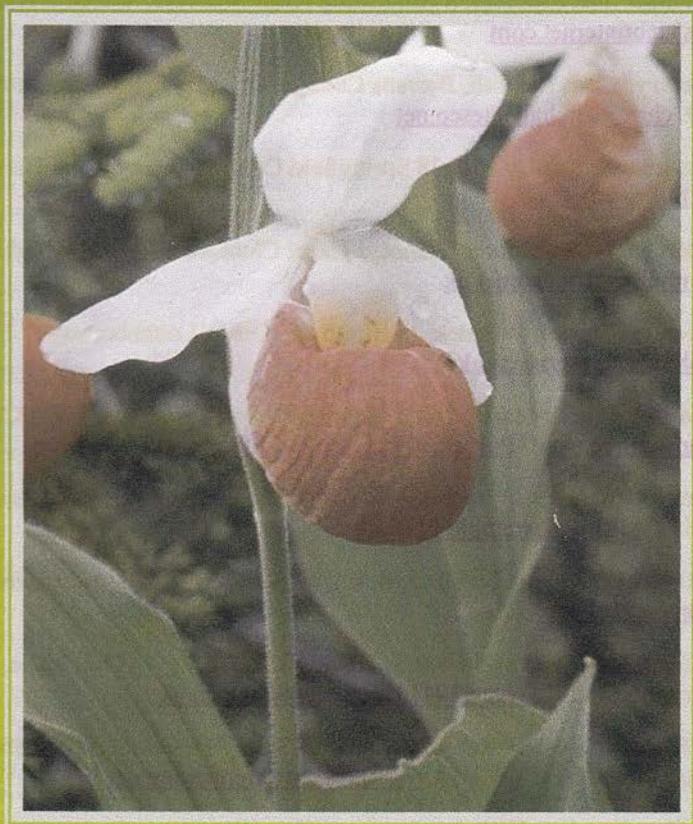


The Hardy Orchid Society Journal



No. 30

October 2003

The Hardy Orchid Society Committee is...

President: Prof Richard Bateman, Department of Botany, Natural History Museum, Cromwell Road, London SW7 5BD.

Chairman: Richard Manuel, Wye View Cottage, Leys Hill, Ross-on-Wye, Herefordshire HR9 5QU. richard@orchis.co.uk

Vice-Chairman: Tony Hughes, 8 Birchwood Road, Malvern, Worcs WR14 1LD. tonyhughes3@btinternet.com

Hon. Secretary: Chris Birchall, Barratts Cottage, Clyst Hydon, Cullompton, Devon EX15 2NQ. chris.s.birchall@tesco.net

Hon. Treasurer: Rosemary Hill, 38 Springfield Crescent, Harpenden, Hertfordshire AL5 4LH. hillros@aol.com

Membership Secretary: Maren Talbot, 4 Hazel Close, Marlow, Buckinghamshire SL7 3PW. mtalbot@onetel.net.uk

Show Secretary: Doreen Webster, 25 Highfields Drive, Loughborough LE11 3JS. dozzer@lobro24.freemove.co.uk

Journal Editor: Patrick Marks, 40 Lawmill Gardens, St. Andrews, Fife, KY16 8QS. pmarks@unisonfree.net or Patrick.Marks@smtp5.fife.gov.uk

Conservation Officer: Bill Temple, Primrose Cottage, Hanney Road, Steventon, Oxon, OX13 6AP. bill@wtemple.f9.co.uk

Publicity Officer: Jim Hill, 38 Springfield Crescent, Harpenden, Hertfordshire, AL5 4LH. hilljames@aol.com

Ordinary Member (Seed and Fungus Bank): Ted Weeks, 74 Over Lane, Almondsbury, Bristol, BS32 4BT. Wecw3941@netscapeonline.co.uk

Ordinary Member (Newsletter Distribution): Barry Tattersall, 262 Staines Road, Twickenham, Middlesex, TW2 5AR. orchis@tatty.screaming.net

Ordinary Member: Eric Webster: details as Show Secretary.

Cover Picture: *Cypripedium reginae*, Photo: Patrick Marks

Contents

Editorial.....	4
Apologies	5
The HOS Wisley Meeting—Saturday 22nd November 2003	5
HOS Photographic Competition 2003	6
Wild Orchids of Scotland—Report of a Talk by Brian Allan	7
Some Problematic Spanish Orchids—Report of a Talk by Mike Lowe	8
Cultivation of Mediterranean Orchids—Report of a Talk by Richard Manuel	10
Orchid Hunting in Nova Scotia and Newfoundland in 2002.....	12
The 2nd American Native Orchid Conference & the Bruce Peninsula—6/20 June 2003.....	16
Some Home-made Ophrys Hybrids.....	21
HOS Website News.....	24
Diversity and Conservation of Georgian Orchids.....	26

Wild Orchids in the Southern Lot, S.W. France

Beautiful Quercynoise farmhouse B & B with swimming pool, in peaceful environment within Quercy Regional Park.

Over 20 species of orchids abundant locally between April and July.
Details of self-led walks around the Lot, Célé and Aveyron river valleys available. Close to the region's tourist attractions including St-Cirq-Lapopie, Pech Merle cave and Cahors.

Packed lunches and evening meals by reservation.

Sheila & Gary Tucknott
Mas de Guerre
46260 Beauregard
France

Tel: 0033 5 65 24 32 86

Email: masdeguerre@freesurf.fr

Web: <http://www.masdeguerre.com>

Editorial

Patrick Marks

Welcome to the new style HOS Journal. This is still at an experimental stage so feedback will be most welcome from members to help me, the HOS committee and our publisher to know if we are getting a new style which most and hopefully all members will welcome. We plan to increase colour content, as it seems a shame to have an interest in such beautiful plants as orchids, and not be able to illustrate them properly.

Contributions are welcome, as we can only publish a better quality journal if we have suitable content. Members' suggestions as to what they would like to see included in the journal are also welcome. The Journal is only as much as we the members make it!

The Wisley meeting, about which you will find details in the Journal, is later than usual, due to a lack of availability of the venue at an earlier date. Hopefully we will not have the same wild weather conditions as last year. Please book as soon as you can, particularly if you require lunch as it may not be possible to guarantee lunch if you book later than the deadline.

The Photographic Competition saw increasing quality of entries last year, but I'm sure that there must be more members out there who have excellent photographic skills and haven't entered. Please consider entering, as it is in my opinion a delight and a learning experience to view the wide range of prints/slides entered. If you have a winning entry it will be published in the Journal and on the Society website.

A member has requested that we try to make more use of the common name of orchid species as the Latin name doesn't always mean much to him. If an orchid has an agreed English language common name, I am happy to ensure that articles mention that name, but as there can be a bit of inconsistency with the common names of some species, the Latin name is essential, though classification changes can cause confusion as well!

Not all talks given at the Harlow Carr meeting may be reported in this issue for space reasons, but hopefully any not reported will appear in some form in the next issue. John Haggart's talk, which I've not detailed in this issue, was similar to his talk given at Wisley last year. John asked to mention that the only new thing relates to treatment of *Dactylorhizas* grown outside. John says that Dacts grown in pots outside should be planted deeply in large pots, plunged and given some protection from the worst of the winter rains.

