



**Journal
of the
HARDY ORCHID SOCIETY**

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Cover Photographs

Front & Back Covers: *Orchis* × *calliantha* the hybrid between *Orchis simia* and *Orchis punctulata* photographed by Keith Fry. (See article on page 49).

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 www.hardyorchidsociety.org.uk, 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

I have a particular affection for the anthropomorphic orchid species. The additional diversity generated by their willingness to interbreed and produce interesting and often quite beautiful hybrids has been a particular interest. From first seeing its image in the excellent book on the genus by Kretschmar, Eccarius & Dietrich, I have felt the hybrid between *Orchis simia* and *Orchis punctulata* to be just about as good as it gets. Hence, this issue is something of a personal indulgence due to the fact that we have an article from Keith Fry reporting on his trip to Armenia and Georgia, with this wonderful hybrid as the “special prize”. It was impossible to resist having this stunning orchid grace both covers of this *JHOS*.

Elsewhere, the hybrid theme is continued in an article by Stewart Taylor, describing only the third UK site for the hybrid between *Pseudorchis albida* and *Dactylorhiza maculata*. Also, Phil, Elinor & Adam Smith contribute an account of a local site where they found some interesting *Dactylorhiza* hybrids. Finally, if you are moved by the Dave Dives article on the A130 in Essex remember there is more information on the HOS website covering management of roadside verges.

Chairman's Note

John Wallington

This is my last "Chairman's Note" as by the time that you read this I will have stepped down from the role of Chairman. Colin Scrutton is taking over from me and I have been asked to continue for a year as Vice Chairman to provide some continuity and support for Colin. It has been a privilege to be Chairman of the Hardy Orchid Society and I have thoroughly enjoyed my time in office. So I cannot pass up the opportunity to once again ask all of you to consider serving on the committee. It is a very rewarding opportunity to help shape the Society for the future.

The 2017 programme of Field Trips will be starting soon. It is printed in the January Journal and is available on the website. There are still places on some of these trips. There is also still time for other trips to be organised and any member is free to offer a trip to their local orchid sites. If you wish to organise a Field Trip please get in touch with Alan Bousfield (alan.bousfield@ukgateway.net). The trip can be advertised on the Forum and on the website.

Once again a magnificent entry was received for the Photographic Competition at Kidlington in November. The entries were expertly judged by Jon Evans who provided constructive and helpful comments at the meeting. As the competition grows in popularity so the task of organising gets harder and I would like to offer special thanks to Steve Pickersgill and Neil Evans for the time and effort that they put in to ensuring a smooth running competition. The results were included in the last edition of the Journal along with reproductions of some of the winning entries. All of the winning photographs can be seen on the website.

The first Scientific Show was also held at Kidlington in November and attracted ten entries covering a wide variety of orchid related subjects ranging from pollination to photography. Richard Bateman and Paula Rudall's panel presented us with a competition based on scanning electron micrographs – with a prize for the one who unravelled the mysteries. Some panels will be taken to the Leeds meeting in September to allow a wider audience to see them. Feedback regarding the show was positive so we will be repeating it at the 2017 Autumn Meeting at Kidlington.

The Leeds meeting will also feature the inaugural "Tony Hughes Video Competition" This competition was announced in the January edition of the Journal and more details will be provided in the July edition and on the website and Forum. If you need more incentive to join one of the Field Trips or just go with other members to marvel at the beauty of the orchids this year then remember you can enliven your visit by producing images and video sequences for the photographic competition, the video competition, the scientific show and perhaps even as part of a talk at one of the regular meetings.



Wildlife Holidays

Small group botanical tours in 2017

<i>Cyprus in Spring</i>	2 - 10 Mar*
<i>Flowers of Western Crete</i>	1 - 8 Apr
<i>Orchids of Rhodes</i>	1 - 8 Apr*
<i>Gotland</i>	2 - 9 Jun
<i>Italian Dolomites</i>	24 Jun - 1 Jun*
<i>Flora of The Pontic Alps</i>	1 - 10 Jul*
<i>The Kaçkars: flowers & butterflies</i>	15 - 23 Jul*
<i>Bulgaria: Rila & Pilin Mountains</i>	29 Jul - 6 Aug*
<i>Autumn Flora of Cyprus</i>	20 - 27 Nov*

