

Crete

Spili & The White Mountains

A Greentours Tour Report

3rd – 17th April 2008

Led by Ian Bennallick and Martin Catt

Thursday 3rd April – London to Heraklion via Athens

The flight to Athens from Heathrow was uneventful, but the first orchid of the trip was seen whilst landing on Athens where Walter spotted several huge *Serapias* plants beside the runway. We had time before the flight to Heraklion to get a good supper at Sbarro where the airport food put Heathrow's to shame. After Ian and Martin collected the vehicles, the group headed towards Spili, taking about 1½ hours to drive along the twisting roads in the increasingly cloudy weather – it rained heavily in the night. On arriving at Spili and with all rooms allocated and luggage unpacked, now 1am, everyone hurried to bed.

Friday 4th April – Spili and Gious Kambos

After a cold damp night (extra blankets were welcome) the day dawned cloudy but dry. The views from the Rastoni rooms were extensive and we could see the whole valley before us. Lots of annuals such as poppies, vetches and other roadside opportunist plants coloured the rough ground. Ian drove the Rastoni group down for breakfast at Heracles which was its usual high standard with fig and lemon jams, local honey, Greek yoghurt, and the freshest of bread and boiled eggs. During breakfast a Cetti's Warbler 'cetti-cetti-cettied' in the giant reeds across the lane. After getting food and requisites from the supermarket, and fruit and bread for the picnic, the group left Spili at 10.30am and headed to the high plain – 'Gious Kambos' – above Spili. The previous winter had been cold and Spili had a foot of snow for a couple of days in January. A period of warm and dry weather – no rain for a couple of months followed, and the day we arrived had the area seeing its first rains for those couple of months. It would be interesting to see what the flora and especially the orchids would hold.....

We drove up the small gorge above Spili, on the road to Gerikari, and near the top, arrived at the famous 'Spili Bumps' – small limestone knolls. Ian was pleased to see that since 2005 there had been no obvious damage to the large Spili bump. These small cultivated fields used to hold huge populations of *Tulipa doerfleri* Orange Tulip, but Martin explained that even though the ploughing wouldn't affect the bulbs, the herbicides applied when the leaves are present would have wiped them out. Despite this we did find some good specimens along field edges and in a fallow field so perhaps it may re-colonise in neglected ground. [When we revisited on day 10,

there were many!] The group disembarked and several Griffon Vultures soared overhead in the cloudy conditions.

Rather than rushing to the large Spili bump the group started walking up the slope immediately opposite where uncultivated ground and scrub had had a recent fire. This had opened up patches and we soon found *Ophrys heldreichii*, *Ophrys tenthredinifera*, *Ophrys bombyliflora*, *Aceras anthropomorphum*, and large patches of *Orchis italica*, *Orchis boryi*, *Orchis pauciflora* but more pleasingly large numbers of robust, juicy *Orchis lactea*, one that is usually over on most trips. A few *Orchis tridentata* were scattered, and in the damp clayey ground a few *Gagea graeca* was flowering, and the curious *Arisarum vulgare* with brown and white candy stripe flowers. *Narcissus tazetta* had gone over. So was this a late season? Beside the stream the *Viola cretica* wasn't flowering and neither was *Ranunculus ficaria* subsp. *chrysocephalus*. Yet some of the later species of *Ophrys* were out. However some of these were rather small but perfectly formed, the recent rains had probably encouraged fresh flowers from the droughted plants; some of the *Ophrys* had dried up leaves but good fresh flowers. Further up the slope *Orchis quadripunctata*, and its hybrid with *Orchis pauciflora* (*Orchis* × *pseudoanatolica*), *Ophrys episcopalis*, *Ophrys cretica* subspecies *ariadne* and *Ophrys sphegodes* subsp. *cretensis*, were all found sparingly, and some brilliant purple *Iris unguicularis* subsp. *cretensis*.

With everyone gathered we drove along the small lane to the large Spili bump as the log in the stream, usually the quickest way to get across, was dangerously slippery. Onto the large outcrop and the group of 16 soon broke into smaller parties as the outcrops were investigated. The orchids seen included *Orchis italica*, *Orchis quadripunctata*, *Orchis pauciflora* and *Orchis boryi*, and *Ophrys bombyliflora*, *Ophrys phrygana*, *Ophrys sicula*, *Ophrys tenthredinifera*, and several from the *Ophrys fusca* group, including *Ophrys fusca* subsp. *creberrima* and *Ophrys iricolor*, in good numbers. *Orchis lactea* was abundant. Beautifully pink *Tulipa saxatilis* was just going over but some flowers were present. The top of the bump was noticeably droughted. Ian noted some of the smaller species of great interest, including the tiny *Asterolinon linum-stellatum*, *Bellis annua* and *Tuberaria guttata*. *Polygala venulosa* and *Daphne sericea* were also flowering on the main 'bump'. The many *Anemone hortensis* subsp. *heldreichii* were looking good and a whole mass covered the ground. The treat this year was the number of the black and white *Iris tuberosa* in perfect condition, scattered along the north side of the bump.

