

Humane Slaughter Association

Improving the welfare of food animals around the world

Spring 2022



Recognising the Sentience of Crustaceans and Cephalopods – the first step on a long journey to treating these neglected animals humanely

We were pleased to see publication of the Review of the Evidence of Sentience in Cephalopod Molluscs and Decapod Crustaceans which was commissioned by Defra. This review examined the scientific evidence for sentience in these invertebrate species, with a view to informing the debate over whether they should be protected by animal welfare legislation which at present only covers vertebrate animals. The HSA contributed to the call for evidence by the report's authors led by Dr Jonathan Birch at the London School of Economics.

The conclusions of the report are that the balance of the evidence suggests that both decapod crustaceans (crabs and lobsters etc) and cephalopods (octopus, squid and cuttlefish) are sentient. In other words, they are likely to have feelings or emotional states (both positive and negative) which matter to them. Most critically for their welfare, they are likely to be able to suffer pain. As a result of the report, the UK government proposes to include these animals within the Animal Welfare (Sentience) Bill, affording them the same protection as vertebrates. This is an important and welcome first step towards improving the welfare of crustaceans and cephalopods. However, acknowledging that they can suffer and that their welfare should be protected is only the first step. To make a real-world difference we need to understand how to protect their welfare by minimising suffering.

One of the areas where we lack the fundamental knowledge of how to protect crustacean and cephalopod welfare is at slaughter. This is where crucial research supported by the HSA comes in. In 2020 we provided over £1.2 million to support two research projects which aim to identify and validate humane stunning methods which will allow crustaceans and cephalopods to be treated humanely when they are slaughtered for food. At present crustaceans are often killed by boiling or carving without prior stunning. Although some electrical stunning devices are available, they have not yet been thoroughly validated. For

cephalopods the situation is even more dire with no routine stunning methods available.

Supported by the HSA, Dr Bjørn Roth and his colleagues at Nofima in Norway are working to develop an electrical stunning system which can be used to stun crabs and lobsters undergoing processing in large commercial facilities. Although many people think of single crabs or lobsters being killed at upscale restaurants, most crustaceans are slaughtered and processed in factories, so the most pressing need is for a stunning system which can be used on an industrial scale.

At the Stazione Zoologica Anton Dohrn in Italy, Dr Giovanna Ponte and her colleagues are using their HSA grant to conduct even more fundamental research to identify whether electrical or mechanical (captive-bolt) stunning may be a humane and practical way of stunning octopus. This research is particularly pressing as recent developments mean that octopus farming is becoming a reality, meaning many more octopuses may be slaughtered in future.

We hope that when the research projects come to fruition, they will identify practical, humane stunning methods for these neglected species which can eventually be mandated by legislation or codes of practice, ensuring a much more humane fate for the many millions of these animals slaughtered every year.

Both research teams will be presenting updates on their research at the HSA International Conference on 30 June/1 July 2022 in Edinburgh (see page 3).



Credit: London School of Economics

CHAIRMAN'S COMMENT

Welcome to the HSA Spring Newsletter, it is an immense pleasure to be writing my first introduction as the HSA's new Chair of Trustees. The HSA plays a vital role in promoting the welfare of animals during transport, slaughter and when they must be killed in emergencies. Some of the greatest challenges faced by animals 'beyond the farm gate' occur elsewhere in the world. For that reason, I am delighted to see a growing focus on international activities. Our staff have been collaborating with the United Nations Food and Agriculture Organisation to develop much-needed guidance on animal welfare when animals must be slaughtered to combat disease outbreaks. This vital information will be distributed around the world in multiple languages. Another example is the work we are doing to share our expertise with the livestock industry in China, the largest consumer of meat in the world. Obviously, some of our attempts to spread the HSA's message Internationally have been curtailed by the pandemic, as have some of our activities closer to home. So, I am also delighted to see that our face-to-face work in the UK is starting to resume as staff return to carrying out welfare assessments and participation at agricultural shows. We are also holding our International Conference in Edinburgh in the summer, and I hope that many of you will attend to hear about the latest developments in animal welfare at slaughter and during transport.