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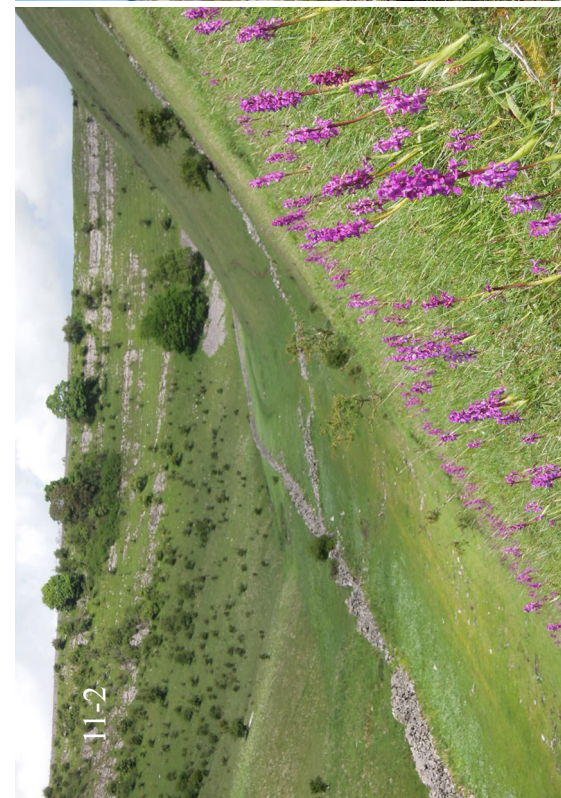
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Photographic Competition 2016 Erratum



An error occurred during the compilation of results after the recent Photographic Competition. An incorrect image file was associated with the second placed entry in Class 12, which was made rather more significant as it became the cover image for the January *JHOS*. The cover picture of Burnt Orchids was taken by David Pearce and not, as wrongly attributed in the Journal, Michael Lutener. Michael's winning image in Class 12 is reproduced above and as you can see it is a group of *Neottia nidus-avis*. We are sorry for the confusion and also for wrongly attributing work by David Pearce and Michael Lutener. The opposite page carries a few more images from the Competition, this time featuring the wide area views from Classes 6 and 11.

- 11-2 (opposite page): *Orchis mascula* by Phil Smith (second in Class 11)
- 11-1: *Dactylorhiza incarnata* by Ivar Edvinsen (first in Class 11)
- 6-1: *Neottia nidus-avis* by Ken Elsom (first in Class 6)
- 6-2 : *Dactylorhiza fuchsii* by Neville Henderson (second in Class 6)



An Orchid Mini-Meadow

Tony Heys

We all know lucky people who have orchids growing naturally in their gardens; Pyramidal Orchids pop up, Common Spotted-orchids self-sow like weeds, summer lawns are carpeted with Autumn Lady's-tresses – and so on. You may well be one of those people. No action required. Conditions are favourable; typically the soil is thin and above chalk or limestone. But what hope is there for the rest of us who were foolish enough to move into homes with ordinary gardens? Where no orchids have ever spontaneously grown and it seems unlikely that they ever will. Where there is, apparently, no magic. This is my story.

I wanted to have my own meadow that would be a colourful and attractive wildlife haven, but more particularly it should be rapidly colonised by a dazzling array of orchids. But if you don't own "land", in the grand sense, then the space is always going to be very limited. Is it, indeed, really worthwhile trying? Can you create something authentically meadow-like on such a small scale? I feel some people may be put off by this worry. Well, in October 2004, I started a mini-meadow. It has been enlarged a few times, but it still is only 8 metres long by 5 metres wide.

Our garden is on top of a hill in the North Downs where the chalk, sadly, is about 2 or 3 feet down, below a clay - loam. The lawn soil is fine crumbed, mid-brown and with a slightly acid pH of around 6.0. I can proudly say it remains "unimproved" in the 13 years we have been here. The site is fairly open and in full summer sun but more shady in winter and prone to frosts.

