



Editor: John Kane
12 Marlborough House,
Richmond TW10 5AR

Email: editor@selbornesociety.org.uk

Web: www.selbornesociety.org.uk

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THE SELBORNE SOCIETY NEWSLETTER

GUEST EDITORIAL

I am very pleased to be given the opportunity to write to you all in this newsletter. The reason I'm writing this time, and not David our Chairperson, is that we have decided to restructure some aspects of the way in which we organise ourselves to ensure the Society remains accountable and focused and that people aren't taking on too much. To do this we have created some new auxiliary roles - assistant this, vice-that - and I will be helping David by taking on the role of Society Vice-Chair. A privilege indeed!

I have been a member of the Society ever since my first visit to Perivale Wood shortly after I moved to Ealing with my family. I have been a trustee for the last three years and many of you will know me from our juniors group, the Rangers, or from my work with the archaeology group (PWHAG), or indeed from our conservation and hedge-laying sessions.

As David wrote in the previous newsletter, the Society continues to adapt and change. We need to ensure the Society continues to be vibrant and relevant and my role is to support David and step in for him when needed and to write the occasional article for the newsletter, of course.

One area of change in the last couple of years is our Education Programme. The wonderful Bluebell Centre is now open and can be used for visiting schools, educational groups, field meetings, evening meetings and the Annual General Meeting. The building is a testament to the commitment of our volunteers, their enthusiasm and vision.

Autumn brings change too and some of you may have noticed that this year we have used mechanical methods to mow the meadows. The grass has been cut to different lengths so that we can compare the impact this makes on the flora next year. For more detail on this, see Nic Ferriday's article inside this newsletter. We also have plans for a new pond dipping platform and the hedge-laying and coppicing programme will get underway over the coming months. There is a surprising amount that goes on throughout the winter.

Thank you for your continued support and I look forward to seeing you at the Reserve soon.



Kim Wakeham

Inside this issue:

New Building Milestone	3
Managing our Meadows	4
Selborne Village's Apple Day	5
Parasites: Friends or Foes	6
Society Outing to Ickworth House	8

NOTES AND LETTERS

RESERVE KEYS - THE ARRANGEMENTS

Members are reminded that keys to the Reserve may be borrowed by calling in at Perivale Library and leaving your membership card as a deposit. Borrowed keys should be returned promptly upon leaving the Reserve so that other members are not inconvenienced.

Library opening hours are 9 - 5pm Tuesdays, Thursdays and Fridays and 10 - 5pm on Saturdays and you should make sure you leave the Reserve in good time to return your key and retrieve your membership card during their opening hours. Security of access to the Reserve is very important and we would ask all visitors to lock the gates after entering, as well as when they are leaving.

Finally, just a reminder that the area around the Reserve is a Controlled Parking Zone (CPZ) from Monday to Friday. To avoid a hefty fine, only park there during the allowed hours.

Information on Perivale Library and CPZ is available on the Ealing Council website via these links:

- www.ccslibraries.com/libraries/ealing-libraries/libraries/perivale-library
- www.ealing.gov.uk/directory_record/230/p_perivale

ANNUAL SUBSCRIPTION REMINDER

Members are reminded that subscriptions are due on 2nd January. Rates for 2018 remain the same as last year, as follows:

Adult subscription £10
Couple at same address £15
Juniors £3
Lifetime membership £200
Joint Life Membership £350

Make cheques out to "Selborne Society" and send them to the Membership Secretary at:

89 Daryngton Drive, Greenford, Middlesex UB6 8BH

Please include a SAE if you would like your membership card to be sent to you directly. Otherwise, it will be enclosed with your copy of the next newsletter.

Rae Hall
Membership Secretary



NEWS

We are very excited to announce that the Selborne Society will soon have its very own Young Archaeologist Club (SSYAC)!

With a planned launch date of May 2018, the SSYAC will add an additional dimension to the education and rangers sessions. Falling under the umbrella of The Council for British Archaeology, the SSYAC sessions will focus on the archaeology of Perivale Wood and its environs to children aged 8-16 yrs.

