Journal of the HARDY ORCHID SOCIETY

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The Hardy Orchid Society Committee

President: Prof. Richard Bateman, Jodrell Laboratory, Royal Botanic Gardens Kew, Richmond, Surrey, TW9 3DS Chairman: Colin Scrutton, 14 Trafalgar Road, Tewkesbury, Gloucestershire, GL20 5FN Colin.Scrutton@dunelm.org.uk Vice-Chairman: John Wallington, 17, Springbank, Eversley Park Road, London, N21 1JH jrwallington@bluevonder.co.uk Treasurer: Maureen Denman, Three Feathers, Little London, Stroud, Gloucestershire, GL5 5DU maureen@denmansaccounting.co.uk Secretary: Hilary Pickersgill, Sissinghurst, Warrendene Road, Hughenden Valley, High Wycombe, Buckinghamshire, HP14 4LY hilaryp52@btinternet.com Membership Secretary: Moira Tarrant, Bumbys, Fox Road, Mashbury, Chelmsford, CM1 4TJ moira.tarrant@outlook.com Plant Show Secretary: Colin Rainbow, The Old PostOffice, Somerton Road, North Aston, Bicester, Oxfordshire, OX25 6HX car.northaston@btopenworld.com Photographic Competition Secretary: Steve Pickersgill, Sissinghurst, Warrendene Road, Hughenden Valley, High Wycombe, Bucks HP14 4LY steve pickersgill@btinternet.com Journal Editor and Website: Mike Gasson, Moor End Cottage, Moor End, Stibbard, Norfolk, NR21 0EJ moorend@globalnet.co.uk Speakers Secretary: Celia Wright, The Windmill, Vennington, Westbury, Shrewsbury, Shropshire, SY5 9RG celia.wright@windmill.me.uk Southern Meetings Organiser: David Cooper, 2 Lane Cottages, Cookley Green, Henley on Thames, Oxon, RG9 6EP david.cooper@digibus.demon.co.uk Northern Meeting Organiser: Alan Gendle, Strathmore, Grayrigg, Kendal, Cumbria, LA8 9BU alan@gendle.plus.com Publicity Officer: Simon Tarrant, Bumbys, Fox Road, Mashbury, Chelmsford, CM1 4TJ tarrant.simon@outlook.com Seed Bank Manager: Alan Leck, 1 Stoodley Terrace, Oakfield Road, Frome, Somerset, BA11 4FF alanleck@alanleck.plus.com Journal Distributor: Nigel Johnson, Cassandene, Station Road, Soberton, Hampshire, S032 3QU cassandene@waitrose.com Conservation Officer: Bill Temple, Primrose Cottage, Hanney Road, Steventon, Oxon., OX13 6AP bill@billtemple.f9.co.uk Field Meetings Co-ordinator: Alan Bousfield, Little Forge, Mill Cross, Staplecross, East Sussex, TN32 5HA alan.bousfield@ukgateway.net **Cover Photographs**

Front Cover: 'Best Print' winner in the 2017 HOS Photographic Competition: *Ophrys reinholdii* by Gillian Elsom in Class 5.

Back Cover: 'Best Projected Image' and winner of the 'Maren Talbot Photographic Trophy' for 2017: *Epipactis purpurea* var. *rosea* by Richard Hogg in Class 14.

The Hardy Orchid Society

Our aim is to promote interest in the study of Native European Orchids and those from similar temperate climates throughout the world. We cover such varied aspects as field study, cultivation and propagation, photography, taxonomy and systematics, and practical conservation. We welcome articles relating to any of these subjects, which will be considered for publication by the editorial committee. Please send your submissions to the Editor, and please structure your text according to the "Advice to Authors" (see Members' Handbook, website <u>www.hardyorchidsociety.org.uk</u>, or contact the Editor). Views expressed in journal articles are those of their author(s) and may not reflect those of HOS.

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Editorial Note Mike Gasson

The January issue of *JHOS* is always well served for photographic material as we have images from the Photographic Competition. They seem to get better each year and I have tried to include a good selection of them along with the results. I can't fit them all in but there is a complete set of the winning photographs on the HOS website. This time the contents are dominated by two larger articles of different flavour. It is good to be able to include another of Moira Tarrant's innovative grower interviews this time featuring Barry Tattersall who has dominated the Plant Show for at least the last couple of years. Aspiring orchid growers should be able to learn from the master! Also, we have a detailed look at *Epipactis* in Kenfig, South Wales where Mike Clark has undertaken some in-depth studies over many years. Again there are insights from an expert in the field. As has been the trend of late we do have a healthy supply of submitted articles, so sorry if there is a delay in getting some into print. Please do keep them coming though as they are the journal's life blood. Only one field trip report is squeezed in this time but I hope to have more in the April *JHOS*.

Chairman's Note Colin Scrutton

One of the thrills of orchid hunting is to find a species not previously recorded from a particular site, or the return of one long thought to have become extinct. These are exciting and important records, but how often do members pass on the information to the appropriate vice-county recorder? New records thus passed on will find their way onto the increasingly valuable BSBI Distribution Database. I have certainly done this in the past when we lived in the northeast and I would do this in the future if the situation arises. I suspect some other members also already do this. It's possible that you might want to keep a new record private, perhaps to preserve it from the attentions of unscrupulous collectors or damage by careless visitors. However, access to the BSBI Distribution Database is restricted and detailed grid references are only available to those who have negotiated unfettered access, usually for research projects.

So I would encourage members to pass on new records to the appropriate recorder. They are listed at <u>http://bsbi.org/local-botany</u>. Alternatively, some wildlife trusts collate important records and pass them on to the local recorder or directly to BSBI, or you could pass them on directly to BSBI yourself. If you consider the item to be particularly sensitive or should remain confidential, mention that, or if you are unsure take advice from a Committee member before submitting the record.