I have, accidentally, used various strategies for making the meadow at different times, such that the area is a bit of a patchwork; no bad thing necessarily. Initially I judged the soil to be too fertile to simply leave the grass uncut, so I removed turf and soil to a depth of about 30 cm and replaced it with poor soil. It has been sown mainly with wildflower and grass seed mixes from Naturescape (long season meadow mix and chalk & limestone soils mix). In other areas I have removed only the turf, then sown the underlying soil with wildflower seed. In still others, I have simply given the existing lawn a hard raking to create bare patches and sown with extra Yellow-rattle as well as wildflower seed. Finally, because the sward was becoming very tall and thick, four years ago I re-dug a large area and replaced the soil with about 50 cm of chalk rubble, in the hope that this would become more sparsely vegetated and orchid-friendly.

Figure 1: The mini-meadow
Figure 2: Orchids planted in the meadow
Photos by Tony Heys



After only a few years it became a great wildlife habitat. In the short turf of early May there is a fine display of cowslips that self-sow readily, along with Bulbous Buttercups, and some plug-planted Fritillaries. Into June and July, the grasses get taller and flower, going from Sweet Vernal-grass to Crested Dog's-tail, Common Bent, and Yellow Oat-grass. Intermingled is an abundance of white, yellow and orange from Yellow-rattle, Bird's-foot-trefoil, Oxeye Daisy, Cat's-ear and Orange Hawkweed. Finally comes the purple and blue of Common Knapweed, Red Clover, and Field Scabious, with the occasional Wild Carrot. The plants are fairly typical of what you would expect for established MG5 mesic grassland / meadow. I have noted around 21 main wildflower and grass species but over 50 different species have flowered. It teems with insects, and I have seen 15 different butterfly species alight, including Meadow Browns, Gatekeepers, and Ringlets. Admittedly many of the plants have been transients, and many of the butterflies would come to the garden anyway, but I'm sure the meadow is a great inducement. There is also a 9 inch high anthill developing, made by yellow meadow ants.

So the mini-meadow is a very worthwhile exercise in its own right. But what of the orchids you ask? Well until this year (2016) not much joy, really. As many of you know I grow my own hardy orchids from seed and have a large number of plants in a greenhouse, a polytunnel, and outdoors. I have planted orchids in the meadow for many years now in the hope that they would become naturalised and increase in numbers. My experience has been that these "plug" plants look good in the setting and provide an annual dusting of seed, but don't tend to survive individually for more than about two or three years. Presumably they have not been able to form the necessary mycorrhizal partnerships that would allow them to establish. Also there was no sign of new plants arising from seed. My assessment of the conditions for orchids here had gradually gone from, to use technical terminology, "unhelpful" to "you must be joking". That is until this early May when I noticed a cluster of familiar spotted leaves in an unfamiliar place. At first I thought I must have planted them in a previous year and forgotten about them. A fingertip search the next day, however, revealed no less than 15 small Common Spotted-orchids, some of them mildly insulted by lawnmower blades. Adding to the excitement, there was a small Twayblade and even a baby Twayblade. Three of the Spotted-orchids and the larger Twayblade proceeded to flower. They are growing in an area about 1.5 m in diameter that is partly where lawn turf was removed then wildflower-seeded, and partly where lawn was just raked and seeded.

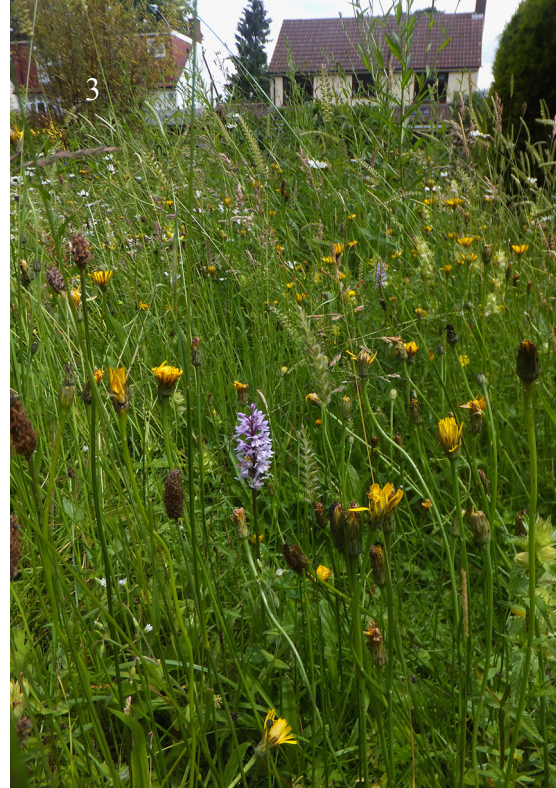


Figure 3: The mini-meadow
 Figure 4: Fritillaries and Cowslips
 Figure 5: *Dactylorhiza fuchsii* naturalised
 Figure 6: *Neottia ovata* naturalised
 Photos by Tony Heys

So success at last, and it goes to show that it can happen, even if the soil type seems unpromising. With luck (and encouragement) the hope is that the orchids will increase in number from here on. But what are the important factors for anyone wanting to start an orchid meadow? First a good reminder from all this is don't assume your existing lawn turf is no good. Let it grow tall in places and see what you have got before extensive digging out - it could also save a lot of effort!

