vice-chair, for a three year term. Current members of the ad hoc committee will be asked whether they want to stay on or not and new members will be recruited by the nomination committee. This is a great time to make yourself known if you want to become involved in one of the most rewarding initiative of the EWDA as of yet. In the meantime, transfer of the Wildlist to the EWDA website is ongoing under the supervision of Rogier Bodewes.
- ★ The student chapter is going strong, working hard on the upcoming student workshop, for which they have received full support from their new student advisor, Lineke Begman. They now also have their own bank account which allows them to manage their funds alone, with the gracious supervision of our treasurer, Philippe Berny. More about how you can help the students in their endeavours in their section of this newsletter.
- ★ Last but not least, if you have not noticed in the latest WDA newsletters, there are four open positions in the WDA board, which are vice president, secretary, treasurer and council. WDA is encouraging participation of Europeans in the WDA board, so if you or someone you know are looking to become involve, now is the time! If you want to know more about this, do not hesitate to contact Dave Jessup, manager of the WDA (wda.manager@gmail.com).

Winter is coming, but look out for Spring:

we will have many exciting new things to announce!



Karin Lemberger
EWDA Secretary
Faunapath and
Vet Diagnostics, France



## Influenza A(H5N8) strikes again...

Avian influenza A viruses continue to circulate worldwide, affecting both animal and human health. After an outbreak of highly pathogenic avian influenza virus (HPAIV) clade 2.3.4.4 A(H5N8) virus among poultry in South Korea in January 2014, the virus spread worldwide in 2014 -2015, with a major role for migratory wild birds (<u>Science, 2016</u>). Currently, Autumn-Winter 2016, HPAIV A(H5N8) is circulating again among wild birds in Europe, killing thousands of wild birds and with transmission to high numbers of poultry farms in various countries as a result.





Dead tufted ducks along the waterside, the Netherlands (Source: Roy Slaterus, SOVON)

#### **HPAIV H5N8 in poultry**

The first confirmed case of HPAIV H5N8 among poultry was a turkey farm in Hungary, November 3, 2016 (www.efsa.europa.eu/sites/default/files/4687.pdf).

HPAIV H5N8 has now been detected in over 150 poultry farms holding geese, domestic ducks, chickens and guinea fowl in various European and African countries. The wide distribution of HPAIV H5N8 among wild birds clearly indicates that effective biosecurity measures are key in prevention of transmission of HPAIV H5N8 from wild birds of poultry during the current outbreak.

#### **HPAIV H5N8 in wild birds**

The first case of HPAIV H5N8 of this autumn was a mute swan (Cygnus olor) that was found dead in Hungaria on October 19, 2016. Subsequently, HPAIV H5N8 was detected in wild birds of various European and African countries (www.efsa.europa.eu/sites/default/files/4687.pdf). Compared to the outbreak in 2014-2015 in Europe, the pathogenicity of the currently circulating HPAIV 2016 virus seems to be higher; mass mortality outbreaks among several wild bird species have been reported. A complete overview of wild birds in which HPAIV H5N8 has been detected during the current outbreak can be found on (https://sites.google.com/site/ewdawebsite/wildbirds-with-hpai-h5n8). Neurological signs have also been observed in a number of wild bird species. Of interest, a HPAIV H5N5 reassortment has been detected recently in a dead tufted duck (Aythya fuligula) in the Netherlands. Phylogenetic analyses and data about mechanisms of transmission from wild birds to poultry are needed to understand the exact routes of spread and transmission of the current HPAIV H5N8. From a wildlife health perspective, it is relevant to understand the impact of this outbreak on wild bird populations for now and the future.



Tufted duck with torticollis, the Netherlands (Source: Roy Slaterus, SOVON)







# **African Swine Fever: ASF-STOP Conference and Events**

African Swine Fever can have devastating effects causing massive loss of pigs and high economic impact due to trade restrictions and costly control and eradication programmes. ASF has been present in Russia and neighbouring countries since 2007 and entered the European Union (EU) in 2014, affecting the three Baltic States and Poland. Wild boar has a key role in the epidemiology of ASF.



