The Hardy Orchid Society Newsletter

No. 18 October 2000

The Hardy Orchid Society Committee is…

President: Paul Harcourt Davies, 128 Church Road, Sandford on Thames, Oxford, OX4 4TB
Chairman: Adrian Blundell, 4 Raby Cottages, Sheinton Road, Cressage, Shrewsbury, SY5 6BX
Vice-Chairman: Richard Manuel, Wye View Cottage, Leys Hill, Ross-on-Wye, Herefordshire, HR9 5QU
Secretary: Sarah Marks, 83 Ladysmith, East Gomeldon, Salisbury, Wilts, SP4 6LE
Treasurer: Tony Beresford, Pound Farm, Wearne, Langport, Somerset, TA10 0QJ
Membership Secretary: Nick Storer, 17 Orchard Close, Lymm, Cheshire, WA13 9HH
Show Secretary: Tony Hughes, 8 Birchwood Rd., Leigh Sinton, Malvern, Worcs, WR14 1LD
Newsletter Editor: Moira Tarrant, Bumby's, Fox Rd., Mashbury, Chelmsford, CM1 4TJ
Meetings Secretary: Colin Clay, 14 Cromwell Place, Lighthorne Heath, Leamington Spa, CV33 9TG
Conservation Officer: Alan Dash, Lower Lakes, Suckley Knowle, Whitbourne, Worcs, WR6 5RH
Ordinary Member (publicity): Simon Tarrant, Bumby's, Fox Rd., Mashbury, Chelmsford, CM1 4TJ
Ordinary Member (Newsletter Dist.): Bill Temple, Primrose Cottage, Hanney Rd., Steventon, Oxon, OX13 6AP
Ordinary Member (Seed & Fungus Bank): Ted Weeks, 74 Over Lane, Almondsbury, Bristol, BS32 4BT
Co-opted Member (BOC Rep.): Richard Nicol, 1364 Evesham Rd., Astwood Bank, Redditch, Worcs, B96 6BD

Contents

Enclosed with this Newsletter: Application Form for the Autumn Meeting

Cover illustration: *Calopogon tuberosus* by Carol Dash

Autumn Meeting, 2000

Colin Clay, Meetings Secretary

The next meeting will be on Sunday 29th October 2000 at Horticulture Research International, Wellesbourne, near Warwick. A sketch map with directions and application form is enclosed with this Newsletter. Use of the Application Form is essential for the usual reasons. We need to produce name badges in advance and issue them on arrival, for security reasons and we need an early indication of the demand for the buffet lunch. Members will be allowed to bring guests but non-members will need to pay an *additional* fee. All attendees need to pay in advance for drinks only – coffee, tea and biscuits during the day OR for drinks plus a buffet lunch. Please send off your completed Application Form to Colin Clay, with payment as soon as possible.

A B&B list is available from Colin (please send a sae) but there is no shortage of B&B establishments locally, due to the proximity of Stratford upon Avon.

Don't forget to bring your Competitive Photographic Images, Prints or Slides (please note entry time) and there should be room to display any other orchid-related material that you would like to exhibit. Please forewarn us of any large amounts of posters etc.

Plant Sales tables will be subject to a new charge of £25, payable in advance and booked through the Meetings Secretary. A Members Sales table will be present and sellers will be expected to donate 20% of monies to the Society. The Plant Sales room will be locked when not attended.

Programme

08:30 Set-up Trade and Members Plant Sales Tables.

09:00 Meeting opens: Coffee / Tea: Informal chat. Hand in Photographic Competition entries before 09.45. Plant Sales Tables open.

10:20 Chairman's Introduction

10:10 Orchid Conservation: What determines Orchid Distribution and Abundance? - Helen Scott

11:15 Orchid landscapes of Sweden and Canada - Simon Tarrant and Alan Dash

12:30 Results of the Photographic Competition and viewing of the Slide entries with commentary by the Judge.

13:00 Lunch (also Plant Sales and viewing of Photographic prints)

14:00 Does DNA reveal all about the evolution of terrestrial orchids?
Part 1: Evolutionary relationships
Part 2: Speciation and conservation genetics - Richard Bateman

15:15 General Discussion Session – Any HOS topic

16:00 Tea and informal chat

17:15 End of Meeting. Vacate by 17:30.

HOS Millennium Photo Competition

Tony Hughes (Show Secretary)

If you think you have read this before, you are quite right! The Classes and Rules for this year's HOS Photographic Competition, to be held during the Autumn Meeting at Wellesbourne, are much the same as last year. The only things that must be different are the pictures. Once again, we will try to display the winning pictures on the HOS Website, so budding 'Heather Angels' may get some free publicity! We are also looking into the possibility of publishing some of them in the quarterly Newsletter, so please bring along plenty of entries to ensure we have our best display ever. Non-competitive exhibits - anything of interest related to orchids - are always welcomed.

