The Hardy Orchid Society Newsletter

No 27 January 2003

The Hardy Orchid Society Committee is...

Contents

Cover Illustration : Platanthera chlorantha by Bob Watson

Editorial Comment

Despite the weather the Autumn Meeting saw an excellent turnout of members who enjoyed a stimulating day of lectures, the excitement of the Photographic Competition and the chance to browse a tempting range of plants and works of art. Unfortunately the weather did cast a slight dampener on proceedings with RHS requiring us to cut the meeting short by an hour. I personally felt that I would have benefitted from a longer day to fully appreciate all the activities and have more time to make contact with members. The two meetings each year are the only times so many orchidophiles will meet, renew acquaintances and make new contacts. The members involved in the actual running of the day will have had even less time to enjoy the day. Nevertheless I came away feeling that I'd begun to put faces to names and had learnt more about orchids from a range of experts making the day worthwhile.

Our photographic competition judge Vaughan had some interesting points to make with respect to the rules of the competition. He pointed out the problems with entries in a couple of the categories, namely orchidaceous landscape and single plant. In the former category Vaughan pointed out that some of the entries didn't in his understanding of landscape fit the category. He commented as well that there was nothing in the category to exclude a landscape in which orchids might not be visible and used a slide from one of the competition entrants to illustrate his point.He also felt that some pictures showed a group of orchid plants but with very little landscape to give an impression to the viewer of the landscape in which the orchids grew. I could see his point with my own entry though two years ago a similar picture had won the same category ! Personally I accept part of his critique though whether the landscape pictures should be devoid of orchids is a moot point !

On the single plant category, Vaughan felt that we should be only accepting pictures with one plant while any pictures with several plants should perhaps go into a new "group" category. I note from the rules that an allowance is made for additional plants in the "single plant" category as long as one plant can be separated out as the main focus of the picture. Perhaps we should change this category and add in a new category as mentioned above. I welcome members' comments though by the time of publication the committee may have debated the possibility of rule changes.

I hope that members will enjoy the articles and reports in this issue, and I would like to ask for further contributions as the magazine is only as good as the contributions. Articles on cultivation, travel and taxonomy, book reviews, conservation issues and letters with queries are all welcome to help me build up the magazine. Possible proposals for further magazine improvements will be discussed at the AGM such as more colour.

The Early Marsh Orchid *(Dactylorhiza incarnata)* in Northern Europe
A Personal view, review of the literature and discussion of taxonomic aspects - Part One

John Haggar

I visited Sweden again in the summer of 2000. Happily my trips to Öland and Scania in southern Sweden coincided with introductions both to several Swedish articles and publications featuring discussions about early marsh orchids in Scandinavia and to Swedish friends who would act as translators! The result was a number of surprises. In addition, references from many other books and periodicals by British, Swedish, Dutch, French and German authors as well as my many visits to sites harbouring early marsh orchids both here in England and Wales and in southern Sweden (including the limestone islands of Öland and Gotland) have subsequently moulded my ideas.

I had always been confused by the vast array of forms described for the European diploid marsh orchids that are nowadays grouped under the specific name of *Dactylorhiza incarnata.* Prior to the above-mentioned visit, I was already aware that Scandinavian early marsh orchid populations contained more purple-flowered plants than pink ones and that Swedish authors referred most of these purple bloomed plants to subspecies *incarnata*, not to subspecies *pulchella* as we do in Britain and Ireland[1]. My understanding of this nuance at the time, however, was not deep.

In the past, I had always visited Sweden at the very beginning of June. In 2000 my visit was approximately three weeks later at midsummer and the orchids that I encountered were not those that I had expected to see. Furthermore, the spring weather in southern Scandinavia had been very warm (unlike in Britain) and some later forms were coming into flower rather earlier than usual. On my previous visits to Öland, Gotland and Scania I had encountered early marsh orchids of many colour variants. Apart from the very distinct *cruenta* and *ochroleuca* forms, off-white, pale-pink, lilac and purple flowered plants were to be found growing in each other's company. Anatomically they were very similar and the predominant flower colour was purple. In some of these sites there were many other plants present that were yet to flower, showing only typical early marsh orchid leaves and short, budding flower spikes. The significance of these later flowering individuals was at the time not apparent to me.

1 See Reference: 1

The various colour forms and almost every conceivable gradation between them are possible because of the nature of the flower pigmentation in *D. incarnata*. The obvious background colour of the flowers (the colour seen below the column around the throat of the spur) is either colourless (conferring a white background to the flower) or very pale yellow. Where present this yellow (anthoxanthin) pigment is often most strongly concentrated on the middle part of the labellum. Some workers, such as Bateman and Denholm[2] hold that yellow anthoxanthin may be found universally in early marsh orchids. This might be so, but it certainly cannot be obviously seen even around the entrance of the spur in the majority of purple-flowered plants, which appear to have a white/colourless background. Additionally, pure white-flowered plants, although rare, definitely exist. The base colour is usually flushed over to varying degrees of density with red and/or violet pigments (anthocyanins of various biochemical compositions) and additionally is usually more heavily marked and densely pigmented (particularly on the labellum and lateral sepals) with loops and lines of similar colour tones. Variation in the proportions, distribution and density of these pigments in different flowers is largely genetically determined and is the reason that the colour of *incarnata* flowers can range from white (no pigment) to pale yellow (no anthocyanins) through to pale rose-pink, crimson red, purple-pink, light purple, lilac and violet-purple.

In later parts of my article I shall frequently refer to "purple" flowers. I use "purple" in this essay to describe the colour of any flowers that are more heavily pigmented with purple/violet than flowers that could be reasonably described as pink. A subjective definition, I know, but all broad descriptions of colour must be subjective to some degree! I obviously exclude white and yellow flowers from my definition of purple and I also exclude the crimson-red colour of *ssp. coccinea*, a colour form that, when compared to other *incarnata* variants, possesses a markedly different combination of anthocyanin types which confers its characteristic flower colour.[3] Generally when I use the term "purple", I am referring to the range of colour that encompasses that of the flowers of *Dactylorhiza praetermissa, purpurella, majalis* and *traunsteineri.* Flowers of a paler hue than light specimens of *D. praetermissa,* I shall refer to as pink. This fits well with Bateman and Denholm's description of the flower colour of their interpretation of *Dactylorhiza incarnata ssp. incarnata*, that is pale, dilute red-purple or red (i.e. pink).

