

Universities Federation for Animal Welfare

Science in the service of animal welfare

Spring 2019

UFAW heads to Belgium for international symposium



On the 3rd and 4th of July this year, UFAW's international symposium *Advancing Animal Welfare Science: How do we get there? Who is it good for?* takes place in Bruges, Belgium.

Advances in animal welfare science are needed to inform decisions on the care and legal protection provided for animals. The symposium will therefore explore two major themes – one around developments that are likely to extend our understanding of animals' needs or how to assess animal welfare or sentience and the other around the case that animal welfare and human goals and interests are not always linked.

The symposium aims to develop and raise awareness of new ideas and to promote higher quality and better-focussed animal welfare science and will include both talks and poster presentations. Keynote speakers already confirmed include Professor Linda Keeling from the Swedish University of Agricultural Sciences, Sweden, who will be discussing advances in technology to monitor animal welfare on the farm and Dr Hans van de Vis from Wageningen Livestock Research in the Netherlands who will be highlighting the challenges associated with assessing and improving the welfare of farmed fish.

The meeting will be of interest to the growing international community concerned with animal welfare and to those working on biomedical research, food animal production, slaughter and companion animal rehabilitation, captive wild animals, conservation and policy makers. The symposium is being held in the UNESCO world heritage city of Bruges, Belgium. Bruges is one of the most well-preserved medieval towns in Europe and because of the number of its canals is sometimes referred to the Venice of the North.



Further details on the symposium, including a registration form and accommodation information in Bruges can be found on the UFAW website:

www.ufaw.org.uk/ufawbruges2019 ■



CHAIRMAN'S COMMENT

As the new Chair of Trustees, it is my privilege to welcome you to the Spring 2019 Newsletter.

As we explore animal sentience, questions around how we can know what animals are feeling, and how we can measure this, have become more pertinent. UFAW recently funded a study to explore whether infrared thermography can be used to monitor animal emotions and you can read about the results of this study on page 6.

In this issue, we bring you up to date with the UFAW SAWI Fund, and how you can help us to help animals in Israel. A feature on SAWI's founder, Miss Marguerite Silverman, also appears on the UFAW website (www.ufaw.org.uk/sawisupport) as part of the charity marking the incredible achievements of women past and present for International Women's Day.

As we go to press, plans for the international symposium in Belgium in July are well advanced. The symposium aims to develop and raise awareness of new ideas and to promote higher quality and better-focussed animal welfare science and we are looking forward to welcoming speakers and delegates from around the world.

As always, we are indebted to you – our members and supporters – for your continued interest and support. We simply could not continue to use science in the service of animal welfare without you. Thank you.

Alick Simmons BVMS MSc MRCVS
Chair

Credit: Oud Sint-Janshospital

UFAW/LASA meeting Embedding the 3Rs Philosophy when Breeding Animals

LASA and UFAW jointly organised a meeting, kindly hosted by GlaxoSmithKline (GSK), aimed at providing laboratory animal care professionals with up-to-date information on the welfare of animals used in research. The speakers at the meeting shared their experiences on addressing issues that included providing appropriate social and physical enrichment for minipigs and guidance on the care of geriatric animals. Other presentations described how there are fewer information resources and poorer regulatory guidance regarding the needs of fish and amphibia compared to those available for mammal species typically used in research. It is clear that there is a need for further research and progress in these areas. ■



Credit: Sanger Institute, Genome Research

Special edition of UFAW's Animal Welfare Journal published

The February 2019 issue of *Animal Welfare* – 28(1), is a special issue entitled *Animal Welfare Reconsidered* which originated from a workshop held at the Wissenschaftskolleg zu Berlin in December 2017. The organisers, Daniel Weary, Peter Sandøe and Michael Appleby, were keen for this forum to form the second in their series of volumes critically reflecting upon topics relevant to animal welfare and guest edited the issue.

