



Parasite Forecast

Issue 10

Summer 2019

Welcome

Welcome to the ESCCAP UK & Ireland summer newsletter. This summer has seen record breaking temperatures and rainfall. These are ideal conditions for both tick and slug activity, as well as flea reproduction. Despite this potential 'perfect storm' for endemic parasites and their vectors to thrive, ESCCAP UK & Ireland has received record numbers of enquiries regarding *Leishmania infantum*.



These are partially in the light of the recent untraveled cases of leishmaniosis in the UK, but also a reflection of the increasing numbers of infected pets relocating to our shores. It remains vitally important that we remain vigilant for undiagnosed positive dogs entering the country, but also that we know how to treat and manage positive dogs that are being knowingly rehomed in the UK.

When faced with an influx of imported dogs infected with exotic parasites, it can be easy to forget about the importance of those parasites already present in the UK. That is why ESCCAP UK & Ireland is currently working with partners to promote awareness of endemic zoonotic parasites, particularly Lyme disease and hydatid disease. **Tick Aware Hampshire** is a collaboration of local government, Forestry Commission and campaign group working together to raise awareness of the risks of tick exposure and Lyme disease. Such cooperation between interested parties is to be encouraged and I was happy to join them on their maiden walk with local dog owners, giving simple tick prevention advice.

Hydatid disease has also proved difficult to eliminate and now appears to be on the rise, both in its traditional Welsh heartlands, but also in Britain as a whole. Raising awareness among high risk groups such as farmers and hunt pack workers, as well as the wider public, remains a priority for ESCCAP UK & Ireland this year. With organised cross industry One Health awareness campaigns in combination with simple practical measures, the trend of increasing Lyme and hydatid cases can be reversed.

In this issue of Parasite Forecast, as well our latest news section and summary of enquiries to ESCCAP UK & Ireland, we have a case summary describing a case of Lyme disease in the North of England. We also have the parasite forecast, summarising which parasites may represent an increased risk based on current information.

Parasite Forecast aims to keep veterinary practices, industry and academia up to date with ESCCAP UK & Ireland news and activities. We welcome any feedback, including any suggestions for future topics or case studies to cover. Please email info@esccapuk.org.uk

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To your parasite control success!

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Head of ESCCAP UK & Ireland



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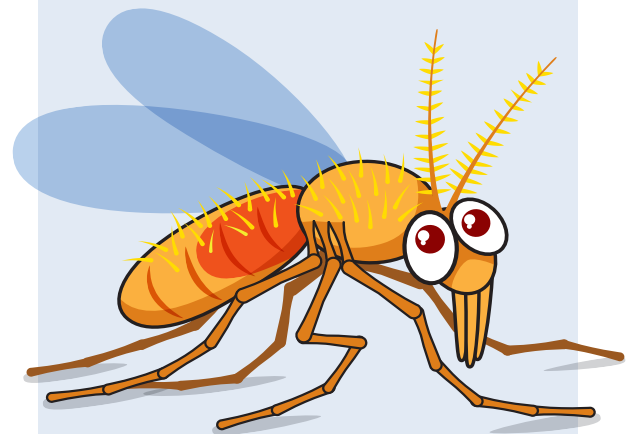
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Exotic disease in imported dogs from Eastern and Southern Europe

A BVA survey has revealed more than nine out of ten companion animal vets (93%) in the country are concerned about the import of rescue dogs from abroad, with three-quarters feeling the numbers have increased over the last year.

Cases reported to ESCCAP UK & Ireland reflect this, with leishmaniosis, heartworm and *Ehrlichia canis* in imported dogs remaining high. There have also been two recent cases of leishmaniosis confirmed in UK dogs with no travel history. The mechanism of transmission is unknown in these cases, so it is important to consider the risk to uninfected dogs when considering importing *Leishmania* spp. positive dogs to the UK, as well as potential risks to wider UK biosecurity. Heartworm cases have been reported this quarter in dogs imported from the US and Brazil, as well as Europe, demonstrating the need for vigilance in dogs imported from all endemic countries.



Sandflies are the vectors for *Leishmania* spp.

ESCCAP UK & Ireland recommend four key steps (the 'four pillars') when dealing with all imported or travelled pets arriving in the UK:

1. **Checking for ticks and subsequent identification of any found**
2. **Treat dogs again with praziquantel within 30 days of return to the UK and treat for ticks if treatment is not already in place**
3. **Recognise clinical signs relevant to diseases in the countries visited or country of origin**
4. **Screening for *Leishmania* spp. and exotic tick-borne diseases in imported dogs**

Following the 'four pillars' concept will enable veterinary professionals to prepare owners if parasites are present, improve prognosis of clinical cases, minimise the risk of spread of any disease and carry out effective disease/parasite surveillance.

