CARDIFF NATURALISTS' SOCIETY

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http://cardiffnaturalists.blogspot.com

Cover: Hummingbird hawk-moth in walled garden, Dunraven. Photo by Phill Blanning.

Indoor Meetings 2019/2020

All meetings start at 7.30 p.m. in Room 0.23 (ground floor) of the School of Management, Cardiff Metropolitan University, Llandaff Campus, Western Avenue, Cardiff CF5 2YB (see map p. 7) - unless otherwise indicated (*).

Monday 23 September 2019

AGM

As this is an important AGM for the Society there will be no speaker. However, we hope to show a film by Sydney Johnson following the AGM.

Monday 14 October

Archaeopteryx—The Missing Link between Dinosaurs and Birds

Cindy Howells

Archaeopteryx is the iconic "missing link" fossil which helped establish the transition between dinosaurs and birds. Two specimens discovered in the late 19th century seemed to back Darwin's theory of evolution, upsetting many geologists who adhered to religious principles. It was 80 years before further Archaeopteryx fossils were found. Each of the 13 specimens now recognised has an interesting tale, sometimes tragic, sometimes confusing or mystifying, and some have been re-interpreted many times. Recent research has revealed more about the animals themselves, the environment of 150 million years ago, and also how the dinosaurs to birds transition is still a source of debate.

October

TBC. Please look out for emails from the Society, or look at online programme/social media for additions to the programme.

Thursday 14 November (*)
(provisional at time of going to press)

Slime moulds

Dr Steven Murray
(Glamorgan Fungus Group)
A joint meeting with the Cardiff Group of the Wildlife Trust South and West Wales, in the Wallace Lecture Theatre, Cardiff University, Park Place, Cardiff CA10 3AT.

Tuesday 19 November

Carboniferous fossil floras of Wales - their importance for understanding changes in ancient landscapes and climate

Christopher J. Cleal
Wales has one of the best fossil flora records from the late Carboniferous age of anywhere in the world. They are the remains of tropical swamp vegetation from about 300 million years ago, and represent one of the earliest examples of an extensively forested landscape on Earth. This talk will discuss some of the evidence regarding the swamps that have been found in Wales, in particular, their ecology and distribution. It will be explained how this throws light on how the world is responding to global warming today.

Tuesday 10 December

Xmas Bash / Flora of the Vercors in southern France

Eirian Edwards
The Vercors is one of mainland Europe's orchid hotspots and has some wonderful alpine plants, all located in stunning scenery.

Wednesday 15 January 2020

Members' Evening
CNS members' short illustrated talks. Contact Hilary Wicks (indoor@cardiffnaturalists.org.uk) if you wish to make a presentation.

Wednesday 29 January

Welsh Mineral Classics

Tom Cotterell
Wales has a rich geological diversity which has helped to shape the landscape. Associated with the geology are minerals, or crystals, some of which were first discovered in Wales. Others are aesthetic, or show unusual features. This walk will introduce some of the iconic minerals of Wales, and explain why they are so significant.

Tuesday 18 February

Harold Augustus Hyde (1892-1973): a pioneering palynologist

Dr Heather Pardoe
Harold Augustus Hyde was appointed Keeper of Botany at the National Museum of Wales in 1922, a post he held until his retirement in 1962. He published extensively on the Welsh flora, but his most important work was considered to be on aero-palynology. Hyde became the 63rd President of the Cardiff Naturalists' Society in 1935. This talk examines the highlights of Hyde's career and considers how his life was shaped by his fascination for botany, his military service, and the influence of his museum colleagues and international contacts.

Thursday 27 February (*)
(provisional at time of going to press)

Cardigan Bay Marine Wildlife Centre

TBC
A joint meeting with the Cardiff Group of the Wildlife Trust South and West Wales, in the Wallace Lecture Theatre, Cardiff University, Park Place, Cardiff CF10 3AT.

Monday 9 March

Student Bursary evening:

i) Biosciences Award winner
Award of Student Bursary, in memory of Prof Ursula Henriques and Dr Mary Gillham, to a Cardiff University School of Biosciences second-year student for their outstanding fieldwork. The student will give a presentation on their work.

ii) Dan Rouse
A tale of bird conservation in Wales, taking you from the green woodlands of mid-Wales that host outstanding birds, such as pied flycatcher and common redstart, to the rocky coasts, home to red-billed chough and Manx shearwater.