On our visits to various orchid sites we have often come across other people examining and photographing the flowers. Some are fellow members of the Society but others are not and in most cases have no knowledge of the Society. So I have



designed a business card outlining our purpose and giving the Society's web address. I've already given out a few of these cards and other members might like to have them handy. If so, email me (<u>Colin.Scrutton@dunelm.org.uk</u>) and I'll send you a jpg of the card design, which is illustrated here. And don't

forget that our Publicity Officer Simon Tarrant has a supply of HOS promotional leaflets. Please contact Simon if you are able to distribute any.

We have just returned from the Autumn meeting at Kidlington where we had a healthy audience of 90+ members and friends. The programme was a nice balance between wild orchids and orchid growing. We showed the winning video from the Leeds meeting and Celia Wright presented the Tony Hughes trophy to Malcolm Brownsword who submitted the 'Orchids of Hartslock'. The side room was full of excellent print

photographs of which the winning print overall was entered by Gillian Elsom. We saw a selection of the best digital entries during the feedback, ably conducted by Jon Evans. A digital photograph of the *rosea* variety of the Violet Helleborine was judged the overall winner and the Maren Talbot Trophy was presented to Richard Hogg. A list of the winners (first three places) will be found elsewhere in this Journal, together with some of their photographs. We also had six very interesting Scientific Show entries, all of which will be on display again at Leeds next year.

We had one shorter talk of 10 mins at Kidlington and our Speaker Secretary, Celia Wright, would appreciate more offers of short talks for future meetings. For example, they are ideal to give a taster of the orchid flora of a particular region or to illustrate species diversity within a particular genus. They help also to diversify the programme at a meeting. If you have suitable material for a short talk, then please contact Celia with the details. She will be pleased to hear from you.

To date, we have only five field trips for 2018 which is rather disappointing. Angela and I hope that by next year we will be able to offer a field trip to one or other of the orchid sites near us, but in 2018 we will be out of the country during the main domestic orchid season. I hope some of you will read this and decide to offer a trip to an area you know well, it is not too late. If so, please get in touch with Alan Bousfield (alan.bousfield@ukgateway.net) who will be pleased to hear from you.

The booking form and programme details for the 25th Anniversary meeting at Kidlington in April are enclosed with this Journal. Our 25th Anniversary talk will be given by our President, Richard Bateman and will review his work and experiences with hardy orchids over the last 25 years. It should be an excellent meeting and I look forward to a good audience at Exeter Hall.

HOS Meetings 2018

Sunday 15th April Spring Meeting, AGM & Plant Show at Kidlington

Sunday 12th August Seed Sowing Workshop at East Hagbourne, Oxfordshire

> Saturday 1st September Northern Meeting at St. Chad's, Leeds

Sunday 18th November Southern Meeting & Photographic Show at Kidlington



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HOS Field Trips 2018

These Field Trips are for Members Only. Accompanying spouses/partners must also be members; it only costs £3 to upgrade to family membership. You may be asked to show your membership card so please take it with you.

Saturday 9th June: New Forest.

Leader: David Hughes, e-mail: davidcchughes@btinternet.com

For the orchids of the blanket bogs. We should find *Dactylorhiza maculata*, *Dactylorhiza incarnata* ssp. *pulchella*, *Dactylorhiza praetermissa*, *Platanthera bifolia*, *Gymnadenia borealis* and *Epipactis palustris*. We will get wet feet and enjoy the unusual flora of the New Forest Bogs.

Second half of June (date to be confirmed): North Wales.

Leader: Sue Parker, e-mail: <u>bugloss@btinternet.com</u>

Minera Quarry which is a good site for a number of orchid species, including Frog Orchid. <u>http://www.northwaleswildlifetrust.org.uk/nature-reserves/minera-quarry-nature-reserve</u>

Eryrys Quarry which has some exceptionally large Frog Orchid plants. http://www.northwaleswildlifetrust.org.uk/events/2014/07/02/eryrys

Saturday 30th June: Hale Moss & Helsington Barrows, South Cumbria.

Leader: Alan Gendle, e-mail: <u>alan@gendle.plus.com</u>

Hale Moss Reserve is a calcareous bog with Northern Marsh-orchid, Early Marsh-orchid (ssp. *pulchella*), Fragrant Orchid and Twayblades.

Helsington Barrows is limestone grassland and covered with Greater Butterfly-orchid, Lesser Butterfly-orchid, Fly Orchid, Fragrant Orchid and Dark-red Helleborine

Early July (date to be confirmed): North Yorkshire.

Leader: Charlie Philpotts, e-mail: charlie.philpotts@btinternet.com

Staveley Nature Reserve is a superb wetland site just off the A1. It is a species rich site with an abundance of wildlife and several bird hides. Orchids include Common Spotted-orchid, Twayblade, Fragrant-orchid, Bee Orchid, Marsh-orchids and Greenflowered Helleborines. It is a fantastic site for both flora and fauna and also great for bird watchers. <u>http://www.ywt.org.uk/reserves/staveley-nature-reserve</u>

Burton Leonard Lime Quarries is a charming small site which was still a working lime quarry until 1941. It is a species rich site which is good for butterflies and other insects. Orchids include Bee Orchid, Twayblade, Pyramidal Orchid, Common Spotted-orchid, Fragrant Orchid and a few hybrids between Fragrant Orchid and Common Spotted-Orchid.

http://www.ywt.org.uk/reserves/burton-leonard-lime-quarries

Saturday 4th August: Stonecroft Mine, Northumberland.

