University Centre
ASKHAM BRYAN YORK

ASK

Journal of Land-based learning

2026-2027



Learning is in our Nature

Welcome to the 2026 edition of the ASK Journal, the Askham Bryan College Journal of Land-Based Learning. We are proud to showcase the breadth and quality of research conducted by students and staff at University Centre Askham Bryan, the higher education arm of Askham Bryan College. The purpose of this journal remains to celebrate and promote scholarly activity across our institution by providing a record of student dissertation research and staff research outputs.

This year's collection demonstrates the diversity of research undertaken across our land-based disciplines and highlights the applied nature of research at University Centre Askham Bryan. The projects featured explore a wide range of contemporary challenges and opportunities, including dairy cattle fertility and reproductive management, canine behaviour and welfare, the impact of visitors and disease control measures on zoo animals, public perceptions of nursing professions, sustainable bracken management, wildlife connectivity along transport networks, and coral reef conservation in Thailand. Collectively, these studies reflect the varied interests of our students and their commitment to addressing real-world issues affecting animal welfare, agriculture, environmental sustainability, conservation, and human-animal interactions.

A defining strength of our research community is its emphasis on industry engagement and practical application. Many of the studies presented here were conducted in collaboration with farms, zoos, veterinary and animal care organisations, conservation programmes, and other external stakeholders. Through these partnerships, our students have generated findings that contribute to professional practice and support evidence-based decision-making within the land-based sector.

We are immensely proud of our graduating students and the high standard of work represented in this journal. At University Centre Askham Bryan, we are committed to providing every student with opportunities to undertake meaningful research that develops their academic skills, professional knowledge, and critical thinking. This journal celebrates those achievements and reflects the vibrant scholarly community that continues to flourish across our institution.

We hope you enjoy reading this year's edition of the ASK Journal and learning about the innovative and impactful research being undertaken by our students and staff.

Dr Tim Whitaker

ASKHAM BRYAN COLLEGE
Learning is in our nature.



ASK - The Askham Bryan College Journal of Land Based Learning 2026

Contents

Staff abstracts

Compulsive conundrums and repetitive riddles in dogs and horses 4

Taxonomic bias within undergraduate research projects 4

Exploration and Analysis of Embedding Evidence-based Learning Theory into Curriculum 5

Contemporary Pedagogies and Indigenous Knowledge systems 5

Developing a Fixed-List Qualitative Behaviour Assessment tool for monitoring giraffe 6

Education for Sustainable Development, the SDG Targets - Wars, Climate Justice, Equity, and Oppression. 7

An observational study investigating the efficacy of heated general anaesthetic circuits during feline flank ovariohysterectomies 7

Using an industry partnership to provide innovative curriculum delivery of animal management in college-based higher education 9

Student Abstracts

BSc (Hons) Agriculture 10

BSc (Hons) Agricultural Management Top Up 12

BSc (Hons) Animal Bioscience and Management 13

BSc (Hons) Canine and Feline Behaviour and Welfare Top Up 14

BSc (Hons) Conservation and Ecology Top Up 17

BSc (Hons) Equine Science with Management 20

BSc (Hons) Zoo Management Top Up 22

BSc (Hons) Veterinary Nursing Top Up 25

Staff Abstracts

Dr Loni Loftus

Compulsive conundrums and repetitive riddles in dogs and horses

This session considered the development of compulsive and repetitive behaviours in dogs and horses and the emotional, environmental, and health-related factors within the behavioural diagnosis. It offered suggestions relating to how we may manage and treat these issues with both animal and human safety and welfare prioritised.

The session included consideration of both immediate, safety and welfare-led, behavioural first aid and longer-term treatment of these issues. With learning outcomes:

- Understand the development of compulsive and repetitive behaviours in dogs and horses,
- Appraise emotional, environmental, and health-related contributors to the performance of compulsive and repetitive behaviours in dogs and horses,
- Evaluate short- and long-term treatment strategies to improve safety, welfare and behavioural responses in these animals.

Presented at The London Vet Show 2026

Madaleine M. Shinn, Dr Paul Rose, Dr Loni Loftus, Thomas Welsh

Taxonomic bias within undergraduate research projects

Taxonomic bias is highlighted as a concern within multiple areas of the life sciences, with research question, species choice and population holding favouring charismatic mammalian species. With zoo-based research, mammals are commonly the subject of empirical research used to answer a range of pure to applied questions. This study investigated whether taxonomic bias extends to undergraduate research projects. An online survey was created and shared with universities across the UK and on social media. Analysis identified that student projects focussed on mammals (43%) or mixed taxa (29%), with most projects examining animal behaviour or conservation. Principal Component Analysis (PCA) identified clusters of influencing factors determined to be either academic or experiential that



influence project choice. Results suggest that the taxonomic bias within student projects may later reflect in future research outputs, therefore staff should be aware of this when advising students on project choice. Future research could focus on evaluation of educational and experiential interventions to counteract the current mammalian bias and encourage engagement with a wider range of taxa and topics in such student research outputs.

Accepted in Zoo Biology

Kate Johnstone, Gabriella Torell Palmquist, Colleen M. Brady, Victoria Lewis

Exploration and Analysis of Embedding Evidence-based Learning Theory into Curriculum

The training of horses using equitation science relies on the correct application of learning theory (LT); however, little is known about how LT is embedded within practical equestrian teaching. Research in coaching and related fields indicates that knowledge of LT is often limited or inaccurately applied, highlighting the need to examine how LT principles are interpreted and enacted in equestrian education. This study aimed to evaluate the experiences of higher education students and experienced educators involved in the practical teaching of LT, exploring their interactions, acceptance, and the challenges encountered, while identifying areas of good practice. Five student focus groups (2–7 participants each), four in-depth individual educator interviews, and four workshop groups of educators (4–6 participants each) were conducted using a semi-structured approach to encourage participants to share their experiences in depth. All discussions were transcribed and analysed using reflexive thematic analysis. Triangulating student and educator perspectives strengthened interpretation and highlighted the extent to which themes were shared across groups. Four higher-order themes were identified. Understanding, Application and Acceptance of Learning Theory - showed that while students understood the concepts, accepting and applying them within entrenched equestrian cultures and their own established habits was difficult. Pedagogical Strategies - highlighted the use of scaffolded teaching, with timing of the release emerging as a key difficulty. Horse Welfare and Ethics - emphasised the role of the horse as a co educator and the need to recognise equine affective states while balancing traditional and evidence-based methods. Systemic Institutional Constraints - noted inconsistencies, terminology confusion, and curriculum constraints, alongside a strong desire for unified, evidence-based industry standards. Overall, students were enthusiastic about LT-informed training, but clearer LT understanding, improved welfare centred practice, and greater curriculum coherence are needed to strengthen future equestrian education.