The COST Action ASF-STOP together with the National Veterinary Research Institute of Poland (<a href="http://www.piwet.pulawy.pl/">http://www.piwet.pulawy.pl/</a>) organised the conference "African swine fever - recent research advances and strategies to combat the disease in Europe" and two workshops (Advances in Vaccinology and Researchers link European industrial partners), in Pulawy, Poland, 6th-8th december 2016 (<a href="http://www.piwet.pulawy.pl/asf-stop/index-item2.php">http://www.piwet.pulawy.pl/asf-stop/index-item2.php</a>).

The main goal of this conference was to provide a platform for exchange of knowledge on ASF and to create or reinforce networking opportunities internationally. The COST Action Understanding and Combating African Swine Fever in Europe (ASF-STOP) (<a href="http://www.asf-stop.com/">http://www.asf-stop.com/</a>) brings together widespread expertise on ASF across Europe and beyond. Very specially, ASF-STOP aims at inclusive collaboration with a good gender balance, wide geographical representation (28 COST countries participate) and creation of opportunities for early career investigators. To join ASF-STOP please email your interest to the chair Dolores Gavier-Widén (dolores@sva.se).



The Conference brought together about 200 participants, 79 of them were sponsored by ASF-STOP. The programme included the following Scientific Sessions: ASF current situation in Europe, Epidemiology, control and prevention, ASF-virology, vaccinology and diagnostics, ASF in wild boar, ASF in domestic pigs, Early Career Investigators oral presentations, ASF in wild boar and epidemiology and Poster Session. A conclusion from European countries affected by ASF was that control in the wild boar has shown to be extremely difficult, which poses of risk of progressive expansion of infected areas.



Dolores Gavier-Widén, Chair, ASF-STOP, National veterinary Institute Sweden



# **Graduate Studies in the US and Oral Vaccination, both successes?**

Is it worthwhile for ambitious European students, who want to do wildlife disease research, to go to the United States? Research and graduate study logistics are different all around the globe. As are priorities, rules and regulations concerning wildlife conservation and wildlife research. In 2012 I moved to the US to pursue research in the <u>oral sylvatic plague vaccine</u> (SPV) project with the USGS National Wildlife Health Center (NWHC)



#### The oral sylvatic plague vaccine (SPV)

The SPV for prairie dogs (*Cynomys* spp.) was developed for field application at the University of Wisconsin–Madison and the NWHC with the long-term goal to provide another plague management tool to sustain prairie dog colonies for endangered <u>black-footed ferret reintroduction</u>. In the US, wild animals can be used in laboratory studies. Thus the vaccine was tested in a controlled environment in wild prairie dogs before moving to field safety and efficacy trials. In 2013, trials started to determine if SPV distribution increases prairie dog survival on prairie dog colonies. Over 30 paired plots were established on prairie dog colonies throughout the US and during 3-years, placebo and vaccine baits were annually distributed, and prairie dogs were trapped and sampled (work to be published). This past summer, SPV baits were distributed by <u>drone</u> in a pilot study to determine if larger areas could be covered by this mode of distribution.



Prairie dog consuming a bait stained by biomarker Rhodamine B (Photo credit: Tonie Rocke)



My field crew and I in Utah, ready to set some small rodent traps (photo credit: Colleen Crill)

#### **Back to School**

This unique, completely wildlife focused, project pulled me into research. I was accepted in a UW-Madison PhD program. However, I did not have secured funding for my tuition, stipend, nor research. In contrast to most European PhD positions, you can apply to PhD programs at American universities and be accepted in the program without having funding or a position in a lab. Thankfully there are many ways to find funding in Europe, or country-to-country collaborations (Fulbright), non-profits supporting research (Morris Animal Foundation in my case) and support from the university.

Now, after two years of classes, three summers of fantastic fieldwork, many grant writing deadlines, visa and tax paperwork frustrations, several missed weddings and major life events of friends and family, you wonder if the jump across the ocean is worth it; do the pros outweigh the cons? You could have gotten those three-valuable-letters much faster in Europe.

But, it might not be all about the end goal; it is also about the road you take. I think it is worth the jump, but ask me again in 10 years.



Bieneke Bron
PhD candidate
University of Wisconsin



Photo credit: Sarah Dreitlein

## Toxoplasma gondii in marine mammals

It's not easy to find a cat parasite in whales & dolphins!