Leader: Alan Gendle, e-mail: <u>alan@gendle.plus.com</u> Stonecroft Mine SSSI, Newborough, South Northumberland for *Epipactis*, including *E. youngiana*, *E. helleborine*, *E. phyllanthes* (*pendula*) and *E. dunensis*.

MALVERN INTERNATIONAL ORCHID SHOW

Reduced price tickets for the Royal Three Counties Show at Malvern on June 15-17th 2018 (includes the Malvern International Orchid Show) will be available again for £8 from British Orchid Council via Iain Wright (full price alternatives are around £20 or more). Available for use by HOS members, their families and friends, they allow entry to the entire Show on any one day that does not have to be specified in advance. Contact Iain ASAP at <u>iaincwright@windmill.me.uk</u>, 01743 884576 or The Windmill, Vennington, Westbury, Shrewsbury SY5 9RG.

Results of Photographic Competition 2017

Class 1. A view of an area (landscape or habitat) showing orchids in their natural environment, print size up to 7×5 inches (16 entries)

- 1st Steve Tandy *Epipactis helleborine* var. *neerlandica*
- 2nd Thomas Turner Orchis purpurea
- 3rd Gillian Elsom Orchis mascula

Class 2. A group of orchids containing at least three flower spikes. These can be all the same species/hybrid or a mixed group, print size up to 7×5 inches (16 entries)

1st Sandra Clements – Orchis militaris

2nd Gillian Elsom – Ophrys sicula

3rd David Hughes - Neottia nidus-avis

Class 3. A single orchid spike, usually the single stem arising from one tuber/ rhizome, print size up to 7×5 inches (16 entries)

- 1st Hilary Pickersgill Orchis provincialis
- 2nd Steve Clements Epipactis helleborine
- 3rd David Pearce Orchis anthropophora

Class 4. A close-up of an orchid, showing one or more entire inflorescence(s), print size up to 7×5 inches (18 entries)

- 1st David Hughes Dactylorhiza praetermissa
- 2nd Gillian Elsom Ophrys insectifera
- 3rd David Pearce Epipogium aphyllum

Class 5. A close-up of an orchid showing part of an inflorescence, print size up to 7×5 inches (18 entries)

- 1st Gillian Elsom Ophrys reinholdii (Best Print)
- 2nd Alan Blackman Himantoglossum hircinum
- 3rd Phil Smith *Epipactis atrorubens*

Class 6. A view of an area (landscape or habitat) showing orchids in their natural environment, print size up to A4 (11 entries)

1st Steve Clements – Orchis anthropophora

2nd Gillian Elsom – Orchis mascula

3rd Patrick Marks - Dactylorhiza maculata & Gymnadenia borealis

Class 7. A group of orchids containing at least three flower spikes. These can be all the same species/hybrid or a mixed group, print size up to A4 (17 entries)

1st Steve Clements – Spiranthes spiralis

2nd Hilary Pickersgill – Anacamptis sancta

3rd Gillian Elsom – Orchis mascula

Class 8. A single orchid spike, usually the single stem arising from one tuber/ rhizome, print size up to A4 (16 entries)

1st Steve Clements – Anacamptis papilionacea

2nd Steve Tandy – Orchis mascula

3rd Hilary Pickersgill – Neotinea lactea

Class 9. A close-up of an orchid, showing one or more entire inflorescence(s), print size up to A4 (18 entries)

1st Richard Laurence – Neotinea ustulata

2nd Gillian Elsom – Dactylorhiza fuchsii

3rd Steve Clements – Myrmechila platyptera

Class 10. A close-up of an orchid showing part of an inflorescence, print size up to A4 (18 entries)

1st Alan Blackman – Epipactis palustris

2nd John Wallington – Cypripedium montanum

3rd Richard Laurence – Ophrys ×pietzechii

Class 11. A view of an area (landscape or habitat) showing orchids in their natural environment, in jpeg form (20 entries)

1st Ivar Edvinsen – Gymnadenia conopsea

2nd Phil Smith – Dactylorhiza purpurella

3rd David Hughes – Neotinea ustulata

Class 12. A group of orchids containing at least three flower spikes. These can be all the same species/hybrids or a mixed group, in jpeg form (22 entries)

1st Steve Clements – Spiranthes spiralis

2nd Gillian Elsom – Anacamptis papilionacea

3rd Richard Bateman – Orchis italica

Class 13. A single orchid spike, usually the single stem arising from one tuber/ rhizome, in jpeg form (25 entries)

1st Gillian Elsom – Orchis italica

2nd Richard Bateman - Orchis mascula

3rd Sandra Clements – Cephalanthera damasonium

Class 14. A close-up of an orchid, showing one or more entire inflorescence(s), in jpeg form (27 entries)

1st Richard Hogg – Epipactis purpurea var. rosea (Maren Talbot Trophy)

2nd Karen Gregory – Ophrys lutea

3rd Mike Waller – Himantoglossum hircinum

Class 15. A close-up of an orchid showing part of an inflorescence, in jpeg form (23 entries)

- 1st Gillian Elsom Ophrys cornutula
- 2nd Ken Elsom Ophrys omegaifera

3rd Ana de'Ath – *Epipactis atrorubens*

Class 16. Novice Class, any hardy orchid print, size up to A4 (4 entries)

1st Eric Gendle – Orchis anatolica

2nd David Livermore - Dactylorhiza viridis

3rd Steve Tandy – Epipactis helleborine

Class17. A hardy orchid subject that has been manipulated creatively using any advanced software technique to create an artistic image. Print maximum size A4 (7 entries)

- 1st Alan Blackman "Lizard Orchid"
- 2nd Gillian Elsom Orchis mascula
- 3rd Steve Tandy "Coming to Life"