Further along, the next outcrop which had in 2005 been partially destroyed by bulldozers, reseeded with grass, and lush with artificial fertiliser, Walter reported that *Iris tuberosa* was numerous in the uncultivated part. The distressing aspect of the Gious Kambos is the rapidity of the loss of the phrygana habitats – since 2000 much has been ploughed, bulldozed, sprayed, reseeded and fertilised, places that were once awash with many species and hundreds, if not thousands of orchids. In 2005 Ian had written in that year's report – 'Within a couple of years if the present changes continue, much of the botanical interest, especially orchids, at this site will be much reduced – will we be visiting it again?', but on seeing the area in 2008, he is now more optimistic that despite some areas becoming apparently sterile, this may be for a short period; in one fallow field were hundreds of *Orchis italica* and *Orchis lactea*.

The picnic site was beneath a large Plane tree by a spring in the lee of a rock cliff. Here were found *Ranunculus creticus*, *Geranium purpureum*, leaves of *Dracunculus vulgaris* and in the marshy area below *Cyperus longus* and *Oenanthe pimpinelloides*, *Ranunculus muricatus*, *Orchis laxiflora*, and Ian found a Common Tree Frog which obligingly stood still long enough for

photos. The picnic lunch was welcome and with delicious melitzanosalata (eggplant salad consisting of roasted aubergines in a creamy sauce), breads, spinach and cheese pies and graviera cheese, and piquant sardines were particular favourites.

After lunch we walked back along the track and explored the slopes above the chapel, hoping to see *Fritillaria messanensis* subsp. *sphaciotica*. Through the fence we were soon seeing *Orchis lactea*, but also small *Ophrys cretica* subsp. *ariadne*, *Ophrys tenthredinifera*, *Orchis collina* and *Orchis italica*. Higher up a few managed to scramble through another difficult fence into limestone gryke type landscape and looked for the *Fritillaria*. Leaves and eventually some buds were found but they were obviously a little late. However the displays of *Iris unguicularis* subsp. *cretensis* were eye-catching, with more of the fragrant *Daphne sericea*. Some *Orchis sitiaca* was almost flowering and *Iris tuberosa* was in fine condition. A few *Cyclamen creticum* in small holes in the limestone added to the list. A Chukar was calling and its head just visible above the rocks. Meeting back at the vans we drove back to Spili for checklists and met at Maria and Costas taverna across the road from Heracles Rooms for an excellent meal of saganaki (fried cheese), rabbit, lamb in wine sauce and stuffed peppers. The Rastoni group headed back up the hill to be greeted by a cacophony of frog calls, (from the murky swimming pool, which hadn't been used for some time). With torches, Martin and Walter soon picked up three Common Tree Frogs in the pool, and also a Green Toad, with wonderful markings.

Saturday 5th April – Triopetra

Overnight rain had eased, but the afternoon forecast was poor, with heavy rain moving in, so we headed to lower levels, where at least it wouldn't be cold in the rain. Driving east towards Akoumia, we headed through the village and followed the hill road around the high mountain of Assideroto (1162m) south towards Triopetra. Soon we were in the Giant Fennel *Ferula communis* zone, as these tall stately (and somewhat sinister – trifold like!) plants, with large feathery foliage and yellow umbels, were dotted all along the roadside. A quick stop to admire them and to see what was growing along the roads and we were rewarded with several colourful annual species such as drifts of *Chrysanthemum coronarium* and others which could be identified later by fruits and small specimens. *Echium italicum*, *Verbascum macrurum*, and several legumes including *Tripodion tetraphyllum* and *Onobrychis aequidentata* were admired. Black-eared Wheatear flew up into the scrub. Another stop further down the hill at an olive grove added *Gladius italicus* and *Ornithogalum narbonense* to the list. The last stop was for a large area of *Ranunculus asiaticus*, all white save for a pale pink one found by David. A few *Ophrys sphegodes* subsp. *cretensis* and *Serapias bergonii* dotted the phrygana, and Ian spotted a Nosed Grasshopper. The rain was heavy and we had hoped to use the taverna on the beach as in 2005, at least for shelter. Unfortunately they were in the middle of pre-Easter renovation so though letting us shelter under a leaky pergola, were not willing to serve a quick tea or coffee. So whilst picnics in the vans were being prepared, the group walked a little away along the beach with finds of colourful rocks, cuttlefish and *Posidonia* balls. The rain eased for eating time and as Martin cleared up the remains of the picnic, Ian led the group up onto the headland with three small rocks (Triopetra) and at the back of the beach found *Gagea graeca*, *Mesembryanthemum nodiflorum*, *Muscari spreitzenhoferi*, patches of *Medicago marina* and *Centaurea raphanina* subsp. *raphanina*. The flat headland side is a smooth sloping shelf, with plants growing in the crevices where they can. It is easily walked up and the top has short wind-