Presented at the 'Nature of Horses' International Society for Equitation Science conference 2026, Billund, Denmark.

Dr Rana Parween

Contemporary Pedagogies and Indigenous Knowledge systems

Around 370 million indigenous people live on earth, in nearly all countries across all continents. Globally, they hold skills set, knowledge and traditions that have continued and accumulated over several generations. Classified and diachronic, indigenous people and their Experiential and Place-Based Learning have played an important role in several aspects of life such as husbandry practices, medical treatments, hunting and fishing and conserving the environment in their own localities. Their

Experiential and Place-Based Learning is waning and going unnoticed, due to lack of globally available documentations.

In the past few decades, technological advancement has been immense, as has been the affordability of these technologies, with more and more institutions backing progressive novel technologies like artificial intelligence (AI) systems and cognitive artificial intelligence for knowledge extraction. Equity deals for artificial intelligence start-ups in various fields show a significant increase; between 2010 and 2015, nearly $5 billion in venture capital funding was invested in firms across the globe developing and employing AI technology. Conversely, similar advancement towards a better understanding of the planet has not been as profound hence not taken precedence.

It is, therefore, imperative to capture and preserve this valuable time-tested plethora of knowledge that is possessed by the 'living libraries' often called indigenous or community elders. Their knowledge needs processing and storing in a form that could be easily available for generations to come. Although the methods for integration of indigenous knowledge and scientific evidence remain debated, this ongoing debate needs an end with an adaptive and inclusive approach attempting to salvage whatever is left of this waning knowledge.

Perhaps there has never been a time as pressing as now to capture whatever is left of the 'usable past'. The advances in technology could benefit from the 'living libraries' to share their 'usable past' before the 'extinction of experiences'.

Accepted for presentation at "The Pedagogies of Connection: Experiential and Place-Based Learning for a Global World" conference

Thomas Welsh, Annika Paukner, Ellen Williams and Samantha J. Ward

Developing a Fixed-List Qualitative Behaviour Assessment tool for monitoring giraffe

Qualitative Behaviour Assessment (QBA) is an increasingly recognised method for assessing animal welfare through interpretation of expressive demeanour; how an animal behaves rather than what it does. QBA has been used across multiple zoo and farm species, including cattle, horses, bonobos, polar bears and tigers, demonstrating its value for detecting affective states which may be overlooked by traditional quantitative indicators. This workshop aimed to collaboratively develop a fixed-choice descriptor QBA list for giraffe (Giraffa camelopardalis) to support welfare assessment during visitor feeding experiences, which are one of the most popular meet-and-greets in UK zoos. Whereas previous QBA work on giraffe has focused on the human-animal relationship, QBA will be employed here as a welfare indicator, identifying positive, neutral or negative affective states. This will assist with informing evidence-based management of animal-visitor interactions. Participants reviewed video clips of giraffe feeding experiences and used free-choice profiling to generate descriptive terms of expressive behaviour. The data generated from the workshop will contribute to the development of the first fixed-list for QBA assessment of giraffes; a validated, repeatable welfare monitoring tool that can be shared across institutions, aligning with BIAZA and WAZA guidelines.

Presented at the European Association of Zoos and Aquariums Animal Welfare Forum 2026, Antwerp, Belgium.

Dr Rana Parween

Education for Sustainable Development, the SDG Targets – Wars, Climate Justice, Equity, and Oppression.

Historical warfare with limited reliance on technology had localised and short-term catastrophes, thus causing comparatively lesser harm on the environment, animals and humans. The never-ending human conflicts coupled with technological advancements have dictated modern day warfare. With substantial development in war machines, and war related technologies the human and environmental casualties are alarming with direct consequences on Climate injustice, degradation of Equity, and increased Oppressive Practices.

Wars have complex impacts on all 17 Sustainable Development Goals (SDGs), which cascade beyond conflict zones affecting adjacent and distant countries worldwide. Satellite imagery has played a significant role in monitoring environmental and socioeconomic impacts such as destruction of educational establishments, hospitals, farmlands and causing extensive long-term pollution. These anthropogenic detrimental advances have led to the loss of homes, livelihoods, as well as loss of opportunities for education and health care.

There has been a significant increase in political instability worldwide, especially in the Middle East. The 2025 Global Peace Index (GPI) reveals a continuing decline in global peacefulness, with many key indicators that precede major conflicts higher than at any time since World War II. Concurrently, there has been a steep rise in armed conflicts in recent years with global economic impact of violence reaching $19.97 trillion in 2024, equivalent to 11.6% of global GDP.

In an increasingly fragmented world, there is a substantial disparity in the levels of peace, security, education, health care and prosperity. There has never been a time more pertinent than now to call for Climate Justice, Equity, and Anti-Oppressive Practices to be on the forefront of all learning practices. It is time to reflect and ask if this disparity will see the SDG targets being achieved by 2030 or will there be another set of unachieved goals whilst we allow the global wars to continue and the young generation to be deprived of the right to education.

Accepted for presentation at the "Embedding Climate Justice, Equity, and Anti-Oppressive Practices in Educational Sustainable Development" conference

Emma Attwood, Kim Smith, Dr Loni Loftus

An observational study investigating the efficacy of heated general anaesthetic circuits during feline flank ovariohysterectomies

Background: This pilot-type observational study evaluated the efficacy of the Humphrey ADE heated general anaesthetic circuit (HGAC) at reducing perioperative inadvertent hypothermia (PIH); appraising the mitigation of thermal decline experienced by feline patients undergoing flank ovariohysterectomies (OVHs) under general anaesthesia (GA).

Methods: Perioperative rectal temperatures (RTemps) were collected from 20 felines undergoing hysterectomies using randomised allocation to treatment group (standard general anaesthetic circuit (SGAC) (control group) or HGAC (experimental group)). Statistical analyses were conducted using SPSS.



Results: HGAC and SGAC average perioperative RTemps did not differ significantly across the entire perioperative timeframe. However, at 35-minutes onwards HGAC RTemps were higher, although not significantly (P = 0.066), than those on SGAC circuits. HGAC RTemps fluctuated less with a significant gradual elevation throughout GA progression (phase 2-3: P = 0.016, phase 1-3: P = 0.011), whereas SGAC RTemps decreased significantly (phase 1-3: P = 0.034), becoming borderline hypothermic at around 50-minutes of operating time.

Limitations: The study is limited by a conservative sample size (pilot study) and a multiplicity of Veterinary Surgeons undertaking procedures within the study.

Conclusion: HGACs are likely beneficial tools to be further investigated within modern veterinary practice; improving patient welfare standards and the quality of GA monitoring delivered.