CLASSES

1. An orchidaceous landscape, print size up to 6x4 inches.
2. A single orchid plant, print size up to 6x4 inches.
3. A close-up, print size up to 6x4 inches.
4. An orchidaceous landscape, print size up to 10x8 inches.
5. A single orchid plant, print size up to 10x8 inches.
6. A close-up, print size up to 10x8 inches.
7. An orchidaceous landscape, 35mm colour slide.
8. A single orchid plant, 35mm colour slide.
9. A close-up, 35mm colour slide.

NOTES

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 required, but 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 may receive only **one award** per class.

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

g) Pictures entered previously are **not** permitted but, if you bring some along, we could display them separately.

h) Slides should be labelled with your name (you do want them back, don't you?) and with an alignment dot on the bottom left corner of the mount (when viewed the right way up). Any standard slide mount should be acceptable.

i) No trophies, no prizes - just the warm glow of success and the chance of having your pictures displayed on the HOS Website! Makes all the effort worthwhile, doesn't it?

Orchid and Sightseeing Tour of the West Coast of USA

Bill Temple

The holiday came into existence when we were invited to visit the North American Native Orchid Alliance (NANOA) Conference. We thought about staying for an extra couple of weeks after the conference, but were advised to come over a couple of weeks before the conference and visit the Rocky Mountains to look for orchids. We then decided to expand our plans to take in some of the well-known tourist attractions.

The trip started on 28th June with an 11-hour flight to San Francisco, where we spent the first night. We looked around San Francisco the following morning and then drove for 5 hours to Yosemite. During 3 days spent inside the National Park we realised the true scale of the place – 120 miles from the south to the northeast entrances. We soon realised that the Park Rangers while very friendly and helpful know nothing about birds, butterflies or flowers. We saw a number of orchids in Yosemite – the leafless *Cephalanthera austinae*, known there as the Ghost Orchid; *Piperia colmanii*, which was named after Ron Coleman and up to two feet tall with hundreds of flowers which have labella and spurs about 2mm long. *Goodyera oblongifolia*, known as Menzies' Rattlesnake Plantain, was here in bud.

Platanthera dilata var. *leucostachys*, known as the Tall Leafy White Orchid or Bog Candles is of impressive stature, often 3-4 feet tall with hundreds of flowers on a spike, it was interesting to note its habitat – marshes and on stream banks close to the water level. The last orchid that we found in Yosemite was *Corallorhiza maculata*, the Spotted Coralroot. On the 3rd July we drove to Fresno airport and then flew to Las Vegas, picked up another hire car and set off for the Utah desert via Zion National Park, staying at Kanab. We visited the Grand Canyon South Rim the following day (400+ mile round trip via the Painted Desert) and had our calculations thrown out by the 1-hour time difference between Arizona & Utah! The next day we made the trip to the North Rim where we saw *Goodyera oblongifolia* again and Weidemeyer's Admiral butterfly. Next day we drove to Moab via a scenic route taking in Red Canyon, Bryce Canyon and Capitol Reef. Although this route took 12 hours it was well worth it as the scenery was stunning. From Moab we visited Arches and Canyonlands and the local nature reserve where we saw hummingbirds and many butterflies, but no orchids.

We set off for the Rocky Mountain National Park near Denver on 10th July (a 400+ mile drive again). When we arrived at our motel outside the park (but still at about 7,500 feet) we discovered that there was a Prairie Dog town in the children's playground just below our balcony. The Rocky Mountain National Park was different again from the others – the entrance must have been almost as far above sea level as the highest road in Yosemite. One road went up to 12,200 feet above sea level and on the tundra beside it there were many interesting plants as well as Yellow-bellied Marmots, Elk and Rocky Mountain Parnassian butterflies - the latter seemed to be struggling due to the lack of oxygen. At lower altitudes (8,000-9,000 feet) the Rocky Mountain National Park was a great site for beautiful lakes and orchids - *Goodyera oblongifolia*, *Platanthera dilata* var. *leucostachys*, *Listera cordata*, known as Heart-leaved Twayblade, *Corallorhiza maculata*, *Spiranthes romanzoffiana*, known as Hooded Ladies'-tresses, and *Cypripedium fasciculatum*, known as the Clustered Lady's-slipper, plus *Platanthera huronensis*, which has yellowish green flowers. We also saw seedpods of *Corallorhiza striata*, the Striped Coralroot, masses of butterflies, a hummingbird and gorgeous Wood lilies and interesting pink flowers known as Little Elephants. Having seen the Elk at 12,000 feet we were rather surprised to find them close to our motel on the last day – we told our neighbour and received the response "I expect they are the ones that were wandering through town this afternoon eating all the flowers in the flower beds!" We also heard wolves from the comfort of the motel (at 2am!) but didn't see any.

