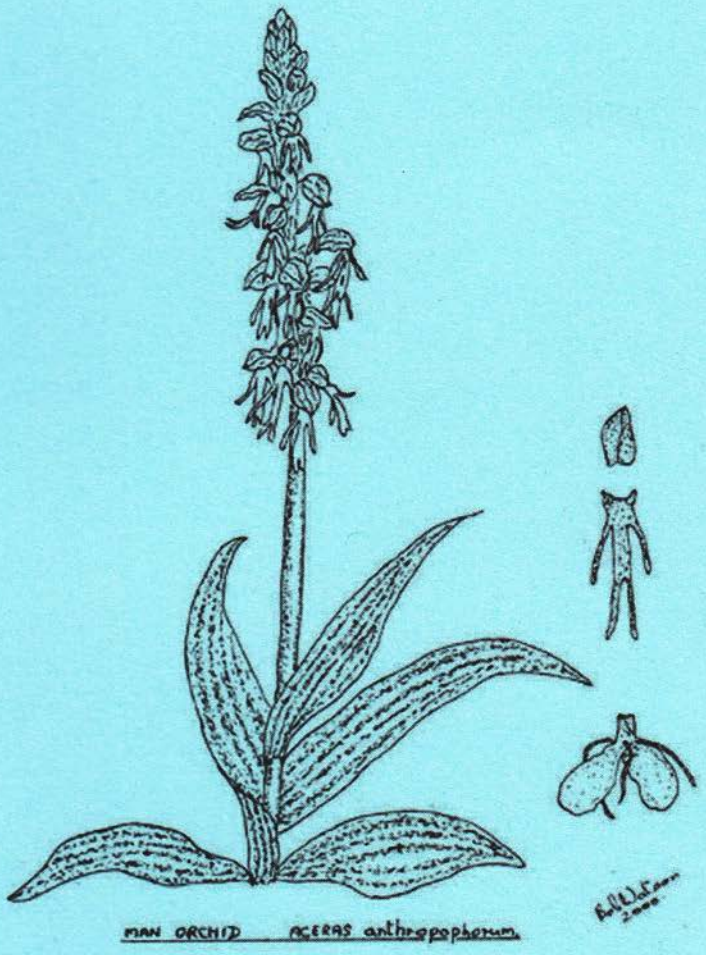
The Hardy Orchid Society Newsletter



No 26 October 2002

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Cover Illustration : Orchis (Aceras) anthropophora, by Bob Watson

Editorial Comment

Enclosed with this issue of the newsletter is an application form which anyone proposing to attend the Wisley meeting on October 27th should complete as soon as possible to allow our meeting organiser to finalise arrangements with Wisley and their caterers. Rules of the photographic competition are also part of the newsletter. Potential entrants should read the rules as there have been changes, though personally I still feel that the limit on the number of slides could be reviewed. I recognise that judging on the day is time limited, and that prints are easier to judge, but given that most entrants will probably use slides in their photography it severely limits choice in that medium. As there is no rule that says that entrants can't get prints made from slides there is that additional expense in getting prints made.In my own experience it is difficult to find a photographic developer who can produce good results from a slide for a reasonable price. Comments on whether we should rethink the content of the photographic competition are welcome.

Members will be aware that I am new at the editing of the newsletter. I hope that the first newsletter under my editorship proved satisfactory. I do welcome comment on any point and must acknowledge that I didn't get it completely correct in the last issue. The tables relating to the competition and the list of elected officers were not quite in sync due to my inexperience with the software I'm using and I must apologise to the cover artist and to the member to whom I wrongly credited the sketch. I can only say that I was under a variety of pressures at the end of June and somehow managed to let a few things like this slip past . Critical comments as well as complimentary are welcomed by the editor as are articles. I can't say however when articles will be published due,but will do my best to minimise the delay.

Autumn Meeting

This year the Autumn meeting of the Society will be at Wisley. For some time there has been a demand for a meeting in the southeast, and this area has one of the ighest densities of HOS members. So now it is up to those members who have previously complained that it is too far to travel to meetings, to show their support for the Society. Then we can consider making this a regular venue.

Programme for the Meeting at Wisley

27th October 2002-08-03

(All timings are approximate and unlikely to be strictly accurate!)

9.30 Meeting opens; Plant sales; Entries and viewing of Photographic Competition (see elsewhere in this issue for details). Coffee/Tea.

10.30 Introduction (Judging of Competition starts)

10.35 **Nigel & Gwynne Johnson** Orchids of the Kandersteg area

11.30 Coffee

12.00 **Richard Manuel** Rhodes revisited again

1.00 Lunch

1.45 **Vaughan Fleming** Results of Photographic Competition.

2.15 **John Haggar** Cultivation of *Dactylorhiza* and related genera.

3.15 **Robert Mitchell** Growing Hardy Orchids for Conservation projects in France.

4.15 Tea

4.45 Meeting ends, hall must be clear by 5.00p.m.

HOS Plant Photographic Competition 27th October 2002

The HOS 2002 Photographic Competition will be held during the HOS Autumn meeting at Wisley on Sunday 27th. October. The winning entries will appear on the web site and some may be published in colour in the HOS newsletter.

Please enter as many photographs as possible in order to maintain the excellent standard set last year. Advance entry is not essential, however, to assist the processing and getting ready for judging, it would be helpful if as many entries as possible were made in advance of the meeting. This can be done either be telephoning Doreen on 0771 340 97 43 or emailing dozzer@lobro24.freeserve.co.uk.

For anyone who cannot attend the meeting personally and wishes to send photographs in advance, photographs can be despatched to Barry Tattersall, 262, Staines Road, Twickenham, TW2 5AR

For the 35mm slide classes, each entrant is restricted to only one slide per class, but for the six classes for prints, competitors may enter up to three prints per class. These prints may be produced photographically or by computer printing. Do please remember that photographs must be ones you have never shown in the HOS Competition before. However, if in addition to your competition entries, you would like to bring along any photographs you have shown before, we could put up a non-competitive display. This is always appreciated by all the members.