Published in Veterinary Record

Thomas Welsh

Using an industry partnership to provide innovative curriculum delivery of animal management in college-based higher education

College-based higher education (CBHE) programmes within land-based colleges play an important role in preparing students for employment within the animal management sector. However, many institutions face challenges in providing students with access to large or exotic species due to financial, legislative and logistical constraints. In response to these challenges, a collaborative partnership was developed between Askham Bryan College and Flamingo Land to co-deliver a Level 5 module within a zoo environment. This project evaluated the impact of the co-delivery model on student outcomes and experience using a mixed-methods case study approach. Quantitative data included module pass rates, overall grades and student experience metrics. Qualitative data were collected through student feedback and analysed thematically. There was no significant difference in pass rates of module grades between the on-campus and co-delivery approaches, suggesting that student outcomes were maintained following the intervention. However thematic analysis identified four themes of the co-delivery approach: authentic industry learning, engagement and enjoyment, exposure to professional expertise and employability and supportive teaching practices. Students valued the opportunity to learn within a zoo environment and engage with industry professionals. Overall, the findings suggest that industry co-delivery can enhance authenticity, engagement and perceived employability within vocational HE programmes whilst maintaining academic outcomes. The project highlights the potential value of collaborative partnerships between education and industry in supporting curriculum innovation and authentic learning.

Funded through a Mixed Economy Group Research Grant

Student Abstracts

BSc (Hons) Agriculture

Carla Brown

Supervisor: Edward Keyes

Investigating a relationship between colostrum quality and lactation in Holstein Friesian dairy cattle

Colostrum provides the calf with its first source of nutrition, as well as immunity, essential nutrients, and digestive support. Colostrum composition can be influenced by multiple factors, including the dam's diet, immune status, pathogen exposure, and age. Effective colostrum management ensures that newborn calves receive adequate immunity, reducing the risk of disease and improving long-term productivity. Substandard colostrum management can reduce growth rates, increase rearing costs, and negatively affect overall health. This study investigated whether there were differences in the quality, protein content, and fat content of colostrum produced by cows and heifers. Colostrum samples were collected from 16 heifers and 20 cows. The results indicated no statistically significant differences in fat content (P = 0.072), protein content (P = 0.399), or colostrum quality (P = 0.144) between cows and heifers. However, results suggest that heifers consistently produced colostrum with a higher fat content, possibly due to inherited traits. Colostrum samples (60 ml per sample) were collected using a dump bucket via the milking parlour. The samples were then frozen and stored until sufficient numbers had been collected for laboratory analysis. A Brix refractometer, the Kjeldahl method (protein), and the Gerber method (fat) were used to determine colostrum quality and composition. Improving colostrum management can reduce mortality rates and lower rearing costs. Understanding the differences in colostrum composition between cows and heifers within this herd may help improve colostrum management and overall dairy management practices.

James Harker

Supervisor: Edward Keyes

A Comparative Analysis of Bale Position and Film Layering on Grass Silage Preservation Quality

The goal of producing silage is to preserve a stable feed with a high recovery of dry matter, energy, and nutrients. This is achieved through fermentation under anaerobic conditions, created by wrapping grass bales with film to form an oxygen barrier. Previous research has generally suggested that four layers of film are sufficient, with six layers recommended for longer storage periods. However, given the age of this research and recent developments in silage film technology, this study aimed to re-evaluate whether bale location and the number of film layers influence the quality of preserved grass silage. Sixty bales composed predominantly of cocksfoot (Dactylis glomerata) and timothy (Phleum pratense) grasses were sampled after 100 days of storage. Five silage analyses were conducted for each grass type, and the data were analysed using Minitab 21 statistical software. No statistically significant differences were found between the grass types for dry matter, pH, or lactic acid concentration (P = 0.959, P = 0.388, and P = 0.786, respectively). These findings are consistent with previous research; however, the limited sample size of five bale analyses per variable and the use of only one film brand, Silawrap, may restrict



the wider applicability of the results. Nevertheless, compared with six layers, four layers reduce plastic consumption by 33%, lowering both the carbon footprint and production costs. This has the potential to improve the environmental and economic resilience of farming businesses during periods of volatile agricultural income.

William Jenkins

Supervisor: Laura Baxter

A comparison of oestrus detection methods on Jersey cows in the UK

Efficient oestrus detection is essential for maintaining reproductive performance in dairy herds, as it directly influences insemination timing, conception success, and overall herd fertility. This study aimed to evaluate the accuracy of three oestrus detection methods: visual observation, Estrotect breeding indicators, and activity detection collars, in Jersey cows, contributing to the limited body of breed-specific research conducted under commercial farm conditions. While extensive research has been undertaken on oestrus detection technologies, most studies have focused on Holstein-Friesian cattle in controlled research environments, resulting in a limited understanding of how these methods perform in commercial Jersey dairy systems in the UK. A quantitative secondary analysis was conducted using farm management data collected under routine commercial conditions. A total of 498 records were obtained from farm software and analysed using Kruskal-Wallis and ANOVA tests in Minitab. The reproductive performance of each detection method was assessed using key fertility performance indicators. Analysis revealed a statistically significant difference in insemination rates between the detection methods investigated (P = 0.005). However, no statistically significant differences were observed in conception rates (P = 0.223) or

pregnancy rates (P = 0.122) among the three detection methods. These findings contribute to a greater understanding of the performance of different oestrus detection methods in Jersey dairy herds and highlight the need for further research into the economic implications of each method, particularly in relation to labour efficiency and reproductive performance.

Holly Sutclliffe

Supervisor: Edward Keyes

How does reproductive performance differ between purebred Holstein cows and crossbred dairy cows within a low-input, high-efficiency production system?

Reproductive performance is a key determinant of productivity and economic sustainability in dairy production as it influences milk yield, calving intervals, and longevity. Declining fertility in high-yielding Holstein cows has been widely reported and has been linked to intensive genetic selection for milk production. Consequently, crossbreeding has emerged as a strategy to improve functional traits such as fertility through heterosis. However, there is limited research examining genotype performance within low-input, grass-based dairy systems in the United Kingdom. This study evaluated the reproductive performance of purebred Holstein and crossbred cows within a low-input herd at a farm in West Yorkshire. Secondary data from 100 cows (n = 50 Holsteins; n = 50 crossbreds) were analysed. The primary reproductive metrics examined were days in milk at first service, days in milk at drying off, and services per conception. The Anderson-Darling test was used to assess normality, and the Mann-Whitney U test was used to analyse differences between the two genotypes. The results showed no statistically significant differences between Holstein and crossbred cows for days in milk at drying off ($W = 2852.50$, $p > 0.05$), days in milk at first service ($W = 2687.00$, $p > 0.05$), or services per conception ($W = 2613.00$, $p > 0.05$). These findings suggest that, under consistent management conditions, genotype may have less influence on fertility than environmental and management factors. Consequently, crossbreeding did not demonstrate improved reproductive performance within this low-input dairy system.