Secondly sympathetic meadow management is clearly necessary; I cut it down in mid August, a bit later than most traditional hay meadows, so that the planted orchids have time to dehisce naturally. Even in a bad summer. Which is most summers of course. Then I cut the re-growth several more times in the autumn. I am also considering doing a high cut in late winter, since there is rather a battle to reduce the sward. Also spreading lots of Yellow-rattle seed around is good for reducing the vigour of the grasses, as is well known.



Figure 7:
Anacamptis pyramidalis
naturalised
Photo by Tony Heys

Thirdly, and probably most important, there can surely be no orchids without seed actually landing on one's meadow. The regular, annual dusting I have been able to provide must be facilitating the process. There are wild orchids on nature reserves within a few miles, but the ratio of seed quantity I have introduced to that blowing in randomly on the wind must be extremely high.

The final factor is time. I didn't notice the orchid leaves last year but they must have been present and I presume this is at least their third year of growth. Even so, that makes about 9 years before the happy event began. So it does need some patience! But if you haven't started already, do give it a try; you will have a wonderful mini-meadow, and eventually even orchidaceousness can be yours.

STOP PRESS: Have just found a Pyramidal coming into flower that I didn't plant. This year is getting ridiculous!

The Orchids of Armenia and Georgia

Keith Fry

For many years a visit to the Caucasus was on the bucket list and in 2016 the opportunity arose to join a plant hunting group, which I readily accepted. We left the UK in May 2016 for two weeks looking particularly for irises, plants growing near the snow including snowdrops, fritillarias and orchids. The Caucasus is the area of land between the Black Sea to the west and the Caspian Sea to the east and comprises a number of states and pseudo-states whose political and ethnic boundaries are the source of problems in much the same way as the Balkans. The Caucasus is bounded by Russia to the north and Turkey and Iran to the south. The maps below illustrate the location of the Caucasus and the various states.



Figures 1 & 2: Maps showing the location of the Caucasus and various states.

The Caucasus in general, and Armenia in particular, is a region of great contrasts; from the semi desert near the Iranian and Turkish borders, to huge temperate forests and subalpine and alpine conditions in the Lesser and Greater Caucasus mountains. Overall it is a very mountainous region with many high peaks and permanent snow. There are, however, vast areas of steppe-like grasslands that are the home of herds of sheep, goats, cattle, horses and donkeys, which wander in a semi-nomadic way across the grasslands during the summer, but stay in their farms during the winter.

The climate in May is very equable – not too hot and not too cold. The Caucasus has very hot summers and very cold winters and the growing conditions for Juno, Oncocyclus and Reticulata irises are ideal. Orchids also thrive, mostly at the woodland margins where they are sheltered from the worst of the summer sun and winter snow. All of my time there was spent in the area to the south of the Lesser Caucasus, the Lesser Caucasus itself and the Transcaucasus. Much of the Greater Caucasus is in Russia.

For orchidophiles who want locations, we travelled from Yerevan to Sisian via Ararat, and from Sisian to Kapan and then on to Agarak. We returned to Sisian along the Azerbaijan border, then on to Lake Sevan and Dilijan and finally to Alaverdi. We crossed the border into Georgia and travelled to Tbilisi. In Georgia we were principally in the east and north, to Lagodekhi and Vashlovani in the east and then up to the Russian border near Gudauri.

Orchids were seen on most days of the trip, but on two days they dominated, when we were in the beech forests in the southern part of Armenia between Ararat and Sisian and then again between Agarak and Kapan. *Orchis punctulata* with its huge spikes and characteristic colour was frequent; in one field there must have been two to three hundred spikes. *Orchis simia* was similarly frequent.