Of course, none of the vital work we do could happen without our members and donors, so thank you as always for your continued support.

Mike Radford
Chair

Sharing the message worldwide

The HSA may be based in the UK, but our mission to maximise the welfare of livestock animals beyond the farm gate is global. Over the last two years, restrictions imposed by the pandemic have prevented our staff from undertaking their usual busy schedule of travel around the world to promote humane slaughter and transport of livestock. However, one of the few unintended benefits of the pandemic has been that it has forced us to adopt new ways of sharing our message across the globe. We have been working on innovative ways to promote best practice and high welfare standards with our international colleagues and developing new partnerships which allow us to have a global influence even when we cannot travel including holding online webinars and producing various online learning resources:

Killing for Disease Control guidelines developed with UNFAO/Eu-FMD

The HSA has been working with the Food and Agriculture Organisation of the United Nations (UNFAO) and European Commission for the Control of Foot and Mouth Disease (EuFMD) to develop guidance documents on the humane killing of animals for disease control purposes.

Across the world when contagious diseases, such as Foot and Mouth Disease, African Swine Fever or Avian Influenza, are found on livestock holdings, animals have to be killed on-farm to stop the disease from spreading. It is of paramount importance that such depopulation exercises are carried out with animal welfare foremost in mind.

These situations require fast action and can be a very stressful time for all involved. It is essential clear plans and guidelines are in place before action needs to be taken, to prevent animals suffering.



The HSA has produced guidelines with the UNFAO and EuFMD which contain information relating to planning and preparation ahead of emergencies, and practical advice on the appropriate methods for humanely stunning and killing animals in these situations.

It is expected the documents will be used by a variety of people, from governments and local authorities developing contingency plans and formulating disease control strategies, to the personnel performing the depopulation.



Please see the website eufmdlearning.works for further information. ■

HSA on-line training in China

The HSA is committed to helping the livestock industry make lasting advances in animal welfare. For over 110 years, we have assisted slaughter facilities through training and welfare assessments, bringing our expertise to those who can put it into practice to make real-world improvements.

In November 2021, we were invited to provide on-line training, and advice on welfare during slaughter, for staff from one of China's largest broiler chicken producer-processors. Technical Officer Jade Spence discussed important considerations when using controlled atmosphere (particularly gas) and electrical waterbath stunning, plus follow-up bleeding. Jade described pros and cons of each method, how to equip and operate systems humanely, and advised on how to assess the effectiveness of each method.

IQC (Shanghai) Ltd (a food safety and animal welfare consultancy) who are working with HSA on our projects to promote humane slaughter in China organised the November event. IQC told HSA: 'It is our first time working together ... it's very good and valuable training for our participants, ...very positive comments from our colleagues here'.



If you have questions regarding your operations or would like confidential, constructive advice or training, please contact HSA (info@hsa.org.uk). ■

E-learning to introduce humane slaughter and transport to Chinese students

We are keen to raise awareness of animal welfare during slaughter and transport around the world. To this end, we have recently begun work on an important project to develop an e-learning module for Chinese undergraduate students of veterinary medicine and biological sciences introducing the basic principles of humane transport and slaughter of livestock. The module will form part of a full course on animal welfare developed by the Animal Welfare Standards project at the University of Queensland, Australia.

Undergraduate programmes at several Chinese universities will use the course as part of the curriculum and it will also be freely accessible to members of the public. The module aims to introduce students to the concept of humane stunning, the common methods of slaughter, welfare of livestock during transport, and the need to consider animal welfare during emergency culls.

We hope this course will contribute to an increased appreciation of the ways in which the welfare of livestock can be protected during transport and killing amongst those at the start of their careers working with animals in China. ■

Humane Slaughter Award webinar: Dr Carmen Gallo

In October 2021, a virtual prize-giving ceremony was held for Dr Carmen Gallo the winner of the 2021 Humane Slaughter Award. The Award recognises individuals or organisations that have made major advances in the welfare of livestock during transport, markets and slaughter, or killing for disease control.