On 15th July we drove to Denver, flew to Seattle and then drove to Port Angeles for the NANOA Conference, where we joined fellow HOS members Carol and Mike Parsons who had also been invited to come to the conference. The NANOA Conference included many field trips into the Olympic National Park and yielded many orchids – *Piperia elegans*, *P. candida*, *P. unalascensis*, *P. transversa*, *P.*

elongata, *Listera caurina*, *Goodyera oblongifolia*, *Corallorhiza maculata*, *C. mertensiana*, *Epipactis gigantea*, *Platanthera dilata* var. *leucostachys*, *Listera cordata*, *Platanthera stricta* and seedpods of *Corallorhiza striata* and *Calypso bulbosa*. Among the non-orchids there were Pinedrops, Pinesap, *Erythronium montanum*, *Campanula piperia*, *Allium crenulatum* and *Lilium columbianum*. The last field trip was to an area to the west of Seattle to see *Platanthera chorisiana*, which had a stature, colour and habitat reminiscent of our own Bog Orchid. There was also an unofficial trip to the Lake Watanachee area which yielded *Cephalanthera austinae* and *Listera convallarioides*, and many mosquito bites. On the 21st July our holiday was sadly over and we flew back from Seattle overnight, although the flight path was so far north over Greenland that it never actually became dark.

A Glorious Day - in Spite of the Rain!

Tony and Diana Hughes

When the e-mail from Richard and Gaby Manuel arrived, suggesting a day of orchid hunting in and around the Cotswolds, we needed no persuasion! And so it was that, first thing on Tuesday 26th June, we were off down the M5 in the direction of Bristol. At that time of year, a drive down the M5 past Gloucester is regarded as quite a treat (daughters say, 'How sad!'). We can often be seen crawling twice round the roundabout at Junction 11 (more of that later), and creeping at dangerously low speed between there and Junction 11A, and it's all because of orchids. One of the greatest British concentrations of Pyramidal, Bee and Wasp Orchids has developed in the cuttings there in recent years, to the extent that large areas of the western banks glow crimson with the enormous density of flower spikes. One particular group of Pyramidal plants is extremely robust, at least twice the size of the rest - could they be tetraploid?

But today there was no slowing down - better things awaited at a secret destination near Bristol. Richard and Gaby were already at the rendezvous, a roadside embankment not far from the M4, where there was no difficulty in finding the large numbers of huge Lizard Orchids. They were magnificent specimens, in full flower, with an interesting range of colour-forms - what a start to the day! In among them were plenty of Pyramidals and a few Bee Orchids, and in the scrub on the opposite embankment were some huge spikes of Common Spotted Orchids and a few gone-over specimens of the Greater Butterfly. Then we were approached by an old chap with a dog, complaining at great length about the state of the verges (the chap, not the dog, that is). No amount of protestation on our part could convince him that we were not incognito inspectors from the Council!

At last we escaped, got back into the cars and drove off in the Stroud direction. There we drove up a steep twisty lane to Selsley Common where an early lunch

was taken to avoid the rain. Selsley is similar to several other commons at this end of the Cotswolds, relics of the days when wool and limestone dominated the local economy, with many long-abandoned quarries and vast areas of flower-rich chalk grassland. Nowadays, light grazing by sheep and cows keeps the coarser grasses down without doing too much damage to the flowers. Although the quarries were interesting, the most rewarding area was the south-west-facing scarp, where Fragrant Orchids were plentiful, interspersed with numerous Bee, Pyramidal and Common Spotted Orchids. Although most plants were quite short-stemmed and few-flowered on the steep, well-drained slopes, they made up for their small size by their impressive numbers. An earlier visit would have yielded a good display of Early Purples, but all we found were the seedpods. The greatest thrill here came from a few diminutive spikes of the Musk Orchid - by far the smallest of our finds, but none-the-less exciting. The Cotswolds are towards the north-western edge of its range, giving rise to very sporadic flowering; in dry years, hardly any spikes appear, but when plentiful rain falls in the spring, so many spikes appear in favoured places that their curious scent of honey and beeswax pervades the air.

Himantoglossum hircinum
(Photo by Simon Tarrant)

On leaving Selsley, we were faced with a difficult decision: Swift's Hill (a Gloucester Trust reserve near Slad) or Painswick Beacon? Rather arbitrarily, we picked Painswick, and were soon strolling up towards the summit. Although a golf course occupies most of the gentler slopes, the northern and western scarps are undeveloped, with sporadic woods and extensive ancient quarries. Orchids grew almost everywhere, with some of the best displays in the 'light rough' near the hilltop. There we found carpets of Fragrant, Pyramidal and Common Spotted Orchids, competing for space with numerous Twayblades; we hoped that the golfers could claim a 'free drop' if they landed in such hazards! Even without the orchids, the views from the summit amply justify the climb, providing a magnificent panorama from the Severn Estuary in the south-west sweeping round past the Welsh mountains and the Malvern Hills to the rest of the Cotswolds to the

north and east. The return path, down through the quarries, proved most interesting, with yet more Musk Orchids and the readily identified remains of a few Fly Orchids.

All too soon we were back on the road, heading generally north-eastward. A brief tea-break was taken on the edge of Cranham Woods, an extensive area of ancient beech woodland, well-known for its Helleborines. Unfortunately, we were too early for the *Epipactis*, so admired a single Birds Nest Orchid and then headed on towards Birdlip.

