

Parasite Forecast

Issue 08

Winter 2018 / Spring 2019



Welcome

Welcome to the ESCCAP UK & Ireland quarterly newsletter. In 2018 we saw highlighted the increasing problems of illegal and legal pet importation with the BVA's 'Trojan Dog' campaign and increasing numbers of exotic parasites being diagnosed in dogs from all over the globe. The risk of establishment of tick-borne pathogens, *Echinococcus multilocularis* and even *Leishmania infantum* loom large and ESCCAP UK & Ireland has worked with the Dog's Trust and APHA to raise awareness of this growing trend.

Throughout 2019 we will continue to work with interested parties and support practices in educating the public regarding pet importation, so that they can make informed decisions.

Pet Travel regulations will be a major focus for the whole veterinary profession in 2019 as it is uncertain what the requirements will be post Brexit. As well as the logistics for preparing for possible additional requirements for EU travel such as rabies blood testing, the Pet Travel Scheme is also up for renegotiation. As a profession we need to consider what changes are practical Europe wide to help maintain biosecurity and reduce the spread of parasites.

There will also be the opportunity for the Government to insist on specific requirements for pets entering the UK. While some of these are desirable, such as compulsory testing for *Leishmania* spp., tick-borne diseases and reintroducing compulsory tick treatments, this is likely to come at the expense of the frictionless movement of UK pets around Europe which many pet owners currently enjoy. In such times of uncertainty, ESCCAP UK & Ireland will continue to give independent, evidence-based advice.

While so much focus is rightly being placed on the threat of exotic disease, it is important not to forget the parasites endemic in the UK. 2019 will see the publication of both the Big flea and HyData projects. These will shed light on the prevalence of flea-borne pathogens such as *Bartonella* spp. and foci of *Echinococcus granulosus* in hunting dogs in Britain. This information is vital to give accurate risk-based flea and tapeworm advice.

All of these parasites, both home-grown and foreign invaders need to be considered when taking a risk-based approach to parasite prevention in UK cats and dogs. Throughout 2019, ESCCAP UK & Ireland will endeavour to continue to provide advice, support and materials to the veterinary profession and pet owning public to aid in parasite control.

We have had a very active 2018, none of which would have been possible without the help and support of our sponsors, donors and fellows, for which we are extremely grateful.

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 chronic ehrlichiosis in a dog imported from Greece. 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

To sign up to future editions of Parasite Forecast, please visit www.esccapuk.org.uk/newsletter/subscribe/

Each edition will also be published on the ESCCAP UK & Ireland website www.esccapuk.org.uk

To your parasite control success!

Ian Wright
Head of ESCCAP UK & Ireland



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Linguatula serrata adult (courtesy of Neil Walsh, Avenue Vets)

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 continuing to be high.

Dogs in the UK imported with *Linguatula serrata* infection continue to be a concern with a recent case reported of an import from Turkey. This parasite is endemic in the Middle East and should be considered as a differential in dogs that have been imported from this region and Eastern Europe presenting with rhinitis, epistaxis, gagging or upper airway signs.

Heartworm cases have been reported this previous quarter in dogs imported from Brazil, Singapore and South Korea as well as from Europe, demonstrating the need for vigilance in dogs imported from all endemic countries, not just those in Europe.

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

1. Check 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.

Fleas

The mild and humid Autumn will have helped to maintain high background flea populations.

Veterinary professionals should continue to advise routine year-round preventative treatment to prevent house infestations and transmission for vector-borne diseases such as bartonellosis.

Lungworm

Reports of *Angiostrongylus vasorum* remain high and warm humid conditions are likely to support continuing slug and snail activity.

Research conducted at the Royal Veterinary College has demonstrated that foxes are an important all year-round source of infection with a mean prevalence of infection of greater than 74% in Greater London and no significant seasonal variation in prevalence.

This constant source of infection means year-round exposure for intermediate hosts such as slugs and snails if weather conditions allow them to remain active. It is therefore vital that dogs receive year-round preventative treatment if living in high prevalence endemic foci such as London.

