



NEWSLETTER

// SUMMER 2021



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ON THE COVER

Northern gannets (*Morus bassanus*)

Cover photo by **Josh Jaggard**, wildlife photographer

Website: [click here](#)

Twitter: [click here](#)

Vimeo: [click here](#)

Editors

Anne-Fleur Brand & Erik Ågren

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.

President's corner

"How to continue EWDA business when facing a global pandemic?"

The first part of 2021 has continued to be a challenge, with diversified situations depending on where in Europe you were located. Everything ranging from full lockdown to partial restrictions has been experienced by our diverse membership. We have continued to adapt, testing every possible means of teleconferencing. And we made it work, holding out for the day we could all go back to a semi normal life, vaccination helping. Have you tested anything new? I started snowshoeing in the Alps due to lockdown of ski lifts and enjoyed it tremendously (despite restrictions there also!).

One could think that the situation could have slowed us down as an Association, but quite the contrary. As chair of the EWDA, regular business included holding board teleconferences to discuss general EWDA actions, participating in WDA council meetings and keeping up with the various activities of our ever so prolific board members and committees, the work of which is featured in this newsletter. New grants, new EWDA Network resources and meeting, new Sustainability information for our members, new website are going to be available to you in the next few months. The Student Chapter stayed true to their [history of successful workshop organisation](#), showing that where there is the will (and the technological prowess), there is a way to unite students around inspiring professionals on how best to communicate in science. Our deepest thanks to all involved!

A big part of my time was dedicated to the work within the [WDA Strategic Committee](#). This included monthly meetings with the Committee comprised of 35 WDA members (WDA officers, section chairs, champions) and sometimes weekly meetings with the "value to our members" subgroup I joined. We also invited the EWDA Sustainability Committee to submit their views on how to improve the WDA approach to sustainability. A lot of the ideas and strategic goals discussed within the committee were put to a test during the interactive survey WDA: [Creating our Future](#). The level of participation was outstanding (413 members cast a total of 31,205 votes). The rich diversity of submitted statements and voting results will provide strong direction for us in the coming years. We learnt that the value statements we proposed are overwhelmingly supported. We learnt that our members want us to be concerned about [environmental sustainability](#). Our revised mission was very strongly supported. The next step: a complete report with recommendations to Council will be presented in August.

Look for the final [Strategic Report](#) when it becomes available!

In late August/early September we will experience our [first ever virtual EWDA conference](#). I will be very happy to welcome you alongside Carlos Das Neves, the WDA president. I hope you will not miss this unique opportunity and if you have not done so already, [please register as soon as possible](#) and help the Cuenca organising committee beat the historic attendance record of 515 set in Lyon in 2012. There are a lot of surprises awaiting you!

Have a great summer and continue to take care of yourselves and your loved ones!



Karin Lemberger
Vet Diagnostics and
Faunapath,
Lyon, France

News from the Board

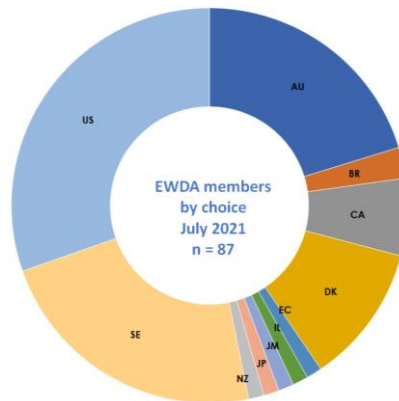
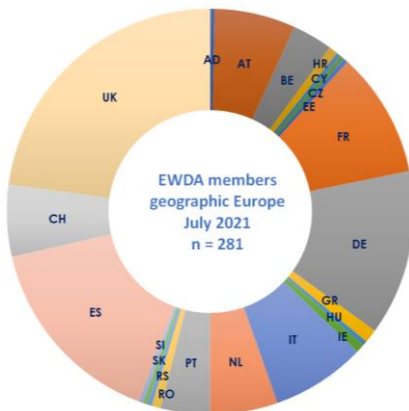


“EWDA board - past winter & spring months”

The EWDA Board met in April this year and had the usual busy schedule of discussing various issues concerning the different committees, the Student Chapter and all the work and meetings of the WDA strategic committee with EWDA being represented by our chair, Karin Lemberger. The Board also welcomed a special guest to its meeting - Francisco Ruiz-Fons, the head of the organising committee for the joint WDA/EWDA conference in late August/ early September. The hard work of the entire group is truly amazing as they not only had to steer through – virtually – uncharted waters of online streaming of our conference, but at the same time to accommodate the conference program to the different global time zones to ensure participation of all WDA members worldwide.