Wednesday 18 March

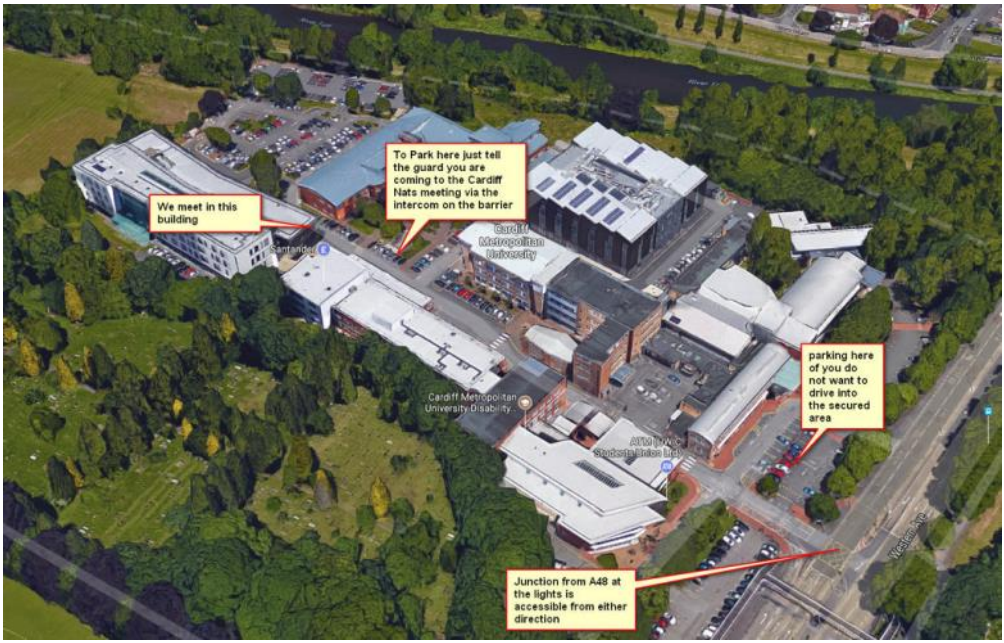
Oliver Brown

Crayfish

Please look online for all the latest information and additions to the CNS Meetings Programme:

http://cardiffnaturalists.blogspot.co.uk/p/programme.html

An aerial view of our usual indoor meeting location at Cardiff Metropolitan University, Llandaff Campus.



Poisonous Plants: Wenvoe Field Trip 29 June 2019

Bruce McDonald

Fine weather guaranteed a good afternoon for those who made it to Wenvoe, but with Culverhouse Cross grid-locked several gave up and returned home. The walk was organised by Wenvoe Wildlife Group and those attending included members of the group, local residents and members of Cardiff Naturalists' Society. The first and most obvious question posed was 'Why poisonous plants?' to which the simple answer would be identification. Our rural ancestors knew their trees and plants and since time immemorial were using them to heal, relieve pain and to kill. With a surge in interest in foraging and herbalism there is a risk of accidental poisoning and children can be tempted to sample juicy berries with fatal consequences. Some fruits and vegetables which we are immune to can poison dogs, cats and livestock.

We met in the village centre and a couple of metres away we saw, amongst oaks and beech, a Bird Cherry, *Prunus padus*, in the primary school playground. The leaves, stems and fruits contain glycosides and amygdalin which can be poisonous. 50 metres away we paused by a Spindle, *Euonymous europaeus*, the brightly coloured berries of which can be enticing to children. Ingestion can cause kidney and liver damage and can be fatal. We were beginning to find the answer to the next question 'Where are these poisonous plants?' and the response would have to be 'everywhere'.

You do not have to leave your home as many very common house plants can be dangerous including familiar ones such as Anthurium, Caladium and Croton. The seeds of apples contain cyanide and if you have allowed your home-grown Asparagus to go to seed, note that consuming half a dozen ripe berries can cause abdominal pain and vomiting. More well-known are the risks of potatoes (the Nightshade family) when they go green and the need to cook Kidney Beans at 100 ˚C for at least 10 minutes. Interestingly, cooking these beans at only 80 ˚C actually increases their toxicity. Grapes can be harmful to dogs and onions and garlic to cats, dogs and livestock. Many flowers that we delight in such as Bluebell and Snowdrop can be dangerous if eaten and there was a recent scare when members of the Chinese community were eating daffodils which were on display in the fruit and vegetable section of supermarkets and in their budded state looked like a garlic chives, popular in Asian cooking.