Maren Talbot Photographic Trophy:

Richard Hogg for his projected image of Epipactis purpurea var. rosea in Class 14

Best Print:

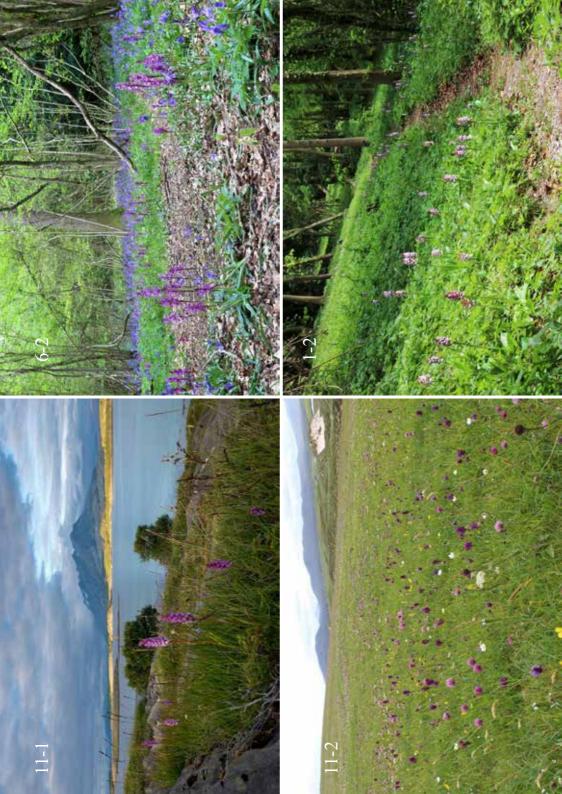
Gillian Elsom for Ophrys reinholdii in Class 5

Our thanks to the Competition Judge:

Jon Evans

The following four pages include a selection of winning images from the 2017 HOS Photographic Competition. Figure numbers indicate the Class followed by the position (e.g. 4-2 is second place in Class 4). All winning photographs are on the HOS website.









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Growing Hardy Orchids - 3: Moira Tarrant talks to Barry Tattersall

Barry Tattersall is known to all HOS members through his exceptional plants shown at every Spring Plant Show at the southern HOS meeting. As his orchids are always among the winners, members unable to admire his plants at first hand will have seen them in photographs of winning plants in the HOS Journal. Barry's plants also appear at Alpine Garden Society Shows across the UK raising the profile of hardy orchids among other audiences. He has frequently won both the Best in Show Trophy and the Banksian Medal for most points awarded at the HOS show and is listed in the top 30 of awarded growers by the Alpine Garden Society.

I visited Barry at his south-west London home on a cool day in late February. As heavy rain showers were forecast we took advantage of the dry weather to go straight outside to the north-facing cold frame where he grows *Cypripedium* and *Epipactis*. A 4ft x 8ft Access ridge frame was sitting on a one foot high wooden base enabling a deep sharp sand plunge. All the plants were in large clay pots except for *C. japonicum* which was at that time in plastic. The *Cypripedium* are all grown in an inorganic mix of pumice, perlite and chick grit with a top-dressing of fine composted bark. For acid-lovers such as *C. acaule* Barry leaves out the chick grit. He showed me his solution to the problem of watering species which demand a pH no higher than 4; a



bucket of rainwater which held live sphagnum moss. This also provided a great bath for the resident Blackbirds. Barry explained that he likes to grow all his orchids hard and so the top glass is removed on 1st March every year leaving the plants to experience whatever the weather brings.

We moved on to the greenhouse; a $12\text{ft} \times 8\text{ft}$ lean-to standard greenhouse, glazed to the ground. Ventilation is provided by vents at bench height standing open all the time; two along the side and one at the end. The door also stands open except when winds are very strong. Even in a sheltered suburban garden Barry fears that a strong gust could lift or

Fig. 1: Barry Tattersall Fig. 2: Frame holding *Cypripedium & Epipactis* Fig. 3: Barry's greenhouse plunge bed Photos by Simon Tarrant





Fig. 4: *Ophrys lapethica* Photo by Simon Tarrant

damage glass panes. Sharp sand plunge beds constructed of sturdy wooden planks standing on concrete block supports run along both long sides. As the house faces south-west it gets no sun in winter until mid-day which suits the orchids. The outer bed was packed full of those plants which require the brighter light; mainly Mediterranean species with a number already in flower. All grow in clay pots in a mix of sizes from 4" (10cm) up to 6" (15cm) often with several plants to a pot. My eye was caught by four very large and healthy Ophrys kotschyi in a 6" pot. Barry explained that he could possibly get larger plants by increasing the pot size but can't as his greenhouse is at capacity with the range of species and genera that he grows. Also occupying the outer bench were several pans of Australian species; Pterostylis and the autumn flowering Diplodium. I commented that the sand plunge looked very dry and Barry

showed me that digging deeper revealed moisture around the bottom of the pots. He is very careful not to overwater and finds that during the worst of winter the plants do not need watering. Indeed, by the time that I was there in late February he had watered only once in this year. Even so, he finds condensation drips from the roof glass a problem, so a sponge is always at the ready. He uses rainwater straight from water butts, watering from above, pointing out that even orchids growing around the Mediterranean will receive freezing rain early in the year. The rear bench held *Calanthe* and a pot holding several *Himantoglossum robertianum* which, as they had started to flower in October, were well over. There were also pots of *Cypripedium formosanum* moved into here as he finds them slightly tender compared with others in the genus. I admired his strategy for increasing the light available to plants in the rear bed. The back and side walls have mirrors screwed to the concrete blocks up to 2½ft height. Also in this rear bed were *Satyrium*, including *S. erectum*, *S. longicolle* and *S. odorum* as well as *Gavilea odoratissima* all in long clay pots as they can produce huge tubers.

