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ON THE COVER

European herring gull (*Larus argentatus*)
Cover photo by Anne Zwagers
Website: anezwagers.com
The mosquito season is finally over! Wow, it took a long time. What a sunny warm fall we have had! Did all the animals take the chance to feed and put on weight before the winter?

And isn’t it ironical? In the spring I attended a conference about pesticides where the dramatic decline of insects was underlined as a cause of worrying bird decline. Frightening. And all over the summer until late in the fall, we and many others have analysed dead black birds infected with Usutuvirus, which is transmitted by mosquitoes. Double hit for birds!

Again we are heading towards Christmas... How time flies!
Many of us met in hot Greece: many thanks again to Babis and his energetic team for their great hospitality! Besides this memorable conference, what happened in this ending EWDA year? A new committee was set up (EWDA Sustainability Committee) – many thanks to Thijs Kuiken, Lineke Begeman, Emmanuelle Gilot-Fromont, Graham Smith, Ana Vale and Barbara Vogler for taking up this new challenge! The EWDA can only function and make a difference if members are ready to engage beyond regular working hours. Another point worth to be mention is the setting up of the WildList, faithfully taken care of by Paul Tavernier.

Last but not least, we have now extensive Bylaws which will hopefully increase the association’s functioning and credibility.

We have an enthusiastic new Board heading towards a joint WDA/EWDA conference 2020 in Spain. Soon we will advertise for the new EWDA Small Grants cycle: Be prepared to submit an application! We would be particularly happy to receive proposals from Eastern European countries. In any case, whatever wildlife diseases we will observe, it sounds like the two next years will be busy, too.

Whether infectious or not, disease emerge anywhere any time, when we expect it least. We need to remain vigilant!

Merry Christmas and happy, healthy 2019 to all! Take care! Enjoy your time, and keep going!
I sincerely hope to see you again soon.

Marie-Pierre Ryser
Centre for Fish and Wildlife Health, University of Bern, Switzerland
Dear EWDA members,

Before you lies the first newsletter produced by the new editorial team. You will see that we put a new spin on the design, as was previously done for the EWDA website.

We hope that you will enjoy reading the different articles in this edition. We would like to thank all the contributors for their efforts and enthusiasm.

Wishing you all happy holidays and a prosperous new year filled with health, happiness and success.

Anne-Fleur Brand (annefleurbrand<at>gmail.com) & Erik Agren (erik.agren<at>sva.se)

Summer Newsletter Deadline - 1st of June 2019

Disclaimer
The editors have tried to put this non-citable bulletin together as carefully as possible and apologise for any errors or omissions may have been committed.
“EWDA old & new board, member matters”

A big THANK YOU to all, who served the former EWDA board for the past years – all your time and hard work are very much appreciated!!

Marie-Pierre Ryser-Degorgis remains the chair of the EWDA ensuring continuity in the work of the new board. She is supported by Karin Lemberger as the new vice-chair and who indeed moved on to seek new challenges after four years of dedicated work as the EWDA secretary. Trying to keep up Karin’s high standards of secretary work is me, Gudrun Wibbelt. Thankfully, Philippe Berny stays on as the good treasurer. Our website has a new coordinator, Sylvain Larrat, who recently installed a nice website contact form to make sure you can always reach us, even if you accidently have forgotten the secretary’s email address (EWDA.secretary@gmail.com). As you already know, the newsletter has a new enthusiastic editorial team: Anne-Fleur Brand, the past student representative, and Erik Agren, who stepped down as vice-chair, but found this opportunity to keep serving the board. The new student representative is Anna Baauw and the new student activity coordinator is Jorge Ramón López Olvera. Andrew Breed, while connecting Australia with the European continent, continues in the research advisor position. To improve communication on a slightly shorter distance Gabor Czirjak and Gorazd Vengušt are the Eastern countries communication officers. The new Members at large are Paul Tavernier and Ricardo Orusa, waiting to assist you for any question or comment you might have in regard to EDWA matters.