CLASSES

1. An orchidaceous landscape, print size up to 7x5 inches.
2. A single orchid plant, print size up to 7x5 inches. (See Rule j)
3. A close-up, print size up to 7x5 inches. (See Rule i.)
4. An orchidaceous landscape, print size up to A4.
5. A single plant, print size up to A4. (See Rule j)
6. A close-up print size up to A4. (See Rule i)
7. An orchidaceous landscape, 35mm colour slide.
8. A single orchid plant, 35mm colour slide. (See Rule j)
9. A close-up, 35mm colour slide. (See Rule i.)

RULES

a) Judging will be based on the quality of the pictures, not on the rarity of the plants.

b) Plants may be wild or cultivated, though only 'hardy' plants are acceptable.

c) Advance entry is not essential but would be helpful (see above). All entries must be staged by 09.45 a.m. so that judging can be completed before the meeting.

d) Prints must be un-mounted, so that they can be inserted in plastic pouches for protection when on display.

e) You may enter up to **three prints** in each of classes 1 to 6, but will only receive **one award** per class.

f) You may enter only **one slide** in each of classes 7 to 9.

g) Pictures entered previously in HOS displays are **not** permitted. (Please refer to the notes).

h) Prints should have a **small note with them of what the plant is** and any information of interest to other members but your name must only appear on the reverse side of the print.

i) When a class states **'close up'** the photograph should only include part of a plant. This would normally be the flowering part, but may be another detail of interest.

j) When a class states **'a single orchid plant'** the picture should consist of the whole of a single plant as the main subject. If other plants are present they should be subsidiary to the single main plant.

k) Slides should be labelled with your name (the judge will not be seeing the actual slide out of the projector!) and with an alignment dot on the **bottom left corner** of the mount (when viewed the right way up). Any standard slide mount is acceptable.

l) No trophies, no prizes - but your efforts will be rewarded by the pride of winning and seeing your own little photographs in colour in the HOS quarterly Newsletter or you may even be able to proudly declare that you "*Have pictures on the Web!*"

Orchids near Verdun
Ron Meijer

A few years ago I went to Verdun in the North of France, to see the WW.I trenches and fortresses and to look for orchids. I knew that in the years after the war the totally destroyed landscape became covered with orchids. Although the trenches were still visible, nature has taken over and covered the scares with a blanket of trees and scrubs. This also means that the fields packed with orchids are diminishing. I found most orchids along site the road and on clearings in the forest where once the bunkers stood and now visitors come to see the remains. While in the Netherlands orchids (like O.apifera, the Bee Orchid) sometimes grows in old cemeteries I didn't see any on the vast cemeteries near Verdun....you can leave it up to the French to keep the soldier graves tidy.

In the woods I saw Neottia nidus-avis not only under beeches, but under pines as well. Being saprphytic Neottia is able to grow in the darkest places. The same spots mosquitoes prefer, so taking photos was a pain. Cephalanthera damasonium can also be seen in the beech wood, but not in very high numbers. But as I said the best orchid spots were right next to the road where the sun was able to find them. A good place to visit is 'Quatre Cheminées' (one of the remains of WW.I), there are very tall O.holoserica, A.anthropophorum, O.militaris (what's in a name?) and P.chlorantha to be seen in a meadow.

What's best about these sites is that, one of my favourite orchids; O.insectifera, is present on quite a lot of spots. At first it's difficult to see them in the more or less high grass, but when you've seen one you'll know what to look for and then you'll notice many more. Just look for dark freckles in the grass and you'll see O.insectifera ...or a fly of course.

Wander along the road to one of the fortresses: 'Fort de Vaux' and you'll see them for sure. Some even reached heights of 50 cm and carried as many as 15 flowers. Talking about beauties I also found a cross between A.anthropophorum and O.militaris combining the form of the Aceras and the colour of the Orchis. A real treat. I'm working on 'making' this hybrid for my garden with my Aceras and O.militaris. Many O.holoserica had beetle-visitors. If I'm correct it was Melolontha malolontha, they didn't do any harm to the orchid and I wonder what they where doing. Could they fall for the Ophrys pollination trick or was the orchid simply a nice landing strip?

In short: In May you can see a lot of Neottia nidus-avis, O.militaris, O.purpurea, Listera ovata, O.insectifera, O.holoserica, A.anthropophorum. Remarkable that I didn't find any G.conopsea while I only saw a few A.pyramidalis, but Verdun is well worth the visit; tragic history and beautiful orchids combined.

Ron Meijer can be contacted by e-mail at r.j.a.hmeijer@freeler.nl

The Orchids of Rhodes and Karpathos

by C A J Kreutz
published by the author, 2002
reviewed by Simon Tarrant

This is a large and sumptuous book, lavishly produced, and as such does not lend itself to being lugged around the hills and valleys of Rhodes to assist in field identification. Instead it is a book to study during the long winter evenings when planning the next holiday, and it is a book which repays detailed study.

The book is bi-lingual (German and English) throughout. The English text reads well, and I cannot fault the translation. Kreutz opens with a broad-based introduction to Rhodes and Karpathos, covering such topics as geography, geology, climate and human activity as well as the flora and fauna, all illustrated with photographs and detailed maps. There follow some general observations about the orchids of the islands and their current status, including a detailed account of the methods used to prepare the species distribution maps. All known locations are depicted using a 1 km UTM grid. There then follows a detailed survey of the orchids themselves, species by species.

Orchid species are arranged alphabetically by scientific name. Kreutz makes no mention of the work of Bateman, Pridgeon and Chase on evolutionary relationships, so the first species to appear is the Man Orchid under the name A*ceras anthropophorum*. For every species we are given several photographs, to illustrate the entire plant, floral details, floral variation, and habitat, with dates and approximate locations, and distribution maps for both islands. The quality of the photographs is truly outstanding. The text provides information on the physical appearance, habitat, flowering time, distribution, hybrids, and threats to the survival of the species.