He reminded me that he wants his plants to show as natural a habit as possible so he doesn't heat the greenhouse or use shade wash. He finds that plunging the pots keeps the temperature of the tubers fairly constant. He does have two large fans in the greenhouse which are switched on manually whenever the sun comes out. In very cold weather he protects plants with sheets of newspaper which is lighter and therefore less damaging than fleece. I asked about composts for the wide range of plants he is growing in this space. All have the same compost which is generally equal parts of calcareous molehills, JI 2, fine grit (granite or whatever is available) and cat litter. My expression of surprise prompted an explanation from Barry – this is Tesco fine cat litter which is a Danish fired clay. He also uses a coarser grade which is more like Seramis. He admitted that he slightly varies his compost each year, sometimes leaving a component out. Asked what criteria he uses to make changes he explained that he works intuitively using his experience to judge how plants are looking when they are re-potted. Plants which had travelled to Shows this season were top-dressed with granite chips or fine composted bark but otherwise his plants remain with no top-dressing. He does not feed his greenhouse orchids but having moved fairly recently to a totally inorganic mix for *Cypripedium* he is now feeding them with Orchid Focus, Grow, Bloom and Ultra all at ¼ to ½ strength. As he has found that the *Cypripedium* do very well with this regime he is now going to try the same feed with *Dactylorhiza*. He does not crock his plants but does put plastic mesh at the bottom.

We prudently admired from the safety of the greenhouse another Access ridge frame holding *Dactylorhiza* and *Gymnadenia* as by this time the promised heavy rain had arrived. These too are grown in large clay pots plunged in sharp sand. Barry uses a compost of equal parts of composted bark, JI 2, peat and 2-3mm grit for these. This means that he does not need to sterilise any elements of his composts as he either accepts what is in his foraged ingredients such as the molehill soil or



Fig. 5: A mirror on the rear wall enhances light to orchids Photo by Simon Tarrant

the material is bought in free of weeds and other contamination. I asked about re-potting frequency. The Mediterranean species are left in their pots to dry off and then re-potted every year, mainly in August. It surprises him how early many species start back into growth. *Dactylorhiza* are also re-potted as soon as growth dies down. *Cypripedium* are not repotted for up to five years as the inorganic medium does not break down.

I also asked about propagation as one of the distinctive features of Barry's Show pots has long been multiple plants of *Ophrys* perfectly uniform in their growth. Barry always uses the technique of removing the new tuber as soon as it develops then re-potting both it and the mother plant which will invariably produce a second and sometimes a third new tuber. This ensures that all plants in a pot are the same

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clone. He advises that this must be done while the plant is still green which can be very early with *Ophrys. Orchis* remain green a bit longer, giving more opportunity for bulking up, but as soon as the leaves start to die off it is too late. He has found that of all his plants only *Epipactis royleana* and *Cypripedium reginae* have produced spontaneous seedlings.

We talked about problems with the plants. Slugs are rarely a problem for Barry, probably because everywhere is relatively dry and all plants are surrounded by sand. He had dealt with an infestation of greenfly on the *Himantoglossum* earlier in the season and sometimes finds moth caterpillars on plants. All require constant vigilance and swift removal. He does not suffer with neck rots of tubers, again probably, because of the relatively dry conditions. He did recount to me one of his constant experiments to improve plant growth and flowering that has not gone as well as hoped. It is recounted here to prevent other HOS growers making the same mistake. Having observed a population of *Dactylorhiza* growing vigorously in pure clay he tried, last season, adding a tiny cube of the clay to each pot of Mediterranean species. This had no measurable effect either for good or ill so this season he tried making a soup of the clay, putting a tiny amount in each pot. While most plants remained unscathed, a few were showing their dislike with some signs of damaged leaf growth.

To counteract this tale of woe, I was struck by seeing several of Barry's innovative practices producing excellent growth and flowering. Even before we had left the house I had seen a couple of pots of very healthy Spiranthes odorata (syn. S. cernua) sitting in an aquarium with a small pump aerating the water. The aquarium is filled initially to about 2cm above the rim of the pots so the base of the leaves are underwater. The tank is cleaned and refilled when water has evaporated to below the rim of the pots. Barry advised that this technique will not work for S. odorata 'Chadd's Ford'. In the greenhouse I noticed pots holding dense mats of *Goodyera oblongifolia* and *G*. repens which Barry tells me are covered in flowers later in the year. They were sitting in a plastic tray in the damp shade under the plunge bed where they can be watered from below but are never allowed to sit in water. Also in the greenhouse but on the bench I observed a plastic bowl in which Anacamptis species, which naturally grow in damp situations, were being grown double potted. The inner pot held the orchid growing in Barry's standard Mediterranean mix. This was held in a larger pot giving at least 1" (2.5cm) all around of sharp sand and sitting in about 1" (2.5cm) of water. Barry explained that the inner pot is held well above the water level but the orchid can reach and use a constant supply of moisture. This regime was being used for A. picta, A. champagneuxii and A. morio subsp. caucasica.

> Fig. 6: *Spiranthes* sp. growing in an aquarium Fig. 7: *Anacamptis* sp. double-potted to provide moisture Photos by Simon Tarrant



I asked him how he manages to produce plants for shows with leaves still green, particularly those species where leaves naturally go over before flowering finishes. He shades any plants he is planning to show either below the shelf in the greenhouse or outside under a bush as both heat and light affect leaves. This is mainly a strategy for *Ophrys* as he finds *Orchis, Anacamptis* and *Neotinea* stay green for longer.