The old EWDA board revised the bylaws of the association and had asked the membership for approval, which was unanimously voted for.

Starting the secretary position I wondered where the members of the EWDA/NWDA actually do come from and for those interested, I compiled a list (see next page). Eastern Europe are rather small, it would be desirable to improve the situation of our colleagues in these countries. Everybody with ideas or thoughts on this, please approach Gábor Czirják and Gorazd Vengušt, the “Eastern countries communication officers”, as they can facilitate support.

Have a merry Christmas and a happy New Year !!!!
It’s that time of year again: time to renew your Wildlife Disease Association membership before it is too late and you lose your advantages as a member, including access to grants, newsletters and the Journal of Wildlife Diseases!

If you were particularly attentive to the new EWDA bylaws, you will have noted that there is now a quick and easy way for dual membership and with that eligibility for the EWDA small grants, attendance fund and board positions.

Why did we implement this? The Nordic WDA section (NWDA) is a WDA geographical section independent of the EWDA. According to the WDA Bylaws, all WDA members living in Nordic countries (Denmark, Finland, Norway, Sweden and Iceland) are automatically members of the NWDA and are not considered as EWDA members (EWDA does not receive fees for their membership and WDA conducts two separate members lists). However, as Nordic countries are part of Europe, NWDA members are invited to additionally join the EWDA by applying for dual membership. To be included in the EWDA members’ list and benefit from EWDA privileges, NWDA members need to tick the “EWDA membership box” on the online WDA registration form. This is also true for other section members, within reason. EWDA section membership can also be added after membership renewal since it is free. Further questions? Please let us know via ewda.secretary@gmail.com.

“WHAT’S NEW IN 2019 FOR THE EWDA AND THE NWDA”
Salmonella enterica, serotype Hessarek represents an unusual serotype isolated for the first time in the ‘50 from a common raven (Corvus corax) in Iran (Neel et al. 1953). Thereafter, numerous outbreaks of septicemic salmonellosis occurred in starlings (Sturnus vulgaris) in Europe (Singer et al. 1977). In central Italy two outbreaks in starlings caused by S. Hessarek have been reported (Magistrali et al. 2008).

From the middle November 2018 for about a month, an unusual massive mortality of starlings was observed in North Italy, in several sites of Brescia, Mantua and Bergamo provinces, especially close to the Iseo and Garda Lakes. A total of 215 dead starlings were sampled in open countries or in urbanization area along the main streets, below trees, in parks or directly along the shore of the lake, and then analyzed in order to identify the cause of the death.

Necropsy findings were the same for all the examined starling: good body condition, splenomegaly, liver enlargement with presence of small necrotic foci and hemorrhagic spots.

The birds were submitted to bacteriological examination with standard cultural techniques. Liver, spleen and brain were plated onto blood agar and Gassner agar, then incubated at 37°C in aerobiosis for 24h. Specific method for Salmonella enrichment isolation was applied from the liver (ISO 17604:2015). The isolation of typical Salmonella sp. colony on agarized medium using direct and enrichment methods both highlights the septicemic nature of the lesions.
Salmonella Hessarek from Sturnus vulgaris in North Italy

The isolated Salmonellae were biochemically confirmed with the GnA System (Microgen TM) and then serologically typed as Salmonella enterica sub enterica serovar hessarek (ISO/TR 6579-3:2014). At the moment S. hessarek isolates were submitted to genotyping by pulsed-field gel-electrophoresis (PFGE) together and with other collection isolates, for a total of 17 strains.

At the same, the virological examination performed (specific PCRs for West Nile Virus, Usutu Virus and correlated Flaviviruses, Avian Flu and Newcastle Disease Virus) resulted all negative. Our report confirms the high pathogenicity of S. hessarek in starling, whose gregarious behavior further improve the infection spread. This bacteria is considered highly specific for starling and only sometimes able to give epidemics in other wild birds like the Song Thrushes and House sparrow (Singer et al. 1977).

