European section of the wildlife disease association bulletin: 2012, 1 (9).

EWDA E-zine

Health of wild
Amphibians | Birds | Fish | Mammals | Reptiles

Echinococcus multilocularis found in Foxes in Sweden (1), Japanaese encephalitis virus found in mosquitoes and antibodies in blackbirds (2), this year again, surveillance of wildlife helped to warn about risky zoonotic pathogens. But, beware: they are our sentinels watching at enemies, not the enemy! M. Artois & P. Duff

1: Wahlström et al. 2012 Eurosurveillance Edition 2012: Vol.17/ Issue 28 Article 3

2: Platonov et al. 2012 Eurosurveillance Edition 2012: Vol. 17/ Issue 32 Article 4

Year 6 - Nr.9

Winter 2012/2013

European section of the wildlife disease association bulletin

President's corner

Christian Gortazar Schmidt*

Ciudad Real, December 2012

Dear wildlife disease colleagues,

This 2012 has been the year of our 10th EWDA conference in Lyon, back in France after our first one almost 20 years ago in Paris: thanks to Marc Artois and his fantastic colleagues. It was the first joint one with the WDA, celebrating its 61st annual conference… and it was a success in terms of people attending, and presentation and discussion quality! We are indebted to all members of the organizing and scientific committees, and already look forward to our next EWDA meeting in Edinburgh, in August 2014.

The scientific contents of the 2012 joint meeting made it evident that European wildlife disease research is (counter-intuitively) healthy despite of the crisis hitting Europe. There are now more active research groups, more people interested in wildlife diseases, more participating countries and more challenging research projects running than at any other time. Fantastic new books appear, work towards a European Wildlife Disease Network progresses, the relevance of wildlife diseases is growing for national and international veterinary authorities, and loads of quality wildlife disease research is published every month, making our field of science progress at an unprecedented speed.

However, funding for basic research is likely to shrink in the next years. One traditional weakness of European research in general is our relatively poor ability to transfer knowledge to the relevant sectors, particularly when compared to the USA. Therefore, we cannot keep on just doing good research: it is time to apply the growing wildlife disease knowledge and make it useful for our society and environment. New funding and career opportunities will emerge in collaboration with the livestock industry and the public health, animal health and conservation agencies. Fortunately, the members of the European section of the WDA have the capacity to adapt to these changes and keep on improving our knowledge of the amazing world of wildlife and their diseases.

Christian

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Brucella melitensis in the Bargy Massif (Haute-Savoie, France)

Jean HARS[1], Marion RIPOCHE[2] and Marie MOINET[3]

France is officially free from bovine brucellosis since 2005 and did not record any cases in sheep and goats since 2004. In April 2012 an outbreak due to Brucella melitensis biovar 3 was detected and confirmed in a dairy herd located in the Bargy Massif (Haute-Savoie). Ithis outbreak caused a human case diagnosed in January 2012. Epidemiological investigations have been unable to explain this outbreak, the last detection of Brucella melitensis biovar 3 in the area dated back to 1999. In this mountain area where cattle, chamois (*Rupicapra rupicapra*), ibex (*Capra ibex*), red deer (*Cervus elaphus*) and roe deer (*Capreolus capreolus*) live together, we considered whether wildlife could have acted as a silent intermediary "vector" between the domestic outbreaks of 1999 and 2012.

Fig.1: Tele-anaesthesia of an Ibex. Marion Ripoche

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In France no cases of brucellosis have ever been described in ibex or red deer, and extremely rare cases were reported for roe deer. On the other hand several brucellosis outbreaks were observed in chamois in the Alps between 1982 and 2001. These outbreaks all originated from contact with domestic cattle outbreaks. In all these outbreaks clinical cases of

(Continued on page 4)

Fig.2: Purulent articular lesion in an 11-year-old male Ibex. Bertrand Muffat

(continued from page 3)

polyarthritis and orchitis in males were observed. Population monitoring conducted for several years lead to the conclusion that chamois was most probably a dead-end host because cases remained highly localized and disease disappeared in the medium-to-long term after the domestic source of contamination was removed.

To remove the doubts concerning wildlife, a surveillance programme of wild ungulates has been undertaken begining in September 2012. It is based on the control of chamois, red deer and roe deer hunted within a designated risk area and clinical monitoring and capture of ibex (protected species in France) for serological and bacteriological analyses (Fig.1). In September and October 2012, one hunted chamois (n=19) and 4 captured ibexes (n=12) have already been diagnosed positive by serology and by bacteriology on arthritic lesions for 2 males and a female ibex wasclinically affected (Fig. 2, 3). The three diseased animals had been shot . The continuation of the surveillance programme should provide epidemiological elements necessary to adapt control measures to the different species infected.

