$18.95 AUS

SPRING 2025 ISSUE #29

THE AUSTRALIAN VETERINARIAN MAGAZINE

CLIMATE A FACTOR DRIVING INCREASED CASES OF RAT LUNGWORM DISEASE IN EASTERN AUSTRALIA

INNOVATION SUPPORTING MARINE MAMMALS - HOW DARVALL'S VENTILATOR SUPPORTED ANAESTHESIA IN SEA LIONS

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†Results from comparison between Apoquel and Zenrelia: primary endpoint was non-inferiority demonstrated at day 28. At Day 112, 77% of dogs treated with Zenrelia achieved PVAS <2 compared to 53% of dogs treated with Apoquel. Secondary endpoint P values are not adjusted for multiple testing; therefore, caution should be exercised in interpretation. This was a subset of dogs treated for 112 days. A "normal" itch score is considered to be comparable to that of a healthy, non-allergic dog (PVAS<2).

For dogs from 12 months of age and 3 kg body weight.

Abbreviations: JAK, janus kinase; PVAS, Pruritus Visual Analog Scale.

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THE AUSTRALIAN VETERINARIAN

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UNPRECEDENTED $100 MILLION GIFT WILL FUND TRANSFORMATIONAL AND EXPANDED VETERINARY TRAINING AND RESEARCH FACILITY FOR WA

MURDOCH UNIVERSITY'S ICONIC VETERINARY SCHOOL WILL UNDERGO A COMPLETE REBUILD THANKS TO A $100 MILLION GIFT ANNOUNCED IN AUGUST.

Artistic Render of Murdoch University School of Veterinary Medicine redevelopment

The existing School will be replaced by a 9,600sqm state-of-the-art facility large enough to support a 50% increase in the number of vet students who can be trained in Western Australia. It will sit alongside Boola Katitjin – Murdoch's academic building voted the world's best in 2023.

The gift – by Perth businessman and philanthropist Ted Powell – is the largest ever received by a WA university – and one of the largest received by any Australian university.

Mr Powell is a long-term supporter of the University through The Ragdoll Foundation – created with his late wife Dee - which provides financial support to students through the Ragdoll Scholarship program. Since its inception, more than 140 Murdoch students have earned their degrees with financial support from the foundation.

"There are many good causes in the medical field, in the educational field and I would encourage anyone who is financially well-off to consider giving to worthy causes," Mr Powell said.

"I am absolutely delighted that this gift will support the redevelopment of the Veterinary School. Dee was an animal lover, and I think she'd be really, really proud of this project."

Vice Chancellor Professor Andrew Deeks said Mr Powell's extraordinary act of generosity would help ensure WA continued its role as a leading hub for animal research, teaching and training.

THE NEW FACILITY WILL:

- **Support** next generation world-class teaching and research at WA's only veterinary school and animal teaching hospital.
- **Upgrade** and expand the ageing veterinary school to continue to meet modern standards and best serve the WA and Australian community.
- **Train** more veterinarians, addressing critical workforce shortages in WA and nationally.
- **Build** on Murdoch University's demonstrated strengths in livestock, equine, wildlife and conservation, animal care and welfare.
- **Support** more cutting-edge research into animal health, welfare and disease.

Since its foundation in 1975, Murdoch's School of Veterinary Medicine has graduated 4000 veterinarians and consolidated its ranking in the world's top 50. The School trains approximately 100 new veterinarians each year.

In addition to the School, The Animal Hospital at Murdoch University (TAHMU) provides services directly to the WA public and offers an important referral service for local veterinarians, along with a range of specialist services - including to the agricultural and racing industries. It is the facility of choice for dealing with the most complex animal health issues and treats everything from birds, dogs and cats to horses and exotic zoo animals such as giraffes.

Professor Deeks said the new School was part one of a staged project to upgrade TAHMU and refurbish the current veterinary school buildings to create a new Conservation and Life Sciences precinct at the University.

"Veterinary Medicine was one of 10 Foundation courses offered by Murdoch when we opened 50 years ago and a commitment to the environment and conservation are part of the University's DNA," he said.

"The discipline has advanced significantly over that time, as have the safety requirements for biological laboratories and animal facilities. The new facility will improve the safety and wellbeing of staff, students and animals alike – as well as providing a higher quality service for the agricultural and scientific community and the broader WA community.

"The development also strengthens research in animal health and the University's One Health agenda – recognising the links between human, animal and environmental health; expand biomedical research collaborations and attract high calibre academics, students and other animal specialists.

"On behalf of Murdoch University, I cannot thank Ted Powell enough for his generosity, support and foresight. He will leave a legacy for the Western Australian veterinary profession, animal research - and for animals great and small - which will resonate for generations to come."

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References: 1. Behrend, E. N. *et al.* (2024) Velagliflozin, a once-daily, liquid, oral SGLT2 inhibitor, is effective as a stand-alone therapy for feline diabetes mellitus: the SENSATION study. *J Am Vet Med Assoc*, 262, 1343–1353. **2.** European Medicines Agency. Senvelgo EPAR.

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Image 1: Sea lion Ozzi being prepared for cataract surgery by Dr Carmen Colitz

INNOVATION SUPPORTING MARINE MAMMALS - HOW DARVALL'S VENTILATOR SUPPORTED ANAESTHESIA IN SEA LIONS

EARLIER THIS YEAR, INNOVATION DELIVERED A SOLUTION TO A UNIQUE VETERINARY CHALLENGE AT COFFS HARBOUR ON THE MID NORTH COAST OF NSW, A PLACE KNOWN FOR ITS MARINE NATIONAL PARKS. THE MILESTONE TOOK PLACE AT THE CITY'S WILDLIFE SANCTUARY WHERE TWO ENDANGERED AUSTRALIAN SEA LIONS UNDERWENT CATARACT SURGERY, WITH THEIR VENTILATION DURING ANAESTHESIA SUPPORTED BY A NOVEL VENTILATOR UNDER DEVELOPMENT BY DARVALL.

The company is a recognised global leader in innovation, design, manufacture and support of veterinary anaesthesia, patient warming and monitoring equipment.

THE PROCEDURE

In June, Miri, a 60kg female, and Ozzie, a 200kg male, underwent cataract surgery, an increasingly common procedure as sea lions live longer in sanctuaries. The challenge? Anaesthetising large marine mammals for prolonged surgical procedures is still very much a developing field which has historically been associated with high risk. Complex procedures in larger marine mammals is a huge effort. They are usually done in marine locations presenting many challenges including injury risk, animal training and handling. It takes many weeks even months of planning, organising a team of experts, sourcing and the transport of specialised equipment. The successful outcome is also very much dependent on the provision of aftercare requiring facilities plus a skilled team of handlers and veterinary staff. The team comprised international experts including Dr Carmen Colitz, a board-certified veterinary ophthalmologist and expert in pinniped eyes, Dr James Bailey a

Image 2: Ozzi in surgery with Dr Carmen (James Bailey & Claire Madden)

Image 3: Sea Lions have apneustic ventilation.

board-certified veterinary anaesthetist and world expert in marine mammal anaesthesia plus local support including Dr Claire Madden with SeaWorld technical staff, anaesthetist Dr Colin Dunlop, engineer James Dunlop plus the CCWS team lead by Tiga Cross including Dr Tiffany Sullivan, Coffs Coast Wildlife Sanctuary and Dr Jim Osman, Woolgoola Veterinary Clinic.

RECENT UNDERSTANDING OF RESPIRATORY FUNCTION AND ITS SUPPORT IN ANAESTHETISED MARINE MAMMALS

This has been long-standing veterinary challenge, an underlying cause of morbidity and mortality and has only quite recently been addressed[1]. On a late Saturday afternoon in May in 2014 during a workshop, Drs Chris Dold from Sea World USA and anesthesiologists Colin Dunlop and James Bailey, who had previously worked together at Colorado State University had a conversation beside the dolphin pool at SeaWorld on the Queensland Gold Coast. The focus was about the paucity of techniques, equipment and data to support anaesthesia of large marine mammals, in particular dolphins and how this was limiting the development of veterinary care of these species, some being endangered. Since that time, Dr James Bailey has invested years understanding the physiology and challenges that these larger marine mammals present under anaesthesia.

Unlike terrestrial animals, diving mammals including sea lions have evolved unique respiratory physiology, taking deep inhalations before diving. They then hold their breath for extended periods before surfacing, then rapidly exhaling and inhaling before diving again. James Bailey notes that their expiration is associated with greater elastic recoil. This produces a larger expiratory volume with lower residual lung volume (functional residual capacity) which is one reason they are susceptible to lung collapse under anaesthesia, leading to hypoxia and hypercapnea.[1] Anaesthesia also depresses their already high tolerance of blood CO_2 levels. This means they require controlled ventilatory support carefully synchronised to their natural rhythm with their large tidal volume rapidly delivered using an apneustic breathing pattern. To solve this problem, James Bailey led a US team to custom build an Apneustic Anesthesia Ventilator (AAV) with size-matched orifices and valves.2 He describes AAV as CPAP with an intermittent expiratory release that can be delivered with an adjustable continuum of recruitment manoeuvres. It has proven to be successful but this custom-built ventilator is a "one off", it is based in North America and reliant on large volumes of pressurised gas, so is loud and expensive to run. It is typically used with large animal (equine) anaesthesia machines which are cumbersome, generally located in "hospital" facilities and operate at higher fresh gas flow rates which can consume a lot of inhalation anaesthetic agent, so generating a lot of environmental waste anaesthetic gas.

THE PROBLEM - A WORLD-WIDE NEED FOR MARINE MAMMAL VENTILATION EQUIPMENT

Darvall's new ventilator designed and being tested for small animal applications (dogs, cats, rabbits and exotics including rodents) using low fresh gas flows, changed that paradigm. This computerised electronic ventilator has control systems to deliver tiny breaths at high frequencies, but it has

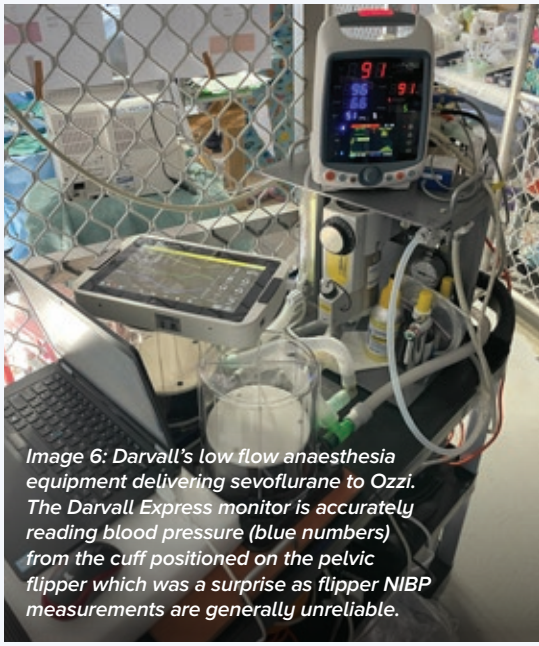

Image 6: Darvall's low flow anaesthesia equipment delivering sevoflurane to Ozzi. The Darvall Express monitor is accurately reading blood pressure (blue numbers) from the cuff positioned on the pelvic flipper which was a surprise as flipper NIBP measurements are generally unreliable.

Image 5: Darvall's ventilator being used on Ozzi who weighs 200kg – L-R: James Dunlop engineer with anaesthetists Colin Dunlop and James Bailey.

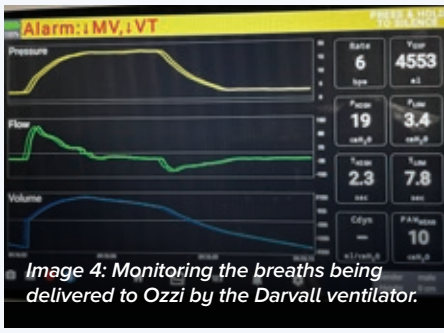

Image 4: Monitoring the breaths being delivered to Ozzi by the Darvall ventilator.

Image 7: Darvall blood pressure cuff positioned on the pelvic flipper. The finger is pointing to the artery location on the other side. Catheter placement is guided by ultrasound.

a powerful drive unit that does not rely on pressurised gas such as bottled oxygen, is simple to set up and operate and is about the size of a small shoe box so very portable and ideal for transport. Compared to the custom built AAV, Darvall's ventilator is consuming large volumes of compressed "driving gas" and is designed to run with low flow anaesthesia systems that use up to ten times lower fresh gas (O_2) flow, which uses up to ten times less inhalation anaesthetic so generates up to ten times less environmental waste anaesthetic gas. Darvall's engineer James Dunlop and ventilator specialist Peter Hartigan constructed a bellows reservoir to suit a 300kg mammal, wrote a program to run the ventilator in the AAV mode and thoroughly tested this set-up in its research laboratory to prove its functionality and reliability over 8 hour run times.

Once the Darvall team had the data, James Bailey was contacted and agreed to use it as the "first line ventilator" for the Sea Lion anaesthesia at CCWS to prove its capability. The ventilator was programmed to replicate the apneustic breathing pattern of sea lions under anaesthesia: approximately six breaths per minute, with a brief expiration followed by an extended inspiratory hold of 8–10 seconds, shown in the graph (image 04). Delivering this unusual ventilation cycle reliably and consistently was a key factor to deliver stable anaesthesia with normocapnia and high arterial oxygen levels. At the completion of successful surgery, the sevoflurane was turned off and a smooth recovery followed, with both animals returning quickly to normal behaviour.

ENVIRONMENTAL SUSTAINABILITY

What's the significance behind reducing inhalant anaesthetic? Anaesthetics such as desflurane and nitrous oxide are potent greenhouse gases that disproportionately contribute to the carbon footprint of acute hospitals, despite making up only a small share of total emissions. Desflurane, in particular, has an especially high global warming potential, according to the Royal College of Anaesthetists. For these sea lion anaesthetics sevoflurane was used, having a much lower atmospheric impact. Darvall's ventilator permitted significant reduction in the fresh gas (O_2) flow, resulting in a 5x lower usage of inhalation anaesthetic agent, all improving sustainability and also simplifying logistics for field and sanctuary settings.

"Having a system that can both mimic the natural breathing cycle of marine mammals and run independently of bottled driving gas represents a step change," said Dr Colin Dunlop, Darvall's CEO. "The new ventilator makes these high-risk procedures safer, more sustainable, and far more accessible."

Image 8: Colin Dunlop, CEO Advanced Anaesthesia Specialists.

COLLABORATION FOR CONSERVATION

The successful outcome was the result of collaboration between Coffs Coast Wildlife Sanctuary (CCWS), a multi-disciplinary surgical team, with support from SeaWorld and Darvall. CCWS, a not-for-profit charity dedicated to wildlife rescue, education, and research, provided the facilities and care required for the surgery.

Image 9: Ozzi recovering from anaesthesia with Dr James Bailey ready to extubate once he has full control of laryngeal function. Ozzi is used to being handled so there is minimal stress!

Image 10: Female Sea Lion "Miri" following successful cataract surgery with (L to R) Tiga Cross CCWS & veterinary experts Drs Carmen Colitz and James Bailey.

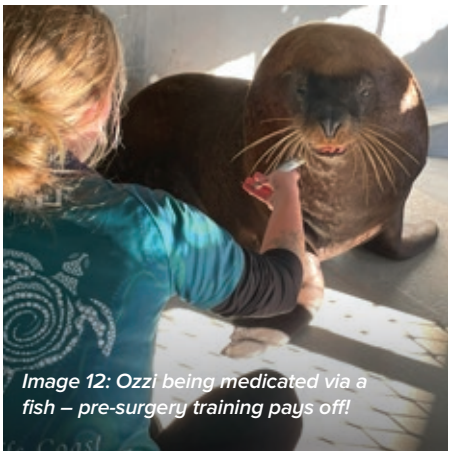

Image 12: Ozzi being medicated via a fish – pre-surgery training pays off!

Image 12: Post-surgery recovery allows this sea lion to return to its natural behaviours

For CCWS, this success not only restored sight to two of its resident sea lions, but also underscored its growing role as a leader in innovative veterinary practice. For Darvall, it demonstrated the potential of its new ventilator to transform anaesthesia for marine mammals worldwide.

"This sanctuary was on the brink of closure when my husband and I mortgaged our house to save it and turn it into a conservation education centre. It is a real privilege to be part of a world-first, especially as cataract surgery in sea lions is a massive risk, if something went wrong, it would be devastating for the species, so we were understandably cautious about trialling a prototype ventilator. But Darvall's new ventilator proved safer, simpler, quieter and more portable than anything we'd used before," said Tiga Cross, Managing Director at CCWS, "It gives our animals the best chance, and it's exciting to think this one-of-a-kind machine could help other marine animals around the world. Our dream is to establish a dedicated wildlife hospital here, and this success shows what's possible when passionate people and innovative technology come together."

LOOKING AHEAD

The successful use of Darvall's new ventilator in two Australian Sea Lions at CCWS represents an opportunity to make Apneustic Anesthesia Ventilation more widely available for marine mammal anaesthesia world-wide improving outcomes for procedures in dolphins, seals, and other diving mammals. This is in both captive and wild contexts while achieving efficiency, portability, and sustainability. With further development and validation, this new ventilator technology could become a standard tool for veterinarians working at the interface of marine medicine and conservation.

The development of AAV technology to support marine mammal anaesthesia demonstrates the power of veterinary-led research and innovation with co-operation of biomedical engineers to transform animal care and welfare from sanctuary settings to the wider field of conservation medicine.

ABOUT DARVALL

Darvall is a division of Advanced Anaesthesia Specialists (AAS), a global leader in the design, manufacture, and support of innovative solutions in veterinary anaesthesia, patient warming and monitoring equipment. Darvall is owned and operated by board-certified veterinary anaesthetists, collaborating with engineers to solve the real-world challenges faced by clinicians. With patient safety as the highest priority, its anaesthesia solutions reduce anaesthetic consumption, costs and lower waste gas emissions protecting both veterinary staff and the environment.

ABOUT COFFS COAST WILDLIFE SANCTUARY (CCWS)

Located in Coffs Harbour, NSW, CCWS is dedicated to conservation education and the long-term care of native marine wildlife. Since 1970, it has provided a safe haven for dolphins, sea lions, penguins, turtles, and other species. Through immersive programs, the sanctuary educates visitors on Australia's unique ecosystems while providing lifelong care for over 40 animals, many of which cannot return to the wild. As a not-for-profit charity, CCWS plays a vital role in inspiring conservation action across the region and is working toward establishing a dedicated Wildlife Educational Training Hospital.

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HOW AI IS TRANSFORMING VET CARE IN AUSTRALIA

AUSTRALIA'S LARGEST VET NETWORK HARNESSES INNOVATION WITH THE ADOPTION OF HEIDI HEALTH'S AI MEDICAL SCRIBE

Greencross Vets and the Animal Referral & Emergency Network (AREN), part of Australia's largest pet wellness company, are embracing the future of veterinary care with Heidi Health – a purpose-built, AI-powered medical scribe that transforms how clinical documentation is handled.

Since its rollout across more than 140 GP clinics and 24 speciality & emergency animal hospitals in June, Heidi Health has not only modernised documentation, but also freed up vets and specialists to focus on what they do best: delivering exceptional patient care. This bold step highlights Greencross Vets and AREN's commitment to embracing cutting-edge technology, setting a new standard for veterinary care across Australia.

By automatically generating high-quality, structured medical records from ambiently-transcribed consultations, the innovation of Heidi Health is transforming the way vets and specialists work by freeing up their time. This enables vets and specialists to focus on improving patients' health and welfare, building stronger relationships with pet owners through richer conversations and spending less time on notetaking.

The announcement comes as the veterinary industry faces increasing strain under growing demand. Australia has one of the largest pet ownerships in the world, with 69 per cent of households owning a pet. In total, there are an estimated 28.7 million pets in Australia, but only around 15,000 vets - meaning there's only one vet for every 2,000 pets. The requirement for comprehensive record keeping and other administrative demands contribute to significant time pressures for an already busy workforce.

Since its implementation in June, Heidi is saving the equivalent of almost an entire day a week. For most vets and specialists, that results in more time back for their patients, clients and families. Heidi has been used in over 35 per cent of total consultations in Greencross Vets and AREN nationwide, with a goal to eventually have most of their GP and speciality & emergency teams utilising Heidi for the majority of their consultations.

Dr Magdoline Awad, Chief Veterinary Officer, Greencross Pet Wellness Company says "As Australia's largest pet wellness company, we are constantly looking for ways to embrace innovation to enhance the client experience both in our GP clinics and our network of speciality & emergency hospitals. The implementation of Heidi Health for our teams has been revolutionary as it takes care of the behind-the-scenes tasks, refines the day-to-day work and gives our vets and specialists more time to do what they are trained for: providing quality care to pets and connecting with the families who trust us

"The uptake of and feedback from our teams on Heidi Health in such a short space of time has been fantastic. Hundreds of our GP and speciality and emergency vets are using Heidi Health to streamline thousands of consultations a week – with some clinics and hospitals utilising it in over 60 per cent of consultations.

"The benefits are numerous, but the most important one is now that our teams' are using Heidi Health, less time is spent on admin and more time is spent connecting with clients and treating patients. Over the coming months, we believe the impact it can drive for both our GP and specialists and our patients will grow exponentially."

Greencross Vets and AREN identified Heidi as the leading AI scribe solution due to its compatibility with the veterinary profession, including specialist terminology and clinical templates, and its ease of use in both implementation and long-term use.

Dr Thomas Kelly, Co-Founder and CEO of Heidi Health added: "We're thrilled to partner with the leading veterinary businesses in Australia, Greencross Vets and the Animal Referral & Emergency Network to help their GPs and specialists free up their time with less admin and focus on what they're trained for. As a business created by clinicians for clinicians, we have an innate understanding of the challenges vets and specialists are facing.

By streamlining consultation transcription, we're helping vets and specialists get back valuable time to support better work-life balance and so they can do more of what they have been trained to do, which is to improve the health and wellbeing of their patients. With the sector under increasing strain, Heidi can play a crucial role in helping animal clinics and hospitals focus on what matters most: delivering exceptional care to animals and their owners."