Instead of going straight to the viewpoint at the top of the hill, we stopped off on the 'old' road that climbs steeply up to the village of Birdlip from Gloucester. About half a mile below the village, where the slopes are at their steepest, the road passes through dense beech-woods that open out into sloping meadows just below the road. On the edge of the woods and in one adjoining field is a tremendous concentration of the Broad-leaved Helleborine. Many is the happy hour we have spent there, chasing chalkland butterflies and watching wasps getting intoxicated on helleborine nectar, their heads festooned with pollinia. But today the helleborine buds were only just starting to open, so we explored the next field where Pyramidal and Common Spotted Orchids abounded among the scabious and knapweeds. This proved to be an excellent area to search, because several spikes of the Wasp Orchid (*Ophrys apifera* var. *trollii*) were in full flower.

Next we drove up through Birdlip village to the viewpoint at the top of the scarp, where a road improvement scheme a few years ago cut off a stretch of the original road. On the thin, poor soil beside the parking area there was a fine display of Pyramidal Orchids, together with small numbers of Common Spotted and Bee Orchids. An exploration of some of the steeper slopes revealed several more Musk Orchids, but not enough to proclaim a 'good' year.

At this point we parted company, with the sun now shining to brighten the evening. But for me at least the orchid hunt was not yet over. Our homeward journey up the M5 took us past Junction 11 where the A40 goes between Cheltenham and Gloucester. This time I was not content with a snail's-pace crawl around the roundabout, but managed to park nearby and explore on foot. (For those worried about motorway regulations, I convinced myself that the roundabout was actually on the A40, so pedestrian access was quite legitimate!) My determination was amply rewarded by vast numbers of Bee and Pyramidal Orchids. What is more, these were strong and healthy plants, quite unlike the puny specimens seen earlier in the day, and at the peak of their flowering. And to make things even better, the warm evening sun had brought out the first of the summer brood of Marbled White and Ringlet butterflies - an excellent end to a glorious day.

An Orchidaceous Bacchanalia

Richard Manuel

If, like me, you spend much of your time drooling over photos of gorgeous wild orchids in gorgeous wild places, you may also, like me, spend some of that time making notes of the picture captions - where and when were they taken!? Via this method and using a magnificent book (Bournerias, 1998) we found ourselves on the 12th May this year heading north from the small French town of Aouste-sur-Sye, in the valley of the Drôme, about 35km SE of Valence. The road northwards is the D70 which passes through Beaufort-sur-Gervanne and on to nowhere in particular, except over the Col de Bacchus. This locality, mentioned frequently in Bournerias, usually as 'sud de Col de Bacchus' seemed too brim full of orchid potential not to include it in a personal Tour de France (by car though, not bike). This is a fascinating part of France because it is the region where the northerly orchid species, which at these latitudes tend to be found on higher ground, overlap in their distribution with a number of Mediterranean types, although one has to go a little bit further south to meet the main mass of 'med' orchids. The northern species, which of course include many British orchids, can produce some magnificent specimens in these warmer climes, which nevertheless suffer pretty harsh winters.

The lower part of the D70, starting at around 220m altitude at Aouste and rising gently up to Beaufort (365m) runs north through open country with a steep escarpment to the west dropping through mixed open forest down to a fine east facing grassy road bank. The first orchids, spotted just out of town, were almost inevitably the tall pink spikes of Pyramidal Orchid (*Anacamptis pyramidalis*) which are hard to miss, but they do prompt one to stop and have a poke around for other goodies. Soon *Ophrys fuciflora* (Late Spider Orchid), *Op. scolopax* (Woodcock Orchid), Greater Butterfly (*Platanthera chlorantha*), Fly Orchid (*Op. insectifera*), a few tiny plants of Sword-leaved Helleborine (*Cephalanthera longifolia*) and some almost-open spikes of *Limodorum abortivum*, a large purple-stemmed leafless helleborine relative, were found, admired, and noted. A little further along a few Lady Orchids (*Orchis purpurea)* and not-yet-flowering stems of Broad-leaved Helleborine (*Epipactis helleborine*) were added to the list.

Beyond Beaufort the going got a bit steeper, which meant a few hairpin bends. These are always good places to look due to the inevitable steep slope inside the bend. The first bend produced another *Ophrys, Op. araneola*, our first encounter with the 'Small Spider Orchid' although this one was in that annoying state between having fresh flowers and ripe seeds! A few yards further along the familiar spherical heads of Monkey Orchids (*O. simia*) were the first of zillions we saw on the trip. Near here a small track led away from the road and we were unable to resist a 'quick look' - i.e. much longer than intended! No new species but lots of

Orchis militaris
(Photo by Tony Hughes)

Monkeys and Ladies, plus the very variable but easily recognised results of an immoral liaison between the two. Throughout France we were to find that the Lady Orchids failed miserably to live up to their name, and very few 'pure' plants were found compared to the hybrids with monkey and military and perhaps even *O. ustulata*.

The main object of our search on this hill was *Ophrys drumana,* a species of the *bertolonii* persuasion but differing from the typical form by its smaller size, brighter colours, and very broad speculum. *Op. drumana* is named after Drôme, the department of France we were in; this road being the type locality for the species. A few bends further up, with open larch and pinewoods on either side, we found the first ones, spotted on the roadside from the car. This event caused a major halt while the necessary photos were taken, and a thorough search of the locality was made, without anything else new being discovered.