The 11 papers cover a wide range of topics. They seek to challenge traditional conceptions of animal welfare, explore the assessment of welfare and consider how best to achieve changes that advance animal welfare. This special issue was published as a compilation of open access papers to enable the volume to reach as wide an audience as possible and can be accessed via UFAW's website

 [www.ufaw.org.uk/
the-ufaw-journal/open-access](http://www.ufaw.org.uk/the-ufaw-journal/open-access) ■

1999-2019 Twenty years of the UFAW Wiley Blackwell Animal Welfare series

In 1999 UFAW entered into an agreement with Blackwell Science (later to become Wiley Blackwell) to commission a book series on a wide range of animal welfare issues and animal welfare science. There are now 12 volumes in the series (13 if the eighth edition of the *UFAW handbook on the Care and Management of Laboratory and other Research Animals* is included) and more are planned.

Robert Young's first volume in the series, *Environmental Enrichment for Captive Animals* was the first to collate the wide range of information on environmental enrichment, was very successful and we are pleased to announce that a second edition is currently being written. David Fraser's book, *Understanding Animal Welfare* drew attention to different conceptions of animal welfare and the importance of proper definitions and is frequently cited. John Webster's *Animal Welfare: Limping Towards Eden* 2005 reviewed progress made in the welfare, particularly of farm animals, since his earlier book - *Animal Welfare: A Cool Eye Towards Eden* 1994 (the writing of which was also supported by UFAW). The *UFAW Farm Handbook* has been a standard text for many generations of veterinary students in the UK, and the fifth edition was published in the UFAW/Wiley series. Other volumes have covered species issues (eg equine welfare) ethics (eg veterinary) or aspects of animal use, such as in research. Most recently, a handbook on the care of companion animals has been produced to complement the farm and laboratory handbooks. ■

Maxwell Knight the original "nature detective" remembered

Maxwell Knight was a man of many talents – a WWII MI5 agent and an all-round naturalist, with vast experience of animals both in the wild and in captivity. He contributed substantially to our knowledge and understanding of species ranging from insects to primates. He was a strong supporter of UFAW and very much admired its sound, constructive, and scientific approach to promoting the welfare of animals, working closely with many of its team and collaborators in the 1950s and 1960s.

Long-standing members John and Margaret Cooper recently organised a symposium about the life and work of Maxwell Knight and used the opportunity to promote UFAW and its work to the delegates by including UFAW materials and membership leaflets in the delegate packs. UFAW is grateful to them for their ongoing support in promoting the charity and encouraging new members. ■

UFAW's Dr Huw Golledge presents in Switzerland

Dr Golledge spoke at the Swiss Laboratory Animal Science Association (SGV) annual meeting on the *Welfare Impacts of Inhalation Techniques for the Humane Killing of Laboratory Rodents*, making the case that researchers should work towards the eventual replacement of carbon dioxide for the killing of laboratory rodents in science. ■

IN BRIEF

Mole traps must be regularly checked

The control of animal populations is never pleasant, and alternatives should always be considered before resorting to lethal methods. Where control is necessary the method used should be as humane as possible. Unfortunately, moles are often not killed immediately by traps set for them, and so UFAW has updated its advice on the humane control of rodents to include this non-rodent species. UFAW recommends that, when mole traps are used, they must be checked, at least twice daily. This frequency being a compromise between what is ideal for welfare and what is likely to be practicable (see <https://www.ufaw.org.uk/rodent-welfare/rodent-welfare>). ■



Credit: Pixabay

Notification for election to Council at the 2019 AGM

In accordance with Article 46 of the Constitution, members' nominations for election to Council at the 2019 AGM must reach the UFAW office between 9th August and 6th September 2019. Further information is available from the UFAW Secretary. ■

2019 Annual General Meeting

This year's AGM will be held in the afternoon of Wednesday 16th October 2019 at the UFAW office (The Old School, Brewhouse Hill, Wheathampstead, Herts). Full details of the time and business of the meeting will be sent to members in due course. ■

Council changes at the 2018 Annual General Meeting

We welcomed Dr Siobhan Abeyesinghe, Senior Lecturer in Animal Behaviour & Welfare Science at the Royal Veterinary College, Hawkshead Campus, Potters Bar. Ms Corrie McCann and Mr David Pritchard were re-elected to council. ■



SAWI FUND: in support of animal welfare in Israel

Dr Roi Mandel has now completed his research work on cattle welfare carried out at the Koret Veterinary School in Israel which was supported by the SAWI Fund.