Dr Gallo, the founder of the Animal Welfare Programme at the Universidad Austral de Chile, has been instrumental in improving livestock welfare in Chile and internationally. Dr Gallo gave a presentation highlighting the main achievements of her research and teaching career which has spanned more than 40 years. The presentation was followed by a Q&A session allowing attendees to gain further insight into Dr Gallo's work and experiences.

We were delighted to acknowledge the contributions of Dr Gallo. Her pragmatic, evidenced-based approach to improving animal welfare, by working with the livestock industry to bring about real-world improvements, epitomises the HSA's approach to livestock welfare.



More information about the event, including a recording, can be found here: hsa.org.uk/awardwebinar

HSA International Conference 30 June & 1 July 2022, Royal College of Physicians, Edinburgh

We are very excited to be holding our first international conference in six years. The event, which will be held in Edinburgh, Scotland, will give attendees the opportunity to present their latest research, and to network and socialise in person.

The theme of the conference is the welfare of food production animals during transport, marketing, slaughter or killing for welfare reasons or disease control.

The conference will feature keynote talks from Professor Bob Elwood (Queen's University, Belfast) on Pain and Suffering in Decapods and Dr Claire White (Senior Veterinary Advisor, NFU) on the Implementation of the Demonstration of Life Protocol which is being used to increase the acceptability of stunning to consumers of Halal meat in the UK.

We have received many interesting abstracts and are looking forward to sharing an exciting programme of presentations with delegates. The conference will also include talks from the researchers carrying out HSA-funded research to develop humane stunning methods for crustaceans, cephalopods and neglected finfish species.

We encourage people to attend the conference in person to make the most of the collaborative and friendly environment, but if this is not possible due to COVID or travel restrictions, there is also an option to view the event live on-line.



Early bird registration for the conference ends 7 April 2022. To register please visit hsa.org.uk/Edinburgh22



English Winter Fair and 2022 agricultural show plans

On 20 & 21 November 2021, the HSA stand was at the English Winter Fair held at the Staffordshire County Showground. It was our first trade show appearance since 2019, as many events were cancelled or postponed due to the pandemic. The show was well attended and our stand attracted considerable interest. Many visitors to the stand were long-standing members of the HSA, whereas some encountered us for the first time, and were surprised to hear we were founded over a hundred years ago.

We offered advice to people who wanted to know how to protect the welfare of their livestock at slaughter, and had -numerous enquiries relating to the provision of local slaughter facilities and home-kills. Some stand visitors didn't own livestock at the time but wanted to be prepared for the future, which is a responsible approach we encourage.

We hope to see more of you at shows during 2022!

We are currently planning to exhibit at:

- The British Pig and Poultry Fair, Stoneleigh, 11 & 12 May
- Royal Welsh Smallholding and Countryside Festival, Builth Wells, 21 & 22 May
- National Beef Expo, Darlington Mart, 28 May
- The National Sheep Association Event, Malvern, 27 July
- The English Winter Fair, Stafford, 19 & 20 November

Farewell to Wendy Goodwin

This year Wendy Goodwin retired from the HSA after an amazing 33 years of service to the Charity. Wendy will be greatly missed by all of us and doubtless many of you who she has helped with grant applications, memberships and countless other issues over the years. We wish her a thoroughly well-deserved and relaxing retirement. ■



Professor Ronald Anderson

During the past year we learned of the sad death of Professor Ronald Anderson who had been a long-time supporter of HSA and a former Council member and Chair. Ron was an HSA Vice-President and always supported HSA and attended the AGMs whenever he could. Our condolences go to his family. ■

Mrs Ann Reynolds

We also recently learned of the sad death of Mrs Ann Reynolds who was Secretary of the Association for many years working alongside her husband Terry the Secretary of our sister charity UFAW. Ann remained a keen supporter of the HSA's work during her retirement and we send our condolences to her husband Terry and her children. ■