The disease in mammals is quite rare (Handeland et al., 2008; Gomez Laguna et al., 2011), and related to an increasing frequency of isolation in in wild birds. S. hessarek has been associated with disease in human only in Israel in 1977. The reports of the ECDC and EFSA published in 2017 did not consider S. hessarek among important serotypes for human health. Other investigation are ongoing on wild birds and wild mammals found dead on the involved area.

References
Human impact on our planet has increased tremendously in the past century, and will continue to increase as both the global human population and per capita consumption continue to grow. The greatest challenge of our time is to bring this human impact under control, and make a transition to a sustainable society.

As part of this transition, the governments of all EU countries pledged at the 2015 Climate Accord in Paris to reduce the output of greenhouse gases in 2030 by at least 40% compared to 1990, in order to keep global warming under 2 degrees Celsius. Climate change, including global warming, is not the only environmental issue for human society. Others include the loss of biodiversity, land-use change, freshwater use, and biogeochemical flows.

Governments cannot make the sustainability transition alone. It requires all of human society, individuals, as well as businesses and associations, to work towards this goal. Important reasons for the EWDA to play an active role are that global climate change and anthropogenic alteration of natural systems are primary issues of concern for wildlife conservation. The EWDA can have a greater impact as an association than individual members can, and may set a positive example for other scientific societies.

"the EWDA aims at reducing its ecological footprint"

In summer 2018, Thijs Kuiken proposed to the Board of the EWDA and to the attendees of the EWDA-Conference in Larissa, Greece, to set up and engage in an ad-hoc sustainability committee. Five engaged members joined Thijs to form the committee. In November already, the committee was officially approved by the EWDA board and is composed of Thijs as chair, Lineke Begeman as secretary and Emmanuelle Gilot-Fromont, Graham Smith, Ana Vale and Barbara Vogler as active members. The long-term goal of the committee is to reduce the environmental impact of the EWDA as far as possible, while maintaining EWDA’s overall mission, and so contribute to the transition to a more sustainable human society.

The committee has met by telephone twice. We agreed that the bi-annual conferences, especially for transport, are the biggest factors contributing to the EWDA's ecological footprint. For now, the committee will concentrate on evaluating or where necessary estimating the ecological footprint of the past five conferences. Based on this, upcoming conferences will be evaluated, possibly supported by a questionnaire to the conference attendees. These evaluations shall provide insights in how the ecological impact of the EWDA conferences may be reduced and recommendations will be proposed to the future conference organizing committees.

**Do you have ideas on how the ecological footprint of future EWDA conferences may be reduced?** We are happy to receive any suggestions by e-mail to following address: ewda.sustainability@gmail.com
During the 13th EWDA Conference in Greece this summer, the student chapter was involved in organizing both the Student-Mentor Mixer and the Auction, as is tradition. The Student-mentor mixer was this year an informal gathering of students and wildlife professionals on the establishment “KLIMAX” in Larissa, Greece. It was an evening filled with talk and discussion between students and professionals in the company of a few drinks and snacks, some dancing and laughter. Furthermore, the early arrivers were able to get a private tour to the Ancient Theater located just across the street from Klimax, getting a whiff of the past.

“Golden oldies, new releases and once-in-a-lifetime opportunities”

For those who were up for another great night, the fabled and famous EWDA Auction took place on the following night on the outdoor terrace by the venue. The auction is, as tradition has it, an important fundraiser for the Student chapter. This night was, as always, a marked success, thanks to the Auction Masters (Rosine, Marc, and Paul), all the generous donations from the conference participants, and of course especially because of the wonderful auctioneers, that knows how to make and auction item irresistible to the audience. This year’s auction items included golden oldies, new releases, and a lot of one-of-a-kind items as well as once-in-a-life-time opportunities. All earnings went directly to the student chapter – many thanks for the generous donations, which will come into good use for the upcoming student symposium and workshop in Lyon, France, 2019. You have thereby all contributed to the education and inspiration of students from all over Europe who will move a bit closer to a career in planet and wildlife conservation. Thank you!