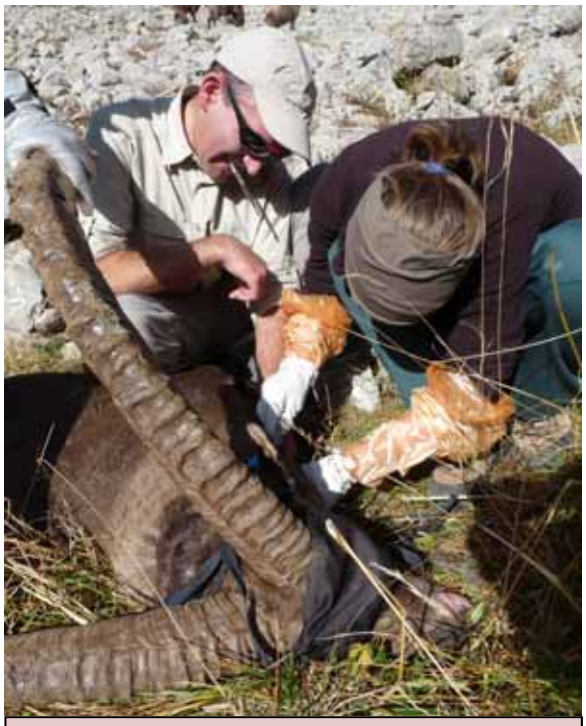

Fig.3: blood sampling on Ibex. Marion Ripoche

Emergence of a novel avian pox disease in British tit

Becki Lawson*

Avian pox is a viral disease with a wide host range and is considered endemic in a range of non-Paridae hosts in Britain. Avian pox in Paridae species (tit family) was first diagnosed in a great tit (*Parus major*) from south-east England in 2006 with particularly large skin lesions. The disease in this species has been reported in Scandinavia since the 1970s (1) and more recently (since 2005) from central Europe, including Austria, the Czech Republic, Germany, Hungary and Slovakia (2).

A database of opportunistic reports of garden bird morbidity and mortality (2006-2010) was used to analyse spatial and temporal patterns of avian pox throughout Britain in Paridae and non-Paridae species (3). A number of Paridae species are susceptible to Paridae pox, however, the majority of incidents involved great tits. Paridae pox incidents were more likely to involve multiple individuals than were incidents in non-Paridae hosts. Results showed an annual seasonal peak of reports in August/ September in both host clades.

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Significant northward and westward spread of Paridae pox has occurred from an origin in south-east England, with the current disease range extending into south-west England, Wales and central England. Spatial analyses revealed strong clustering of suspected avian pox incidents involving Paridae hosts, but only weak, inconsistent clustering of incidents involving non-Paridae hosts. There was no spatial association between Paridae and non-

Fig.1: great tit with pox.
Jenny Davis. Courtesy ZSL

(Continued on page 6)

(Continued from la page 5)

Fig.2: great tit with pox; Jelena Harper. Courtesy of ZSL

Paridae incidents.

Unlike the small wart-like lesions usually seen in non-Paridae with avian pox in Britain, lesions in Paridae were frequently large, often with an ulcerated surface and caseous core. Sequencing of the avian poxvirus 4b core protein produced a single sequence from each of 30 great tits tested from Britain. This sequence was identical to that of avian pox from great tits in Scandinavia and central Europe. In contrast, sequence variation was evident amongst virus tested from non-Paridae. Our findings show Paridae pox to be an emerging infectious disease in wild birds in Britain, possibly originating from viral incursion from central Europe or Scandinavia. Ring recovery data do not support great tit migration as a likely route of viral spread; instead vector movement, perhaps via wind-borne spread, offers a more likely explanation for the method of incursion.

Paridae pox was first observed in 2009 in a long-term study site in Oxfordshire where populations of wild tits have been monitored in detail for several decades (4). Paridae pox became established within the local population of great tits reaching relatively high peak prevalence (10%), but was far less prevalent (<1%) in sympatric populations of several other closely-related, abundant Paridae species. Multistate mark-recapture modelling showed that Paridae pox causes significant reductions to host survival, with particularly large effects observed for juvenile survival. An age-structured population model demonstrated that Paridae pox has the potential to reduce population growth rate, however, national disease-induced population decline is unlikely to occur at the prevalence of pox observed in this study population (5).

Current research priorities include mapping the occurrence of Paridae pox incidents, and collating information on Paridae pox samples available, across Europe to facilitate further phylogenetic research to better-understand the origin of this virus and how it emerged in Britain.

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Emerging *Schmallenberg virus* in wild cervids, Belgium

Annick LINDEN*

Fall 2011

Legend: From left to right: Rosario Volpe, Fabien Grégoire (standing), Jessica Pirson, Annick Linden, Julien Paternostre, standing: Marc Wirtgen †, Adrien Nahayo

Schmallenberg virus (SBV) emerged in summer-fall 2011 in North-West Europe (1). To determine whether wild ruminant species were also susceptible to infection, a study was carried out in Southern Belgium. The prevalence of antibodies to SBV in wild red deer (*Cervus elaphus*) and roe deer (*Capreolus capreolus*) was measured and the viral genome was sought in fetuses from found-dead pregnant animals.