ABOUT HEIDI HEALTH

Heidi's AI-powered medical scribe streamlines time-intensive administrative tasks to reduce the cognitive load on clinicians. Learn more at **https://www.heidihealth.com.**

ABOUT GREENCROSS VETS AND THE ANIMAL REFERRAL AND EMERGENCY NETWORK (AREN)

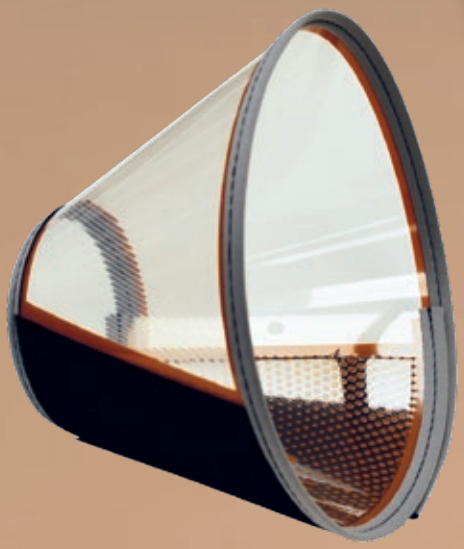
More information on Greencross Vets visit: **www.greencrossvets.com.au/**

More information on the Animal Referral and Emergency Network (AREN) visit: **www.emergencyvet.com.au/**

MORE INFORMATION

For more information about Heidi Health, visit: https://www.heidihealth.com/au/use-case/vet

Size does matter.



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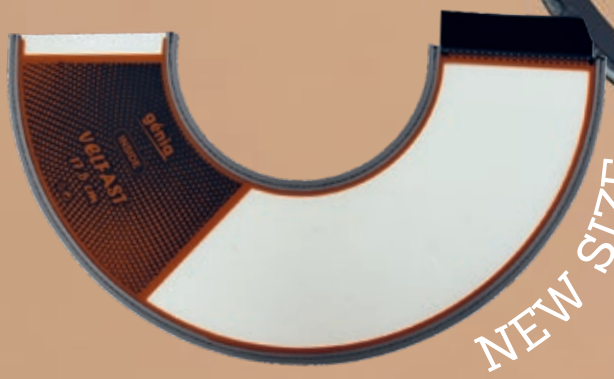

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THE NEUROBIOMECHANICAL BASIS OF CANINE CHIROPRACTIC: **INTEGRATING SPINAL HEALTH INTO CLINICAL PRACTICE**

A SYSTEMS-BASED PERSPECTIVE ON SPINAL HEALTH.

BY: **DR. BILL ORMSTON, *DVM, CAC, DVETHOM***

Veterinarians are trained to assess pathology—detect, diagnose, and treat disease. But there is growing recognition that many chronic or recurrent musculoskeletal and neurological complaints in dogs stem not from disease, but from dysfunction—often subtle, biomechanical, and best addressed through manual therapies such as chiropractic care.

Canine chiropractic, when applied appropriately and within the scope of veterinary medicine, offers a neurobiomechanical approach to improving functional outcomes in dogs presenting with compensatory gait changes, recurring lameness, post-surgical imbalances, and vague neurologic signs.

This article outlines the scientific rationale for chiropractic integration, clarifies the mechanism behind the chiropractic adjustment, and provides guidance on case selection and referral in Australian clinical settings.

NEUROBIOMECHANICS: **THE MISSING LINK IN CHRONIC FUNCTIONAL DYSFUNCTION**

The concept of subluxation in animal chiropractic differs markedly from historical human chiropractic notions. In veterinary practice, we refer to a **vertebral subluxation complex (VSC)** as a **functional joint restriction** — a joint that is hypomobile, with altered proprioceptive input and potentially resulting in abnormal muscle tone, compensation, or neurological feedback.

Why it matters neurologically:

- Joint mechanoreceptors and nociceptors within facet joints constantly inform the central nervous system about body position and motion.
- When a spinal joint is restricted, **afferent signaling is altered**, leading to changes in segmental reflexes, muscle tone, and even autonomic regulation.
- These changes can result in **functional lameness**, reduced stride length, impaired proprioception, or signs that mimic orthopedic or neurological pathology.

This functional disruption does **not typically show up on imaging**. It is detected through motion palpation, gait analysis, and neurologic response to segmental loading.

THE CHIROPRACTIC ADJUSTMENT: **MECHANISM AND CLINICAL EFFECT**

Chiropractic adjustments are specific, high-velocity, low-amplitude (HVLA) thrusts applied to joints with demonstrable restrictions. The goal is not to "realign bones" but to:

- **Restore** joint mobility
- **Normalize** afferent input to the spinal cord and brain
- **Inhibit** pain through spinal reflex mechanisms
- **Reset** muscle spindle function and segmental tone

Several studies in humans and animals have demonstrated the neuromodulatory effects of spinal manipulation, including:

- Reduced paraspinal EMG hyperactivity
- Increased joint range of motion
- Changes in cortical sensorimotor integration
- Modulation of pain perception and reflex arcs

In dogs, clinical improvement is often observed in **gait quality, posture, behavior**, and **pain response**, even in the absence of overt orthopedic lesions.

APPROPRIATE CASE SELECTION: **WHEN TO CONSIDER CHIROPRACTIC REFERRAL**

Chiropractic care is not a replacement for diagnostics, imaging, or pharmacologic treatment. It is, however, an excellent adjunctive therapy in cases involving:

- Recurrent lameness with unremarkable radiographs
- Post-surgical rehabilitation (e.g., TPLO, IVDD decompression)
- Gait asymmetry or poor postural control
- Chronic neck or back pain
- Neurological deficits that do not warrant surgical intervention
- Performance or working dogs with subtle compensation

It is also useful in **geriatric patients, dogs with previous trauma**, or **post-anaesthesia/post-dental cases** where positioning has induced musculoskeletal strain.

In each case, spinal assessment and targeted adjustment should follow veterinary evaluation, and chiropractic intervention should be withheld in cases of:

- Acute disc extrusion with compression
- Neoplastic infiltration of the spine
- Severe instability (e.g., atlantoaxial subluxation without surgical stabilization)
- Fracture, infection, or other contraindicated pathology

LEGAL AND PROFESSIONAL CONSIDERATIONS IN AUSTRALIA

The application of chiropractic care to animals in Australia is legally regulated and varies by state. Generally:

- Only r**egistered veterinarians** may

legally perform chiropractic adjustments on animals, or must directly supervise qualified practitioners.
- Practitioners should be certified through reputable institutions such as the **International Veterinary Chiropractic Association (IVCA) or American Veterinary Chiropractic Association (AVCA)**.
- Clear communication between the referring veterinarian and certified chiropractor ensures continuity of care and appropriate case management.

It is best practice for veterinarians to either complete approved training themselves or refer to practitioners with formal animal chiropractic certification who operate within the bounds of veterinary referral and documentation.

EVIDENCE-INFORMED PRACTICE AND THE NEED FOR COLLABORATION

Although large-scale randomized trials in veterinary chiropractic remain limited, a growing body of **case reports, observational studies**, and **clinical experience** support its use in functional disorders. For example:

- In a study of 109 dogs treated for lumbosacral dysfunction, over 80% showed improvement in pain, mobility, or both.
- Canine agility and working dog handlers often report fewer injuries and faster post-competition recovery with ongoing chiropractic care.
- Integrative practices across Australia report improved outcomes in orthopedic, neurologic, and behavioral cases when chiropractic is part of a multimodal approach.

Ultimately, the most effective use of canine chiropractic lies in collaboration — not as an isolated intervention but as part of comprehensive care that includes diagnostics, physical rehabilitation, pain management, and owner education.

CONCLUSION: A TOOL FOR FUNCTION, NOT A CURE-ALL

Veterinary chiropractic is not a panacea. It does not replace surgery or disease management. But in cases of neuromusculoskeletal dysfunction — where pain, poor movement, or compensation is the primary challenge — it offers a safe, evidence-informed way to restore motion and modulate neurological input.

When integrated thoughtfully, chiropractic care becomes a valuable addition to the veterinary toolkit—especially in a profession that increasingly values **function, mobility**, and **quality of life** over symptom suppression alone.

ABOUT DR BILL ORMSTOM

Dr. O started his veterinary career as a mixed animal mobile practitioner. That is when he discovered animal chiropractic. Through animal chiropractic, Dr. O found a sense of belonging, as well as an opportunity to help animal patients resolve their ailments. Animal chiropractic helped him to build a foundation for understanding health in animals that he was eager to share with other doctors like himself. Because of this he has been the backbone of more than one animal chiropractic program. He continues to find innovative ways to help animal chiropractors grow their practice, educate their clients and help more animals. He is the author of the books "Yes! It is Really A Thing", and "Yes It's A Better Thing." He currently teaches at Animal Chiropractic Education Source.
Visit: **www.yeschiro.com.**

INTERNATIONAL EXPERTS WARN NOISY BREATHING COULD SIGNAL SUFFERING IN POPULAR FLAT-FACED DOGS

THE INTERNATIONAL COLLABORATIVE ON EXTREME CONFORMATIONS IN DOGS (ICECDOGS) HAS RELEASED NEW GUIDANCE FOR OWNERS ADVISING THAT BRACHYCEPHALIC (FLAT-FACED) DOGS, SUCH AS FRENCH BULLDOGS, PUGS AND ENGLISH BULLDOGS, THAT HAVE NOISY BREATHING AT REST OR LIGHT EXERCISE ARE SUFFERING FROM SEVERE RESPIRATORY DISEASE AND SHOULD NOT BE CONSIDERED AS NORMAL OR HEALTHY.

Heavily informed by research from the Royal Veterinary College (RVC), the guidance encourages owners of flat-faced dogs to keep their dogs slim and attend annual veterinary general health examinations to help spot suffering related to noisy breathing earlier and protect canine welfare. More widely, the group calls for flat-faced dogs with noisy breathing to not be described as healthy if promoted, bred from, sold, shown or rehomed.

ICECDogs is a multinational group which aims to address the escalating global welfare issues and suffering caused by extreme body shapes in dogs. ICECDogs defines extreme conformation as a physical appearance that has been so significantly altered through selection by humankind that dogs commonly suffer from poor health and welfare. Brachycephaly (being flat-faced) is a leading example of an extreme conformation that many humans find visually appealing but that also leads to a lifetime of suffering for many dogs.

Flat-faced dogs suffer from a number of health problems linked to their extreme body shape, including issues with their breathing. Features such as narrow nostrils, compressed noses and elongated soft palates can block the movement of air through their nose and throat, which is known as Brachycephalic Obstructive Airway Syndrome (BOAS). Approximately 60% of Pugs suffer from BOAS, 50% of French Bulldogs and 40% of English Bulldogs.

However, there has been rising demand for French Bulldog, Pug and English Bulldog dogs over the past decade and a half, which has now created the 'flat-faced dog crisis'. In the UK, French Bulldogs have risen in popularity by 166% and English Bulldogs by 64% since 2009, according to Kennel Club puppy registration figures. The RVC's VetCompass data estimates that there are 503,798 French Bulldogs, 186,725 Pugs and 132,024 Bulldogs currently in the UK, demonstrating the potential scale of these health and welfare issues.

The international group is therefore urging the public to be aware that noisy breathing – i.e. awake-snoring or raspy breathing - at rest or light exercise is evidence of respiratory disease. Anyone wishing to acquire a healthy dog is advised to never acquire a dog with noisy breathing at rest or during light exercise. Additionally, people who already own a flat-faced dog are advised to carefully monitor their pet's breathing for signs of distress and seek veterinary advice if their dog's breathing is noisy while resting or lightly exercising.

Other steps flat-faced dog owners can take include:

- Asking your vet about grading your dog for respiratory function to assess the severity of your dog's breathing problems
- Being aware that breathing problems in flat-faced dogs generally become worse with age
- Exercising your flat-faced dog with caution if they have breathing problems
- Keeping your dog cool on hot days to reduce the risk of heatstroke, as flat-face dogs are more susceptible
- Never breeding from a flat-faced dog with noisy breathing.

Dr Dan O'Neill, Associate Professor for Companion Animal Epidemiology at the RVC, Chair of the UK Brachycephalic Working Group and co-founding ICECDogs member, said:

"Owners need to recognise that it is never 'normal' or healthy" for a dog to have noisy breathing at rest or when lightly exercising – including snoring, snorting, wheezing or raspy breath. Air hunger like this is evidence of a lifetime of severe suffering. Owners should also be aware that breathing problems in flat-faced dogs generally worsen with age, if their dog is overweight and during hot weather.

"Noisy breathing is sadly not curable but there are ways that owners can help to improve their pet's quality of life. These include keeping them slim, having annual veterinary health examinations and breathing assessments, taking care during exercise and keeping them cool during warm weather. Surgery may sometimes help to reduce the suffering in some dogs.

"The key message to the public here is that noisy breathing at rest or light exercise in flat-faced dogs is never normal, and these dogs are suffering. Anyone thinking about acquiring a flat-faced dog is urged to 'stop and think before acquiring a dog with an extreme conformation."

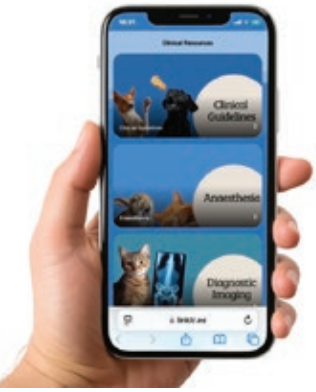
MORE INFORMATION

Visit: **rvc.ac.uk** or **icecdogs.com**

CVS AUSTRALIA LAUNCHES UNIQUE MIGUIDE POCKET CLINICAL RESOURCE

CVS AUSTRALIA HAVE LAUNCHED THE UNIQUE MIGUIDE POCKET RESOURCE TO PROVIDE VETS AND NURSES WITH THE CLINICAL INFORMATION THEY NEED EVERY DAY IN COMPANION ANIMAL PRACTICES.

Thought to be a first in the profession, the portal is easily accessible on a phone and designed to be 'quick reference' in format. It houses clinical guidelines, anaesthesia, diagnostic imaging, dentistry and toxicology sections, along with an antibiotic guide. These resources are easy to access, with well catalogued and easy-to-navigate sections.



The portal also links to CVS' Knowledge Hub online learning platform, for clinicians to access hundreds of associated training courses. In addition, CVS' colleagues can access its Vet Oracle specialist telemedicine and Advanced Clinical Services Network support teams through the hub.

It is hoped that the breadth of information contained on the portal will support clinical decision making, making recommendations to clients easier - and ultimately improving patient outcomes.

Dr Radha Ravi, Regional Director at CVS Australia, said "Our amazing vets and nurses have such a varied role and this resource brings together the essential clinical knowledge they rely on, in one easy-to-access place. We hope it helps them make confident, informed decisions so we can keep delivering the very best care to every animal we see."

The new MiGuide resource was launched during CVS Australia's first annual conference in April 2025 and is now available to all clinical colleagues.

MORE INFORMATION

CVS Group is a leading provider of veterinary services, operating 45 practices across six states in Australia. For more information, visit **www.cvsvets.com.au.**

SUPPORT RESPONSIBLE PET OWNERSHIP AND STAMP OUT UNETHICAL BREEDERS

AS A VET, YOU ALREADY PLAY A CENTRAL ROLE IN PROMOTING RESPONSIBLE PET OWNERSHIP, FROM DESEXING AND MICROCHIPPING TO OFFERING HEALTH ADVICE AND GUIDANCE ON PET BEHAVIOUR. BUT ONE SIMPLE STEP AT THE POINT OF CARE COULD DRAMATICALLY IMPROVE OUTCOMES FOR PET OWNERS AND THE COMMUNITY.

Since 2018, South Australian legislation has required veterinarians and other authorised microchip inserters to record details of desexing and microchipping procedures in Dog and Cats Online (DACO). Pet owners must also keep this information updated throughout their pet's life.

The overlap was designed intentionally, so if one party misses a step, the other fills the gap. But many records are never completed.

Vets and microchip implanters can transfer microchipping and desexing responsibilities to pet owners via a form. And while well-intentioned, this approach has proven ineffective.

Evidence from local councils shows that a significant percentage of these procedures are never entered into DACO, leaving large gaps in South Australia's pet database.

Research from Animal Medicines Australia (2024) shows a significant discrepancy between the number of pets in the community and those recorded in Dog and Cats Online.

This lack of information makes it harder to:

- reunite lost pets with their owners
- monitor unregistered or at-risk animals
- track and address non-compliant breeding activity (including puppy farms)
- plan and resource local animal management effectively.

With new dog and cat breeder regulations on the horizon, accurate and complete data in DACO will become even more important for identifying unethical breeders and safeguarding animal welfare.

WHAT THIS MEANS FOR VETS

Vets are trusted partners in the care and welfare of animals, and in most cases, they are already collecting and recording accurate information. The reality is that vets are often more reliable record keepers than some pet owners.

However, when details of a procedure are not entered into DACO at the point of care, pet owners may unknowingly miss out on the benefit of what they've paid for. Without a DACO record, their pet remains non-compliant with state law, which may impact future registrations, rehoming, or lost animal recovery.

IS CONFIDENTIALITY AN ISSUE?

Some vets worry about data privacy but under South Australian law, desexing and microchipping information must be recorded in DACO.

It is a bit like registration of motor vehicles. If a car owner wants to drive their car on SA roads, the car must be registered.

It means pet owners are not entitled to argue that information about their pets should be treated confidentially by vets.

The system has special arrangements for owners in sensitive professions or who may have safety concerns. Anyone with concerns can speak to their council animal management officers for more information on these arrangements.

STRENGTHENING THE SYSTEM

DACO works well. It can work better. That's why LGA South Australia, the peak body for local government in the state, has recommended closing the loophole so vets and implanters enter procedure details directly into DACO at the time of care.

Making sure it's entered at this point helps protect pets, supports owners and strengthens the system.

AUSTRALIA'S CANINE HEALTH CRISIS: HOW TO PROTECT YOUR POOCH THIS TICK SEASON

AS TICK SEASON APPROACHES, ELANCO IN PARTNERSHIP WITH AUSTRALIAN VETS IS URGING PET OWNERS TO PROTECT THEIR DOGS AGAINST EHRLICHIOSIS, A RELATIVELY NEW DEADLY TICK-BORNE DISEASE THAT CONTINUES TO SPREAD ACROSS THE COUNTRY.

Increasing cases of ehrlichiosis are putting thousands of dogs at risk and placing a growing emotional and financial toll on pet owners.

Each year, thousands of dogs across Australia suffer from tick-related-diseases including ehrlichiosis, with treatment at a vet incurring costs that can run into many thousands of dollars, depending on the severity and type of tick bite. With the rising cost of living, unexpected vet bills like these can put immense pressure on pet owners.

While most pet owners living along Australia's east coast know about paralysis ticks, fewer realise the risks of tick-borne diseases like ehrlichiosis transmitted by the brown dog tick, which is found across much of Australia.

Ehrlichiosis is a serious and potentially fatal bacterial disease that can cause severe illness in dogs. Early symptoms include fever, loss of appetite, weight loss, and lethargy and in the later stages, dogs may experience bleeding disorders, cloudy eyes, organ damage or life-threatening septicaemia.

The treatment and recovery can be long, costly and uncertain, often involving lab tests, hospitalisation, and supportive care. At this time, there is no vaccine for this disease. While dogs can be successfully treated, they may suffer subsequent relapses, as the bacteria can "hide" within the body.

Since it was first detected in Australia in 2020, ehrlichiosis has spread rapidly across the top end and centre of Australia (QLD, WA, NT and SA) and is increasingly spreading to southern states (NSW, VIC), possibly due to increased dog travel.

Dr Liisa Ahlstrom, Technical Veterinarian at Elanco for Seresto warns, "The rapid spread of ehrlichiosis cases across Australia and the severity of the disease seen in infected dogs has been alarming. In some areas where access to veterinary care is limited, it's been estimated that up to 80% of dogs have died. It's been heartbreaking witnessing the devastating impact of this disease."

"This tick season, prevention is more important than ever. Ticks are one of the biggest threats to dogs in Australia, yet many pet owners aren't fully aware of the risks, or how to protect their pet," says Dr Ahlstrom.

Many pet owners don't realise that most tick products, while highly effective at killing ticks, are not able to protect dogs from ehrlichiosis. This is because most products work by killing ticks after the tick has bitten, which can take up to 2-3 days. This is too slow to prevent ehrlichiosis, which can be transmitted to dogs within just a few hours of ticks biting.

Ahlstrom continues, "It's critical for dog owners to understand that to protect their pet from ehrlichiosis, they must use a tick product that repels ticks, to stop them biting and transmitting the bacteria that cause the disease. This is especially important for dogs living in, or travelling into brown dog tick regions."

Seresto™ is the only tick product proven and registered to reduce the transmission of tick-borne diseases, including ehrlichiosis, in dogs.

This year is predicted to be a particularly bad tick season with wet and humid conditions across many parts of the country and veterinarians are warning pet owners to be especially vigilant. Tick season typically kicks off on the East Coast between August and September[1].

In other parts of Australia, like the top end, which is considered a hot spot, ticks remain active year-round.

Australia has one of the highest rates of pet ownership in the world, with approximately 48% of households having at least one dog[2]. Pet owners are encouraged to speak with their vet to understand the risk to their dog and consider year-round protection like the Seresto™ collar for dogs.

TICK TIPS: PROTECTING YOUR DOG FROM TICKS BY DR LIISA AHLSTROM

The best way to protect your pet from ticks includes:

- Conducting daily tick searches on your dog, especially if they mix with other dogs or spend time outdoors in grassy or bushland areas. Always check the ears, mouth, lips, and under the tail—ticks love to hide where it's warm and hard to see. See Elanco's tick removal guide.
- Using a tick product that repels ticks, to stop them biting. The Seresto collar provides up to 8 months protection against fleas and paralysis ticks and 4 months protection against brown dog ticks and tick-borne diseases including ehrlichiosis. Seresto is an odorless and water- resistant collar that works on the outside of your pet to repel ticks, and kill fleas and ticks on contact so that they don't need to bite. Seresto is the only tick product proven and registered to reduce the transmission of tick-borne diseases, including ehrlichiosis, in dogs.
- Knowing the signs of tick paralysis (e.g. lethargy, loss of coordination, difficulty standing or walking) and ehrlichiosis (e.g. lethargy, fever, loss of appetite, weight loss and unusual bleeding or bruising) and the importance of seeking immediate veterinary attention.