Climate Change

A parliamentary briefing note has highlighted the variety of ways that climate may influence the geographical spread of vectors and vector-borne disease. Mosquitoes are one of the vectors benefiting from a warmer, wetter climate in Europe with the UK's recent and predicted weather benefiting current mosquito species and allowing establishment of new ones. Public Health England (PHE) runs a free mosquito reporting service and we encourage anyone able to capture mosquitoes to send them to PHE to help with surveillance. This work is important to help establish which vector-borne diseases UK mosquitoes are likely to transmit or allow to establish. For further information go to www.gov.uk/government/publications/mosquito-surveillance/mosquito-nationwide-surveillance

Fleas

The warm and wet weather will have helped to maintain high background flea populations.

The Big Flea Project results have been released, finding 28.1% of cats and 14.4% of dogs positive for fleas (<https://parasitesandvectors.biomedcentral.com/articles/10.1186/s13071-019-3326-x>). Of the infested pets, 11.3% were found to be harbouring fleas infected with *Bartonella* spp. An infected population of this size puts the UK pet owning population at significant risk of exposure to this zoonotic pathogen, making routine flea control essential for all domestic cats and dogs. Veterinary professionals should continue to advise routine year round preventative treatment to prevent house infestations.

Lungworm

The warm and humid weather is likely to support continuing slug and snail activity. Veterinary professionals should be vigilant for cases of lungworm in their area and advise preventative treatment for high risk dogs (previously infected dogs, those dogs living in close proximity to other cases, those ingesting slugs, snails, grass and amphibians and those that are coprophagic). A recently published paper has demonstrated a low but significant prevalence (1.7%) of *Aelurostrongylus abstrusus* lungworm infection in cats across the UK. Outdoor access was identified as a major risk factor with a greater chance of infection in the East Midlands and South East of England (www.sciencedirect.com/science/article/pii/S2405939018301618?dgcid=author). This paper demonstrates the widespread presence of feline lungworm across the UK and the importance of considering it in parasite control programs for cats with outdoor access.

A fatal case in a kitten has been documented in the vet record (<https://veterinaryrecord.bmj.com/content/184/8/257.1>), demonstrating that although *A. abstrusus* infections are often mild or sub clinical, they can be severe, especially in kittens and the immune suppressed patient. Lungworm should be considered as a differential in feline respiratory cases and as part of parasite control programs in at risk cats.



Tick-borne disease

Additional data continues to support the view that the current UK climate allows questing and feeding of *Ixodes* spp. ticks all year round.

(<http://veterinaryrecord.bmj.com/cgi/content/full/vr.104649>).

The warm spell has promoted further increases in grass and foliage height. This means that owners and veterinary professionals should be aware of potential tick attachment to pets and owners throughout the summer.

Checking for and removing ticks within 24 hours, and using an effective product that will rapidly kill or repel ticks, will greatly reduce the risk of transmission for pets and owners walking in high risk areas such as outdoor areas with tall grass, bracken and those shared with deer or ruminants. Pets with a previous history of tick exposure should also be treated as it is likely their lifestyle will expose them to ticks again in the future.

A recent study has supported an association between Lyme positive dogs and human exposure linked to shared environmental exposure (<https://geospatialhealth.net/index.php/gh/article/view/750>). Positive dogs are therefore sentinels for human infection and owners of positive dogs should be aware of the possibility that they may also have been exposed.

Toxocara canis

There remains no current data on the prevalence or incidence of human toxocarosis in the UK. Recorded prevalence of patent infection in untreated UK adult cats and dogs does continue to be high (5% dogs, 26% cats, most recent figures from Lancashire, 6% dogs, 32% cats most recent figures from Ireland).

Due to the zoonotic risk this represents, and the potential for all cats and dogs to be infected, ESCCAP UK & Ireland continues to advise all UK cats and dogs are treated at least every three months to reduce egg shedding and high risk groups (those cats and dogs on raw unprocessed diets, those that hunt, those living with children or immune compromised adults) should be treated monthly.

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Echinococcus granulosus

Work carried out on behalf of the Welsh Government and FSA offal condemnation figures both demonstrate that the incidence of *Echinococcus granulosus* is much more widespread in Britain than previously thought.