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All serum samples collected during the fall of 2010 (n=299) were negative. On the contrary, apparent seroprevalence among wild cervids (n= 225) in 2011 was 43.1%. There was no significant association between species and occurrence of seroconversion, with 40.5% in *C. elaphus* and 45.9% in *C. capreolus* (Fig.1). Further, twenty-two fetuses (from road injured pregnant roe deer) and five newborn fawns

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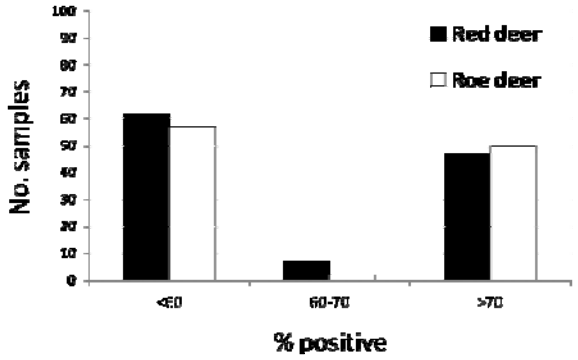

Fig.1: Frequency distribution of the results yielded by indirect ELISA for detecting IgGs targeting recombinant nucleoprotein of emerging Schmallenberg virus in serum samples collected during the fall of 2011 from 116 red deer and 109 roe deer. Results are expressed as percentages of the reference signal yielded by the kit positive control serum, with serologic status defined as negative (<60%), doubtful (>60% and <70%) or positive (>70%) by the manufacturer.

(Continued from page 7)

found dead (red deer) were autopsied and brain samples were tested for detection of SBV genomic RNA and cellular beta-actin transcripts by reverse transcription-quantitative PCR (RT-qPCR) according to Hoffmann et al. (2). All the beta-actin-positive samples of these 27 fetuses/ newborns remained negative for SBV RNA. Unfortunately fetal sera were not suitable for analysis due to postmortem decomposition.

In conclusion, the study provides evidence that SBV infects wild cervid populations and that the new virus has quickly spread throughout the region since its emergence about 250 km northeast in the late summer 2011.

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WildTech update

Duncan HANNANT*

Project background

WildTech (Novel Technologies for Surveillance of Emerging and Re-emerging Infections of Wildlife, supported by the European Commission under the Food, Agriculture and Fisheries, and Biotechnology Theme of the 7th Framework Programme for Research and Technological Development, grant agreement no. 222633) addresses the problem of the increasing prevalence of new and emerging diseases arising from wildlife.

The objectives of the project are: The application of microarray technology for the detection of known infectious agents in wildlife populations, for the detection and identification of novel and unknown infectious agents in wildlife populations and to develop a high throughput serological screening of wildlife populations for infectious disease.

The utilisation of these technologies to assess the spread of selected diseases (proof of concept) using historical samples and those collected during the project. We will monitor and model patterns of wildlife disease spread and the risks associated with these changes. Ultimately this epidemiology framework will be used to reduce the risk of further potential epidemics by producing a generic action plan in case of emerging epizootics among wildlife.

The development of a state of the art wildlife disease data management system with mapping capability for use in Europe and beyond.

Project developments

The fabrication and testing of the nucleic acid and serology arrays continues for the detection of pathogens in wildlife. Non array-based technologies (e.g. proteomics, luminex arrays, next generation sequencing) are also being investigated. Validation requirements and potential applications of these new methods for wildlife disease surveillance are being analysed. Two technology transfer workshops have taken place to introduce the basic principles underlying the new technologies being developed by the WildTech project: the first was a theory-based workshop held at the joint EWDA/WDA conference in Lyon in July 2012. The second was a hands-on wetlab workshop held at the AHVLA in October, attended by 8 colleagues from our Associate and Collaborative Partners.

Our pool of Associate and Collaborative partners is growing and they, along with our project partners, continue to provide us with surveillance samples and samples for technology validation. After having developed the new technologies in the various laboratories of the Technology Centre and delivered the improved SOP for transportation of samples – we have received a large number of serum and tissue samples delivered to the WildTech laboratories. Samples were delivered either for evaluating / validating the developed arrays, or for surveillance. These samples have been or are being run on the arrays and are also undergoing testing with the other methods being developed as described above.