BSc (Hons) Agricultural Management Top Up

Poppy Elliott

Supervisor: Edward Keyes

The Socioeconomic Impacts of Farm Diversification in the UK

Farm diversification is becoming increasingly important within UK agriculture as farmers face a range of challenges, including the reduction of direct subsidy payments, volatile input costs, and concerns surrounding mental health and wellbeing. This research investigated the socioeconomic impacts of farm diversification in the UK using a mixed-methods approach. Qualitative and quantitative data were collected through surveys (n = 52) and interviews (n = 4). The results were statistically analysed and indicated that economic factors were a strong motivation for

diversification, with participants generally reporting positive financial outcomes. A statistically significant positive correlation was identified between investment levels and income generated from diversification activities. Social impacts were also found to be important secondary influences, with statistically significant positive correlations observed between quality of life and economic impacts, as well as between quality of life and social impacts. Overall, the findings suggest that diversification can be an effective strategy for improving farm business resilience, enhancing quality of life, and supporting mental wellbeing. However, the impacts of diversification vary between businesses and communities, highlighting the need for careful consideration when restructuring farm enterprises and identifying opportunities for further research into the factors influencing diversification outcomes.

BSc (Hons) Animal Bioscience and Management

Katie Bagshaw

Supervisor: Anna Pickard

Adapt, Move, or Die: Investigating resilience mechanisms in coral reefs amid climate change



Coral reefs are among the most biodiverse ecosystems on Earth, providing both ecological and economic benefits. However, despite their immense value, they face multiple threats associated with climate change. Fish assemblages can serve as important indicators of reef health and resilience, yet this area of research remains underexplored. This study aimed to identify fish assemblage characteristics that may act as indicators of ecological reef stability by analysing fish assemblage biodiversity across five coral reef sites in Koh Tao, Thailand. Secondary data provided by the Global Reef Monitoring Programme were used to calculate Simpson's diversity, Shannon's diversity, and species richness for each timed underwater visual census conducted at five reef sites between 2019 and 2025. The results identified a statistically significant weak negative correlation between Simpson's diversity and year across all sites combined ($r_s = -0.176$, $p = 0.009$). However, when each reef site was analysed individually, no statistically significant correlations were identified (Green Rock, $r_s = 0.007$, $p = 0.969$; Red Rock, $r_s = -0.089$, $p = 0.542$; White Rock, $r_s = -0.241$, $p = 0.051$; Twins, $r_s = -0.154$, $p = 0.235$). This system-wide decline may reflect pressures such as thermal stress, ocean acidification, or pollution, which can gradually affect coral reef health and resilience. These findings highlight the potential for fish assemblage structure to provide early warning signs of reef degradation before visible changes occur within reef ecosystems. Long-term monitoring of fish assemblage structure may therefore provide a valuable tool for proactive, ecosystem-based conservation and management strategies.

Heidi Wright

Supervisor: Dr Rana Parween

Earthworm – Plant Interactions: Assessing the Impact of Lumbricus terrestris on Growth and Nutrient Content of Westerwold Ryegrass

The growing human population and increasing demand for food have placed significant pressure on agricultural land, contributing to soil degradation and biodiversity loss. Sustainable land management seeks to improve soil health, reduce degradation, and enhance crop productivity and quality. This study investigated the influence of the earthworm (Lumbricus terrestris) on the nutritional composition and height of Westerwold ryegrass. It also examined the effects of different earthworm densities on ryegrass nutrient content in two growing media: 100% compost and a 50:50 compost-soil mixture. Westerwold ryegrass was cultivated for 12 weeks in six replicates of each substrate using clear plastic containers. Statistical analysis was used to assess differences in ryegrass height across soil types at varying earthworm densities, while further analysis explored the relationship between earthworm abundance and ryegrass calorific content. Results showed a statistically significant difference in ryegrass height between treatments with and without earthworms in the 100% compost substrate ($P = 0.026$), but not in the 50:50 compost-soil mixture ($P = 0.062$). Within the 100% compost treatment, a significant difference was also observed between the presence of three and six earthworms ($P = 0.038$). However, no statistically significant relationship was found between earthworm density and ryegrass calorific content in either substrate ($P > 0.05$). These findings demonstrate that Lumbricus terrestris can positively influence the growth of Westerwold ryegrass under specific substrate conditions, particularly in 100% compost, but that its effects are dependent on the growing environment. Overall, the study provides evidence of the potential role of earthworms in supporting sustainable agricultural practices through improvements in soil health and crop productivity.

BSc (Hons) Canine and Feline Behaviour and Welfare Top Up

Darcie-May Downes

Supervisor: Dr Mollie-May Campbell

Investigating Social Interactions in a Cat Café Environment

This study investigated differences in the duration of social and non-social behaviours in cats at a cat café. Behavioural observations were categorised as non-social, human social, and cat social interactions. A Kruskal-Wallis test revealed a significant difference in behaviour durations across categories ($p < 0.05$), leading to the rejection of the null hypothesis. Post hoc Mann-Whitney U tests showed that cats spent significantly more time engaging in non-social behaviour ($M = 31.6$) than in cat social behaviour ($M = 13.4$, $p < 0.001$) and human social behaviour ($M = 19.5$, $p = 0.003$). There was no significant difference between cat social and human social behaviour ($p = 0.065$). Overall, non-social behaviour accounted for the greatest proportion of time, followed by human social interaction, with the least time spent engaging in cat social behaviour. These findings suggest that cats preferentially engage in non-social activities, with implications for understanding feline behaviour and welfare in managed environments.

ASK - The Askham Bryan College Journal of Land Based Learning 2026

Sam Sherwood

Supervisor: Matt Anderson

Can different olfactory stimulation reduce stress in kennel boarding domestic dogs?

Canine olfaction plays a vital role in influencing a dog's emotional state and decision-making. Most research investigating the use of scent in kennel environments has focused on reducing stress-related behaviours in long-term kennelling situations rather than short-term boarding facilities. Therefore, this study aimed to investigate whether calming scents could be used to reduce stress in a short-term boarding kennel environment. Ten dogs of varying breeds, ages, and behavioural characteristics were observed under four conditions: a control treatment with no scent and three calming scent treatments consisting of lavender, chamomile, and vanilla, all applied using scented collars. Behavioural observations were conducted using an ethogram to define and categorise behaviours associated with either stress or calmness. Overall, the findings suggested that scent-based enrichment may help to reduce stress-related behaviours in domestic boarding kennels, with lavender appearing particularly effective in reducing vocalisation. However, the observed effects were not statistically significant, which may be attributed to the small sample size. These findings highlight the need for larger-scale research to further investigate the potential of calming scents as a means of reducing stress in dogs housed in short-term boarding kennels.