Toxoplasma gondii is well-known for its life cycle in felids and its danger to pregnant women. It may cause abortion in seronegative women who get infected with oocysts shed by the domestic cat. The worldwide distribution of this protozoal parasite lies in its ability to infect all warm-blooded animals which act as intermediate host in its life cycle. Although the final host of *T. gondii* are felids, this parasite is not bound to terrestrial environments.







Several studies have shown the presence of T. gondii in marine mammals, but only few reports of cases of clinical toxoplasmosis in marine mammals have been published. In these cases animals were often immunosuppressed, suggesting T. gondii is not a primary pathogen. However, its presence is surprising and can be seen as an indicator for marine pollution. How is T. gondii able to reach these marine environments? The exact transmission routes are still unclear but several hypotheses have been proposed. Sporulated oocvsts remain viable and infectious for long periods of time in salt sea water. Marine mammals could ingest these oocysts as any terrestrial intermediate host would do. Oocysts might flow through rivers or sewage outlets into the ocean. Flushing cat feces through the toilet and release of ballast water of cargo ships have been proposed as a contributing factors. Oocysts have also been found in concentrated amounts in anchovies and filter-feeding bivalves and may act as mechanical vector.

Assaying seropositivity in marine mammals appears to be quite a challenge. The Modified Agglutination Test (MAT) is considered ideal for testing wildlife for its easy application and no need for a species specific conjugate. Two hundred ninety-two marine mammals which stranded on the Dutch and Scottish coastline (North Sea and Atlantic Ocean) were tested with MAT and resulted in high seroprevalences (up to 63%). During testing, Blancet et al. (2014) showed that MAT might give false positive results in harbour porpoises. All samples were retested using Immunofluorescent Assay (IFA) and Enzyme Linked Immunosorbent Assay (ELISA). This resulted in a seroprevalence between 7 and 16%, and only 4 animals tested positive in all three serological methods. *T. gondii* was also detected using PCR in 2 harbour porpoises (Phocoena phocoena) found on the Dutch coast. Although *T. gondii* was only found in few animals, the presence of *T. gondii* in the North Sea and Altlantic Ocean was confirmed. Finding accurate and usable diagnostic methods should be a primary objective in the future for assessing the prevalence of *T. gondii* in marine mammals.



Norbert van de Velde Resident in Veterinary pathology Ghent University



# **Working with Wildlife**

At the end of October, 99 students attended a "Working with Wildlife" conference in London organised by the UK's EWDA reps. This number more than exceeded their hopes, and is a great sign of just how much interest there is in this field. Undoubtedly, numbers were boosted by the quality of the speakers that were recruited for the day. Given a brief to inspire their audience with a breadth of topics, these speakers did a fine job of keeping the students interested through over five hours of talks. The lectures complemented each other well, and common themes were soon emerging: the importance of being a naturalist, making a memorable impression on placements through being pleasant (more critical than knowing everything!), and how welcoming the wildlife health community really is.







Recent past EWDA president Lisa Yon gave a comprehensive overview of the Wildlife Disease Association and its divisions, mirrored by a talk from the student perspective on recent experiences at both the 2016 international conference, and the 2015 EWDA student workshop. Six themed lectures covered surveillance (Alex Barlow), pathology (Vic Simpson), marine strandings (Rob Deaville), citizen science (Becki Lawson), wildlife health in practice (Anna Meredith), and wildlife health policy (Ruth Cromie), all talks generating plenty of interest. Buried amongst these sessions, a discussion session offered the group the chance to guiz the panel on the nature of working in wildlife health, career opportunities, and the variety of paths available.

A good crowd made it out to a local pub to round the day off including a number of the invited speakers, allowing for discussions to carry on into the night. The organisers are grateful to all who helped make this day a success. Enthusiasm levels were high, and a follow up meeting in 2017 is already being discussed.



**Stuart Patterson** 

Co-organizers Harriet Cock Sima Lionikaite



EWDA BULLETIN EWDA UK Student Rep

# **Proof of Touch**

Polar bears appear quite often in artworks, but hardly ever has an artist touched one. In June 2016 I made a lithographic print of a two year old male polar bear that was found dead in the northern tip of Spitsbergen, one of the Svalbard islands. As far as I know, it was the first polar bear that was allowed to be used for artistic purposes by the authorities.