For all, who have yet not registered for this outstanding event – [please support the local team](#) by registering right now. The pressure on them is enormous and a nice big participant number is already one way to thank them for all their efforts.

| | | |
|--------------------|----|----|
| Andorra | AD | 1 |
| Austria | AT | 18 |
| Belgium | BE | 9 |
| Croatia (Hrvatska) | HR | 2 |
| Cyprus | CY | 1 |
| Czech Republic | CZ | 1 |
| Estonia | EE | 1 |
| France | FR | 28 |
| Germany | DE | 37 |
| Greece | GR | 3 |
| Hungary | HU | 1 |
| Ireland | IE | 2 |
| Italy | IT | 21 |
| Netherlands | NL | 15 |
| Portugal | PT | 11 |
| Romania | RO | 2 |
| Serbia | RS | 1 |
| Slovakia | SK | 1 |
| Slovenia | SI | 1 |
| Spain | ES | 44 |
| Switzerland | CH | 16 |
| United Kingdom | UK | 64 |



| | | |
|---------------|----|----|
| Australia | AU | 16 |
| Brazil | BR | 2 |
| Canada | CA | 5 |
| Denmark | DK | 9 |
| Ecuador | EC | 1 |
| Israel | IL | 1 |
| Jamaica | JM | 1 |
| Japan | JP | 1 |
| New Zealand | NZ | 1 |
| Sweden | SE | 18 |
| United States | US | 24 |

Geographic locations of members, including regions not covered by the European WDA section.

Under the leadership of EWDA's enthusiastic website coordinator, Alberto Casado Gomez, the [website working group](#) (Marco Vecchiato, Giulia Graziosi, Javier Sánchez Romano, Karin Lemberger, Gudrun Wibbelt) has made some much-needed improvements to the website.



The tireless work by Alberto, squeezed between elephant necropsies and other zoo vet duties, on website themes and scrutinising for faulty font styles is incredible and also he deserves a special thank you! Find a brief sneak preview on the left.



Gudrun Wibbelt
Leibniz Institute for Zoo and Wildlife Research, Berlin, Germany

With a little luck, the new website will be [launched by the end of summer!](#)

Cuenca 2021

69th Annual International WDA & 14th European WDA

Joint Virtual Conference

*Managing Wildlife Diseases for
Sustainable Ecosystems*

August 31, 2021 - September 2, 2021

#CUENCA2020VIRTUAL

Five Plenaries

Reservoirs Sans Frontières: can ecology help us predict viral spill
over risk from bats?

Dr. Olivier Restif, University of Cambridge, Cambridge, UK

Illegal wildlife trade and emerging infectious diseases: Pervasive
impacts to species, ecosystems and human health

Prof. A. Alonso Aguirre, George Mason University, Fairfax, Virginia, USA

Wildlife through the lens of One Health: An African perspective

Prof. Anita Michel, University of Pretoria (South Africa)

Understanding pathogen transmission in a solitary, secretive
carnivore (*Puma concolor*)

Prof. Meggan Craft, University of Minnesota, Minneapolis, MN, USA

The Ecology, Economics and Evolution of Emerging Pathogens
Prof. Andrew P. Dobson, Princeton University, Princeton, NJ, USA



Maria Garcia Romero

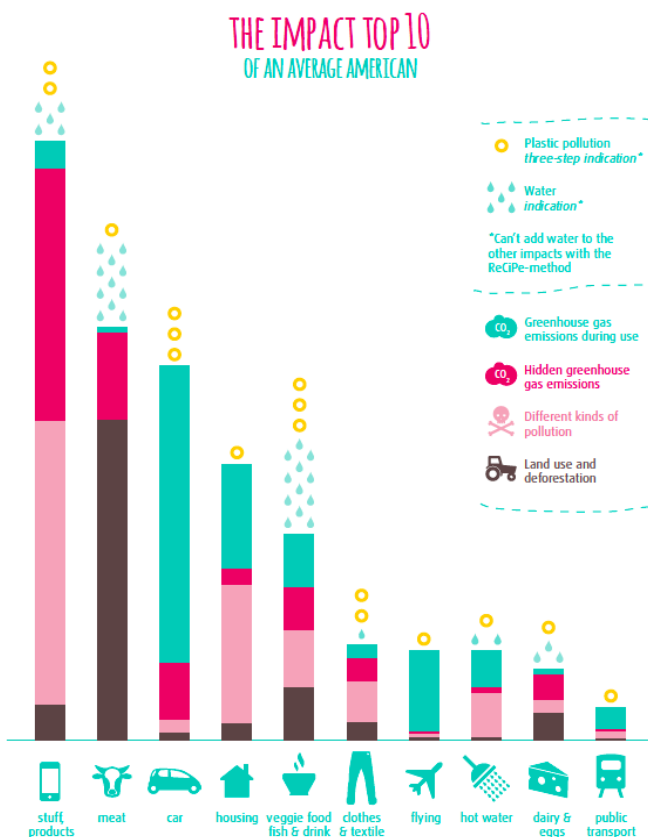
Find out more and register here:

<https://cuenca2020.com/CUENCA2020>

News from the Sustainability Committee

“Assessing the ecological footprint of a typical EWDA member’s wildlife health research”

The EWDA sustainability committee was founded in 2018 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 first task we took on was to estimate the environmental impact of EWDA conferences, and to make suggestions about how to reduce this impact (see EWDA Winter Newsletter 2019). The choice to make the next EWDA conference virtual rather than face-to-face, forced upon us by COVID-19, will surely make it the **most environmentally friendly conference in EWDA’s history**.



The next task we have taken on is to estimate the environmental impact of different aspects of wildlife disease research. Our idea is that if we know which aspects have the biggest impact, we can focus our attention on them rather than on aspects with only a small impact. For example, did you know that one -80°C freezer needs as much energy as an average home, and that **changing the temperature from -80°C to -70°C saves the energy equivalent of 340 Euros per year?**

A Dutch author, Babette Porcelijn, made an estimate of the environmental impact of a typical citizen’s personal life, and came up with a top 10 (figure; source: Hidden impact. Think big, act now, Amsterdam, 2017). We would like to do something similar, but for a **typical EWDA member’s working life**. To do so, we have divided wildlife disease research into the following provisional categories:

1. Field work;
2. Computer work and storage;
3. *In vitro* laboratory work;
4. *In vivo* laboratory work;
5. Overhead;
6. Disturbance of ecological balance.

It is a work in progress, but in case you already want to know more, please check out the resources and materials page on UCL’s Laboratory Efficiency Assessment Framework:

<https://www.ucl.ac.uk/sustainable/staff/labs/resources-and-materials>.

In case you have further ideas, we are happy to receive your comments via ewda.sustainability@gmail.com

Thijs Kuiken, on behalf of the EWDA Sustainability Committee (Lineke Begeman, Jorge Ramon Lopez Olvera, Beatriz Rubio Alonso, Graham Smith, Ana Vale, Barbara Vogler).



Thijs Kuiken
Erasmus MC,
Rotterdam, The
Netherlands

News from the Network Committee



This blue tit was diagnosed with *Suttonella ornithocola* infection following communication of a widespread outbreak within the EWDA Google group.

“The EWDA Google Group - an interactive platform to support wildlife health surveillance in Europe”

We rely on wildlife health surveillance to help with early detection of wildlife diseases that can impact the health and well-being of wildlife, domestic animals and humans, and the stability and resilience of our ecosystems. The need for [timely communication of wildlife health issues](#) in Europe led to the establishment of the EWDA Google Group in 2010. The aim of this discussion platform is to provide a collegial forum where members can [rapidly share and freely discuss](#) pertinent topics and findings related to wildlife health surveillance.

The Google Group is still going strong. Since its inception, approximately [350 discussion threads](#) covering a wide range of topics have been shared with [over 200 members](#). For example, the group has reported on the emergence of Chronic Wasting Disease in cervids in northern Europe, findings of African Swine Fever in wild boar in new countries, outbreaks of highly pathogenic avian influenza in increasing numbers of wild bird species, the re-emergence of rabbit hemorrhagic disease with spillover into hares, and the transboundary spread of Usutu virus in passerines. Reports of wildlife mortality events, advice on diagnostic tools, and tips on position announcements, meetings and funding calls have all been communicated within the group over the past decade.