Jim Hill, who gave a talk on Australian terrestrial orchids at Harlow Carr, has sent an account of these plants which I hope to use in the next issue.

Apologies

The more discerning readers may have noticed a slight cock-up in the last edition of the Newsletter - in fact more of a minor disaster than a mere cock-up! Due to the convergence of various unfavourable circumstances – a misunderstanding with the printers over proofs, trying to do things in a hurry, holidays, and probably short staffing at the printers - the quality of the colour pictures did not come up to scratch; in fact it was appalling.

Looking to the future, we are always aiming to improve our Newsletter. This current edition has been printed elsewhere, and we hope that the quality of the printing and the layout show a marked improvement. From now on the number of colour pictures will be increased, and colour will feature in every issue.

But, we will not ignore any constructive criticisms or suggestions and, of course, we will be delighted to receive any offering in the way of a letter, note, or article for inclusion in the new Journal (as it will become).

Richard Manuel (Chairman) on behalf of the committee.

The Hardy Orchid Society Wisley Meeting

Saturday 22nd November 2003

Provisional Timetable – all times subject to change.

- 08:30 Set Up Trade and Members' Plant Sales Tables
- 09:30 Tea/Coffee. Sales Tables
- 10:30 Meeting opens. Chairman's Introduction
- 10:35 Simon Andrew: 'Six July Days in Newfoundland':
An Introduction to the North American Orchid Flora.
- 11:30 Short break (15 minutes)
- 11.45 Prof. Richard Bateman: 'Burnt Tips and Bumbling Bees'
- 13:00 Lunch
- 14:15 Robert Rolfe: 'The 2003 HOS Photographic Competition'
- 14:45 Short break (15 minutes)
- 15:00 Tony Hughes: 'Following Footsteps in the Vercors'
- 16:00 Any Other Business, followed by Tea and Biscuits
- 17:00 Meeting Ends / Garden Closes

A booking form is enclosed. Please send your booking and cheque to:

Maren Talbot, Membership Secretary, by 12th November 2003.

HOS Photographic Competition 2003

Doreen Webster

The HOS 2003 Photographic Competition will be held during the HOS Autumn Meeting at Wisley on Sunday 22nd November. The winning entries will appear on the web site and some may be published in colour in the HOS Journal.

Please enter as many photographs as possible in order to maintain the excellent standard set last year. Advanced 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. To do this, telephone Doreen on 0771 340 97 43 or email 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 35 mm slides, each entrant is restricted to only one slide per class, but for the eight classes for prints, competitors may enter up to three prints per class. These prints may be produced photographically or by computer printing. Two print classes have been added following recognition of the need after last year's competition when some photographs didn't quite fit the single plant category! Do please remember that photographs must be ones you have never shown in the HOS Competition before.

Please remember to put your name on the back of each print and slide, and correctly spot the slide as per the rules. This makes the show secretary's job much easier and prevents any material going astray. 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, always appreciated by members.

CLASSES

1. An orchidaceous landscape, print size up to 7x5 inches.
2. A group of orchids, print size up to 7 x 5 inches.
3. A single orchid plant, print size up to 7x5 inches (see Rule j).
4. A close-up, print size up to 7x5 inches (see Rule i).
5. An orchidaceous landscape, print size up to A4.
6. A group of orchids, print size up to A4.
7. A single plant, print size up to A4 (see Rule j).
8. A close-up, print size up to A4 (see Rule i).
9. An orchidaceous landscape, 35mm colour slide.
10. A group of orchids, 35mm colour slide.
11. A single orchid plant, 35mm colour slide (see Rule j).
12. 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 09.45am 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** for each of classes 1 to 8, but may receive only **one award** per class.
- f. You may enter only **one slide** in each of classes 9 to 12.
- g. Pictures entered previously in HOS competitions are **not** permitted (Please refer to the notes).
- h. Prints should have a **small note with them of what each plant is** and any information of interest to other members, but your name must appear only on the reverse side of the print.
- i. When a class states '**close-up**', the photograph should include only 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, which may be multi-stemmed.
- 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.

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

Wild Orchids of Scotland

Report of a talk by Brian Allan

Brian Allan, co-author of the Wild Orchids of Scotland, spoke about wild orchids around Scotland to a packed meeting at Harlow Carr, lacing his account with tales of the risks that could abound in trying to reach a site for a rare species or variety.

Brian based his talk on the types of orchids which could be found in different habitats. He demonstrated with his slides and anecdotes how areas like the machair of the Western Isles and the far north west of Scotland are rich, both with well known species such as *Listera ovata* (Common Twayblade) and *Orchis mascula* (Early Purple

Orchid) but also have their own specialities such as *Dactylorhiza fuchsii* ssp. *hebridensis* (Hebridean Spotted Orchid) and the rare *Dactylorhiza majalis* ssp. *ebudensis*. He also illustrated the interesting hybrids that can be found in the machair such as the *Dactylorhiza (Coeloglossum) viridis* x *Dactylorhiza fuchsii* ssp. *hebridensis* found in Lewis in 1991. This variety has turned up on a number of occasions since then. Even the less obviously orchid rich habitats of heather moorland were shown to have interesting possibilities, with Brian showing a slide of a rare intra generic hybrid between *Gymnadenia borealis* (Heath Fragrant orchid) x *Pseudorchis albida* (Small-white Orchid). The same site also produced a couple of *Gymnadenia borealis* x *Dactylorhiza maculata* hybrids.

Other Scottish rarities illustrated included the famous *Epipactis youngiana* (Young's Helleborine), now sadly discounted as a species in its own right, but viewed as a hybrid between *Epipactis helleborine* (Broad-leaved Helleborine) and *Epipactis leptochila* var *dunensis* (Dune Helleborine) and *Dactylorhiza traunsteineri* ssp. *lapponica* (Lapland Marsh Orchid). Mountain ledges and sea cliffs featured in Brian's quest for Scottish rarities, with *Dactylorhiza fuchsii* ssp. *okellyi*, an attractive scented variety of *Dactylorhiza fuchsii* known in Scotland from precipitous slopes in Argyllshire and *Epipactis atrorubens* (Dark-red Helleborine) on a mountain ledge in Perthshire where it sadly is mainly accessible to sheep or other fleet footed mountain grazers!

Not all Scottish orchids require mountaineering skills as Brian related, with many attractive sites often only a few steps from the car. Readers can find a more detailed article on Scottish orchids in Issue 26 of the HOS Newsletter. The only other major hazard for orchid lovers in Scotland are the dreaded midges! (The editor recommends investing in some form of head or upper body covering).

Some Problematic Spanish Orchids

Report of a talk by Mike Lowe

Mike Lowe, by profession an ecologist, discussed, with slides, the problems in relation to identifying a range of Spanish orchid species many of which have been 'discovered' in the past 20 years. Mike started with a discussion about various *Epipactis* species. He said that twenty years ago, Spain only had four 'species', but since then this has more than doubled, due to botanists, professional and amateur, exploring the Spanish mountains and plains at varying times of spring and summer and making the discoveries discussed. Mike cited *E. tremolsii*, a species widespread in Spain, which has been characterised by its compact basal leaf formation and preference for a dry habitat, though it can vary in flower colour to the extent that it can resemble *E. atrorubens*. *E. lusitanica* another species found further south, particularly in Portugal, with a thinner, leaner look and well spaced leaves has recently, following studies, been relegated to sub-specific status of *Epipactis tremolsii*. This 'species' prefers acidic soils, though most 'species', as Mike went on to show, prefer calcareous areas.

