Meeting reports 2017

Saturday 21st January 2017 AGM
Fordbridge Centre, Chelmsley Wood,
Birmingham
Quiz by Martin Collins

Sixteen members (out of a total membership of fifty) attended the AGM at Fordbridge, and for our delectation the elegantly hirsute Dr Martin Collins had prepared a botanical quiz. A table-top was generously strewn with twigs and sprays, linked we were told, in threes. Our task was to identify what they had in common—for example, Corylus avellana, Garrya elliptica and Alnus glutinosa all bore catkins, whilst Ulmus procera, Euonymus europaea and Acer campestre all showed corky wings on young branches. Some examples were challenging: Phyllitis scolopendrium, Selaginella and Equisetum were all pteridophytes; water starwort, hornwort and duckweed, besides being pond-dwellers, all had 'insignificant flowers'; whilst Ruscus aculeatus, Genister digitalis and Schlumbergera all had 'stem leaves' (the first with cladodes) or leaf-like green stems, which could photosynthesize. Other groups were more straightforward, such as oak, beech and hornbeam with persistently-adherent dry leaves; galls induced by gall wasps resembling artichokes or marbles, plus knopper galls; or begonia, cyclamen and Lamium maculatum all with variegated foliage. A trio of hybrids proved difficult to identify: comprising a huge ivy, a Berberis × Mahonia cross, and—famous for demonstrating 'hybrid vigour'— ×Cupressocyparis leylandii. Holly, ivy and mistletoe formed a group: "Christmas!" we cried; "Pagan celebrations" intoned the more dignified (Roger Reynolds, actually), but these three specimens were intended to suggest 'berry fruit'. There were many others: a trio from Australia; a possible connection via long-and-short styles between Primula vulgaris and jasmine; and distinctive stipules in both Melianthus major and Galium mollugo. Martin encouraged us to spot further shared characteristics for ourselves. It seemed to me that Melianthus and Correa, both from warmer climes, were connected through bird-pollination. Apparently Martin had not seen Melianthus in flower, perhaps because the ghost of the last ice-sheet still persists beyond its boundary just north of London. However, in sunny southern Kent it blooms well with dark russet throat-like flowers, secreting, as the name
suggests,nectar—albeit lacking sun birds to pollinate them. In examining Corylus avellana, the red styles protruding from 'female' buds on the twigs gave rise to an observation from our Editor that often hazelnuts
occur in pairs. Our Education Co-ordinator confirmed that careful dissection of a bud will reveal more than one ovule. Martin had also brought along an impressive collection of botanical books, including early ones
with finely engraved illustrations, and these werefrequently consulted. It was a stimulating and informative practical quiz, and we were delighted.
Helen Ayers

Saturday 18th March
Bulkington Community and Conference Centre
Cacti and succulents with Mike Stansbie

This was a most informative talk, with many examples. These were provided as a PowerPoint presentation and as specimens from his extensive collection, some of which were passed around for closer observation. Mike introduced the topic by explaining that "all cacti are succulents but not all succulents are cacti!" Succulents are "plants adapted to an environment deprived of water for prolonged periods, for at least part of the year". They are found in a wide range of habitats and there are hundreds of species worldwide. Water can be stored in stems, leaves or roots many of which are not easily recognizable—for example some species of Euphorbia are only visible
when enough water is present—they shed their stems! He explained how a low surface area to volume ratio, thickened epidermis and cuticle, the presence of thorns, spines, prickles and hairs, and few stomata, all help to reduce water loss.Many species have a photosynthetic modification known as crassulacean acid metabolism (CAM) to operate when water is in short supply. In CAM, the stomata are open at night and closed during the day, the reverse of the normal pattern. At night, carbon dioxide is taken up and fixed temporarily into an organic acid, malate, which is stored in the vacuole of the cell. During the day, with stomata closed, the malate is broken down to release carbon dioxide which is fixed into sugars by the usual photosynthetic process. In this way, water loss is minimized because the stomata are closed during the day, and carbon dioxide gathered during the previous night is processed when light is available, behind closed doors so to speak. We then heard about the eight families which include succulents, and their distribution. Most of the time was spent on the Cactaceae which are characterized by the presence of areoles. Each areole consists of spines plus a bud and there are many different types. Flowers show no clear distinction between sepals and petals, so it is safest to call them tepals. The afternoon was spent drawing and discussing Mike's fascinating specimens—even more information was acquired. It is difficult in this report to

convey the mass of knowledge which was given to us by a qualified judge and real enthusiast—it justifies a fuller account at some point.
Daphne Thompson