We are also looking for volunteers to join the team to lead and organise sessions. The sessions will be on the 2nd Saturday morning of each month (same Saturday as the Rangers sessions). Please email kim@perivalewood.co.uk for more information.

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Kim Wakeham



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NEWS FROM THE RESERVE

THE BLUEBELL CENTRE IS OPEN!

After nearly three years and hundreds of volunteer hours, the Bluebell Centre is fully open and is already being used by members for meetings. To remind you, we started this project with a group of trustees who wanted to build a replacement hut. The “hut” we built is functional, aesthetically pleasing and constructed using low carbon methods and materials. Previous articles have gone through the amount of recycled materials we have used and its low carbon design, what we have not written about is the official certification process we had to undergo.

As with all building work, Ealing council had to be involved. Before we began we had to determine if the building would be a permitted development and submit initial planning drawings to the planning department. We appointed an architect who specialises in straw bale buildings. They submitted detailed drawings to the Planning Department. Once we had received planning approval, they continued and produce detailed drawings for submission to Building Control. The Architects produced 32 drawings. Even with this number of drawings to work with the Build Team had to produce another 40 drawings to determine the methods of construction, construction details, wiring diagrams etc. to enable the building to be constructed.

The vast majority of the building works was carried out by Selborne Society volunteers. Very few of the Team knew each other before starting this project but many new friendships have been formed. Many of those involved enjoyed the camaraderie so much that they wished to continue being involved, so Tuesday is still a volunteer day.

This is the first Straw Bale Building in Ealing so there were several issues we had to overcome, not least the foundations being just 600mm deep and consisting of used car tyres. Building Control are more familiar with a concrete material and being up to 2metres deep in normal buildings.

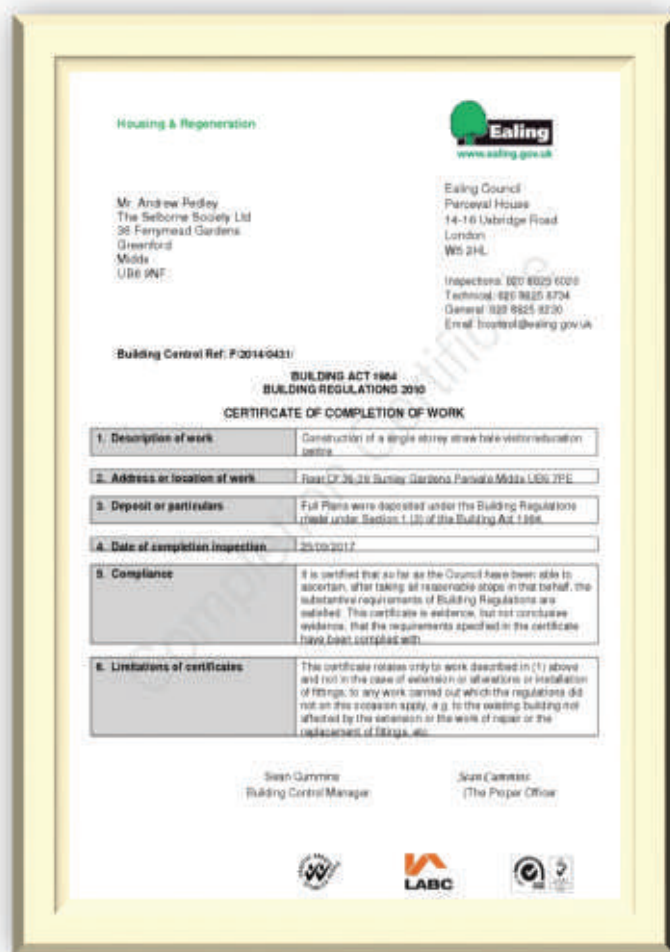
We answered all their questions and then started work, with them visiting us on site to inspect the work as we progressed. Because it was a new

concept to the Council they had to be cautious and challenged several issues that we had to resolve before we could move on.