Allotetraploid marsh orchids are rather uncommon around the western Baltic coasts. *Dactylorhiza majalis* (in its strict sense) grows in Denmark and Scania (the southernmost part of mainland Sweden) where it is one of the commonest marsh orchids to be found but the only allotetraploid forms generally recognised here are *Dactylor-*

2 See Reference 2

3 See Reference 3

hiza sphagnicola, which is very rare and confined to acid bogs, and *Dactylorhiza traunsteineri,* which is also rare and in these parts flowers not until July, much later than in Britain and Ireland.[4] In addition, one population of *Dactylorhiza purpurella* is said to grow in sand dunes on the coast of northern Gotland. A consequence of this paucity of allotetraploid forms is that a visit to any of Öland's or Gotland's fens, marsh margins or wet meadows in June reveals huge populations of marsh orchids all of which you can be reasonably certain will be one form or another of diploid *Dactylorhiza incarnata*. Furthermore, virtually every described form of *D. incarnata* may be found here, often growing in close proximity to other familiar and less familiar types. One notable exception to this is the absence of the red-flowered *D. i. ssp. coccinea.* Although populations of plants that are similar to *coccinea* in vegetative and floral anatomy are found in similar habitats elsewhere in north west Europe (e.g. *D. i. ssp. lobelii* or *var. dunensis* from Holland, Norway and Denmark),[5] the remarkable crimson red flower colour of *coccinea* seems to be a peculiarly British and Irish phenomenon.

"Öländska ängsnycklar" (Öland's early marsh orchids), a 1994 article in the Svensk Botanisk Tidskrift by Åke Lundqvist and beautifully illustrated in watercolours by Bo Mossberg, attracted my interest and attention.[6] This article pictures the various types of early marsh orchid that are found on Öland and describes their morphology and flowering periods. Åke Lundqvist describes the main form of early marsh orchid in Öland as occurring in two variants. The second variant, *var. serotina*, I shall discuss later. The first variant, *var. incarnata,* he goes on, exists here in two versions. The main version has a peak flowering time around midsummer. This is illustrated as a tall growing and purple flowered plant. The second version, which is described as being in full flower several weeks earlier, is a less lofty much dumpier looking plant illustrated with a pale coloured flower and looking quite like a small specimen of British *Dactylorhiza incarnata ssp. incarnata.* The flower colour, however, is described as "curious". The usual colour of these rather small earlier early marsh orchids as I have mentioned above, is purple or lilac (dilute violet-purple) although dirty white and pale pink individuals comparable to some British forms of *ssp. incarnata* are not that uncommon. Some of these pale individuals that I have seen on Öland, however, lack lip markings and appear to be only marginally different from the plants described above as dirty white. The range of colour variation seen in the Swedish populations (in my experience predominantly but not exclusively in the early flowering variety) is well illustrated, again by Bo Mossberg, in Nilsson's 1979 Penguin Nature Guide to the Orchids of Northern Europe.[7]

4 See Reference 13 & 14.
5 See Reference 4
6 See Reference 5
7 See Reference 6

I was actually quite stunned at the time to learn that although *D. incarnata* (excluding *cruenta and ochroleuca)* can be found in Sweden in many colour variants, it is actually a relatively late-flowering (midsummer), tall-growing purple-flowered plant that is considered to be typical *Dactylorhiza incarnata var. (ssp.) incarnata* in the Swedish literature. *Var. incarnata* is described in other Danish and Swedish references as varying in colour between rose and purple but as being more usually purple in colour.[8] Pale pink-flowered plants are a distinctly rare component of the population in Scandinavia. Such plants that we, in Britain, might consider to be typical *ssp. incarnata* are looked upon in Scania and on Öland and Gotland as representatives of rare and unusually coloured subtypes of *var. incarnata*. In Britain, all purple-flowered early marsh orchids appear to be included by most recent authors in *ssp. pulchella*, a taxon said to be most usually found in acidic bog environments and not recognised by some Continental authors as occurring outside the British Isles! A British observer, unfamiliar with the range of Scandinavian types, might easily want to describe most Baltic early marsh orchids as belonging to the subspecies *pulchella* if they adopt the position, as British orchidologists so often do, that the flower colour defines the subspecies! Interestingly, British floras often translate *"incarnata"* as meaning "flesh-coloured". Some of the Swedish literature translates it as "the colour of meat". Different indeed, if you take "flesh" to mean the colour of skin and "meat" to mean the colour of rump steak![9] I came to the startling conclusion that the plant we consider the nominate race or subspecies of *Dactylorhiza incarnata* in Britain and Ireland is not the same entity that Scandinavian botanists consider it to be!

Based on my experiences of earlier visits and before reading Lundqvist's text, I had been expecting in the summer of 2000 to find a similar spectrum of *D. incarnata* types as I had seen before, but probably at a rather advanced stage of flowering, perhaps well gone over to seed. To my surprise, I encountered huge colonies of relatively tall (the plants were frequently more than 30 cm high) and exclusively purple-flowered early marsh orchids in full bloom in many fen habitats I visited! Sites that I had visited in previous years harboured fading and largely gone-over specimens of the plants that I had formerly come to believe were typical Baltic *D. incarnata*. These early-flowering and sometimes pale pink-flowered plants I now saw in their correct context. Temporally they really were early. Morphologically they were shorter in stature being generally 10 to 25cm high. The pink flowered plants were atypical of the population as a whole. Numerically they were much less plentiful than the grander purple-flowered orchids that appeared to be blooming everywhere! All the sites I visited were over calcareous bedrock. The Scanian sites were on chalk or leached marine shell-sand and Öland is entirely composed of Ordovician limestone.