To help facilitate open communication of findings within the forum, the Google Group is accessible to members only. Membership is open to EWDA members and to non-members who work with or are planning to start up wildlife health surveillance. The spirit of the group is [informal, friendly and respectful](#), and members are asked to keep findings within the group unless wider dissemination is permitted by the author of the post. Together, Google Group members promote and [support the advancement of wildlife health surveillance](#) in Europe. If you would like to participate in the group, applications for membership are welcome through the following link: <http://groups.google.com/group/ewda-network>

“The first virtual EWDA Network Meeting: Expanding the field network of wildlife health surveillance”

Find inspiration and share your experiences on how to expand wildlife health surveillance through collaboration across disciplines and communities. [Please join us](#) in kicking off the upcoming WDA/EWDA conference with the EWDA Network meeting:

Expanding the field network of wildlife health surveillance

Monday August 30th 2021, 14.00-19.00h Central European Time

Programme and registration details available at:
<https://cuenca2020.com/cuenca2020/ewda-meeting>



Aleksija Neimanis
National Veterinary
Institute (SVA),
Uppsala,
Sweden

News from the Small Grants Committee

"Wildlife research grants – three now available from the EWDA"

This year we are pleased that we will be offering three grants for wildlife research projects after the EWDA has received a generous donation from the estate of [Amanda Hawkswood](#) (see EWDA Summer Newsletter 2020, page 14). All the grants have a different focus so please read the details on the website and consider applying.

We have produced a new dedicated grant application which we hope will make the application process easier for everyone. The main applicant and project leader must be an EWDA member, and early career members are encouraged to apply. All the details are on the website: <http://ewda.org/ewda-small-grants/>

Please send completed application forms to the EWDA secretary, ewda.secretary@gmail.com by September 15th 2021.

Please e-mail the EWDA secretary as soon as possible to discuss further if required.

Student Chapter Workshop 2021



Student Chapter Workshop 2021

This year, considering the circumstances, the 8th biannual EWDA Student Workshop titled “[Communicating science in wildlife conservation](#)” was held online for the first time. The event was divided in three phases over March and April 2021 and praised the participation of [23 international speakers](#) working in different non-governmental and governmental organizations. Participants had the opportunity to apply either as active or as passive participants and a total of 81 people attended the workshop, connecting from throughout Europe and overseas.

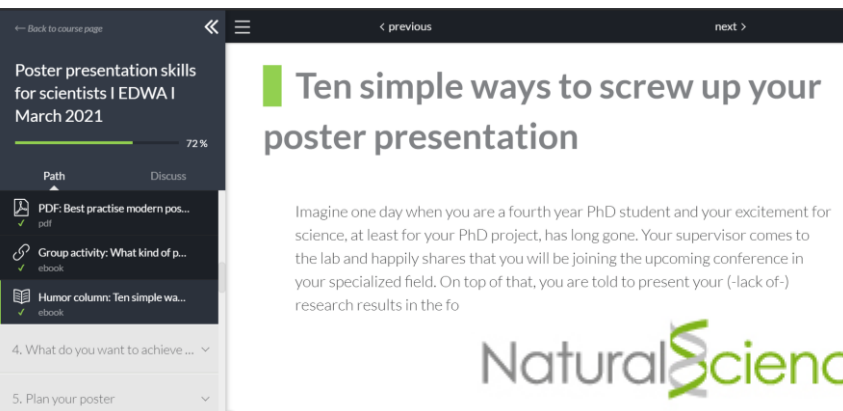
Phase one (18th March 2021) consisted in a single-day event with an [outstanding line-up](#) of speakers that shared the ins-and-outs of science communication from different perspectives (scientific writing, presentations, communication with public and politics, illustration and storytelling).

Phase two (19th March – 18th April 2021) was a one-month-period given to dedicated active participants (28) to work on a presentation (oral or poster) to present during phase three of the workshop. An online learning platform customised by [naturalscience.careers](#) (<https://naturalscience.careers/>) was offered to the active participants as support in creating their presentations.



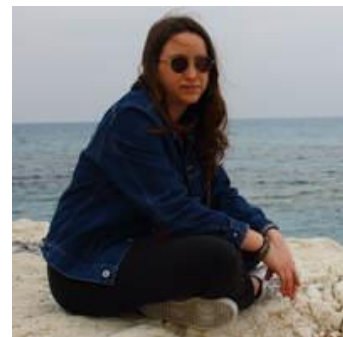
Top: Sasha Dench a.k.a. 'The Human Swan' shared the inspiring story of her paramotor flight from the Russian Arctic to the UK in the name of conservation.

Left: The online learning platform from Natural Science Careers.



Phase three (19th – 22nd April 2021) was held in four consecutive evenings and virtually hosted professionals from the following institutions: Research institute for wildlife ecology (FIWI)/VetMed [University of Vienna](#), Institute of Zoology, [Zoological Society of London](#), Wildlife Ecology and Health Research Group/ [University of Barcelona](#) and the [Swedish National Veterinary Institute](#). At the end of each evening, student-mentor mixer sessions took place and despite the nature of the workshop, mentors and students alike spent productive time together discussing wildlife matters and possible career paths.