Then we arrived at the final sign-off which we needed to enable us to get insurance cover. We have three visits before we got the final agreement and certificate. This has taken six months with us working on whatever they raised but, although some were minor issues, we now have a better building for going through the process.

The Build Team have built this building with care and hope you all enjoy using it. We have not put up our feet as we are now looking at the whole Reserve and have made a long list of jobs to be completed to make your future visits more enjoyable.

John Morrell and John Sears



Building Regulations Certificate of Completion

NEWS FROM THE RESERVE

MANAGING OUR MEADOWS

About two years ago Claire's lovely and popular old horse Fire died. This left us with a major issue about grazing in 2016. Claire was unable to continue grazing horses so we desperately needed some new ones.

Fortunately, West London Stables came to the rescue. It was a month after we would normally start grazing, but because they brought in 4 horses, the backlog was overcome. However, the horses were problematic - they were not as docile as the old ones and they stayed far longer than we wanted.

The owner did not offer to graze in the 2017 season and that gave us the opportunity to have a re-think on management of the meadows.

In the meantime, I had received comments from a couple of conservation experts who thought the pastures seemed to be suffering from too high a nutrient status, which can lead to lower floral (and probably insect) diversity.

I had also begun to notice changes in the meadows. There seemed to be ever more rapid encroachment of blackthorn, bramble and other rank vegetation from the hedges and edges of the pastures. We seem to have lost over the years a suite of good pasture plants, including adders-tongue fern. My view on this is that this is due to a combination of nutrient enrichment and the related rapid encroachment of vegetation from the edges.

Unlike in gardens or allotments, soil which is nutrient rich can be a problem in a nature reserve. A few vigorous species such as bramble or rye grass crowd out other species and the plant diversity declines. With this, all the dependent species, particularly invertebrates, also decline in diversity.

Various chemical elements are implicated in nutrient enrichment, but the most important here is probably nitrogen (chemical symbol N). The nitrogen in the air is no problem, but it can combine with other chemicals to form nitrogen oxides, nitric acid, ammonia and ammonium compounds. Nitrogen oxides, of which the biggest source in our area is road traffic, is probably the biggest source. These nitrogen compounds can

then be deposited or washed into the soil and metabolised by greedy plants.

Grazing does not resolve this problem because nutrients are simply recycled and if supplementary feed is given, the nutrient levels are increased. The obvious solution is to take a hay cut and remove the hay, which can be followed by some grazing. This is recommended practice in conservation grasslands. We also need to remove the 'arisings' around the edges of the meadow in order to reduce nutrients.

With this in mind, we arranged for a contractor to cut the meadows and remove the cuttings. Also, to remove huge piles of scrub that had built up over a year as a result of an exceptional amount of scrub bashing.

Visitors to the reserve will have seen the Little Elms Meadow (LEM) and Willow Mead (WM) were cut in summer but the Paddock (Pa) not cut until autumn. This was done to replicate the established pattern of grazing, where LEM/WM were grazed early (from Open Day till about July) and Pa from August onwards. That pattern seems to have given rise to significant differences in flora and better diversity overall.

An important result from grassland research is that for some invertebrates, cutting every year is damaging and a cut every two years is better. Given the urgency of removing excess growth and nutrients, I decided to compromise, cutting most of the meadows but leaving a smallish proportion uncut in the centre of each meadow. Next year the plan would be to cut these central areas but leave some (not all) of the other areas uncut.

Nic Ferriday



Contractor working in the Paddock

FAMOUS FIVE'S LATEST

It was a work day at Perivale Wood when Viv said, "Let's have a day out at the Selborne Apple Day" What a spiffing idea we all agreed and arranged to meet on Sunday 8th October. Ann & John met with Rae early in the morning and Rae asked if we should take some sandwiches and pop, but we decided to go and see what the event had to offer. We set off from Greenford and met up with Viv & John in Ealing to go in one car.

Now we had the five together, we set off. After a while Viv asked our driver, John S,

"Do you know where you are going?"

Yes" said John, "Selborne".