After passing through the small village of Plan de Baix at about 750m altitude the terrain levelled out somewhat, and a rich mosaic of wild flowers in subalpine hay fields started to line the roadside, with here and there a few *Orchis militaris* (Military Orchid) opening their flowers to add to a vividly colourful display. Above these meadows, to the east, the sheer jagged western crest of the Vercors massif formed a stark contrast to the otherwise gently undulating countryside. Despite the relatively coarse grass on the banks of the road there were orchids aplenty, including some of the finest lady orchids (pure!) I have ever seen, and a quartet of 'new' species: Man Orchid (*Aceras anthropophorum*), Burnt Orchid (*Orchis ustulata*), a colony of Twayblades (*Listera ovata*), and a single Green-winged (*O. morio*).

By this time we were looking for a place for lunch - an old family rule means that such a place has to be seething with orchids - and we found a good 'un! At about 880m altitude a large meadow sloped gently up to the steep screes of the Vercors. It had been grazed recently by cattle (no cows but plenty of evidence) and hence the grass was short and displayed tantalising patches of purple and yellow which just had to be large colonies of orchids. After demolishing a flute (the other French loaf) and some Bleu des Causses (like Rocquefort but even better and much cheaper) we roamed the meadow with eyes peeled. The first yellow patch proved to be, somewhat surprisingly, a fine colony of *Orchis provincialis* (no English

name), just like *O. mascula* but with pale yellow flowers instead of purple. The next was a mixed colony of *Dactylorhiza sambucina* in both its yellow and red phases. The red form of this orchid can be a brilliant genuine scarlet, not unlike *D. coccinea*, but is more usually a drab brownish pink. The whole range was visible here. A couple of rich purple patches were none other that our old friend *O. mascula* (Early Purple Orchid) in very fine form. And scattered amongst these and the meadow at large were numerous *O. ustulata (*Burnt Orchid*), Aceras*, a few *O. simia, O. militaris* (mostly still in bud) and occasional *O. purpurea*. In one corner a nice colony of *Ophrys araneola* with good fresh flowers demanded that the camera and tripod be fetched from the car boot, and then we noticed that an otherwise barren patch of the meadow had, in fact, a large colony of *Op. drumana*, mostly still in bud. Many more of the latter were in evidence in a field on the other side of the road but this had little else visible in the way of orchids. It was still inhabited by cows which appeared to have eaten almost everything except these little orchids. Back to the main meadow where further exploration achieved my favourite photographic reminder of the whole trip: a dense patch of very fine Early Purples, standing guard over a carpet of different coloured forms of common milkwort - pink, blue, white, purplish - we'd never seen such a range of colours in this modest little plant before.

A little further along the road, past a couple of fields purple with Green-winged Orchids, we reached the top of the col at 980m, though it would have easily been missed if there had not been a sign proclaiming this. On the north side the change of aspect brought a dramatic change of scenery, the open fields and road banks giving way to mixed woodland of mainly pine and larch, which yielded three more species within a couple of kilometres. On a grassy bank a *Dactylorhiza* in bud, of uncertain affinities but most probably a form of Common Spotted Orchid *D. fuchsii*; and inside the woods Birds Nest Orchids *Neottia nidus-avis* and Large White Helleborine, *Cephalanthera damasonium*, both in good numbers and fresh flower. We returned the way we had come, taking a couple of minor side roads to explore further, and at one of these, which must have been some sort of sun trap, we found a Bee Orchid *Ophrys apifera* amongst a small group of Late spiders, and then, quite remarkably for mid-May, a single spike of Fragrant Orchid *Gymnadenia conopsea* in full flower!

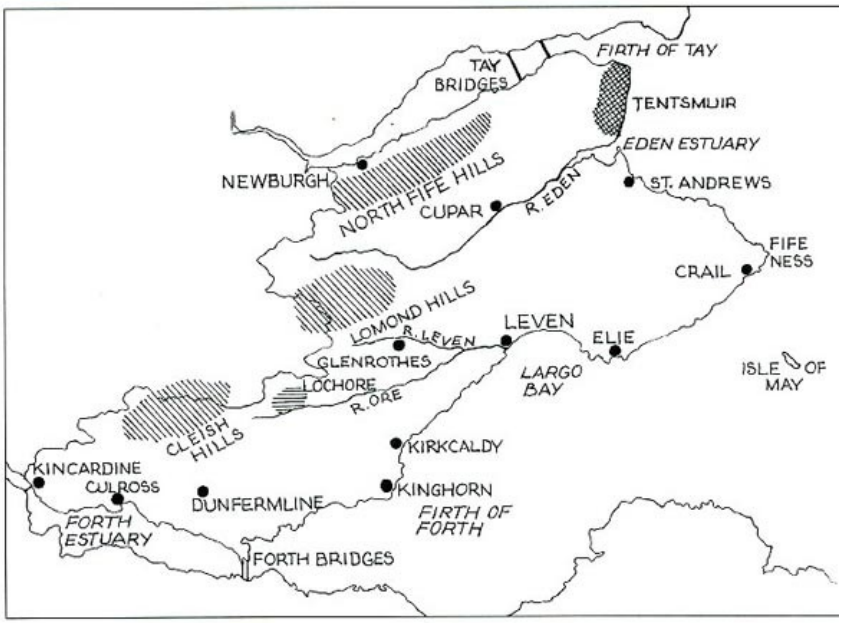
Eventually we got back to Romans-sur-Isere and our hotel after a fantastic day of perfect weather in wonderful orchid country, and a total of 26 species, enough to keep the most demanding orchid twitcher happy.