Veterinary professionals should remain vigilant for cases in their area and advise preventative treatment for high risk dogs (previously infected dogs, those dogs living in close proximity to other cases, those eating slugs, snails, grass and amphibians).



Tick-borne disease

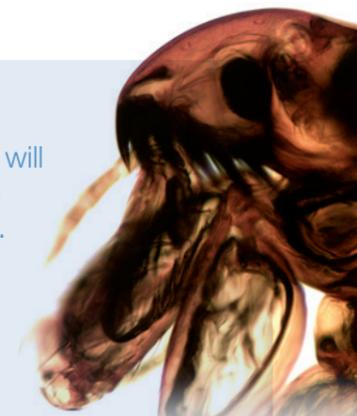
Late summer and autumn humidity has helped to maintain grass and foliage height throughout the winter.

This means that owners and veterinary professionals should be aware of potential tick attachment to pets and owners, throughout the winter months.

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 also for 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. *Babesia canis* continues to be endemic in Essex and possibly adjoining counties, so tick prevention in dogs with outdoor access living in or visiting these counties remains very important.

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Echinococcus granulosus

The ongoing threat to human health presented by *Echinococcus granulosus* and hydatid disease was recently highlighted in a comment piece to the Lancet.

It emphasised the importance of control of this zoonosis in endemic countries and the importance of frequently deworming at risk dogs to reduce and hopefully eliminate the risk to people.

While the risk to the UK population from hydatid disease is nowhere near as high as in Eastern Europe and Asia where WHO efforts are focused, the UK is also endemic for this parasite and failure to take adequate steps to control it can result in significant human suffering and morbidity. Work carried out by the FSA on behalf of the Welsh Government found that the incidence of *Echinococcus granulosus* was much more widespread in England 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 *Echinococcus 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* tapeworm segments (the risk factors for *Taenia* and *Echinococcus granulosus* infection are broadly the same), fed raw offal/unprocessed raw diets or have access to fallen livestock.
3. Quarterly 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

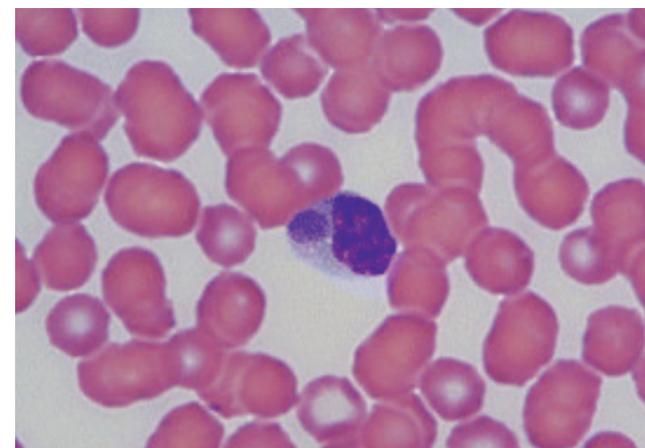
ESCCAP UK & Ireland regularly receives enquiries relating to exotic parasites in imported dogs. One such parasite being seen in travelled UK dogs with increasing frequency is the tick borne *Ehrlichia canis*.

Suspected chronic ehrlichiosis in a dog, Cheshire

Annie, a 9 year old neutered female Labrador Retriever rescued from Greece three years previously, presented to a clinic in Cheshire with lethargy and reduced appetite of one week duration. Clinical exam revealed a marked splenomegaly but was otherwise unremarkable. Haematology and biochemistry revealed mild non regenerative anaemia, leucopaenia, thrombocytopenia, hypoalbumaemia and hyperglobulinaemia. Abdominal ultrasound revealed the spleen to be enlarged with a normal echotexture. No other abnormalities were found on the scan so, given the travel history, blood tests were carried out for Leishmania spp. and tick-borne pathogens. The patient was negative by quantitative antibody ELISA for Leishmania spp. but positive for *Ehrlichia canis*. Given the long period of time since foreign travel, this made a diagnosis of chronic ehrlichiosis very likely.