As the student-cherry on top of a wonderful conference, the best student poster and oral presentation received the student award for their contribution. The student awards are a great opportunity for students to receive comments on their work and presentation skills. This year the poster awards went to Sebastien Lambert, Lea Bonin and Johan Espunyes, and the oral presentation awards went to Helle Bernstorff Hydeskov, Raquel Castillo-Contreras and Gaia Moore-Jones. Congratulations!

Thank you for another great EWDA conference!
2018 Conference - Photo Corner -

Paul Tavernier
Pre-Conference Student Event 2018

Beside the traditional EWDA Auction and Student Mentor Mixer, this year for the first time, we have also organised a one-day-event before the EWDA conference, dedicated especially to students! By this event we wanted to give a chance to students who would participate in the conference to get to know each other and leading scientists before the conference starts. However this event was also open to students who could not participate in the conference but still wanted to expand their knowledge on wildlife health.

29 post- and undergraduate students from 13 different countries joined us during this fruitful, informative and fun day.

The event started with interesting scientific lectures covering a wide variety of wildlife health related topics. In between those lectures we enjoyed delicious Greek food, coffee, and lively chats. Furthermore, we got an introduction on GIS and participated in an interactive philosophical session entitled “What is science?”. This was followed by discussions in small groups aiming to improve our student chapter through setting expectations and giving suggestions on how to meet them.

“We ended up turning the morning’s acquaintances into friendships”

All the new knowledge and ideas were further discussed during a cultural evening while enjoying dinner and drinks from various European countries. The cultural evening started by exchanging information about how wildlife education works in different countries of Europe and ended up in turning the morning’s acquaintances into friendships. We believe we have met our goal to make a small contribution in supporting students to shape a successful career path within wildlife health.
Student Chapter - 2019 Symposium & Workshop -

EWDA Student Chapter Presents:

Student Symposium
13-14th April 2019

CONFLICT or coexistence

Student Workshop
15-17th April 2019

Facing the Human Wildlife Interface

Lyon, France
Faculty of Veterinary Medicine

www.conflict-or-coexistence.com
Since 2014, the EWDA lecture events have become a well-attended part of extracurricular activities on our Vetmeduni campus in Vienna. On October 4th 2018 we had the pleasure to host another successful evening with lecturers from Romania and South Africa alongside our local zoo veterinarian. Around 80 attendees enjoyed the topics including *Perissodactyla* evolution, ecology, infectious diseases, reproduction management and research in Europe and Africa as well as a many aspects of working as a zoo vet.

Students were encouraged to network and socialize with peers during the breaks, while the student organization AVE supported the event with snacks and drinks.

**Fabian Bagó** has joined the organising team and we are currently busy preparing our next lecture event in January 2019. Topics will be veterinary forensics and managing the return of wolves in Austria.

Merry Christmas from Vienna, **Fabian** and **Julian** (from left to right)
New Comprehensive Book on Reindeer & Caribou Health and Diseases

The first international and comprehensive textbook on health and diseases in Rangifer (reindeer and caribou subspecies) is out on CRC Press (October 2018). More than 40 authors across the Arctic and Sub-Arctic regions, all experienced in different fields on Rangifer and wildlife, have contributed to this book, edited by Morten Tryland (UiT Arctic University of Norway) and Susan Kutz (University of Calgary).

Reindeer and Caribou: Health and Disease compiles extensive research and experience-based information on issues ranging from drug doses for chemical immobilization, blood chemistry values, and raising an orphaned calf. In addition, it contains hundreds of high quality colour illustrations that contribute to its value as a diagnostic resource for recognizing various parasites, pathogens and signs of disease, both in live and dead animals. Each chapter is followed by a comprehensive list of references and a list of contact information for all the contributors, identifying world experts in the different areas of health for this circumpolar and fascinating species.

This book is compulsory reading and an indispensable resource for anyone dealing with health in reindeer and caribou, including veterinarians, wildlife biologists and managers, reindeer herders/game ranchers, zoological husbandry personnel, and students with wildlife health.