Jemma Carpenter

Supervisor: Helen Reynolds

The Role of Early Success in Dog Persistence: How Puzzle Difficulty Order and Reward Density Impact Persistence and Resilience in Domestic Dogs

This study explored the role of early success and reward density in persistence during an independent problem-solving task in dogs. The study aimed to investigate whether the order of puzzle difficulty affected dogs' levels of engagement and interaction time, and whether early success in problem-solving could increase persistence, build resilience, and sustain engagement despite a reduction in puzzle reward density. Twenty-seven dogs were recruited from Askham Bryan Boarding Kennels, of which 19 completed the puzzle trials. The Positive and Negative Activation Scale for Dogs (PANAS) questionnaire was reproduced with permission from the authors and distributed via Google Forms to obtain validated owner-reported measures of affective temperament to support data analysis. The results showed a statistically significant increase in interaction time (seconds) with the advanced puzzle following the early success effect of two easier puzzles in dogs within the low start-level persistence group (paired t-test, $t = -3.61$, $n = 9$, $p = 0.007$). These findings suggest that independent problem-solving tasks should be introduced to dogs gradually, with increasing levels of difficulty, to prevent frustration and build confidence, thereby enhancing task engagement. Further research is recommended to expand understanding of the role of early success in developing self-efficacy in dogs and increasing persistence and resilience in a wider range of problem-solving contexts.

Rebecca Bamforth

Supervisor: Helen Reynolds

Investigating the Interplay Between Sleep, Activity Levels, and Behavioural Differences in Dogs Under 24 Months Using Activity Trackers

This study investigated the relationship between sleep, activity, and behaviour in adolescent dogs. Adolescent dogs often exhibit increased behavioural problems, which can contribute to higher rates of relinquishment. Although sleep is theoretically linked to emotional regulation, data on the sleep-activity budgets of adolescent dogs remain limited. The aim was to investigate the physiological and behavioural sleep-activity budget of dogs under 24 months of age and assess the accuracy of owner perceptions regarding sleep requirements. Using a cohort of five dogs ($n = 5$), data were collected over seven days using Tractive® wearable actigraphy and owner-reported behavioural metrics. Analysis revealed a significant negative correlation between daily activity and sleep duration ($rs = -0.900$, $p = 0.037$). Furthermore, a significant difference was found in activity levels between behavioural groups ($p = 0.011$), with dogs displaying fewer negative behaviours exhibiting higher levels of physical activity. No significant difference was observed in sleep duration between groups ($p = 0.087$). Owner perceptions of sleep requirements differed significantly from scientific benchmarks and recorded averages ($p = 0.04$). These findings suggest that, for adolescent dogs, physical activity may be a stronger predictor of behavioural stability than sleep duration alone. This highlights the need for a balanced approach to behavioural interventions that supports both canine welfare and the human-canine bond.

ASK - The Askham Bryan College Journal of Land Based Learning 2026

BSc (Hons) Conservation and Ecology Top Up

Keri Flynn

Supervisor: Dr Rana Parween

Underpass, overpass, wandering free: can wildlife fatalities and their locations, determine the need for wildlife corridor development?

Roads are a major contributor to habitat fragmentation and pose a significant threat to biodiversity. Millions of animals are killed on roads annually, disproportionately affecting wildlife populations in the UK. Landscape connectivity is critical for mitigating the negative impacts of fragmentation. This study aimed to establish the need for wildlife corridor development along the A64 between Leeds and York based on observed roadkill incidents recorded over a four-month period. The study also assessed the significance of associated habitats to identify suitable locations for wildlife corridors. A literature review was conducted to evaluate the benefits and risks of wildlife corridors using evidence from global studies. A time-specific public survey was distributed via a web link and social media platforms, with respondents recording roadkill observations and associated habitat types. These data were compared with open-source roadkill records collected within the same geographical area and time frame. Data were analysed using mapping software, statistical tests, and qualitative assessments. A chi-squared test identified a statistically significant association between the species affected and the four-month period analysed ($p < 0.05$). The results provide evidence that clusters of wildlife-vehicle collisions have a negative impact on local species populations. Further research is recommended using data collected over a longer and more seasonally representative period. In addition, the use of targeted camera traps could help identify wildlife crossing hotspots and determine where wildlife corridors are most needed to protect species and conserve biodiversity.

Nardia Moore

Supervisor: Anna Pickard

Adapt, Move Die: Mapping the Distribution of Shark Populations in the UK

Sharks play important ecological roles within marine ecosystems; however, climate-driven environmental change may be influencing their distribution in UK waters. Despite growing concern regarding the impacts of climate change on marine species, empirical evidence of long-term changes in shark distributions around the UK remains limited, restricting the development of effective conservation strategies. This study analysed 45 years of occurrence records for basking shark, blue shark, and spiny dogfish obtained from the NBN Atlas. Spearman's rank correlation and Geographic Information Systems (GIS) mapping were used to assess temporal trends in latitude and longitude. Basking sharks exhibited a significant northward shift over time ($r_s = 0.173$, $N = 5{,}605$, $P < 0.001$), while blue sharks also showed a significant latitudinal shift ($r_s = 0.494$, $N = 22$, $P = 0.020$). In contrast, spiny dogfish displayed no significant shift in latitude ($r_s = \square 0.025$, $N = 825$, $P = 0.468$) but demonstrated a weak yet statistically significant longitudinal trend, indicating an increase in inshore occurrence ($r_s = \square 0.078$, $N = 825$, $P = 0.026$). These findings suggest that climate-driven redistribution of sharks is already detectable in UK waters. However, responses differed between species, reflecting variations in ecology, mobility, and habitat use.



Siam Sudphum

Supervisor: Anna Pickard

Global Perspectives on Animal Welfare: A Cross-Cultural Survey of Ethics, Tourism, and Public Perceptions

This study investigated global perspectives on animal welfare in tourism, with a particular focus on whether cultural values or tourism demand exert a stronger influence on welfare-related practices across regions with differing welfare standards. Using a cross-sectional quantitative research design, data were collected through an online survey of 70 participants from multiple continents. Statistical analyses, including ANOVA, post-hoc Tukey tests, Spearman's rank correlation, and a General Linear Model (GLM), were used to examine relationships between geographic region, Animal Protection Index (API) scores, and attitudes towards animal welfare. The findings revealed significant differences in animal welfare attitudes between continents, with respondents from Europe, Oceania, and North America expressing greater concern for animal welfare than those from Asia, Africa, and South America. Although a moderate positive correlation was identified between API scores and animal welfare attitudes ($r = 0.503$, $P < 0.001$), API score was not a significant predictor when continent was controlled for, whereas geographic region remained highly significant. These results suggest that cultural and regional factors have a greater influence on public perceptions of animal welfare than legislative frameworks alone. The study highlights the limitations of relying solely on policy indicators to assess welfare standards and emphasises the importance of culturally sensitive, context-specific approaches to animal welfare governance. Recommendations include incorporating education, stakeholder engagement, and locally adapted strategies into international policy development. Despite limitations including a relatively small sample size and uneven regional representation, the findings contribute to a more nuanced understanding of the factors shaping global attitudes towards animal welfare in tourism.