Reference: Bournerias, M (Director) 1998. *Les Orchidees de France, Belgique et Luxembourg*. Collection Parthenope, Montpellier.

Orchid Hunting In Fife

Patrick Marks

Fife to most people is not a place noted for the scenery that is typical of much of Scotland. It does not have any mountains, only hills up to 500m. Partly as a consequence Fife is one of the most intensively cultivated regions in Scotland, giving the impression that there is little room left for nature. Fife also has an industrial heritage, mainly in the central and western districts with coal mining a major industry for hundreds of years, though there is only one deep pit left and open cast mining is now more productive.



Fife's underlying geology is dominated by sandstone of the Devonian period, with Carboniferous overlying much of that with a mix of deposits which include economically valuable coal and limestone. There is evidence of the volcanic activity of this period in volcanic sills and other related deposits. The Fife hills are mostly the remnant of this activity which was precipitated by earth movements. These helped to form the Midland Valley of Scotland, squeezed between the Highland fault line and its southern less dramatic neighbour.

Fife is situated between Scotland's two major estuaries of the Forth and Tay rivers which has influenced both the coastline and the climate. It has a relatively low

rainfall and despite the demands of agriculture and industry has a surprising diversity of habitats which is where orchid hunting can take place.

Fife boasts the most rapidly growing area of land in Britain where the Tay reaches the sea at Tentsmuir, north of St. Andrews. The sand dunes here can be seen to have expanded seaward by hundreds of feet within the lifetime of an average individual. New habitats are constantly evolving as a consequence, though the sea can take away as well as give! Tentsmuir used to be a relatively unspoilt moor with some woodland until it was purchased between the wars by the Forestry Commission and planted with large acreages of Scots and Corsican Pine. On its south side Leuchars RAF base has grown up, leaving only a small part looking like moorland. However Tentsmuir has a rich diversity of plants in its forests, moorland and dune areas. Several orchid species still occur, and there are historical records which indicate a possibly greater diversity in the past. The commonest orchid interestingly is a pinewood orchid, *Goodyera repens*, a small white relatively late-flowering species. Research conducted in the past couple of years claims that there could be over 9 million plants scattered through the woods. This is based on quadrat studies, made easier by its habit of leaving non-flowering rosettes year round. Less common orchids that also occur include *Listera cordata* with Tentsmuir as its Fife stronghold, a count indicating possibly over a thousand plants scattered through the pinewoods and heather. *Corallorhiza trifida* is found in wooded areas and to a lesser extent younger dune slacks still to become woodland with an estimate of over a thousand plants.

At the south end of Tentsmuir in grassland and dune slacks large numbers of *Dactylorhiza purpurella* provide a mass of colour with a small population of *D. incarnata* in damper slacks, often in water. The latter also occur nearer the north end of Tentsmuir with smaller numbers of *D. purpurella* and occasional *D. fuchsii* and *Listera ovata*. *Epipactis helleborine* existed until recently at the southern end of Tentsmuir Point NNR, but appears to have died out, and is indeed a very uncommon plant in east Fife, with the biggest population found in west Fife along a former railway line!

The rocky coasts of Fife provide some of the less developed habitats where a good variety of plant species can survive. Much of the coast merits SSSI status, with the coastal braes home to *Orchis mascula* in good numbers, followed by *Dactylorhiza fuchsii* and *D. purpurella*, though sites tend to be scattered and increasing pressure of land use can affect how habitats can alter, sometimes to the detriment of plants with specialised requirements. *Coeloglossum viride* has its two main Fife sites along the coast, one on the rough of a golf course near Crail and the second beside a caravan park ten miles west on an area with basaltic rock underlying the sandy soil.

Dune slacks on the south coast of Fife east of the seaside village of Lower Largo which is between Leven and Elie house the largest population of *Dactylorhiza incarnata* including *coccinea* in Fife. Hundreds of plants which include a good number of white specimens occur at Dumbarnie Links, with *D. purpurella* also found, but in drier parts of the slacks. *Orchis mascula* and *Listera ovata* also occur in small numbers. This site was much better until the tenant farmer tried to improve the grassland by spraying over twenty years ago, thus wiping out much of the area's diversity. Fortunately some of it survived and the area is slowly recovering. At Ruddons Point just to the east before the seaside resort of Elie, *Coeloglossum viride* is found in good numbers with a variety of other rare plant species. The area has underlying and sometimes exposed basaltic rocks, which also form the basis of high cliffs just to the east beside Elie.