Epipactis kleinii, distributed from the Sierra Nevada to the Pyrenees, has been re-named from the illegitimate name *E. parviflora*. He mentioned several species which had been 'discovered' in recent years such as *Epipactis bugacensis*, a species from poplar groves with pale flowers, also *Epipactis cardina* which prefers exposed xeric conditions on limestone and flowers later than other species found in similar habitats and *Epipactis distans*, which Mike has found in mountains in central Spain, at high altitude, on limestone in pine woodland. The debate about the various *Epipactis* 'species' will no doubt continue for a long time.

Mike briefly reflected on *Platanthera algeriensis* which it has been decided actually replaces *Platanthera chlorantha* in much of Spain, contrary to older literature. He also touched on the Orchis genus, mentioning *Orchis tenera* found in the Sierra Cazorla mountains, another species resembling the likes of *Orchis mascula*. Mike said that there is some variation in this 'species' in different mountain areas, so what does this imply for taxonomists?

Ophrys species constituted the remainder of his talk, with a concentration on the *Ophrys fusca* complex. This has also been the subject of various studies which have tried to define different species from characteristics which could in some cases be due to environmental factors. Pollinators are part of the ongoing debate, with a belief that some forms of *Ophrys fusca* may depend upon specific pollinators. Mike gave examples of possible pollinators, with *Ophrys fusca* at its type locality near Lisbon having *Colletes cunicularius*, a Hymenopteran bee, as its pollinator whereas the related *Ophrys lupercalis* in northern Spain had a different pollinator, *Andrena nigroaenea*.

Mike tried to explain the more important ways of distinguishing the different forms of *fusca* and pointed out less reliable techniques such as going by the variation in the speculum. Mike said that he used a technique called biometrics to study populations and showed some overhead graphs depicting the result of his work with *Ophrys fusca*. He said that in his view, labellum width versus length is quite a good indication of taxonomic status in the *Ophrys fusca* complex. He also commented that there was often a tendency to view more robust plants as possibly being different, but said that as *Ophrys fusca* and other *Ophrys* species could be defined as edge plants which thrived on disturbed soil and were quite short-lived, the more robust plants were almost certainly specimens which had survived longer and had been able to develop bigger tubers to produce bigger plants. These large plants Mike felt broke the usual rule of 'weed' status and were atypical of the species, which thrived in marginal, disturbed habitats. Mike said that various factors could be used as measurements in biometrics but that this technique of analysis should be used with great caution.

Mike finished his talk with some mention of his work in the UK in helping to create new habitats from former wasteland and how he obtained suitable seed, which was then broadcast on these regenerated areas. He commented that orchids were well suited to establishing themselves in such areas whereas in established habitats did not do well if there had been no orchids previously present.

Cultivation of Mediterranean Orchids

Report of a talk given by Richard Manuel at Harlow Carr

Richard began his talk by trying to define what constitutes a typical Mediterranean orchid, illustrating his comments with slides of several species from a range of genera such as *Himantoglossum*, *Anacamptis*, *Orchis*, *Ophrys* and *Serapias*. He added that he would only be considering tuberous forms in his talk.

He described how tuberous species start their growth in the autumn, with the actual timing depending upon where they live, what species they are and what the weather is like during the year. Richard illustrated his point with a slide of a bee orchid in rosette in mid-winter. He said that as leaf rosettes form fairly quickly, plenty of water is desirable at that stage, so in the wild a drought will have a detrimental effect upon growth. Up until the onset of cold weather Richard recommended regular watering. Then, as in the wild the cold will affect the rate of growth, and less water is required. During the cold months the tubers start to form, earlier in *Ophrys*, later in *Anacamptis* and *Serapias*. Flower spikes will begin to form in the centre of the rosette, as early as January in some *Ophrys* species for plants that will flower in March or April, or February for species like *Anacamptis* which flower a month later. Richard illustrated various aspects of growth with slides.

When the orchids begin to flower, Richard waters according to the state of the leaves. He said that if leaves start to go over during flowering he gives little if any water, whereas if they remain green and healthy he waters as normal. Once flowering is over and the leaves start to go yellow and wither, watering should stop even for plants carrying a seed capsule. As in the hot, dry Mediterranean summers when little rain falls to moisten buried tubers, in cultivation no more water is required until re-growth starts in autumn.

Richard finished his talk with pictures of the greenhouse in which he grows his plants, telling the audience that good ventilation is essential. If a greenhouse is not available a cold frame is an alternative, and plants can be left outside in fair weather or on a window sill in a cool room or porch. He also briefly touched on the compost mix he uses for his plants.

Orchid Hunting in Nova Scotia and Newfoundland in 2002

Patrick Marks

In July 2002 I flew with my wife and two children to Eastern Canada for a three and a half week trip. The first half of this trip was centred in Nova Scotia and Newfoundland. Before the trip I had asked for help with orchid sites from members of an online group of orchid enthusiasts to which quite a few of our society members belong. I received great help from society member Roger Gelder who suggested I contact Carl

Munden (author of *Orchids of Nova Scotia*) and Heather Drope (Wildflower Society of Nova Scotia). I also had contact with Stan Bentley from North Carolina, who is very knowledgeable about Newfoundland, and with whose detailed notes I was able to pinpoint orchid sites with almost GPS accuracy. I also had help from a Newfoundland enthusiast Todd Boland who gave me some locations on the route from Port aux Basques to Gros Morne, and further north.

My search for orchids had to be constrained by the demands of family. While my wife and children were quite happy to humour my interest and even assist in my search, they were not prepared to spend all their holiday following me across bogs!

Our trip started as I mentioned earlier in Nova Scotia. Carl Munden's book is a useful guide to the range of local species, the areas in which they might be located and the time of flowering, however I could not have started off my holiday quite as successfully without personal help from Carl and Heather. Carl kindly met us at the airport and suggested that we should set up camp at Smiley's Regional Park, a site for *Cypripedium reginae* (Showy Ladies Slipper). We had a brief look at the *Cypripedium reginae* site in the park before heading off to three other sites.