Roi's research explored the relationship between the animals' use of automated grooming brushes and how this use is affected by stress, pain and disease in dairy cows. Farms and management practices are becoming increasingly automated so that animal-handler contact is reduced and these changes mean that there is a need to find better ways of using automated systems to detect conditions that could compromise cattle welfare. Roi's results support the inclusion of grooming brush use, and possibly other low-resilience behaviours, into automated health monitoring systems, to better detect disease progression and recovery. UFAW is very grateful for the contributions of Professors Eyal Klement, Becky Why and Christine Nichol towards this project.

Roi is now teaching ethology and animal welfare at the ETH Zurich, Switzerland. He has also been teaching at the Koret Veterinary School, Hebrew University of Jerusalem. He leads the Animal Welfare course and teaches both veterinary students and veterinarians who are pursuing a Masters degree in Public Health. ■

Help us to help animals in Israel

The SAWI Scholarship was awarded in the hope that it would not only develop useful animal welfare knowledge, but also help build Israeli capacity in animal welfare science. Roi's scholarship and subsequent work is an excellent start and his teaching work is helping to develop interest and expertise in animal welfare in the next generation of animal welfare professionals. Roi plans to continue teaching animal welfare and to develop a research programme in Israel. However, UFAW would like to do more. The SAWI fund is dedicated to improving the welfare of animals in Israel but we need your help to fund further vital research and educational work that will help build expertise and thus make a real, and long-term difference, to the welfare of animals in Israel.

You can help by providing a gift or legacy. UFAW's 'SAWI' Fund is specifically for use to promote animal welfare in Israel and was established in 2003 when the Society for Animal Welfare in Israel was brought under UFAW's wing in line with the wishes of SAWI's founder the late Miss Marguerite Silverman. If you would like to help, please consider a donation or a legacy to SAWI, which will help us to continue supporting animal welfare in Israel and building on the work already begun. If you would like further information on making a donation or leaving a legacy to SAWI, please contact the office. Thank you. ■

International symposium on ovine footrot

As well as supporting research, an important element of UFAW's work is to ensure that knowledge about the latest developments in animal welfare is disseminated. One way to do this is to support meetings on specific, important, topics in animal welfare. UFAW recently supported Dr Rachel Clifton to organise a symposium on footrot in sheep – the most common cause of lameness in sheep which is present in 90% of UK flocks.

The two-day symposium was held at the University of Warwick and was attended by 22 researchers from five different European countries. There were two sessions during the symposium, one focusing on the latest research about the biology of footrot, and the second focusing on control programmes for footrot. Researchers gave presentations based on ongoing work in their country, and each session was followed by a discussion. There was then a meeting at the end of the event to determine the best strategies for ongoing collaborative footrot research.

Dr Clifton hopes that the event will influence research and control strategies for footrot in multiple countries with significant benefits for sheep health and welfare. ■

Previous UFAW Medal winner

2016 UFAW Medal winner Professor Don Broom, Professor of Animal Welfare (Emeritus) at the University of Cambridge recently provided an update to his award. He says: "I was honoured to receive the UFAW Medal. The accompanying award has allowed me to attend and give lectures at conferences where I received no expenses or less than the actual cost. Because of the UFAW award I have been able to attend or lecture at a UFAW conference, three ISAE (International Society for Applied Ethology) conferences and conferences in India, Chile and Colombia. Many thanks". ■

Our university outreach initiative – the UFAW LINK scheme - continues to prove popular and we receive regular enquiries from universities around the world about how they can join it.

The LINK scheme engages with staff and students at universities and educational institutions around the world and encourages an interest in animal welfare by providing support for novel activities in their institution. Over the years UFAW has supported inspirational lectures from leading animal welfare scientists, seminar programmes, student conferences and other activities.

Universities that have recently joined the scheme include University of Namibia, Namibia, University of Ljubljana, Slovenia, Jiangnan University, China, Universidade Positivo, Brazil, Universidad de Chile (Santiago), Chile, Università degli Studi della Basilicata, Italy, Royal Agricultural University, UK and Université Laval (Quebec), Canada. ■

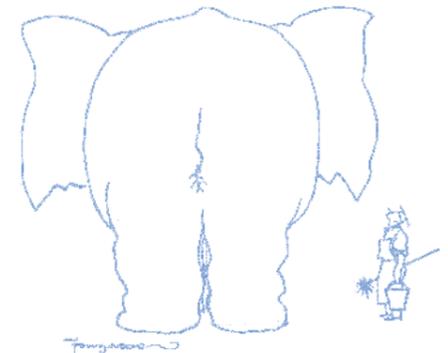
20th UFAW Animal Welfare Student Scholarship meeting, University of Glasgow

An important part of the learning experience provided by the UFAW Animal Welfare Student Scholarships is that scholars give a talk on their research to an audience of their peers.