Taking a print of a wolf



Taking a print of a wolf



Detail of a print of a wolf

When I embarked on this project in 2010 with a series of animal-prints that were so precise that each hair was visible, I was also searching for a narrative framework to decide which animals to print. So I came up with the plan to print a polar bear: due to its size, scarcity and mythic status, this feat would provide a culmination of the project to work towards. In this process, only prints of animals that could help develop the technique or content were elected, or more pragmatically prints of animals that could open doors to work with scientific partners. This led to what became a core principle of the whole project: a circular process whereby artistic methods can generate a way of understanding and researching images through their production.

This was followed by the observation that you talk differently about something when you have touched it. Using this form of tactile knowledge on the same level as written and spoken language is a good tool for how natural sciences, humanities and the arts can work together productively on the same object.

My approach was broad and I talked to Inuits, trophy-hunters, veterinarians and virologists, zoo-directors, art collectors, writers, ethicists etc. with the intention to place even greater primacy on a research approach based on artistic methods that could add to the existing knowledge of these animals.

Soon it became clear that only time, personal presence, conversations and good recommendation would allow this project to have a good outcome. In 2013 the print of a wolf was published in a Swiss news-paper. This allowed me to meet Dr. Marie-Pierre Ryser from the University of Berne. With her help, contacts with Dr. Morten Tryland from the University of Tromsø and Dr. Jon Aars from the Norwegian Polar Institute were made which led to an agreement with the Governor of Svalbard for the project.

Printing a subadult male brought back a lot of focus on all the other animals printed during the process, as during the research the iconic trophy polar bear changed its aspect from the symbolically loaded 'pin-up of global warming' into a perfect projection-space, which is one of the core fields of the arts.

Michael Günzburger, lives in Zürich and is a researcher at the University of the Arts in Zürich. http://www.guenz.ch



# Student Chapter An update on the student course





The EWDA Student Chapter presents

International Student Course





At the Interface between Humans, Animals and the Environment



# Student Chapter An update on the student course



A lot of experience has been gained from the series of successful workshops that have been organised by the Student Chapter, every two years since 2005. Young people have been inspired to pursue a science career and valuable networks have been established.

The previous EWDA Student Workshops aimed at **gathering professionals** from scientific research fields or from international public policy **and students** with backgrounds in **biology** and **veterinary medicine**.



An impression of the 6th EWDA Student Workshop in March 2015 at the Conference Centre of Les Pensières.

Bringing professionals and students together in an intimate setting has proven to be a **successful concept**. Why not use this same concept to bring together young scientist from a wide range of backgrounds to address complex issues that require an **interdisciplinary approach**?

For the **next edition**, we have given a **whole new dimension** to the event by broadening the subject and opening it to **participants from a wide variety of backgrounds**. This edition is **themed "One Health: Living and Surviving the Interface"** and will take place in France.

This is a great opportunity to show the global scientific community the **role of wildlife health experts** in addressing complex One Health-issues. Well-known EWDA-members including Marc Artois, Richard Kock and Thijs Kuiken will be joining us during the event together with medical doctors, environmental scientists, policymakers, a film producer and others.



In Berlin, EWDA Chair Marie-Pierre Ryser-Degiorgis emphasized the need for a more solutions-oriented mindset. During our event in 2017, there will be a strong focus on **how to get things done**. Turn words into action!

Keep an eye out on our <u>website</u> for additional information.

If you wish to contribute to the event, please visit our crowdfunding campaign.



Anne-Fleur Brand Chair









## **HAPPY HOLIDAYS EVERYONE!!!**

### **Disclaimer**

The editors have tried to put this non-citable bulletin together as carefully as possible, we apologize for any errors or omissions that we may have committed.

## **Acknowledgements**

We would like to thank all the contributors for their articles, their time and their enthusiasm!

## For your calendars!

The deadline for submission of articles for the next newsletter will be

June 1st, 2017



### **Bulletin Editors**

## **Rogier Bodewes**

University of Utrecht, the Netherlands Rogier.Bodewes@gmail.com

### Lidewij Wiersma

Food and Agriculture Organisation, Rome, Italy lidewij w@hotmail.com