Calapogon tuberosus (Grass Pink),
Nova Scotia, Photo: Patrick Marks

The first site was a woodland area with public access, which had several late flowering *Cypripedium acaule* (Pink Slipper Orchid or Moccasin Flower), including one white specimen. This species has quite a large flower in proportion to its size. Heather Drope arrived as we were inspecting the site, and accompanied us to the next site, a bog area with *Arethusa bulbosa*

(Dragon's-mouth Orchid) and *Calapogon tuberosus* (Grass Pink). These bog orchids were quite different from anything I'd seen before. *Arethusa* has an almost iridescent pinkish sheen, though it can vary from white to a deep red. It is a diminutive plant with only one flower, which has a decidedly exotic appearance. Carl's book mentions that pollination is infrequent, perhaps explaining to some extent a variability in numbers from year to year in one site. *Calapogon tuberosus* is also very distinctive with its lip facing upwards, giving an unusual appearance with the column of pollinia prominent at the top of the flower as one looks at it. The pollination method is also unusual, and can be found described in any book on American Orchids. The final site was in dense coniferous woodland where Carl and Heather had hoped to show me *Corallorhiza maculata* (Spotted Coralroot) in flower. Unfortunately the flowers had



Cyripedium reginae, (Showy Lady's Slipper),
Gros Morne National Park, Photo: Patrick Marks

gone over so we had to make do with plants in the process of developing seed heads. I had previously seen this species near Yellowstone National Park, so was not too disappointed!

The following morning before heading north, I took the family to look at the *Cyripedium reginae* site. I don't think that even the most non-botanical person could fail to be impressed by these beautiful pink and white blooms, all the more impressive for the plants' large size (up to 90 cm) and habit of forming some very large clumps thus giving a stunning display of colour. This species is not all that common in Nova Scotia with only two sites in the main area of the province and several sites in Cape Breton. The plants need wet conditions with a gypsum substrate according to Carl's book. I can see why the species is so desirable and has been affected by collecting. Historically this was one of the first orchid species listed in the USA, and as a result it suffered from the desire to grow it in gardens, where it usually failed due to ignorance about its growing requirements.

With a tight itinerary we were unable to explore southern Nova Scotia as I would have liked, and the following day headed for a whistle stop tour of Cape Breton, which has a strong Gaelic connection and culture. We camped at Cheticamp just south of the Cape Breton Highlands National Park. In the time of our visit, the best site was an area known simply as The Bog a few miles north of Cheticamp. This site is open to public visiting with boardwalks to protect the fragile vegetation. Here I

found *Arethusa bulbosa* and *Calopogon tuberosus* as well as *Platanthera blephariglottis* (White Fringed Orchid) not in flower and *Platanthera dilatata* (Tall White Bog Orchid) just beginning to flower among the ubiquitous *Sarracenia purpurea* (Pitcher plant). Just across the road from this site, I chanced upon another open bog area with a scattering of *Arethusa bulbosa* looking quite photogenic, including a group by a large Pitcher plant! Photographing these plants without a boardwalk proved a wet process! A drive further around to the north of the park saw us stop for a walk at an area called Macintosh Brook, noted for a waterfall at the end of a marked trail. A quick recce turned up *Corallorhiza trifida* (Early Coral Root) setting seed and a *Platanthera* in bud, but sadly nothing I could see in flower.

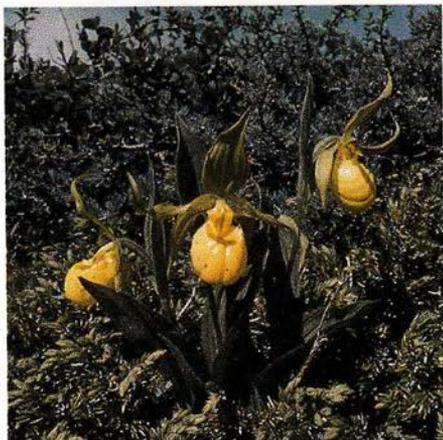
Our weekend touring round Cape Breton didn't allow me to do justice to the orchid potential about which I'd heard a lot from fellow HOS member Roger Gelder, however, Newfoundland, our destination for the coming week, promised a feast of orchids, unless I was very unlucky. We took an early morning ferry from North Sydney to Port aux Basques on the south west side of Newfoundland and were driving north by lunch time in pouring rain. Apart from toilet and lunch stops we didn't halt until we reached our initial camping area in the beautiful Gros Morne National Park, which is about half way up the west coast of Newfoundland. The Scottish influence was still apparent as we camped in Lomond Campsite in the southern end of the park. Our choice of Lomond proved an excellent one as it was close to lots of orchid sites, and even the campsite could boast a beautiful damp sloping meadow with *Cypripedium reginae* and *Platanthera dilatata* literally a hundred yards from our tent.



Platanthera dilatata
(White Bog Orchid), Gros Morne
National Park, Photo: Patrick Marks

The next couple of days consisted of following up sites for which I'd been sent details, and general exploration to see what we could find in areas that looked interesting. The first morning at Lomond I was up early and checked out a site by the park entrance, which proved successful for *Cypripedium reginae* in some impressive clumps as well as *Platanthera dilatata* nicely in flower. A site called the Lomond trail was also on my list. An initial exploration proved successful, and I did manage to see more *Cypripedium reginae* and various *Platantheras* in the early stages of flowering – *Platanthera dilatata* and *P. orbiculata* (Pad leafed Orchid).

In the late morning we headed up to an area called the Tablelands, a bleak looking area, which is very interesting geologically as it consists of rock from the earth's mantle. Very little vegetation is able to grow on the rock due to high iron and magnesium content, but in areas closer to the road small pockets of vegetation revealed *Cypripedium parviflorum* var. *pubescens* (Large Yellow Lady's slipper) in reasonable condition, along with more *Platanthera dilatata* and *P. hyperborea* (Tall Northern



Cypripedium parviflorum var. *pubescens*, Burnt Cape, Newfoundland,
Photo: Patrick Marks

Green Orchid). I finished the day with another walk on the Lomond Trail, taking a different route where I saw some more clear cut forms of *Cypripedium parviflorum* var. *parviflorum* (Small Yellow Lady's Slipper), which is said to be noted for its dark red petals that do appear more twisted than the other variety. Further specimens of *Platanthera orbiculata* beginning to flower added to the day's tally, along with a nice flowering specimen of *Corallorhiza maculata*. The roadside ditch above the Lomond Trail also proved productive for *Cypripedium reginae* and *Platanthera dilatata*.

Leaf Rein Orchid), which is distinctive with its one large basal leaf. *Arethusa bulbosa* turned up on one walk, as did a few more *Cypripedium parviflorum* var. *parviflorum*. Later at a site near a stream known as Baker's Brook I located high above the main road another good site for *Arethusa bulbosa*, *Platanthera hyperborea* and *P. dilatata*, though it did require a fair scramble through wet, boggy forest! *Platanthera hyperborea* is harder to find with its green flowers, but the scent is quite strong and pleasant.