To confirm, ultrasound guided fine needle aspirates of the spleen were sent for *Ehrlichia* spp. PCR and a positive result obtained. The prognosis for chronic ehrlichiosis is poor but given the initial mild changes on biochemistry and haematology, treatment with doxycycline was attempted. The patient unfortunately deteriorated rapidly on treatment and after further discussion with the owner, euthanasia was opted for.

This case demonstrates that chronic ehrlichiosis can present initially with non-specific and mild signs but with rapid deterioration then being typical. It can develop months or years after initial infection and therefore travel history may not be recent. It should be considered as a differential in any systemic illness case with a history of travel, particularly those involving splenomegaly, anaemia, thrombocytopenia, leukopenia and lymphadenopathy.



Microscopic image of a morula of *Ehrlichia canis* in the cytoplasm of a monocyte (x100)

"Microscopic-image-of-a-morula-of-Ehrlichia-canis-in-the-cytoplasm-of-a-monocyte-x100" by https://www.researchgate.net/figure/Microscopic-image-of-a-morula-of-Ehrlichia-canis-in-the-cytoplasm-of-a-monocyte-x100_fig1_272076390 is licensed under <https://creativecommons.org/licenses/by/4.0/> / image cropped from original.

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The One Health Triad



Latest news from ESCCAP UK & Ireland

ESCCAP UK & Ireland supports Bristol 'One Health' series of lectures

ESCCAP UK & Ireland presented a lecture on a One Health approach to Lyme disease to students at the University of Bristol.

This formed part of a series of lectures on One Health topics, which will become increasingly vital as zoonotic infections become more prevalent due to changes in climate, habitat and animal movements.

Nottingham Vet School publish ESCCAP UK & Ireland funded *Angiostrongylus vasorum* study

Nottingham Vet school have published an ESCCAP UK & Ireland funded study investigating the chosen therapies and prophylaxis used by UK primary care veterinary surgeons against canine angiostrongylosis.

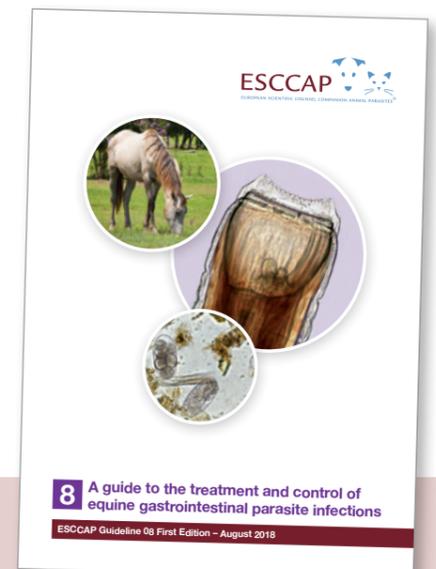
The study showed that the majority of practices in the survey included *Angiostrongylus vasorum* prevention in their parasite prevention protocols, with moxidectin the most commonly selected drug for prevention. Fenbendazole remained the most popular choice for treatment despite being unlicensed and an optimal treatment length still not having been established.

Further research is required to see if fenbendazole is still widely used across the country and whether sub optimal treatment might be occurring as a result.

ESCCAP launch new equine guideline

The ESCCAP Equine Guideline is now available!

This comprehensive guide to parasite distribution and control in European horses can be downloaded from the ESCCAP website and will be followed by a series of equine focused articles by ESCCAP UK & Ireland throughout 2019.



ESCCAP UK & Ireland Plans for 2019

ESCCAP UK & Ireland has been pleased to announce some of its other plans for the year. These include:

Ectoparasite ID materials

Flea and tick identification posters and leaflets will be made available for download on the website to help assess which fleas and ticks may be involved in specific infestations.

Equine materials

The launch of the ESCCAP equine guideline will be followed by a series of associated articles and an equine 'parasite wheel', similar to the ones currently available for cats and dogs.

Big Flea and HyData project meetings

The results from these nationwide studies will indicate the potential risk that zoonotic flea borne pathogens such as *Bartonella* spp. and *Rickettsia felis* pose in the UK and give an indication of the location of endemic foci of *Echinococcus granulosus*. ESCCAP UK & Ireland will be arranging CPD events with its partners and public forum meetings to help raise awareness of the risks these parasites pose and consider effective control strategies.