We finished a great morning of talking orchids by reminiscing about early days of the Hardy Orchid Society. Barry recalled that he had been growing hardy orchids well before the HOS was started having got into them from his interest in tropical fish. From fish to the plants that grow in aquaria to Marsh-orchids (*Dactylorhiza* sp.) seemed a logical step. He was greatly encouraged by the late Dr. Tom Norman and recalls the lengthy discussions he had with the late Norman Heywood about the possibility of starting a society. I am grateful to Barry for his kind sharing of his vast skill and knowledge of hardy orchids and we must all be grateful that Barry and Norman Heywood's discussions resulted in the Hardy Orchid Society which has allowed all of us to increase our knowledge.

Barry always prefaces any conversations about how he grows his orchids by pointing out that he slightly changes what he does every season. So for snapshots of Barry's methods at different times see the chapter on cultivation that he contributed in 2005 to 'Orchids of the British Isles' by Michael Foley and Sidney Clarke. Also an article by John Fitzpatrick in 'The Alpine Gardener' (forthcoming) following a visit to Barry by John in May 2015.

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Book Review: *Eesti Orhideede Käsiraamat* Simon Tarrant



Eesti Orhideede Käsiraamat [Estonian Orchid Handbook], by Rainar Kurbel and Toomas Hirse; Käoraamat, 2017. ISBN 978-9949-81-745-0; 304pp; approx €27 plus postage. Obtainable from https://www.rahvaraamat.ee

It is less than five years since a definitive book on Estonian orchids appeared, and now we have another one. I reviewed the previous book in this Journal (Tarrant, 2013). Both books are in Estonian, a language not readily accessible to non-native

speakers, which at least suggests a healthy interest among Estonians in their native orchids.

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The bulk of the book is devoted to a species by species account of orchids currently known to occur in Estonia. Each account contains a lot more photographs than text, so a lack of linguistic knowledge is not a major impediment to appreciating the information displayed. The photographs are clear and comprehensive and include habitat, whole plant and close-ups as well as variations and diagnostic features. Some basic statistics covering size and numbers of leaves and flowers are provided and flowering season is indicated. A symbol indicates relative scarcity in Estonia. A particularly valuable feature is the distribution map for every species, differentiating pre-2000 records from more recent ones. Encouragingly, only a few species have seen a major decline in the 21st century, though most have seen some decline.

Each genus has a brief introductory section, where key differences between individual species are highlighted. I am impressed by the use of coloured circles superimposed on photographs to indicate such diagnostic features, for example how to distinguish between *Cephalanthera longifolia* and the white-flowered form of *C. rubra*. Again, an inability to read Estonian is not an issue!

A lot of work has been undertaken in recent years to try and unravel the relationships between different northern European *Dactylorhiza* populations (e.g. Bateman, 2011; Bateman & Denham, 2012; Pikner, 2014), and a monograph on *Dactylorhiza* has been published (Eccarius, 2016). Perhaps not surprisingly Kurbel and Hirse give the Estonian 'specials' *Dactylorhiza osiliensis* and *D. vironii* entries in their own right, in contrast to their treatment by Eccarius, who treats them as subspecies of *D. ruthei*.

Photographs are also used in introductory sections of the book, one of which provides a key by flower colour (though I doubt that many orchid enthusiasts would need to bother with this), another illustrates plants after their flowering season has finished, so from green seedpods to withered brown stems carrying empty pods - really handy if you time your visit after flowering has finished. You shouldn't need to do that however as a chart of flowering seasons is provided, reminding us of the shortness of the Estonian orchid season, from early May to the end of August. The book closes with sections on hybrids, monstrosities and a bit of speculation on future developments with a map showing the nearest occurrences of some non-Estonian species - *Calypso bulbosa* being the closest, found a mere 90 kilometres away in Russia. In summary, this is an attractively presented work which contributes significantly to the literature on northern European orchids.

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Book Review: *The Orchid Hunter* by Leif Bersweden Mike Gasson & Simon Creed



The Orchid Hunter by Leif Bersweden Short Books, London, 2017 ISBN 978-1-78072-334-1 363 pages; RRP £12.99 Currently available for £10.04 from Amazon

Lief Bersweden's book came in to HOS for review a while back but we didn't have space to fit it in the last *JHOS*. Since then a couple of members have made positive comments about the book on the HOS Forum and one sent in a critique of the book. Hence

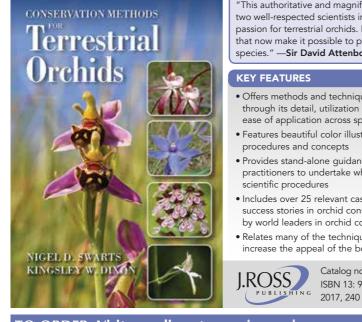
this is a hybrid review with my own comments from earlier followed by words from Simon Creed who clearly enjoyed reading the book.

Lief's book is an autobiographical account of an orchid hunting year (2013) in which he set himself the goal of seeing all of our native British orchid flora in flower. In many ways it is a botanical rerun of Patrick Barkham's The Butterfly Isles and is very much in the style of in vogue natural history writing where personal experiences and perspectives are interwoven with accounts of the target subjects. The book is nicely written and in keeping with its aim covers a large number of sites throughout Britain and Ireland. There are some attractive line drawings by Evie Dunn and a centre section with colour photographs of the orchids encountered. The hardened orchid expert will be very familiar with many of the sites and orchids described but even they are likely to learn some new things. For the less experienced there will be a wealth of ideas to fuel their future orchid hunting. It was interesting to read of Lief's perspectives on some of our well visited sites which in my own experience can rather give the impression of a botanical zoo! At the present time in the depth of winter here is an enjoyable read that will fuel enthusiasm for the season ahead! Simon Creed's thoughts follow but one small warning – he does reveal something of the story so if you are worried about plot spoilers I suggest you save his second paragraph until after you have read the book!