The following day we explored several trails in the park and followed up other leads finding more *Platanthera dilatata*, *P. orbiculata* and some *P. obtusata* (Blunt

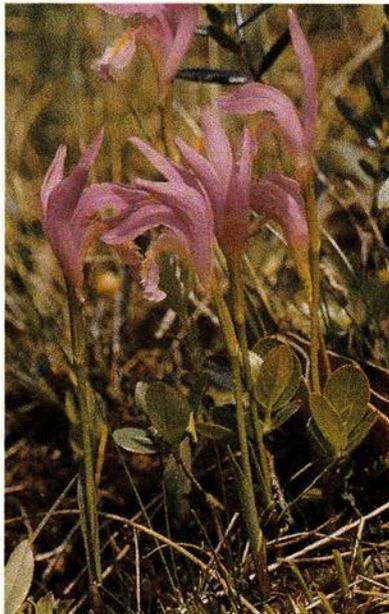
We headed north on our third day to the Burnt Cape area, a wind swept limestone peninsula or headland at the tip of the Great Northern Peninsula, close to the small pretty settlement of Raleigh, and not far from Vinlandia where the Vikings briefly settled a thousand years ago. En route we stopped at a couple of sites, the Arches a limestone coastal feature and Port aux Choix, noted as an archaeological site for early Eskimo settlement. At Port au Choix *Cypripedium parviflorum* var. *pubescens* was easily located, but poor weather prevented further exploration. It was often as successful to keep an eye on the roadside habitat, as orchid sites were quite frequent on the limestone karst scenery with thousands of *Cypripedium parviflorum* var. *pubescens* dominating the orchid flora, followed by diminutive forms of *Platanthera dila-*

tata and *P. hyperborea*, stunted by the elements and thin soil.

We eventually arrived at a Provincial Park campsite near Raleigh and spent the following couple of days exploring part of Burnt Cape Ecological Reserve, also heading further west to a couple of other possible locations such as Pointe Riche, another bleak, windswept limestone area. Burnt Cape deserves a week in itself to do it justice. It is not very large, some 800 plus acres, four kilometres long, one kilometre wide and less than one hundred metres altitude, but it holds an immense richness of orchids.

Two species familiar to HOS members were present and in flower, namely *Pseudorchis albida* (Small White Orchid) and *Dactylorhiza* (*Coeloglossum viride*) *viridis* (Frog orchid). The former is a rare species in North America with one theory claiming that it could have been introduced by Viking attempts at settlement. *Dactylorhiza viridis* is found across Canada and seems little different from the plant we know from Britain. Other species included *Amerorchis rotundifolia* (Small round-leafed orchid) which I first saw growing in a swamp north of Yellowstone now growing through the dwarf forest known as Tuckamore, *Calypso bulbosa* (the eastern form) growing almost on the beach hiding under more low shrubby growth and numerous *Cypripedium parviflorum* var. *pubescens* which literally glowed like beacons in this barren habitat. *Platanthera hyperborea* added to the list of species found in the reserve, but I missed a few including *Listera cordata* (Lesser Twayblade).

It isn't often that the sight of icebergs close to the coast accompanies a search for orchids, and indeed we saw numerous icebergs run aground in the bays around this area. The reserve is accessible by four-wheel drive vehicles with a rough track as far as the northern end where we found *Cypripedium parviflorum* and *Amerorchis rotundifolia* on the fringes of a makeshift car park. Most of my time was spent at the southern end where I located the bulk of species within a hundred yards of the track, either growing in small cracks in the limestone or in small depressions where soil had accumulated enough to provide low ground cover. I had been given a site in this southern area for *Calypso bulbosa* but was unable to locate it, though I eventually found it at a second site the following day along the beach on the eastern side of Burnt Cape.



Arethusa bulbosa (Dragon's Mouth)
Cape Breton, Photo: Patrick Marks

It is worth visiting the office for the reserve in Raleigh from where the wardens run guided tours or are happy to give advice. The reserve was presented to the people of Canada in June 2002 by the Nature Conservancy of Canada and is one of Newfoundland's most special botanical sites with its mix of orchids and arctic/alpine plants including a species unique to the reserve, *Potentilla usticapensis* (Burnt Cape Cinquefoil).

We headed south all too soon to spend a night at Gros Morne before driving the second half of the journey to Port aux Basques. A stop at Table Point Ecological Preserve on the road south of Port aux Choix was on our list. This preserve apart from cypripediums and the commoner *Platanthera* species also boasted *Platanthera hookeri* (Hooker's Orchid) a rarity in Newfoundland. A very precise description of the location saved a potentially difficult search for this green flowered orchid! An early start the following morning gave me a final opportunity to search the area around the Lomond Trail, adding no new species but having a final opportunity to admire the *Cypripedium reginae* and *Platanthera dilatata*.

Our drive down the Highway from Gros Morne gave us a better view of the area than we'd had a week previously. I had some details of possible sites en route, particularly near an area called Stephenville a couple of hours south of Gros Morne. This area had been mentioned in a little book on Newfoundland flowers, which I'd purchased in Nova Scotia.

A few kilometres north of the junction for Stephenville I spotted a bog on the right side of the highway which looked interesting and decided to stop and explore it. My hunch turned out to be a good one as I was soon coming across both colour forms of *Sarracenia*, lots of *Arethusa*, and to my delight several *Platanthera blephariglottis* (White Fringed Orchid) just coming nicely into flower. This orchid has a decidedly ragged appearance to the sepals, hence its name. After an hour of exploring the bog and photographing the plants, I was forced by family demands to continue heading south. We did not have time to visit Stephenville but believe it is worth a stop. A further site north of Port aux Basques added *Platanthera grandiflora* (Large Purple Fringed Orchid) – but only one plant, fortunately in prime condition with the distinctive ragged fringe to the sepals. Finally, west of Port aux Basques near the village of Margaree I had read that some productive bogs existed, but it appeared to be a late season as I only saw *Arethusa bulbosa* and some *Platanthera dilatata*. I can recommend the café in Margaree, which serves superb fish and chips! The area according to the literature is worth a longer visit.

As areas to visit, I can thoroughly recommend both Nova Scotia and Newfoundland, with the latter having a later season for many species of orchids if a visit isn't possible before July. More information can also be gleaned about Newfoundland's plants from a superb website run by the Provincial Museum of Newfoundland (www.nfmuseum.com), which hosts a digital database of the island's plants. Many of the photos of orchids taken digitally are superb!

References:

Munden, C. 2001. *Native Orchids of Nova Scotia: A Field Guide*. University College of Breton Press Inc.

Titford, Bill & June. 1995. *A Traveller's Guide to Wild Flowers of Newfoundland*. Flora Frames, St. Johns, Newfoundland.

**The 2nd American Native Orchid Conference
and the Bruce Peninsula
6 - 20 June 2003
Mike Parsons**

This year the second North American Native Orchid Conference was held at McMaster University in Hamilton, Ontario. Last year's conference in North Carolina had been such a success (see my article in HOS No 26) that I could not wait to go, so my wife Carol and I prepared for the conference and its three days of field trips on the Bruce Peninsula. This is an area of outstanding natural beauty on a limestone pavement that is part of the Niagara escarpment (Alvar). With 43 species of orchid documented, it is probably the richest North American area for orchids outside Florida. I normally stay for a period after the event to make the most of a long journey, but this year I had to leave immediately after the field trips as my daughter was expecting a baby.



Amerorchis rotundifolia,
Photo: Dave McAdoo

We are very lucky to have relatives in Toronto, so we had a base and a place to sleep before the conference. We arranged to travel to Canada early to see some of the earlier orchids that do not occur on the Bruce. First we went to pick up my rental vehicle, only to find out that the company had not paid their bills so we had to negotiate a new contract. At least they felt sorry for us and upgraded our vehicle at no extra cost, which proved useful on the field trips as we could take up to seven people. Our first trip was across the border into New York state in the USA, mainly to look for *Cypripedium candidum* (Small White Lady's Slipper) at Bergen Swamp and Danville.