The book can be ordered here: https://www.crcpress.com

A semi-domesticated reindeer with oral necrobacillosis (Photo: I.H. Nymo).

Morten Tryland
Arctic Infection Biology, Arctic University of Norway
(Tromsø, Norway)
After three successful and exciting “International Conferences on Avian, Herpetological and Exotic Mammal Medicine” (ICARE) in Wiesbaden (Germany), Paris (France) and Venice (Italy), all participating organisations have agreed that this veterinary symposium should continue every two years, touring throughout European locations. The collaborative steering committee is formed by the European Association of Avian Veterinarians (EAAV), the Association of Exotic Mammal Veterinarians (AEMV), the Association of Reptilian and Amphibian Veterinarians (ARAV) and the European College of Zoological Medicine. This Steering Committee selects suitable locations from submitted proposals, and supports the local organising committees for future conferences. The 4th ICARE will be held in 2019 in London, UK (April 28 – May 2, 2019).

Your group’s proposal should include a complete concept, including the following:

- Organising team (qualifications, past experience,...)
- Dedication to exotic animal medicine
- Brief sketch of the conference (duration, sessions, local characteristics,...)
- Setup of conference venue including traffic connections/transport options, logistics, place for the lectures/talks/practical labs (number and size of rooms,...)
- Accommodation options close to the conference location
- Food options close to the conference location (gastronomy, catering, food service industry)
- Options for a social program, field trips and excursions
- A sketch of your financial plan (projected costs of all conference aspects,...)
- Preliminary list of sponsors, partners from industry etc.
- Pictures and maps.

The organising team is kindly invited to present their application (20-25 minutes presentation) in front of the ICARE Steering Committee during ICARE London.

Call for Conference Host - ICARE -

In preparation for the 6th upcoming ICARE in 2023, the ICARE Steering Committee seeks your proposals!

Please send your proposal before 28 February 2019 to Chair-ISC@icare-conference.eu.
Chlamydia pecorum associated with an outbreak of infectious keratoconjunctivitis in semi-domesticated reindeer in Sweden

Infectious keratoconjunctivitis (IKC), the most common ocular disease in wild and domestic ruminants worldwide, has affected semi-domesticated Eurasian reindeer (Rangifer tarandus tarandus) for over 100 years. Even though the disease is often limited to 1-5 animals displaying mild clinical signs, sometimes large outbreaks affecting tens to hundreds of animals appear. Stress and high animal densities are considered the most important risk factors for the development of clinical signs.

All affected animals were treated with the long-acting antibiotic gamithromycin (150 mg/25 kg; Zactran®) and fully recovered from the disease, testing negative for the presence of Chlamydiaceae DNA by PCR 16 days and three months after the initial treatment. For the first time, Chlamydia pecorum was identified in semi-domesticated reindeer, and the involvement of Chlamydiaceae in a clinical outbreak of IKC is reported. The CvHV2 seroprevalence (56.6 %) and the data obtained from a previous outbreak in 2014 (95.8 % seroprevalence and 100 % CvHV2 prevalence by PCR) also suggest the involvement of the reindeer alphaherpesvirus in the recurrent outbreaks.

“Early identification of the pathogen involved in an IKC outbreak is crucial for the management and control of the outbreak and full recovery of the affected animals”

Recurrent IKC outbreaks have been affecting a semi-domesticated reindeer herd in Östra Kikkejaure (Norrbotten county, Sweden) since 2014. The latest outbreak, in winter 2016/2017, was investigated in this study. Clinical findings were in line with previous reports of IKC in semi-domesticated reindeer and the clinical signs displayed by the affected animals included increased lacrimation, follicular conjunctivitis (A), purulent secretions around the affected eyes (B) and corneal oedema. Laboratory analyses of the samples revealed the presence of Chlamydiaceae in 98.3 % of the samples obtained from the clinically affected animals, but also a high seroprevalence of cervid herpesvirus 2 (CvHV2) antibodies (56.6 %) and the presence on Moraxella bovoculi in 35.0 % of the clinically affected reindeer sampled for bacteriological cultivation. 16S rRNA gene sequencing of selected samples revealed that Chlamydia pecorum was the dominant Chlamydiaceae species during the outbreak.