Post-mortem inspections in abattoirs across Britain have produced positive cases with a particularly high incidence on the Welsh border and North Midlands. HyData UK is a 3-year (2016-2018) multi-centre collaborative study investigating the national distribution of *Echinococcus granulosus* in high-risk dog populations (hunting hounds, farm dogs and pet dogs in rural areas), livestock (cattle, sheep) and horses at slaughter in England, Wales, Scotland and Northern Ireland. Using a molecular epidemiological approach and GIS methodology, the study aims to build the most comprehensive picture of *E. granulosus* geographic distribution in the UK and explore associated risk factors for animal and human infection. Until these results become available, prevention advice to pet owners must be based on lifestyle risk of the pet, including:

1. Monthly treatment with praziquantel of all dogs in known hydatid endemic areas unless kept on leads and fed cooked diets
2. Monthly treatment with praziquantel for any dogs outside these areas shedding *Taenia* spp. tapeworm segments (the risk factors for *Taenia* spp. and *E. granulosus* infection are broadly the same), fed raw offal/unprocessed raw diets or have access to fallen livestock.
3. At least 4 times a year praziquantel treatment for dogs in non endemic areas that are out of sight off lead with potential pasture access.
4. Promotion of anti dog fouling, keeping dogs on leads around farms and livestock, and promotion of adequately frozen or cooked diets.



Case report

The increasing incidence of human Lyme disease has received a lot of recent press attention, but dogs are also at risk of the disease – as demonstrated by a recent case in Fleetwood Lancashire.



Suspected case of Lyme disease in a Labrador, Fleetwood

Bella, a 5 year old neutered female Labrador, presented to a clinic in Fleetwood with raised submandibular lymph nodes and inappetence of 4 days duration. Bella had remained bright and examination was unremarkable other than a body temperature of 39.6 degrees Celsius. Bella had been unvaccinated since being a puppy, frequently visited the Lake District and had a history of recent tick exposure. Blood tests were therefore taken for *Borrelia* spp. C6 serology, haematology and biochemistry. Fresh urine was also sent for *Leptospira* PCR. Urine tested negative and no abnormalities were observed on blood tests other than serology being positive for *Borrelia* spp.

After discussion with the owner, it was decided to start antibiotic treatment for Lyme disease, given the clinical picture and positive serology. This is not proof of infection or causality but sufficient evidence to warrant treatment. NSAIDs were also administered to correct the pyrexia which was already relatively long standing. Response to treatment was rapid with normal range body temperature and improved appetite within 48 hours. Lymphadenopathy resolved within 7 days, but antibiotic treatment was continued for 4 weeks to eliminate any persisting infection.

This case demonstrates the importance of accurate history taking, as Fleetwood is not considered high risk for ticks, but the pet had history of both travel to a high risk area and also known exposure to ticks. Achieving a definitive diagnosis of Lyme disease is difficult but positive C6 serology in combination with clinical signs is justification for treatment, often with an excellent outcome in the absence of complicating renal factors. The development of patient side serology tests has made diagnosis both rapid and affordable to the client.



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ESCCAP UK & Ireland supports Tick Aware Hampshire

ESCCAP UK & Ireland participated in Tick Aware Hampshire's tick awareness day walk – marking the start of tick awareness month.

Tick Aware Hampshire are a collaborative group of local authorities and organisations including the County Council, National Park Authority and Forestry Commission, working to raise awareness of the issue of tick-borne disease transmission and share information about precautions. Feedback on the day from dog owners was excellent and hopefully this will be the start of further collaborative work with the group.

Tick Aware
Hampshire



Hydatid Awareness meeting in Wales



ESCCAP UK & Ireland hosted a hydatid meeting in Llandovery, Wales. Special thanks to Arjen Brouwer and Marisol Collins for speaking.

Arjen has been involved in gathering vital abattoir trace back data and Marisol is currently completing the HyData project that will give essential UK distribution data on the parasite.

Farmers, Welsh Government, APHA and vets were all represented at the meeting and we look forward to working with a wide range of partners and our sponsors to raise awareness of what is still a significant zoonotic risk in the UK.