Saturday 20th May
University of Leicester Botanic Garden
Habit drawing in the field

Definition: in botany, habit is the characteristic form in which a given species of plant grows, its general appearance, growth form or architecture. An interesting and constructive meeting was held at the Leicester Botanic Garden when a dozen members attended a day school entitled Habit Drawing in the Field which was led by committee member, Roger Reynolds. The forecast for the day was less than encouraging with heavy rain due from lunchtime onwards; in the end the rain did not unduly inhibit the activities of the day. The morning commenced with a short PowerPoint presentation, during which Roger explained the meaning and purpose of illustrating plant and tree habit by showing a selection of drawings executed by a number of different botanical
artists. Roger also circulated a book called 'Portfolio of a Botanical Artist' (2004) illustrated by Pauline Dean, which beautifully illustrates various forms of plant habit, particularly where the whole plant isincluded in a reduced form to show the plant's growth habit. The following illustrations from the book were noted: number 33, Actinidia deliciosa 'Hayward', life-size drawings of the flowers and fruit of kiwi fruit, with a thumbnail drawing of the climbing habit of the vine; number 38, Ribes uva-crispa 'Leveller', showing life-size drawings of the flowers, fruits and leaves of the gooseberry with a thumbnail sketch of the habit of the bush; number 48, Aesculus hippocastanum, life-size drawings of the winter twig, autumn leaf and fruits of the horse chestnut with a
thumbnail sketch of the habit of the tree. Members were shown how to create a scale bar using a simple method devised by Anne Bebbington. This involved two people and the known height of one of them, in this case Roger was volunteered to be the datum!Armed with knowledge and equipment, the members ventured into the garden to observe the trees which ranged from a young sapling to a large giant redwood. The sun shone briefly as members went about measuring the height and width of the trees. It was unclear what other visitors to the garden thought of our anorak-clad members, standing in a group brandishing their plastic rulers this way and that while peering intently at each tree!The trees were measured by establishing a fixed object of a known length, in our case this was the height of Roger, and then using the ruler to measure Roger's height in centimetres. These measurements were converted using simple proportion based on Roger's known height.Members retired to the study room to convert the information gained into a fairly accurate habit study of the trees measured. Calculators and coffee were to the fore while members calculated the heights and widths of various trees and compared notes. Roger stressed the value and necessity of using scale bars on the drawing appropriate to the size of the tree. The afternoon session started in glorious sunshine, but the rains came again which forced members to seek shelter in the garden or return to the study room. Roger also demonstrated the use of a battery operated eraser to show an effective way of creating highlights on foliage in a sketch of a tree. It soon became clear that in illustrating the trees a freer approach resulted in a livelier illustration. Drawings were compared and Roger gave further helpful instruction of how to create a thumbnail sketch of the tree without drawing in every leaf! Another attempt was made with pleasing results.Thank you, Roger, for an excellent day with some great results.
Michael Oxley

Saturday 8th July
Wicken Fen
Field meeting. Meeting report 1

I was impressed with the submission of the Iceni Botanical Artists to the RHS London Botanical Art Show last year (2016) which achieved highest group award of Silver Gilt. They followed this up with a stunning book, "Breckland Wild Flowers, Heaths and Grasslands". So, when IAPI's field meeting weekend this year was to The Brecks—I had to go. Saturday 8th July saw a group of us meeting at the Visitor Centre, Wicken Fen, at 10.30 a.m. with a
welcome cup of tea or coffee after our drive. We were joined by three members of the Iceni Botanical Artists.The General Manager, Sarah Smith, welcomed us to Wicken Fen and took us on a guided tour, starting with Sedge Fen. This area, a two acre plot of old sedge fen, has never been drained or cultivated. From Roman times there had been attempts to drain fen land for farming but local villagers here used this plot for peat digging and sedge harvesting. In the 1890s when the peat and sedge economies collapsed, Charles Rothschild, of the banking dynasty and a passionate entomologist, purchased it for £10 and donated it to the National Trust. Ironically, this patch, which has never been drained, is now the driest area on the reserve. Draining caused the peat of the surrounding fen to shrink, leaving Sedge Fen high and dry as an island. We were intrigued with the windpump being the only remaining active