Manuscript under review in Frontiers in Veterinary Medicine – Veterinary Infectious Diseases.

Co-authors: M. Leijon, Å. Hagström, T. Jinnerot, U.K. Rockström & M. Tryland

Javier Sánchez Romano
UiT The Arctic University of Norway
From the 9th to the 20th of July 2018, five of the eight current Residents in Wildlife Population Health of the European College of Zoological Medicine (ECZM-WPH) attended the 2nd ECZM-WPH Summer School, this time in Croatia. The interdisciplinary programme was kindly put together by the coordinator Prof. Dean Konjevic at the University of Zagreb and included lectures, practicals and fieldwork. The areas covered included biology and pathology of fishes and honey bees, applied parasitology, gross necropsy, large carnivore management, disease modelling, and wildlife tracking systems.

During one of the three scheduled excursions, we visited a Capercaillie breeding centre and a hunting ground in the mountainous Gorski Kotar. There we learned about the challenges of Capercaillie breeding and reintroduction efforts and the peculiarities of large carnivore (brown bear, grey wolf, Eurasian lynx) research. Moreover, we had practical exercises on radio telemetry and tele-immobilisation, learned about photo trapping and had the opportunity to observe the local fauna on high seats. The following day we were able to perform clinical examinations on the sea turtle patients of the Marine Rescue Centre at the Aquarium of Pula, before ending the trip with a visit to the Brijuni National Park.

During the last two excursions, we visited a deer farm and a huge fish farm in Poljana, where we performed health assessments on the fresh water fish species. The 2nd ECZM-WPH Summer School was again a great experience for all participants! The scientific programme was broad, followed the ECZM-WPH topic requirements and allowed us, who are based at different universities in several European countries, to gain a common basic understanding and knowledge.

The next ECZM-WPH Resident Summer School still needs to be planned, but we sincerely hope that these great learning opportunities will become an annual tradition.

Special thanks again to Dean, Miljenko and Maja for the organisation of the Summer School! The ECZM-WPH Residents
Interventions in Wild Animal Health Field Course 2018

“Interactive, hands-on, good simulation of field conditions”

This year The Wildlife Institute of India, University of Edinburgh and Zoological Society of London hosted the third Interventions in Wild Animal Health (IWAH) Field Course between 3rd & 22nd of February 2018 at Sariska Tiger Reserve, Rajasthan, India as part of an ongoing element of the Wildlife Health Bridge. Twenty-four participants, from nine countries including Kenya, Afghanistan and Indonesia and India attended.

The recruitment of wildlife health professional participants from low income, developing nations is a key objective aim of the Wildlife Health Bridge and we were pleased to have once again managed to recruit 14 (58%) participant from these backgrounds. Attending participants had a range of professional backgrounds with many already working in a wildlife health capacity or with ambition to move into the field. Careers included government veterinarians, conservation and program managers and veterinary centre directors. Our 2018 programme covered the following topics, Wild Animal Population Monitoring, Protected Area Management, Field Disease Investigation, the Human-Wildlife Interface, Wildlife Crime & Forensics and Wild Animal Restraint and Anaesthesia.

Highlights of the three weeks included the participants carrying out immobilisations for health survey purposes, in groups, on four separate animals, a visit to a local village to discuss human-wildlife conflict within the National Park and a simulated disease outbreak which the participants investigated.

Participant feedback from the IWAH 2018 course reflected the positive experiences of participants.

To find out more about the IWAH course including next years location and fees and to apply please visit www.iwah.org

Alexandra Thomas
Wildlife Health Bridge Coordinator
Zoological Society of London
In Loving Memory
- Vic Simpson -

A fine pathologist and inspiring mentor to many, and winner of the 2016 WDA Emeritus Award.