clipped coastal phrygana vegetation with species like *Fumana thymifolia*, *Fumana arabica*, *Anthyllis hermanniae*, *Sarcopoterium spinosum* and fragrant labiates and bushes such as *Satureja thymbra*. In the clay pans between the bushes we found *Linum tryginum*, *Neatostema apulum*, *Lomelosia brachiata*, *Nigella damascena*, *Ophrys sphegodes* subsp. *cretensis* and *Ophrys episcopolis*. After the rains, snails were everywhere and even a Painted Lady and a bedraggled Eastern Baton Blue butterfly were seen!

Negotiating an awkward building mesh fence (which is used everywhere as fencing in Crete) with new pliers, we headed west towards a small valley where *Pistacia terebinthus*, aromatic *Myrtus communis*, *Arundo donax* and *Ceratonia siliqua* formed a bushy area for lots of Goldfinch and a Cetti's Warbler, and as we walked into the valley we disturbed a group of seven Night Herons sheltering in the bushes. One *Anacamptis pyramidalis* was found, but further down more orchids were looking fresh in the now heavy rain. Here *Serapias bergonii*, *Ophrys cretica* and *Ophrys heldreichii* had escaped being grazed by the goats and the tiny blue and white flowered *Solenopsis minuta* was found in wet pans. Walking back to the beach along now wet clay tracks, we passed a Yellow Horned Poppy in perfect condition, and soon were back at the buses, all very wet and muddy. A short drive back to Spili earlier than anticipated through heavy mist and dark conditions was welcome for people to dry off and meet for checklists later. A good meal again at Maria and Costas', including Baklava for dessert, as the rain continued, and in the night the southerly wind blew a gale.

Sunday 6th April - Kourtaliotiko & Kotsifou Gorges

As Heracles had promised, the weather improved, so much so that it was clear blue sky! The Rastoni room group looked to the west and could see that the White Mountains lived up to their name with snow covering large parts of the range.

After breakfast we headed west. The first stop was at the huge Kourtaliotiko Gorge, which the road ran through, which was windy and cool in the shade. Looking skywards for the elusive Lammergeier seen here on trips before, we were lucky enough to see one, as well as a Lanner Falcon, spotted by Martin. Blue Rock Thrush was heard and Crag Martin, Jackdaw and Rock Dove all seen, as well as a couple of Griffon Vultures. Botanising along the roadside we picked up *Ricotia cretica*, a neat little cruciferous plant (Cretan endemic) with lilac flowers and large bean-like seedpods, and the usual 'chasmophytes'. These are plants able to survive the harsh conditions of cliff faces and included *Verbascum arcturus*, flowering nicely, *Silene gigantea*, *Ptilostemon chamaepeuce*, *Stachelina petiolata*, *Brassica cretica* and *Scorzonera cretica*. Walter stayed near the vans and on an outcrop found *Tulipa cretica* in fruit, *Ophrys sicula* and *Cyclamen creticum*. Ian pointed out the very rare *Dittany Origanum dictamnus* (once heavily collected for Cretan mountain tea), growing along the cliff base.

Driving along the road towards Mirthios, *Phlomis fruticosa*, *Salvia fruticosa* (syn. *Salvia triloba*) and *Galactites tomentosa* all made yellow and purple splashes of colour along the roadside with Crown Daisy and many other colourful annual plants lining the ditches and disturbed ground near villages, where trees such as *Robinia* and *Cercis* were in flower.

We stopped at the base of the Kotsifou Gorge and everyone disembarked whilst Ian and Martin 'bunnyhopped' the vans towards the top of the road at the top of the gorge. As in previous

years typical chasmophytes (plants adapted to the shaded, windy and dry gorge sides) were seen, including the endemic grass *Sesleria doerfloeri* (with cottonbud flowerheads), the stately yellow spathes of *Arum creticum*, *Symphytum creticum*, *Ricotia cretica*, *Ptilostemon chamaepeuce*, *Staelhelina petiolata*, *Linum arboreum*, *Brassica cretica* and a host of small annuals. A perfect *Onosma graeca* plant was seen on the roadside at the top of the gorge. A Blue Rock Thrush was seen by Susan and Ian, and Crag Martins flew overhead and along the cliffs, and at the top of the gorge Martin spotted Cretan Festoon, Cleopatra, Speckled Wood, Scarce Swallowtail and many Holly Blue butterflies around the Ivy on the gorge wall.

