Birmingham Natural History Society

Founded 1858

Registered Charity No 500819

President: Ms Kat Clifford

Internet address: bnhsoc.org.uk

NEWSLETTER No 115 – January 2019

Lecture Programme reminder – Early 2019

Friends Meeting House, Selly Oak, starting at 7.30 pm

18 January 2019	**Dr Peter Coxhead** – Introduction to spiders
15 February 2019	**Hein van Grouw** – Not every white bird is an albino: some black-and-white facts about colour aberration in birds
15 March 2019	**Rosemary Winnall** – The nature of Wyre.
19 April 2019	**Kat Clifford – AGM and Presidential lecture** – Extinct megafauna: giant sloths, mammoths, moas ….

Further details are on our web site at http://bnhsoc.org.uk/bnhsProg.htm

MEMBERSHIP

The Society is trying to make sure it has an up-to-date record of membership.

We get an automatic record of those paying by standing order, and of course those paying by cheque or cash at one of our meetings (preferably the January meeting!) will be noted. For members sending a cheque through the post (note the new address), please return this payment as soon as you can, with your details on the enclosed reminder and payment slip, and again you will be confirmed on our list.

If you do wish to discontinue membership you can always email me at peterjarvis668@gmail.com. I'm afraid that anyone not paying for two years will be deemed to have let their membership lapse, but then at least we'll stop sending you unwanted newsletters!

Peter Jarvis
Membership Secretary

LIBRARY

We probably have a new home for the Library. Following overtures by Geoff Barnbrook to the Moseley Combined Services Club, located at 91 Church Road, Moseley, and a reconnaisance visit by Geoff together with other members of Council (President, Hon Librarian, Hon Secretary and Janet Antrobus) there is agreement in principle with the Club's Secretary to use one of their upstairs room for our book cases. It is anticipated that borrowing of or indeed access to books and journals will usually be by arrangement with Geoff Barnbrook, who lives nearby (contact details later). A list of library holdings will be made available to members via the Society's web pages (with a printout for those wanting one). Among other options, books can of course be brought to meetings.

It is anticipated that the room will become available early in the year, and the book cases and books can then be moved out of storage. The one great shame, of course, is that the library will no longer be in the Selly Oak meeting room.

RSPB BIG GARDEN BIRDWATCH: 26-28 JANUARY

Interested? Sign up for a free postal pack or register online at https://www.rspb.org.uk/get-involved/activities/birdwatch/packrequest/

Health hazards to wild birds associated with garden feeding.

Work on emerging infectious diseases and garden birds in the UK has been supported by citizen science projects, most notably Garden BirdWatch, Garden Wildlife Health and the Garden Bird Health Initiative – the latter now superseded by Garden Wildlife Health. Through these schemes, researchers have been able to carry out national surveillance of emerging diseases, including finch trichomonosis, Paridae pox and passerine salmonellosis. An article by Becki Lawson and five of her colleagues published last year in the *Philosophical Transactions of the Royal Society B: Biological Sciences* (https://doi.org/10.1098/rstb.2017.0091) reviewed the work that has been carried out on these diseases over the past 25 years.

Kate Risely has summarised much of this work in the BTO publication *Bird Table* (Spring 2018).

Avian trichomonosis, caused by the protozoan parasite *Trichomonas gallinae* is a disease of the throat caused by a parasite, transmitted via saliva, which affects birds' ability to feed. It is most often diagnosed in greenfinches and chaffinches, though it has been found in most seed-eating birds that visit feeders. This disease causes mortality year-round, though with a peak in late summer (August-September). It has long been found in pigeons and birds of prey, but was first seen in finches in this country in 2005. We don't know exactly how finch trichomonosis arose, but it seems likely that this was originally due to 'spillover' transmissions from woodpigeons (which have recently increased their use of garden feeding stations) to finches, using bird feeders, and has since been maintained by finch-to-finch transmission. As a direct result of trichomonosis, the greenfinch population has declined from a peak of 4.3 million in 2006 down to 1.5 million pairs in 2016. This has led to the British race of greenfinch being red-listed as a Bird of Conservation Concern.