one. There were canvases on the sails and it is now used in reverse, to lift water on to the fen. Fenland soils when cultivated lose their organic matter, slowly but just perceptibly: by a man's height in a man's lifetime was the rule of thumb, i.e. about an inch a year. Some is by natural decomposition of the organic matter (and release of nutrients making these soils fertile) and some is byfen blow is when huge swathes of billowing dust sweep through taking away peat. The quality of fenland generally for farming is plummeting—faster than it forms which is at 0.2 mm per year. It has taken thousands of years to form and is now only40–50 cm. deep in places; when it's gone, it's gone. During the first half of the twentieth century, people were unaware that without harvesting the sedge, the natural progression of vegetation would lead to scrubland. Fortunately a massive clearance programme started in the 1950s and this site is heavily managed. Our guide came from a farming background and was very aware of devising more sympathetic ways of farming such as growing crops with minimum tillage (no ploughing) and maintaining plant cover on the soil as much as possible. So the younger generation now coming into farming are bringing in new methods. The RSPB gives advice for field margins. Wicken Fen is now a National Nature Reserve and Site of Special Scientific Interest (national designations), a Special Area of Conservation (European designation), and a Ramsar Site (an international wetland designation). Our guide explained that the “Wicken Fen Vision” is to extend and buy land over a hundred years, trebling the acreage in one contiguous area towards Cambridge with Wicken Fen in the middle being well protected. The aim is to create a mix of wetland habitats to include wet grassland, reedbeds, marsh, fen and shallow ponds and ditches, as well as establishing chalk grassland and woodlands. This will provide green lungs for Cambridge with easy cycle access to Anglesey Abbey (NT). Our guide pointed out the boardwalks made of recycled plastic to take pressure off the peat which otherwise is compacted thus reducing the movement of water. Some of Wicken Fen is on clay—hence the old brick kilns for making bricks for the local buildings. Konik (Polish) ponies and Highland cattle are used ingrazing the reserve. Their introduction to the reserve has also attracted new species of flora and fauna to the fen, through their well trodden paths in areas of long grass, dusty hollows where they roll, and their dung. This produces a mosaic of grassland, scrub and pools. Over 900 species have been recorded including by Charles Darwin who collected beetles here in the 1820s. Cambridge University botanists visited, such as Dr Arthur Tansley and Sir Harry Godwin in the early 20th century. They laid out experimental plots, some with no intervention, some managed with cycles of two, three or four years, in a long-running ecological experiment. We noted saw sedge (Cladium mariscus) with the vicious serrated edges to the leaves; this was cut and used for thatching because it is more flexible than reed and was used for ridges and other fancy work. England’s largest bird of prey, the marsh harrier, is surviving here with one pair breeding—they nest on the ground. Our guide had had the privilege of seeing a male bringing in food and observing the food-pass in the air to the female. They do this to avoid bringing attention to the nest site. Hen harriers visit the reserve. Reed warblers, sedge warblers and bearded tits are regularly seen, and female cuckoos target the reed warbler nests. Nick Davies has been undertaking a cuckoo study here for 30years. This year there were six singing males.After lunch, we enjoyed a trip on the electric boat “Mayfly” along Wicken Lode with sightings of the marsh harriers, dragonflies and fish. Back at the meeting room, Isobel Bartholomew and Jan Toomey delighted us with a display of the original artwork by Iceni Botanical Artists. We were impressed by how cohesive the selection was while allowing distinctive styles by the different artists. I loved the Foreword to the book, "Breckland Wild Flowers", written by John Parker (Emeritus Professor, Clare Hall, Cambridge). He succinctly links the art and science of botanical illustration. At the start of the project, botanist Yvonne Leonard, an expert on the Breckland area, and her husband, David, helped identify representative plants. Forty-six species were targeted and finally forty five were completed by twelve artists working over three years. Of course, most of these plants are rare and endangered, so they could not be picked and taken home to study! Many are very small, growing close to the ground on poor soil and needing sun for the flowers to open in the morning. So, not easy work: lying prone on the ground looking at these tiny specimens through a lens, measuring size, taking colour swatches. Oh, and drawing them. The artists had to plan for incorporating the habit, flower and fruit, which appeared at different times of the year. Jan Toomer took up the story with an overview of the geology and climate. Breckland is a small area, much of it military and not open to the public. The project arose following the University of East Anglia (UEA) undertaking a UK Biodiversity Audit in 2010. This indicated that nearly a third of the UK’s Biodiversity Action Plan Species were found in the Brecks, with 56 SSSIs, 4 NNRs and 26 rare and endangered plants. An extraordinary concentration of rarities. I had always thought Cambridge was the driest area, which seems to be the case. The summers are usually warmer than average, winters colder, with a great variation between day and night temperatures. Some locations could have frosts in May or even June. I had been confused by the soils: acid or chalk? It transpired that the Brecks are on chalk. Glacial activity deposited layers of sand and flint giving a complex mixture of acid and calcareous soil types. Pingos—lumps of ice left in the soil—melted and layers fell in. As the ice retreated, material was left and or moved on as the ice moved. All in all, a unique environment, perhaps more like the semi-continental climate of the steppes. We were overawed by the standard of the artwork and inspired by the beautiful plants, and looked forward to seeing some of them in the field the following day. Jan left us to make one observation as we drove to our accommodation for the night: the lines of contorted Scots pines