This year the scholarship meeting was held at the School of Veterinary Medicine at the University of Glasgow on December 12th. The audience of staff and students from Glasgow, Myerscough College and elsewhere listened to talks on a range of subjects. Amongst these were, Theresia Bishof (University of Natural Resources and Life Sciences, Vienna, Austria) talking on her attempts to better understand and increase the use of the creep area in piglets, Emily Hendry (University of Glasgow, UK) looked at the insights gained from the use of infrared thermography on footpad dermatitis in broilers and Nicole Regan (Royal Veterinary College, UK) explored how drugs used to treat epilepsy in dogs impacted on their food-motivation and could lead to issues with obesity. Adele Aynsley (Aberystwyth University, UK) also discussed the issues she encountered in trying to develop an automated system to investigate depression in horses.

Professor Georgia Mason (Campbell Centre for the Study of Animal Welfare, University of Guelph, Canada) kindly gave a plenary presentation on some of her recent work. Professor Mason is a leading international animal welfare scientist and a past winner of the UFAW Medal for Outstanding Contributions to Animal Welfare Science.

In a fascinating, astute and compelling presentation, Professor Mason detailed how she and her students have used phylogenetic comparative methods to gain an insight into animals and their needs. Building on her longstanding interest in captive carnivores, she explained how a species' natural ranging behavior impacts their ability to adapt to captivity, with animals like the polar bear that range over very large areas annually being highly predisposed to showing stereotypic route-tracing. She presented new results from her student Miranda Bandeli, on what is it about being wide-ranging that makes such species hard to keep. For example, is it that they need to walk long distances every day? Is it that they have large hippocampi (a part of the brain responsible for spatial memory and navigation)? Is it simply their nomadic lifestyle? Professor Mason explored the case for each of these, and other, hypotheses.



At the meeting, in addition to giving a talk on her research, scholar Freija Maulbetsch (University of Natural Resources and Life Sciences, Vienna) was awarded the Farm Animal Care Trust (FACT) scholarship, given in memory of Ruth Harrison, for her project *Chilled or bored? Inactivity in fattening cattle*. Freija was presented with a copy of Ruth Harrison's seminal work *Animal Machines*. ■



UFAW grants support research and other scientific activities aimed at improving or better understanding the welfare of animals. Awards range from large project grants to support major research projects to small awards supporting travel to scientific meetings. Here we summarise the outcomes of some research funded by UFAW.

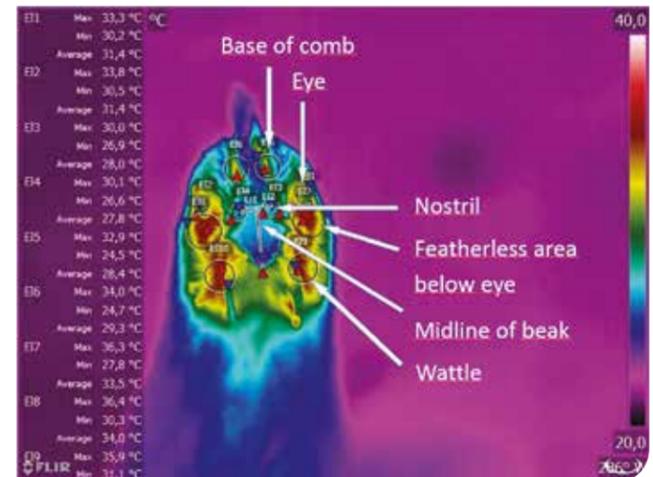
Bristol scientists use UFAW funds to explore whether thermography can be used to monitor animal emotions remotely

Infrared thermography, also known as thermal imaging, is a non-invasive technology for measuring temperature distributions across a surface, such as that of the skin or eyes of an animal. Thermographic studies of animal emotions have so far focused on emotional arousal. This provides useful information but does not inform us about valence (whether the emotion is positive or negative), which is of central relevance for assessing animal welfare.