To the east of the coastal resort of Elie the main *Anacamptis pyramidalis* site in Fife has existed for over a hundred years, but a few plants have more recently appeared at the Crail golf course site amongst the main *Coeloglossum viride* colony.

Working our way inland the streams which have carved their way to the coast sometimes create narrow wooded dens and a site in a few places for large *Orchis mascula* colonies, numbering up to a thousand plants in a small area. Field edges in some locations can yield *Dactylorhiza fuchsii* and *D. purpurella* with associated hybrids in large numbers. I counted over ten thousand plants at a site on the edge of St. Andrews two years ago, but the farmer unwittingly destroyed part of the site last year. A field a few miles south of St. Andrews purchased by a friend which he planted with trees about ten years ago has been colonised somehow by *Dactylorhiza fuchsii* with approaching a thousand flowering plants. Former mine workings also present habitats in which orchids thrive and many such exist in Fife. I monitor one such site near St. Andrews and have seen an increase in numbers of three orchid species present.

An uncommon species in Fife is *Gymnadenia conopsea* ssp. *borealis*. Two main sites are known, one on an SWT nature reserve which is a few miles south of the inland town of Cupar, where this year I found a hybrid plant between this species and *Dactylorhiza fuchsii*, flowering later than *Gymnadenia*, but smelling strongly of that parent. This same reserve known as Fleecefaulds is home to six orchid species, including *Platanthera chlorantha*, another uncommon Fife species known from only a handful of sites.

At Cassindonald Moss SSSI a few miles away, close to St. Andrews, *Platanthera bifolia* is found in its only confirmed Fife site. This is also a major stronghold for *Dactylorhiza maculata* which is surprisingly scarce in Fife. The site, which is partly a sphagnum bog, requires careful management to prevent scrub encroaching

and shading out the five orchid species found as well as other uncommon plants.

Even town parks can provide surprises in orchid form in Fife with a park in Kirkcaldy on the south coast of Fife hosting a site for *Neottia nidus-avis* while on the other side of the park in a meadow at least ten plants of *Dactylorhiza fuchsii* var. *rhodicila* have been found among examples varying from pure white to more normal *fuchsii* patterns!

The hills of Fife have their orchids with *D. fuchsii* and *D. purpurella* the commonest species, though *Listera ovata* occurs in wooded hillsides and there are tantalising records of *Dactylorhiza incarnata* in the Lomond Hills and surrounding area, as well as a *Neottia* record. *Coeloglossum viride* has been re-found in the Lomond Hills, but is difficult to locate unless one knows the exact grid reference. A thriving colony of *Gymnadenia conopsea* ssp. *borealis* occurs on the south side of the Lomond Hills beside a reservoir.

As mentioned earlier *Epipactis helleborine* is a decidedly uncommon species in Fife, with east Fife seeing a reduction or virtual extinction in recent years. The west of Fife still remains a stronghold with a former railway line, now a cycle track, between Dunfermline and Alloa in the neighbouring county making a splendid linear nature reserve. A few miles along this track near the village of Crossford at a section of the railway which backs on to a rich but overgrown meadow I counted 40 spikes of *Epipactis* as well as non-flowering plants. Here too were *Listera ovata* and *Dactylorhiza fuchsii* still flowering in mid-August. The meadow behind also harbours a large *Platanthera chlorantha* population which could improve with proper management.

Species which may have previously existed in Fife if historical records are correct include *Hammarbya paludosa*, *Cephalanthera longifolia*, *Epipactis palustris* and *Pseudorchis albida*. I still dream about re-finding even one of these species, lurking in a little visited den or hillside!

This gives a glimpse at the orchid flora of Fife which I am happy to share with visitors. It is a fascinating task to keep an eye on sites and return year after year to see how they are thriving. There can be new discoveries even in a county so heavily influenced by man's activities in agriculture and mining. Fife has an innovative approach to recording its fauna and flora with a small unit in its Economic Planning Department having developed a database on which records collected by volunteers and professionals are collated and available for inspection. The research mentioned earlier in relation to the *Goodyera repens* came out of an Endangered Plants Survey conducted last year by this unit.

If you want to find out more about Fife I am happy to be contacted.

Members Ask (One)

“Some of my *Dactylorhiza* species in the garden have developed a rust fungus. A grower suggests that ‘Sportak 45 hf’, which is an agricultural fungicide for cereals, works well to cure the problem, and as domestic types of control don't work, I would like to try this remedy. The only problem is where to obtain it in small amounts, if at all?”

Colin Clay managed to obtain from an expert the answer printed below.

"Sportak 45 was a fungicide containing prochloraz as an active ingredient. That commercial product is no longer available although other professional products containing this active ingredient, often mixed with other fungicides, are still around. I would imagine an amateur should go to the garden centre and see if any of the products there contain prochloraz and try it. However, there can be no guarantee under these circumstances that control will be achieved or that the product will not give some phytotoxicity. Check the label to see if any of the products control rusts."