8 See Reference 4,7,8,9,10,11,12,& 15
9 See Reference 6

The companion vegetation was not indicative of an acidic environment at any of the above mentioned sites. Furthermore, the Swedish floras that I consulted described *Dactylorhiza incarnata* as occurring in damp meadows or moderately rich to very rich fens commonly in chalky (limestone) areas but only rarely elsewhere. Significantly variant or subspecific forms are not described from places other than these central habitats and the flower colour is described as predominantly "röd", loosely translated as "red" but according to my Swedish colleagues, a quite appropriate description for the purple colour of early marsh orchids that in Britain and Ireland would be referred to *subspecies pulchella.*

In a few places small, narrow leaved, purple flowered plants were just coming into flower. These orchids, representing Lundqvist's second variant of the "main" form of early marsh orchid in Öland, in most years flower well into July and are regarded as a separate variant: *var. serotina*. Separated in Öland phenologically but not ecologically from *var. incarnata,* this variant has been compared to and, by some authors, considered synonymous with our *D. i. ssp. pulchella.* With its smaller stature and narrower leaves *var. serotina* did look reminiscent of New Forest *pulchella* but the plants I saw were only just coming into flower (so comparisons were difficult) and they were not growing in an acid bog! Their flower colour, of course, was basically no different from that of other earlier flowering local early marsh orchids, i.e. purple. Bo Mossberg's paintings of *var. serotina* bear more than just a passing resemblance to *ssp. pulchella,* as I understand it from Hampshire.[10] Excellent photographic illustrations of *ssp. pulchella* from the New Forest may be seen in Jenkinson's "Wild Orchids of Hampshire and the Isle of Wight."[11]

English specimens of *D. incarnata ssp. pulchella* that I have seen in the New Forest, however, were not the same as the tall Swedish plants that were so much in evidence! Although it must be emphasised that there was a huge amount of variation present in this midsummer-flowering population, my overall impression of these often large and robust plants was that the flower spikes tended to be more elongated and the labella of the flowers were frequently longer with more pronounced central lobes. The lateral borders were often, but not invariably, notched and subdivided and were sometimes quite crenate. The lips often had more markedly reflexed lateral margins when compared with specimens from southern Hampshire. The lip markings were usually less heavy but otherwise the flower colouration was generally similar, varying between the red- purple typical of our *ssp. pulchella* and a somewhat darker violet.

And the Swedes referred to them as *subspecies* or *variant incarnata!*

10 See Reference 5

11 See Reference 16

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The Vercors, an Orchid Wonderland

Richard Manuel

A couple of years ago I wrote a piece about the orchidaceous wonders of the Col de Bacchus, in central southern France. This location is sited on the western flanks of the Massif of Vercors, a splendid chunk of very pure limestone - almost chalk - that lies between Grenoble (Dept *Isere*) to the east and Valence (*Drome*) on the west, with the dept boundary irregularly dividing the massif in two. For some reason the orchids of this region have been neglected by most orchid writers, or are they just keeping it to themselves? One couldn't blame them, for the Vercors is perhaps the richest region for orchids in a land where orchids are anyway fairly commonplace. In particular, for those who love the true 'orchises', the Vercors must be the place to go. Almost all the western European species can be found here, and almost all flowering within the same short time frame, so that just a couple of hours drive would be enough to see them all. There is a good deal of infidelity among the *Orchis* species, especially the (not-very-ladylike) Lady/Military/Monkey group, but so far I have not found any of those fascinating hybrids involving Man orchid, which is contrary to many other reports.

The massif is about 65Km from north (defined more or less by the A49 motorway) to south (road D93 or Drome River) and the east west axis averages about 30Km wide,

using the 300m contour as a limit in the west, and the N75 to the east. Orchid-wise it consists of two, maybe three, halves. The east and west sides are divided by a jagged spine of limestone, so steep and precipitous that only one road crosses it, way up north, and which makes an impressive north/south skyline. The two sides of this ridge are as different as chalk and - er -Calcium carbonate. To the west the slopes are relatively gentle and having more exposure to the sun, give at least the impression of being a little warmer. The eastern side is steeper, and hence narrower, and much of it is shaded during the afternoon by the high central ridge and outlying peaks. The north is almost terra incognita to me. In 1997 we drove from west to east on the D531, stopping at the highest point near this road, les Olivets, 1200m, to look for, and find, *Nigritella* (as it was then) and *Traunsteinera*, as it still is. The steep drop down from Villard-de-Lans towards Grenoble is a truly spectacular way to get to the east side; yet it is sometimes used as an uphill finish for stage of the Tour de France (bike race to the uninitiated)! As I have already written in some depth about the Col de Bacchus on the west side (Newsletter No. 18, Oct 2000), I will add here my 2002 experiences on that flank, and in the next issue will describe the east.

This year we drove down to Valence via the south of Paris, Beaune, and Lyon, a couple of weeks later than in 2000. The latter end of this trip was enlivened by a gaspingly hot southerly gale, quite alarming on a fast motorway, and not very pleasant out of the car either. Having located our hotel on the outskirts of Valence, we went for a drive on the D68, which eventually meets up with the north side of the Col de Bacchus. At the base of the mountains, just outside a village called Peyrus, the road ran alongside a high north-facing and steep bank. This was peopled by a vast colony of orchids in much the way that road banks in this country have dense colonies of dactylorhizas; only these orchids were Monkeys, the familiar British rarity *Orchis simia*, and the colony extended for at least half a kilometre! Further examination revealed a few Burnt orchids (*Neotinea ustulata*) amongst the Monkeys. A little higher the road hit some open woodland and here were more species: Fly orchid (*Ophrys insectifera*), Twayblades (*Listera ovata*), Spotted orchids (*Dactylorhiza fuchsii?*), Sword-leafed helleborine (*Cephalanthera longifolia*), and more Monkeys. All these species could be found alongside the next couple of kilometres of the road but eventually the woodlands thinned out to a typical scrubby 'orchid bank' type of habitat, where we added Lady orchid (*Orchis purpurea*), Man orchid (*O. anthropophorum*), Military orchid (*O. militaris*) and a non-brit, the delicate little 'lesser spider orchid' *Ophrys araneola*, to the list.

Rising higher, through steep and dense woodland, we emerged at about 800m alt. on a winding stretch of road which was just catching the last rays of the sun, and glowing in those last rays was a more or less continuous strip of vivid blue on the edge of the bank above the road. This was a real bonus, large trumpet gentians (*Gentiana clusii?*), something we had not expected to see, but so stunning that they could almost be admitted as honorary orchids. Dusk was rising now but there was still time to

find a couple of huge colonies of Monkey orchids, including some pure white ones, a form which I had not seen before outside books. Another field had good numbers of *Dactylorhiza sambucina*, a few *militaris, ustulata*, and perhaps *Orchis provincialis* as well. Then we made our way back to the hotel, plotting the route for tomorrow and wondering if I had enough film....