And what of the species themselves ? Kreutz describes 73 species of which over 40 are *Ophrys* species, compared to 53 in the Kretzschmar's recent book (with 27 *Ophrys*). Of course new research is identifying more species all the time, and Kreutz includes several species described as recently as 2001, such as *Ophrys cornutula* (related to *O. oestrifera*) and *O. parvula* (a member of the *O. fusca* group). In such cases a cogent argument is provided for the existence of a new species, and differences from the "parent" species are described. Kreutz provides English and German names taken from previously published works wherever possible, but has created names for newly-described species, such as Small-flowered Brown Ophrys for *O. cinereophila*, another *O. fusca* relative.

Whatever one's views about lumping or splitting, this book is a beautiful and well-crafted result of a considerable amount of hard work and dedication and no serious student of Greek orchids should be without it.

Die Orchideen von Rhodos und Karpathos/The Orchids of Rhodes and Karpathos

Published by C A J Kreutz, Landgraaf, The Netherlands, 2002.
ISBN 90 805149 2 6
Price 59 Euros, or approx. £45 from Summerfield Books

Wild Orchids of Scotland
Brian Allan

Scotland has a wide range of habitats where 'Wild Orchids' can be found. These can vary greatly due to climate, soil conditions, altitude and aspect.

Altitude can be simply defined as upland or lowland, and differences in pH, as basic, neutral or acidic. However these boundaries are not always clear cut and, as often as not, they blend into each other, but divisions between upland and lowland are, in the main, fairly easy to define.

But orchids do not always stick to these predetermined habitats with some species growing quite happily in a number of quite different habitats. For example *Orchis mascula*, (Early Purple Orchid), can be found in coastal grassland, deciduous woodland and even grassy ledges high in the glens. Because of this habitat range this species may be found in flower from April to early July.

This account looks at a number of the main habitats and the species which can be found in each, starting at sea level through lowland woodland and wetland habitats to upland mires and heaths.

Coastal Cliffs and Ledges

Grassy coastal cliffs occur all around Scotland and it is on these sea facing ledges that the first orchids of spring can be found. Species to look out for during late April or early May include the relatively common *Orchis mascula,* (Early Purple Orchid), the less common *Coeloglossum viride* (Frog Orchid), and in the south west the rare *Orchis morio*, (Green-winged Orchid). In the far north and west the spectacular *Epipactis atrorubens*, (Dark-red Helleborine), flowers during late July, and a little earlier, an unusual marsh-orchid with attractive leaf spotting, *Dactylorhiza purpurella* var. majaliformis may be found.

Machair

The machair is a special form of grassland that is primarily found in the Western Isles, but can on occasions be found on the north west mainland. These are primarily west-

facing areas protected by established coastal dunes. The calcareous, shell-rich sandy soils, support a species rich short grazed turf which contains none of the more invasive, coarse dune grasses such as marram or lyme grass.

There are some species of orchid that are found only in this rich habitat, the best known being the fairly widespread *Dactylorhiza fuchsii* ssp. *hebridensis*, a subspecies which more or less replaces *D. fuchsii*, (Common Spotted-orchid) in the outer isles. Another is the rare, recently discovered *Dactylorhiza majalis* ssp. *ebudensis* which is confined to only two sites on the outer hebridean island of North Uist. Other species that occur more commonly include, *Dactylorhiza purpurella,* (Northern Marsh-orchid) *D. incarnata* ssp. *coccinea,* (Dune Early Marsh-orchid) *Orchis mascula, Coeloglossum viride, Gymnadenia conopsea* ssp. *borealis* (Northern Fragrant Orchid) a stunted form of *Listera ovata* (Common Twayblade) and *Platanthera bifolia*, (Lesser Butterfly-orchid).

It was on a typical stretch of machair on Lewis during 1991 that an unusual intergeneric hybrid was found, *Coeloglossum viride* x *Dactylorhiza fuchsii* ssp. *hebridensis*. See accompanying picture.

Photo by Brian Allan

Dune Slacks

Dune slacks, which can at times become flooded, within stabilised dunes complexes are primarily found in the east of Scotland. Sands of Forvie north of Aberdeen, St Cyrus NNR in Kincardine, Tentsmuir in Fife and Aberlady Bay south of Edinburgh are all good examples of this rich and varied habitat.

These are home to a variety of common orchid species similar to those found on the machair with the addition of *Corallorhiza trifida*, (Coralroot Orchid), which can often be found in large numbers in early summer. *Dactylorhiza incarnata*, (Early Marsh-orchid) and *D purpurella (Northern Marsh Orchid)*. One Scottish rarity found only recently in Angus and found in a couple of duneland sites in Fife is *Anacamptis pyramidalis (Pyramidal orchid)*. One unusual hybrid was found on an area of duneland on Skye. Growing close to a typical plant of Dactylorhiza maculata ssp ericetorum was a plant which on first look was a hybrid with *Pseudorchis albida* but the second parent was nowhere to be seen. It was only when a return visit was made the following year that Pseudorchis albida was eventually found 200 metres away. See accompanying picture on page 10.

Coniferous Woodland

In Scotland, coniferous woodland can be split into two main types, native Scots Pine as remnants of the ancient Caledonian Forest or forestry plantations. Native Scots Pine woodland, by their very nature, tend to have a more rich ground cover vegetation than most of the plantations where huge areas of non-native spruce trees can block out all but the most tenacious of plants. However some older more mature plantations can encourage a ground vegetation that can be almost as rich and diverse as a native Scots Pine woodland.

Photo by Brian Allan

The star orchid that can be found in our native pinewoods is the late summer flowering *Goodyera repens*, (Creeping Lady's-tresses), which, in some areas, can be found in surprisingly high numbers. This delightful orchid can be found in a number of well established coniferous plantations, such as Tentsmuir forest in Fife, where this little gem can be found in quite large colonies. *G. repens* grows in moss and pine needle litter in forest clearings and fringes of mature conifers. It can also be found in more open areas among tall, rank, bell heather, but always with pines nearby. Other species which can be found in coniferous woodland include *Corallorhiza trifida*, (Coralroot Orchid), and *Listera cordata,* (Lesser Twayblade), but these are not restricted to coniferous woodland and can also be found in other quite different habitats.