The epidemiology aspect of the project has begun and is ongoing. The aim is to deliver the mathematical, statistical and epidemiological tools necessary for pan European wildlife disease surveillance design, testing and support. Tasks undertaken and in progress include qualitative risk assessment for developing wildlife sampling strategies, epidemiological analysis of historic and new field data to quantify spatial and temporal patterns of wildlife disease incidence (prevalence and geographic distribution) and assessing the consequence of changing pathogen distributions using statistical and dynamic modeling. Finally, the evidence derived from results of these risk assessments will form the basis of recommendations for appropriate and proportionate management and policy actions based on the results of the risk assessment

The WildTech database has been developed. The goal is to have a database where sample data and array results can be

(Continued on page 10)

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stored and accessed for epidemiological analysis, and that can be further developed to form part of a pan-European surveillance system. Wildpro®, the electronic encyclopaedia on the health and management of free-ranging and captive wild animals and emerging infectious diseases, continues to be updated with new pathogens as part of the WildTech project.

WildTech
Novel Technologies for Surveillance of Emerging and Re-emerging Infections of Wildlife

Legend: WildTech consortium meeting: Jena, April 2012

Wetlab participants, at AHVLA in October 2012

Take up the challenge: harmonize methods in wildlife epidemiology, join APHAEA!

Legend: from left, to right, standing: M. Artois, E.Gilot, MP Ryser, C. Staubach, & J. Sonnenburg; kneeling: T. Kuiken, M. Boadella & C. Gortazar.

In June 2012, the EMIDA ERA-NET (coordination of European Research on Emerging and Major Infectious Diseases of production Animals) project "harmonised Approaches in monitoring wildlife Population Health, And Ecology and Abundance" (APHAEA) was officially started. This project aims at establishing a European wildlife disease surveillance network that is capable of providing reliable estimates of abundance of wildlife species and of pathogen distribution in key wildlife species. More specifically, this project will: (1) contribute to the development, implementation and encouragement of the use of harmonized procedures for wildlife population abundance estimation, sampling and diagnosis, both at national and European levels, in order to improve wildlife health surveillance in general; (2) provide data on key host species abundance (red fox, wild boar and small rodents) and key pathogens (Pseudorabies virus – Aujeszky´s disease, *Echinococcus multilocularis* – echinococcosis and *Francisella tularensis* – tularaemia) in their wild hosts in selected participating countries according to current national records and harmonized procedures proposed by APHAEA, in order to reliably detect geographical differences in host abundance and pathogen occurrence; (3) enhance international collaboration expected to continue after the end of the project: By developing the proposed harmonized methods, APHAEA will build on existing European initiatives, including those from OIE (www.oie.int) and EWDA (www.ewda.org), to develop a European wildlife disease surveillance network that has the potential to monitor pathogen distribution for selected wildlife diseases with an impact on human and livestock health.

To achieve this goal, the expertise and opinion of colleagues from all over Europe is requested, and everyone is invited to join, to contribute to protocol development and/or pro-

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legend: Presentation of APHAEA at the informal meeting of the EWDA Wildlife health surveillance network in Lyon, France, July

vide consultancy on proposed protocols. Project partners originate from Spain, Italy, Germany, Switzerland, France, Sweden, Denmark and the Netherlands. Already numerous additional countries have expressed their interest, but the more we will be, the greater the chances to achieve the project's goals.

For more information, visit the APHAEA website www.aphaea.eu

To become a partner, contact: Marie-Pierre.Ryser@vetsuisse.unibe.ch (please write "APHAEA in the email title")

Legend: There are few images of Aphaea who is usually considered to be Artemis or Diana, the goddess of hunting and nature...

Our first EWDA-conference and post-conference trip on the water

Olivia BEERLI,
Sohvi BLATTER*

The start of the conference was amazing! We got the chance to join the chamois capturing for students in the French Alps. On Saturday afternoon we started a nice walk to our camp. There we ate a delicious dinner and we chilled out at the beautiful fireplace. Very early in the morning we started the walk up the mountains, it was actually more running than walking! After hiking for two hours and waiting in the wet grass for another hour we got the reward for our patience: three adult and a young chamois got in the trap.

The next days we could profit by the knowledge of the speakers and the informative posters. After this impressive week we had the enjoyment to be a participant at the auction. All the people being serious and hard working all over the week changed when the auction started! All of a sudden they were talking about aphrodisiacal baits and other unique products. No one was too stingy to spend a generous sum.

Finally at the end of the week our FIWI-team took the opportunity to enjoy and discover the beautiful landscape on a canoe-trip on the river Ain. To keep the tradition of shared water adventures Paul and Alex from AHVLA joined us.