Lunch was taken in a good local taverna at the top of the gorge, where main courses included octopus, saligaria (SNAILS!!), pork in tomato sauce, okra and 'mountain onions' - corms of *Muscari*, which are cooked and eaten here. From the taverna here the view towards the east took in Psiloritis and Spili, nestling below the high Kedros mountain range. Whilst looking towards the sea through the gorge, two Lammergeiers were seen circling high, a very good running total of sightings of this very rare bird.

Driving the vans through narrow back streets of Agios Ioanis towards woodland on the hill above was abandoned, as the larger Mercedes vans would not get through. The group instead walked to the woodland which was also an excuse to work off the large lunch. In this area the soil is derived from a sandstone and the shrubby vegetation includes *Arbutus unedo*, *Erica arborea* (in full flower), *Erica manipuliflora*, *Quercus pubescens* and cypress, with an under storey of *Cistus salviifolius* and *Cistus cretica* – all on long abandoned terraces. We stopped at a small stream where the track to the OTE mast ran, and the *Cyclamen creticum* was abundant on the woodland floor, with some *Asplenium onopteris* ferns along the stream banks with *Selaginella denticulata*, and *Rubia peregrina* and *Tamus communis* climbing through the shrubs. The *Cyclamen* looked in better condition than on previous trips. Retracing our steps back to the junction we followed the road up to a small chapel, easier than scrambling up through the woodland, where Margaret found some budding Violet *Limodore Limodorum abortivum*, and Ian the strange reddish parasitic plant *Cytinus hypocistis* subsp. *hypocistis* beneath the *Cistus*. Eventually at the top, about 100 *Dactylorhiza romana* were found amongst the goated terrace by the chapel, some small and going over and some fresh – including 2 pure creamy white specimens found by Walter. Serin, Goldcrest, Coal Tit and Greenfinch could be heard in the trees, and a Hoopoe flew over. We drove back to Spili past flowery roadsides.

After a quick hot drink at Heracles Rooms, and checklists, we went for another good meal at Maria and Kostas including Rabbit with Lemon Sauce. Despite the large lunch, evening appetites were surprisingly good! The Rastoni Rooms group drove back up to their accommodation, and again heard and saw Common Tree Frog in the pool, and also two Scops Owl calling to each other below, and a Barn Owl screeched in the night air.

Monday 7th April – Drimiskos Pass

A much more typical Spili morning; clear skies and the sun almost peeping over the high rock above the village. The day was pleasantly warm as we drove along the main road towards Agia Galini, stopping once for a look at a freshly dead Beech Marten on the road. The first main stop was on the road to Melambes, at a corner, where the slopes above and below looked

promising. *Orchis italica* and *Barlia robertiana* looked prominent and where these are seen other orchids are usually in the area. The slopes were explored and soon *Orchis papilionacea* subsp. *alibertis* and subsp. *heroica* were found, one going over the other coming into bloom. Also scattered amongst the phrygana were *Ophrys cinereophila*, *Ophrys spruneri*, *Anacamptis pyramidalis*, *Serapias bergonii* and *Ophrys heldreichii*. Other flowers made a colourful display with *Lupinus pilosus* in fine form with blue flowers, *Ranunculus asiaticus*, *Cistus* spp., numerous yellow, orange, red and white legumes, and small patches of *Aristolochia cretica*. The group managed to see most of the species seen on the slope and the descent was a little tricky, though the shepherd and his goats made light work of the pathway. Goldfinches called around, and Cretan Festoon butterflies were seen in the bright and warm sunshine. Moving on upwards to a junction the group explored the areas towards a small chapel. Below the road were extensive patches of the blue Lupin *Lupinus pilosus*. Some fresh *Orchis collina* and many *Serapias bergonii* were scattered throughout the grassy terraces, with *Trifolium arvense* and lots of other legumes. John and Fiona were puzzled over a Star of Bethlehem with no leaves but flowers – *Ornithogalum divergens* – and a few keyed out a rather large plant of *Ophrys cinereophila*, one of the ‘fusca’ or dull bee orchid group. Cretan Blue Lettuce *Petromarula pinnata* was flowering on a roadside wall. The picnic was taken at a small chapel where one side of the outside had been covered to make a very good picnic spot – with lots of Greek delicacies such as dolmades (stuffed vine-leaves), taramasalata, spinach pies and gigantes (big haricot beans in tomato sauce). The views from the chapel were spectacular, with the large Psiloritis mountain range, dusted with fresh snow, and large snow patches, prominent in the distance. After lunch we decide to drive to a good viewpoint for photo opportunities where Martin found some *Glaucium flavum* on the cliff and road. The next small stop was near the bottom where on the east side of the road over a slope were hundreds of *Ranunculus asiaticus*, with many *Orchis italica*, *Serapias bergonii*, *Ophrys sicula*, more very good *Orchis collina*, several vetches and *Cistus creticus* and *Cistus parviflorus*. Brown Argus and Common Blue butterflies flitted amongst the flowers and a Scarce Swallowtail was seen by Walter. An unusual *Ophrys* was found which was thought to be a hybrid between *Ophrys tenthredinifera* and something else – possibly *Ophrys cretica* subsp. *ariadne*.