Training activities and welfare assessments

The COVID-19 restrictions have severely curtailed the HSA's out-of-office activities, but since August 2021 Technical Director Charlie Mason has been back on the road providing invaluable training and advice including:

- Eight training courses –
 - emergency slaughter and humane killing of pigs for field-staff in Scotland and the Borders
 - emergency slaughter and humane killing of neonatal livestock animals for technicians at a leading veterinary school;
 - poultry slaughter and assessment for WATOK licensing for five seasonal poultry producers in the south of England and the Midlands;
 - WATOK licensing refresher training for APHA staff (two sessions);
 - emergency slaughter and humane killing of neonates for a sheep farmer in Wales.
- Welfare assessments:
 - Pilgrim's Pride, Westerleigh

Poultry slaughter training and assessment

The HSA offers practical training and assessment of competence in slaughter of poultry, leading to the issue of a WATOK (Welfare of Animals at the Time of Killing) licence allowing the holder to slaughter poultry. These courses are particularly suited to seasonal producers who need to slaughter poultry in the run-up to Christmas. Since organising training and receiving the WATOK licence once assessed as competent can be time consuming, it is important that anyone who wishes to slaughter poultry for Christmas arranges training well in advance of the festive season. Please contact info@hsa.org.uk if you wish to attend a training course.

Following the courses delivered last summer in Sussex and Inverness, the HSA offered two more courses in Sussex and Worcestershire covering domestic fowl and ducks. Despite much initial interest, numbers were curtailed due to COVID and other outside influences. Nevertheless, the HSA's training resulted in five more individuals gaining their WATOK licences for seasonal and small-scale poultry slaughter. To further the success of the recent courses, the Technical Director has written two articles for the January/February and March/April 2022 issues of The Smallholder magazine, explaining the procedure for obtaining a WATOK licence for small-scale and seasonal producers. We hope this will increase the demand for this type of training and, if so, we plan to schedule courses through the spring and summer months, starting in March/April 2022. Keep an eye on the HSA website for further details. ■

VPHA Award

The Veterinary Public Health Association's (VPHA) 60th Anniversary Conference took place at the Mercure Bedford Central Hotel in September 2021. Following the presentations, there was a Q&A session with a panel including the HSA's Technical Director, Charlie Mason. At the conclusion of the Q&A, to his complete and utter surprise, Charlie was presented with a Highland Quaich (a shallow two-handled drinking cup or bowl), in recognition of his numerous contributions to, and support of, VPHA meetings over the last 30 years. The presentation was made by the VPHA President, Dr Madeleine Forsyth. Congratulations to Charlie on this well-deserved recognition of his many contributions to the work of the VPHA. ■



APHA WATOK refresher training

The current crisis affecting the UK pig industry has seen the HSA involved in several advisory and training exercises involving pig farmers and field-staff, veterinary surgeons and government departments. Culling pigs on-farm is carried out largely by farm staff. Whilst most, if not all, pig producers have procedures in place, and appropriately-trained personnel to undertake emergency killing (which doesn't require a licence), most of them are not licensed for non-emergency killing which does require a licence). Depopulation of surplus, but otherwise healthy, animals does not fall under the definition of emergency killing, unless the Government declares it an emergency, which to date it hasn't. This has led to a plethora of applications to the Animal and Plant Health Agency (APHA) for staff to be assessed for WATOK licences. These assessments must be carried out by veterinary officers from the APHA and the HSA was approached to provide two online refresher courses for the APHA staff involved, which took place in December 2021. The courses covered captive-bolt stunning, pithing and bleeding; the use of firearms and shotguns; mechanical blunt-force trauma for neonates; and a checklist of critical points to look for during the assessments. ■

Consultations – Sharing our expertise to improve welfare

The HSA is a valued contributor to consultations carried out by government departments on the protection and welfare of animals during transport, at markets, and at slaughter. We provide considered and referenced answers to questions raised in these consultations, highlighting areas where knowledge is sparse, and hence more research needed.