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FIWI (Centre for Fish and Wildlife Medicine), Vetsuisse Faculty, University of Bern, Switzerland

Legend: From right to left: Sohvi Blatter, Olivia Beerli, Mirjam Pewsner, Marie-Pierre Ryser, Alex Barlow, Paul Duff, Fabien Mavrot, Guisep-pina Gelormini

A dizzy group with after-effect of the banquet arrived at the canoe-leasing place. After a dry run on the river bank we were finally getting into the canoes. Paddling down the river our pair-teams had very different techniques to work with or against each other in one boat. The outcome of our effort was very amusing. One team ended in circling down the river whilst another crossed it from one side to the other continuously. In the third boat one could just lay back and profit from the experience of her partner. We were all impressed by the English coolness and ability to paddle easily until we arrived at a slightly dangerous part of the river. Trying to overcome a turbulence our guests capsized and had to be rescued from their predicament.

After we got some routine in canoeing we could relax and experience the landscape and the water birds in their natural habitat. Nevertheless at lunchtime we were relieved to have a solid floor under our feet. We were looking forward to eat delicious food in a familiar

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atmosphere and could even train our pathology skills while eating French cheese and Iberian ham.

In the evening we were lucky to find the right exit where we got picked up. We got stuffed with two other groups (altogether 17 persons) in to the car and were brought to the train station. Tired, exhausted and dry again we curled up in the train seats and travelled back home to Switzerland.

Now four month later it is nice to have a souvenir full of new impressions, interesting talks and cosy evenings at the beautiful city of Lyon! Thank you ;)...

EWDA Student Chapter

Lidewij Wiersma*

The new board of the EWDA Student Chapter was installed at the WDA/EWDA conference in Lyon and in this newsletter we would like to introduce ourselves.

The 2012-2014 board is:

Lidewij Wiersma – Chair (left)
Mariella Aalto – Workshop organiser (middle on the photograph)
Janneke Schreuder – Communications officer (right)
Adam Michel – Past Chair
Steven van Beurden – Past workshop organiser

The new board aims to improve the **communication** of the chapter and we have chosen to do this via a **new website**, a **mailing list** and a **facebook page**. Janneke has been working hard over the past few months to create a more user friendly and accessible webpage for the EWDA SC, which can be found at: http://ewdastudent.wordpress.com/.

We have updated the membership database and created a mailing list that members will automatically be subscribed to. We also encourage all (student and non-student alike) EWDA members to join our facebook group entitled 'European Wildlife Disease Association Student Chapter': http://www.facebook.com/groups/10403297125/. Feel free to post any information that you think is relevant to our students, including job opportunities, internships, courses, symposia, information on mailing lists etc.

Finally we are happy to inform you that we are making good progress on the preparations for the **5th EWDA student workshop**, which is planned for the 11-14th of April 2013. Sponsorship is proving tricky in the current economic climate, so we are still open to suggestions and tips on that front. The workshop program is coming together nicely and the first announcements regarding registration will be up soon! We will also shortly post the workshop poster on the website and facebook page, which everyone is encouraged to circulate as widely as possible.

For any questions or suggestions for the EWDA SC, do not hesitate to contact us!

Lidewij

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1st Joint WDA and EWDA Conferences in Lyon: wildlife health at the centre of the debate in the French capital *of gastronomy!*

Alix ORTEGA[1]

From the 22nd to the 27th of July, the 1st Joint WDA/EWDA conference took place in Lyon. It was a lively and very instructive week, with participants coming from 61 different countries, ready to share the latest news about wildlife heath around the world.

Releasing one of the four chamois captured during the student trip to the Bauges mountains. Photo by Leslie Mattoy.

A joyful group of organizers from Lyon Veterinary School (now called VetAgro Sup) and from local partners had 2 years to design a perfect week of conferences, workshops, and social times around the theme "convergence in wildlife health". This very accurate theme represents the "One health" concept as well as the first union of the WDA and EWDA conference. More than 500 professionals and students from various backgrounds, all dedicating their careers to wildlife, enjoyed this international meeting of high importance.

The week started with 9 different workshops, including one specially designed for students on avian and chelonian necropsy. It was hosted by Lyon veterinary school, who had recently celebrated its 250th birthday, as the oldest veterinary school in the world.

The rest of the week was extremely informative: around 80 international speakers presented their current work and more than 300 posters were displayed and commented on by their authors. The major theme was "One health", illustrated for example by zoonoses such as tularemia, trypanosomiasis, simian pathogens or West Nile virus. It was widely demonstrated how human populations were damaging the "One health": wildlife traffic, disturbance of migration routes, wild animals becoming multi-resistant to antibiotics following direct contact with rubbish dumps, etc. The changes we humans create leads inexorably to emerging diseases.

Other major themes were remarkably illustrated: useful tools for population health assessment, advances in management of diseases (possible new treatments and vaccinations, etc.), migration and its consequences on wildlife health. It was clearly demonstrated how we must take into account the changes in

78 speakers presented their current work during this week of conference.
Photo by Emilie Ribault

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Banquet and award ceremony at Lyon City Hall. Photo by Hugo Sentenac

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ecosystems (due to human activities or not), such as climatic issues, in order to predict the evolution of local and worldwide diseases.