1 Pet Industry Association Australia
2 Animal Medicines Australia, 2022 PM-AU-25-0271

MORE INFORMATION

Visit: **www.elanco.com/en-au/**

DEADLY BIRD OUTBREAK
DEFEATED BY CITY AND BIOLOGISTS IN PERTH LAKE RESCUE

LAKE JUALBUP, A CHERISHED URBAN WETLAND IN THE CITY OF SUBIACO, HAS SUCCESSFULLY REVERSED A DEVASTATING TREND OF AVIAN BOTULISM OUTBREAKS THANKS TO A STRATEGIC PARTNERSHIP BETWEEN THE CITY AND WATER MANAGEMENT SPECIALISTS PASES AQUA PTY LTD.

In late autumn of 2024, an outbreak of avian botulism at the lake resulted in the deaths of more than 40 birds, including ducks, swans, and other local waterbirds, causing significant concern within the community. Avian botulism is a paralytic disease caused by a naturally occurring bacterium that thrives in low-oxygen water conditions, often exacerbated by drought and warm weather.

Following the successful implementation of new biological treatments and solar-powered technology in early 2025, no further botulism outbreaks have been detected.

City of Subiaco CEO Colin Cameron confirmed the proactive approach taken to safeguard the lake's ecosystem.

"Avian botulism is a naturally occurring seasonal issue across Perth, and was most recently detected at Lake Jualbup in Shenton Park in late autumn 2024," Mr. Cameron said. "Following a period of drought, which resulted in lower water levels than usual, the City engaged PASES Aqua Pty Ltd to provide strategies to improve the water quality and mitigate future avian botulism outbreaks at the lake. Treatments including anaerobic bacterial and enzyme treatments in January 2025, and the installation of two new solar powered paddle aerators in April 2025, are playing a significant role in reducing the risk of future botulism outbreaks and maintaining optimum oxygen levels within the lake's ecosystem."

THE CHALLENGE AT LAKE JUALBUP

Constructed wetlands like Lake Jualbup are vital habitats for wildlife. However, low water levels, stagnant water, and a build-up of organic nutrients can deplete oxygen, creating ideal conditions for the Clostridium botulinum bacterium to multiply and produce toxins. Once infected, birds suffer from paralysis and often cannot survive without intervention.

"Our goal was to show that we can combat these seasonal issues using acombination of beneficial bacteria, enzymes, and targeted aeration technology," said Dr. Dulana Herath, Founder of PASES Aqua Pty Ltd.

"Natural fluctuations in water level meant that solar paddle wheel aerators were the perfect solution to improve oxygen levels at low water depths.

This directly improves water quality and creates an environment where botulism is far less likely to develop. We also applied anaerobic bacterial treatments and enzymes into stagnant areas which may have been potential hotspots for Clostridium."

A TARGETED SOLUTION

- **In early 2025**, PASES Aqua rolled out a multi-stage water improvement program at Lake Jualbup:
- **January 2025:** Application of anaerobic bacterial treatments (BBA Biosolutions) and enzymes (Ozipond Lakefix) to break down organic sludge and reduce the nutrient load that fuels harmful bacteria.
- **January 2025:** Revegetation of banks and some inner areas with trees and plants to soak up nutrients in the lake sediment.
- **April 2025:** Installation of two solar-powered paddle wheel aerators to continuously circulate the water, increasing dissolved oxygen levels and preventing stagnation.

This combined approach has led to a dramatic improvement. Since the treatments, water quality at the lake has stabilized, and only less than a handful of isolated bird deaths have been recorded most likely due to other natural courses, with no further botulism outbreaks confirmed.

A PRACTICAL MODEL FOR OTHER WETLANDS

"This project demonstrates that there are effective, environmentally responsible alternatives for managing water quality and botulism outbreaks in urban wetlands," said Dr. Herath.

"Many wetlands across Perth and Australia face similar challenges. Solar aeration combined with biological treatment offers a cost-effective and sustainable way forward."

Improving wetland health is a vital step in protecting Australia's unique wildlife. The successful outcome at Lake Jualbup is now being shared with other councils and environmental managers as a practical model for protecting waterbirds and enhancing the health of urban waterways.

"Saving Perth's waterbirds is possible when we apply the right knowledge and tools, " concluded Dr. Herath. "We are proud to have partnered with the City of Subiaco to show this can be achieved in a practical and sustainable way."

MORE INFORMATION

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WVS CHARITY LEADS LIFE-SAVING RABIES RESPONSE IN WORLD'S LARGEST REFUGEE CAMP

COX'S BAZAR, BANGLADESH:
WITH FEARS RISING OVER THE SPREAD OF RABIES IN THE WORLD'S LARGEST REFUGEE SETTLEMENT, UK CHARITY WORLDWIDE VETERINARY SERVICE (WVS) HAS SPEARHEADED AN EMERGENCY RESPONSE THAT HAS VACCINATED OVER 1,700 DOGS IN JUST FOUR DAYS – A LIFESAVING INTERVENTION IN ONE OF THE MOST DENSELY POPULATED AND UNDERSERVED HUMANITARIAN SETTINGS ON EARTH.

The campaign was launched in response to a 128% increase in reported dog bite cases between 2021 and 2023, as recorded by the WHO Cox's Bazar Health Sector Bulletins. Rabies is almost always fatal once symptoms develop, yet entirely preventable through timely canine vaccination – the single most effective way to stop transmission.

With over one million Rohingya refugees living in the 13km^2 Kutupalong camp, the public health stakes couldn't be higher. In May 2025, WVS deployed a high-impact, community-based campaign through its Mission Rabies initiative, achieving over 70% vaccine coverage – the critical threshold needed to stop the disease in dogs and prevent human deaths.

Dr Luke Gamble, Founder and CEO of WVS said "This is what we're about – anyone can do easy. This campaign proves that even in the toughest conditions, we can get in, pull together, and save lives. We can't change the hardship families here face every day – but we can make sure rabies is one less thing they have to fear."

The campaign, delivered in just three weeks from planning to completion, was a multi-agency operation involving:

- Ministry of Health and Family Welfare (MoHFW), Bangladesh
- Directorate General of Health Services (DGHS)
- Department of Livestock Services (DLS)
- Obhoyaronno – Bangladesh Animal Welfare Foundation

- Chattogram Veterinary and Animal Sciences University (CVASU)
- Refugee Relief and Repatriation Commissioner (RRRC)
- WHO Bangladesh, CDC, UNICEF, and Médecins Sans Frontières (MSF) for coordination and field support

Over 87 Bangladeshi veterinary students were trained and deployed, alongside over 150 campaign personnel, creating local capacity to carry forward zoonotic disease control. Teams used the Mission Rabies App to track real-time data, log vaccinations, and map campaign coverage across 26 zones.

Community outreach ran in tandem with the vaccinations, reaching over 12,000 residents and school children with life-saving rabies education in Rohingya language. Wristbands, posters, loudspeakers, and classroom sessions helped demystify the disease and promote safe behaviours, especially for children who are most at risk.

"This wasn't just a vaccination drive – it was about education, trust, and protection," said Dr Karlette Fernandes, one of the key Project Managers for the campaign.

"Communities were informed, engaged, and incredibly supportive. It shows how much can be done when we act with urgency and compassion."

The operation also included:

- Establishing surveillance mechanisms to report and track suspected rabies cases
- Structured SOPs, safety protocols, and on-site medical support for vaccination teams
- Secure vaccine cold-chain logistics across all camps

The campaign aligns with the WHO's "Zero by 30" global strategy to eliminate dog-mediated human rabies by 2030, and with the CDC's recent classification of Cox's Bazar as a rabies transmission zone requiring urgent intervention.

FURTHER INFORMATION

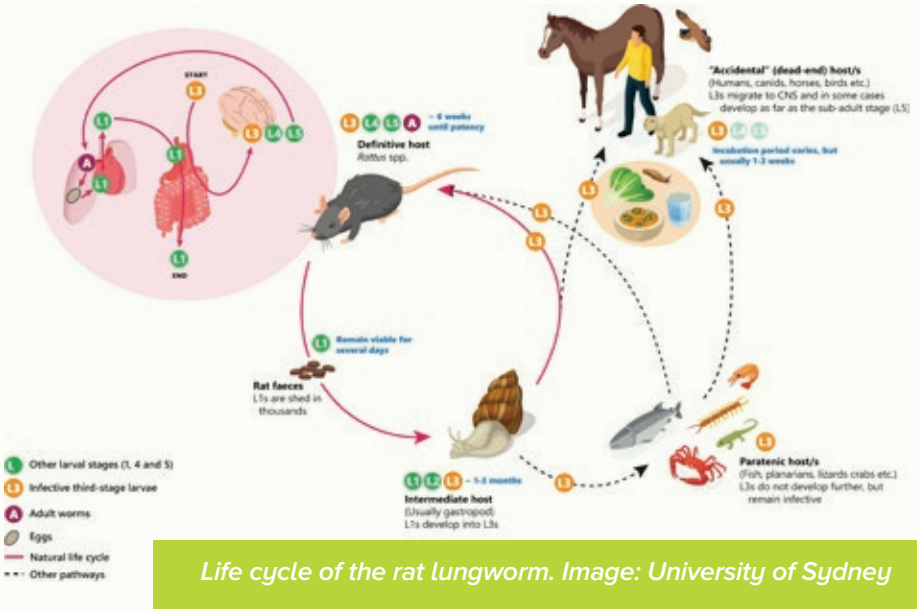
Further information on Mission Rabies and how to get involved can be found at **missionrabies.com**

MISSION RABIES

Mission Rabies is a project of Worldwide Veterinary Service (WVS) is an international veterinary charity based in Cranborne in Dorset. Founded by veterinarian Dr Luke Gamble in 2003, the charity provides veterinary support to animals in need and acts as a central veterinary resource for animal charities and non-profit organisations around the world. In 2013, WVS launched the Mission Rabies project to eliminate canine-mediated human rabies deaths. Following World Health Organization guidelines, Mission Rabies runs mass canine vaccination and community education in the world's worst hotspots for the disease. Mission Rabies currently delivers campaigns in Malawi, India, Sri Lanka, Zambia, Uganda, Tanzania, Ghana, Mozambique, Cambodia, and Thailand. Over five million dogs have been vaccinated and over ten million children have been educated worldwide since Mission Rabies began. For more information, please visit **missionrabies.com**

CLIMATE A FACTOR DRIVING INCREASED CASES OF RAT LUNGWORM DISEASE IN EASTERN AUSTRALIA

MORE DOGS ARE CATCHING THE DISEASE, POSING A POTENTIAL PUBLIC HEALTH RISK.



Life cycle of the rat lungworm. Image: University of Sydney

Rat lungworm disease is on the rise in eastern Australia in dogs – and there have even been recorded cases in humans, including two known lethal incidents. Caused by a parasite naturally found in rats, the disease requires ongoing monitoring to ensure it is controlled and doesn't pose a public health threat.

Research by veterinary scientists at the University of Sydney has unveiled insights into what is behind the growth in the disease, also known as neural angiostrongyliasis. Their study highlights how climatic factors act as drivers for this potential public health issue.

They publish their findings in *The Journal of Infectious Diseases*.

Rat lungworm disease has spread from its origins in Southeast Asia to regions including Australia, North America and Europe. Naturally found in feral rats scavenging in our cities, the parasite causing the disease is transmitted through snails and slugs, which act as intermediary hosts.

Senior author Professor Jan Šlapeta from the Sydney School of Veterinary Science said: "These snails and slugs, and the infective worm larvae in them, can – accidentally – be a disease source to us humans and our pet dogs. Once in humans or dogs the worms quickly get to brain where they cause disease."

Professor Šlapeta and his team analysed five years of data to develop a model that identifies high risk periods for transmission of the disease between two- and 10-months after heavy rainfall. The scientists identified 93 cases in dogs in the study period, with a peak of 32 in 2022. This peak was due to high rainfall, a driver of snail and slug proliferation.

Professor Šlapeta said: "This is another example how the La Niña events with wetter than average periods in Australia lead to increased disease transmission and occurrence."

The confirmed cases in the study were in and around Sydney and Brisbane, likely due to access to emergency veterinary care and higher population density.

THREAT TO HUMANS AND DOGS

The results shed light on the intricate relationship between climatic and weather conditions, such as rainfall and temperature fluctuations, and the threat of emergence of the disease in humans and domestic dogs.

Rat lungworm disease is caused by the parasite *Angiostrongylus cantonensis*, which is naturally found in rats. However, humans and dogs are considered accidental hosts, and infection can lead to devastating neurological consequences.

Lead author Phoebe Rivory, who has submitted her PhD thesis to the Sydney School of Veterinary Science, said: "In dogs and humans, the parasite enters the brain but rather than progressing to the lungs like it does in rats, it is killed in the brain by our own immune response. It is that overt immune response that causes severe headaches and sensations."

Using a One Health approach, which emphasises the interconnectedness

Lead author Dr Phoebe Rivory from the Sydney School of Veterinary Science.

of human, animal and environmental health, the researchers examined a dataset of canine infections to inform potential risks for human populations. By monitoring canine neural angiostrongyliasis cases, the team aimed to fill a significant gap in understanding how climate factors drive the occurrence of this zoonotic disease, an infection that jumps from animals to humans.

ONE HEALTH APPROACH

Notably, this research emphasises the importance of identifying the high-risk periods for transmission, allowing for targeted public health interventions to mitigate the spread of the disease. The study found that climatic patterns influenced the seasonal occurrence of rat lungworm disease, increasing the likelihood of transmission to dogs and potentially to humans.

Professor Šlapeta said: "This work is a clear representation of the One Health approach, illustrating how insights gained from studying animal diseases can effectively inform human medicine. With ongoing changes in climate, understanding the epidemiology of rat lungworm disease becomes imperative for protecting our pets and ourselves."

The implications of this research are particularly poignant, especially when recalling the tragic case of Sam Ballard, who died seven years ago after consuming an infected slug in 2010. There have been at least half a dozen recorded cases in humans since the 1970s in Australia, including at least one other fatal incident.

"This work is a clear representation of the One Health approach, illustrating how insights gained from studying animal diseases can effectively inform human medicine. "

These underscore the potential severity of rat lungworm disease, reinforcing the urgent need for heightened awareness and preventive measures.

As the number of reported cases in dogs rises, this study serves as a call to action for health professionals, policymakers and the public to remain vigilant.

Professor Šlapeta said: "Educating communities about how to avoid infection – by steering clear of potentially infected slugs and snails – can be lifesaving. And programs to inform dog owners on what symptoms to look out for in their pets would be worthwhile."

The research team encourages further investigation into the impact of environmental changes on disease dynamics. This would be assisted by including data on snail and slug abundance and the related availability of infective parasite larvae.

RESEARCH

Rivory, P. et al 'Rainfall and temperature driven emergence of neural angiostrongyliasis in eastern Australia' (*The Journal of Infectious Diseases 2025*) DOI: 10.1093/infdis/jiaf173

The authors declare no conflicts of interest. The study was in part funded by the Betty & Keith Cook Canine Research Fund at the Sydney School of Veterinary Sciences at the University of Sydney.

MORE INFORMATION

Visit: **www.sydney.edu.au/news-opinion/news/2025/06/17/climate-a-factor-driving-increased-cases-of-rat-lungworm-disease.html**

FROM FEAR TO FASCINATION: DECODING THE DEPTHS AND DISTANCES TRAVELLED BY THE WORLD'S LARGEST FISH

BY COLBY BIGNELL:

FEMALE WHALE SHARKS ARE CONSPICUOUS IN THEIR ABSENCE FROM AGGREGATION SITES SUCH AS NINGALOO REEF. A UNIQUE SATELLITE TRACKING DATA SET IS SHOWING US WHERE THEY ARE SO THAT WE CAN BEGIN TO UNDERSTAND WHY.

The study showed there was evidence that in late spring, females occupied areas with lower sea surface temperature than males.

KEY POINTS

- Unique dataset for whale sharks at Ningaloo Reef compares the diving behaviour and migrations of males and females.
- Males and females use different areas and water temperatures at certain times of the year.
- Female whale sharks use deeper habitats as temperatures rise.

I became acquainted with sharks at a very early age.

We spent every other Christmas holiday at my family's old beach shack at an island in the Dampier Archipelago, 2000 km north of my home in Perth.

From fear to fascination: Colby's interest in sharks started early, with visits to Dampier Archipelago in north-western Australia.

My earliest memory of an encounter with a reef shark was while snorkelling there when I was five or six.

As a child, I had developed an intense fear of the "monsters of the deep" depicted in books about great white sharks in the school library. Once I interacted with sharks this fear quickly transformed from fear into awe and fascination.

Ultimately, these early encounters led me to study Marine Science at Murdoch University. I started around the time that my Mum and grandparents moved to Exmouth, the focal point of Ningaloo Reef, Australia's largest fringing coral reef that reaches across 300 kilometres of coastline. And this was the first time I swam with the world's largest fish - the whale shark, which aggregate at Ningaloo Reef annually.

My first experience of research was during my Honours degree at the University of Western Australia. I researched behaviour and sensory biology including vision, behaviour and electroreception, where sharks detect electro-magnetic fields with special sensory pores.

The ocean has influenced every aspect of my life, both in my studies and as an avid diver, fisher and underwater photographer. It has taken me across six continents to photograph, experience and learn everything I can about sharks. I have also been lucky to work for the South African Shark Conservancy, with the Newport Beach Lifeguards in California, USA and with the Queensland Department of Environment & Science.

CIRCLING BACK TO NINGALOO

Ningaloo Reef, Australia's largest fringing coral reef, reaches across 300 kilometres of coastline in northwest Western Australia. Colby first visited when his family moved to Exmouth in the early 2011.

These experiences working abroad were pivotal in shaping my career goal to continue with research. This led me back to the whale sharks of Ningaloo Reef in 2022, when I started a PhD with CSIRO and the University of Tasmania in the Ningaloo Outlook program.

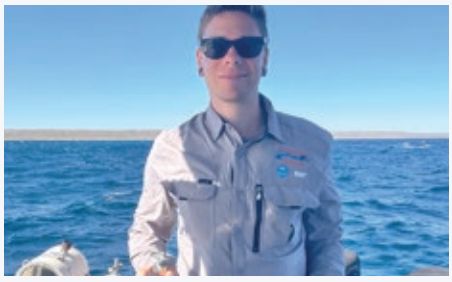
My research aims to better understand the movement ecology of sharks at Ningaloo Reef, using satellite and acoustic tagging data – which tracks not only where whale sharks go but how deep

they dive. Movement ecology is concerned with understanding the patterns and drivers of movement behaviours, which vary amongst marine species depending on their physiology, age, sex and the environment. There are still many gaps in this knowledge for whale sharks.

The Ningaloo Outlook research team – including my PhD supervisor, Richard Pillans, and many others – have tagged more than 150 reef sharks of various species and 40 whale sharks over the past decade.

Ningaloo Reef hosts one of the world's largest known aggregations of whale shark which occurs between March and August year. These aggregations are dominated by immature males so obtaining comparable data from males and females is important.

I have been lucky to help collect this data on several field trips; swimming up close to more than 100 whale sharks in just a few days. My field work also includes maintaining a large array of acoustic listening stations throughout the lagoon and reef slope, diving in a wide range of habitats and conditions to collect the receivers and download the shark detections.



Colby joined CSIRO's Ningaloo Outlook whale sharks research team in February 2022 and is undertaking work towards a PhD degree at the University of Tasmania.

A UNIQUE DATA SET FOR A UNIQUE FISH

Some of the satellite tracks in our study are among the longest ever recorded for whale sharks at Ningaloo Reef. We collected data for almost an entire year from some individuals as they travelled to Indonesia, Timor-Leste and the Gulf of Carpentaria in Queensland – 3,500 km away from Ningaloo Reef.

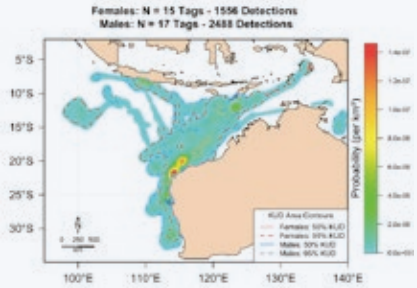
The tags used were capable of transmitting both satellite locations and depth data, which allowed us to collect detailed information on depth use during the whale sharks' migrations. We observed many deep dives up to an astonishing 1,906 m as they moved offshore. Whale sharks may even dive deeper than this, but tags can only withstand depths up to 2,000 m before they are crushed by pressure.

While the data we collected is remarkable, this type of research presents challenges as satellite tags cannot transmit data when underwater. Whale sharks do not need to surface to breathe and spend a lot of time under the surface, which means much of the data contains large gaps or errors. Resolving this requires the use of complex statistical modelling and analysis to predict the most likely locations of sharks between gaps and link them environmental variables to better understand their movements.

Over countless hours spent writing code in the past three years to clean, analyse and predict patterns in the data, my PhD research has led to some fascinating discoveries about whale sharks. I'm excited to finally share these findings in my first lead-author publication in the scientific journal Marine Biology.

What is unique about this study is that it explores the horizontal and vertical movements of whale sharks using a dataset that includes an equal number of males and females. Aggregations of whale sharks are dominated by immature males so obtaining comparable data from males and females is important.

WHERE THE SATELLITE TRACKING TOOK US



The graph shows a 'heat map' of where male and female whale sharks spent the most time throughout the monitoring period, generated from a Kernel Utilisation Distribution (KUD) of the combined satellite location estimates of all tracked individuals.

The results provide important insights into the movement ecology of male and female whale sharks.