If you are an enthusiastic orchidophile, keen naturalist or love to get stuck into a good novel, I recommend *The Orchid Hunter* by Leif Bersweden. With interesting native orchid facts and naturalising adventures all in a twisted novelist style. From a young age and an early interest of botany and native orchids of a young botanist just finishing his GCSEs and stocking shelves in Waitrose to fund and pay for his travels, setting off on an impossible mission to find all 52 native wild orchid species in one summer all across England, Scotland and Ireland, which no other botanists have ever done before.

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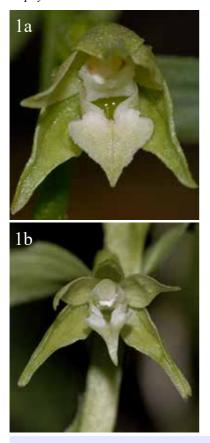
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Epipactis at Kenfig NNR, South Wales: Field Based Observations 1999-2016 M. J. Clark

Epipactis phyllanthes: (Green-flowered Helleborine)

Out of the five varieties of *Epipactis phyllanthes* which occur in England and Wales var. *pendula*, var. *vectensis*, and var. *cambrensis* are the three I have observed through an 11 year survey at Kenfig National Nature Reserve. *E. phyllanthes* var. *pendula* and *E. phyllanthes* var. *vectensis* have been observed as woodland plants and flower in



late July (Fig. 1). Although the average height of plants is around 21cm, I have found plants to 59cm and also in deep shade. D. P. Young (1962) noted that there is no material dividing line either geographical or morphological between var. *pendula* (Fig. 1a) and var. *vectensis* (Fig. 1b). I have found plants with mixed characters on the same plant and hence the names are retained only for convenience of description. The hypochile is more or less cupshaped, slightly nectariferous, and unlike other U.K. *Epipactis* is pale green within.

In 1941 and 1942 C. A. Thomas found small plants which he named *E. phyllanthes* var. *cambrensis* and the recent rediscovery of the plant (Fig. 2) shows it still exists, although in small numbers each year. In some years only one or two plants are found. *E. phyllanthes* var. *cambrensis* grows in the open and although three plants were found on the ground surrounding small sand hills all the rest have been found growing on the side or at the base of small sand hills. *E. phyllanthes* var. *cambrensis* can in be variable with very small flowering plants, which are possibly young plants (Fig. 3), and robust plants (Fig. 4). The

Fig. 1: E. phyllanthes in woodland in late July
Fig. 1a: E. phyllanthes var. pendula Fig. 1b: E. phyllanthes var. vectensis
Fig. 2: E. phyllanthes var. cambrensis
Fig. 3: Small flowering E. phyllanthes var. cambrensis
Fig. 4: Robust E. phyllanthes var. cambrensis
Photos by Mike Clark



labellum curves back (i.e. reflexes) early after full flower and is pale green with the boss showing white. They can flower in early July and in some years I have found a small number of plants keying down to var. *cambrensis* on the Oxwich Dunes. Further investigation is necessary to establish whether it is a good taxon and not just an ecotype.

It has been noted that *E. phyllanthes* var. *cambrensis* is sufficiently distinct from other subsidiary taxa of *E. phyllanthes* to justify a separate varietal rank. A detailed morphological comparison of this variety has not yet been carried out but it is hoped that molecular analysis of samples (legally collected specifically for that purpose) may clarify its status in due course.



Fig. 5: *E. phyllanthes* under Hawthorn Photo by Mike Clark Regarding the woodland forms of E. phyllanthes, the structure of this plant under mature Birch as opposed to mature Hawthorn differs. Under Birch they are more robust than under Hawthorn where they tend to be smaller and fewer in number, thin stemmed and with fewer flowers (Fig. 5). The only time there is a robust plant under Hawthorn is when a mature Birch is nearby (within 1 or 2 metres) and the fungus appears to be greater. However, there are intermediate plants as observed with E. helleborine ssp. neerlandica and there are weak or juvenile plants which may give misleading characters. It is rare to find this woodland form growing outside the cover of trees. The lips of the woodland E. phyllanthes are rather variable; some are attributable to var. vectensis while others are closer to var. pendula. In 2006-2007 because of stock damage I made a trial caging of plants in the Birch wood site but unfortunately this was of little benefit as the cages served as a play thing for the cattle. Also, whilst surveying plants one would inadvertently make tracks to the plants which the cattle would follow and often damage to plants would take place.

Fungus

I considered that the density of the fungi under the mature Birch may be greater than that under mature Hawthorn. On removing soil, I found a high density of fungus

under mature woodland Birch taken when plants were in flower and only a small evidence of fungus under mature woodland Hawthorn at the same time. The process involved removing soil 17cm from the plants and 7cm deep by 7cm wide on the site of seven plants, the plants themselves were not touched. Of course, I am only presuming that the *E. phyllanthes* is acting upon and making good use of the fungus. It would make a good student project to check and compare fungus type and density and also try to determine the problem with plants aborting.