Sunny weather and great social times were there to welcome all the participants. On Sunday, more than 50 lucky students were able to discover the stunning Bauges mountains and capture chamois for scientific purposes. The week of conference then started with an ice-breaker at the Rhône Department House. Other activities took place in a chilled atmosphere: student/mentor mixer night in Lyon's most famous brewery, visit to Lyon zoo and the beautiful bird park of Villars les Dombes. The traditional auction night raised more than 6000€ for the student activities for WDA and EWDA. Finally, the exiting week ended with the awards ceremony and a lively banquet in the grandiose City Hall of Lyon.

For more information about the conference, visit the website wda2012.vetagro-sup.fr. Some videos of oral presentations will be uploaded soon!

Do not forget the next important dates: the 62nd WDA conference will take place in **Knoxville, Tennessee,** on August 2013 and the 11th EWDA biennial conference will be held in **Edinburgh in September 2014.**

News from the Board

Lisa Yon

The following is a summary of the decisions from the EWDA Board meeting on 24 July 2012 in Lyon, France, and the Board teleconference on 29 November 2012.

Bank account and budget

The Board unanimously agreed for Philippe Berny to set up a bank account for the EWDA with HSBC in France(this was a logical choice because both the Treasurer and the proposed Accounts Officer reside there). Because of new changes in account costs, Philippe is checking fees for accounts at other banks to find the least expensive option.

Marc Artois and Philippe Berny are submitting paperwork to arrange for EWDA to be recognised officially in France as an Association, and will scan the official papers when received and send tthese o EWDA and WDA.

The EWDA and WDA Boards agreed to evenly split the auction proceeds from Lyon, provided all funds go toward student activities.

Positions in the board

Two new positions will be added to the Board this coming year: a Vice Chair Person (2 year tenure) and a Member at Large (4 year tenure). Descriptions for the roles of these two positions will be distributed to members, a committee constituted to suggest candidates to the Board (members of the committee are Thijs Kuikin, Marie -Pierre Ryser and Lisa Yon), and members will be asked to submit any additional candidates for these positions between January and 1 March. A vote will be held from 1 March to 1 May 2013.

The Board proposes Marc Artois as Accounts Officer, to be voted upon by EWDA membership in the next election (to be held March-May 2013).

Conferences: fees, support

The Board voted to accept reduced fees for EWDA conference attendance by Associate Members. For members in financial difficulty, they can indicate this when registering for the conference, and reduced fees will be considered for each person on a case-by-case basis.

The Board agreed to contribute 5,000 euros to the next Student Chapter workshop; the costs for the workshop will be 25,000 euros, and they have currently raised 11,000 euros including sponsorship.

The next EWDA conference will be held from 25 to 29 August 2014 in Edinburgh, hosted by Anna Meredith. The local organising committee also includes Gidona Goodman, Mike Hutchings and Liz Mullineaux. This is in the middle of Edinburgh Festival time so hotels will need to be secured early.

Miscellaneous

The Board agreed that the APHAEA logo should be added to the Diagnosis card being posted on the EWDA website.

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EWDA bulletin www.ewda.org

The Bulletin is a non peer reviewed publication of the European section of the Wildlife Disease Association (EWDA). None of the articles in this bulletin should be mentioned as scientific publication.

Chairman: **Christian Gortazar Schmidt** ,

Bulletin Editor and contact:

- **Marc Artois**, marc.artois@vetagro-sup.fr
- **Paul Duff** Paul.Duff@ahvla.gsi.gov.uk

31 December 2012

ECZM Wildlife Population Health Subspecialty

Becki Lawson*

The European College of Zoological Medicine (ECZM) is a European Veterinary Specialist College formed under the auspices of the European Board of Veterinary Specialisation. The Wildlife Population Health (WPH) subspecialty opened in 2009 and currently has approaching 30 active members from ten countries. The emphasis is on ecosystem health, conservation medicine as well as wildlife epidemiology, including disease management and prevention, surveillance and outbreak investigation, and is not primarily clinically oriented. The call for *de facto* applications for Diplomate status remains open until the deadline of April 2014. To be eligible, applicants need (1) at least 7 years of experience in their speciality (2) to spend at least 60 per cent of their time in their specialty and (3) to have published at least 6 peer reviewed original primary data scientific articles (at least 3 as first author).

Opportunities for a 3-year Residency in WPH are in development at several centres although none have yet launched. WPH Residents will be required to have undertaken broad training and experience in clinical veterinary medicine and surgery and their supporting disciplines, which must be attained either by participation in an internship of 12 months duration or by 2 years full time equivalent in general practice, prior to commencing a residency. Applicants will be expected to have clinical and pathological experience with reptile, avian and mammalian species. An alternative residency route, tailored to the individual and typically of longer duration, is also available for approval.