The expert insists though, that anything tried on a plant, without a label recommendation can only be at the grower's own risk. It is unlikely that any formulations that can be purchased will have been tested on orchids.

Members Ask (Two)
Could Molluscicides Cause Phytotoxicity to Terrestrial Orchids?

Colin Clay

Those of you attending the HOS May Meeting will remember the debate about molluscicides and orchids. There had been a report that molluscicides (slug pellets) had been placed around some rare terrestrial orchids by conservationists for obvious reasons. The orchids were not eaten but died, from unknown causes. Several opinions were given at the Meeting, including possible toxic effects on orchid mycorrhizae or the possibility of phytotoxicity.

I have managed to attract some further discussion from a colleague who worked for one of the multi-national pesticide companies during the 1980's (and who insists I mention that he left this area of work in 1992!).

> “Most molluscicides used on farms in the UK contain either metaldehyde, methiocarb, or thiodicarb and to the best of my knowledge, none of these active ingredients is likely to show any phytotoxic effects when applied at recommended dose rates. Methiocarb and thiodicarb are both carbamates and although there are carbamate herbicides, I never saw any phytotoxicity using

these materials when used at quadruple rates or higher. However it should also be remembered that on farms these materials are used at about 5 to 10 kg per hectare. We did some calculations on what the average gardener uses and it comes out to an equivalent of something like 350 kg per hectare, however I still doubt that a good formulation would cause problems.

Unfortunately the active ingredient is only part of what goes into a slug bait. You also need an attractant (usually yeast or malt), a binding agent (a number of things used for this), a phago-stimulant and generally there is a mammal and bird repellent. My guess would be that none of these are likely to cause problems at normal rates - one of the common mammal repellents is for example also used in pellets sold to keeps cats off flowerbeds. BUT I guess that if a very heavy protective screen of bait pellets was used maybe the repellent (which is quite volatile) could cause a problem. The other main component would be a filler of some description - sawdust for example has been used in cheaper baits, but again this would not cause a problem. The bait is also designed so that the active ingredient does not leach out very quickly - we aimed to retain activity for 30 days even in wet conditions. Some of the cheaper baits are not as good and drop apart in only a few days in the wet and would therefore release the active ingredient quicker. Most of the active ingredients have a half-life of about 7 days in normal soil conditions.

Overall I would think it was fairly unlikely to be the slug pellets, though if a very high rate was used it is not completely impossible that one of the volatile components, such as the mammal repellent might cause a problem."

I expect that the debate will continue?

Members Ask (Three)

Shirley Pierce is seeking an *Orchis morio* - white form. If you can help please contact her direct at 24 Main Street, Normanton le Heath, Leics, LE67 2TB
Tel: 01530 262250

Conservation Officer Asks

Alan Dash

One conservation project has reached the stage of planting out of seed-raised orchids this year and there are another two on-going projects – more of which in forthcoming newsletters.
Are there more suggestions from members of projects for the HOS to be involved in? Orchids to save from developers, sites for re-introductions, roadside verges to manage etc.

If you have something for the HOS to be involved in please contact the Conservation Officer, Alan Dash at Lower Lakes, Suckley Knowle, Whitbourne, Worcester WR6 5RH or by e-mail at adash@orchidsbypost.co.uk

Orchids in the News

Press and Media reports sent in by members

Greedy thieves pinch rare orchid
Rare orchids taken by "greedy" thieves. A Wildlife Trust is mounting a vigil after thieves dug up some very valuable rare flowers. Between 15 – 20 rare green-veined orchids have been stolen from the Morden Meadow nature reserve in Kent. The theft took place within days of a special open day to thank local people for raising money for the reserve. Kent Wildlife Trust has condemned the theft as a greedy and heartless act depriving visitors of a great asset.
(BBC Ceefax p. 123, 28th May 2000)

Bellamy buys £1 sanctuary
TV naturalist David Bellamy has bought 70 acres of land, home to 17 wild orchid species, for £1. Dawcombe Nature Reserve in Surrey was under threat by developers until its owners, pharmaceutical giant Pfizer, sold it to the bearded botanist.
(Sunday Mirror 30th July 2000)

Blooming green
A colony of rare orchids was accidentally cut down by council workers mowing grass in a park at Eastleigh, Hants.
(Mirror, 14th June 2000)

All from reports supplied by Christopher Toogood

Back Issues of the HOS Newsletter

Copies of all issues of the Newsletter are still available from the Newsletter Editor. A full contents list appears on the HOS website: www.drover.demon.co.uk/HOS

Copies are £2.50 each or £8 for four, including p&p
BUT copies of issues 8 to 14 inclusive are still available to members at the sale price of £1 each.

Contact the Newsletter Editor at the address inside the front cover or at m.tarrant@virgin.net
OR catch her at the October meeting at Wellesbourne.

In the next issue….

This issue has had more travel than sometimes to tempt and inspire your holiday planning for next year. The next issue will include the more usual mix of cultivation, conservation plus reports from the October meeting.