Professors Mike Mendl, Becky Whay, Dr Elizabeth Paul and Helena Telkanranta of Bristol University have recently completed a project investigating the links between valence and thermal lateralisation. Their work focussed on asymmetry of surface temperature distributions, but also aimed to contribute to the development of rigorous methodology for thermographic studies on animal emotions.

Their findings constitute the first systematic mapping of lateralised effects in temperature in any species. Their main conclusions were that the results support the existence of thermal lateralisation, confirming it is a promising novel research avenue for animal welfare science. Furthermore, the results highlight the multifactorial nature of thermal lateralisation. For some of their results, affective valence was a plausible explanation, but other explanations such as novelty were also possible. The results of this project lay a groundwork for further studies to investigate these effects and their interactions in greater detail.

The images below show parts of the system for measuring temperature that were developed as part of this project. Depending on the part of the head, the temperature is read either as an average of the entire area (such as the line along the chicken beak), the coolest pixel of the area, denoted with a blue triangle (such as the chicken nostril) or the warmest pixel of the area. ■



Alison showing delegates how to make a tea towel suturing model

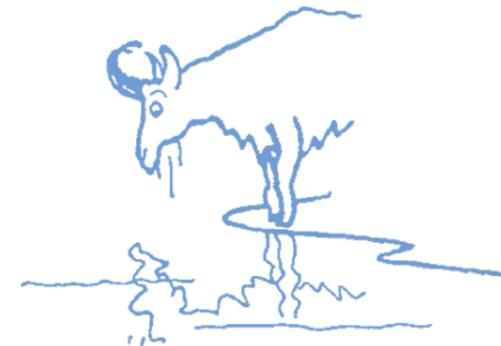
Clinical skills workshop in Bangladesh helps veterinary students

A grant awarded to run a two-day clinical skills workshop at the Chittagong Veterinary and Agricultural University (CVASU) in Bangladesh in January 2019 was a great success. Some 40 delegates representing nearly all the vet schools in Bangladesh as well as Sri Lanka attended.

On the first day the delegates took part in three practicals: they made suturing models; tried out models for a range of common and important clinical procedures eg injection techniques, iv catheter, spay, etc and had a tour of the newly established CVASU clinical skills lab (the first in Bangladesh) which was set up for a practical on surgical prep and suturing.

On the second day, the delegates worked in groups to design their own skills labs and programme. The aim was for them to spend time developing a plan to take back to their own school and each school presented their plans at the end of the day.

Professor Sarah Baillie, Professor Emeritus of Veterinary Education at the Bristol Veterinary School, who was awarded the grant to run the workshop said: *The level of engagement by the delegates in all the workshop activities was amazing. There were news articles about the workshop in every national Bangladesh paper during our visit. It was an important and useful event for them and they really appreciated it. Thank you for supporting this project.* ■



Animal Welfare Across Borders - A meeting to bridge cultural gaps to advance animal welfare worldwide

UFAW is the international animal welfare science society and is keen to undertake more activities around the world to promote animal welfare science. As part of this strategy, UFAW supported a two-day international animal welfare meeting hosted at the City University of Hong-Kong in October 2018. The meeting brought together scientists and others with an interest in animal welfare from all around the world to hear a range of excellent talks and posters over the course of the two-day meeting.

Keynote speakers included ones from former UFAW vacation scholar Natalie Waran (now Professor at the Eastern Institute of Technology in New Zealand) and Dr Judy MacArthur-Clark, a former UFAW staff member who went on to chair the Farm Animal Welfare Council and be Head of the UK's Animals in Science Regulation Unit. Other keynote presentations came from Dr Johnson Chiang, President of the World Veterinary Association and Dr Birte Nielsen, from the National Institute of Agricultural Research in Paris.

Talks focussed on animal welfare issues experienced across the globe, from attitudes to pig welfare within the Chinese pig industry and differences in the regulations governing the use of animals in research around the world, to the trade-offs between animal welfare and sustainability.