All in all, it was a [very inspiring event](#) and an excellent opportunity for students to gain insight into communicating science.



Stefania Tampach
Communications
Officer
EWDA Student Board

Oral Rabies Vaccination in European Wolves



“An apex predator has returned to Central Europe – and with it, the need to rethink current rabies prevention methods”

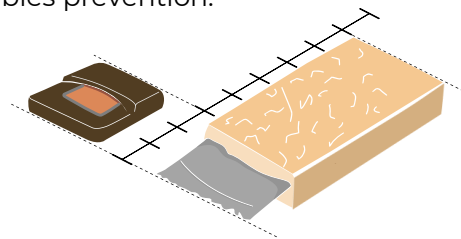
Wolves have begun to recolonise Germany since the turn of the century. While many parts of Europe have been rabies-free for many years, sporadic cases are still reported annually in eastern countries, offering the potential for a re-introduction into the rest of the continent. Although the fox is regarded as the most important rabies vector, wolves' potential to **travel great distances**, along with the **aggressive nature of the disease** in these animals and their **high affinity for the virus**, makes them a species that should not be overlooked in terms of rabies prevention.

The goal of this project is to develop a bait system capable of delivering **rabies vaccine orally** to European wolves. Existing baits widely used in Oral Rabies Vaccination (ORV) campaigns targeting foxes are unsuitable for use in larger canids, as their dimensions make them easy to swallow whole, preventing delivery of the vaccine directly into the oral cavity to elicit an immune response.

Preliminary studies in 2017 provided results on the composition of a bait mass that wolves would not only readily consume but also easily find in the wild. In collaboration with Ceva Santé Animale, we are now further developing this method of vaccine delivery to determine the appropriate bait size and composition.

Because we wanted to make this process as minimally invasive as possible, we developed a **non-toxic oral marker** to be used in the bait sachet instead of the oral rabies vaccine. Once a wolf perforates the sachet, its contents are released into the oral cavity. When enough marker is released, it **stains the animal's tongue** enough to be visible. We rate this as a successful vaccine release.

Although the trials won't be officially completed until August 2021, over 100 European wolves kept in various German wildlife parks have participated in studies to date, and the results look promising. Establishing an oral marker that can indicate perforation of an ORV bait also has many other potential uses; one is to **mark free-ranging dogs** in rabies-endemic parts of the world to assess vaccination coverage that may be achieved during ORV campaigns. While the results of our work will need to be corroborated via **serological testing** and **field trials in wild animals**, this study is an important step towards the development of a readily available ORV bait for the European wolf. This will enable us to **act quickly in the event of a possible rabies outbreak** and complement existing strategies against fox rabies with a system tailored to another apex predator.



Top: Schematic size comparison ORV fox bait (left, 3x3cm) versus trial wolf bait (right, 8x3 cm)

Bottom: Wolf opening up a marker-filled vaccine bait



Anna Langguth

University of
Veterinary Medicine,
Hannover,
Germany



ECZM Residency in Wildlife Population Health

We are the current residents of the Wildlife Population Health (WPH) specialty at the Wildlife Conservation Medicine Research Group (WildCoM), [Autonomous University of Barcelona](#), Spain. This residency program started in October 2019 under the supervision of Dr. Oscar Cabezón and as a multicentre collaborative residency, including the veterinary faculties of Barcelona and Cordoba, the Animal Health Research Centre (IRTA-CReSA) and three wildlife rehabilitation centres. Johan Espunyes and Lourdes Lobato were the first candidates selected, and shortly after, Maria Puig Ribas joined the group.



Johan Espunyes

Research focus: Canine distemper virus in wild carnivores and antimicrobial resistant bacteria in griffon vultures.



Lourdes Lobato

Research focus: Infectious and pathological processes affecting bat population dynamics.



Maria Puig Ribas

Research focus: Dynamics of chytridiomycosis and host-pathogen interactions in amphibian communities.

Our involvement in these research areas goes from study design to field sampling and data collection, development of diagnostic techniques, data management, statistical analysis and academic writing. Besides our individual research projects, we also get the opportunity to help our colleagues with their research in other wildlife species. Additionally, we attend and organise weekly seminars or journal clubs and we supervise undergraduate and intern students on their initiation in research.