Deciduous Woodland

Unlike the southern counties of England large areas of deciduous woodland are rare in Scotland but the dry birch woods of east-central Scotland and the damper woodlands of the Western Highlands together make up an important habitat for flowering and non-flowering plants. Willow, birch and alder carr is another distinct woodland type found primarily in east Scotland often in association with raised bogs and other water courses.

Dry birch woodland is not usually rich in orchids but *Dactylorhiza maculata* ssp. *ericetorum*, (Heath Spotted-orchid), and more rarely the diminutive *Listera cordata* (Lesser Twayblade) can be occasionally be found. On less acidic soil in birch woods *Epipactis helleborine* (Broad-leaved Helleborine), *Listera ovata* (Common Twayblade) and *Dactylorhiza fuchsii* (Common Spotted-orchid) may be found. However it is in wetter birch-alder-willow carr, which is prevalent in lowland Angus,

that *Corallorhiza trifida* (Coralroot Orchid) can be found in surprisingly large numbers. This latter species can also be found among the Creeping willow, *Salix repens*, in open duneland.

In the west of Scotland on wet and more basic soils, dominated by oak, ash and occasionally beech, a larger variety of orchids can be found. These include arguably our most attractive species, *Cephalanthera longifolia* (Sword-leaved Helleborine), with *Epipactis helleborine, Orchis mascula, Platanthera chlorantha,* and *P. bifolia,* the Greater and Lesser Butterfly-orchids, *Listera ovata, Dactylorhiza fuchsii.* In beech woodland, the saprophytic, *Neottia nidus-avis*, (Bird's-nest Orchid) may be found but with its brown colouration it can be extremely difficult to spot among the beech leaf litter. It is by no means a common orchid but occurs in over 60% of Scottish vice-counties, but there is no overall or clear pattern of distribution. This may well be due to under recording.

Where elm, ash and oak occur on limestone in the north west Scotland the dazzling *Epipactis atrorubens* (Dark-red Helleborine) can be found, although the main habitat for this spectacular species is open expanses of limestone pavement mainly in the north and west.

One woodland habitat, not so far mentioned, is mixed woodland that has developed on old, long abandoned coal pit bings or spoil heaps in the central belt of Scotland. Here two very rare orchids were discovered. during the 1980's, *Epipactis youngiana*, (Young's Helleborine) and *Epipactis leptochila* ssp. *dunensis,* (Dune Helleborine). These rarities were found together with the more common *Epipactis helleborine,* (Broad-leaved Helleborine). In recent years, doubt has been expressed regarding the validity of Young's Helleborine as a true species with some workers considering this to be a hybrid between *E. helleborine* and *E. leptochila* ssp. *dunensis.* Also recently there has been a suggestion that a new species, *Epipactis phyllanthes,* (Pendulous-flowered Helleborine) has also been found growing in similar habitat, but that is still to be confirmed.

Grassland

Grassland habitats, be they upland or lowland, vary enormously and the diversity of plants that grow in them depend on how extensively they have been altered by agriculture.

Lowland grassland that has not been 'improved', to serve the needs of farming for grazing is unfortunately rarely found in Scotland and since orchids are extremely sensitive to disturbance, drainage, fertilisers and herbicides, they will normally be edged out by more robust plants. It is mainly for these reasons that upland grassland is often richer in orchids than lowland grassland. *Gymnadenia conopsea* ssp. *borealis, (*Northern Fragrant Orchid), *Platanthera bifolia, P. chlorantha*, (Lesser and

Greater Butterfly Orchids), and *Orchis mascula*, (Early Purple Orchid), can tolerate a wide range of soil conditions and occur in many grassland types. Similarly *Coeloglossum viride*, (Frog Orchid) can be found in a wide range of habitats from coastal grassland to grassland in the montane zone.

However there is one species which above all characterizes upland grassland, the delicate *Pseudorchis albida* (Small-white Orchid) now with a name change to Gymnadenia albida. However, this species can also be found at much lower altitude in many vice-counties of Scotland. Other species which have been recorded mainly in damp, lowland grassland include *Dactylorhiza fuchsii,* (Common Spotted-orchid), *D incarnata*, (Early Marsh-orchid) and *D. maculata* ssp. *ericetorum*, (Heath Spotted-orchid), together with invariably hybrids of all three.

Marshes

Marshes are mainly dominated by rushes, sedges and tall grasses and are not easy to describe or classify. However, they can be described simply as wetlands that have not formed peat. Over the centuries many areas of marshland have suffered from extensive drainage and have subsequently been ploughed up to make way for agricultural crops or grazing. Those that have survived contain a large number of flowering plants including many orchid species.

These include *Dactylorhiza purpurella, (Northern Marsh-orchid), D. incarnata,* (Early Marsh-orchid) *D. maculata* ssp. *ericetorum* (Heath Spotted-orchid) and the other Spotted-orchid *D. fuchsii, Gymnadenia conopsea* ssp. *borealis* (Northern Fragrant Orchid) and both species of *Platanthera.* The latter two being found less frequently. In the west of Scotland *Spiranthes romanzoffiana,* (Irish ladies-tresses), occurs in marshes, especially where periodic flooding occurs. This species can also be found favouring some stony loch margins which also experience flooding during the winter months.

Mires Bogs and Heaths

Mires, bogs and heaths cover large areas of upland Scotland. Mires or peatlands are found mainly in the north and west where the cool, climate provides ideal conditions for the creation of peat on gently sloping ground, especially in hilly districts where rainfall is higher. In the drier east of Scotland peat formation is less pronounced but can still be evident in some areas. Mires tend to be dominated by just a few plants including purple moor-grass, heather, deer-grass, cross-leaved heath and cotton grasses but are not rich orchid habitats with *only Dactylorhiza maculata* ssp. *ericetorum,* Heath Spotted-orchid) *D. incarnata* ssp. *pulchella,* (Purple Early Marsh-orchid) *Listera cordata,* (Lesser Twayblade) *Gymnadenia albida* (Small-white Orchid) and *Gymnadenia conopsea* var. *borealis* (Northern Fragrant Orchid) occasionally being found. It was on Skye during 1994 that an intergeneric hybrid, P. Albida x D. *maculata* ssp. *ericetorum*, was discovered.