- **Migration timing and habitat use varied between sexes.** Females migrated away from Ningaloo Reef earlier (June–July) and stayed offshore for longer whereas males spent more time in shallower coastal waters in June-July and during the summer months.
- **Temperature preferences differed.** There was evidence that in late spring, females occupied areas with lower Sea Surface Temperature - SST (<24 °C) than males (>28 °C). Additional data are required to determine if this result represents a preference for cooler temperatures in females, which differs from the widely accepted temperature preferences of whale sharks (26.5–30 °C).
- **Habitat use was influenced by temperature.** Core area size increased with increasing SST in both sexes, most likely due to animals moving away from warmer tropical areas as water temperature increases during the summer months.
- **Depth use was influenced by temperature, but differently by sex.** Females dived to greater depths than males in SST between 26-28 °C, possibly to avoid warmer surface waters. Deep diving in males was more frequent in SST above 28 °C).

There is still much to learn, and more research is required to understand what drives the movements of these large migratory animals, research that is essential for their conservation. I hope to continue contributing to this field during the remainder of my PhD and beyond as a post-doctoral scientist. As the first person in my family to complete a university degree — let alone undertake a PhD — I'm incredibly proud of this work and excited to see what more I can discover.

MORE IN THE OPEN ACCESS PAPER:

Bignell, C.J., Patterson, T.A., Donovan, A. et al. Satellite tracking reveals sex-specific differences in the geographical and vertical habitat use of Whale sharks, *Rhincodon typus*, in the Eastern Indian ocean. *Mar Biol* **172**, 105 (2025). https://doi.org/10.1007/s00227-025-04616-5

Colby Bignell is a PhD Candidate at the University of Tasmania and CSIRO Ningaloo Outlook Program.

This research is funded by Ningaloo Outlook (a strategic marine research partnership between CSIRO and Woodside Energy to better understand Ningaloo Reef and its important ecological values).

MORE INFORMATION:

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THE *REAL* PARASITE THREAT PUTTING CAT LIVES AT RISK

NEW AUSTRALIAN RESEARCH INTO FELINE PARASITES CLARIFIES THAT THE RISK OF FELINE HEARTWORM IS LOW TO NON-EXISTENT, AND THE REAL PARASITE THREATS ARE LUNGWORM AND TAPEWORM. THE CHALLENGE FOR VETS IS: ARE MANAGEMENT STRATEGIES ALIGNED WITH THIS NEW UNDERSTANDING?

Cats are not the natural host for Heartworm and will mount an immune response if the parasite is encountered, and many regions of Australia experience temperatures that are too low to support the development of larvae.

HEARTWORM (DIROFILARIA IMMITIS)

Recent studies confirm an extremely low prevalence of heartworm in Australian cats, suggesting no need for a blanket approach to Heartworm prevention in cats. Data on the prevalence of Heartworm and Tapeworm in Australian cats is limited. New research by Roeber et al. (2024) sought to address this by investigating the prevalence of Heartworm (*Dirofilaria immitis*) and Tapeworm (*Dipylidium caninum* and *Taenia spp.*). The study of shelter and pound cats in Eastern Australia found no positive cases of Heartworm[1]. This aligns with earlier findings by Adagra et al. in 2021, suggesting an extremely low prevalence of cat Heartworm[2]. Consequently, a blanket approach to Heartworm prevention for all cats is not necessary. These studies dispelled myths about Heartworm in cats and reinforced the need to protect cats from the relevant parasitic threats – Lungworm and Tapeworm.

"This study highlights the low risk of heartworm in cats across Eastern Australia, advocating for a tailored prevention approach rather than routine year-round treatment," says Dr Florian Roeber, Business Unit Leader, Wongaburra Research Centre. DVM, PhD., Grad. Dip. Bus. Mgt.

Dr Ryan O'Handley from the University of Adelaide has been involved in developing an open-access Heartworm dashboard to enable Australia's Heartworm risk landscape to be mapped and examined in real-time. This tool allows veterinarians to confidentially shift from blanket year-round treatment to a benefit-risk assessment model. In addition to these innate factors that prevent Australian cats from contracting Heartworm, providing up-to-date prevalence data can also assist veterinarians in making informed decisions.

LUNGWORM (AELUROSTRONGYLUS ABSTRUSUS)

Unlike Heartworm and Tapeworm, Lungworm can cause severe lung damage, often without obvious clinical signs[3]. Historical data from a 2009 study revealed a 13.8% prevalence in peri-urban semi-feral cats in Victoria[4]. Subclinical infections and diagnostic challenges further complicate detection and management. Therefore, broad-spectrum parasiticides that include Lungworm are essential for all Australian cats to prevent this easily preventable parasite, including indoor cats.

TAPEWORMS (DIPYLIDIUM CANINUM AND TAENIA SPP.)

The same study identified a 1.1% prevalence of Taenia spp. and no cases of Dipylidium caninum. While these results suggest a low prevalence, they highlight the importance of incorporating Tapeworm control in regular worming protocols. Quarterly worming that covers Tapeworms and other gastrointestinal parasites is essential for cats.

A CALL TO ACTION

Veterinarians must challenge their own misconceptions and prioritise cat parasite control compliance for Lungworm and Tapeworm. Australian vets suggest that 25% of cats they see have no protection against parasites[5,6]. Is this a similar number for your clinic? By fostering awareness and implementing effective prevention strategies, we can safeguard the health and well-being of our feline companions.

"This study highlights the low risk of heartworm in cats across Eastern Australia, advocating for a tailored prevention approach rather than routine year-round treatment."

Dr Florian Roeber, Business Unit Leader, Wongaburra Research Centre | DVM, PhD., Grad. Dip. Bus. Mgt.

Regular parasite control protocols must address the full spectrum of the prevalent Australian parasites, including emerging threats like Lungworm. Veterinarians play a critical role in educating pet owners about these risks and ensuring that preventive care reflects current research findings.

Easy-to-administer, long-lasting control that targets the major parasitic threats will enhance compliance. Cat owners should be offered products that fulfil these requirements. Does your Feline Wellness Program cover cats from Lungworm and Tapeworm and is it long-lasting?

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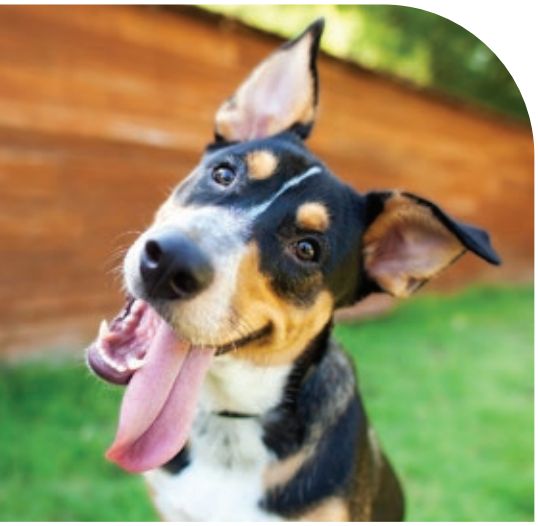
ACHIEVE MORE TOGETHER

THE CANINE WELLNESS EVENT OF THE YEAR HAS ARRIVED!

LIVE TALKS, WORLD CLASS EXPERTS AND NATURAL HEALTH INSIGHTS AT CANINE MASTERS 2025



Prepare for an inspiring and interactive experience as Canine Masters 2025 takes centre stage at "the world's most beautiful cinema", The Capitol in Melbourne on 15 November 2025, uniting dog lovers, pet parents, holistic practitioners and wellness advocates for a full day of learning, connection, and natural health inspiration.

Proudly supported by major sponsor The Pet Food Shop, the full-day event is set to be a spectacular experience, as promised by co-hosts Phivo Christodoulou, founder of Augustine Approved Pty Ltd, and Michelle Cummins of the Natural Pet Farmacy and STAN Pet Beds.

"We're thrilled to launch the very first Canine Masters event; a groundbreaking experience for anyone passionate about natural canine health," says Phivo. "It's a global coming together of some of the most respected minds in the field. We are absolutely delighted to announce our world-class lineup for 2025!"

With trailblazers like clinical herbalist Rita Hogan (USA) and renowned veterinary homeopath Dr Michael Dym (USA) among the distinguished speakers, the event promises dynamic discussions, practical insights, a touch of comedy and heartfelt inspiration.

The event will unite dog lovers, pet health professionals and passionate animal advocates for an unforgettable showcase of global expertise, innovation and inspiration, said Michelle.

"Canine Masters is more than a conference. It's a leading forum for advancing canine health and wellbeing through natural, science-backed practices, and I'm incredibly proud to be part of an event that brings such valuable knowledge to our pet loving community," she said.

Phivo described the event as a celebration of nature-first approaches, arriving at a time when more people are seeking genuine alternatives to pharmaceuticals and symptom-focused care.

"It's not about competition; it's about collaboration and community. We're creating something special for the pet wellness industry and giving back through shared knowledge, connection and spirit," he said.

"The excitement is already unleashed and growing fast across the industry, with flights and accommodation already booked by industry professionals and devoted pet parents from every state in Australia, and internationally from Singapore and Malaysia — all before tickets had even gone on sale!"

Canine Masters 2025 features a powerhouse line-up of international and Australian speakers, including:

- **Rita Hogan (USA)** – Clinical herbalist & author of The Herbal Dog
- **Caroline Ingraham (UK**) – Founder of Applied Zoopharmacognosy and the Ingraham Method of Individualised Medicine (IMIM)
- **Dr. Michael Dym (USA)** – VMD. Classical veterinary homeopathy
- **Amy Renz (USA)** – CEO of Goodness Gracious
- **Dr. Matthew Muir (AUS)** – Lyka Co-founder & Integrative Veterinarian. BVSc/BVetBiol (Hons) MRCVS.
- **Phivo Christodoulou (AUS)** – The Dog Health Guy & founder of Augustine Approved

Speaker bios: *https://caninemasters.com.au/pages/speakers*

Rita Hogan, clinical herbalist, educator and author of The Herbal Dog, has seen "firsthand that dogs are living in increasingly artificial environments, exposed to synthetic chemicals, processed foods, unnecessary pharmaceuticals and chronic stress," she said.

"Dogs' natural resilience is being eroded, and they need more than isolated treatments. They need whole-system, individualised support. It's summits like Canine Masters that are leading the way by teaching people how to work with nature, not against it."

Rita will discuss the foundational role of the nervous system in a dog's overall health and how it influences every other system in the body, from digestion and immunity to the endocrine and cardiovascular systems.

"I'll be sharing how to recognise the signs of nervous system imbalance, and how to bring it back into harmony using herbal medicine," she said. You're in for something truly eye-opening! Your dog will thank you for it."

From Australia, integrative veterinarian Dr Matthew Muir – Clinical Director of All Natural Vet Care and Co-Founder of Lyka Pet Food – brings many years of experience in functional preventative medicine and wholefood nutrition.

In his talk titled, A Functional Medicine Approach to Preventative Canine Care, Dr Matthew will share how a proactive, individualised approach to canine care can prevent disease before it starts, and how pet parents can work in partnership with their vets to support long-term wellness.

"We're seeing a rise in chronic conditions, like cancer, autoimmune disease and digestive disorders. Functional medicine allows us to address these at the root level rather than simply managing symptoms, and reshape preventative pet care and outcomes," said Dr Matthew.

Dr Matthew encourages pet owners to "think further upstream and be proactive, not wait to react to issues." At Canine Masters, he'll share evidence-based strategies to improve health outcomes, along with real-world insights into how they're put into practice

"Whether you're a first-time dog owner or a seasoned natural health advocate, this event is welcoming, practical and packed with tools you can take home and use to add healthy years to your dog's life," he said.

EVENT HIGHLIGHTS

- **Date:** Saturday, 15 November 2025
- **Location:** The Capitol, Melbourne VIC
- **Live Talks:** 10:00 AM – 4:00 PM
- **Expo Experience:** 4:00 PM – 6:30 PM featuring select, forward-thinking brands that align with the event's natural health vision
- Meet & Greets, Publicity Photos & Book Signings with speakers
- Post-Show Intimate Cocktail Evening for VIP Ticket Holders with Speakers, Hosts and Sponsors

TICKETS AND SHOWBAGS

Alongside a full day of knowledge, experience and inspiration, every attendee receives an expertly curated showbag packed with premium health products and goodies.

Ticket prices for this catered event start from $159AUD, and time permitting, everyone will have an opportunity to meet and have a photo opportunity with the speakers.

MORE INFORMATION

For details, please visit: **https://caninemasters.com.au/pages/tickets**

RARE DISCOVERY: **TEYL TRAPDOOR SPIDER FOUND IN PERTH**

A RARE FIND HAS BEEN UNEARTHED IN REMNANT BUSHLAND IN PERTH, WITH THE FIRST RECORD OF A TEYL TRAPDOOR SPIDER ON THE SWAN COASTAL PLAIN IN 30 YEARS.

Researchers from Edith Cowan University (ECU) and the University of Western Australia (UWA) made the discovery in bushland at the UWA Field Station, Shenton Park.

Often affectionately referred to as citrine trapdoor spiders, Vice-Chancellor Research Fellow at ECU, Dr Leanda Mason, said Teyl species are known for their small size, glossy sheen and often bright orange or yellow colouring that produces a gem-like appearance.

"First described by the late Professor Barbara York Main, the genus name Teyl is derived from Noongar languages as a sign of respect, and roughly translates into meaning 'shiny stone'," Dr Mason said.

"This rare and glittering discovery is a vivid reminder of the hidden living gems persisting within our last remnants of Whadjuk boodja (Swan Coastal Plain bushland)."

Dr Mason expertly excavated a single pregnant female for observation, with the mother and her spiderlings to be re-released back into the same site and monitored to determine ecological requirements.

"This is a precious opportunity to document life history traits, while also allowing a higher proportion of spiderlings to survive to maturity," Dr Mason said.

"This foundational knowledge will directly inform future conservation actions and management recommendations for this and potentially other cryptic species in an area in desperate need of protection."

Dr Mason incidentally found the burrows while working with UWA Professor of Botany and Restoration, Kingsley Dixon, near the UWA Field Station laboratory building.

"For almost 50 years I have worked in this bushland and who would have thought such an extraordinary discovery would happen right on our doorstep – literally at the front door to the laboratory," Professor Dixon said.

"A rare triumph of nature holding on to life."

Teyl spiders construct open-holed burrows, with very little silk lining rather than having a lid like many other trapdoor spiders.

Dr Mason said this makes the burrows very difficult to distinguish, even by an expert.

"What makes this discovery even more extraordinary is that it appears to be an undescribed species, not yet formally named or studied," Dr Mason said.

"This little arachnid is more than a scientific curiosity - it is a jewel of biodiversity. These long-lived spiders with ancient Gondwanan lineages, still persist in one of the few remaining patches of native habitat decimated by clearing and rapid land-use change.

"Let this be a call to be humbled, to celebrate and protect the extraordinary life that continues - often unseen - in the smallest pockets of nature around us."

RESEARCH EXPLORING MOTOR VEHICLE COLLISIONS WITH KANGAROOS: **SURVEY FOR VETERINARIANS**

Dr Anne Marks and Christine Minty Walker from the School of Nursing and Midwifery at Western Sydney University are conducting a study to explore the impacts of motor vehicle collisions with kangaroos on veterinarians.

We are looking for veterinarians who provide treatment or euthanasia of kangaroos to complete an online survey. This link has further details about the research that has been approved by the Western Sydney University Human Research Ethics Committee.

The Approval number is H16401.

MORE INFORMATION AND TO PARTICIPATE IN THE SURVEY

For further information visit:: **https://surveyswesternsydney.au1.qualtrics.com/jfe/form/SV_cRQGFcnvnsb7qjY**

MISSION PAWS'IBLE **HELPS BALI'S STREET DOGS**

MISSION PAWS'IBLE LAUNCHES EMOTION-DRIVEN CAMPAIGN WITH DR WILL MAGINNESS AND BORN BRED TALENT TO HELP BALI'S STREET DOGS

Mission Paws'ible, a grassroots animal rescue organisation based in Bali founded by Australian creative and former graphic designer, Prue Barber, has launched a powerful new campaign asking Australian travellers to give back by donating to support the island's injured and abandoned street dogs.

The campaign is fronted by rising social media star and holistic vet Dr Will Maginness, best known for his viral Instagram content and founder of premium dog food brand 5 Hounds. Dr Will has signed on as brand ambassador and will be providing ongoing virtual veterinary consulting to Mission Paws'ible's team on the ground, supporting the treatment and rehabilitation of rescued animals at their Bali-based Healing Centre.

The content-led campaign was spearheaded by influencer and talent agency Born Bred Talent and produced by creative studio Slate Media. The nine part interview style content series is designed to connect emotionally with the more than 1.5 million Australians who visit Bali annually, encouraging them to look beyond the resorts and beach clubs, and make a meaningful impact.

"Mission Paws'ible is doing truly remarkable work under incredibly tough conditions," said Dr Maginness. "It's an honour to support the team and share my knowledge to help these dogs heal. This campaign is about inspiring Australians to act with compassion, whether they're heading to Bali or just watching from home."

Dr Maginness brings a unique background to the campaign: a former AFL rookie with the West Coast Eagles whose career was cut short by injury, he found solace in his first dog, Monty. That bond inspired him to pursue veterinary medicine and later launch 5 Hounds, a dog food brand that blends regenerative farming, nutrition science and ethical sourcing.

The campaign will run across social media and digital platforms throughout winter and spring, targeting conscious travellers and pet lovers alike.

"Every day, we rescue animals from unimaginable suffering and give them a second chance at life," said Prue Barber, founder of Mission Paws'ible. "But we can't do it alone. With the help of Born Bred, Slate, and Dr Will, we're building a campaign that resonates and activates real support from Aussies who care."

MORE INFORMATION

For more information head to: **www.missionpawsible.org** or check out the content series on Mission Paws'ible's Instagram: **@missionpawsible**

VET NURSE BURNOUT CAN AFFECT PET CARE, BUT NEW STUDY OFFERS FIX

BURNOUT AMONG VETERINARY NURSES CAN AFFECT THE QUALITY OF PET CARE, ACCORDING TO LA TROBE UNIVERSITY RESEARCHERS. BUT A NEW INTERNATIONAL STUDY PUBLISHED IN ANIMALS JOURNAL HAS IDENTIFIED HOW TO FIX THE ISSUE.

Burnout is widely known to affect veterinarians, yet few studies have looked at burnout among vet nurses, who make up 42 per cent of the industry workforce in Australia.

Vet nurses play a critical role in pet healthcare, from monitoring anaesthesia, assisting in surgery and performing radiology to providing emotional support to pet parents.

Lead researcher and PhD candidate, Angela Chapman said as pet ownership rises and demand for services increases, nurse burnout is likely to grow unless clinics put strategies in place to manage it.

“Our previous research revealed that two in three vet nurses have experienced signs of burnout and nearly half reported their workplace had no systems in place to support their wellbeing,” Angela said.

“Burnout negatively affects vet nurses’ mental and physical health, which increases dissatisfaction and the likelihood of vet nurses leaving the industry. This puts pressure on busy clinics and may affect the gold standard of care provided to pets.”

In this new study, the researchers asked 40 veterinary leaders and wellbeing experts from Australia, New Zealand, UK, USA and Canada to develop and evaluate strategies for tackling 10 key burnout risk factors to improve staff wellbeing and retention rates.

High workloads, lack of support and under-utilisation of vet nurses’ skills and training were some of the significant chronic workplace stressors identified.

“Overall, we found improving staff retention was considered a more effective strategy for reducing workload and burnout than hiring more staff,” Angela said.

Regular communication between staff and leaders, providing career pathways with embedded training and support, and clear workplace policies and procedures could also help reduce staff turnover and improve wellbeing, the study showed.

Angela said industry-wide barriers included a lack of consistent professional regulation, which led clinics to under-utilise vet nurses’ skills in activities they were well-qualified to perform.

“Greater leadership awareness of industry regulations, willingness to delegate tasks and trust in nurses’ capabilities could improve efficiency, morale and retention rates across clinics.”

Study co-author Dr Vanessa Rohlf added that inadequate support and training for vet industry leaders was another issue which hampered change efforts.

In the US veterinary industry alone, burnout costs an estimated US$1 to 2 billion (AUD $1.5 to 3 billion) annually.

Dr Rohlf said burnout was a global issue for the veterinary industry but one that could be tackled with local action.

“This is a wake-up call for the veterinary industry. We now have practical tools and strategies that vet clinics can use to address burnout before it becomes a chronic workplace issue. What we need now is the willingness to act – both at an industry-wide and vet clinic level.”

Angela said adoption of tailored solutions for vet clinics would lead to increased staff retention and wellbeing.

”Which will ultimately translate to higher quality patient care and happier pet parents.”

REFERENCES

DOI: doi.org/10.3390/ani15091257

MORE INFORMATION

Visit: www.latrobe.edu.au

PEST PROFILE:
WHITE-NOSE SYNDROME

Pseudogymnoascus destructans: WHITE-NOSE SYNDROME (WNS) IS ONE OF AUSTRALIA'S HIGHER-RISK EXOTIC ENVIRONMENTAL DISEASES. WNS IS A FUNGAL DISEASE THAT AFFECTS HIBERNATING BATS, LEADING TO HIGH MORTALITY.

A little brown bat (Myotis lucifugus) infected with white nose syndrome. Note the white fungus around the nose and mouth. Source: Indiana Department of Natural Resources.

First recorded in New York bats in 2006, the disease has since spread across the United States and Canada. Since then, it has been found on bats in Europe and Asia. At some locations, 90 to 100 percent of bats have died.

The fungus, which looks like white fuzz, grows on their muzzles, ears and wing membranes. When bats are hibernating, they are more susceptible to infection and disease.

It is thought that the fungus causes bats to wake from hibernation early, become active and do unusual things like fly outside in the daytime during winter. The bats then use valuable stored energy and can't refuel as their food sources are not available during winter.

White-nose syndrome has not been identified in Australia, however it poses a significant risk, particularly to threatened species facing multiple impacts to their survival.

People do not get white-nose syndrome, but spores from the fungus can last a long time on surfaces such as clothes, shoes and outdoor gear, so we can unknowingly move the fungus from one place to another.