I did. In fact I hardly used any because it was one of those days, starting relatively fine but thoroughly wet by the time we reached the mid levels of the road (D70) up to the Col de Bacchus from Crest. Stops at the same places as two years ago revealed little change in the orchid populations, although in one place a thoughtful farmer had bulldozed a track through a fine colony of Monkey/Lady orchids and their hybrids, so few remained. But he had missed (just) a fine cluster of *Limodorum abortivum*, which this time were in full flower. This is a splendid orchid when, as here, it is in prime condition, but not a common sight. A short diversion down a small side road produced more *Op. araneola* and, on the road verge opposite a small steeply sloping open wood, a perfect habitat for Red helleborine - *Ceph. rubra*, we found one of these growing in thick grass leaning and nonchalantly against a telegraph pole. Not far above this, near Plan de Baix at around 700m, the first wisp of low cloud attacked us, and from then on the day degenerated into low cloud, rain, and just enough wind to make life really uncomfortable. Despite this we pressed on to the big field just before the head of the Col. Being a little later in the year than the previous visit the *Ophrys drumana* were in full flower and large numbers. This is a very distinctive little ophrys but quite variable in the colour of its sepals, sometimes deep pink or even purple, sometimes white. Also in the big field was an orchid I had missed previously, *Neotinea (Orchis) tridentata*, some just starting to open out, many others in tight bud. Alongside these was an interesting, variable, and sometimes very attractive hybrid N. x dietrichiana, (*tridentata x ustulata*). The latter plant has to be the commonest, and most widespread 'orchis' in France. We noted that perhaps there were less *O. provincialis* than before in this field, though they were going over by now, as were the Elderflower orchids, *D. sambucina*, and thus less obvious.

The weather by now dispelled all thoughts of photography, rather like the view, so we went on to reach the large Monkey orchid colony where we had stopped the previous evening. This was further than we had anticipated and took us over the Col des Limouches, where the thick cloud obliged us to tiptoe along at sub-orchid-spotting speed, but unable to see the flowers! So eventually we turned back eastward to a point where the cloud was a little thinner and I ventured into a promising looking field on a steep slope near the junction D70/D68. Although this field held nothing new (or at least, I didn't see anything new!) there were some lovely plants with just enough room to walk between them. Big clumps of *Orchis mascula*, mostly with unspotted leaves, which meant that I had to peer closely to distinguish some of them from the huge plants of *Anacamptis morio* (Green winged orchid) which often grew side by side with the Early purples. *D. sambucina* was in perfect flower here, yet *N.*

tridentata were just opening, with the occasional Man orchid, Military, Monkey, and even a few Lizard orchids in 'big bud'. Then in an attempt to shake off the weather, we returned to lower altitudes on the D68, where it was still raining but only gently, and at least was clear of cloud. Driving around aimlessly in mostly heavily agricultured country, we stopped for a comfort break at a road junction (as you do) where a few trees gave cover. There on a triangle of rough grass no larger than a tennis court were Lesser butterfly (*Platanthera bifolia*), Lizard orchids in bud, Monkeys, a couple of *militaris, tridentata*, and some very colourful *Ophrys fuciflora/scolopax* - a difficult group to identify in these parts where the species merge almost imperceptibly into each other. Certainly *'scolopax'* here is very different from those in the Var, and again different from the iberian ones.

That was enough for one day and the next we drove south to the Var and other adventures. A few days later we came back north to the other side of the Vercors, where the rain was sometimes torrential, and the orchids rather different.

Cotswolds Field Trip 2002
Richard Manuel

Fifteen members took part this year and the trip followed more or less the same pattern as last year - see Roy Bailey-Wood's article in Newsletter 22. We had a very wet May in these parts and two species showed the benefits of increased moisture during their main season of growth: *Herminium monorchis* Musk orchid, and *Dactylorhiza viridis* Frog orchid, were both more plentiful and larger in size than in 2001. But the most interesting finds occurred within yards of each other on Selsley Common. One of these was a small Bee orchid plant exhibiting both normal Bee orchid flowers and a 'Wasp' orchid flower on the same stem. (A similar plant is illustrated in Bournerias 1998, *Les Orchidees de France, Belgique et Luxembourg.)* A very timely find in view of the article by Richard Bateman in the July Newsletter. This is illustrated on the HOS website. Can anyone explain in plain English how such plants can occur?

Photographic Competition 2002
Doreen Webster

Thanks to everyone who showed at the Photographic Competition this year. We were slightly down on last year's figures with only 25 exhibitors against 29 last year but I felt all those brave people who turned up on such a wretched day did a super job of showing some excellent photographs. Thanks also to Vaughan Fleming for judging. We also had some great non-competitive exhibits which all added to making the show a success. May we look forward to more entries again next year?