Borrelia spp. and *Anaplasma* spp. seroprevalence study

ESCCAP UK & Ireland will be collaborating with IDEXX to carry out a seroprevalence study in dogs across the UK testing for *Borrelia* spp. and *Anaplasma* spp. This will create the first meaningful data set indicating how these pathogens in *Ixodes* ticks is translating into infection in dogs. This study, its aims and results will be promoted through the website, blogs and articles.

Vet school research support

Results of ESCCAP UK & Ireland funded studies will be summarised and highlighted on the website as they are published. This will include Nottingham Vet School's investigation into the prevalence of *Toxocara* spp. eggs in public sandpits in the UK, the degree of contamination and the risk it may pose to public health.

Online interactive CPD

ESCCAP UK & Ireland will be adding to their existing collection of CPD to provide more interactive and accredited learning opportunities for veterinary professionals.

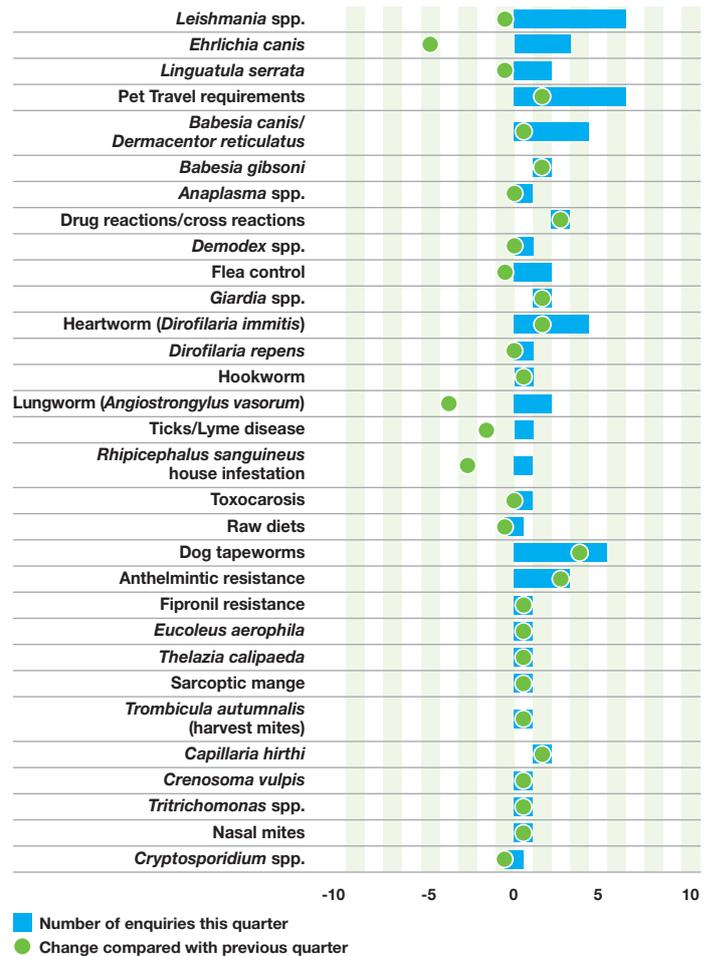
ESCCAP UK & Ireland Enquiries

ESCCAP UK & Ireland have received enquiries from veterinary professionals and the public regarding a wide range of subjects in the final quarter of 2018.

The most enquiries have continued to be regarding exotic parasites such as *Leishmania infantum*, *Ehrlichia canis* and heartworm, reflecting the ever-increasing number of non-native pathogens being seen in travelled and imported pets.

Concerns over pet travel regulation post Brexit has also seen pet travel enquiries shoot to the top of the list. Interest in canine tapeworms remain high and is likely to be fuelled by the release of the HyData project data in 2019.

There has also been a sharp rise in enquiries regarding drug resistance and interactions and ESCCAP UK & Ireland is happy to advise on product licenses and drug concerns.



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