For several years I have noted that large numbers of woodland *E. phyllanthes* plants abort each year despite varying weather conditions. Quite healthy-looking plants manage to get to the bud stage, then they blacken on the bend of the stem near to the buds and abort prior to flowering. This may be due to dry springs or the result of an air born pathogen and can affect over 70% of the plants. It is problematic and unexplainable at this time. Large numbers of seed seem to be produced by the plants that do survive. In the 11-year period surveyed I have found numbers of flowering plants vary greatly from year to year. One main study site produced 163 plants in 2010 and none in 2014 (see photo from River Copse Fig. 6). With plants being this irregular, I check as many copses as possible even if no plants have shown in a copse and if I can, I will check 15 sites every year. My highest total for the year is 371 plants in 2010.



Fig. 6: *E. phyllanthes* habitat at River Copse Photo by Mike Clark

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Epipactis helleborine (Broad-leaved Helleborine)

At Kenfig the woodland form of *E. helleborine sensu stricto* reacts as normal in its response to shade with several relatively large broad dark green leaves often arranged into two opposite ranks up the stem (Fig. 7). The flowers tend to be clean in colour unlike ssp. *neerlandica* and tend to be more open in its shaded environment (Fig. 8). I have recorded plants up to 103cm tall. I have never found the plant to be numerous in the copse. Plants lacking in chlorophyll (var. *monotropoides*) (Fig. 9) also appear from time to time in the area named the Birch Wood.

Epipactis helleborine ssp neerlandica

Observations regarding *E. helleborine* ssp. *neerlandica* (Fig. 10 -this is an extreme example of leaf cluster) reveal a wide range of colour to the flowers and I have found

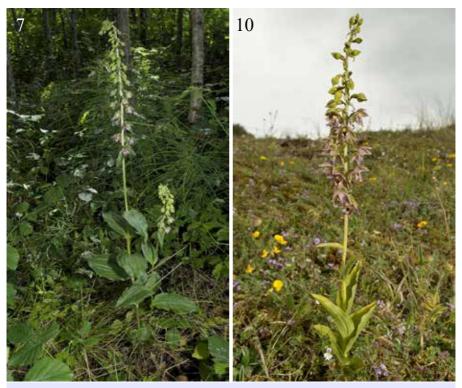


Fig. 7 (above): Woodland form of *E. helleborine* at Kenfig
Fig. 8: More open flowers of shaded *E. helleborine*Fig. 9: *E. helleborine* lacking chlorophyll
Fig. 10 (above): *E. helleborine* ssp. *neerlandica*Fig. 11: *E. helleborine* ssp. *neerlandica* lacking chlorophyll
Fig. 12: Small plant of *E. helleborine* ssp. *neerlandica*Photos by Mike Clark



pale green flowers (chlorotic) with no anthocyanins showing (Fig.11) including inside the hypochile but this is rare. Most are of a dull appearance, with a mixture of olive green and purple showing in the flowers. I think there is a strong possibility that it is an ecotype. It is worth noting that the leaves are arranged higher up the stem when growing in thick *Salix repens*, presumably to reach more light, which I think is more evidence of it being an ecotype.

This conclusion was supported when I marked a tall 103cm plant of *Epipactis* helleborine sensu stricto (Fig. 8) with GPS in an area subject to woodland clearance. The plant reappeared along with others growing in the open after the clearance and all were of the ssp. neerlandica form showing more rounded, erect and clustered leaves toward the base. E. helleborine ssp. neerlandica is capable of producing plants in flower that are around 5-6cm tall (Fig. 12). Most plants have a pale yellow-green colour. Several experts on E. helleborine ssp. neerlandica were invited to comment on the identity of the Kenfig plants. C. A. J. Kreutz, a well-known Dutch author of several books on European orchids, including 'De orchideeën van Nederland' (2000), examined the Kenfig plants during visits in 2006 and 2007. He took photos and notes for his forthcoming book and concluded that they were the same as the continental ssp. *neerlandica* with which he is very familiar. The two other experts consulted, J. Reinhardt and D. W. Kapteyn den Boumeester, were also both of the same opinion. On inspection the tuberculiform papillae are small, closely spaced, mostly isosceles triangle-shaped and pointing outwards. In contrast E. helleborine sensu stricto has larger, more widely spaced, often hook shaped (uncinate) papillae



Fig. 13: *E. palustris* var. *albiflora* Photo by Mike Clark

pointing towards the leaf apex. Although there is a good colony at Kenfig, I also found that it was well established at Oxwich sand dunes in South Wales.

Epipactis palustris : (Marsh Helleborine)

E. palustris, along with the Early-purple Orchid *Orchis mascula*, are the most common orchid found at Kenfig. Although its numbers can wane some years it will still outnumber other species. Numbers depend on whether the slacks have had a regular winter cut. *E. palustris* var. *ochroleuca* can occur in large numbers, but var. *albiflora* which lacks anthocyanin pigments is rare (Fig. 13).

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Hardy Orchid Field Trip to the New Forest David Hughes

On 26th August 2017 a group of travelling HOS members assembled on a perfect sunny day on Wilverley Plain in the New Forest to admire the Autumn Lady's-tresses, *Spiranthes spiralis*. A conservative count of these reaches five million plants and of course each has to be photographed. The ponies and cattle that graze amongst them are careful to leave the orchids but they are perhaps not so dainty with their hooves. Our membership is not blinkered to look at orchids alone so were pleased to admire the Felwort, *Gentianella campestris*, the rare Marsh Clubmoss *Lycopodiella inundata* and profuse Marsh Gentian, *Gentiana pneumonanthe*.



Field Trips – Your Help Required! Alan Bousfield

I try to arrange about ten field trips each year to various locations across the country. From the low attendances to some 2017 field trips, I can only assume members are looking for new and different locations. So if you know of a suitable location for an additional field trip in 2018 and are willing to organise one, please contact me: <u>alan.bousfield@ukgateway.net</u>. In addition, suggestions are welcome on where members might like to go and what they would like to see on a field trip.