At the customs entry point we had the difficult task of explaining to the customs officer that we had come all this way to see a plant without showing

some form of address in the States (I should have said we were just on a shopping spree), but eventually he let us go when we said we were on their side. We eventually found the two sites for the orchids at Bergen Swamp and Danville only to find that they had gone over. The only consolation was a lone *Cypripedium pubescens* in full bloom in the swamp.

On our return I contacted my friend Clint from the First Nation Bkejwanong (Ojibwe) Indian tribe, only to find that their sizable population of *C. candidum* had also gone over, so I then set my sights on *Amerorchis rotundifolia* forma *lineata*. It is a sort of lined or blotchy orchid known as the Lined Round-Leaved Orchid. We had to get up early for this one as we had to travel across Toronto before the rush hour, so we arrived quite early at a village called Ompah. We had a little trouble finding the site so we called on a local botanist, only for an Alsatian to chase us back to the car. We didn't quite make it and the dog caught us up and licked us both to death!



Platanthera blephariglottis,
Photo: Patrick Marks

On knocking at the house, Gib the botanist informed me that it was he who discovered this variation many years ago and had written an article on it in *The Canadian Field Naturalist* – I think it was dated about 1961. ‘Did I want to see it?’ he asked - silly question - so he got permission from the owners and we went to the cedar forest. We only managed to find the ordinary type of orchid that had just come into bloom, very similar to a European Orchis and found mainly in boreal situations. It was a reasonable consolation, along with hundreds of *Cypripedium reginae* (Showy Lady’s-Slipper) at least two weeks off from blooming. We later heard that some members found forma *lineata* after the conference. On the way back we visited Purdon Conservation Area at McDonald’s Corners - another good place

for *C. reginae* where over 16,000 plants bloom every year.

So on to the conference on the 14th June where we met some of our old friends from two previous meetings. We also met Simon Andrew and Graham Giles from the HOS who stayed with us for most of the field trips. The conference was well organised again, thanks mainly to David McAdoo (Chairman, and co-author of *Kentucky Orchidaceae*) and Mark Rose (Treasurer) who was absent for personal

reasons.

The speakers and their talks were:

Paul Catling (co-author of *Orchids of Ontario*): 'Exploring the Bruce & its Native Orchids'

Chuck Sheviak: 'The Good, the Bad and the Ugly - a User's Guide to Flora of North America'

Shirley Curtis: 'Orchids of New Hampshire, Maine & Vermont'

Susan Meades: 'Introduced Populations of *Dactylorhiza* in North America and Orchids of Newfoundland' (They looked very much like our own *D. praetermissa* var. '*junialis*' or '*pardalina*', although some of the leaves were very heavily spotted.)

Lee & Barb Drake: 'Management Issues Related to Providing Ecotype that will Continue to Support Native Orchids and their Habitats at Zurich Bog'

Mona Rynerston: 'Conservation and Management Issues for Bergen Swamp's Rare Ecotypes and its Native Orchids'

Carl Slaughter (author of *Wild Orchids of Arkansas*): 'A Potpourri of Pulchritude' (whatever that means!)

Fred Case (author of *Orchids of the Western Great Lakes Region*): 'North American Terrestrial Orchids - Adaptations, Plant Distribution and Conservation Issues'

Ron Coleman (author of *The Wild Orchids of Arizona and New Mexico & The Wild Orchids of California*): 'The Wild Orchids of California'

Lorne Heshka: 'Pollination of the Western Prairie Fringed Orchid in the Tall Grass Prairie of Southeast Manitoba'

Simon Andrew: 'A European's Encounter with the Orchids of Newfoundland'

Hal Horwitz: 'In Praise of Native Orchids'

The meeting went on for two days; on the first day it ended at 9:30 in the evening and included a 'Photography Workshop' led by Ron Coleman, Shirley Curtis, and Hal Horwitz. We also had a report on the organisational status and future plans which revealed that the organisation will have a journal in the future, possibly based on our



Cypripedium arietinum,
Photo: Dave McAdoo

own journal, and that membership would start after the meeting. All applications for charter membership were to be in by the end of the year. Then there was some voting for officers and support of the new constitution and rules.

After the meeting portion of the conference, we all shot off on Sunday evening for the drive to our motels on the Bruce where we were split up into three groups on the following day. On the way we stopped at Beaverdale bog where we saw our first *C. pubescens* scattered around, but it was too early for the *C. reginae*.

On Monday morning we joined Shirley Curtis' group and went to Walkers Wood where we saw some battered *Cypripedium acaule* (Stemless Lady's Slipper), the ubiquitous *C. pubescens* and the rising *Platanthera aquilonis* (Green bog orchid). It was too early for *Goodyera oblongifolia*, *tesselata* and *repens* var. *ophioides* which I had seen on a previous occasion. Then we went to Oliphant Fen and Petrel Point, hoping to see *Calopogon tuberosus*, *Liparis loeselii* and *Pogonia ophioglossoides*, but we were still too early. We did see *Platanthera dilatata* (White Bog Candle) in bud appearing through the rushes.

As I had been to the Bruce on five previous visits, I was asked to go ahead to seek out any orchids in bloom, as all the intermediaries were not being too helpful this year. I was joined by the English contingent and our aim was to find *Galearis spectabilis* (Showy Orchis), a low-growing red and white orchid with large basal leaves. We found it in some woods near Oliphant where most plants were non-flowering, but we were pleased to find two in reasonable condition. It seemed strange that this orchid was already past its best while many others were not even in bud, like *C. reginae* in a fen just across the road that normally flowers at this time of year (see Carol Dash's article in HOS no 19). Failing to find the rest of our party, I decided to show my English friends a rare Ontario orchid at Red Bay - *Listera ovata* (Common Twayblade). They were not impressed, as this orchid is common in England, as is the introduced *Epipactis helleborine* (Broad-leaved Helleborine) that is now probably the commonest orchid on the Bruce.

Most of the orchids were in a garden near the beach and, while we were peering through the trees, we were invited by the lady of the house to look around the property and see her own orchid drawings. In the garden we found a lone *Corallorhiza trifida* (Early Coralroot) near another bunch of *C. reginae* and *C. pubescens*.

In the beach area the scenes were outstanding where the streams run into Lake Huron's rocky coastline - a good place to find *L. loeselii* and our feathered friends, Common Merganser, Rosefinch and Waxwing. The water seemed a long way out and the local residents were blaming their neighbours across the border (watering their golf courses), but another said it was a natural phenomenon that occurs about every ten years. Further up the road we went to Howendale and found a *C. acaule* in mint condition and a *Platanthera orbiculata* (Pad-leaved orchid) in tight bud. We also

looked for *Listera convallarioides* (Broad Lipped Twayblade) but never found it, although it was seen by one of the other groups. On the way back to base we hoped to see *Spiranthes lucida* at Sauble Falls, but the water level was too high so none were found. We did find a wonderful colony of *Cypripedium arietinum* (Ram's Head Lady's Slipper), which is the smallest and one of the most spectacular slipper orchids found on the Bruce at Ferndale.