The meeting was a huge success, attended by almost 250 delegates, representing countries from around the world. The choice of City University in Hong-Kong was particularly appropriate as the university has just launched a new Vet School within which there will be a centre for animal welfare run by Dr Howard Wong, the local organiser for the meeting and also UFAW's University LINK in Hong Kong.

UFAW is grateful for the enormous effort of the organising committee and our colleagues in Hong Kong for their work in making the meeting such a success. UFAW would like to facilitate more international animal welfare meetings and would be delighted to receive proposals from those who have a suggestion for a meeting theme or location. ■

Animal Welfare Research Network

UFAW has recently provided partial support for the Animal Welfare Research Network (AWRN), which was established by the UK Biotechnology and Biological Sciences Research Council (BBSRC) to identify important research topics, increase collaboration, and support and encourage research activities. The BBSRC funding is due to end in three years, and as AWRN's aims to advance animal welfare science efficiency and capacity are very similar to those of UFAW, the charity will be working with the AWRN to consider how best to continue the AWRN's activities once BBSRC's funding ends. ■

UFAW needs you!

Despite its substantial achievements, outside the scientific and academic/veterinary community, relatively few people are aware that UFAW has been hard at work for nearly a century. We've already achieved much which has benefitted millions of animals of all kinds, from pets to wild and farm animals. But finding ways to protect the welfare of animals is a huge challenge – one which we can't do it alone. Quite simply, we need your help to be able to continue to be a significant force in improving the welfare of animals. As a charity, we rely on voluntary donations and new members in order to continue. Key to advancing animal welfare is discovering and sharing the knowledge unlocked by science so we are trying to build our number of supporters.

Please feel free to share this newsletter and help us spread the word about UFAW. If you would like additional copies of the newsletter, or some general leaflets, then please let the office know. ■

An extraordinary legacy – Dr Mary Dawson

Dr Mary Dawson was a long-term member and supporter of UFAW, as well as a scientist. Based at the University of Strathclyde, Mary was to become one of the leading exponents of using tissue culture methods for replacing animals in research as well as a recognised expert on laboratory animal welfare. During her career, she lectured extensively, including presenting a paper at a UFAW symposium in 1971 entitled *The rational use of tissue cultures for drug testing*, and was the author of numerous papers and books.

In 1974 at the University of Strathclyde, she began her UFAW-supported research into the use of tissue-culture methods to replace animal experiments. The project was completed in 1980 and aimed to find non-animal alternatives for the testing of new drugs against possible carcinogenic and cardiotoxic side effects.

When she died in 1996, Mary left not only a body of work for a new generation of scientists to continue and develop, but she also left a generous bequest to UFAW which has ultimately made a real and lasting difference to the lives of many animals, as well as encouraging the next generation of animal welfare scientists to take up the baton.

Mary's legacy enabled UFAW to launch a new award scheme as part of its efforts to encourage high calibre science likely to lead to substantial advances in animal welfare. Called the Animal Welfare Research Training Scholarships, the aim was to enable promising graduates to undertake three-year research programmes leading to doctoral degrees. The first scholarship was awarded in 1998 to Ms Emma Harding at the University of Bristol for her project *Novel methods for assessing mental states and animal welfare*

Mary's gift also enabled a Mary Dawson award to be given in 1997 to Dr Nolan, a student at Glasgow University, to develop new technologies to investigate mechanisms of hypersensitivity to pain. Inflammation of sensitive tissue can cause hypersensitivity to stimuli, so that animals feel pain during normal activities such as walking or foraging. Dr Nolan's project aimed to identify appropriate analgesic pain-relief drugs or other methods of pain control. ■

How your support makes a difference

Just £3 a month could help us to provide educational materials to improve animal welfare in developing countries.

£10 a month could help us to progress our outreach work to help animals around the world.

One of the most effective ways in which you can really make a difference is through a legacy. Legacies are vital to our work, a fact that most of our supporters don't realise. Once you have ensured that your loved ones are properly provided for, please consider leaving a gift to UFAW in your will. Leaving a legacy is a wonderful way to make sure your care for animals and their welfare will live on. ■



Credit: UFAW, courtesy of Elena Armstrong

Current RTS scholar Elena Armstrong is investigating the lifetime welfare of chickens by testing whether changes in the birds' brains reflect their levels of stress.



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