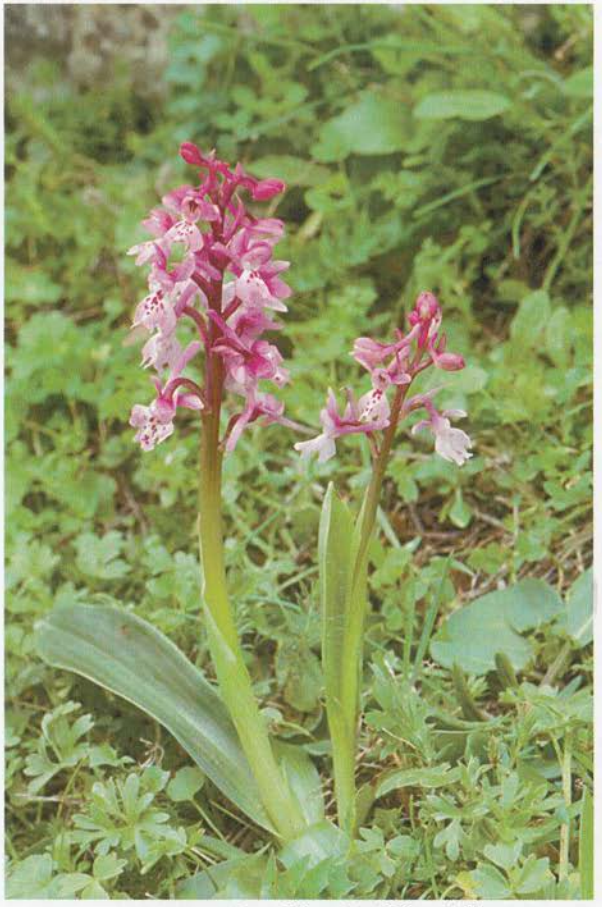
Class 3 Ophrys omegaifera Nick Storer

Class 9 Cypripedium franchetti Eric Webster

Class 6 Epipogium aphyllum Tony Hughes

Class 2 Orchis pauciflora Tony Hughes

Class 9 Ophrys x heraultii Richard Manuel



Class 8 Orchis olbiensis Brian Allan

Class 7 Roadside Verge, Ireland Brian Laney

Class 5 Cypripedium reginae, Patrick Marks

RESULTS OF THE PHOTOGRAPH COMPETITION
27th October 2002

Class 1 An orchidaceous landscape – print up to 7x5

1st Tony Hughes	Orchis quadripunctata
2nd Colin Clay	Dactylorhiza fuchsii, Draycote Meadow
3rd Gwynne Johnson	Lady's slipper orchid

Class 2 A single orchid plant – print up to 7x5

1st Tony Hughes	Orchis pauciflora
2nd Nick Storer	Ophrys lutea
Commended Colin Clay	Dactylorhiza fuchsii, Draycote Meadow

Class 3 A close-up – print up to 7x5

1st Nick Storer	Ophrys omegaifera
2nd Tony Hughes	Ophrys araneola
3rd Richard Lawrence	Autumn Lady's tresses, Hants
Commended Tony Hughes	Ophrys sipontensii

Class 4 An orchidaceous landscape – print up to A4 size

1st Patrick Marks	Cypripedium parviflorum, Burnt Cape
2nd Colin Clay	Dactylorhiza, Draycote Meadow
3rd Bill Temple	Ophrys sphegodes, Dorset

Class 5 A single orchid plant – print up to A4 size

1st Patrick Marks	Cypripedium reginae, Gros Morne, Newfoundland
2nd Colin Clay	Platanthera chlorantha
3rd =Nick Storer	Orchis mascula
3rd =Tony Hughes	Ophrys lutea
Highly commended Patrick Marks	Calypso bulbosa, Burnt Cape,Newfoundland
Commended Patrick Marks	Cypripedium reginae, Gros Morne

Class 6 A close-up – print up to A4 size

1st Tony Hughes	Epipogium aphyllum
2nd Nick Storer	Orchis israelitica
3rd Colin Clay	Orchis anatolica

Commended Peter Scott	Ophrys apifera
Commended Richard Lawrence	Lady orchid

Class 7 An orchidaceous landscape 35mm colour slide

1st Brian Laney	Roadside verge, Ireland
2nd Tony Hughes	Orchis italica
3rd David Hughes	Orchis papilionacea
Commended Richard Robinson	Landscape, Kazakhstan

Class 8 A single orchid plant 35mm colour slide

1st Brian Allan	Orchis olbiensis
2nd Nigel Johnson	Orchis troodii
3rd Patrick Marks	Amerorchis rotundifolia
Commended Alan Blackman	Serapias neglecta

Class 9 A close-up 35mm colour slide

1st =Richard Manuel	Ophrys x heraultii
1st =Eric Webster	Cypripedium franchetti
2nd Gwynne Johnson	Orchis anatolica
3rd Graham Giles	Ophrys apifera

Wisley October 2002
Richard Manuel

The Wisley meeting has come and gone. It was extremely unfortunate that the chosen date proved to be blessed with the biggest storm of the year. Not surprisingly, a number of members decided to heed the warnings not to travel that day, but still a good number (C. 80% of those signed up) attended. More than one hundred members signed up to come, which is probably a record for an HOS meeting. The Wisley staff decided to close the gardens for safety reasons and only let us hold the meeting after some discussion. But we still had to leave before dark, which meant that the afternoon's programme was rather truncated, and much potentially interesting discussion time had to be forfeited. Despite all this most members seemed to enjoy themselves; the venue was fine (apart from the accoustics - no-one told us there was a sound system); the food was good; the Photographic Competition rich in both quality and quantity of entries (see report earlier), the talks varied and interesting and provoking far more questions than we had time to answer. All in all a good meeting despite the trials and tribulations.

CONSERVATION
Bill Temple

The society has been involved in growing orchids from seed, for planting in various locations, moving threatened plants and advising on land management for the benefit of orchids. Members have also been actively involved in managing one site.

I would like to expand the role of the society in the active management and advice areas and therefore I am seeking help.

In order to provide good management advise the society needs a database of information, which has been collected over a number of years in the UK. This alas cannot be obtained instantly. It is not essential that the information be collected every year, though that would be ideal. Any information is better than none.

The information that I would like is as follows -
Site name, (if there is one)
OS grid ref
Number of orchids of each species (number of flowering & non-flowering plants would be a bonus)
Any comments – e.g. active management, known reasons for disasters etc

For the active management I would be interested in any offers of the loan/hire of a tractor mower with grass collection box in the Oxfordshire/Warwickshire area for a day per month from September to April. I have access to a car transporter trailer with ramps.

Cultivation of Dactylorhiza and related genera
A talk given at the October meeting at Wisley
John Haggar

My initial interest in growing hardy orchids began some fifteen years ago and centred on the laboratory techniques used to germinate seed and grow on seedlings. By the mid '90s I was producing large numbers of asymbiotically grown seedlings of various Dactylorhiza species and for the first time was benefiting from greatly enhanced post-weaning survival rates as a result of the availability of symbiotic fungi from the society. Nowadays I think I am rather good at growing temperate terrestrial orchids from seed and use a range of borrowed and self taught symbiotic and asymbiotic methods to grow a range of species and hybrids, the majority of which are marsh or spotted orchids.