Next day we rejoined our group and went to Dorcas Bay and saw another display of *C. arietinum* and *C. pubescens* with many other pretty wild flowers - *Sarracenia purpurea* (Pitcher Plant), *Castilleja coccinea* (Indian Paintbrush) and *Aquilegia canadensis* (Columbine), as well as the strange *Piperia unalascensis* (Alaskan orchid) which seemed a long way from home. This tall green orchid was found in an area for the rare lakeside daisy (*Hymenoxys acaulis* var. *glabra*).

At lunchtime some friends asked if I knew a site for *Cypripedium parviflorum* (Small Yellow Lady's Slipper). It is a rare orchid on the Bruce and is like *C. pubescens* but smaller and with red sepals. I looked in my notes and sent them on a road towards Pinetree Point.

The scouts returned informing us that they had found four plants and had marked the spot accordingly for our visit. We were joined by a Newfoundland contingent and set out to try to find the orchids, but it still took a long time despite the directions. Eventually we discovered them by a beaver lake that was guarded by a Mississauga rattlesnake which I nearly trod on. Thank goodness I didn't, as I might have been sent to a SARS hospital! Last time I was there it was a black bear that crossed my path. We also found *Platanthera huronensis* with a few early blooms. On this road in the past I had seen *Malaxis unifolia* and *Spiranthes romanzoffiana*, but we decided to return to base as time was running out and the orchids would probably not have been in flower.

It was now time for the groups to split up, so we decided to try and find *Arethusa bulbosa* (Dragon's Mouth) in a small bog owned by Les and Isobel Greenhof. We



Calypso bulbosa, Photo: Mike Parsons

went to their house to seek permission, only to be told by a neighbour that they had both died in the last few years. The neighbours said that the land may be donated to the Federation of Ontario Naturalists (FON) and gave us a permit to visit the site. I hadn't been there before as it had always been flooded. This time, although muddy, it was easy to get around but the area was patrolled by bullocks (bulls?). We did not hang around long as they seemed to have their eyes on us, and we did not find the orchids; it appeared that the area had been overgrazed and well trodden. It was now time to go to a farmhouse B & B near Cape Chin where we had stayed before and where one can see hundreds of *C. pubescens* en route. On the farm there are nesting Brewers blackbirds, bluebirds, bobolinks, four species of swallow and humming birds and chickadees feeding on the bird table, with an occasional great grey owl usually being mobbed by red-winged blackbirds.

Wednesday, our last day on the Bruce, was spent on Flowerpot Island between Lake Huron and Georgian Bay - probably the highlight of the trip. It is a pretty island with limestone rocks towering out of the water in the shape of flowerpots. The boats that took us were quite large and not the glass bottom boats they had used previously, probably due to the terrible accident caused by a freak wave a few years ago. We then landed by zodiacs (inflatables) on to the shore.

The island is very rich in limestone and has at least 20 species of orchid growing by the paths that head towards the lighthouse and the marl lakes. This is a good place for *Calypso bulbosa* - most of us found over 20 plants and took several photographs, especially in an area with a group of seven plants. We heard that a white one had been found but we missed it. Along the paths we found several colonies of *Corallorhiza striata* (Striped Coralroot), a very pretty reddish-brown orchid with stripes on the tepals and labellum, together with more *C. trifida*. *Listera cordata* (Heart-leaved Twayblade) appeared occasionally amongst the undergrowth with *Corallorhiza maculata*; the *flavida* variation was just emerging.

Other orchids seen in their early stages were various *Goodyeras*, *E. helleborine*, *Piperia unalascensis*, *Platanthera obtusata*, *orbiculata* (possibly *macrophylla*), *huronensis* and *clavellata*. Near the marl lakes were *P. dilatata*, *C. pubescens* and *C. reginae*. As there were only a few ferries, we hurried back to the jetty for our boat trip back to the mainland. We had time for only one more site so it was a toss up between looking for *Platanthera flava* var. *herbiola*, *Aplectrum hyemale* or one site for *Platanthera hookeri* and *Dactylorhiza viridis* var. *bracteata*. The latter won but we found none of the orchids. I understand that *P. hookeri* was seen by another group who also went to Long Swamp looking mainly for *A. rotundifolia* and *Platanthera lacera* - neither was found.

It was then back to Toronto, only to learn that our daughter's baby was due at any moment but we were not allowed to visit her for at least 10 days owing to the SARS virus!

I would like to dedicate this story to Les & Isobel Greenhof for being such great naturalists and a great help to myself.

Some Home-made *Ophrys* Hybrids

Richard Manuel

When I am out in the Mediterranean area looking for orchids, I rarely see plants that I consider to be hybrids; yet others seem to see them everywhere. This particularly applies to *Ophrys*: is this because my definition of a species allows more leeway for intraspecific variation than others, or am I just blind?



Fig 1 *Ophrys speculum* x *bertolonii*
(*Op. x emmae*)

When it comes to growing these plants from seed, I generally avoid making hybrids because a) they take as much effort as a species, b) pure species are more desirable, c) hybrids have little conservation value, and d) they are unlikely to improve on nature. However, it is sometimes difficult to resist the occasional flirtation with cross-pollination, especially when there is pollen available of a desirable species and no conspecific recipient for it; or, in a few cases, when I have been unable to find a 'common' hybrid and so have decided to make my own.

One such hybrid was illustrated in Newsletter 27 (Jan 2003): *Ophrys* x *heraultii* (*Op. tenthredinifera* x *speculum*). An interesting point here is that my plants were made using

Op. tenthredinifera as the female (pod) parent. A rule of thumb in orchid hybridising is that the form of the plant and often the shape of the flower tends to follow that of the female parent more than the male, which shows clearly here. Yet in several illustrations of this hybrid in the literature, e.g. Delforge 1995 (p.444), the shape of the flower is much more like *Op. speculum*, which is presumably the female parent in that case.

Another hybrid, which flowered for me for the first time this year, is *Ophrys speculum* x *bertolonii* (*Op. x emmae*, fig.1). This compares favourably with a picture in Buttler 1991 (p. 261) of a putative hybrid between *Op. bertolonii*formis (effectively differing from *bertolonii* only by its green sepals) and *Op. speculum*



Fig 2 *Ophrys kotschyi*



Fig 3 *Ophrys reinholdii* x *kotschyi*



Fig 4 *Ophrys cretica* x *kotschyi*

(cited as *Op. ciliatum*, a common synonym).

A few years ago I decided to try to make a hybrid with a flower resembling as closely as possible the gorgeous but rare and strongly protected Cypriot endemic *Ophrys kotschyi*, Fig. 2. I acquired some pollen of this species (orchid pollen is easily carried and stored, and retains its viability for many months) and pollinated a couple of related species with it: *Op. reinholdii* (found in parts of Greece and Turkey, including Rhodes) and *Op. cretica* (Crete, parts of the Greek mainland and islands, and Rhodes).

So far I have only had a few flowers of *Op. reinholdii* x *kotschyi* (fig. 3), which I have christened 'Cyprein', and one of *Op. cretica* x *kotschyi* (fig. 4) which remains unnamed. These hybrid flowers would probably not stand out as 'different' in a colony of *Op. kotschyi*,

but it is a little soon to be certain that all the progeny will resemble this form, although it seems likely.