Caving is an increasingly popular sport or hobby, attracting international travellers to Australian caves. Cavers perform a vital role in protecting Australia from white-nose syndrome. It is important that cavers returning or entering Australia from overseas are aware of the risk of carrying the fungus into Australia. All travellers should declare on their incoming passenger card if they have been in contact with wilderness areas including farms, farm animals, or freshwater streams/lakes in the last 30 days. However, they should also disinfect their clothing, footwear and caving gear before arriving in Australia.

There is no cure for white-nose syndrome, but scientists from all over the world are working together to study the disease, how it spreads and infects bats and what we can do to control it.

White-nose syndrome is a national notifiable disease and must be reported to agricultural authorities.

IF YOU THINK YOU HAVE FOUND WHITE-NOSE SYNDROME:

- Do not touch infected bats
- Take a photo (screenshot your map app or enable geotagging on your phone)
- Report a pest or disease concern—contact your state or territory authority
- Call the Emergency Animal Disease Watch Hotline: **1800 675 888.**

REFERENCES:

- Study Focused on Bats and Disease-causing Fungus | ODWC
- White-Nose Syndrome
- Exotic White-nose syndrome fact sheet

MORE INFORMATION

Web: **www.agriculture.gov.au/biosecurity-trade/policy/environmental/priority-list**

ALMOST NOTHING KNOWN ABOUT ENDANGERED QUEENSLAND SEAHORSE

UNIVERSITY OF QUEENSLAND RESEARCHERS HAVE BEGUN THE STATE'S FIRST STUDY OF WHITE'S SEAHORSES TO SAVE THEM FROM EXTINCTION

Associate Professor Karen Cheney from the School of the Environment said there were critical information gaps about the seahorse species, which was 1 of only 2 in the world classified as endangered.

"The species was listed as endangered in 2020 after some New South Wales populations declined by 90 per cent within 6 years," Dr Cheney said.

"Similar population declines may have occurred in Queensland but the species has never been studied here so no conservation efforts exist unlike in NSW.

"Seahorses are highly selective with habitat choices and have minimal ability to move so they are very susceptible to disturbances.

"Changing climate conditions, flood events and dredging led to the loss of critical White's Seahorse habitat including seagrass beds and soft coral."

The White's Seahorse is native to the east coast of Australia and found mostly in estuarine environments.

The species can grow to about 10-15 centimetres and lives in coastal bays from very shallow to about 10-15 metres deep.

In collaboration with the Sea World Foundation, researchers will conduct hundreds of surveys in hotspot areas across South-East Queensland to find, tag and release as many as possible.

PhD candidate Rowan Carew said members of the public could help by taking photos and reporting any sightings to researcher's online database.

"Critical information such as where they are found, what habitats they are associated with, what their population structure is and climate impacts are completely unknown," Ms Carew said.

"This project aims to understand these critical aspects of the QLD population so appropriate conservation actions can be developed to ensure survival.

"Any seahorse sighting will help as they are often incredibly camouflaged and remain very still but a keen photographer or hobbyist can spot while diving or snorkelling.

Rowan Carew with student holding a seahorse in the field (Credit Shoshannah Fogarty)

Adult female Hippocampus whitei found in Moreton Bay. Credit/ Rowan Carew.jpeg

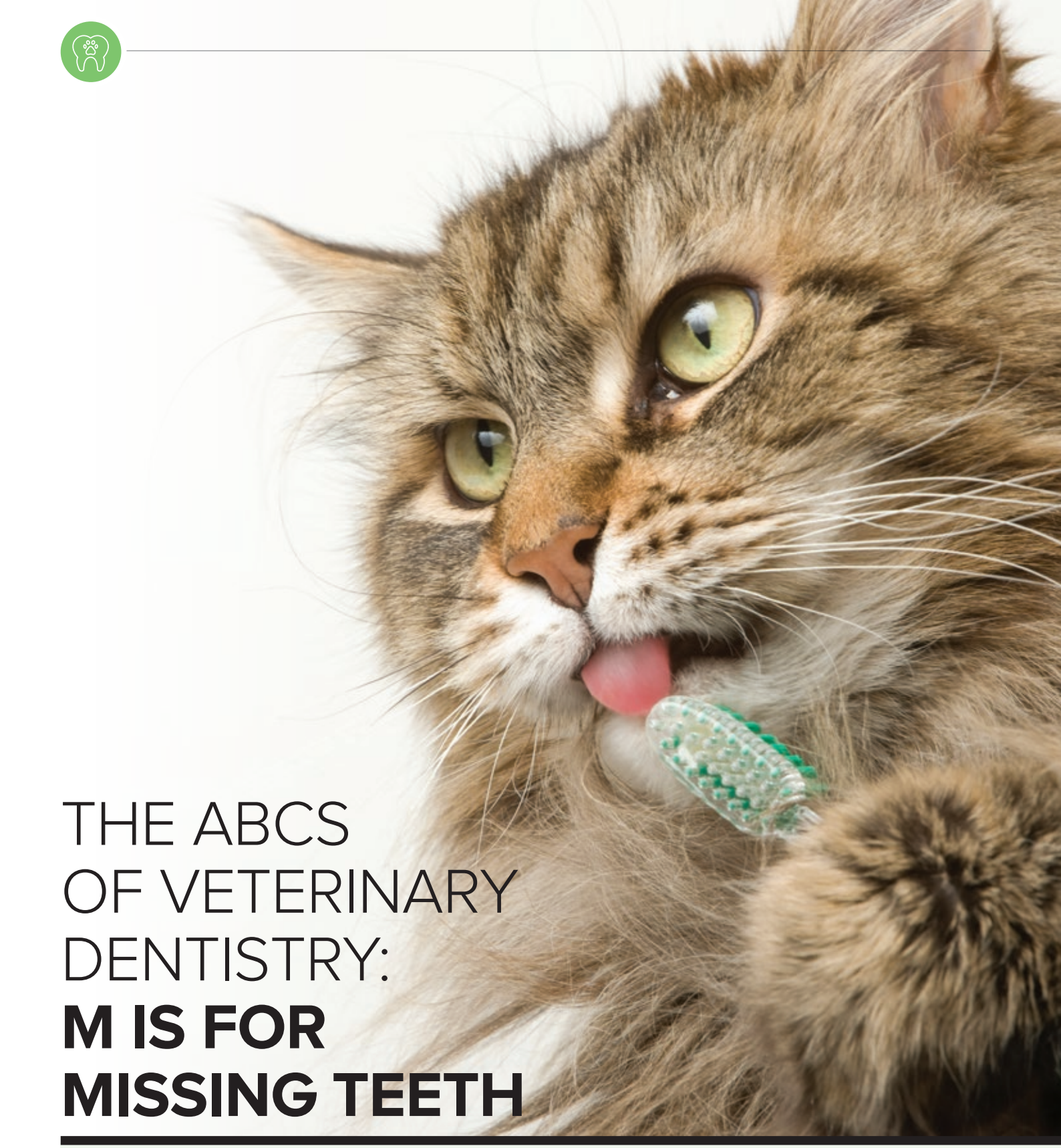
"To collect data, please keep at least 30cm away and try not to disturb them, take a clear photo from the side preferably with a scale of some sort and record the time and exact location.

"Then upload your images and location to the webpage listed below with your contact details but try not to share information about the seahorse publicly as they're popular with aquarium collectors."

Funding for the survey has been provided by the Queensland government's Threatened Species Research Grant program.

MORE INFORMATION

Upload your observations from South-East Queensland to help improve our understanding of their distribution and ecology, Visit: **https://environment.uq.edu.au/community/citizen-science/whites-seahorse-queensland-conservation-project**



THE ABCS OF VETERINARY DENTISTRY: **M IS FOR MISSING TEETH**

Tracey Small BA (Soc Sc), VN, Dip VN (Dentistry)
Veterinary Dentistry and Oral Surgery

www.dentalcareforpets.com.au

AS WE CONTINUE TO JOURNEY THROUGH THE DENTAL ALPHABET, IN THIS ARTICLE WE DELVE INTO THE PATHOLOGY OF THE LETTER M AND MISSING TOOTH.

***Figure 1A**. Missing mandibular fourth premolar teeth in a 3-year-old female Labrador Retriever.*

Photograph left lateral view.

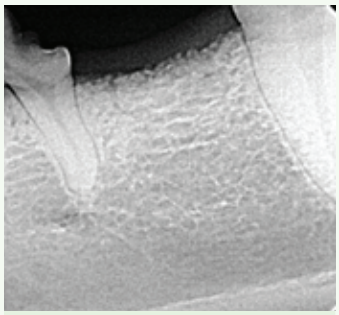


***Figure 1B.** Missing mandibular fourth premolar teeth in a 3-year-old female Labrador Retriever.*

Radiograph left lateral view.

***Figure 1C.** Missing mandibular fourth premolar teeth in a 3-year-old female Labrador Retriever.*

Photograph right lateral view.

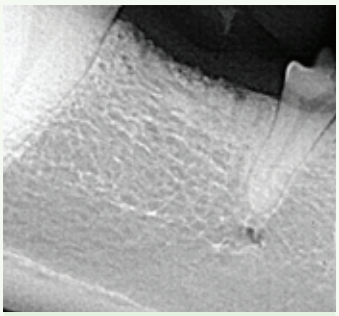


***Figure 1D.** Missing mandibular fourth premolar teeth in a 3-year-old female Labrador Retriever.*

Radiograph right lateral view.

MISSING TEETH ARE A RELATIVELY COMMON FINDING IN CANINE AND FELINE PATIENTS,[1-3] HOWEVER, THE CLINICAL ASSUMPTION THAT A TOOTH IS SIMPLY ABSENT CAN BE MISLEADING. WHAT APPEARS TO BE A MISSING TOOTH MAY, IN FACT, CONCEAL A SPECTRUM OF UNDERLYING CONDITIONS THAT ARE NOT EVIDENT ON VISUAL EXAMINATION ALONE. DIFFERENTIATING BETWEEN TRULY ABSENT TEETH AND THOSE THAT ARE RETAINED OR IMPACTED IS ESSENTIAL FOR ACCURATE DIAGNOSIS AND EFFECTIVE TREATMENT PLANNING.[1-3]

The differential diagnosis for a "missing" tooth includes previously extracted or exfoliated teeth, embedded or impacted teeth, and retained roots that have lost their coronal structure.[1-3] Each of these conditions can mimic the appearance of a missing tooth while harbouring the potential for silent but significant pathology, including chronic inflammation and progressive bone destruction.[1-6] These conditions often remain asymptomatic until advanced stages, underscoring the importance of early detection.[1,3-6]

To ensure comprehensive oral health care, it is imperative that all cases of missing teeth are investigated radiographically.[1-6] Dental radiographs provide critical insight into the presence of unerupted or pathological structures and help prevent the long-term consequences of undiagnosed dental disease.[1-6] Radiographic confirmation should be considered a standard component of veterinary dental protocols when evaluating missing teeth.[1-6]

The true absence of teeth in dogs and cats is generally considered a congenital condition,[1-3] however environmental disturbances during the developmental stages of tooth formation may also be a factor. External influences during the process of tooth development can interfere with healthy eruption of teeth, leading to their absence.[1,3] While genetic factors are often implicated, trauma or intrauterine disturbances can also play significant roles in the development of congenital tooth agenesis.[1-3] Additionally, endocrine disruptions or the use of certain medications during critical stages of development can impact tooth formation, leading to the absence of one or more teeth.[1,3]

If a deciduous tooth is missing then the successional, permanent tooth will also be absent. This is because the permanent tooth derives from the dental bud of the deciduous tooth.[1,3]

The absence of teeth can be either unilateral or bilateral, with bilateral missing teeth often pointing to a genetic cause.[1,3] Single missing teeth, on the other hand, may be due to localized developmental disturbances or trauma rather than genetic factures.[1,3] Only radiographs will confirm whether this tooth is truly absent.[1-6]

TRUE MISSING TEETH

True missing teeth are categorized based on the number of teeth absent, with distinct clinical classifications for varying degrees of tooth agenesis:

- **Anodontia** refers to the complete absence of all teeth, a condition that is rarely seen in veterinary practice.[1,3]
- **Hypodontia** refers to one to five missing teeth. This condition is more commonly observed in veterinary dentistry, with certain teeth, such as the first premolars and the mandibular third molars, being most frequently affected.[1,3]
- **Oligodontia** is characterized by the absence of more than six teeth, a condition that may be observed in certain breeds predisposed to tooth agenesis, such as Chinese Crested and brachycephalic breeds[1,3]

Of these classifications, hypodontia is by far the most prevalent condition in veterinary patients[1], and it is frequently seen in specific breeds with a known genetic tendency for missing teeth. Boxers, Toy breeds, and brachycephalic breeds are particularly overrepresented in cases of hypodontia.[1-3] The missing teeth in these breeds are often the first premolars and the mandibular third molars[1,3] with variations in severity and pattern depending on the individual animal.

Radiographic features of a truly missing tooth are characterized by several distinct features. The image will show smooth, intact alveolar bone margins without the usual alveolar socket that surrounds the tooth.[3,7] In these cases, the gap left by the

Figure 2A. *Absent maxillary and mandibular third premolar teeth post-extraction in a 5-year-old Burmese cat.*

Photograph left view.

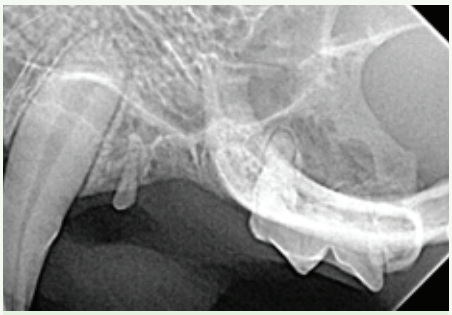


Figure 2B. *Absent maxillary and mandibular third premolar teeth post-extraction in a 5-year-old Burmese cat.*

Radiograph left maxilla.

Figure 2C. *Absent maxillary and mandibular third premolar teeth post-extraction in a 5-year-old Burmese cat.*

Radiograph left mandible.

missing tooth is evident, and the absence of the tooth root or alveolus is clearly visible.[7] The surrounding bone will often appear unremarkable in cases of true tooth agenesis.[7]

RETAINED ROOT

A retained root is the remaining portion of the tooth that remains embedded within the alveolar bone following the loss or removal of the coronal segment. This typically occurs due to incomplete tooth extraction, advanced caries, a traumatic injury or tooth resorption.[1-3]

Recent studies underscore the high prevalence and often underdiagnosis of retained roots. One investigation reported that 82.4% of canine and 92.8% of feline patients exhibited retained root remnants following extraction of carnassial teeth[8] highlighting the limitations of visual inspection alone.

Despite their prevalence, retained roots often remain clinically silent with patients not presenting overt signs of inflammation or infection during the routine consultation.[1,3] However, another study investigating the evidence of inflammation associated with retained roots found that 81 of 148 (54.7%) of dogs with retained roots had radiographic evidence of inflammation.[9]

The pathological consequences of retained roots are significant and multifaceted. These remnants can precipitate a range of complications including osteomyelitis, inflammation, periapical infection, draining sinus, chronic infection and persistent oral pain.[1-3,9]

Given the potential for serious sequelae, dental radiography is indispensable in the diagnosis and management of retained roots.[1-3,9] Radiographs not only confirm the presence of retained fragments but also help assess associated pathology and determine whether the root is structurally intact or diseased.[1-3,9] Radiographic evaluation should be considered standard practice during all dental extractions to verify complete removal of the tooth and to avoid leaving behind residual root.[1-3]

In most cases, complete removal of retained roots is recommended to eliminate sources of infection and pain. Exceptions may be made in rare instances where surgical retrieval poses a greater risk to surrounding anatomical structures or the patient's overall health.[1-3,9] In such cases, careful monitoring and documentation are essential.[1]

IMPACTED OR EMBEDDED TEETH

Teeth that fail to erupt into the oral cavity are typically classified as either impacted or embedded.[1-3] Impaction refers to a condition in which a tooth is prevented from erupting due to the presence of a physical barrier.[1-3,5] These barriers may include soft tissue, adjacent teeth, malocclusion, surrounding bone structures.[1-3,5] In contrast, embedded teeth fail to erupt due to lack of eruption force.[1-3]

Several factors contribute to tooth impaction. Persistent deciduous teeth that do not exfoliate in a timely manner can obstruct the eruption path of successional teeth.[1,3] Additionally, dental overcrowding and mispositioned teeth may create mechanical interference.[1,3,5]

Among teeth most commonly affected by tooth impaction are the maxillary canines and maxillary/mandibular first premolars.[1-3] Certain breeds, especially toy breeds and those with brachycephalic skull conformations, exhibit a higher prevalence of tooth impaction.[1-3] This overrepresentation is likely due to their unique craniofacial morphology which predisposes them to dental crowding and altered eruption patterns.

Another important consideration in the diagnosis of impacted teeth is the presence of supernumerary teeth—extra teeth that develop in addition to the normal dental formula.[1-3] These are most commonly but not limited to first premolars.[1,3] Clinically, the dentition may appear complete during oral examination, potentially masking the presence of an unerupted supernumerary tooth.[1,3] Radiographic imaging is the only way to reveal these impacted teeth and possible associated pathological changes such as cyst formation.[1-3]

Comprehensive dental radiography necessitates accurate diagnosis of impacted teeth and associated pathology.[1-6.] Radiographs confirm the presence and precise location of impacted teeth, evaluate the status of the root apex and assess the health of surrounding periapical structures.[1,3-6] These findings are critical in determining treatment options.[1,3-6]

For instance, if the apex is still open the tooth retains the potential for continued eruption if the obstructive barrier is removed by performing an operculectomy.[1,3] Conversely, a closed apex indicates that the tooth has completed its development and may require surgical intervention for removal.[1-6]

DENTIGEROUS CYSTS

One of the most significant pathological entities associated with unerupted teeth is the dentigerous cyst. Dentigerous cysts are an odontogenic cyst that are associated with unerupted teeth.[4-6] The cyst form when fluid accumulates within the cyst lining consisting of epithelial cells derived from the reduced enamel eithelium.[5,6] Dentigerous cysts are usually painless, however, the fluid accumulation and proliferation of epithelial cells cause localized destruction of alveolar bone and adjacent teeth leading to root resorption, weakening of the jaw.[1-7]

Dentigerous cysts are typically asymptomatic and may remain undetected until identified on radiographic examination, often after irreversible damage has occurred.[1,3-6]

In the case of an impacted tooth with a dentigerous cyst, both the unerupted tooth and the cyst must be removed to prevent further damage.[1,3-6] This involves extraction of the tooth followed by cyst enucleation to eliminate the lesion and reduce the risk of recurrence[1,3-6] In cases where the cyst has caused extensive bone destruction, the placement of a biosynthetic allograft is warranted. These grafts stimulate bone regeneration and help restore structural integrity, improving long-term outcomes.

Prognosis is generally excellent when impacted teeth and associated pathology are identified and treated early.[1,3-6] Timely intervention can prevent complications such as bone loss, damage to adjacent teeth and jaw fracture[1,3-6] However, in older patients, if an unerupted tooth is incidentally discovered on a radiograph and shows no signs of pathology, a conservative approach may be appropriate.[1,3] In such cases, the tooth can be left in place and monitored periodically to ensure that no pathology develops over time.[1,3]

The integration of routine dental radiography into veterinary dental protocols is critical for delivering true comprehensive care. It enhances diagnostic accuracy, guides therapeutic decisions, and safeguards against misdiagnoses of hidden pathology such as retained roots, unerupted teeth and their underlying destructive pathology as just “missing teeth”.

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***Figure 3A**. Seven-year-old male German Shepherd dog presented for non-healing extraction site of third incisor tooth 30 days post-surgery. Note mandibular canine teeth have also been extracted.*

Rostral view of missing incisors and canines.

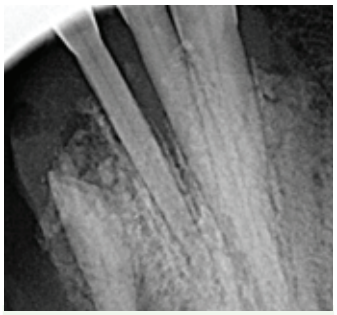

***Figure 3B.** Seven-year-old male German Shepherd dog presented for non-healing extraction site of third incisor tooth 30 days post-surgery. Note mandibular canine teeth have also been extracted.*

Radiograph showing retained root of mandibular third incisor tooth.

***Figure 4A.** Absent mandibular right third incisor, canine and first premolar teeth in a 2-year-old female Pug.*

Photograph showing absent teeth.

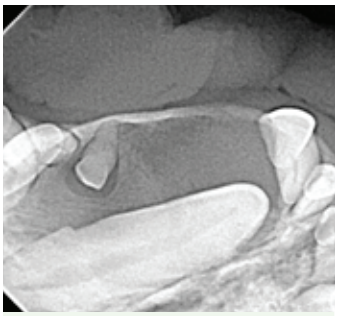

***Figure 4B.** Absent mandibular right third incisor, canine and first premolar teeth in a 2-year-old female Pug.*

Radiograph showing missing third incisor, impacted canine and first premolar tooth surrounded by a large radiolucent area consistent with a dentigerous cyst.

SOMETHING TO BARK ABOUT!
BIOSECURITY PILOT PROJECT BOOSTS DISEASE SURVEILLANCE AND COMMUNITY ANIMAL HEALTH.

AMRRIC'S BIOSECURITY PILOT PROJECT EVALUATION REPORT HAS BEEN LAUNCHED AS PART OF NATIONAL BIOSECURITY WEEK, WITH THE PROJECT EXCEEDING EXPECTATIONS AND DEMONSTRATING MARKED IMPROVEMENTS IN COMMUNITY ANIMAL HEALTH, BIOSECURITY SURVEILLANCE CAPACITY AND COLLABORATION.

The Biosecurity Pilot Project was delivered in partnership with remote Indigenous communities across Northern Australia from 2022 to 2024, and was funded by the Australian Government's Biosecurity Business Grants Program.

The project's evaluation report details that not only were all anticipated project outcomes achieved, but outcomes exceeded expectations in key areas. Collaboration was strengthened between Indigenous organisations, local governments, and health agencies, whilst the project also greatly enhanced community animal health and biosecurity surveillance capacity.