Figure 3: *Iris caucasica* (Juno)
Figure 4: *Iris elegantissima* (Oncocyclus)
Figure 5: *Iris lycotis* (Oncocyclus)
Figure 6: *Iris acutiloba* (Oncocyclus)
Figures 7 & 8: *Orchis punctulata*
Figures 9 & 10: *Orchis simia*
Photos by Keith Fry



Ophrys species did not seem to be well represented among the orchids of Armenia. We found two species: *Ophrys mammosa* and *Ophrys scolopax*. I need to say at this stage that I am not a splitter when it comes to naming orchids and I am sure that many purists may argue that I have got the names wrong. Whatever you decide to call a particular plant, nothing will change its beauty!

The undoubted star of the Caucasus orchid flora is *Steveniella satyriodes*, which we were fortunate enough to find on a number of occasions, mistaking it for frog orchid on the first finding!! If you look at the photographs, we could maybe be excused!



Figure 11: *Ophrys mammosa*

Figure 12: *Ophrys scolopax*

Figure 13: *Ophrys scolopax*

Figure 14: *Ophrys mammosa*

Figures 15, 16 & 17: *Steveniella satyriodes*

Photos by Keith Fry



Members of the genus *Orchis* continue to be represented with *Orchis purpurea* (which the purists would call *Orchis caucasica* or *Orchis purpurea* subsp. *caucasica*) together with *Orchis adenochila*, which could easily be considered a form of *Orchis purpurea*, but is somewhat distinct.

These two, together with *Orchis militaris* or *Orchis stevenii* or *Orchis militaris* subsp. *stevenii*, are all to be found with varying frequency. We also found *Orchis mascula* or *Orchis pinetorum*, depending upon your views, *Anacamptis morio*, *Neotinia lactea* and *Neotinia ustulata*.



Figures 18, 19 & 20: *Orchis adenochila* Figure 21: *Orchis militaris*
 Figure 22: *Orchis purpurea* Figure 23: *Orchis mascula*
 Figure: 24: *Neotinia lactea* Figure 25: *Neotinia ustulata*
 Photos by Keith Fry

Orchids from other genera were also found, notably *Cephalanthera damasonium*, *Cephalanthera longifolia* and *Platanthera chlorantha*. We had hoped to find *Cephalanthera rubra*, but sadly we had no success.

Dactylorhiza were also represented with *Dactylorhiza flavescens* in both yellow and red forms and *Dactylorhiza euxina*, the latter at high altitude (8000+ ft.) close to the snow. Interestingly some plants had completely purple leaves. There is some indication that photosynthesis at high altitudes is promoted by increased levels of anthocyanins in plants, which can absorb light in the ultra violet range.



Figure 26: *Platanthera chlorantha* Figure 27: *Cephalanthera longifolia*
Figure 28: *Cephalanthera damasonium*
Figures 29 & 30: *Dactylorhiza euxina*
Figures 31, 32 & 33: *Dactylorhiza flavescens*
Photos by Keith Fry



Armenia is a very poor country economically, but floristically it is rich with a very diverse range of habitats and a diverse range of plants to match, all within what is a very small country. Georgia is less varied, much wealthier, but has the prize of snowdrops in May! This is *Galanthus platyphyllus*; a robust bright green plant covering the snow patches, together with *Fritillaria latifolia*. The fields of snowdrops are an awe-inspiring sight!

However, the special prize of the trip was the hybrid between *Orchis punctulata* and *Orchis simia* – *Orchis* × *calliantha*. What a fabulous plant this was – fully 60 cm. tall and a lovely shade of greenish yellow. Perhaps this may whet your appetite for a vist to this somewhat remote but fascinating part of the globe.



Figures 34, 35, 36 & 37: *Galanthus platyphyllus*
Figures 38, 39, & 40: *Orchis* × *calliantha*
Photos by Keith Fry



An Orchid Verge in Essex David Dives

Essex is not a county known for its orchids so the appearance of thousands of Pyramidal Orchids and hundreds of Bee Orchids along the verge of a relatively new road is an exceptional event. The road is the A130 (known as Essex Regiment Way) which runs north from Chelmsford; the orchids are mainly along three sections of verge north of the new Chelmsford Park & Ride car park.