In wetter areas, such as flushes or bogs where mosses and liverworts dominate the vegetation, that the diminutive *Malaxis paludosa,* (Bog Orchid) can be found. However this species is green in colour, typically less than 10 cm. high and is often overlooked among the dense rafts of sphagnum moss. Where the ground water is less acidic, base rich flushes are often richer and here *Dactylorhiza incarnata,* (Early Marsh-orchid) *Platanthera bifolia* and *P. chlorantha* (Lesser and Greater Butterfly-orchid) can occur. Within the last decade or so three marsh-orchids, all which grow in basic or mildly basic flushes, have been added to the Scottish orchid flora. These are *Dactylorhiza cruenta,* (Flecked Early Marsh-orchid), *Dactylorhiza traunsteineri* ssp. *lapponica*, (Lapland Marsh-orchid) and *D. traunsteineri,* (Narrow-leaved Marsh-orchid).. The first was previously known only from Western Ireland. *D. traunsteineri* ssp. *lapponica* is a new species to the British Isles and *D. traunsteineri* was only confirmed as a Scottish species in 1983 previously being found in southern England and some alpine areas of Europe.

Heaths are merely better drained mires in more acidic conditions where it is much too dry for active peat building, and are dominated by ericaceous shrubs such as *Calluna vulgaris,* heather, *Erica cinerea*, bell heather and blaeberry where the orchid flora is more or less restricted to *Dactylorhiza maculata* ssp. *ericetorum*, (Heath Spotted-orchid) or the occasional spike or two of *Gymnadenia conopsea* ssp. *borealis* (Northern Fragrant Orchid). Where the heather grows long and rank a small micro-climate is formed and is home to the tiny *Listera cordata* (Lesser Twayblade). It is always fun when walking through such areas to casually part the dense heather to reveal this hidden gem.

As with all plant hunting, remember not to pick or dig up any specimens rather study them, photograph them, then leave them for others to find and enjoy.

Cotswolds Field Trip June 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? Nearby, an odd clump of dactylorhizas posed a problem - picture also on the website. No prizes,but we'd like to hear your views on their identity..

Motorway Madness - Planting Orchids alongside the A35 Motorway in France

Caron and Robert Mitchell

The A35 motorway passes from Basel to Strasbourg traversing the 'Foret de la Hardt' and running parallel to the Rhine. Sections of the motorway are over 30 years old but some sections have been finished more recently. One was opened just 13 years ago, this being the section from Mulhouse to Ottmarsheim and Mulhouse to Sainte Croix en Plaine. The value of transport routes for plant conservation has long been recognised and Jean-Claude Jacob of the Conservatoire des Sites Alsaciens encouraged the motorway builders to sow areas of the motorway sides with the seeds of dry meadow species found in natural grassy clearings of the Foret de la Hardt.

The geological layer of the route is uniform and composed of gravel. It is ancient alluvial deposits from the Rhine covered by a fine layer of open soil and sand, wet in winter and spring, dry in summer and autumn. Like other dry meadow that exists in the region, the banks of the A35 motorway have acquired a high level of biodiversity of flora and fauna after a number of years of intensive maintenance. The different plant associations are influenced by inclination and sunniness of the slope and the surrounding vegetation. One can find in varying proportions, ox-eye daisies, scabious, esparcettes, campanulas, thymes, bouillon blancs, broom, potentilla, woad, oeillets des Chartreux, etc. Grasses are the dominant plant. They give their tones to the different parts of the motorway, passing from grey-green to blue-green during summer, then turning an ochre-red with the first frosts. The plants that bloom along the motorway are very diverse, in the course of the seasons it is easy to count 150 species. Nevertheless on the whole route there wasn't a single orchid to be found. Is it because there is no seed and fungi? Perhaps the soil of the motorway banks is too rich in mineral salts after years of maintenance, impeding the microrrhyzal fungi?

Samuel Sprunger, a teacher of horticulture and an authority on orchids, lives in Mulhouse. Samuel had become a great friend after years of collaboration with me when I worked on the Sainsbury Orchid Project at Kew. He has been a fantastic help to the project providing good quality seeds and roots for fungal isolation all fully supported by CITES papers. He is also one of the most enthusiastic conservationists I have ever met and he organises, surveys, cultivates, plants and monitors all the plant material we can supply him with. All of his time to the Sainsbury Orchid Project and several other orchid conservation projects he has established in Alsace is given freely and with great charm.

Samuel Sprunger contacted the authorities proposing the planting of orchids at selected sites on the motorway, and after much persuasion and a course on safety regulations for motorway work was given permission to go ahead. He then

approached us in France to grow the plants from seeds he would supply. We agreed to try to grow the plants for him if he could cover the cost of lab materials needed. He then found the financial support required from Societe Chimique Roche at Village Neuf. We set to work and on the 10 November 1995 we gathered on a bleak stretch of motorway bank near the Basel-Mulhouse-Fribourg Euroairport. Samuel had organised for all the authorities, sponsors, local politicians and press to witness the first planting of 1000 orchid plants. These were made up of 800 *Anacamptis morio (Orchis morio)* and 200 *Ophrys apifera.*

It will come as no surprise to anyone growing orchids from seeds that in many ways the problems had just begun. Samuel had organised some student projects to monitor the progress of the plants. All of the young plants were potted into local sandy soil. He used a range of pots to hold the young plants before planting and had decided on four basic procedures:

1. plastic mesh pots
2. compressed peat pots
3. recycled carton pots
4. direct planting.

One of the first observations was that the conical shaped peat and recycled pots were pushed out of the ground by frost-heave and left the plants vulnerable to drying out. The raised pot acting as a wick causing rapid drying of the soil in the pots. This did not happen to the plastic mesh pots. However short-tailed field mice quickly found the disturbed ground around them and would burrow beneath them. This caused them to sink deeper and often left the plants covered by soil.