"AMRRIC's Biosecurity Pilot Project set out to improve companion animal health surveillance in 25 remote Aboriginal and Torres Strait Islander communities across Northern Australia – places where distance, access, and limited veterinary services make early detection of animal disease incredibly challenging," said Dr Bonny Cumming, Project Lead and AMRRIC's Head of Innovation & Strategy.

The project adhered to the principle of 'no survey without service', ensuring that every surveillance event also delivered immediate benefits for animals and their owners.

"This approach not only strengthened surveillance but also built trust and participation at the community level. Over three years, the project delivered 41 community-wide biosecurity surveillance events, and surveyed almost 8,000 animals, with more than 7,300 treated for parasites and health conditions."

The Biosecurity Pilot Project also provided tailored biosecurity training for 126 participants including Indigenous Rangers, Local Government staff and Environmental Health Workers.

"As Australia faces ongoing risks from diseases such as rabies and African swine fever, AMRRIC's Biosecurity Pilot Project demonstrates the vital role of community-driven, culturally appropriate animal health programs in safeguarding both biosecurity and community wellbeing," said Dr Cumming.

"AMRRIC would welcome consideration by Government for further funding to continue this successful project, to maintain the demonstrated benefits to biosecurity and community animal health."

Over 84% of community partner funding went to Indigenous-controlled organisations, with the remainder directed to local government authorities in remote regions with predominantly Indigenous populations. Community partners strongly endorsed the project's model, recommending that it be continued and expanded with greater frequency and duration.

"Demonstrating tangible improvements in animal health builds trust and engagement. When community members see the positive impact on their animals, they are more likely to support and actively participate in biosecurity efforts." – quote from Community partner survey response.

MORE INFORMATION

To view the full evaluation report of the Biosecurity Pilot Project: **https://www.amrric.org/resource-type/monitoringandevaluation/view/amrrics-biosecurity-pilot-project-evaluation-report-2025/**

VETS CALLING FOR ACTION AS NEW RESEARCH REVEALS AUSTRALIAN DOG OWNERS MAY BE UNAWARE THEIR PETS ARE SUFFERING OSTEOARTHRITIS PAIN

NEW RESEARCH HAS REVEALED THAT LOW AWARENESS OF OSTEOARTHRITIS PAIN SYMPTOMS IN DOGS MAY BE LEAVING THEM TO SUFFER IN SILENCE DESPITE THEIR OWNERS' GOOD INTENTIONS.

KEY POINTS

Most Australian dog owners (70%) believe pain affects a dog's life as much as it does for humans, yet over a third (34%) admit waiting until symptoms are obvious before acting on their dog's health.[1]

Approximately two in five (40%) dogs currently live with osteoarthritis pain,[2] *but Australian vets report diagnosing it in only 25% of their canine patients.*[3]

Vets are calling for dog owners to look for early signs of osteoarthritis pain and seek advice from their veterinarian on treatment options to enhance dogs' quality of life.

The Australian consumer research[1] commissioned by Zoetis Australia highlights that while 85% of dog owners feel anxious about their dog being in pain, over a third of them (34%) wait until symptoms are obvious before acting on their dog's health.

While 90% of the surveyed dog owners were able to name at least one sign or symptom associated with canine osteoarthritis, a quarter (25%) of respondents revealed that they consider pain to be a normal part of life for most dogs.[1] This latest insight suggests dog owners' perception of their dog's pain has the potential to delay interventions that can alleviate suffering and improve quality of life.

Osteoarthritis is a condition that leads to pain and progressive degeneration of the affected joints.[4] It occurs when cartilage, which cushions the joints at the end of the bones, breaks down. This can cause pain, inflammation, and reduced mobility due to bone-on-bone contact.[5] Without appropriate treatment, osteoarthritis can impact a dog's ability to do the things they enjoy, such as walk and play.

According to Dr Graham Lauridsen, a Veterinarian and Director of Tropical Vets from Atherton in Queensland, the research findings highlight a critical need for more vigilance about detecting and treating osteoarthritis pain as early as possible.

"There are common misconceptions that may be impacting our dogs' quality of life. Firstly, there is the perception that osteoarthritis is an older dog's disease. Secondly, some people believe that seeing dogs 'slow down' is a normal part of their ageing, but it could be due to osteoarthritis pain. Just like humans, dogs can also struggle with the pain associated with this condition. However, they can't tell us when they're in pain, so it's up to us to recognise the signs as early as possible," said Dr Lauridsen.

Approximately two in five (40%) dogs are living with osteoarthritis pain,[2] but Australian vets report that only 25% of their canine patients are formally diagnosed with osteoarthritis, while they suspect this disease is present in an additional 24%.[3] While there is evidence of underdiagnosis of osteoarthritis in dogs, this is not due to a lack of care from dog owners. Most (71%) Australian dog owners consider their dog a member of the family, and the majority (70%) also agree that pain affects a dog's life as much as a human's.[1]

With close to half of Australian households (48%) having at least one dog,[6] vets are urging dog owners to be aware and recognise the early signs of osteoarthritis pain to ensure the quality of life of thousands of beloved pets is preserved.

"The best thing we can do for our dogs is learn how to recognise the signs of pain. If you notice your dog lagging on walks, limping after walks or exercise, having difficulty jumping or climbing stairs, or they are a little slower to get up, they may be telling you they are in pain. If you're unsure, it is always recommended to seek your vet's advice," said Dr Lauridsen.

The new research also revealed that vets are among the most trusted information sources about osteoarthritis pain management and treatment options. Four in five (81%) respondents trust their vet's advice about new and innovative treatments.[1]

Dr Megan Lui, Associate Director - Veterinary Operations Companion Animal at Zoetis Australia, emphasised the importance of vets and dog owners working as a team to discuss clinically proven treatment options that will help manage each dog's osteoarthritis pain.

"While there is no cure for osteoarthritis, there are many ways we can help our pets live a better, pain-free life. Your vet is your best source of support if you suspect an issue with your dog's health. It is through open conversations throughout your dog's life that we can discuss osteoarthritis diagnosis, early intervention, pain management and treatment that is right for them," said Dr Lui.

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MORE INFORMATION

Visit: **www2.zoetis.com.au/**

WHALE SONG CRUNCHED FOR MINKE CONSERVATION

AI TOOL CREATED BY 22-YEAR-OLD STUDENT TRACKS ELUSIVE MINKE WHALES TO BOLSTER THEIR PROTECTION.

Minke whales remain a target of commercial whalers. Photo credit: Sea Shepherd Australia.

A University of Sydney student has created a way to aid minke whale conservation through a machine-learning model trained to recognise the species' distinctive song.

Minke whales produce a range of vocalisations, from the low, mechanical-sounding "downsweep" to the discrete, guttural calls known as "boings".

Commerce and engineering student Oscar Mower, 22, created an AI tool that can detect the call of the North Pacific minke whale, a subspecies of the common minke. The model can detect the presence of minke whales by analysing audio from existing underwater microphones known as hydrophones.

Student Oscar Mower, 22, created an AI tool that can detect the call of the minke whale. Photo credit: University of Sydney/ Stefanie Zingsheim

AN INDUSTRY PLACEMENT WITH IMPACT

"Minke whales are notoriously elusive," said Mower. "They're fast, deep divers, so we don't know much about their migration patterns. To protect them, it's essential that we understand where they are."

Mower developed the technology while participating in the University of Sydney's Engineering Sydney Industry Placement Scholarship, which offers students the opportunity to work on a real-world project with a leading company during a six-month placement, while also conducting research and completing a thesis. Mower spent his placement with Accenture, who provided him with knowledge and training to develop the model.

THE SOUNDSCAPE OF THE SEA

To train the model, he drew on thousands of hours of whale song recorded by hydrophones that span Arctic, Asian and US waters. These underwater microphones – either fixed or towed behind boats – are part of existing marine infrastructure. They record the soundscape of the sea for conservation, research and defence purposes.

The acoustic data that informed Mower's work was gathered by the US National Marine Fisheries Service (NOAA Fisheries). Manually labelling acoustic data is labour intensive and time consuming, but Mower's machine-learning model can detect instances of whale song in real time.

"Using the model, the hydrophone would detect and then alert a ship that a minke is close by," he said. "The ship could then reduce its noise output or avoid the whale's territory."

A SPECIES UNDER THREAT

Common minke whales have been heavily hunted and remain a target of commercial whalers. In recent times, there have been growing numbers of unexplained minke whale mortalities, including mass strandings. As a relatively small whale, they are also vulnerable to becoming bycatch from industrial fishing trawlers.

"Minke whales are under real and increasing threat," said Sea Shepherd Australia managing director Jeff Hansen. "It's fantastic to see machine learning being used to enhance conservation efforts."

Mower hopes the tool will help create marine protection zones that are off-limits to whaling and fishing trawlers.

"It could be used to create shipping lanes that avoid their territory," he said. "It could also contribute to better planning for drilling projects to ensure they don't hurt or disorientate minkes. Noisy deep-sea activities can distress them and set them off course."

DIGITAL TECHNOLOGIES HARNESSED FOR CONSERVATION

Professor Stefan Williams from the Faculty of Engineering was Mower's academic supervisor during the project. "Oscar's work demonstrates AI's potential to drive positive change and shows how digital technologies can be harnessed for conservation," he said.

Mower is in his fifth year of a Bachelor of Engineering and Bachelor of Commerce, and has a keen interest in marine conservation. After graduation, he hopes to use his technical skills to further environmental causes. His passion for whales began when he was a child in Queensland, taking regular whale watching trips to North Stradbroke Island with his family.

MORE INFORMATION

Visit: **https://www.sydney.edu.au/news-opinion/news/2025/06/05/whale-song-crunched-for-minke-conservation1.html**

IMPROVING DENTAL HOMECARE COMPLIANCE USING THE PETOSAN 'STARTER PACK' FROM K9 GUMS

Dr David E Clarke Dipl. AVDC
Registered Specialist, Veterinary Dentistry and Oral Surgery
www.vdec.com.au

I am regularly asked, 'What % of your clients brush their pet's teeth?' But the question should be 'What % of your clients regularly perform a Homecare protocol?' and the answer should be 'All of them.'

Every pet attending your clinic requires a dental Homecare program and it needs 4 key ingredients:

1. client education,
2. staff training,
3. a dedicated client and
4. a willing pet.

Owners should try to keep their pet's teeth clean by implementing a Homecare protocol that works for them. Client education and the Homecare protocol should start early in life to obtain the best results. Pets respond to a quiet calm approach with a product that is suited to their needs and temperament. As with all training methods, start early and slowly, MAKE IT FUN, and use lots of positive reinforcement and praise.

There are many products on the market for plaque and calculus control but nothing like the Petosan 'STARTER pack', which contains a microfibre fingercloth and a 20gm tube of chicken flavoured toothpaste that physically disrupts plaque accumulation.

Toothbrushing using a PETOSAN fingercloth and paste

Several studies show that periodontal disease can be prevented with daily brushing, whether by toothbrush or fingerbrush.

However, most owners do not sustain the dedication or motivation to brush daily, so every other day may be more realistic. Most studies reflect a 30-40% compliance rate amongst the best clients, whilst 1-2% is much more realistic in a general practice.

The Petosan range solves this problem, with the 'STARTER pack', ideal for starting brushing, and ensures a higher compliance % compared to traditional methods. The advantages, when used correctly and consistently, include effectiveness and affordability.

The disadvantage of compliance can often be overcome by slow and calm introduction as well as the use of chicken flavoured toothpaste, which increase the acceptability and palatability to the pet.

email: info@k9gums.com.au ph: (03) 8795 0050
www.k9gums.com.au

THE CASE FOR INDOOR CATS: HEALTH, HAPPINESS AND WILDLIFE PROTECTION

CATS DON'T NEED WIDE-OPEN SPACES TO LIVE HAPPY, HEALTHY LIVES. BEHAVIOURAL SPECIALISTS AGREE THAT A COSY INDOOR ENVIRONMENT—WITH ENRICHMENT LIKE A CAT TREE AND EVEN A FELINE COMPANION—CAN MEET ALL OF A CAT'S PHYSICAL AND EMOTIONAL NEEDS. KEEPING CATS INDOORS NOT ONLY SUPPORTS THEIR WELLBEING BUT ALSO PROTECTS LOCAL WILDLIFE.

Cats only need a cosy indoor environment, not wide-open spaces. Behaviour specialists agree: our case, two kittens and a substantial cat tree create a healthy, engaging home where cats can thrive without ever needing to roam outdoors

"Many cat professionals will confirm that having two kittens, plenty of perch positions and a good scratching post is more than enough to enrich your cats' lives," Crighton says. "This, alongside dedicated play time and plenty of snuggles, will keep them safe and happy. With a little creativity and love, even single kitten and cat homes can be purrrfectly content living indoors."

Indoor life reduces risk from traffic, predators, and disease. Additionally, it protects our biodiversity, as roaming cats cause the deaths of millions of native wildlife species annually in Australia. It's a win-win for pets and parks. Sadly, it is the pressure on Australia's precious wildlife that cats pose that leaves a lasting negative impact on all of our feline friends.

"The message is clear for those considering welcoming a friendly feline into their lives, but are torn between the outdoor freedom – the fact is cats do not need to have free access to roam outdoors to live happy, carefree lives," Crighton suggests. "If you want your cat to explore the great outdoors, consider training them on a harness to walk on a leash, or invest in constructing a cat enclosure for safe outdoor time."

The statistics are rather shocking. According to the National Environmental Science Programme and the Science for Saving Species factsheet[*3], pet cats that are allowed to roam and hunt are estimated to kill an additional 390 million mammals, birds, and reptiles each year.

"For many cat lovers, these types of findings can be evidence of the importance of considering keeping your cats and kittens indoors for life."

AWARENESS AROUND COSTS & INSURANCE

According to PetSure's Pet Health Monitor 2025[**], these are the top cat health conditions and average treatment costs:

1. Gastrointestinal issues – Avg $903 (up to $26,987)
2. Urinary tract disorders – Avg $1,459 (up to $38,769)
3. Skin Infections/Allergies – Avg $470 (up to $21,343)

Despite these risks, many cats, whether indoor or outdoor dwellers, are significantly underinsured, leaving their owners unprepared for costly veterinary visits in emergencies.

"Even indoor cats can suffer injuries," Crighton says. "I know of this personally as my precious indoor Siamese broke her leg falling from a window shelf and getting caught in the blind to the tune of $4,000. Like most Australian cat owners, I was not insured at the time, and this took a rather big hit financially and emotionally."

THE INDOOR CAT FACTS

Keeping cats indoors saves lives—both for our feline family and native wildlife. It reduces disease, extends cat longevity, and debunks myths of indoor boredom. With the correct setup, indoor life is fulfilling, safe, and enriched.

- **Extended Lifespan:** Studies from the University of California-Davis state that indoor cats have a lifespan of 15 to 17 years, while the life expectancy of an outdoor cat ranges between 2 and 5 years.
- **Safety and Reduced Risk:** An international study of cat owners found that Road traffic accidents were the primary concern for owners of indoor-only cats in all surveyed regions and one of the main reasons they chose to keep their cats indoors.
- **Behavioural Enrichment Prevents Boredom:** Behavioural research on indoor cats has proven that a stimulating environment helps them satisfy their natural instincts, keeps their minds sharp, and prevents behavioural issues caused by boredom and frustration.
- **Indoor Happiness Matches Outdoor:** The Animal Humane Society showed that when pet parents enrich their indoor cats' lives correctly, all cats can still express natural behaviours like scratching, chewing, and toileting. Without the right outlets, however, such as scratching posts, chew-safe toys, and clean litter areas, they can develop health or behavioural issues.

"The key to avoiding behavioural issues in indoor cats is creating the right environment," Crighton says. "It's not just about keeping your cat inside—it's about bringing the outside world in. With a little creativity, you can give your cat all the joy, stimulation, and enrichment they would find outdoors—without the risks."

TOP BENEFITS OF INDOOR LIVING FOR CATS

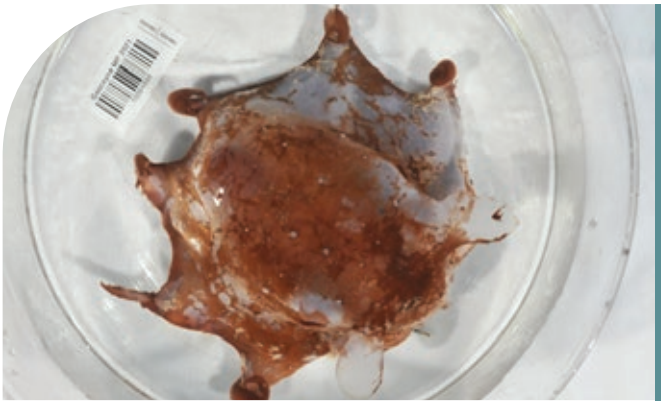
- **Safer, Healthier Lives:** Indoor cats avoid traffic accidents, fights with other animals, exposure to toxins, and diseases, given that outdoor roaming exposes them to parasites and pathogens.
- **Improved Longevity:** Indoor-only cats typically live 12–15 years, compared to 5–7 years for outdoor cats.
- **Wildlife Protection:** A parliamentary report estimates that Australia's pet cats are responsible for killing up to 390 million native animals each year.
- **Reduced Disease Risk:** Indoor cats have far lower risk of feline infectious diseases.
- **Myth Busting: Indoor Boredom:** Well-enriched indoor cats are just as mentally stimulated as outdoor cats.

"The majority of cat lovers are unaware of the exact impact their outdoor-loving cats can pose to our natural wildlife," Crighton says. "Over the years, cats have been seen as the 'easier' option for pet ownership, as they are much more self-efficient at entertaining and feeding themselves; however, this notion needs to change. Cats can live wonderful indoor lives – and also keep the majority of that independence without the need of a cat flap."

**1 https://pmc.ncbi.nlm.nih.gov/articles/PMC7316254/?utm*
**2 https://www.zoetispetcare.com/benefits-of-pets*
**3 https://www.nespthreatenedspecies.edu.au/media/eeufmpqx/112-the-impact-of-cats-in-australia-findings-factsheetweb.pdf*
*** https://petsure.com.au/pet-health-monitor/*

FINDING FLAPPY: **FROM DEEP SEA TO DESCRIBED SPECIES**

FOLLOW THE INCREDIBLE JOURNEY OF THE CARNARVON FLAPJACK OCTOPUS FROM AN UNKNOWN INHABITANT OF THE DEEP, DARK OCEAN TO THE INTERNATIONAL SPOTLIGHT.



The holotype (the primary reference material for describing a new species) of the Carnarvon Flapjack Octopus was collected during Operation #177 along with several other specimens of the new species. Image: CSIRO-Cindy Bessey.

KEY POINTS

- We still have much to learn about what lives in the oceans around Australia, especially the extraordinary life found in the deep ocean.
- A world-first biodiversity survey of marine parks off Western Australia by CSIRO research vessel (RV) Investigator has led to the discovery of a new species.
- Following meticulous work by teams of experts, we welcome the newest type of 'dumbo' octopus into the described world.

The story of the Carnarvon Flapjack Octopus begins in 2022, on a science ship on the surface of the Indian Ocean.

CSIRO research vessel (RV) Investigator, having departed Fremantle in November, was carrying a team of 32 researchers on a mission to deliver a world-first biodiversity survey of the Gascoyne and Carnarvon Canyon Marine Parks off Western Australia.

What they would discover, more than 1000 metres beneath the waves, would be as intriguing as it was important.

Researchers used several types of nets and sleds to sample ocean life, including the scampi net which was used in Operation #177. Image: CSIRO-Frederique Olivier.

MEET THE VOYAGE TEAM

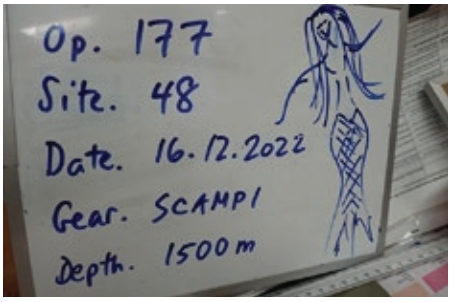
CSIRO marine ecologist, Dr John Keesing, was the Chief Scientist on the 2022 voyage that discovered the new octopus species. Image: CSIRO-Frederique Olivier.

Led by CSIRO under Chief Scientist, Dr John Keesing, the collaborative voyage included experts in vertebrate and invertebrate marine species hailing from research organisations, collections and museums from across Australia.

“More than 70 per cent of Australia’s vast marine estate is greater than 1000 metres deep but these areas are poorly studied and we know very little about the life down there,” John said.

During their 30 days at sea, the voyage team delivered more than 180 science operations, investigating ocean life at depths from 50 to 5000 metres. They deployed special underwater cameras to film life on the seafloor, and nets and sleds to collect specimens for population, biological and further study.

The voyage represented the culmination of more than two years’ careful planning in conjunction with Parks Australia, who manage Australia’s extensive network of marine parks.



Several specimens of the new octopus species - including the holotype specimen - were collected during Operation #177 at Station 48. Image: CSIRO.

The mix of survey and sampling methods selected was vital for a comprehensive study of the biodiversity in the region and tailored to suit the habitats the researchers would encounter. Importantly, while there are various ways we can study life in the ocean, it is only through the collection of physical specimens that new species can be identified and described.

Being a world-first biodiversity survey in this region, John and the voyage team expected to collect many species that would be new to science.

MEET THE CURATORS

The WA Museum provided scientists and researchers with unique expertise to guide the preliminary identification and curation of invertebrate specimens. Image: CSIRO-Frederique Olivier.

The specimens collected from the program of physical surveys were sorted, categorised and given a unique barcode. Each specimen was then carefully arranged and photographed, and a provisional identification was made.

In some cases, there were specimens that had the onboard experts stumped. These would be flagged for further study.

Several deep-sea octopus specimens fell into this category.

Experts from several museums, including the WA Museum and TMAG, guided the onboard preparation, preservation and preliminary identification of species. Image: CSIRO-Frederique Olivier.

CSIRO scientist, Dr Cindy Bessey, arranges a specimen to be photographed in the Preservation Laboratory onboard RV Investigator. Image: CSIRO-Frederique Olivier.