These plants were first noticed in 2011 when one of the sections was reported to have 50 Bee Orchids and 60 Pyramidal Orchids. I had recently volunteered to be my area's representative to the Essex County Council and Essex Wildlife Trust Special Roadside Verges joint working group and I was keen to get this orchid site included. The A130 is a busy new road and the problem was that Essex Highways appear to have an obsession with short grass and usually start to cut in May; bad news for those wishing to assess an orchid population and bad news for the orchids prevented from flowering and seeding. After several visits it was possible to establish the main extent of the orchids which seem to flourish particularly on the west facing banks where the road has been cut through the arable farmland leaving a fairly sharp bank of about 40 degrees. Two sections of verge were identified and proposed for protection under the SRV scheme. The first two sections were agreed by the working group in 2012 but it took until winter 2014/15 for the marker posts to be installed, and until these posts were in position the May cutting could not be stopped. A further section was agreed this year (2016) and should be marked ready for the 2017 season. With the posts in place the summer cut does not take place and the flail mowers return to finish their work in the autumn, after the orchids and other plants have finished flowering and set seed.

With at least four seasons of unavoidable summer cutting behind us we didn't know what to expect in the first surveys. Now with only two seasons of surveys behind us we can cautiously suggest that the orchids are recovering and are showing some signs of increasing. Stopping the summer cutting was a major step, but the other issue with flail mowing is that the arisings are left in place to rot unlike a hay meadow environment where fertility is continually lowered by removal of the crop. I speculate that the steepness of the banks on this site is an advantage as there is a tendency for the arisings to move down the bank (winter storms and winds) avoiding fertility build up on the slopes.



Figure 1: Marker post on the Special Roadside Verge
Figure 2: Orchid rich habitat on the A130
Figure 3: Orchid verge on the Essex Regiment Way
Photos by Simon Tarrant

The most recent counts for the orchids on the three sections we now have designated as SRVs are 350 Bee Orchids and 2500 Pyramidal Orchids which for a publicly accessible site in Essex is exceptional. The SRV scheme in Essex was established to care for plants on verges that are rare in a local context or iconic Essex specialities. Bee and Pyramidal Orchids occur in small numbers on several verges in the area and neither by themselves would qualify a verge as “special”, but it was possible to get these verges designated because of the exceptional numbers of Orchids.

Across Essex, as elsewhere, there is much needless cutting during the summer months, but most counties should have a similar special verges scheme in place. Typically one would find the scheme, as in Essex, is subject to serious budget constraints, and “posting” and mowing a verge out of season does imply additional cost. To establish a new special verge it is important to show that it meets the scheme’s criteria. Generally this wouldn’t include a verge that simply has some pretty wild flowers. A survey by individuals recognised as competent will always be required and must establish the presence and quantity of a target species, and this generally requires that you visit the verge in flower. There is something of a “Catch 22” here: to stop the summer cutting you need to visit when it hasn’t been cut! In our case we were able to take advantage of occasional tardiness in the management programme to get a timely survey. Perhaps the budget cuts worked in our favour on this occasion!




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**Flowerfield: A Wonderful Orchid Meadow and a New Location
for the Hybrid Orchid *Pseudorchis albida* × *Dactylorhiza maculata*
(×*Pseudorhiza bruniana* (Brügger) P.F. Hunt)
Stewart Taylor**

A rough-grazing field/meadow near Boat of Garten, Inverness-shire, about 5 ha in size is, as far as can be ascertained, the best site in the Cairngorms National Park (CNP), Scotland and the UK for populations of *Platanthera bifolia* (Lesser Butterfly-orchid) and possibly also *Pseudorchis albida* (Small-white Orchid). The site comprises stock-grazed dry heath and species-rich grassland occupying gentle to steep east facing ground. Grazing is currently by cattle but in the past sheep have been wintered on the site. Despite recommendations for designation status in the past by Scottish Natural Heritage (SNH), it has no legal protection other than being within the boundary of the CNP and being looked after by hugely sympathetic owners who work tirelessly to ensure the site is maintained in its current, nationally important state for the benefit of future generations.