Living in a flat in central Brighton, I rather suddenly found that I was in possession of hundreds of living seedlings with nowhere to grow them! My original seed parent plants were kept in a relative's greenhouse where there was little room for expansion. Luckily I acquired the use of the corner of a horse field (with horticultural planning permission) in the nearby countryside where I proceeded to erect a greenhouse of my own and to construct various experimental growing beds for my young plants. My constructions relied heavily on the use of cheap breeze blocks and cheap bags of sharp sand purchased from a local builders' merchant. With a little thought and a little extra expense, however, my rather stark constructions could sympathetically be incorporated into a garden setting.

Anacamptis morio, laxiflora, palustris and pyramidalis I prefer to grow inside the frost-free but otherwise unheated greenhouse. My best results involve the use of clay pots plunged in damp sand. I allow my Anacamptis species to dry off in their pots in the summer. I repot and begin watering in September.

Mediterranean Anacamptis, Serapias, Orchis and Ophrys I grow under similar conditions but I have had some difficulties with the watering regime in our cold climate. This year I have decided to grow these plants under fluorescent lights to reduce the chances of water damage to the leaves. So far the method (borrowed from Svante Malmgren's recent article) appears to be working well and enables me to be much less careful with the watering can!

Many species and hybrids of Spiranthes and Epipactis may successfully be grown in tall pots in standing water or on hydroponic gravel (NOT Spiranthes spiralis nor Epipactis atrorubens, mairei or thunbergii). Unlike Dactylorhiza spp these plants appear not to abhor somewhat stagnant conditions.

Among the easiest plants to maintain are Epipactis gigantea and Dactylorhiza fuchsii. Although some literature suggests that these are plants best suited to the woodland garden or to shady borders, I have found both species very easy to grow outside in full sun in simple containers or raised beds without special attention to drainage beyond the use of suitable compost. It is most important, however, to use large containers or raised beds and to ensure that the compost is kept moist in the warmer dryer summer months. Should you choose to grow any hardy orchid outside in anything other than a large container then I would consider plunging in sand or peat to be essential. Dactylorhiza, in particular, is very resistant both to winter cold and to summer heat but sudden changes in temperature, particularly rapid and repeated freezing and thawing in the wet winter months will surely kill them. Plunging massively reduces temperature swing in small pots and many plunged and therefore slowly frozen plants will grow normally when the thaw comes. I have used both clay and plastic pots in such situations with success although in theory at least more attention to watering is required when plastic vessels are used.

For plants that need a cold winter but that dislike our soaking wet weather, clay pots in sharp sand plunge beds covered by a cold frame work well. Cypripedium, oriental Epipactis, northern Orchis and Dactylorhiza sambucina are plants that respond well to this type of cultivation. It is important not to site covered frames in full sun. In the shade of the north facing side of the greenhouse is a good position. Orchids that are more resistant to wet conditions, such as Dactylorhiza fuchsii, maculata and saccifera, may be plunged in peat/sand beds without cover and in plastic or clay pots. Although not, in my opinion, the best way to grow them, marsh species of Dactylorhiza will also respond to such treatment and I have many hundreds of flowering sized marsh orchids in plastic pots plunged in large beds of sand, unshaded and usually exposed to all weather conditions. Because a few plants will always reveal tender young shoot tips during the winter months and because I have problems with rabbit and fox vandalism, I do cover these large beds with horticultural fleece and heavy net between December and March.

Most of the plants that I grow are marsh orchids, namely Dactylorhiza incarnata, praetermissa, majalis, traunsteineri and their hybrids. It has been suggested that an appropriate method of growing these forms be in raised beds constructed over a plastic lined wet sump of gravel or peat. Such constructions include the "Holman-Whitlow raised bog garden" and similar beds described in past editions of the newsletter. I find that marsh Dactylorhiza species hate these beds and do not grow well in them at all. I have killed many hundreds of marsh orchids by planting them out in beds such as these.

Although plants may flower well initially in freshly prepared compost, the stagnant, acidic, anaerobic and sour conditions that develop in the base of these beds inhibit root growth and attenuate and blacken the newly developing tubers.

Marsh dacts like damp conditions around their roots and tubers and they appreciate "rising damp" but the water must be fresh, clean and oxygenated. The previously described beds do not satisfy this requirement. For those growers blessed with a natural source of running water, a streamside situation would probably be ideal, particularly if the bank soil is excavated and replaced with more suitable compost. For most this is not a practical option and as an excellent substitute I offer my "artificial raised dune slack". This consists of a raised bed of sand in intimate proximity to a healthy, weedy, oxygenated pond. A pond liner runs underneath the entire structure and the raised sand bed is separated from the pond by a porous dam. The sand surface rests about a foot or so above the highest pond water level, which is maintained by an overflow. In such a bed clean water from the pond moves up into the sand bed from beneath and evaporates from its surface, providing a constant capillary flow of fresh water to the orchids which are plunged in clay pots in the sand. Excellent growing results are obtained using this method and the new tubers are almost invariably

large and healthy when plants are repotted in the autumn. In particular I find that pink or red flowered forms of Dactylorhiza incarnata grow better using this technique than with any other.

It is important to emphasise that my successes and failures depend not only on growing methods but also on the composts that I use. My composts, however, might not suit alternative growing techniques nor might my methods be appropriate for other composts, particularly for those that dry out quickly and/or require heavy fertilisation.

The composts that I currently use for my Dactylorhiza plants are based on the formulations described in the past by Norman Heywood (not Norman's current formula) and Alan Dash but I have found that both provide inadequate drainage and retain too little air, a problem that is greatly ameliorated by incorporating 25-50% of porous granular material. "Seramis" works well in this respect but is rather too expensive for large scale use and my preferred material is "Ultrasorb" a similar material of smaller particle size that may be obtained from "Garden Direct" (the mail order division of "Chempak"). "Perlite" and "Vermiculite" appear to retain too much water in composts that contain large quantities of peat so I have not regularly used them to date. I have no experience with pumice but suspect that it may work well if an appropriate particle size can be found.