The residency program benefits from the partnership with different wildlife-related institutions. At the Veterinary Faculty, we have full access to necropsy rooms and classical laboratories, sharing resources with other investigators and fostering a collaborative environment.

We participate in the wildlife disease surveillance scheme of Catalonia, performing post-mortem examinations of several wildlife taxa. We regularly join the activities of different wildlife rescue centres in order to gain further knowledge in wildlife medicine, critical care and pathology of mammals, birds, reptiles, amphibians and marine animals. We are also associated with the renowned IRTA-CReSA where we perform advanced laboratorial techniques including serological, molecular, microbiological and parasitological diagnosis.

As part of our group, we are immersed in an [interdisciplinary cooperative environment](#). We also work in close partnership with wildlife management organisations including government institutions. Moreover, we acknowledge the importance of public awareness and community engagement for the success in conservation efforts and we regularly promote outreach activities.

www.wildcomresearch.com

[@wildcom_bcn](https://twitter.com/wildcom_bcn)



Johan Espunyes

Lourdes Lobato

Maria Puig Ribas

ECZM-WPH Residents,
Barcelona, Spain

Would you like to know more about us?

Ticking off the Ungulate Box



Ticks and ungulates are often associated with each other, both in the scientific and non-scientific world. But within the group of ungulate species are quite some differences. Roe deer live solitary or in small groups, while fallow deer live in larger groups. Moose are large animals with long legs, while wild boar live much closer to the ground. Fallow deer mainly graze, while moose are more classified as browsers. And the list goes on. Could it be that these behavioral and morphological differences influences the ability of the different ungulate species to feed ticks, and perhaps also their role in the circulation of tick-borne pathogens?



To investigate this, we collected ticks and spleen samples from five different ungulate species (namely: fallow deer, red deer, roe deer, moose and wild boar) in South-Central Sweden. These ticks and spleens were tested with PCR for the presence of several tick-borne pathogens (among others: *Borrelia burgdorferi* s.l. and *Anaplasma phagocytophilum*).

We found a clear difference among the ungulate species in their mean tick burden (the average number of ticks feeding on an individual). Wild boar fed very few ticks, and therefore we concluded that their role in the life cycle of ticks, and consequently in the circulation of tick-borne pathogens, is negligible. All deer species seemed to play a significant role in the life cycle of ticks, because we found ticks on all of them. However, the tick burden among these species differed with fallow deer having the highest number of ticks feeding on them.



For the pathogen *Anaplasma phagocytophilum* we found that all deer species are important for the transmission to feeding ticks. In Europe there are four (genetically different) ecotypes of this pathogen. In our study we found that red deer and fallow deer seem to be more important for transmitting the (zoonotic) ecotype 1, while roe deer seems to be more important for transmitting the (non-zoonotic) ecotype 2. For *Borrelia burgdorferi* s.l. we found that there might be a dilution effect from deer. But they don't play a positive role in the circulation of the pathogen.

Our results suggest that ungulate management tailored towards specific species could be used as a tool to mitigate human health risk, but this needs to be investigated further. And that is exactly what we're doing at the moment.

So, if you like to be updated on this research, or you have any questions, send me an email! (nannet.fabri@slu.se)



Nannet Fabri

Swedish University of
Agricultural Sciences,
Umeå, Sweden &
Utrecht University, The
Netherlands

Passive Surveillance in Hedgehogs



© Oleksandr Lytvynenko
Shutterstock

“Zoonotic pathogens in synanthropic hedgehogs”

Western European hedgehog (*Erinaceus europaeus*) is a terrestrial mammal distributed throughout all Europe, with a highly variable home range. Hedgehogs can reach high population densities. They show a marked synanthropic attitude, and are characterised by the wide diversity of habitat colonised and the great variety of food resources they feed on. These aspects could lead to the establishment of contacts with humans and other synanthropic wild and domestic animals. Surely these peculiar characteristics make it a perfect host capable of harbouring and spreading different types of pathogens, some of these potentially emerging. Several studies demonstrated its involvement in maintenance and transmission of zoonotic pathogens (*Salmonella* spp, *Leptospira* spp, tick-borne diseases such as anaplasmosis and borreliosis). About viral diseases few information is available, recently MERS-related *Coronavirus* was detected and few cases of *Papillomavirus* and *Herpesvirus* were registered in central Europe. Starting from these assumptions, it was planned to perform lab analyses on animals found during passive surveillance within the regional plan of wildlife monitoring, in order to clarify and deepen the knowledge about the epidemiological [role of hedgehogs](#) in regard to [hosting and spreading of pathogens](#) with intrinsic [zoonotic and/or conservationist implications](#).