Recently, we responded to a consultation by Defra on issues associated with labelling products for animal welfare. Welfare during transport and at slaughter is part of such labelling schemes. In terms of transport, journey distance and duration affect the welfare of the animals being transported, but loading and off-loading is often the most stressful part, making it difficult to assess welfare based on details of the journey. Instead, animal-based measures collected upon arrival could be used in a labelling scheme to reflect the quality of the transport. These could include the number of animals arriving dead at their destination, injuries during transport, and post-mortem meat inspection data.

The HSA also provided useful information on a consultation from the Animal Welfare Council (AWC), which was updating its Opinion on Welfare of Farmed Fish at the Time of Killing. We suggested the inclusion of accessory/cleaner species such as lumpfish and wrasse when collecting data from the industry. The HSA recommends that all finfishes should be effectively stunned before slaughter or culling, including accessory species like cleaner fish to preclude the possibility of pain and suffering.

The HSA contributions to the report on Sentience in Crustaceans and Cephalopods are acknowledged in the report and we were delighted to see that as a result of the report these invertebrate species are now likely to be acknowledged as sentient in UK animal protection legislation, see page 1. ■

HSA Student and Trainee Scholarships

HSA Student/Trainee Scholarships enable undergraduate or masters students and trainees in the livestock industry to undertake a short research project related to humane slaughter, transport or emergency killing. They provide up to £2400 support for each project and are available to students or trainees worldwide.

To learn more visit hsa.org.uk/stss

In 2021 we supported five students to carry out small research projects within the remit of the HSA. They presented their results in December 2021 at the annual seminar held together with our sister charity the Universities Federation for Animal Welfare. The scholars came from across the globe, working on a broad variety of subjects. Two studies were carried out on the welfare of animals at wet markets in Hong Kong. Desiree Hung looked at the welfare of saltwater fish and found that, overall, the welfare of fish in the stalls visited was acceptable, but at high stocking densities more physical damage (ulcerations and fin erosion) of the fish was found. Ming Yi Tse investigated the welfare of chickens in live poultry retail shops in Hong Kong. There are 1.3 million chickens reared annually in Hong Kong and all are slaughtered in the 128 wet market stalls and shops. She studied six of these, finding an absence of water provision for the birds, no stunning prior to slaughter, and no training provided for the staff.

More than 13,000 km away, at the University of Pennsylvania, USA, Saif Khawaja worked on improving fish welfare by developing an automated system for ikejime and shinkei-jime. These are techniques used for stunning and killing of fish where a spike is inserted quickly and directly into the hindbrain of the fish, causing immediate brain death. For this developmental study, no live fish were used. Alexandra Paraskevopoulou from Newcastle University surveyed poultry farms in the UK to assess the methods used for on-farm killing of birds. Manual cervical dislocation was the overall method of choice, but those that worked with turkeys preferred the use of captive-bolt (cartridge powered) and those working with ducks preferred mechanical cervical dislocation.

You can read about the fifth scholar, Alex Kyabarongo, opposite ■



Credit: HSA

HSA Grants – supporting research and development in humane slaughter and transport

The HSA offers grants to support research and other projects which improve our understanding, or develop ways to improve, animal welfare during slaughter and transport. These awards are open to applicants from anywhere in the world. To learn more or apply visit hsa.org.uk/grants ■

Mentoring partnerships support students to win HSA scholarships

In 2021 Alex Kyabarongo, a veterinary student from Makerere University, Uganda, was successful in obtaining an HSA scholarship to investigate 'The welfare concerns of transporting ruminants from farms to abattoirs in Uganda'. Alex was part of a mentoring scheme which aims to support students keen to undertake their first research project, but who need support from more experienced researchers and are unable to get this locally.

Alex was mentored by Dr Nienke van Staaveren, a senior Research Associate at the University of Guelph, Canada, who supported and guided Alex through the development of his project plan and successful application for HSA funding.