I find that irregularly shaped grit works better than shards so I use "Cornish Grit" or "Westland horticultural grit" in my composts. I prefer to avoid proprietary multi-purpose compost, John Innes, and sterilised loam as ingredients because I consider that the fine nature of the often-sandy loam in both impedes drainage by creating a substantial mud layer at the bottom of the pot. A home-made clay loam prepared from riddled stacked turf is preferable and this may subsequently be oven-sterilised and its stickiness reduced by shaking with sharp sand. It is important, however, not to break down the crumb texture with a treatment too vigorous or by adding too much sand! Sandy crumbs, not loamy sand is required. This is the only sand I use in my composts. Too much free sand only thickens the undesirable mud layer. I do add dolomitic lime at 2ml/litre to composts that contain no lime and that are designed for plants that like limey soils in the wild. I also add hoof and horn at 1ml/litre to composts that do not already contain fertiliser.

After my talk I was questioned about the ethics of using peat in my composts. This is not a matter that I had given much thought to before the question for which I was quite unprepared! The lady who asked the question, however, does have a very valid point and I am pleased to say that as a direct result of her inquiry I have begun to trial composts with a substantially reduced or absent peat content. I remain somewhat unconvinced, though, that some of the potential substitutes involve any less environmental damage than does peat extraction!

Growing Hardy Orchids for Conservation Projects in France - Report on a talk by Robert Mitchell

Robert Mitchell gave what unfortunately had to be a truncated version of his planned talk on this work, as also described in his article in the last newsletter. Robert and his wife Caron have worked with a dynamic conservationist Samuel Sprunger in the Alsace region. They supplied orchid species raised from seed for restocking and re-introduction to the sides of the A35 motorway. Robert had hoped to expand upon his article with more detail on techniques and experiences but didn't have the time at Wisley. However he did give an outline of the methods used to raise the plants using natural symbiosis. He spoke of some of the problems which he had encountered with the establishment of plants in open ground and some of the successes they'd had over the years. A fascinating topic which as editor I personally feel deserves more consideration in Britain as our "natural" habitats come under increasing threat and places like motorway embankments may become a refuge for certain species if properly managed. Thoughts on this are welcome as the society needs to look towards its conservation role and re-introduction may be a part of that role.

Orchids of the Kandersteg Area
Report of a Talk by Nigel and Gwynne Johnson

Nigel and Gwynne Johnson entertained the HOS members who had braved the storms to attend the Autumn Meeting at Wisley with a mouth-watering account of the Kandersteg area in Switzerland. Nigel discussed their orchid finds during three trips to the area, one in early June, the other two in August while Gwynne ably complimented her husband with accounts of other alpine specialities encountered. Having visited this area in July, I was most interested to discover what they'd found as, like Nigel and Gwynne I was entranced by the beauty of the area, real chocolate box scenery supporting an exciting diversity of plants.

Nigel and Gwynne explored both the Gasterntal valley and the Oeschinensee which is above Kandersteg, as well as the Kleine Scheidigg area. The Gasterntal is a beautiful secluded valley where traffic can only enter along a narrow twisting road partly cut out of the rock with several tunnels. The road eventually opens into the valley proper. There is only a small, temporary population who live in the valley in the summer time partly to serve the tourist trade and a fee is paid at the road entrance into the valley which is to help with maintenance. Once in the valley it is possible to drive about 7km. to Heimritz but near the top the road is narrow without passing places so they usually park a little above Hotel Steinbock at Selden. However enroute to Selden there are plenty of opportunities to botanise both by the roadside, in the meadows, and along the woodland edge.

Nigel and Gwynne's holidays took place from 3 – 8th August 2000, 26 July – 6thAugust 2001 and 30th May – 10th June 2002. The dates allowed them to see a range of orchids and alpine plants from near the beginning and towards the latter end of the season. On their 2001 trip they found species such as Epipactis atrorubens growing beside Cephelanthera rubra, the elusive Epipogium aphyllum growing in moss and pine needles and black vanilla orchid, Gymnadenia rhellicani in the meadows. More common species found included Listera ovata, Goodyera repens and Gymnadenia densiflora. Gwynne briefly mentioned some of the interesting non-orchid alpine plants seen in the Gasterntal such as edelweiss, leafless stemmed globularia and snow gentian.

Each year they took a ski lift up to Oeschinensee from Kandersteg. The Oeschinensee is a beautiful blue lake at the foot of the Bluemlisalp mountain which provides numerous walking opportunities with lots of orchids to be found. Species still in flower in late July included Neotinea ustulata, Traunsteinera globosa and Gymnademia odoratissima. Other plants included the yellow gentian and the hairy alpenrose.

Two trips were made to Kleine Scheidigg , one directly by railway and the other via Mannlichen followed by a walk to Kleine Scheidigg. Good examples of Pseudorchis albida and Chamorchis alpina were found.

In 2002 Nigel and Gwynne planned their holiday to see earlier flowering orchids and alpine plant species. Again the Gasterntal proved its worth with splendid showings of Cypripedium calceolus, though at the beginning of the holiday the species was only in bud. Plants were not difficult to locate often flowering close to the road. In pine woodland in the valley they found Listera cordata, and by the roadside Ophrys insectifera but Corallorhiza trifida was only beginning to come into flower by the end of the holiday. Gwynne made a further contribution with slides of other alpine plants such as alpine buttercup, alpine butterwort and alpine clematis seen during the trip.

One visit was made up the Uschenetal. Near the top they found Dactylorhiza alpestris and on the way down Plantanthera bifolia and Cephalanthera longifolia were seen. Further examples of Cypripedium calceolus were found in the walk up to the Oeschinensee from Kandersteg.The alpine flora in the valley floor of the Oeschinensee included Orchis mascula, spring and Clusius's gentians, birds eye primrose and hepatica. At Wengenalp station, on the way to Kleine Scheidigg, they found a species which had eluded them elsewhere, Orchis ovalis, similar to Orchis mascula but with petals looking long pointed and recurved upwards and the basal leaves with red speckles on both surfaces. (The editor has seen this species higher up in the Oeschinensee). Other delights near Kleine Scheidigg included sheets of white and purple crocus, the spring pasque flower and the yellow form of the alpine pasque flower. The quality of the slides was superb and more than complimented the knowledgeable commentary about an area full of interest to botanists of all persuasions !