Hannah Denton

Supervisor: Dr Rana Parween

New Directions for Bracken Control: Stakeholder perspectives on effective bracken control post Asulox

Pteridium aquilinum (bracken) is one of the most widespread and problematic plant species in the UK, presenting significant challenges for land managers. Historically, the herbicide Asulox was widely used for bracken control; however, its withdrawal has created uncertainty regarding effective and sustainable management methods. This study investigated how bracken can be effectively managed in the UK following the withdrawal of Asulox. A stakeholder survey was used to capture the experiences of UK land managers involved in bracken management. The survey collected both quantitative and qualitative data on current control methods, perceived effectiveness, and the sustainability of different management approaches. The results showed that mechanical control methods, particularly cutting and bruising, are now the most commonly used approaches in place of chemical control. However, stakeholders reported that managing bracken has become more difficult since the loss of Asulox. The findings also highlight an important distinction between perceived effectiveness and sustainability, with methods considered the most effective not always viewed as the most sustainable. Overall, the results suggest that future bracken management is likely to rely on integrated approaches that balance effectiveness, environmental considerations, and practical feasibility for land managers.

Aliyah Jackson-Johnson

Supervisor: Dr Rana Parween

Are some taxonomic classes more successful in rehabilitation? A comparative study of wildlife rehabilitation outcomes across the United Kingdom

Wildlife rehabilitation centres (WRCs) play a vital role in responding to wildlife injury and supporting conservation efforts. However, the factors influencing rehabilitation success across different taxonomic groups remain unclear. This study investigated whether rehabilitation outcomes differed between major taxonomic classes across multiple WRCs in the United Kingdom. Secondary admission data were obtained from three participating rehabilitation centres and standardised to enable comparisons between birds, mammals, and reptiles/amphibians. Rehabilitation outcomes were categorised as released, died, or euthanised, and statistical analyses were conducted to examine differences in outcome distributions across taxonomic groups. Birds accounted for the highest proportion of admissions across all centres, followed by mammals. Reptiles and amphibians exhibited the highest release rates and the lowest mortality rates; however, their small sample sizes limited their representation. Mammals had the second-highest release rates but

experienced high mortality rates at some centres, while birds consistently exhibited the highest euthanasia rates and the lowest release rates. Statistical analyses revealed a significant difference in rehabilitation outcomes between taxonomic groups, although the effect size was small, suggesting that additional factors contributed to variation in rehabilitation success. Overall, these findings indicate that biological and ecological differences between taxa influence rehabilitation outcomes, although factors such as case severity, institutional practices, and reporting biases also play an important role. This study emphasises the need for a standardised national data collection framework and further research on underrepresented taxa to improve rehabilitation practices and support conservation initiatives.

BSc (Hons) Equine Science with Management

Grace Wyatt

Supervisor: Laura Johnson

Acute vs chronic illness in equines resulting in sudden or planned euthanasia and the effect on the owner

Equine euthanasia is a complex and emotionally challenging experience that, despite being relatively common among horse owners, is often under recognised as a significant life event. This study aimed to explore the effects of acute and chronic illness leading to sudden or planned euthanasia and their impact on owners' mental health. Survey data were collected from 213 horse owners and analysed using chi-squared tests of association to examine relationships between time since loss, current distress levels, and stages of grief. The questionnaire was designed to gather information on owners' experiences of equine euthanasia and identify associations between key categorical variables. The findings supported the concept that grief following equine euthanasia is non-linear. The type of illness and the circumstances surrounding euthanasia were found to have the potential to influence owners' long-term mental wellbeing. Significant associations were identified between the duration from diagnosis to euthanasia and current distress levels, with higher levels of distress reported following sudden euthanasia. Significant relationships were also observed between the duration of specific stages of grief and the time elapsed since loss, demonstrating considerable variation in grief progression among individuals. Overall, the results suggest that owner grief is strongly influenced by the circumstances surrounding euthanasia, with psychological preparation playing an important role in reducing the intensity of emotional responses where possible. Adequate preparation prior to a horse's euthanasia may improve owners' ability to cope with and accept their loss. Recognising equine euthanasia as a significant life event is therefore important in ensuring that appropriate support is available to horse owners experiencing bereavement.

Aleksandra Suhoveiko

Supervisor: Laura Johnson

Paying For Greens: Equine Consumers' Perceptions of Sustainability, Cost, and Value

Sustainability has become an increasingly important issue across many industries, including the equine sector. However, research investigating sustainable purchasing behaviour among equine consumers remains limited. This study aimed to explore how sustainability awareness, sustainability knowledge, and financial factors influence attitudes towards the purchase of sustainable products. A quantitative research design was employed, with data collected through an online questionnaire distributed via social media and professional networks. Responses were analysed using statistical methods to identify relationships between the variables. The findings suggest that financial stability and household income do not have a significant influence on equine consumers' willingness to pay a premium for sustainable products. General awareness of sustainability was also not strongly associated with purchasing behaviour. However, respondents with greater knowledge of sustainability and environmental issues were more likely to regard sustainability as an important factor when making purchasing decisions. These results indicate that knowledge of sustainability may play a more important role in shaping purchasing behaviour than financial considerations. Overall, this study highlights the importance of sustainability education and awareness within the equine industry. Improving knowledge and communication surrounding sustainability is likely to encourage more environmentally responsible purchasing decisions among equine consumers and support the development of more sustainable practices and businesses within the sector.

Katie Orton

Supervisor: Kate Johnstone

Pilot study to investigate the effect of in-hand work on changing the arousal level of a horse during a training session

Equine welfare is of paramount importance, and continued research into methods of reducing stress in domestic horses is essential. Groundwork is commonly used by equestrians as a technique to promote calmness and reduce arousal; however, there is limited research evaluating its effectiveness. This study aimed to determine whether in-hand work reduces stress in ridden horses using established indicators of anxiety, including eye temperature, heart rate, and behavioural signs. Four horses completed an in-hand routine before being ridden for five minutes at walk and trot, and the results were compared with a control condition in which the same horses were ridden at walk and trot without prior groundwork. Physiological data were collected using a heart rate monitor and thermographic imaging of the eye, while video recordings were analysed to assess the duration of stress-related behaviours. The results showed that heart rate remained unchanged in three of the four horses, eye temperature decreased to a greater extent when the in-hand routine was performed, and behavioural analysis revealed no significant differences between the two conditions. Although limited comparable research exists on the effects of groundwork on stress in ridden horses, findings from studies using similar methodologies and investigating groundwork in other contexts provide useful points of comparison. Further research with larger sample sizes is required to determine more accurately the influence of groundwork on equine stress and to improve the reliability of the findings.