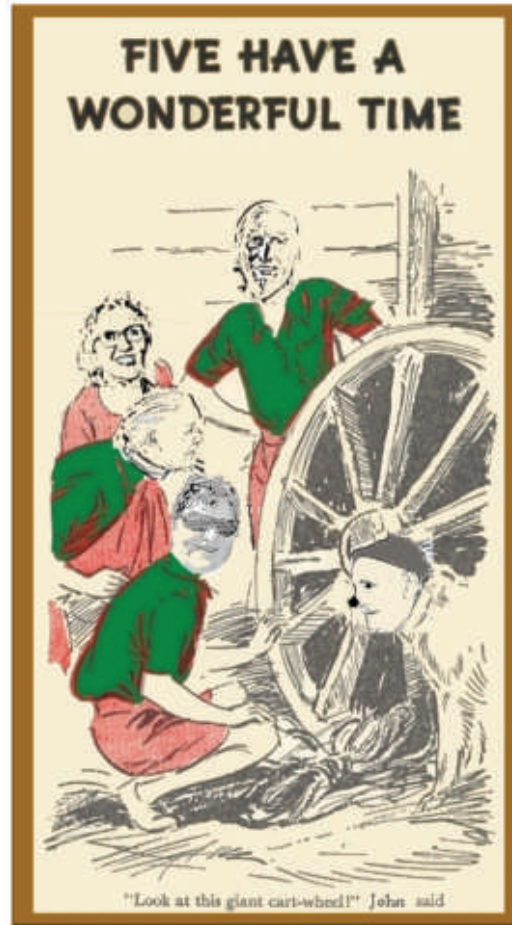
At this point, we reached for our mobile phones, which we all have because we are just old enough and found that Selborne Apple day was at Blackmoor so we set the satnavs going and were on our way - "Hurrah!".

We had a smashing journey with no hold ups or stops for pop and no one asked John "Are we nearly there yet?" We arrived to find a large field with lots of cars but the organisers got us parked and we set off.

First thing that we spotted were the pumpkins of all sizes from tennis to beach ball size. Viv & John bought one to make pumpkin pie which we left there to collect later. The Famous Five were very good and didn't head straight to the coffee shop but instead headed to the apple stalls. The next hour was taken up with tasting apples and discussing which one we all liked. We didn't agree, but we were very good and didn't argue. Although you could have as much apple as you like, no one was sick.

John S spotted the "Identify Your Apple" stall and got one of the apples from Perivale Wood out of his pocket. There was a long wait, but Viv & John were very good and got to see the expert. He said our tree was an *American Mother*, now known as

Mother, or possibly *Adam* variety, good eating apples, so we all agreed that we would go scrumping when we got to the Wood again.



There were lots to see with rural crafts on show, a blacksmith and many local charity stalls. They had cider (sort of adult pop) for sale but we were very British and found the village hall where they were selling tea and lots of terrific grub. We had a great nosh, lashings of hot strong tea and Rae had a very large slice of chocolate fudge cake and didn't get any on her face!

Later, as we were walking around, we heard someone say,

"Good to see you all here, didn't know you were coming!"

It was Lord Selborne (our society President). He was very pleased we came and suggested we bring a coach next year. Lord Selborne admired our tops, the Selborne Society fleece jackets and

thankfully didn't look down, since I don't know if we all had cleaned our shoes.

We ended our visit with a trip around the church and didn't forget to pick-up Viv & John's pumpkin on the way to the car. We had a good trip home John S. drove very well and we all had more tea at their house in Ealing.

We left Viv & John and dropped Rae home having all agreed it was a spiffing day and we must go again next year.

Who are the five? Rae Hall, Vivienne Cane-Honeysett, Ann Morrell, John Sears and John Morrell. Yes, I know the original Famous Five were four children and a dog but, well, I am standing in for the dog as I am always in the doghouse.

John Morrell

With apologies to Enid Blyton and Eileen Soper!

PARASITES: FRIENDS OR FOES?

In the July 2017 edition of “The Oldie”, its columnist, Dr James Le Fanu, has written an interesting article “The Parasitical Life” which struck me as well worth sharing. I had previously become interested in this topic after listening to a fascinating science podcast in the “RadioLab” series from New York’s WNYC radio station.