RHODES REVISITED-2002

Report of a talk by Richard Manuel

Chairman Richard Manuel took members attending the autumn meeting away from the storms of Wisley to the springtime of Rhodes earlier this year. This was Richard's third visit, with previous trips in 1988 and 1994. On this occasion he managed to get an exceptionally early charter flight to the island, departing on 27th March for a week. The weather however was not the warm climate expected as the Mediterranean can throw up cold weather at that time of year. Richard found the island barely prepared for the tourist season. A local lady in a supermarket told Richard that the weather had been warm for two weeks before his arrival, which resulted in many of the earlier flowering species having largely gone over and the next phase barely started. Richard had hoped to see some of the more interesting and unusual species which were earlier flowering, particularly in the south of the island in the area south of Kattavia. On this trip he hired a four wheel drive, necessary for some of the tracks he would have to travel over.

He said that Lindos proved an ideal centre for orchid hunting, being well served by adequate roads, well geared for tourism and quiet! The town is devoid of the large high rise tourist hotels found in other resorts and for tourists, if not for locals cars are not allowed in the town. Parking is on the fringes of the town.

Richard's first full day saw him head up to Laerma marsh, a site he'd visited in 1994, to discover that some of the woodland had been cleared and ploughed resulting in a loss of habitat, affecting species such as An laxiflora. He did see some of that species still hanging on in a ditch but exploring the area at the north end of the marsh turned up a range of Ophrys species such as Op heldreichii, Op ferrum-equinum, Op sicula and Op regis-ferdinandii. A wooded hill close to this parking area produced additional species of Ophrys such as Op phryganae, Op bremifera, Op reinholdii and Op bombyliflora but not in great numbers. O anatolica, Op omegaifera and Op 'dodekanensis' were found in further exploration of the hillier wooded areas around Laerma marsh.

Travelling from Laerma on the Ag.Isidorous road saw the value of the four wheel drive as the road deteriorated. Op mammosa was added along this route to Richard's list and O italica as well as more Op omegaifera. Travel further along this road on the first day also revealed Se. bergonii, An. papillionacea. Op speculum, and at a nice wood, which is a site for Cep epipactoides, he found Op lucis plus several other Ophrys species with hybrids. Him robertianum, an early flowering species was also seen.

Richard's second day took him to south of Kattavia/Hohlakas road with variable road conditions having to be endured. Several sites were explored en route. Species seen

in the first part of the day included Se carica, Op regis-ferdinandii, Op 'cornutula', An pyramidalis, An fragrans/sancta (tight bud), Op cretica, Op oestrifera and An papilionacea. Later on near Mesanegros further Ophrys and Anacamptis species were found including Op iricolor, Op episcopalis (green sepals), Op mammosa, Op phryganeae and a hybrid Op cretica x reinholdii and possible Op candica. Not all areas investigated proved productive with a drive up to Apolakkia, where there is a dam, proving much less productive.

On the third day the weather was calmer allowing Richard to return to the Laerma marsh both to take some photos and do a bit of further exploration. He then headed round towards Embonas to try and find the classic 'Op apulica'/Cephalanthera site but only found a patch of O anatolica. Rain hampered further photography and exploration but Richard found a good colony of Op lucis on a track a couple of kms north of Laerma and near Kalathos at a road junction much tipped upon, found lots of orchids including Op rhodia, Op regis-ferdinandii, Op ferrum-equinum and lots of An fragrans/sancta.

The fourth day saw Richard head towards Profitas Ilias, Rhodes highest mountain. He found evidence of sites which had been damaged by both human and animal activity with pigs often the guilty party due to their habit of rooting up buried bulbs/corms etc. Some parts of the mountain proved more productive with finds including Op rhodia, Op oestrifera, Op reinholdii, Op sicula, Op bremifera, Op episcopalism, Op bombylifera, 'small Op fusca' O italica, O anthropophora, Him robertianum, An pyramidalis, An papilio and N maculata.

On the fifth day, Richard headed back to Hohlakas to take photos and then north to locate a bee-orchid site from his 1994 trip. He found no sign of Op apifera but found Se carica, An papilio, An pyramidalis and Op regis-ferdinandii at the site. He then explored past Kattavia to search unsuccessfully for an Op cretica site before heading north along the coast to Apolakkia and east on to Istrios road. A site along this road proved productive with several Ophrys species including Op iricolor, Op lucis, Op attavaria (just opening), Op tenthredinifera (nearly at the end of flowering) and An papilionacea.

The day before departure saw Richard at a crossroads site on Laerma/Ag.Isidoros road for species including, Op attavaria, Se bergonii, An papilionacea, O italica, Op fusca (small and medium) and N maculata. He then headed back to Laerma and the Apollona road on which at various sites in the woods he found a range of Ophrys, Orchis and Anacamptis and at one site a nice clump of Limodorum. Weather proved unsettled again preventing as much photography as Richard would have liked.

On the final day Richard explored south to Gennadio and on to an old road to Lahania. He found species such as An collina in fruit, An papilio, An fragrans

/sancta in bud, Se carica, Op regis-fernandii and Op heldreichii. During a trip up towards the monastery at Moni Skiathii on a very poor and muddy road Richard found a grassy area, probably ploughed once but now covered with a wide range of orchids including An collina (in fruit), Op phryganae, Op sicula, Op iricolor and a swarm of Op heldreichii/oestrifera/calypsus (?) encompassing a variety of "species" and forms just coming out which would be probably worth a look if visiting at a later date.

Richard recommended the two books recently published on orchids of Rhodes:- Kretzchmar, H & G, Eccarius, W - Orchideen auf Rhodos 2001 published by Bad Hersfeld and Kreutz, C.A.J - The Orchids of Rhodes and Karpathos (In German and English) published by Seckel & Kreutz, The Netherlands .

A Member Asks

Tim Conway is looking for a copy of "Wild Orchids in the South of England" by Lock, M & Wills, M and published by MLP Publications to either buy or get someone to photocopy for him. He also wondered about setting up a message forum on the HOS website similar to the Cypripedium site on the internet. If any member has thoughts on this or can help Tim with the book he'd be grateful. He is contactable at 156 Thoresby St, Hull HU5 3RE. Ph. 01482 471076 and e-mail TIGERCONWAY@aol.com .

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