Additional details and WPH Residency adverts when available will be posted @ www.eczm.eu Enquiries to Andrew Cunningham A.Cunningham@ioz.ac.uk

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EWDA 2014 Conference

July27th to August 1st: It will be in **Edinburgh** and will coincide with the world famous **Edinburgh Festival**, the biggest arts festival in the world! Hosted by the **University of Edinburgh's Royal (Dick) School of Veterinary Studies.** The conference will be held **at the world class John McIntyre Conference Centre** in the heart of Edinburgh city. Accommodation will be on site – Book early as Edinburgh will be the place to be !

FIRST ANTIGONE ONE HEALTH COURSE!

Submitted by **Thijs Kuiken***

The first ANTIGONE One Health Course was held in Rotterdam, The Netherlands, from 17 September to 5 October 2012. It attracted 26 participants from Europe, Asia, Africa, and North America, several of them EWDA members. They came from institutes of veterinary medicine, human medicine, and wildlife biology, and so already by their origin fulfilled the concept of "One Health". Of the 26 students, eight were from the Netherlands, five were from Spain, four were from Vietnam, two were from the U.K., two were from Italy, and one each were from Belgium, Finland, Ghana, Switzerland, and the U.S.A.

Contents followed "chain of emergence"

The contents of the three-week course followed the so-called "chain of emergence" of viral and bacterial pathogens from their animal reservoir to the human population. In the first week of the course, there was a general introduction to emerging viral and bacterial diseases in the human population,and the interspecies barriers for emerging pathogens were discussed. The second week of the course dealt with intrahuman barriers and interhuman barriers for emerging pathogens, as well as their identification, epidemiology, and modelling. Finally, in the third week of the course, clinical treatment of human patients, preventive measures, and future perspectives were presented.

Lecturers were the leading scientists in their fields and covered a wide range of disciplines and included a number of

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Participants of the first ANTIGONE « one health » course

(continued from page 19)

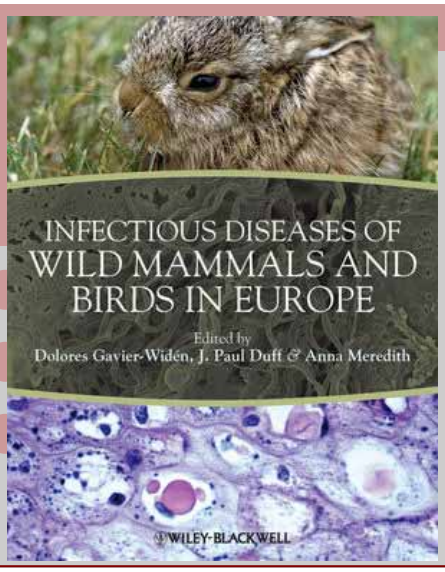
EWDA members. They included Samuel Cohn, an historian from the University of Glasgow, Albert Osterhaus, virologist from the Erasmus Medical Centre in Rotterdam, Sarah Randolph, ecologist from the University of Oxford, John Cleland, demographer from the London School of Tropical Medicine and Hygiene, Frédéric Keck, social anthropologist from the Centre national de la recherche scientifique in France, Nigel Dowdall, aviation medical examiner from the Civil Aviation Authority at Gatwick, Tiffany Bogich, mathematical modeller from Princeton University, Constance Schultsz, medical microbiologist from the Academic Medical Centre in Amsterdam, Christian Gortazar, veterinary scientist from the Instituto de Investigación en Recursos Cinegéticos in Ciudad Real, Laurence Tiley, molecular virologist from the University of Cambridge, and Richard Delahay, wildlife biologist from the Food and Environment Research Agency, Woodchester Park.

Both theory and practice

The format of the course was a mix of theory and practice, and encouraged discussion among students and between students and lecturers. Before lunch, the lectures were concluded with a panel discussion, in which students had the opportunity to quiz the lecturers of that morning. Most afternoons were used for practicals and site visits. These included visits to a wild animal shelter, a modern poultry farm, an urban design office, an experimental animal facility, and an intensive care centre, as well as a multi-header microscope session, a simulation exercise for a communicable disease outbreak, and viewings of documentaries on epidemics and environmental effects of increased consumption.

Next ANTIGONE *One Health* Course in Spain, autumn 2013

Taken together, this course provided a three-week immersion in the multitude of disciplines that make up One Health. In this way, ANTIGONE hopes to equip the next generation of scientists with the holistic viewpoint required to deal with emerging infections. The next ANTIGONE One Health Course will take place in the autumn of 2013 in Spain, and will be announced on the ANTIGONE website (http://www.antigonefp7.eu).