Another problem Samuel encountered was sudden changes in management of the banks. Preparations for the arrival of important Heads of State, for example, lead to intensive mowing of the first planting site, leaving the grass with a lawn like finish and removing flowers from the surviving plants. Samuel puts in many hours reminding the management authorities and even individual tractor drivers of the importance of managing these selected planting sites more constantly. A job that never seems to get easier as staff change and managers juggle their budgets. Now Samuel has persuaded the Direction Departementale de l'Equipement to define zones where the grass will not be cut before the end of August.

There is very encouraging evidence that some of the young plants were capable of reaching flowering size within two years from seeds. On the nursery we also found remarkable variation in first year tuber size despite trying to keep growing conditions as constant as possible. Some plants of *Anacamptis morio* and *Ophrys apifera* flowered in their second season on the nursery. This is not so surprising as all the seeds are from wild plants and variation in development must be an important survival aid in adverse weather conditions.

Over the years we have been able to grow a wider range of species from the area and have added young plants of *Anacamptis pyramidalis*, *Orchis mascula*, *A. palustris (O. palustris)* and *A. coriophora (O. coriophora)* to the site. Samuel has tried many different methods and is now growing the plants on for a year in containers to get bigger plants as they are better able to take the conditions. He has identified six factors that affect such trials and require consideration and further research. These are:

1. Pre-cultivation and choice of compost
2. Date of planting
3. Soil composition of the site.
4. Seasonal weather.
5. Site maintenance
6. Disturbance by rodents, birds, slugs etc.

I would also add that it requires someone of great energy and determination to co-ordinate and push such a project forward. Samuel Sprunger is an excellent example of such a person.

North Carolina and Tennessee

15 – 29 MAY 2002

Mike Parsons

My wife and I went to the American native orchid conference that was held at Greensboro North Carolina. We flew from Gatwick to Charlotte where we collected our rental car before heading to the conference. Greensboro is a beautiful town in the centre of North Carolina where apparently the British had won a battle here in the war of American independence, but the locals informed me it was only a pyrrhic victory as the home side had depleted our troops so much that the next battle was crucial and was eventually won by the Americans. The first two days of the conference were held in Guilford County Agricultural Center where we were treated with some great slide shows and speakers. The conference was dedicated to the memory of Philip Keenan author of "Wild orchids across North America – a botanical travelogue" who was a long time orchid enthusiast and naturalist, who passed away last year.

The speakers were David McAdoo, who is co-author of the booklet – "Kentucky Orchidaceae," who spoke on *Exploring North Carolina and its native orchids*, Dr.Carl Slaughter, a retired doctor, and past president of Arkansas native plant society and author of "Wild Orchids of Arkansas," who spoke on *North American Cypripediums* and on the following day *Sexual and asexual reproduction of vascular plants.*

Jyotsna Sharma spoke about a "Report on recovery efforts for the federally

threatened Platanthera praeclara (orchidaceae)," while Ron Coleman , of University of Arizona at Tucson who is author of "The wild orchids of California," spoke on his new book *The wild orchids of Arizona and New Mexico*. Shirley Curtis spoke on *Exploring for orchids in the Canadian Rockies, Banff, Yoho, Kootenay, and Jasper*, while Kevin Taylor gave a slide show on *Pink Ladies Slippers*.

Dr. Charles Sheviak, a senior scientist and curator of Botany, NY State museum a renown botanist who writes in several magazines including the AOS (The American orchid society), spoke on *Platanthera huronensis in the far north: eleven time zones and the winds of change*, followed by Dennis Horn, retired engineer, vice president of Tennessee native plant society who spoke on *Orchids and wild flowers of Tennessee*, and Dr. Larry Mellichamp professor of Biology at UNC - Charlotte, who spoke on *Bog gardening with orchids, carnivorous plants and other southeastern natives*, Lorne Heshka, spoke on "*Orchids, whales, and a polar bear* (an orchid hunting trip to Churchill, Manitoba)," and William Chapman, author of "Orchids of the Northeast – a field guide," spoke on *From poke to pogonia, Southern Ethnobotany*.

The conference was really well run which was mainly due to the organisers – Mark Rose and David McAdoo. On our arrival at the hall we were greeted by old friends who we had met two years ago at Port Angeles near Seattle in Washington state when the organisation was then run by Paul Martin Brown of the North American Native Orchid Alliance (NANOA) who for some reason or other was not part of this conference. He has recently finished his book "Wild orchids of Florida," and maybe the writing of this book was one of the reasons that he has disappeared from the scene for so long. Therefore this was the first meeting of orchid enthusiasts and it would appear that this would be the demise of the old society NANOA.

There were many stands of plants and the one that caught my eye as I came through the door was a couple of beautiful plants of *Encyclia tampensis* (Florida butterfly orchid). I couldn't buy it, as I would not be allowed to take it home, so instead I headed to the book counter and bought Ron Coleman's latest book. I didn't realize at the time he was standing right behind me and offered his autograph that I gratefully accepted. The meeting got off on time and the coffee, lunches and tea breaks couldn't have been better organised, where we could all meet up together, which was a far cry from the meeting in Port Angeles, where we all had to make our arrangements especially for lunch which meant a trip into the local town.

The two days of the meeting were very hectic but everything went smoothly which was a surprise as there were many eminent speakers. But at the end the real work had to be done in trying to arrange a new organisation. First of all they had to sort out who wanted to volunteer for the committee. Hands were raised and I think that there were enough people to get the organisation on its feet.

Its still early days but there was enough enthusiasm to make sure that the organisation would start as soon as possible, so it was suggested that the attendants would all donate at least $10 each which seemed fine by the fifty odd attendants in the room. Most of the members wanted to know if there would be a conference next year, so a handful of the newly voted committee suggested that there would be a venue and the most likely place would be the Bruce Peninsula in Ontario, Canada. Unfortunately for me this would not be a new venue for me as my wife's brother lives in Toronto, and the peninsula from there is only three hours drive away, so I have been there several times.