On completing his project, Alex told us: *"It has been an exhilarating experience sharing with my mentor for the last 5 months. She helped me in developing a good animal welfare project concept"* Additionally, Alex found that: *"...through our series of meetings, we had a lot of chats on animal welfare and animal welfare research from her perspective and experience, and this gave me a picture of how animal welfare is perceived in different countries and cultures"*.

Given the success of Alex and Nienke's mentoring partnership (which was made possible via HSA's sister charity, the Universities Federation for Animal Welfare), the HSA has launched its own mentoring scheme. During 2022 we look forward to following the progress of two new mentor/student pairings. One partnership the HSA is supporting is Fred-Ann Tanises, a veterinary student from the University of Namibia, and Stephanie Schneidewind, a Research Associate from the Freie Universität Berlin, Germany. Stephanie wanted to be part of the scheme because: *"...My experience with research so far has given me valuable insights into planning a scientific study with a solid scientific foundation...I myself have been very lucky with my supervisors, and thus I am now confident that I have many useful tips to pass on"*.

The 2022 cohort of HSA and UFAW mentor pairings will also benefit from being part of an on-line group through which they will be able to network, and gain support from each other.



If you are interested in participating in the scheme, please visit: hsa.org.uk/mentor ■



Alex's project investigated the welfare challenges such as being trekked long distances to market faced by livestock in Uganda.

Credit: Alex Kyabarongo

New grant award: Farm animal transportation regulations: Time for a change?

Dr Eugénie Duval, an expert in public law has recently received HSA funding to work on a project on farm animal transportation regulations. Together with animal scientists from the Animal Welfare Program at the University of British Columbia, Canada, Dr Duval will study the recently adopted, new, or revised existing transport regulations of six jurisdictions (the EU, Australia, New Zealand, the UK, the US, and Canada). Despite a global move by these and other countries to improve their animal transportation regulations, little is known as to how each of the revised regulations compares. The aim of this study is to identify regulatory improvements and gaps in relation to current scientific knowledge; especially aspects of transportation (eg fitness for transport) that can severely affect the welfare of animals. This comparative approach will provide a novel opportunity to gather a broad understanding of what regulations have been improved and what is still lacking. ■



Spring Appeal 2022

Our successful Autumn Appeal asked for support of our scheme that offers mentoring and support from more experienced researchers to students around the world who are just beginning their careers in research into humane slaughter or transport. For our Spring Appeal, we are asking for your support to help deserving international students or early-career researchers attend our conference in Edinburgh. For students in developing economies, such as those participating in our mentoring scheme, the chance to attend an international scientific conference and network with their peers from around the world is invaluable but all too often unattainable. Your support will allow us to offer opportunities to talented young researchers which will enable them to develop their careers and make real improvements to animal welfare in their home countries

To donate to the 2022 Spring Appeal visit: hsa.org.uk/springappeal ■

You can help the HSA by:

Becoming a member – membership is just £15 per year for individuals and £5 per year for students. See hsa.org.uk/join.

Making a donation – large or small, your donation means a great deal to the lives of many animals, and is vital in helping us continue the HSA's work. You can pledge a monthly amount of your choice, or make a one-off donation.

Monthly

£3 will help us to deliver virtual online training and guidance

£10 enables us to provide up-to-date technical information and advice on all aspects of animal handling, transport and slaughter

£20 will assist in the cost of translating information and advice into various languages

£50 will help us to fund essential research aimed at improving animal welfare beyond the farm gate

Leaving a gift in your will – a gift in your will, regardless of size, will ensure that we can continue to make a lasting difference to the welfare of food animals during marketing, transport and slaughter. Gifts left in wills make up over 50% of our income, so every gift is extremely valuable to us – hsa.org.uk/legacy.

Purchasing gifts from our gift selection – every purchase helps support and promote the work of the HSA.

If you'd like to become a member, renew your membership or make a donation now you can do so securely online - hsa.org.uk/support.

Other ways you can help

Recruit a member – if you are already a member you could recruit a friend or colleague.

Follow us on social media and share our content - Twitter - @HSAofficial, LinkedIn linkedin.com/company/humane-slaughter-association. ■