along the roadside. The idea had been to treat these as hedges by laying, i.e. cutting halfway through the stems and laying them horizontal to continue growth and make a barrier to livestock and form a shelter belt. But this did not work with Scots pine so we are left with weird formations. Like John Parker, I felt emotional driving past them, as I had done for years to and from my home city, Norwich.
Joyce Barrus

Field meeting Meeting report 2
Sunday 9th July
Weeting Heath and Cranwich Camp
The second day of our East Anglian field trip saw us visiting two really interesting Breckland sites, and stumbling across an enormous number of plants there. We were lucky to have members of the Iceni Botanical Artists (www.icenibotanicalartists.co.uk) with us, who know an enormous amount about the local botany and habitats. First, we visited NWT Weeting Heath Reserve (www.norfolkwildlifetrust.org.uk/wildlife-innorfolk/nature-reserves/reserves/weeting-heath)where the visitor centre has resident swallows nesting just above the tills, and stone curlews nesting nearby (outside!). Reserve Warden James Simmonds took us on a tour of the dry chalky soils,where some unusual and rare plants are found. James was enthusiastic and knowledgeable, and within seconds we had spotted the locally common purple cat's tail (Phleum pleoides) along with quaking grass (Briza media), purple milk vetch (Astragalus danicus), wild thyme (Thymus vulgaris), common stalk's bill (Erodium cicutarium) and weld(Reseda luteola). One very beautiful flower growing in abundance on Weeting Heath is the maiden pink (Dianthus deltoides). This flower forms bright clumps which make the whole area glow pink. Individual flowers can vary from a shocking magenta to a delicate pale shade.We saw loads of ladies' bedstraw (Galium verum), ragwort (Jacobaea vulgaris) complete with cinnabar moth caterpillars (Tyria jacobaeae), wood sage (Teucrium scorodonia), rare spring sedge (Carex ericetorum) and hare's foot (Trifolium arvense). I recorded more than 40 species in the hour or so we were there, not to mention an endless succession of solitary wasps, skipper butterflies, Breckland-specific hemipterans lurking under some stork's-bill, and the metallic forester moth (Adscita statices).spicata). This gorgeous blue plant was growing in small clumps throughout the reserve, really pretty against the honeyed yellow of the ladies' bedstraw flowers. James told us about the management of this species, how a decline in the rabbit population had led to less intensive grazing which had detrimental effects on this speedwell's population.Introducing a "flying flock" of sheep, moved around different nature reserves requiring grazing, had helped this species recover, and the plant is going from strength to strength at Weeting. James explained about exposing areas of soil by stripping off the turf and topsoil, creating turf-stripped patches. These encourage some of the rarer Breckland species because there is no competition with grasses, and form part of the wildlife trust's research and management scheme.The next reserve we visited was Cranwich Camp, an unmarked area of chalkland meadow in amongst heathland and beautiful Scots pines, and our guide was one of the Iceni Botanical Artists, Rob Dyke. As we got out of our cars, he pointed out a tiny little plant, found nowhere else in the U.K. It was the unassuming proliferous pink (Petrorhagia prolifera). Once we got our eye in, this little flower was all over the place. There is some suggestion it may have been brought as seed from Italy in clothing or footwear: Cranwich Camp was an Italian prisonerof-war camp in the 1940s. This site was also rich with species; I listed more than 35. These included viper's bugloss (Echium vulgare), small bird's-foot trefoil (Trifolium dubium), meadow bindweed (Convolvulus arvensis), flixweed (Descurainia sophia—nationally scarce), and boththe spiny and common restharrows (Ononis spinosa and Ononis repens). We spent a long time figuring out what part of the plant the spines of the restharrow were (shoot tips we concluded), and I was bowled over by how pretty all the kidney vetchlooked, turning the grassland pale yellow. Another rarity we found was the Spanish catchfly (Silene otites). This plant has a spindly appearance, with different plants bearing the male and female flowers. Some of the specimens we found even hadthe odd dead insect attached to the sticky stem, verifying the name. Along with the plants, the area was alive with insects, loads more forester moths and lots of six spot burnet moths (Zygaena filipendulae). It seemed wrong to head off with the sun beating down, and so many of these tiny and beautiful Breckland plants to examine, but we left newly informed and entirely inspired by the botanical jewels of this corner of Norfolk. Many thanks are due to Roger Reynolds and Sarah Howard for organizing the trip, to James Simmonds of Weeting Heath, and to Rob Dyke and Isobel Bartholomew and the Iceni Botanical Artists.
Lizzie Harper