Included in the onboard expertise was a team from the Western Australian Museum (WA Museum) led by their Head of Aquatic Zoology, Dr Lisa Kirkendale.

“The Indian Ocean is truly a frontier for marine biodiversity research and the WA Museum is the region’s institutional hub as we move forward to address this challenge,” Lisa said.

Lisa and her team carefully guided the curation (preparation and preservation) of the mystery octopus specimens, along with countless other marine creatures, from carnivorous bivalves to bejewelled deep-sea squid. These would be sent back to the WA Museum for further research and to be included in their marine species collections.

MEET THE OCTOPUS EXPERT

Specimens of the unknown octopuses then waited patiently on the shelf until December 2023 when Dr Tristan Verhoeff received them on loan from the WA Museum.

Dr Tristan Verhoeff, a volunteer researcher with the Tasmanian Museum and Art Gallery - shown here with a giant deep-sea isopod - described and named the Carnarvon Flapjack Octopus. Image: Supplied by Tristan Verhoeff.

Tristan, a volunteer Systematic Taxonomist at the Tasmanian Museum and Art Gallery (TMAG), had been working on a review of Australia’s cirrate octopuses since 2021.

"Cirrate octopuses are so called because they have special hairs next to their suckers called cirri," Tristan said.

"They’re also called ‘dumbo’ octopuses as the finson their body, which is called a mantle, look like little elephant ears," he said.

Tristan carefully studied the specimens and, after identifying there was an unknown octopus in their midst, he set to work painstakingly describing the new species.

However, his discoveries didn’t finish there! Tristan also helped describe a second new species of dumbo octopus *(Cirroteuthis kirrilyae)* at the same time. This description was made from specimens collected on the same 2022 voyage as well as the 2017 Sampling the Abyss voyage by RV Investigator off eastern Australia.

“The process of describing these species took approximately a year, and included careful collection of measurements, sucker counts, dissection of internal organ systems, and detailed photography work,” Tristan said.

“A lot of time was also spent looking at comparative material, and going through old literature," he said.

"You also get to name the species which is fun."

MEET THE OCTOPUS

On 12 May 2025, the Carnarvon Flapjack Octopus was introduced to the world by the Australian Journal of Taxonomy, in a research paper authored by Tristan. The discovery of this rare and unusual species was quickly picked up and shared by world media. Tristan named the new species *Opisthoteuthis carnarvonensis*, the Carnarvon Flapjack Octopus, after the location where it was collected.

The underside of the holotype specimen of the Carnarvon Flapjack Octopus showing its deep-red tentacles, webbing between its arms and cirri (hair-like structures) around its suckers. Image: CSIRO-Cindy Bessey.

In Latin, ‘ensis’ means ‘from’ so its Latin name translates to 'from Carnarvon'.

“The species is small, the body length being up to 40 mm and a total length of up to 190 mm, and it has an orange-brown colouration,” Tristan said.

“They have fins on their body and a unique cartilaginous shell that anchors the muscles to these fins. These octopuses have an extensive web between the arms, and the jellyfish-like movement of this webbing, as well as flapping the fins, are used for propulsion, rather than the jet-propulsion used by ‘normal’ octopus,” he said.

“However, flapjack octopus are mostly benthic, resting on the seafloor.”

Interestingly, unlike other octopuses, flapjack octopuses produce no ink and cannot change colour.

The Carnarvon Flapjack Octopus is only found off north-western Australia from depths of 1000-1500 metres. Its presence adds extra value to the recently established marine parks managed by Parks Australia and its discovery will now help marine managers protect the species.

The same paper describing the Carnarvon Flapjack Octopus also revealed that north-western Australia had two other flapjack octopus species, *Opisthoteuthis cf. philipii and Insigniteuthis extensa*, previously unknown in Australian waters.

Tristan said many people may not be aware that museums like WA Museum and TMAG have extensive and valuable collections of deep-sea life that are available for study.

“Many of the new species I have described have been in these collections for decades awaiting someone to notice them.”

MORE INFORMATION:

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IT'S YOUR CASE - 6 YEAR OLD GREAT DANE WITH TACHYCARDIC, SHOCK & PAINFUL ABDOMINAL PALPATION

VETCT
Teleradiology | Teleconsulting | Education

Species: Canine
Breed: Great Dane
Sex: Male Neutered
Age: 6 years

Clinical History:

He initially presented two days ago for vomiting and was managed on an outpatient basis. Although the vomiting subsided, he remains anorexic. On presentation today, he was tachycardic, shocky and painful during abdominal palpation which has responded well to intravenous fluid therapy and pain management.

CBC: HCT= 62 (H) **Chemistry:** Pending
AFAST/TFAST: Normal.

Diagnostic interpretation:

ABDOMEN:
There is good abdominal serosal contrast. The visible margins of the liver and spleen are radiographically within normal limits.

The gastric silhouette contains gas and is displaced cranially by the markedly distended segments of colon. Along the left wall of the fundus, and an irregular margin is evident (orange arrowheads). The ascending and transverse colon (red arrows) are difficult to trace but are markedly distended with gas and heterogenous material. The caecum is suspected to be in the left mid-abdomen (blue arrows), caudal to the gastric fundus (yellow arrows). The descending colon is narrow and empty (green arrows). The small intestine is generally soft tissue opaque or contains a small amount of gas; it is within normal limits for diameter and margination.

The renal and urinary bladder silhouettes are smoothly marginated and within normal limits. There are no radiopaque calculi.

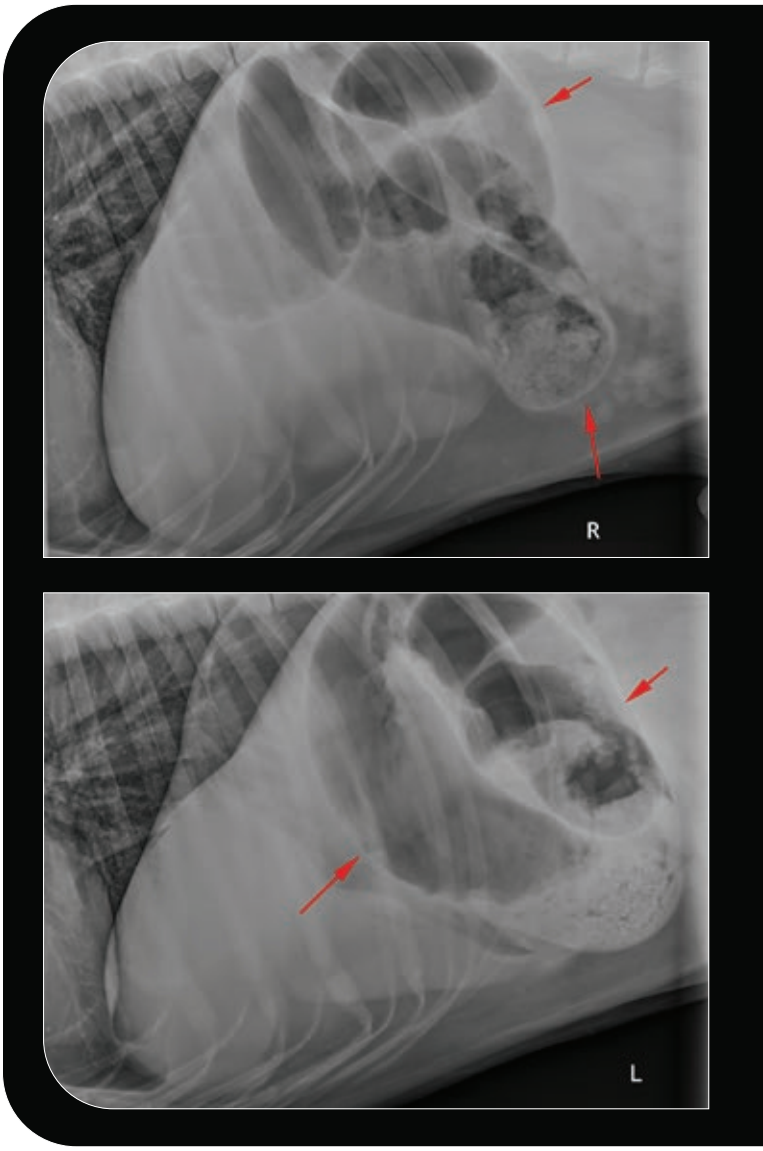
The lumbar vertebral column is unremarkable without evidence of fracture, luxation or osteolysis.

INCLUDED THORAX:
The visible pulmonary vasculature is narrow in diameter and tapers as it extends to the periphery. The caudal vena cava is variable ranging within normal limits to narrow.

Anatomic regions: Abdomen

Details of study and technical comments:

A radiographic study of the thorax and abdomen is presented for evaluation. The study consists of right and left lateral views as well as a ventrodorsal view of the abdomen.



Conclusions:

- Colonic distention and suspected abnormal positioning of the caecum. Primary consideration is given to colonic malpositioning (i.e. torsion) or vascular compromise (i.e. entrapment).
- Possible gastric mural change versus gastritis.
- Suspect hypovolaemia.

Additional comments:

The changes associated with gastrointestinal tract are primarily linked with the caecum and colon. There is global distention of the ascending and transverse segments however the path is difficult to confidently trace. Radiographic features associated with colonic torsion include segmental distention, consistent malpositioning and caecal malpositioning. These factors are present in this exam. That feature which is not observed is focal narrowing which often delineates the site of torsion; this may be obscured by distended segments.

Of uncertain clinical significance is noted change associated with the gastric wall. Further evaluation of the global picture in the abdomen can be made with computed tomography which may prove valuable in a patient of the size.

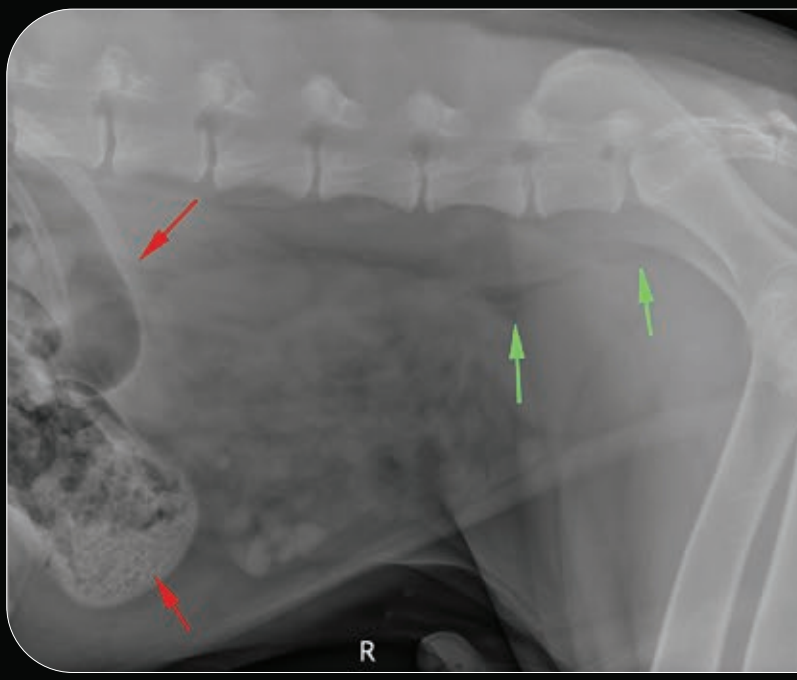
Outcome:

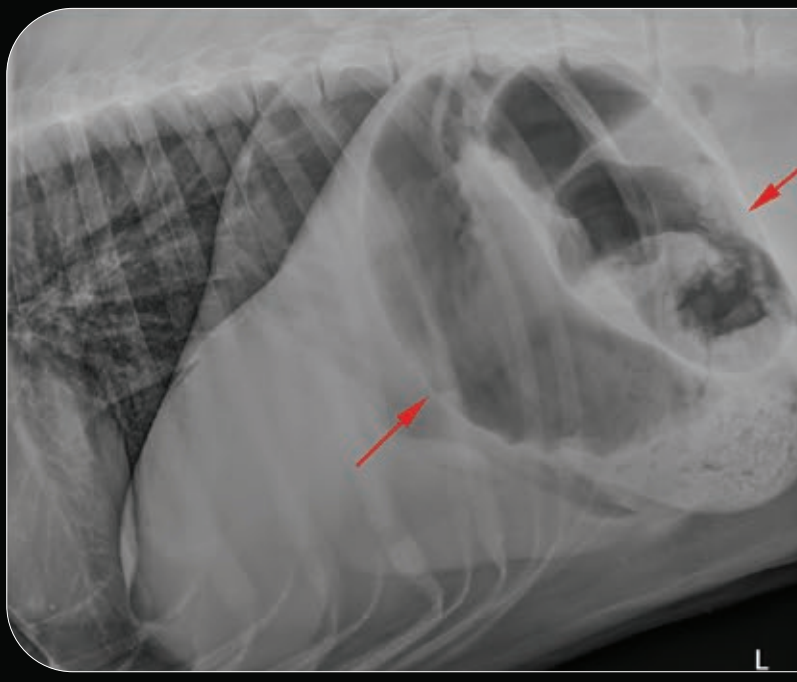
The patient proceeded to exploratory laparotomy. The descending colon was rotated 180 degrees clockwise and manual reduced. The transverse colon was moderately hyperaemic and moderately to severely dilated without evidence of haemorrhage, necrosis or vascular shearing. The contents were milked aborad and the features of viability improved.

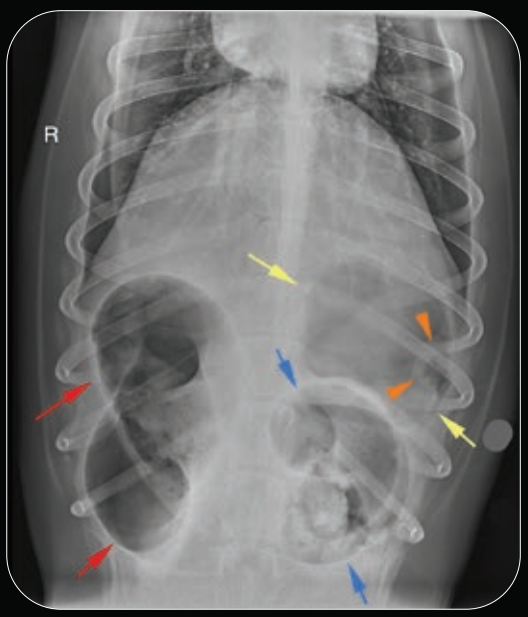
Literature:

Gremillion, C. L., Savage, M., & Cohen, E. B. (2018). Radiographic findings and clinical factors in dogs with surgically confirmed or presumed colonic torsion. *Veterinary Radiology & Ultrasound, 59*(3), 272-278.

Czajkowski, P. S., & Fryer, K. J. (2020). Colonic torsion in 4 Great Danes. *Journal of Veterinary Emergency and Critical Care, 30*(5), 581-586.







2024/25 FINDINGS OF PET HEALTHCARE COSTS

NEW DATA RELEASED BY PETSURE'S PET HEALTH MONITOR 2025 REPORT INTO THE PET HEALTHCARE COSTS OF THE AVERAGE AUSTRALIAN PET IS BASED ON THE INSURANCE DATA OF 700,000 PETS, THE BIGGEST DATASET OF ITS KIND IN AUSTRALIA.

*"Oodles" were offcially Australia's favourite dogs in 2024 - but Border Collies had the lowest vet bills**

SUMMARY OF KEY POINTS:

- Poodle crossbreeds (Oodles) were Australia's most popular dogs in 2024, with Cavoodles topping the list.
- Cavoodles had the second-lowest average annual healthcare claims, behind Border Collies.
- Other breeds with below-average healthcare costs included Kelpies, Dachshunds, and another Oodle, the Groodle (Golden Doodle).
- French Bulldogs had the highest average vet costs of any breed in 2024, at $1,641.
- Other brachycephalic (flat-faced) dog breeds, including Pugs, also recorded above average healthcare costs.
- Among non-brachycephalic breeds, Beagles, Rottweilers and Miniature Schnauzers cost the most in vet bills.
- The 2025 Pet Health Monitor, features some of these breed-specific insights – and broader findings on pet health trends – from the country's largest pet healthcare dataset.

STANDOUT FINDINGS FROM PETSURE'S 2025 PET HEALTH MONITOR REPORT

Australians continue to favour Poodle crossbreeds ("Oodles") over any other type of dog.

New data from Australia's largest pet insurer, PetSure, shows that one in five insured dogs nationally is an Oodle, with Cavoodles alone making up more than 10% of the country's insured dog population.

Cost considerations may be one reason for their popularity: two of the five dogs with the lowest average annual vet claims in 2024 were Oodles – Cavoodles and Groodles (or Golden Doodles).

These findings are based on PetSure's insurance claims data, and other insights from which are featured in the 2025 Pet Health Monitor. This report is Australia's largest and most comprehensive annual analysis of insured pet health, drawing on data from 700,000 pets.

Interesting findings* from the 2025 Pet Health Monitor report include:

- While "Luna" was again the most popular name for both female dogs and cats last year, there are fresh trends for male pets. Milo was the top choice of name for male cats born in 2024, and Teddy was the favourite for male dogs.
- Skin conditions were the leading reason dogs visited the vet, followed by gastrointestinal issues and ear infections.
- The most expensive dog health claims were for lymphoma (with one case exceeding $61,000) and tick paralysis (with a top claim over $57,000).
- Feline obesity continues to rise, affecting a significant share of domestic cats.

DOG HEALTHCARE COSTS

In 2024, insured dog owners submitted an average of $1,047 in vet-related claims across all breeds. The average claims rose as pets aged.

Top five breeds for lowest average annual healthcare costs (claims):

#	Breed	# Breed Avg. annual claim
1	Border Collie	$771
2	Cavoodle	$776
3	Kelpie	$793
4	Dachshund	$795
5	Groodle (Golden Doodle)	$813
ALL BREEDS		$1,047

Based on 2024 PetSure claims data as at April 2025. Amount claimed per policy over a 12-month period.

At the other end of the spectrum, French Bulldogs (Frenchies) were the most expensive breed for healthcare costs, with average yearly claims of $1,641. As a brachycephalic (flat-faced) breed, Frenchies are prone to respiratory issues and often need surgery to open up their airways. Nevertheless, they were the fifth-most popular dog breed in Australia in 2024 according to the Pet Health Monitor.

While not in the top five, Pugs averaged $1,235 and were in sixth place.

Top five breeds for highest average annual healthcare costs (claims):

#	Breed	# Breed Avg. annual claim
1	French Bulldog	$1,641
2	Beagle	$1,428
3	Rottweiler	$1,341
4	Miniature Schnauzer	$1,296
5	Cavalier King Charles Spaniel	$1,259
ALL BREEDS		$1,047

Based on 2024 PetSure claims data as at April 2025. Amount claimed per policy over a 12-month period.

EXPERT COMMENTARY FROM VETERINARIAN DR SIMONE MAHER (PETSURE'S CHIEF VETERINARY OFFICER)

"It's interesting to see that two of the five lowest-claiming breeds, Border Collies and Kelpies, are active working dogs traditionally bred for herding livestock on farms," Dr Maher said.

"These breeds have a high need for physical activity and mental stimulation. Ideally, their owners understand this and ensure they get the exercise they need - that regular activity may reduce the risk of obesity-related conditions, which can have a positive impact on long-term health."

"Interestingly, both breeds do show a higher incidence of claims for wounds and injuries, which could reflect their boundless energy and active lifestyles."

"In terms of their anatomy and appearance, these dogs haven't been bred for exaggerated features. So they're much less likely to need the corrective surgery we commonly see in other breeds where physical compromise is more likely," Dr Maher said.

CAUTION WITH LARGE AND FLAT-FACED DOG BREEDS

Dr Maher highlights the high healthcare cost claims of brachycephalic dogs like Frenchies (the fifth most popular dog in 2024) that are bred for their characteristic flat faces.

"Brachycephalic breeds are clearly overrepresented in our highest-claim categories, suggesting that some of the appearance traits that have become popular are not always conducive to a pet's health and wellbeing."

"French Bulldogs are prone to Brachycephalic Obstructive Airway Syndrome (BOAS), a breathing disorder resulting from compressed airways. Many of these dogs require surgeries on their airways and soft palates to ensure they get enough oxygen, especially in warm weather."

"The Pet Health Monitor report shows the average cost to treat BOAS is over $3,100, assuming the procedure is uncomplicated. Treatment can, however, cost nearly $30,000," Dr Maher concluded.

MORE INFORMATION

Explore the full 2025 Pet Health Monitor for data-driven breed and health condition rankings, treatment costs, in-depth disease studies, veterinary care insights, and helpful tips that can be downloaded at **https://petsure.com.au/pet-health-monitor/**

ABOUT PETSURE:

PetSure (Australia) Pty Ltd ("PetSure") is Australia's leading pet insurer. For over 20 years, PetSure has been the market leader in both size and innovation. PetSure issues and administers the pet insurance policies of over 20 partner brands.

As the category leader, and in close collaboration with members of the veterinary industry, PetSure continually seeks to extend coverage, keep pace with modern veterinary practices, and provide pet insurance policies that are transparent and operate with the highest levels of integrity.

In March 2023, PetSure obtained its own APRA general insurance license, making it the first general insurer in Australia that's fully dedicated to pet insurance. PetSure is committed to the long-term growth and sustainability of the pet insurance category.

REFERENCES:

Based on PetSure claims data, 2024

DISCLAIMER:

Unless otherwise specified, the data referenced in this article is drawn from PetSure claims data for the year 2024.

High and low risk breeds were based on PetSure Australia 2024 claims data. Claims experience was normalised against the number of pets for each breed to determine the average cost per pet per year. Only breeds with more than 5,000 pets were considered to ensure reasonableness of the data trends.

Insurance products are issued by The Hollard Insurance Company Pty Ltd ABN 78 090 584 473, AFSL 241436 (Hollard) and/or PetSure (Australia) Pty Ltd ABN 95 075 949 923, AFSL 420183 (PetSure) (from 8th May 2023 only), administered by PetSure and promoted and distributed through their authorised representatives and distribution partners. Any advice provided is general only and does not take into account your individual objectives, financial situation or needs. Cover is subject to the policy terms and conditions. You should consider the relevant Product Disclosure Statement (PDS) to decide if a product is right for you. PDS and Target Market Determination are available from the relevant partner's website.