Just beyond was a Laburnum, *Laburnum anagyroides*, common enough in gardens. If anything the tree has a worse reputation as a killer that it deserves. Many children have shelled the pods and eaten the seeds, inspired by shelling peas at home, and whilst it will make them ill and often requiring hospitalisation there have been no known deaths in the UK in recent times. In a sheltered garden or conservatory you might find Oleander, *Nerium oleander* – it is a very common garden and street shrub around the Mediterranean. Flowers and foliage can be deadly. It is reported that a group of French soldiers in the Peninsular war cut the stems of Oleander to use as skewers to cook their meat – of the 12 who ate the meat, 7 died.

A short walk brought us to the churchyard with its ancient Yew, *Taxus baccata*. All parts are poisonous except the red aril but the seed inside is harmful, particularly if chewed. The alkaloids in the tree are rapidly absorbed and death may be very quick, without any previous symptoms. Which raised our next question ‘What do we mean by poisonous?’

A standard dictionary definition will be along the lines of ‘Something that is poisonous will kill you or make you ill if you swallow or absorb it’ (Collins Dictionary). However the reaction can vary according to a range of different factors such as the amount of plant consumed, which part of the plant was swallowed and the health and age of the consumer. One can also distinguish between plants which contain poisons and some which acquire poison through association with fungus or bacteria. For example, the grass Darnel, *Lolium temulentum* has been poisoning people for millennia, particularly when associated with the fungus Ergot, of the genus *Claviceps*. There is also the category of plants which are harmless to many of us but which can cause an allergic reaction in some, Ragwort, *Jacobaea vulgaris* being an example. We passed Holly and Ivy, and Mistletoe, and noted that all of these have poisonous attributes.

Why should so many plants contain poisonous chemicals? Simply, to deter predators and herbivores. Some defences that plants have evolved include spines and prickles but since invertebrates are the major cause of plant destruction another strategy was need and this entailed a mix of toxic chemicals. Our route now took us along the hedgerows and here we quickly found Woody Nightshade or Bittersweet, *Solanum dulcamara* as the name suggests a member of the Nightshade family. Wild Clematis or Travellers Joy or even Old Man’s Beard, *Clematis vitalba* was next, all parts of which are poisonous. Beggars rubbed the acrid juice into scratches to make them appear worse and if chewed the tongue can become ulcerous. Passing through a new housing estate we noted that the developer had planted Blackcurrants as part of the landscaping but also White Nightshade (photos, p. 11), while Black Nightshade was also establishing itself, so you had two very similar types of black berries next to each other, one tasty and the other toxic.

We soon reached the Elizabethan Orchard where the Shakespeare garden revealed some interesting plants. Much planted in gardens and growing wild along the banks of the River Ely not far away was Monkshood or *Aconitum napellus*.

White Nightshade, left, and Blackcurrant, right (stock images).

Monkshood has long been used for its harmful properties and was employed to poison enemy water supplies in ancient Europe and Asia. It was believed to have originated from the dripping fangs of the three-headed dog Cerberus, which Hercules dragged back from the Underworld. On the island of Ceos in ancient Greece it was the official poison for euthanasia for old men who were no longer of any use to society. Symptoms include paralysis of the respiratory system and convulsions. Next Rue, *Ruta graveolens*, not quite as lethal but the sap includes furanocoumarins which can sensitise the skin to light resulting in blisters and dermatitis. And then Marsh Marigold which many know as Kingcups, *Caltha palustris*, a delight in our gardens and the countryside in late Spring. Protoamenonin is one of the active substances which can cause convulsions, dizziness and fainting and the juice creating blistering and inflammation.