Hybrids between *Op. kotschyi* and *Op. reinholdii* or *Op. cretica* are unlikely to happen in nature because their distributions don't overlap, but *Op. reinholdii* x *cretica* is possible naturally as both can be found on Rhodes (the latter as *Op. cretica* spp. *beloniae*, fig. 5, which is somewhat reminiscent of *Op. kotschyi*!) and in places on the Greek mainland. Kretschmar & Eccarius 2001 (p.207) figure a very attractive, but not entirely convincing, example of a putative hybrid between this and *Op. reinholdii*. *Op. cretica*, of course, is immensely variable, and several forms (variously called varieties, subspecies or even species) have been described, principally the nominate *Op. cretica* var. *cretica*, which is not the commonest form found on Crete, and *Op. cretica* var.



Fig 5 *Ophrys cretica* var. *beloniae*



Fig 6 *Ophrys cretica* var. *ariadne*

ariadne (syn. *karpathensis*) which has a larger flower than the former and often a very complex double pattern (fig. 6).

To add to this confusion I have made several back-crosses, and a hybrid *Ophrys* 'ariadne' x *kotschyi* which, when it flowers, may even be an improvement on nature. Oh what a hypocrite I am!

References:

- Buttler, K.P. 1991. *Field Guide to Orchids of Britain and Europe*. 288pp. The Crowood Press, Wiltshire.
- Delforge, Pierre. 1995. *Collins Photo Guide: Orchids of Britain and Europe*. 480pp. HarperCollins, London.
- Kretschmar H. & G. & Eccarius W. 2001. *Orchideen auf Rhodos*. 240pp. H. Kretschmar, Bad Hersfeld, Germany.

Diversity and Conservation of Georgian Orchids

A review by Richard Bateman

This glossy new booklet describes the orchid flora of Georgia, a modest-sized and largely mountainous country bounded by the Black Sea to the west, the Caspian Sea to the east, the Caucasus Mountains to the north and the troubled region of Armenia and Azerbaijan to the south. There is, nevertheless, a strong British connection, as the booklet has been produced by "The Georgian Society of Nature Explorers" under the "Ecology and Economy in Harmony" programme of British Petroleum. This sponsorship is evident in the production quality, which is full colour and includes photographs of many of Georgia's 53 orchids, together with a few mouth-watering landscapes encompassing orchid habitats.

The text gives a brief overview of orchid biology and the historical background to orchid exploration in Georgia, supported by a short bibliography. The new study represents eight years of herbarium research and fieldwork by Siegfried Künkele and Richard Lorenz. They confirmed the presence of 23 species, added a further three species/subspecies from herbarium studies and eight from fieldwork, but rejected five species previously claimed for the region. This constitutes a modest list, given the diversity of habitats and local climates described, though it includes some choice species such as *Cephalanthera caucasica*, *Dactylorhiza euxina*, *Orchis militaris* subsp. *stevenii*, *Orchis punctulata*, "*Orchis*" *pseudolaxiflora*, *Steveniella satyrioides* and *Traunsteinera sphaerica*. Many of these taxa are rare, as demonstrated by a table that lists the frequency (in 10 x 10 km squares), altitudinal range, IUCN category and conservation significance in Georgia of each species/subspecies.

Rapid declines inferred for many species are attributed to "improved" agricultural practices and more locally to drainage and droughts exacerbated by global warming. Nonetheless, no orchid species currently benefits from legal protection within Georgia, though many orchid populations occur in the nature reserves that currently cover 5% of the land surface. Consequently, *ex situ* conservation measures are proposed in three Georgian botanic gardens.

No attempts are made here to describe particular Georgian orchids or to map their distributions (no doubt this will follow in *Journal Europäischer Orchideen*). Instead, much space in this text has been devoted to bilingual presentation in English and the local script. With regard to taxonomy, species delimitation falls midway between "splitters" and "lumpers"; most notably, *Ophrys* and *Orchis sensu lato* are treated primarily at subspecific level. However, the authors exhibit a greater love of the arcane laws of nomenclatural priority (manifested for example in the replacement of the long-recognised *Platanthera chlorantha* by *P. "montana"*) than in the scientific re-circumscription of genera to fit modern scientific principles. Also, the authors have been rather badly served by their English translators, providing some unintentional humour. These criticisms aside, this is an attractive and laudably conservation-oriented introduction to the orchid flora of a poorly known region of Eurasia.

Akhalkatsi, M, Kimeridze, M, Künkele, S, Lorenz, R & Mosulishvili, M (2003). *Diversity and Conservation of Georgian Orchids*. GCS, Tbilisi, Georgia. 40 pp. Euro 10.00 (including P&P, from Dr R Lorenz, Leibnitzstrasse 1, D-69469 Weinheim, Germany).

HOS Website News

Tony Hughes

Many thanks to all the members who sent me so many great orchid pictures for the September update to our Website (see www.drover.demon.co.uk/HOS).

I have now inserted a new section devoted to "Orchid Pollination" - stunning pictures - well worth a visit! There are also several more pictures of natural hybrids between various native species - it's amazing what those pollinators get up to!

As always, there is plenty of scope for improvement of the website, so please let me know if you have any decent pictures - particularly of pollination or of hybrids, but also of British species not yet on display.

A further addition to the Website is a set of instructions to help potential contributors to the HOS Journal.



Hardy Orchids



New Gate Farm, Scotchey Lane, Stour Provost, Near Gillingham, Dorset, SP8 5LT.

Telephone 01747 838368

FAX 01747 838308

E-mail : hardyorchids@supanet.com

Have you the space to grow a few of these beautiful and undemanding little gems?

We produce them from seed in a laboratory, usually with the assistance of a symbiotic fungus, weaning them out into trays and growing on for a further three to eight years, depending upon the species or hybrid concerned to raise them to flowering size. Some are vegetatively reproduced. We have a comprehensive list produced in Autumn each year.

The catalogue includes plant lists with details, growing instructions, etc.

The nursery is open by appointment only.

Send two first class stamps for our current catalogue, to be published this month, October, or visit our web site, which will be updated by the end of October.

www.hardyorchids.supanet.com



Orchids by Post is a joint venture made up of both amateur and professional growers.

Our aim is to supply seed raised plants grown, wherever possible, in association with mycorrhizal fungi.

The production of high quality seed raised plants is vital for the protection of wild populations and over the coming seasons we aim to expand the range of material available.

Please send an SAE to receive our new seed raised WINTER list – to include CYPRIPEIDIUM species and hybrids.

4 Raby Cottages, Sheinton Road, Cressage, Shropshire, SY5 6BX

www.orchidsbypost.co.uk

FLOWERING SIZED HARDY ORCHIDS

FOR SALE

Propagated from seed

Send 1st class stamp for current list to:

John Haggar, 35 Gloucester Road, BRIGHTON, BN1 4AQ

or visit www.johnsorhids.co.uk

Visit the Hardy Orchid Society Website

www.drover.demon.co.uk/HOS

Designed & Printed by Maren Talbot, 4 Hazel Close, Marlow, Bucks., SL7 3PW

mtalbot@onetel.net.uk