BOOK RELEASE: **TRAVELLING WITH PETS ON AUSTRALIA'S EAST COAST - SO POPULAR THAT ITS 7TH EDITION IS ABOUT TO BE RELEASED!**

TITLE: Travelling with Pets on Australia's East Coast

AUTHOR: Carla Francis

RRP: $34.99

AVAILABLE: All good bookstores and www.woodslane.com.au

Carla Francis is a freelance writer and a devoted pet owner who cannot stand to leave her dog behind when she travels. Her book, Travelling with Pets on Australia's East Coast, covers from Port Douglas to Port Fairy, and features everything from charming cat cabins to cute cockatiel friendly caravan parks. All independently researched. Carla has left no stone unturned in her quest to provide a definitive guide to pet-friendly accommodation. This seventh edition(!) also includes information about doggie days out, dog-friendly beaches, parks, cafes, pubs and wineries, plus traveller's tips for pet-friendly sightseeing.

MORE INFORMATION

Visit: **http://www.woodslane.com.au**

STAND UP FOR THE BUSH!
SAVE THE KOALA MONTH THIS SEPTEMBER

This September, our organisation is preparing for 30 days of engaging and informative Koala-related activities to help spread awareness of our four decade-long battle to save the flora and fauna of the Australian bush.

Save the Koala Month is our annual worldwide event to share our work with children and adults who are passionate about educating themselves about Koalas and their habitat. We've been celebrating this event since 1989 to raise funds for our Foundation's important work. AKF is one of the very charities that does not take government funding, enabling us to speak freely for the Koala.

Deborah Tabart OAM, Chair of the Australian Koala Foundation, says: "Save the Koala Month is all about helping Koalas in fun and friendly ways! Every little action big or small can make a big difference for our furry friends."

We are calling on all kids and adults to accept the mission at hand - **Become a Koala Guardian this September!**

There are numerous ways that both Australians and supporters abroad can get involved in our Save the Koala Month festivities.

- Planting trees for Koala habitat via the AKF Plant a Tree Program.
- Support an adult or joey Koala through our Adopt a Koala Program
- Ordering a donation box for your school, workplace or local shop
- Hosting fundraisers such as a Koala Cake Stall, Koala Karaoke, Trivia Nights and more
- Sharing knowledge by educating others about Koala facts
- Joining the Koala Army to be a voice for change, writing to the Prime Minister or the Environmental Minister, urging them to support the future of our Koalas by enacting the Koala Protection Act.

The Australian Koala Foundation are counting down the days until September — it's time to stand up and fight for the future of the Australian bush.

ABOUT SAVE THE KOALA MONTH

Save the Koala Month is an annual initiative dedicated to raising awareness about the challenges facing Koalas and advocating for legislative measures to protect their habitats. This month-long campaign encourages individuals and communities to come together in support of the Koala Protection Act and broader wildlife conservation efforts.

Selwood House Vets Brooke Delaney nurse consult room

CVS AUSTRALIA LAUNCHES NURSING ADVISORY COMMITTEE

CVS Australia has launched a new Nursing Advisory Committee to empower veterinary nurses across its 45 companion animal practices. It offers a supportive platform where nurses can share insights, promote wellbeing, and help shape the future of veterinary care.

The committee is chaired by Tara Ryan, CVS Australia's Chief Veterinary Nursing Officer, and includes a representative from each state to champion the voices of nurses across CVS Australia. Alexandra Lakes, Veterinary Nurse at Pet Universe in Adelaide, will oversee the initiative as nursing lead.

Designed to inform group-wide decisions, the committee will play a key role in reviewing and trialling equipment and products before they're rolled out across practices, ensuring they're nurse-approved and clinically effective.

One of the first initiatives is a quality improvement project focused on antimicrobial stewardship and infection control. Using a synthetic germ powder that glows under UV light, this will support practice teams to assess and enhance infection control processes in their practices to improve safety for both patients and colleagues.

A major focus will be reviewing how nurses are using their skills within clinics, to support and enhance career satisfaction and development. This project also aims to support nurses and their managers to map out progression and identify development opportunities within CVS Australia's practice and operational teams.

Nurses across CVS Australia can also take part in its nursing journal club, providing an opportunity to connect with nurses across Australia and the UK, and supporting nurses to remain at the forefront of clinical research.

Tara Ryan, Chief Veterinary Nursing Officer at CVS Australia, said: "I'm really excited to work with our talented and passionate nurses to help shape the future of veterinary nursing in Australia. This committee is about giving our nurses a voice, listening, learning and supporting them to be the nurse they want to be."

MORE INFORMATION

CVS Group is a leading provider of veterinary services, operating across six states in Australia. Learn more at **www.cvsvets.com.au.**

GREENCROSS VET HOSPITAL ACHIEVES PRESTIGIOUS ASAV HOSPITAL OF EXCELLENCE ACCREDITATION

GREENCROSS VET HOSPITAL (GVH) AT THE UNIVERSITY OF MELBOURNE (UOM) HAS BEEN AWARDED THE AUSTRALIAN SMALL ANIMAL VETERINARIANS (ASAV) HOSPITAL OF EXCELLENCE ACCREDITATION, MAKING IT ONE OF ONLY ~50 HOSPITALS NATIONALLY TO HOLD THIS PRESTIGIOUS TITLE.

The accreditation, valid for four years, recognises the hospital's outstanding performance across all domains of clinical care, infrastructure and governance.

This rigorous accreditation process, overseen by the Australian Veterinary Association, is a testament to GVH's commitment to excellence. The ASAV Hospital of Excellence Accreditation is reserved for veterinary hospitals that demonstrate the highest standards in clinical care, operational performance, and facility design.

"We're incredibly proud to have been awarded the ASAV Hospital of Excellence Accreditation. It's a meaningful recognition of the passion, dedication, and tireless work our team puts in every day to deliver the highest standard of care," says Dr Fiona Witham, Clinical Director, Greencross Vet Hospital.

"To be one of only around 50 hospitals nationally to receive this level of accreditation is a real honour. It reflects the commitment of every team member to clinical excellence, continuous improvement, and making a real difference to the animals and clients we care for."

Highlights from the Accreditation:

- **World-Class Facilities**: The hospital exceeds ASAV standards with purpose-built infrastructure, specialist wards, and advanced diagnostic capabilities including CT and MRI.
- **Clinical Excellence:** Policies and procedures are comprehensive, well-embedded, and support best practice clinical care.
- **High-Quality Records:** Medical documentation met all criteria for excellence, reinforcing continuity of care.
- **Exceptional Leadership**: Dr Fiona Witham's leadership was recognised as a standout factor in creating a culture of quality, training, and professional development.
- A Destination for Talent and Training

Greencross Vet Hospital is also a hub for clinical education and talent development and has had over 130 final-year students from the University of Melbourne complete clinical rotations at GVH annually with 75 per cent of internship roles at GVH filled by University of Melbourne graduates last year.

Each year, the team at GVH treats over 11,000 pets and has become a trusted referral centre, recognised for its advanced clinical capabilities and collaborative approach to patient care. With a growing caseload and a reputation for excellence, the hospital continues to expand its role as a leader in specialised veterinary services.

The ASAV Hospital Accreditation Program evaluates veterinary hospitals against an extensive set of criteria including:

- Medical records, nursing care and patient management
- Anaesthesia, surgery and dentistry protocols
- Diagnostic imaging and laboratory services
- Medicine control, emergency readiness and WHS compliance
- Staff training, wellbeing and professional development

To earn accreditation, hospitals must also submit detailed clinical case studies, undergo a comprehensive site inspection and demonstrate excellence in leadership, governance, and quality assurance.

At the start of 2023, Australia's largest pet wellness company, Greencross Pet Wellness Company entered a commercial partnership with the University of Melbourne to operate the university's animal hospital facility at Werribee

Under the partnership, GVH offers both a both GP vet clinic and 24-hour Specialist & Emergency Hospital services at the Werribee site while supporting the University of Melbourne veterinary students gain valuable practical educational advancement.

ABOUT GREENCROSS VET HOSPITAL

Opened in 2023 Greencross Vet Hospital at the University of Melbourne is part of The Animal Referral & Emergency Network (AREN) - Australia's largest specialist and emergency network. Greencross Vet Hospital is a 3000sqm, purpose-built veterinary hospital located in Werribee at the University of Melbourne. With 14 consult rooms; three state-of-the-art surgical theatres; a dedicated Intensive Care Unit and High Dependency Patient Ward; and advanced diagnostic equipment, including high-field MRI, CT, and fluoroscopy, Greencross Vet Hospital provides high quality GP and specialist veterinary services to the pets of Melbourne and clinical teaching opportunities for University of Melbourne Doctor of Veterinary Medicine students.

MORE INFORMATION

For further information on Greencross Vet Hospital visit **https://www.emergencyvet.com.au/our-network/greencross-vet-hospital.html**

SIMPLE STEPS FOR HAPPIER, HEALTHIER CATS

EXPERT ADVICE FROM DR CLAIRE JENKINS PRESENTED BY BREEDER'S CHOICE. FOCUSING ON ENHANCING YOUR CAT'S WELL-BEING THROUGH EFFECTIVE ENRICHMENT STRATEGIES.

BALANCE MATTERS:

Striking the right balance between treats and meals is essential to maintaining your cat's overall health. Overindulging in treats can lead to obesity, nutrient imbalances, and other health issues, while a balanced approach ensures optimal nutrition and well-being. Dr Claire Jenkins shares practical guidance on how to treat responsibly.

"Treats are a great way to bond with your cat, but they should never replace nutritionally complete meals," says Dr Jenkins." By following simple guidelines like the 90/10 rule, you can keep your cat healthy and happy while still enjoying those special moments."

TOP 5 TIPS FOR RESPONSIBLE TREATING

1. Follow the 90/10 Rule
Ensure that 90% of your cat's daily caloric intake comes from nutritionally complete meals and limit treats to 10% or less. "This rule allows you to reward your cat without compromising their overall diet," explains Dr Jenkins.

2. Choose High-Quality Treats
Select treats made from natural, wholesome ingredients. Breeder's Choice Tasty Treats are an excellent option, crafted with high-quality ingredients to ensure your cat enjoys a healthy reward. "Providing nutritious treats helps you support your cat's health while giving them a little indulgence," adds Dr Jenkins.

3. Use Treats as Occasional Rewards
Treats should be reserved for special occasions, training, or to reward good behaviour—not as a regular part of their diet. "Frequent treating can lead to overfeeding, so keep it occasional and meaningful," advises Dr Jenkins.

4. Consider Your Cat's Activity Levels
Adjust treat portions based on your cat's activity and energy levels. Less active cats require fewer calories overall, making portion control especially important.

5. Incorporate Treats into Enrichment Activities
Use treats to stimulate your cat mentally and physically by incorporating them into puzzle feeders or interactive play. "This makes treating fun and encourages natural behaviours like hunting and foraging," says Dr Jenkins.

ENRICHMENT MATTERS:

Providing mental and physical stimulation is essential for your cat's overall health, helping to prevent boredom, reduce stress and promote a happy, active lifestyle. Dr Claire Jenkins, offers practical tips to enrich your feline friend's daily routine.

"Enrichment isn't just about keeping your cat entertained; it's about fulfilling their natural instincts and promoting mental and physical health," says Dr Jenkins. "Simple changes can make a significant difference in your cat's quality of life."

TOP 5 TIPS FOR ENHANCING YOUR CAT'S MENTAL AND PHYSICAL STIMULATION

1. Engage in Interactive Play Sessions
Dedicate time each day to play with your cat using toys that mimic prey, such as feather wands or laser pointers. These activities stimulate their hunting instincts and provide necessary exercise. "Interactive play is a great way to bond with your cat while keeping them mentally and physically active," advises Dr Jenkins.

2. Provide Puzzle Feeders
Incorporate puzzle feeders into mealtime to challenge your cat's problem-solving skills and slow down rapid eating. "Puzzle feeders turn feeding into an engaging activity, satisfying your cat's natural foraging instincts," notes Dr Jenkins.

3. Create Vertical Spaces
Cats love to climb and observe their environment from elevated spots. Install

MORE INFORMATION

For more expert tips, informative blogs, and interactive activities, visit Breeder's Choice's website or follow their social media channels. Let's make enrichment a priority for the well-being of our cats!
Visit: **breederschoicecats.com.au.**

ABOUT BREEDER'S CHOICE:

Breeder's Choice has long been a trusted name among cat owners. It offers eco-friendly solutions that support feline health and sustainability. From its Tasty Treats to its recycled paper-based cat litter, Breeder's Choice provides products that align with the values of modern pet owners. "Balancing nutrition and treating doesn't have to be complicated," says Dr Jenkins."With the right choices, like Breeder's Choice products, you can support your cat's health while being mindful of the environment."

HYDRATION MATTERS:

Keeping your cat hydrated is one of the simplest yet most impactful ways to support their overall health. Proper hydration plays a vital role in preventing urinary tract issues, maintaining kidney health, and ensuring overall feline well-being. Dr Claire Jenkins has compiled five expert-backed tips to help ensure your feline friend stays well-hydrated.

"Hydration is one of the simplest ways to support your cat's health, yet it's often overlooked. Small changes, like incorporating moisture-rich treats or providing multiple water sources, can significantly improve your feline's well-being," says Dr Claire Jenkins, Breeder's Choice Vet Ambassador and founder of VetChat. "Here are five simple yet effective tips to help keep your cat well-hydrated."

TOP 5 TIPS TO KEEP YOUR CAT HYDRATED

1. Provide Fresh Water Daily

Cats are naturally drawn to fresh, clean water. Make sure to replace your cat's water at least once a day and clean the bowl regularly to avoid bacterial build-up. "Cats are more likely to drink when their water is clean and appealing," advises Dr Jenkins.

2. Incorporate Wet Food into Their Diet

Wet cat food can contain up to 80% water, making it an excellent way to boost hydration. "Including wet food in your cat's diet not only enhances their water intake but also supports overall nutrition," says Dr Jenkins.

3. Use Multiple Water Stations

Cats are more likely to drink water if it's easily accessible. Place water bowls in multiple areas around your home, particularly in spots your cat frequents. Dr Jenkins adds, "Having multiple water sources encourages cats to drink more without effort."

4. Enhance Treat Time with Hydration

Adding a small amount of water to treats, like Breeder's Choice Tasty Treats, can provide an extra source of hydration while keeping treat time enjoyable. "Softening treats with water not only helps with hydration but can also be a great way to cater to cats with sensitive teeth or gums," suggests Dr Jenkins.

5. Flavour Their Water

A splash of low-sodium chicken broth or tuna water can make drinking more enticing for cats. Dr. Jenkins recommends, "Offering flavoured water can be a great option for cats who are reluctant to drink plain water. However, always ensure fresh, clean water is available at all times".

For more expert tips, informative blogs, and interactive activities, visit Breeder's Choice's website or follow their social media channels. Let's make hydration a priority for healthier, happier cats!

cat trees, shelves, or window perches to offer vertical exploration opportunities. "Vertical spaces enrich your cat's environment and provide them with a sense of security," says Dr Jenkins.

4. Rotate Toys and Introduce New Scents

Keep your cat's environment interesting by regularly rotating their toys and introducing new scents, like catnip or silvervine. This variety prevents boredom and encourages exploration. "Changing toys and scents keeps your cat curious and mentally stimulated," explains Dr Jenkins.

5. Establish a Routine with Training Sessions

Cats can benefit from short, positive reinforcement-based training sessions. Teaching simple commands or tricks provides mental stimulation and strengthens your bond. "Training isn't just for dogs; cats enjoy the challenge and attention, too," says Dr Jenkins.

NEW GLOBAL WELLNESS TOOLKIT AIMS TO HELP PET OWNERS KEEP THEIR DOGS AND CATS HEALTHIER, LONGER

DEVELOPED BY THE WORLD SMALL ANIMAL VETERINARY ASSOCIATION (WSAVA), WHICH REPRESENTS MORE THAN 500,000 VETERINARIANS WORLDWIDE, AND HEALTHFORANIMALS, THE GLOBAL ANIMAL HEALTH ASSOCIATION, THE PRINCIPLES OF WELLNESS PROVIDE SIMPLE, SCIENCE-BACKED STEPS THAT PET CAREGIVERS CAN TAKE TO SUPPORT THEIR ANIMAL'S HEALTH AT EVERY LIFE STAGE.

From longer lives to fewer sick days, a new set of global 'Principles of Wellness' aims to help dog and cat owners take charge of their pets' health. Developed by the World Small Animal Veterinary Association (WSAVA), which represents more than 500,000 veterinarians worldwide, and HealthforAnimals, the global animal health association, the Principles of Wellness provide simple, science-backed steps that pet caregivers can take to support their animal's health at every life stage.

These best practice principles cover six essential areas: Primary Care, Nutrition, Dermatology, Parasite Control, Vaccination, and Welfare. They offer caregivers clear guidance on what to do at home and what to discuss with their veterinarian – forming the foundation of a personalised wellness plan for every dog and cat.

Pets may not show signs of illness until it's too late, that's why prevention and proactive care is important. These Principles give caregivers the tools to act early and work with their veterinarian to help provide a healthy life for their pet.

While pet ownership is rising worldwide, many pets remain at risk of preventable ailments. Parasites are a common risk, with Australian pets at risk of paralysis ticks, heartworm, fleas and mites. Following a vet recommended parasite control plan will help protect your pets from these preventable ailments.

Vaccination is one of the most common and foundational forms of preventative pet care. In Australia, vaccination is the second most common reason pet owners visited a vet in 2021-22.

Caring for a pet should be joyful, not stressful," said Mr Ben Stapley, Executive Director of Animal Medicines Australia. "We're excited to support the Principles of Wellness because they empower pet owners to work with their vet and make confident, informed choices for their animals' health.

"Australians are spending more than ever on their pets' health, with an estimated $4.7 billion going to vet visits and $2.9 billion on healthcare products1. It's clear we share a deep bond with our pets, and this resource is designed to help owners give their animal companions the best possible care," said Mr Stapley.

Just as people increasingly invest in their own wellness – from annual checkups and tailored diets to mental health – the Principles of Wellness bring that same proactive mindset to pet care. They reflect the growing understanding that regular veterinary visits, personalised nutrition, and attention to emotional wellbeing are as essential for pets as they are for people. Pets thrive when they're physically healthy and mentally stimulated – both of which the Principles aim to encourage.

The Principles emphasise that every pet is unique and encourage caregivers to consult with veterinary professionals to tailor a wellness plan that meets their animal's specific needs. The guidelines are particularly useful during key life transitions — like entering senior years or managing a chronic condition – when a proactive plan can help pets live longer, healthier lives.

MORE INFORMATION

Visit: **https://animalmedicinesaustralia.org.au/resources/principles-of-wellness-2/**

Zinc: Plaque's natural enemy

BRUCE ADDISON, Veterinary Microbiologist • **Addison Biological Laboratory, Inc.**

"Plaque forms within 24 hours, calculus within 3 days and gingivitis begins as early as 2 weeks."
— WSAVA.org

Pet oral health care is an ongoing challenge for pet owners and veterinary teams. Periodontal disease is the number one health problem in small animal patients, according to the American Kennel Club. By age 3, more than 80 percent of dogs and cats have some form of periodontal, or gum disease. Pet owner resistance to in-clinic dental procedures that involve x-rays and anesthesia is well known.

To optimize pet health, **the starting point for comprehensive oral care must be in the home** where bad breath is the primary warning sign. Most veterinary clinic personnel miss the opportunity to educate pet owners about daily oral care and promote in-home solutions for their pets.

Quite simply,
"a chew alone won't do."

Working with natural zinc compounds, Addison Biological Laboratory pioneered the use of a natural, zinc-based compound that is safe for daily use, inexpensive, taste-free and provides excellent pet acceptance. The unique formula works to break down plaque on contact and can be used daily without brushing.

Addison's neutralized zinc is a combination of select amino acids and zinc. Taurine and zinc gluconate form a complex bond that inhibits the precipitation of zinc in the neutral pH (6.7 – 7.0) range. In this narrow pH range, an oral zinc preparation delivers increased bioavailability that ensures its duration of effect and efficacy.

"Zinc is well documented to tie up sulfur compounds in the oral cavity which are a primary cause of bad breath, the first signal of impending dental disease." — Bruce Addison, Veterinary Microbiologist, President and Founder

Putting zinc to work

New to the MAXI/GUARD® product family are MAXI/GUARD® Oral Cleansing Wipes. They provide a proprietary neutralized zinc oral care compound on a textured applicator wipe. They are recommended for daily in-home use.

MAXI/GUARD® Oral Cleansing Wipes	
Features / Functions	*Benefits*
• Taste free	• Increases pet acceptance
• Oral product and applicator all-in-one	• No mess; more sanitary than a toothbrush
• Neutralized zinc formulation	• Removes plaque; resolves offensive mouth odors
• Quick and easy wipe application	• Supports pet owner compliance
• 100 textured wipes per large container	• Up to 100 days of effective daily oral care

email: info@k9gums.com.au ph: (03) 8795 0050
www.k9gums.com.au

Galliprant™

Treat Canine Osteoarthritis early so your patients can keep moving and doing the things they love

Recommend Galliprant as first-line treatment

- **FIRST-IN-CLASS** non-COX inhibiting NSAID[1]
- **UNIQUE MODE OF ACTION** specifically blocks the EP4 receptor, a key mediator of OA pain, but allows the production of prostaglandins involved in GIT and renal homeostasis
- **FOR ALL STAGES** of OA from the earliest clinical signs

For more information, please contact an Elanco Animal Health Consultant on 1800 995 709 from anywhere in Australia Monday to Friday.

INDICATION Galliprant is a NSAID that controls pain and inflammation associated with osteoarthritis in dogs.

1. Kirkby Shaw, K, et al. Vet Med Sci. 2016;2:3-9.

Read product leaflet for full instructions. The safety of Galliprant has not been established in dogs less than 3.6 kg or less than 9 months of age.

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www.elanco.com.au