The conference was still not over as two more days had been organised as field trips to the local orchids of North Carolina. We were aware of this, and we had prepared in advance a bed & breakfast called 'The Cresent Moon' at Holden beach on the coast. We chose this place as we prefer B & B's which are rare in the States. So after the meeting we all headed south to the coastal area of North Carolina but too late to appreciate the wonderful Carolina coastline.

The following day we went to Green Swamp (a Nature Conservancy Preserve) which is well known for the Venus fly trap (*Dionaea muscipula*), as well as two types of bladderworts *(Utricularia* species) , three types of pitcher plants *(Sarracenia* species), and two types of sundews *(drosera* species) as well as the home of the rare cockaded woodpecker, the only woodpecker in America to have their nests in live trees, and of course the orchids and other plants . The swamp wasn't too bad for getting around, and we soon joined a party heading into a grassy area surrounded by slash pine. The grass was high here, and this is where we stumbled on our first orchid – *Cleistes bifaria* that has many ordinary names but the one I prefer is the 'upland spreading pogonia.' A little further on we did encounter its relation – *Cleistes divaricata* known as the 'large spreading pogonia.'

Cliestes divaricata Photo by Kelvin Taylor

These orchids are extremely pretty with a large labellum and spreading sepals. These species have only been separated recently and it is rare for both to be found together. C.bifaria is mainly found inuplandareas as its common name suggests whereas C. divaricata prefers wetter areas on low lying land and often prefers a burnt area. In this area there are several places where controlled burns had taken place that is sensible for controlling forest fires and not just for the sake of the orchids. Of course a fire in this swamp would often happen naturally.

Apart from the Cleistes which are one of the most highly sought after orchids we then found *Calopogon pallidus* (pale grass pink*) Calopogon tuberosus* (common grass pink) and *Pogonia ophioglossoides* (rose pogonia) all looking quite radiant. The latter two species I had seen before and are quite widespread from Canada to Florida. However, it was nice to find old friends that often grow together in wet places. The pale grass pink was new to me and was a lot smaller in size and varied in colour from light pink to white. The grass pinks are all nonresupinate and stand out readily from the grassy backgrounds. The rose pogonia normally has a very deep pink colour with a deeply fringed margin with yellow beard.

Calapogon tuberosus: Photo by Kelvin Taylor

The only other orchid we found here was *Spiranthes praecox* that has green veining on the labellum that we found by the road-side. One of the common names is 'giant ladies' tresses' but only one of these orchids fitted that description. There are many other orchid species found here and we were pointed out some old stems from last years orchids by Chuck Sheviak of *Plantanthera integra, Plantanthera nivea,* and *Plantanthe ciliaris.* Other orchids found here in other months of the year are *P.blephariglottis, P. clavellata, P. cristata, P. lacera, Calopogon barbatus, Corallorhiza odontorhiza, C. wisteriana, Epidendrum conopsea* (the only epiphytic orchid found outside of Florida in the USA), *Listera australis, Malaxis spicata, Malaxis unifolia, Pteroglossaspis ecristata, Ponthieva racemosa, Spiranthes cernua, S.laceravar. gracilis, S. Lacera var lacera, S. longilabris, S. ovalis, S. odorata, S. tuberosa,* and *S.vernalis*

Later we visited two smaller sites before heading to Boone in the Appalachian Mountains, a six hour drive. It seemed strange that the conference was held in central North Carolina that made in necessary for us to drive south for four hours and then north for further six, but I assume that was the only possible venue at the time of booking. The next day we went to several sites in the mountains which were just off the Blue Ridge Parkway, a road which seems to have been built just purely for pleasure and runs right through the Appalachian mountains for over 400 miles.

Here we met the organisers for a trip to look at the mountain orchids that were in bloom at this time of the year. The main quest was to find *Isotria verticillata* (large whorled pogonia) that we found on the Tanawha trail. There were several plants but

unfortunately all the plants were blind (sterile). *Isotria medeoloides* known as the lesser whorled pogonia has been found in the area but is so rare that it is on the endangered list. It is well named as both species when not in bloom look remarkably like Indian cucumber root *(Meleola virginiana)* and the lesser whorled pogonia had adopted the latin inscription. However we did find *Cypripedium acaule* that has many common names such as pink ladies'slipper and stemless ladies'slipper. Both common names describe the orchid quite well and we were pleased to find some. This orchid is very common in the Appalachians and can be found as far north as Canada. Apparently the Isotrias are often found accompanied by this orchid but not unfortunately vice versa.

We then persuaded our leader to take us to another site where eventually we did find some more plants, most of them blind, but here there were a few that had flowered and were now in fruit. Although our luck had not held out for the Isotrias we did however find on the trail in bloom *Aplectrum hyemale* often known as puttyroot. We were expecting to find this orchid but for some reason it had evaded our eyes. This is a well-camouflaged orchid in the colours of yellow and green and blends in quite well in the woodland setting. This orchid often puts up a single leaf in winter which can be seen easier in the snow than when the orchid is in full bloom. We saw two orchids in bud — *Platanthera ciliaris* and *Plantanthera orbiculata*, the latter which has two great big pad like basal leaves, which were so large I wouldn't be surprised if the species would come under the heading of variation '*macrophylla,'* but a further check on the spur would help when in flower. Other orchids seen in the area either in leaf or rosette form were *Galearis spectabilis, Goodyera pubesens, and Tipularia discolor.*

This was the last day of the conference, so we said goodbye to all our friends and went on to two further sites that were recommended. The first site by Sims lake was for *Listera smallii*, an endemic orchid of the Appalachian's. We were lucky to find some in bud as they were so small, although we had read that they like growing in wet areas beside or under rhododendron and Kalmia bushes, which proved correct. *Rhododendrom catawbiense, R. maximum* and *Kalmia latifolia* were reasonably common in this area and the latter being one of my favourite plants. Linville falls was our next stop so apart from admiring the waterfalls we did find *C. acuale* in bloom. *G. spectabilis* in leaf form, *Aplectrum* in fruit, the ubiquitous *Goodyera pubesens* together with *Goodyera repens var.ophioides* in rosette form. The latter orchid being similar to our own in many ways except its basal leaves have a startling tesselated design.