BSc (Hons) Zoo Management Top Up

Anna Windus

Supervisor: Matt Anderson

From Past to Present: A Global Analysis of Seagrass Trends - Identifying the Fastest Changing Areas and Their Ecological Implications

Seagrass meadows provide important habitats for a wide range of species, support fisheries and nursery grounds, offer food and shelter, and contribute significantly to carbon storage. As ecosystem engineers, seagrasses modify their surrounding environment by reducing water movement, stabilising sediments, decreasing turbidity, and creating favourable conditions for growth. This study aimed to investigate whether seagrass trends and rates of change differed significantly among global bioregions and to explore the potential ecological implications of these differences. A secondary analysis of quantitative data from six seagrass bioregions was conducted. Kruskal-Wallis and Mann-Whitney U tests were used to identify differences both among and within the bioregions. The results identified a significant difference in rates of change among the six bioregions, leading to the rejection of the null hypothesis. Significant differences were identified between several bioregional pairs, including the Temperate North Atlantic and Tropical Atlantic, the Mediterranean and Tropical Indo-Pacific, and the Tropical Indo-Pacific and Temperate Southern Oceans. These findings suggest that seagrass trends vary considerably across global regions, with potential implications for ecosystem functioning and conservation management. Future research should incorporate environmental factors such as temperature and primary productivity to provide greater insight into the drivers of regional variation. Expanding monitoring programmes to include additional locations and more recent data would also strengthen future analyses and improve understanding of global seagrass change.

Sam Wadsworth

Supervisor: Joe Hargreaves-Lee

Food for Thought: Behavioural Responses of African Grey Parrots (Psittacus erithacus) to Natural vs Chopped Food

Captive African Grey parrots are commonly provided with nutritionally balanced diets; however, food is often presented in a simplified form within a metal bowl, which may limit opportunities for natural feeding behaviours such as foraging, manipulation, and food processing. As highly intelligent and behaviourally complex birds, African Grey parrots require environmental stimulation that enables the expression of species-specific behaviours. Food presentation may therefore represent an important yet underexplored aspect of captive welfare management. This study investigated whether food presentation influenced food consumption and behavioural expression in captive African Grey parrots by comparing chopped and whole food presentations. A within-subject observational design was used, allowing the same parrots to be exposed to both feeding conditions and directly compared. Food consumption was recorded for each presentation type, and behavioural observations were conducted using an ethogram to quantify the duration of natural feeding-related behaviours. Data were analysed using descriptive statistics, tested for

ASK - The Askham Bryan College Journal of Land Based Learning 2026



normality using the Anderson-Darling test, and subsequently analysed using the Wilcoxon signed-rank test. The parrots exhibited higher mean food consumption when whole food was presented compared with chopped food and spent more time engaging in natural behaviours, particularly foraging and manipulation, under the whole-food condition. Despite these trends, statistical analysis revealed no significant differences between the two presentation methods for either food consumption or behavioural duration. Although the null hypothesis could not be rejected for either measure, consistent trends in the descriptive statistics suggest that whole-food presentation may promote greater behavioural engagement than chopped-food presentation. These findings indicate that feeding methods should be evaluated not only on their nutritional value but also on the behavioural opportunities they provide. Whole-food presentation may therefore represent a practical and cost-effective enrichment strategy for improving the welfare of captive African Grey parrots and other psittacine species in captive collections.

Chloe Firmin

Supervisor: Joe Hargreaves-Lee

Peak a Boo: Do the White-Crowned Mangabey's (Cercocebus atys lunulatus) care when you stare?

Zoos and aquariums attract more than 700 million visitors worldwide each year. While modern zoos are guided by conservation, education, research, and animal welfare objectives, concerns remain regarding the impact of visitors on captive animals. One such impact is commonly referred to as the 'visitor effect', which describes changes in animal behaviour associated with visitor presence. The effect of visitor presence on White-Crowned Mangabeys remains largely unexplored. This study aimed to investigate the influence of visitor presence on the behaviour of White-Crowned Mangabeys and to develop recommendations to mitigate any negative effects identified. Behavioural observations were conducted on the White-Crowned Mangabeys over a total of 24 hours across six days. Behaviours were recorded using ZooMonitor software, which prompted observations at one-minute intervals during two-hour observation sessions. Of the 22 behaviours included in the ethogram, 17 were observed during the study period. A two-sample t-test revealed a significant difference in stationary behaviour between periods of visitor presence and visitor absence ($t_{(28)} = 3.20$, $p < 0.05$). Overall, the findings suggest that visitor presence had a minor influence on White-Crowned Mangabey behaviour and was associated with subtle changes in enclosure use.

Sophie Ferguson

Supervisor: Joe Hargreaves-Lee

Flu, Feathers, and Flight Paths: A Comparative Study of Wetland Aviary Utilisation

Avian influenza presents a significant biosecurity concern in zoological collections, often necessitating housing restrictions that may affect the behaviour and spatial use of captive birds. This study examined how avian influenza management measures influenced enclosure utilisation and behavioural expression within a mixed-species wetland aviary. Data were collected using scan sampling at two-minute intervals during 120-minute observation sessions, with both behaviour and enclosure zone recorded for all visible individuals. Observations were conducted over multiple days and compared with data from a previous year to assess temporal changes. A chi-squared test demonstrated a significant association between year and behaviour. In Year 2, behaviours such as loafing, roosting, preening, and foraging increased, while walking and swimming decreased. Observations recorded as 'out of sight' increased substantially, likely reflecting reduced visibility due to increased vegetation rather than genuine behavioural changes. Spatial Proximity Index analysis indicated uneven enclosure utilisation across species, reflecting ecological preferences rather than environmental constraints. The findings suggest that avian influenza housing restrictions did not substantially limit the expression of natural behaviours, as the aviary maintained access to key habitat features and environmental complexity. Behavioural variation appeared to be influenced by multiple interacting factors, including species-specific ecology and external disturbance. This study highlights the importance of enclosure design in supporting animal welfare while implementing disease management protocols.