A preliminary study was carried out from 2018 on 97 hedgehogs originating from different provinces of North Italy and hospitalised in a wildlife rehabilitation centre. Available biological matrices (oral and rectal swabs or pool of viscera) were submitted to a broad panel of analyses. Initially, they were analysed through classical virological examination by inoculation on VERO and MARC-145 cells and samples showing cytopathic effect were observed by negative-staining electron microscopy (nsEM). A broad spectrum of PCR protocols including *Coronaviruses*, Influenza A and D viruses, Canine Distemper virus, *Pestivirus*, Pseudorabies virus and *Flavivirus* was performed. Inoculation on cell cultures allowed to isolate viral strains identified by nsEM as reovirus-related particles, then confirmed by PCR as mammalian type 3 reovirus. About *Coronavirus*, [41.3% of samples](#) (38/92) resulted [PCR-positive for Betacoronaviruses](#) belonging to lineage C and related to the known *Erinaceus* coronaviruses (EriCoVs). All the other PCR protocols gave negative results.

Results obtained from this study, along with a recent increase of mortality in a hedgehogs' population in Emilia Romagna region, led to further investigate the presence of the previously listed emerging and zoonotic pathogens. Since at necropsy, the presence of [hepatic necrotic foci](#) was frequently detected as well as many subjects resulted [parasitised by ticks](#), we extended the analysis to the search for pathogens of bacterial origin, in particular the presence of *Salmonella* was investigated, and to tick-borne diseases, among which of particular interest is [tick-borne encephalitis](#). Results from these ongoing investigation will be object of a contribution at the EWDA International Meeting 2021. On the whole, results obtained so far suggest that hedgehogs could be wild natural reservoir of emerging MERS-like CoVs and *Reovirus* with potential zoonotic implication. Indeed, they further highlight the importance of monitoring synanthropic species because of the overlap and the close relation established with humans and pet animals.

Tiziana Trogu¹, Sabrina Canziani¹, Sara Salvato¹, Clara Tolini¹, Anna Castelli¹, Silva Rubini¹, Martina Munari¹, Davide Tartari², Lorenzo Borghi², Enrica Sozzi¹, Davide Lelli¹, Antonio Lavazza¹, Ana Moreno

1. Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia-Romagna "Bruno Ubertini", Brescia, Italy
2. League for Birds Protection "Il giardino delle Capinere" (LIPU), Ferrara, Italy

Systematisation of Fatal Injuries in Wildlife Vehicle Collisions Accidents

“Worldwide, death due to the vehicle collisions is one of the major cause of death in wild animals”

It is undisputed that impact injuries are one of the main causes of animal death. Injuries due to a [vehicle accident](#) can often be [confused with injuries resulting from falls or abuse](#). However, the distinction may be made when there is a clear systematisation of both. The aim of this work was to identify and systematise mortal injuries resulting from traffic accidents involving [170 wild animals](#) over a [ten-year period](#) in the Northern region of Portugal. For each animal, lesions were systematised per the anatomical region and the major structures affected. Internal hemorrhage and lesion type was also recorded. The necropsy reports of the Laboratory of Histology and Pathological Anatomy of the University of Trás-os-Montes and Alto Douro between January 2010 and July 2019 were consulted. Only animals with a history and severe injuries compatible with a collision with a vehicle

For mammals, the species most identified in this study were Red Fox (*Vulpes vulpes*) and in the group of birds, the most common species were Common Barn Owl (*Strix aluco*), more frequently adult animals (88.2%), with no difference between genders.

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ONLINE DUE TO
COPYRIGHT ISSUES.

PLEASE CONTACT AUTHOR
DIRECTLY FOR FIGURE.

Considering anatomical region, mammals presented thorax (n=85) and abdomen and pelvic injuries (n=101), and 36 birds had coelomic cavity injuries, 70 had head and neck injuries (41.2%) and 52 had limb injuries (30.6%), as described in Figure 1. Most animals (n=126, 74.1%) had lesions in more than one anatomical area, with 44 animals (25.9%) presenting only one affected area. With respect to major structures affected, most animals presented musculoskeletal lesions (n=120, 70.6%), followed by organ lesions (n=112, 65.9%) and cranioencephalic lesions (n=59, 34.1%). [Musculoskeletal injuries](#) were predominantly found in [birds](#), while in [mammals](#), [organs](#) were the most affected structures.