Infectious Diseases of Wild Mammals and Birds in Europe (Gavier Widen, Duff & Meredith, editors. ISBN: 978-1-4051-9905-6. Hardcover, 568 pages. August 2012, Wiley-Blackwell) is a key resource on the diagnosis and treatment of infectious diseases in European wildlife that covers the distinctive nature of diseases as they occur in Europe, including strains, insect vectors, reservoir species, and climate, as well as geographical distribution of the diseases and European regulations for reporting, diagnosis and control. Divided into sections on viral infections, bacterial infections, fungal and yeast infections, and prion infections, this definitive reference provides valuable information on disease classification and properties, causative agents, epidemiology, pathogenesis, and implications for human, domestic and wild animal health.

Publisher jacket note

Training and education in wildlife health.

This table summarise training and course opportunities, presenting at least a module on wildlife health. Only organisations present in Europe are mentioned. Universities or colleges interested to be cited should send their details to Marc Artois for any further update. EWDA will encourage training in wildlife health, however our association cannot endorse, support or recognise these independent training courses . M.A.

City (country)	Title & Level	Website
Europe. **EU project ANTIGONE.** **Different country each year** **2013: Spain;** **2014: Germany;** **2015: France;** **2016: U.K.**	Continuous education "one health" Further course will be posted on: Young ANTIGONE	Web site for 2012 course http://www.virosciencelab.com/ant/young-antigone-2/2012-antigone-one-health-course http://www.antigonefp7.eu/ant/young-antigone-2/young-antigone
. Barcelona (Spain) **Universitat Autònoma de Barcelona (www.uab.cat)**	M.C. "Ecología Terrestre y Gestión de la Biodiversidad"	http://masterecologiaterrestre.uab.es
. Barcelona (Spain). **Universitat Autònoma de Barcelona (www.uab.cat)**	Course 5th year veterinary study (optional & solely for students registered at UAB) (starting in 2014-15)	http://sefas.uab.cat
. Ciudad Real (Spain). **Un. of Castilla – La Mancha (www.uclm.es)**	M.C. in Wildlife Research at IREC. (Investigación básica y aplicada en recursos cinegéticos) Official languages are Spanish and English.	**www.uclm.es/IREC** Master link: http://www.uclm.es/IREC/docencia/master.html
. Cordoba (Spain). **AMUS: "Acción por el Salvajes"** **Universidad de Cordoba**	Estancias teórico-practicas de iniciación a la medicina de fauna salvaje	www.amus.org.es
. Edinburgh (UK). **Royal (Dick) School of Veterinary Studies, Un. of Edinburgh**	Certificate/Diploma/MVetSci Conservation Medicine(On-Line, Part-Time)	www.ed.ac.uk/vet/conservation-medicine
. London (UK). **Zoological Society of London and Royal Veterinary College**	M.C. in Wild Animal Health M.C. in Wild Animal Biology	http://www.zsl.org/science/postgraduate-study/ _____ http://www.zsl.org/science/postgraduate-study/
. Lyon (France). **VetAgro Sup**	Course 2nd/3rd year veterinary study (optional & solely for students registered at VetAgro Sup)	http://www.vetagro-sup.fr/
. Murcia (Spain). **Un. of Murcia**	Master "Innovative systems for the conservation of Euro-Mediterranean fauna".	http://www.um.es/web/veterinaria/contenido/estudios/masteres/fauna-silvestre/2012-13 --- EuROPA Wild: http://www.medicinaveterinaria.unina.it/index.php?p=europa-wild
. Napoli (Italy). **Un. of Napoli Federico II**	"Erasmus Intensive Programme" - EuROPA Wild: wildlife / environment policy and management	http://www.medicinaveterinaria.unina.it/ EuROPA Wild: http://www.medicinaveterinaria.unina.it/index.php?p=europa-wild
. Napoli (Italy). **Un. of Napoli Federico II**	M.C. (2nd level) in Innovative Systems for Euro-Mediterranean Fauna Preservation	http://www.unina.it/studentididattica/postlaurea/master/dettagli.jsp?cont=326
. Plitvice Lakes National Park (Croatia). **ISAWS – International: Society for Applied Wildlife Studies**	ISAWS March 2013 International Easter School in Applied Wildlife Studies	www.appliedwildlifestudies.com
. Utrecht (NDL). **Un. Utrecht; Faculty of Veterinary medicine**	Wildlife health. Course 2nd/3nd year veterinary study	http://www.uu.nl/faculty/veterinarymedicine/EN/education/educationalstructure/osz-bic/bic/International%20Cooperation/Student%20exchange/Pages/default.aspx
. Vienna (Austria). **Un. in Vienna**	Diploma Programme in Veterinary Medicine Final year immersion module "Conservation Medicine"	https://online.vu-wien.ac.at/VUWonline/webnav.ini
. Zagreb (Croatia). **Faculty of Veterinary Medicine, Un. of Zagreb**	International Summer School-Wildlife Health & Management"	TBA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