The first reference I found relating to the site being recognised as important for orchids was when a local lady, May Marshall, informed SNH staff on 24th June 1993 about its importance, though no details were given relating to number of flower spikes. The owners of the meadow were alerted to the importance of the site in June 2000 when they were applying for planning permission to build a house on the site. After discussions with relevant experts (the site is also of national importance for Lepidoptera) the least damaging location was agreed and a house overlooking the orchid meadow was built, allowing the owners to become on-site custodians. A meeting with the owners in 2007 informed me that an estimate of the number of flowering spikes of *Platanthera bifolia* was made by walking over the site and that 400-500 seemed to be the annual estimate. They were aware that *Pseudorchis albida* was present in just a small part of the meadow but the spikes were not counted. However, they were also aware that just a small number of flower spikes of this orchid had been present in the 1980s and that numbers had been increasing since that time. Following my meeting in 2007 I suggested that it would be important to obtain a more accurate annual count and, with their agreement, I offered to carry out a transect line-type count across the site during the following summer.

Flowerfield Orchid Meadow

Figure 1: A few of the Small-white Orchids (*Pseudorchis albida*)

Figure 2: A few of the Lesser Butterfly-orchids (*Platanthera bifolia*)

The very short meadow sward in both photos growing below the orchids is vital for their future and is maintained by sympathetic seasonal grazing.

Photos by Stewart Taylor



Other orchids recorded at the Flowerfield meadow are: *Dactylorhiza fuchsii* (Common Spotted-orchid; occasional, no count), *Dactylorhiza purpurella* (Northern Marsh-orchid; a recent arrival, but 10s), *Dactylorhiza maculata* (Heath Spotted-orchid; not counted but 100s) and *Gymnadenia borealis* (Heath Fragrant-orchid; not counted, but >10,000).

Other plants of national conservation importance occurring at the Flowerfield meadow include: *Gentianella campestris* (Field Gentian) and *Pyrola media* (Intermediate Wintergreen).

So, 2008 was the first year of my serious involvement in the botanical side of the Flowerfield orchid meadow, though many June visits had been made to see the orchid and broader flower display in the years prior to this. My first count saw me trying to cover the site systematically by walking roughly straight lines across the site, aided by a compass. However, the results were not sufficiently accurate due to the sheer number of *Platanthera bifolia* orchids present, and once again we ended up with a (slightly more accurate) 'estimate' of the number of flowering spikes. However, for the first time a reasonably accurate count was obtained for the *Pseudorchis albida* orchids, which occupied just a small section of the overall meadow. Having undertaken the first count of the whole meadow I decided that the only way an accurate count could be obtained would be by using canes, topped by strips of red and white tape, to create 2-3 m wide transects across the whole site. Straight lines were obtained by lining up a single set of canes from existing fence-lines and also by looking back along the line of canes as the next one was positioned. The second line of canes was then set 2 m from the first to create the first transect count line. As the transect was walked, orchids were counted via a hand tally counter, and as a pair of canes denoting the line was reached, the 'outer' one was moved over and positioned 2 m from the 'inner' one thereby creating the next transect line for the return count. Thereafter, 2 m wide transects were used where the flower spikes were at their densest and 3 m wide in less dense stands.

Once the Lesser Butterfly-orchid count was complete, the Small-whites were counted using the same method but with all the transects being 2 m wide. The counts were carried out at peak flowering time. If working alone the whole count would take two to three days to complete but if two people were involved the main count could be completed in a single day, requiring a further two to three hours for the Small-white Orchids.



Figures 3-6:

Details of the hybrid orchid *Pseudorchis albida* × *Dactylorhiza maculata*
 (×*Pseudorchis bruniana* (Brügger) P.F. Hunt).

Photos by Stewart Taylor

Table 1 shows the number of orchids counted. For the years 2010-2014, Dr Andy Scobie, CNP Rare Plants Officer, assisted with the *Platanthera bifolia* count and also undertook an evaluation of the wider botanical interest of the meadow prompted by a planning application to construct chalets on land adjacent to the meadow that was raised in January 2016. Similar evaluations linked to the planning application were undertaken by Liz Lavery (Ecological Botanical Statement) and Dr Mark Young and Michael Taylor (Rare Lepidoptera).

Table 1: Annual counts of the two key orchid species at Flowerfield Meadow

Year	<i>Platanthera bifolia</i> Lesser Butterfly-orchid		<i>Pseudorchis albida</i> Small-white Orchid	
	Count (spikes)	Counters	Count (spikes)	Counters
2008	650	ST	101	ST
2009	1,288	ST	277	ST
2010	2,800	ST & AS	570	ST
2011	800	AS	no count	ST injured
2012	970	ST & AS	416	ST
2013	4,345	ST & AS	1,508	ST
2014	1,225	ST & AS	338	ST
2015	1,667	ST	1,010	ST
2016	5,655	ST	2,645	ST

Over the years counts were made between 21 June and 6 July.
(ST) = Stewart Taylor, (AS) = Andy Scobie.