BSc (Hons) Veterinary Nursing Top Up

Abbie Town

Supervisor: Dr Mollie-May Campbell

Psychosocial Impact of Canine Epilepsy on Dog Owners: Emotional Toll, Lifestyle Changes, Coping Mechanisms

Canine epilepsy is a chronic neurological condition that affects not only the dogs diagnosed with the disorder but also the psychological wellbeing and daily lives of their owners. This study investigated the psychosocial impact of canine epilepsy on dog owners, with particular focus on emotional wellbeing, lifestyle disruption, and coping mechanisms. A cross-sectional online survey was conducted with 98 owners managing dogs with epilepsy. Quantitative data were analysed using descriptive statistics, Spearman's rank correlation, and one-way analysis of variance (ANOVA), while qualitative responses to open-ended questions were examined using thematic analysis. The results indicated that lifestyle disruption had the highest mean score ($M = 4.06$), followed by emotional wellbeing ($M = 3.93$), with sleep disturbance also notably affected ($M = 3.82$). A significant positive correlation was identified between emotional wellbeing and sleep disturbance ($r_s = 0.5$, $P < 0.001$). The ANOVA identified a statistically significant effect of seizure frequency on lifestyle impact scores ($F(4,93) = 4.54$, $P = 0.002$), with higher seizure frequency associated with greater disruption to owners' lives. Thematic analysis identified several key themes, including chronic anxiety and hypervigilance, emotional distress, lifestyle disruption, guilt and self-blame, and the use of coping strategies. Overall, the findings demonstrate that canine epilepsy has a substantial and multifaceted impact on dog owners, extending beyond clinical management to affect emotional wellbeing and social functioning. These results highlight the importance of providing holistic support for owners, including psychological support and education, to improve both owner wellbeing and long-term disease management outcomes.

Charlotte Cowley

Supervisor: Megan Weall

Significant differences across public perceptions of registered veterinary and general nurses (UK Based)

This study aimed to determine public perceptions of Registered Veterinary Nurses (RVNs) and Registered General Nurses (RGNs). The research investigated differences in public knowledge and perceptions of these two professions, while also evaluating their visibility and representation. Data were collected using two surveys containing identical questions with minor terminology adjustments. Respondents were asked to answer questions to the best of their knowledge and according to their opinions. A review of the literature identified key themes relating to media misrepresentation of nursing roles, inaccurate public understanding of professional responsibilities, and poor visibility of the professions. No previous research directly comparing RVNs and RGNs was identified. Although this limited direct comparison with existing findings, it highlights the need for further research in this area. The study identified significant differences in the visibility of RVNs and RGNs but found no evidence that these differences influenced public



perceptions of RVNs relative to RGNs. However, the results indicated that most respondents were unaware that the RVN title is not protected in the same manner as the RGN title. Further research using interview-based methods and a larger, more representative sample would be beneficial to explore this topic in greater depth.

Liza Docherty

Supervisor: Megan Weall

Is the legal framework set up by the Veterinary Surgeons Act 1966 outdated and what changes could be made in the future to further the profession of the RVN?

This project evaluated the current legislative framework of the Veterinary Surgeons Act 1966, including the Schedule 3 Amendment Order, and examined how it is applied in clinical practice by veterinary professionals. It also investigated the reforms that Registered Veterinary Nurses (RVNs) would like to see implemented and the potential impact of these changes on the profession. The study aimed to explore RVNs' perceptions of the relevance and effectiveness of the current legislative framework and to identify opportunities for future adaptation to support the development of the profession. Data were collected through an online survey completed by 53 respondents and analysed using both qualitative and quantitative methods. The results indicated that demographic factors had no significant influence on attitudes towards legislative reform. However, regardless of demographic background, most respondents considered the Veterinary Surgeons Act 1966 to be outdated and in need of review and amendment, with 56.6% strongly agreeing and 22.6% agreeing with this view. A majority of respondents also believed that RVNs should be able to obtain additional certification to perform more advanced procedures not currently covered by

Schedule 3, with 60% strongly agreeing. The findings highlight the need for legislative reform and greater clarity to improve understanding and utilisation of RVNs while ensuring that professional limitations remain clearly defined. Many respondents expressed support for expanding the RVN scope of practice to include more specialised skills following additional qualifications, such as prescribing flea and worm treatments, performing certain emergency interventions, undertaking cat castrations, and contributing to diagnostic procedures. However, many also recognised that such changes are unlikely to occur until title protection for RVNs is strengthened. Given the challenges currently facing the veterinary profession, including rising costs, staff recruitment and retention issues, and concerns regarding the mental wellbeing of veterinary professionals, the findings suggest that legislative reform is necessary to ensure the long-term sustainability of the profession while maintaining high standards of animal welfare in the UK.

Rowan Camm

Supervisor: Ashley Dear

A Thematic Analysis of Therapeutic Evidence in Canine Degenerative Myelopathy: A Critical Appraisal of Methodological Quality and Implications for Veterinary Practice and Translational Research

Canine degenerative myelopathy (DM) is a progressive neurodegenerative disease of the spinal cord caused by a mutation in the superoxide dismutase 1 (SOD1) gene, which is also implicated in some forms of human amyotrophic lateral sclerosis (ALS). As a result, DM has increasingly been used as a naturally occurring translational model for the development of ALS therapies. However, the methodological quality of the therapeutic evidence base for canine DM has not been formally assessed. This study aimed to critically evaluate the strength and methodological quality of therapeutic evidence for canine degenerative myelopathy and to assess its implications for both veterinary clinical practice and the validity of DM as a translational model for ALS. A systematic search of PubMed/MEDLINE was conducted to identify intervention studies in canine DM. Five completed studies, comprising a total of 112 dogs, met the inclusion criteria. Thematic analysis was performed using the Computer Assisted Text Markup Application (CATMA) to identify recurring themes across the evidence base, and study quality was assessed using the Newcastle-Ottawa Scale (NOS). Five key themes were identified: a limited volume of intervention evidence, with only one study per intervention category and no replication; widespread methodological weaknesses, including the absence of randomisation in all studies and blinding in four of the five studies; statistical limitations, with no study using multiple regression to adjust for confounding variables and only one employing formal survival analysis; euthanasia bias affecting survival outcomes, with reported survival ranging from 6 to 12 months and up to 36 months depending on endpoint definition; and inconsistent diagnostic criteria between studies. NOS scores ranged from 2/9 to 6/9, with three studies classified as high risk and two as moderate risk of bias. Overall, the therapeutic evidence base for canine DM is limited in both quantity and methodological quality. No completed intervention study employed randomisation, and the available evidence is insufficient to draw robust conclusions regarding the effectiveness of any treatment. Intensive physiotherapy remains the most strongly supported intervention but is based on a single retrospective study involving 22 dogs. Future research should adopt prospective, randomised, and blinded study designs, incorporate standardised endpoints and appropriate statistical analyses, and utilise multicentre collaboration to strengthen the evidence base.

University Centre
ASKHAM BRYAN YORK

askham-bryan.ac.uk

AskhamBryanCollege
AskhamBryan
Askhambryancollege