Parasites, which Le Fanu helpfully defines as “one who eats at the table of another” are around us everywhere and are generally given a bad press. From wasp larvae feasting on the innards of their living caterpillar hosts to the terrifying (but happily fictional) creature that scampered away from John Hurt’s exploded carcass in Ridley Scott’s original “Alien” movie, it is hard to warm to these lifeforms. In truth, though, the reality is more nuanced. In some cases, both host and parasite may benefit from the arrangements and I’m not just talking about famous opera divas swallowing tapeworms to lose those extra pounds!

For example, humans and hookworms have millennia of co-existence - they have parasitised us for pretty much the entirety of our time on this planet. Adverse effects of a hookworm infection can include dysentery, anaemia and hæmorrhaging - not a great CV! There is also a theory, however, gaining credence amongst scientists, which is known as “The Old Friends Hypothesis”, which postulates that the elimination of parasitical, amoebic and other infections through improved sanitation has left us open to more auto-immune disorders such as asthma, multiple sclerosis and irritable bowel syndrome. Essentially, the body’s response to the presence of these “Old Friends” is to produce regulatory T-cells which keep our immune systems on a tighter leash, stopping them from attacking our own body. Some

brave/foolhardy individuals have reported an immediate abatement of their symptoms of asthma and Crohn’s disease after deliberately introducing hookworms into their digestive systems. It’s fair, however, to say that the jury is still out on this particular treatment.

Another human parasite that seems to have the secret of eternal youth is the blood fluke and it is possible that studying the remarkable regenerative powers of



SURPRISE !

their stem cells might yield insights into human biology. Human stem cells allow us to regenerate skin, bone and even our livers where lobes have been removed but blood flukes seem to have taken things to a whole new level. Mr. and Mrs. Fluke (and yes, they’re largely monogamous) can live in us for 30 or 40 years. Scientists have compared them with their free-living worm relatives, the planarians, which can regenerate their bodies

entirely from small cuttings. It turns out that the blood flukes share these stem cells, known as neoblasts, and through them are able to regenerate damaged tissues. Research is currently targeting ways of inhibiting these neoblasts so that the flukes will be more susceptible to existing treatments but stem-cell research is an exciting field and it is possible that the insights gained will lead to breakthroughs in our understanding of the human stem cell function.

One theme of Le Fanu’s article is the extent to which parasites can modify the behaviour of their hosts. *Sphaerularia bombi*, a nematode worm, will penetrate the skin of potential bumblebee queens as they hibernate. The worm’s uterus swells massively inside the bee until it turns itself inside out through its own oviduct, leaving the body of the worm as a shrivelled appendage of the uterus from which thousands of larvae emerge. At this point, as the bee emerges from hibernation, she should be looking for a burrow in which to form a new colony but instead she is driven by the larvae’s presence to fly restlessly from dawn to dusk, only stopping intermittently to dig shallow holes in which she voids a shower of larvae. This continues until the bee dies of exhaustion.

Another nematode from Central American rainforests, *Myrmeconema neotropicum*, has developed the facility of transforming an ant’s



Hookworm

abdomen into a rosy, berry-like globe and, via some psychotropic shenanigans, persuaded the ant that it should from this point onwards raise its rear end to



the sky. Birds swoop for these fruity bodies and, in due course, scatter the nematode larvae far and wide in their droppings.

One liver fluke, *Dicrocoelium dendriticum*, which parasitises sheep and reproduces in their bile ducts, performs a similar mind-bending feat on ants. Its life cycle commences when a snail, feasting on the droppings of an infected sheep, consumes its eggs. As they hatch, the fluke larvae migrate to the lungs of the snail, which coats them with mucus and coughs them up as balls of slime. These balls are as good as Beluga Caviar to the passing ants which pick up these morsels to take back to their nests to share with friends and family. Alas, it's the same story, as the larvae, now ensconced in the ant's innards, proceed with the requisite brain surgery/chemistry (no one is sure of the exact mechanisms) to modify the host's behaviour. As evening comes, the parasitised ants disperse from the colony and climb up nearby grassy stalks, lock on with their powerful jaws and wait until daybreak before returning to the nest. This procedure continues each day until one night, a passing sheep grazes on that blade of grass. Mission accomplished as the fluke returns to its only viable breeding ground in the bile duct of the hapless herbivore.