Our gardens can often conceal toxic plants and one which is often grown in public parks is the Castor Oil Plant, *Ricinus communis*. The older generation may have consumed (or been forced to!) Castor Oil and it is still used as a stomach medication but it is also the source of Ricin, a poison with no known antidote and which was used to murder Georgi Markov, the Bulgarian dissident in 1978, where the poison was placed on the tip of an umbrella. It is popular as an attractive and architectural plant at Dyffryn Gardens and there is one in the magnificent floral displays in front of the shop in August. If you do grow it, it is safest not to allow it to flower and seed. Others which we did not see on the walk but which are very common in the parish are Hemlock, *Conium maculatum*, and Hemlock Water Dropwort, *Oenanthe crocata*.

Hemlock is a very common plant, for example, growing along the M4 from around Wiltshire and onward into Surrey, unmistakeable because of its height. Socrates was forced to drink a cup of Hemlock and according to Pliny it took 12 hours before death came. Hemlock Water Dropwort can be found growing along many of the streams in the Parish and from the comfort of the cafe at Dyffryn Gardens the view of the adjacent stream reveals extensive stands of it. One of its common names is Dead Man's Fingers, which might suggest some of its qualities. Small amounts can be fatal and death comes quickly. Another plant which has been recorded locally, usually in arable fields, is the Apple of Peru, *Nicandra physaloides*, a member of the Solanum family and all parts of the plant are said to be poisonous.

Our next stop was the Welsh Orchard which includes several beds full of herbs used by the 12th century Physicians of Myddfai, with a few more recent ones added for interest. First Wormwood, *Artemesia absinthum*, which was used to flavour the drink Absinthe, popular in the nineteenth century with artists such as Van Gogh and Degas.

Hemlock and Degas' Absinthe Drinkers (stock images).

Whilst it is both hallucinogenic and emetic the dangers of Wormwood were probably overstated. With 9 mentions in the Bible and medical use recorded as far back as ancient Egypt its history was unspectacular until 1905, when a Swiss farmer, Jean Lanfray, murdered his family and drinking Absinthe was supposedly the cause. The fact that he had already been drinking wine and brandy was overlooked by the Temperance Movement which then claimed that Absinthe ‘makes you crazy and criminal, provokes epilepsy and TB and has killed thousands of French people ... it menaces the future of the country’. It was promptly banned (although not in the UK) but has recently seen a bit of a revival. Chernobyl means Wormwood and we have the famous Wormwood Scrubs in London although the link between the name and our plant is uncertain.

Other plants we noted, many of which grow commonly in gardens were Aconite, Juniper, Solomon's Seal, Aquilegia, Greater Celandine, Lungwort and Catmint. All of these have some potentially dangerous qualities.

There is much confusion between Woody Nightshade, *Solanum dulcamara*, and Deadly Nightshade, *Atropa belladonna*, as many claim to have seen the latter locally whilst confusing it with the former. There are few, if any, records of *Atropa* growing wild in the region recently – the specimen we were admiring coming from a supplier. As the Latin name suggests it was used to make women look more beautiful by dilating the pupils but all the parts of the plant are poisonous, particularly the roots. The main danger comes from the shiny and quite palatable berries but children have died from eating just three of them.

Our next plant was growing in a small pot. We held our breath as the plant was removed, knowing that death was a possibility. We waited for the penetrating scream but all was quiet. This was the oft-quoted and filmed (but seldom seen) Mandrake, *Mandragora officinarum*. From Culpeper to Harry Potter, the Mandrake root can look human and it was said that the scream from a plant being uprooted would kill you. The technique was to tie a dog to it; the dog would uproot it and you would get your Mandrake for the loss of one expendable dog. Whilst this is commonly quoted in books and online few refer to the fact that the Mandrake was more prized than gold and the reason the myth was spread around was simply to protect it from being dug up. Mandrake was also referred to as The Divine Root or The Root of Life. It was used by the Romans as an anaesthetic for surgical operations and the hospital at Soutra Aisle in Scotland which was part of an Augustinian monastery dating from the 12th century revealed some of its seeds along with Hemlock, Henbane and Opium.

Mandrake (stock image).

It is surprising just how common poisonous plants are but this has been a source of inspiration for writers such as Conan Doyle who did a short course on Botany, Agatha Christie who referred to many of the plants mentioned here and even Dr Crippen who is suspected of using Henbane to murder his wife. Cases of poisoning are still relatively rare and hopefully mainly limited to the pages of fiction.