Saturday 16th September
Workshop on Graphite Techniques with Guy Eves
Guy's background is in advertising, marketing and design and he started by telling us how he started out. He began with a Foundation Course in art and went on to study Graphic Design. He worked as a freelance designer for companies such as Thompson Morgan producing work for their seed catalogue. The work required a quick turn-

around. Guy was inspired to start botanical work after seeing Redouté's drawings and decided to go back to basics by practising drawing a line without thinking about it. He did this by drawing one-inch squares and carefully drawing straight lines, diagonal lines and wavy lines close together until he felt confident. He used the analogy of learning to play music by practising the notes until they went into 'mechanical memory'. He showed us some photographs of his work area, a small desk in the corner of a room, where he has set up a light on the left with a daylight bulb, a white backboard and some shelves on the right to keep his equipment on. He sets up the specimen in front of the backboard and covers the phial with paper so that only the specimen can be seen. A mount is then placed in front of the specimen so that an idea of the finished drawing can be observed, this can then be adjusted as necessary. To do the initial drawing, he uses dividers and can add spots on the backboard so that he doesn't lose his place. It is important to complete the drawing before moving. He masks the work carefully by cutting paper to fit around the image so that his hand does not touch the drawing paper. The initial drawing is done with an 'F' pencil and Guy said that he uses Berol office pencils. He uses a range of pencils to apply the tone ranging from 6H to 4B using the 2H pencil for blending. He also showed us how to sharpen pencils to a 'pin point' and 'chisel' by using 600 grit wet-and-dry paper which he secures to a board with a piece of kitchen towel (also secured to the board) on which to wipe the sharpened point to remove any graphite dust. Tone could also be added by varying the pressure on the pencil, but he did warn us not to press too hard as it could change the fibres in the paper. Guy used Windsor and Newton 140 gsm paper for his work. Highlights can be removed by using a kneadable putty rubber and UHU white tac can be used at the end. To check his lines, which are close together, he uses a 'linen tester magnifier' which is used in the print industry, and finally he sprays the drawings with a fixative. Guy's drawings take 40–50 hours to produce. The afternoon was spent happily trying out the techniques that Guy had explained and chatting to him about his work.

Wendy Harvey

Saturday 18th November

Botanical sketchbooks

Peter opened the meeting by thanking us for coming along, and Wendy, for her delicious cake. From about 11.15 we began a most interesting discussion,starting with papers, i.e. best for watercolour work,suitability for coloured pencil, availability, and so on.Lizzie had much to say on this aspect, as she is in the process of finding the best replacement for her favourite Fabriano Artistico paper, which has been modified, and is now thought to be lacking something of the qualities it once had. As we all have our different requirements, there is a good variety of papers and boards to suit the most demanding artist.The question arose about adding the date to our artworks, (some of us do, except when we forget).This is a good idea as, in years ahead we can look back with satisfaction at our old sketches, noting the date, and see the way we have progressed through time. Sometimes a clear date and location recorded in a sketchbook can be of scientific interest; the works of Diana Ruth Wilson in Dorset, and the Clifford sisters and aunts in Gloucestershire were recalled.This meeting was largely about sketchbooks which, after the break for lunch, we were able to share and comment upon. Sketchbooks are intended to be places for notes and trials, and small specimens can be added. Habitual keepers of sketchbooks find them invaluable for later reference, for instance when an illustration is commissioned out of season for the plant.Some plant material was available to draw, and Valerie brought in a small branch from a tree, with large, curved and wrinkly leaves. She told us it was loquat (Eriobotrya japonica). I later looked it up in a book. I'm pleased to be better acquainted with it,especially after seeing that part of the actual tree.More of this would be very welcome. Robin and Gaynor talked about the differences between bearberry (Arctostaphylos uva-ursi), bilberry(Vaccinium myrtillus), cowberry (Vaccinium vitisidaea),and crowberry (Empetrum nigrum). I am personally quite familiar with these plants, having spent many hours picking bilberries, high in the Staffordshire Moorlands, whilst noting the other members of the Ericaceae.

This was a particularly stimulating meeting, in which everyone had something interesting to say.

Neville Waters