Key points were:

- Hydatid is still very prevalent in Mid Wales
- There is strong evidence to suggest Hydatid is endemic in other parts of mainland Britain as well as the Western Isles of Scotland
- Current awareness is low while human cases of hydatid are still occurring



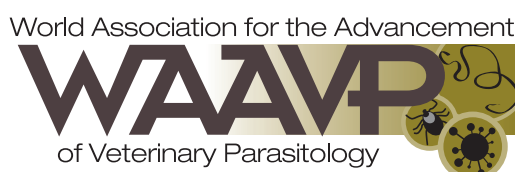
- More data is needed to establish whereabouts in Britain *Echinococcus granulosus* is endemic. The HyData project will be next piece of research to help address this.
- Regular deworming of at risk dogs, increased education of high risk professions such as hunt kennel workers, anti dog fouling campaigns and prevention of dog access to raw offal and fallen carcasses is vital to reduce disease incidence.
- If we do not act now then we won't know the consequences on human health for many years, due to the parasite's long incubation period.

ESCCAP at WAAVP 2019

ESCCAP UK & Ireland helped promote and run the ESCCAP stand at the World Association for the Advancement of Veterinary Parasitology (WAAVP) held in Madison, USA.

Thanks to IDEXX for making this booth available to ESCCAP and to all those who helped over the course of the conference. Modular Guidelines were available for anyone visiting the stand and there was considerable interest in the Guidelines from people both teaching and researching the field of parasitology.

TroCCAP (Tropical Council for Companion Animal Parasites) was also present and our two organisations will be working closely to produce pet travel and importation guidelines alongside CAPC (Companion Animal Parasite Council) - so watch out for those in 2020!



FAQs updated on ESCCAP UK & Ireland website

The FAQ section on the ESCCAP UK & Ireland website has been updated to reflect the large numbers of questions received regarding exotic parasites as well as a range of domestic parasites. They can be found at www.esccapuk.org.uk/page/FAQs/43/



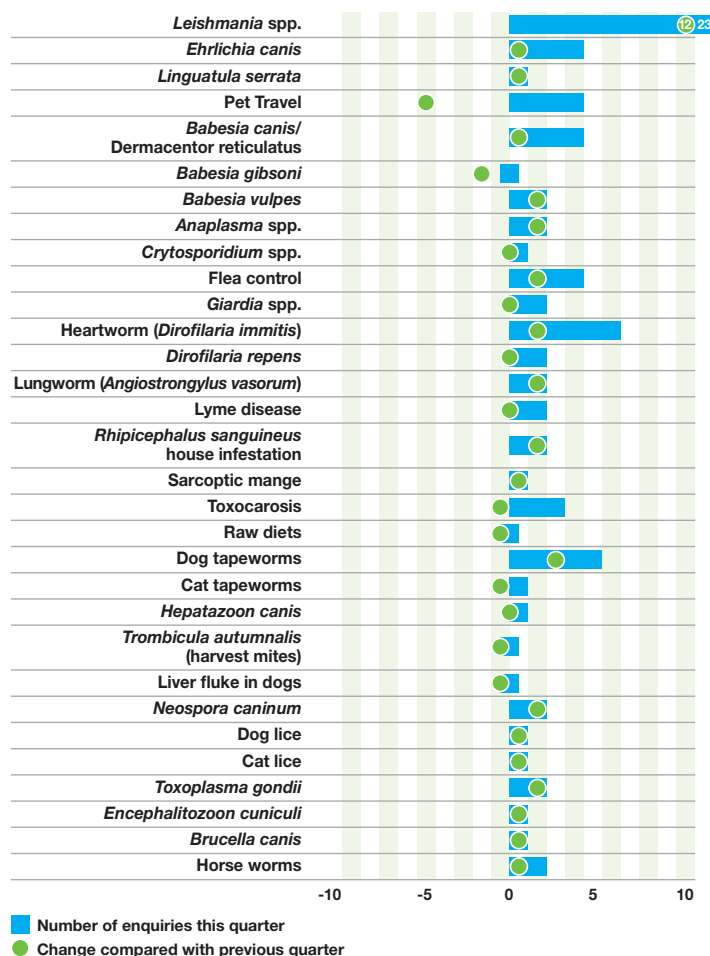
ESCCAP UK & Ireland Enquiries

ESCCAP UK & Ireland has received questions from veterinary professionals and the public regarding a wide range of subjects in the last three months.

The most enquiries this quarter has once again regarded imported cases of *Leishmania infantum*; with a record number of enquiries for this parasite. There have also been enquiries concerning *Ehrlichia canis*, *Babesia* spp. and heartworm, reflecting the ever increasing number of non-native pathogens being seen in travelled and imported pets.



The continuing uncertainty over Brexit has also seen pet travel enquiries remains high. Enquiries regarding dog tapeworms have also increased, possibly because of ESCCAP UK & Ireland's concerted effort to raise awareness of hydatid disease through veterinary literature.



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