The next day we had arranged to meet up with a friend who was off to Tennessee. The main purpose for visiting Tennessee was to see *Cypripedium kentuckiense* which is better known to the local botanists as the Southern Ladies' slipper orchid as it grows is most of the southern states and not just Kentucky. We were very fortunate and visited a site near Huntsville where we only saw two flowering plants. We were told

that this used to be the best site in the state and that there did not seem to be any reason why the site had taken a downward path. At least we did see two wonderful plants that appear bigger than any other *Cypripediums* in the USA. They are very similar to *C.parviflorum var. pubesens* and apart from the size the colour was a very pale yellow. The following day we visited another site near Manchester which had taken a turn for the best where we saw at least thirty flowering plants apparently a large increase from when they were last seen at this site. We could see the site had been well looked after as there was protection in some areas from deer and other varmints! Later there were other plant sites to see so we saw a local prairie – rare in Tennessee - and saw *Irises* and *pentstemons* as well as seeing a wet area full of *Pogonia ophioglossoides*. In these areas *Platanthera nivea, Platanthera lacera, Cliestes bifaria,* and *Listera australis* had been recorded.

As we were in the middle of Tennessee we decided to do our tourism bit so we travelled all the way to Memphis to see Gracelands (Elvis) and the mighty Mississippi.. After touring that area we headed back through Nashville and attended a Country & Western concert at the Grand Old Opry, a live radio show. Back to the Appalachian mountains and a quick visit to Vanderbilts house near Ashville, a house structured like the chateaux on the Loire valley in France with many art treasures from the old world. We decided to head for the coast and on the way we stopped at Eno River State Park where we had been informed that there was *Liparis lilifolia*, known as the lily leafed twayblade in bloom. It didn't take too much searching before we stumbled on one plant by a bridge together with some rising *G. pubesens*. We were very pleased as we had never seen this orchid before which is also related to our *Liparis loeselii* which also grows in the USA. The Americans call these type of orchids twayblades unlike ourselves who relate twayblades with the *Listera* genus. The plant is far prettier than the dour fen orchid as it is a mauve colour that highlights the dull scenery in the vicinity. Further into the park we later found *Cypripedium parviflora var. pubesens* that is similar to our *C.calceolus* but with yellow tepals growing near the river but unfortunately for us they were well past their best.

It was now time to head for the beaches and do a little bird spotting so first of all we went to Wilmington and caught the ferry to Southport and eventually relaxed on the beach watching the brown pelicans and boat tailed grackles. We then decided to have one last look at the Green Swamp and were pleased that we had much better weather as previously we were trekking around in a drizzle but at least that kept the bugs at bay as mites and chiggers (whatever they are) abound in this type of environment. So although it was hot we did put on the necessary clothing. We had not realized that this reserve is for black bears, so as we were by ourselves we did not overstay our visit. We didn't find anything new and most of the other plants had gone over. It seems that the area was in a transition before the next lot of goodies.

We visited a few other parks but only found *Spiranthes vernalis* the spring ladies' tresses growing in most of the them and roadsides. This orchid reminds me of our own

Spiranthes spiralis but in a much larger form with occasional leaves,and sharp pointed hairs. Some of the coastal parks such as Huntington in South Carolina have good birding areas where we saw Indigo and painted buntings alongside the more common birds such as blue jays, northern cardinals, and bluebirds. We returned to the airport via the freeway from Charleston to Charlotte. The whole round trip came to 3,146 miles, but was well worthwhile.

Orchid Conservation.

Bill Temple

Saturday April 20th, bright and early, members of The Hardy Orchid Society and The Harwell Environment Group joined forces to move the White helleborines (Cephalanthera damasonium) from the corner, which a hotel is expected to occupy. In total about 700 plants were moved during the day, and although Eric (the official photographer) appeared with his camera, at both this site and the relocation site, inside the security fence, he could not be persuaded to start digging. For those who were able to stay until all the orchids had been planted, it was a long, tiring day, but worth it. The Fire brigade kindly watered the transplants twice so hopefully they will have a greater chance of survival in their new home than they did in their old home. The intention is to move all orchids threatened by this and other developments in due course, if possible.

The volunteers were given the opportunity to have a guided tour of some of BBOWT's nature reserves on May 11th in order to see some of the rarer native orchids. This was a sunny day so everyone enjoyed the field trip in which Military, Monkey, Lady, Fly, Bird's nest and Early purple orchids were seen in flower as well as huge numbers of Twayblades, some of which were in flower. At one time a group of six Red kites provided entertainment and the party also saw Dusky skipper, Holly blue, Brimstone and Peacock butterflies and a number of uncommon species of flower.

As of June 21st the White Helleborines seemed to be doing well in their new home beside an existing colony of White Helleborines.

I have received an e-mail from Peru offering escorted tours to see the orchids in the Peruvian jungle. The literature claims that the purpose of the tours is to create a fund for an orchid garden in the area to be visited and in the city of Lima for conservation, educational and recreational purposes. The prices quoted depend on the number of persons in the party abd range from $766 for > 14 persons to $1320 for > 4 persons and exclude flights to and from Lima. If anyone is interested I will forward the E mail.

Bill Temple.

HOS WEBSITE NEWS
Tony Hughes

The end of August this year saw a minor milestone passed as the "Hit Counter" on our website crept over the 20000 mark! That figure, coupled with the number of e-mails received from all over the globe by the HOS officers, confirm that a lot of people are extremely interested in what our little soicety gets up to.

The latest (September) update to the website contains a new section on British Orchid Hybrids. The idea is to include pictures of any hybrids that one might encounter in the British Isles - this may help people to identify oddities that don't match anything in the books. At the moment only four hybrids are illustrated, and that is where YOU come in. If you have any reasonably sharp pictures of hybrids between British species, I should love to include them. It would be nice if pictures were of native plants, but to get things going I am quite happy to include pictures taken elsewhere in Europe or even in your greenhouse, provided the hybride might have occurred here. It helps if you can be reasonably certain of the parentage - wild guesses only cause confusion !

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