Bruce McDonald

Sources:

The Poison Garden by the Alnwick Garden, Northumberland. (well worth a tour).

Poisonous Plants in Great Britain by Frederick Gillam, Wooden Books.

Berries of Deadly Nightshade with blue of Monkshood. Photo by Bruce McDonald.

The Colonel Morrey Salmon Project

Mike Dean

I think the majority of the members of Cardiff Naturalists' Society will have heard of Colonel H. Morrey Salmon and be aware of his close association with the Society. However, even though he was a remarkable man, both in his service life in both World Wars and more particularly in the sphere of ornithology and naturalist history, few people outside of CNS are aware of his achievements.

He was a pioneer in the field of bird photography, especially at a time when cameras were relatively unsuitable for this task. He often designed and built his own enhancements to enable him to obtain the photograph he wanted. He was a lifelong friend of Geoffrey Ingram, who was also a President of Cardiff Naturalists' Society, and they went on numerous field trips together photographing birds. Most of Morrey's early photographs were taken on glass slides and only later in life did he use 35 mm slides.

At this time Cardiff Naturalists' Society had a close relationship with National Museum of Wales, having played a significant role in the decision to locate it in Cardiff. Colonel Morrey Salmon was instrumental in furthering this relationship and went on to become the Museum's Treasurer amongst other roles.

On his death his collection of photographs together with a lot of written material, including manuscripts, letters and Geoffrey Ingram's notebooks, was bequeathed to Cardiff Naturalists' Society and the collection has remained in the CNS Library and one of the Zoological stores in the National Museum of Wales at Cathays, unavailable to the general public. After discussions with the Salmon family, to ensure the future care of the material it was decided that the collection should be handed over to the Museum, but only if they clean, digitally scan and preserve the photographs, make them available to the public via their website, and allow the Society to have free use of the images.

The Salmon family has made a generous donation to the Society to allow this work to proceed but discussions with the Museum have been very protracted and we are still not in a position to proceed. However, we still hope that a successful conclusion will be reached in the near future.

The funding received will not allow the Museum to carry out the project in total, therefore we will be seeking volunteers prepared to give up say a day a week for a period to carry out sorting, checking, labelling and possibly some cleaning. Please contact me if you feel you would like to be part of this exciting project:
Mike Dean (Hon. Sec.)
secretary@cardiffnaturalists.org.uk

Morrey Salmon with kestrel

Howardian Local Nature Reserve

Andy Kendall

On the evening of the 18th June 2019 we met at Howardian Local Nature Reserve for an evening walk to see how the site has developed over the last few years since we were there last. Martin Doe and Roy Bailey-Wood were our main leaders, but they had good help from the Friends Group to keep an eye on us and help out with identifications.

The site began life as the Rhymney Tidal Refuse Tip, which was in use until the early 1970s. In 1973 when it was derelict land, the Parks Department under the father and son William Nelmes (both former CNS presidents), asked if pupils of the adjacent Howardian High School would like 5-6 acres to convert to a nature reserve. This was eagerly taken up and pupils spread earth, planted trees and Rye grass; they were involved with the Reserve till the school closed in 1990. With the support of various groups and the hard work of the Friends, the reserve has now grown to 34 acres. Originally, there was just a line of trees on the boundary but 30,000 have now been planted and that was the main visible difference over the years - there is a lot more woodland than there was in the 1990s.

The reserve has been developed to have a pleasant network of paths which are well shielded from the traffic and from the David Lloyd leisure centre, and if it was not for some of the traffic noise you would not know that you were in such a busy area of the city. I am sure that many of the people who drive past don't give this reserve a second thought. If you want a plan to take your own walk one is available at: *http://www.howardianlnr.org.uk/archive/locationnames.html*

We did a circular route looking at things as we went along and it was not long before we saw our first orchid, because there were Bee Orchids (*Ophrys apifera*) right at the entrance to the reserve, and there were more to see later when we saw very elongated plants growing in the shade under the trees, which included many of the usual native species, Oak, Ash, Hawthorn, Elder etc.

To the northern end of the reserve is an open grassland area and it was here that many years ago we saw a veritable field of the Bee Orchids. There are less now as the grassland has been reduced, but there are still some on show. Some of the other highlights were Twayblade and Common Spotted Orchid.

Bee orchid. Photo by Andy Kendall.