The characterisation of fatal injuries associated with vehicle collisions is very important, not only to contribute to the increase in knowledge in this area, but also to allow the differential diagnosis with other causes of death.

Figure 1.
Distribution of lesions by anatomical region in mammals and wild birds included in this study.



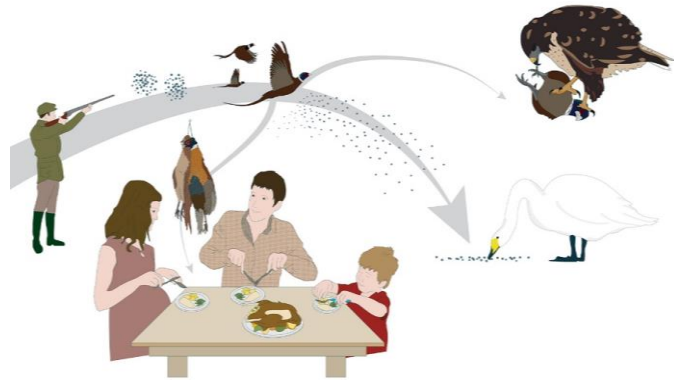
**Andreia Garcês,
Justina Prada,
Adelina Gama,
Anabela Gomes,
Celso Santos, Filipe
Silva, Isabel Pires**

Inno – Serviços
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Montes and Alto Douro
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Preventing Lead Poisoning: Make Your Health Voice Heard!

"An opportunity to consign a health problem to history..."

The EU is moving to [ban lead ammunition](#) and fishing weights which would prevent nearly 100,000 tonnes of lead being released into the EU environment annually. The poisoning resulting from this lead deposition leads to mortality of approximately [2 million birds each year](#) with higher numbers affected sub-lethally with a range of consequences for reproductive health and immunological capability. Impacts on other taxa are less well studied although more recent research suggests ammunition as a source of lead for scavenging mammals such as [bears](#).



Source: Wildfowl & Wetlands Trust

We now know that populations of some of [Europe's most threatened birds of prey](#) including vultures are in effect 'supressed' by lead no doubt due to its effects on both births and deaths and their particular vulnerability to additional adult mortality and their low rates of reproduction.

Following a call for evidence last year, the [European Chemicals Agency](#) (ECHA) has produced an Annex XV restriction dossier highlighting the risks from lead ammunition to wildlife; to human health via the consumption of game meat shot with lead; risks to cattle from lead shot ingestion; and the risks from lead fishing weights to waterbirds such as divers.

They highlight the range of [non-toxic alternatives to lead](#) ammunition and fishing weights which are available on the EU market and make economic assessments of the transition.

ECHA is running a public consultation on the dossier which ends on **24th September**. Currently the vast majority of responses are from those involved in shooting who see only problems with the restriction and the benefits of removing lead from the environment are at risk of being overshadowed. If you have got additional information about impacts of lead poisoning or a view on the need for restricting releases of lead ammunition and fishing weights, please feel free to respond to the public consultation.

The background summary information about the restriction proposal is [here](#). The whole enormous(!) Annex XV report is [here](#).

The link to submit your views or new information is [here](#). Unless you are able to answer their specific technical questions, your views/data/other can be submitted in the first box for general comments.

Please get in touch if you'd like any further information at all ruth.cromie@wwt.org.uk



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Veterinary Field Triage in Wildlife

“Looking for experts and panel members to participate in a study on wildlife triage in a disaster situation”

Non-epidemic disasters are a concrete threat to society. Due to the complexity of [evacuating animals that are in a disaster area](#), it is good to think in advance about what should be done with these. This group includes both domestic livestock and wildlife, group that may be overlooked in these types of situations because they is no clear or direct ownership.

In human medicine, [field triage](#) is applied in disaster situations to quickly obtain an overview of the [most urgent patients](#). The triage of livestock and wild animals in disaster situations seems to hardly be discussed in peer-reviewed literature, despite the social relevance.



This topic is the subject for my master thesis as a Veterinary Medicine student. I am researching field triage in animals in disaster areas with wildlife as a special area of interest. The aim of this study is to see if we can [use a human field triage protocol as a model to create a livestock and wildlife triage protocol for veterinary field triage in a disaster area](#).

For the study, we are looking for experts in the field of wildlife veterinary medicine in disaster situations to [help create a triage protocol](#). In addition, are looking for people who would like to be part of a panel that assesses the final product.

If you are interested, please contact me at a.m.dubbink@students.uu.nl and let me know in which group you would like to participate.

Thanks in advance!



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