Perhaps the most fascinating example of a parasite modifying the behaviour of its host is that of *Toxoplasma gondii* (hereafter TPG) the single-celled creature behind Toxoplasmosis. This infection can have nasty effects on individuals with weak or

compromised immune systems, leading to ocular cysts and encephalitis but for most of us, the effect is more likely to be mistaken for a mild dose of 'flu. TPG can only reproduce in the gut of a cat so when it is expelled/excreted by the cat, it is on a life or death mission to return to its feline home. Various academic studies have concluded that the most typical method of return is for a passing mouse or rat to ingest some of the cat faeces and its TPG passengers. Predation of infected mice and rats by neighbourhood cats would ensure some of the parasites made it home safely but, apparently, these odds weren't good enough for TPG.

Scientists have observed that the infected rodents appear to lose their fear of cats and seem irresistibly drawn to the scent of cat urine. They actively seek out their own predators and thus return the TPG to its desired host. Dopamine levels have been identified as the catalyst for the change in behaviour. How the parasite actually achieves this is unknown but there's a theory that the parasites travel to the rodent's brain and form cysts in the amygdala, the region of the brain governing fear.

That leaves us with the final question: what about humans infected with the parasite? Obviously, we'd have to be predated upon by very large cats for TPG to complete its life cycle but could our brains nevertheless be altered by the presence of the parasite in our bodies? A recent study of the effects of TPG on chimpanzees, our fellow primates, found that they lost their natural aversion to the smell of leopard urine, one of their few predators. Human studies are still at an early stage but several have indicated that TPG can affect people's personalities by slowing down their reaction times or making them more likely to take risks. Some studies have linked the cat parasite with psychotic disturbances in humans such as self-harm and suicide, and even serious psychiatric illnesses such as schizophrenia. So maybe, just maybe, there is a

grain of epidemiological truth in the popular archetype of the "crazy cat person"?



John Kane

COACH TRIP TO ICKWORTH

TUESDAY, 8TH, AUGUST.

Over the past couple of years, each time I have chosen a date for an outing, it seems to rain. Yes, for our trip to Ickworth it rained, but still the weather didn't prevent us having a most enjoyable day. Indeed the rain did ease off to enable Rae Hall, Tom Berry and I to enjoy an amble around some of the extensive grounds here. When I say extensive, the Red Walk is 6 miles which gives you an idea on how large this estate is!

For me, the main attraction was the range of fine trees on offer. Indeed, the Ickworth estate contains four champion trees which are a Cucumber Tree (*Magnolia acuminata*), Crimean Pine (*Pinus nigra ssp.pallasiana*), Downy Oak (*Quercus pubescens*) and Pedunculate Oak (*Quercus robur*). Of course many of the latter named species are also resident in Perivale Wood!

Looking at the building (which we three only briefly visited), I found the exterior of the Rotunda very much resembled the Radcliffe Camera in Oxford.

On reading through the family history, I would have thought that the Earl-Bishop (4th Earl of Bristol) deserved a prison sentence as he was using funds from his dioceses to house his estranged wife and family instead of the good deeds of the

church. Still, things like this still happen today, dare I mention BHS! Also, looking at the antics of the 7th Marquess (which probably explains his short life) then again this reminds me of some people who become rich but cannot handle the privilege (e.g. some football stars!).

My only gripe was that, had the sun been shining then I'm sure we would had been greeted with lots of butterflies and dragonflies to accompany those fantastic trees. Never mind, we still had a great day out at a lovely place (well worth another visit too!). Also, it was great to see Tom Berry (our previous Chairman) and to thank him on taking our group photo. Yes, it's not easy taking photographs of people as likewise with wildlife!



John Wells



Selborne Coach Trippers at Ickworth House