Avian poxvirus has been documented in a number of garden bird species and is most often seen in house sparrow, starling, woodpigeon and dunnock, again with a seasonal peak in late summer. Its emergence in UK tits saw a more severe form of the disease, resulting in pronounced skin lesions, some of which were likely to have hampered the individual's ability to feed and to avoid predators. Sequence analysis of the poxvirus strains affecting garden birds revealed that a single clade is responsible for the disease seen in UK tits. This form has been known in Scandinavia since the 1950s, with incidents seen elsewhere in mainland Europe since 2005. In 2006 a strain emerged in south-east England that particularly affects great tits, which has since spread north and west across England and Wales. Because UK tits are relatively sedentary in their habits, and because of the geographical pattern of disease spread seen, it is likely that the disease reached the UK via a biting insect such as a mosquito crossing the English Channel in a warm plume of air. The virus can remain in the environment for months, for example on feeders.

Salmonellosis has been reported in wild birds since at least the 1950s, with the bacterium responsible, transmitted via droppings, capable of persisting in the environment for many months. Greenfinch and house sparrow are the two species in which the disease is most often seen. Passerine salmonellosis incidents have a clear seasonality, peaking in January. That the prevalence of the disease in UK passerines has dropped sharply over recent years may reflect increased immunity to the particular form (DT56v) that had been seen here, or it may be that transmission is density-dependent, with the sharp decline in greenfinch populations resulting in much lower rates of transmission.

Mycotoxins, which include the **aflatoxins** and **ochratoxin**, are secondary metabolites produced by certain fungi of the genera *Aspergillus* and *Penicillium*. Exposure to the aflatoxins and ochratoxin can exert a range of adverse effects in birds, including suppression of the immune system. These toxins have for example been found in the livers of house sparrows and greenfinches. The fungi involved and their toxins are known to occur on bird feed, including peanuts, especially under warm conditions. Food residues from bird feeders were screened for the toxins, with detectable aflatoxin residues found in all seven samples, two of which greatly exceeded the maximum permitted limits set for such residues in peanuts destined for livestock feed, which includes wild bird food. It therefore seems likely that garden birds may be exposed to these toxins at levels associated with toxic effects in captive birds.

In general, disease risks are increased when large numbers of birds congregate, particularly those that wouldn't normally come into close contact in the wild, and if feeder hygiene is poor.

Birds using garden feeders may be attracted from a much wider area, and finch trichomonosis has highlighted the importance of garden feeders in the transmission of diseases that can affect populations, as well as wild bird welfare. However, there is much that is still unknown about the risks of different types of feeders. For example, horizontal feeding surfaces may increase the transmission risk of trichomonosis, where saliva and regurgitated food from infected birds can easily contaminate fresh food. On the other hand, hanging feeders may increase contact rates via perches or mesh, and facilitate transmission of avian pox.

The BTO advises:

• Offering a **variety of foods** from reputable sources.

• **Feeding in moderation** (i.e. only putting out an amount of food that will be consumed while fresh, within one or two days).

• Regularly **cleaning and disinfecting** bird feeders and tables, and removing old, wet food and droppings.

• Occasionally **moving feeders to different parts of the garden,** to avoid build up of droppings and waste food.

• Using feeders with designs that **prevent food becoming moist or contaminated** with droppings, and that allow easy cleaning.

• **Storing food appropriately** (dry, with no rodent access).

To contact the Hon Secretary or to provide copy for the next Newsletter:

Dr Peter Jarvis: 23 Crosbie Road, Harborne, Birmingham B17 9BG 0121 427 1010 peterjarvis668@gmail.com

SAVE paper, printing and postage costs: could members let me know if they would be happy to receive the Newsletter by email.

Many thanks to the increasing number of members who have already done this.