It was during the 2014 count that Andy called me over to see two small orchids found on one of his transects that had flowers shaped a little like *Pseudorchis albida* but overall, more like a small *Dactylorhiza maculata* (Heath Spotted-orchid). Andy's guess was that these were hybrids between these two orchids but for some reason neither of us followed up the find as we progressed on to other *Pseudorchis albida* field counts. In 2015 I did not see the hybrids during the annual survey but during my 2016 count, when the number of flowering spikes of the two target species was at record levels, they were seen again. Once the main count was completed I returned to get good photographs of the two closely-spaced plants, including photos with plant height and flower sizes so that these could be sent to Richard Bateman at RBG Kew for determination. Richard confirmed that Andy's original identification was correct and that this was just the third recorded UK site for *Pseudorchis albida* × *Dactylorhiza maculata* (×*Pseudorhiza bruniana*). This hybrid has previously been recorded from Ullinish Point (vc104) on the west coast of Skye, last recorded in 1994, and Stenness (vc111) on Mainland Orkney, last recorded in 1977.

During the commenting process, Richard provided details of a visit he made to the site, with Ian Denholm, on 1 July 1983. "My records show only ca 50(!) flowering *Platanthera bifolia* but ca 5000 flowering *Gymnadenia borealis* and ca 2000 flowering *Dactylorhiza maculata*, all in full flower. We failed to find *Pseudorchis albida* (assuming it was present then), but I noted in my diary – 'Marvellous meadow that should contain *Pseudorchis*'. Well fancy that!"

Acknowledgements

To the owners for allowing access to the meadow and for their unstinting efforts to maintain the meadow's important plant and insect communities. To Dr Andy Scobie for help with the counts, finding the hybrid orchid and for additional plant survey work on the Flowerfield site. To Prof. Richard Bateman for confirming the identity of the hybrid orchid, suggesting that I write this note and for his helpful comments on my drafts.

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Right On Our Doorstep!
Phil, Elinor & Adam Smith

Like many HOS members, we have travelled far and wide in Britain, Europe and beyond in search of wild orchids. However, it was with great surprise and excitement that, in the summer of 2016, we discovered a new and spectacular site within a few miles of our home in North Yorkshire.

We had often passed the grassland site in question on a country lane along its northern boundary. Good numbers of *Dactylorhiza fuchsii* were evident on a bank adjacent to the lane and on the verge itself. With a bit of research, we discovered that the site was a designated Site of Special Scientific Interest, although the citation made very limited reference to its orchid flora. Comprising areas of wet unimproved neutral grassland, scrub and base-enriched flushes, the site extended over 19 hectares, much larger than evident from the adjacent lane. After seeking the landowner's permission (the site has no public access) we visited the site in late June.

Our first impression was the sheer abundance of *D. fuchsii*, which occurred in their thousands over much of the site. We had spotted two white orchids at some distance from the lane, so headed over to see if these were var. *alba*. To our surprise they were in fact *Platanthera bifolia*. Nearby in damp areas at the base of a steep bank, we encountered *D. incarnata* (purple form). We felt our chances of finding the hybrid with *D. fuchsii* were high given the numbers of the two species growing in close proximity and soon came across a robust plant with intermediate characteristics.

As we explored the south-facing area of the site, we next came across large numbers of *D. maculata*. Again, as they were growing alongside large numbers of *D. fuchsii*, we started to search for hybrids and soon found a number of robust plants of intermediate character.

After a couple of hours at the site we had encountered four species and two putative hybrids. However, the most impressive feature was the sheer abundance of orchids. We were really surprised to find such an excellent orchid site so close to home and were left wondering how many other, largely-unknown, sites supporting such a diverse and abundant orchid flora are out there waiting to be "discovered"?



Figures 1 & 2: Putative hybrids between *D.fuchsii* and *D. maculata*
Figures 3 & 4: Putative hybrids between *D. fuchsii* and *D. incarnata*
Photos by Phil Smith