Being such a dull evening with some rain at times the birds were not well on show, but a Great Woodpecker was heard and we were able to see masses of toadpoles (we were reliably informed they were not frogs) in one of the ponds.

It is not just the plants and animals, this site is recognised as a RIGS (Regionally Important Geological Site) because it is one of the most southerly outcrops of the Silurian aged rocks that is still visible. We saw them where the stream cuts through them in the woodlands to the west of the site.

Silurian rocks at Howardian Local Nature Reserve. Photo by Andy Kendall.

I was noting as many species as I could as people shouted things out and as I found them myself. This has meant that the number of plants and animals we have on our species list for the site (*http://cardiffnaturalists.org.uk/pdf/listings/howardian.pdf)* has gone up to 144 which to be fair is still a lot less than the 214 that the Friends Group have on their well identified and photographed listing on their website:
http://www.howardianlnr.org.uk/fauna-common.html
However, we were invited back to see if we can increase both lists next year and we are considering having a few walks across the season to spot early, summer and later plants and animals.

Twayblade. Photo by Andy Kendall.

Cosmeston Lakes Country Park

Stephen Nottingham

On the evening of Monday 3 June 2019 a group of around 15 Cardiff Naturalists' Society members were given a guided tour of Cosmeston Lakes Country Park by the Countryside Ranger Sharon Mullins. This included gaining access to parts of the Park not usually accessible to the general public.

Sharon first gave us an overview of the history of Cosmeston, a former quarry and landfill site. It was a quarry from 1890 to 1970, providing limestone for a large cement works nearby (now long gone). The limestone was transported using narrow gauge locomotives. After the quarry closed it was used as a landfill site for household waste, until 1979 when the Country Park was first established. The park gained Local Nature Reserve Status in 2013.

Today, Cosmeston Lakes Country Park comprises over 110 ha with a variety of habitats, including wetlands, ancient woodland and wildflower meadows, and a vast number of species.

One recently re-introduced species is the water vole. There have now been 400 water voles released at Cosmeston, over several years in batches. Our visit coincided with the imminent release of the last water voles to be released in this introduction programme. They came from a specialised water vole breeding centre in Devon. We saw a couple of release cages on our tour, in an area not usually accessible to the general public. The water voles are shy, but some members caught a glimpse of one through its straw bedding in its pre-release box (see photo p 23).

In this area of secluded water there is also an otter holt. However, it is difficult to determine if it is occupied at any particular time, and evidence for otters in the park unfortunately mainly comes from road kills.

Cages used to release water voles. Photos by Stephen Nottingham

Part of the new outdoor learning area. Photo by Andy Kendall.

Pond in restricted access area. Photo by Stephen Nottingham.

A recent development has been the opening of an open-air learning facility, near the main carpark. Here we saw the new habitats being created (pond, meadow and tree planting), the outdoor wooden gazebo, wooden seating, fire pit, bug hotel, and the impressive carving by Chris Wood, of Wood Art Works, made from oak, of a swan and other wildlife that you can see at Cosmeston. Funding for the outdoor learning facility was obtained from the Welsh Government's Rural Community Development Fund.

Sharon Mullins stressed the importance of obtaining grants from diverse sources to get projects done around the Country Park. Another recent example is a grant from Network Rail, to plant 1,350 trees as a southern extension to Cogan Wood. This area includes the planting of an orchard of native fruit trees.

Part of Chris Wood Art's carving in the new outdoor learning facility. Photo by Stephen Nottingham.

Gigrin Farm Red Kite Feeding Centre

Red kites and buzzard. Photos by Stephen Nottingham.

Unknown Wales Conference 2019

Members might like to know that this year's Unknown Wales Conference, organised by the Wildlife Trust of South & West Wales, will be held at the National Museum of Wales in Cardiff on Saturday 26 October 2019 (10am-3.30pm). It is a free event, but booking is required (the online form asks for a £5 refundable payment).

For further information visit:
www.museum.wales/cardiff/whatson/10785

Deadline for submissions to the January 2020 CNS newsletter: Friday 6 December 2019

Marsh fritillary at Aberbargoed Grasslands. Photo by Linda Morris.

Photo: Howardian Local Nature Reserve (Photo by Andy Kendall). See pages 18-21.

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