The last stop of the day was at the high point south of Vatos where igneous serpentinite rock makes the area look like slagheaps, free of vegetation in places, on the road to Drimiskos, and a very good *Tulipa cretica* site. This was looking good with many hundreds (thousands?) of flowers on the black and greenish rocks. Some *Aethionema saxatile* and *Anthemis rigida* with lots of *Rumex bucephalophorus* made up most of the other species but here and there were good vigorous clumps of *Orchis pauciflora*. Some took small rocks which looked like serpent skin with green shiny scales. David found an intriguing bit of blue rock which Heracles thought to be Serpentinite contaminated with another chemical. On rocks across the road where more Tulips were found were a few *Ophrys sphegodes* subsp. *gortynia*, with small squarish flowers, found by Rachel and Walter. In phrygana vegetation back on the other side were several *Orchis sitiaca*, *Orchis collina*, *Orchis boryi*, *Orchis lactea* and *Orchis italica* (and with one *Orchis simia* a possible hybrid between the two was seen by Martin), and *Ophrys cretica* subsp. *ariadne*, *Ophrys tenthredinifera*, and *Ophrys sicula*. On grassy areas across the road and down the slope were some very good *Orchis sitiaca* and also good colour forms of *Orchis lactea*. *Ophrys bombyliflora* were found by Susan, and further down a pale yellow *Ophrys tenthredinifera* by Walter. Across the slumps in a grassy valley Margaret and David came back to the bus saying that there were hundreds of *Orchis italica*, and very photogenic they were too. But there were other things to

see and Martin found Eastern Bath White, which he managed to place on a convenient flower for photographing. There were lots to find here and driving down towards Vatos we passed more banks of orchids and through Aktounta were sheets of the small lilac flowered Lupin on slopes above. We drove back to Spili for self-catered tea and coffee at Heracles. After checklists we again ate in Maria and Kostas, for Dagos, Rabbit in lemon sauce and a surprise for Jenny, two delicious chocolate cakes to celebrate her birthday.

Tuesday 8th April – Psiloritis

Starting at 8.30am, in clear skies and temperatures rising we drove to Perama via Rethymno, and then the winding road to Anogia, a town high up in the mountain slopes on the north side of Psiloritis, through pleasant rocky valleys with trees and shrubs coming into leaf including the lovely *Styrax* with masses of small white flowers. Higher up the hills we had good views of Griffon Vultures riding the thermals. Stopping for a quick coffee at Anogia, we then drove the 20km up to the Nidha plain, to the Analipsis refuge, the end of the road before reaching the Idean Cave, a famous historic site and also supposedly the birthplace of Zeus in Greek mythology. Up and up, the road hair-pinned each way, through increasingly vegetation free ground. The first stop was a grassy northwest facing bank, for a recce to see what flowers may be out. Under the gnarled and goat nibbled topiared Kermes Oak, and the spiny shrubs of *Berberis cretica* were masses of *Scilla nana* (subsp. *albescens* here on Psiloritis), *Anemone hortensis* subsp. *heldreichii*, *Ranunculus ficaria* subsp. *chrysocephalus*, *Viola cretica*, and many leaves of *Arum idaeum*. A few *Romulea bulbocodium* were found, and even *Iris tuberosa* was flowering in places with *Iris unguicularis* subsp. *cretensis*. Amongst the daisies and few dandelions were very small plants in the open soil patches, including *Erophila verna*, *Lepidium hirtum* subsp. *oxyotum*, as well as *Lithospermum incrassatum*, *Myosotis incrassata*, *Alyssum* spp. and *Lamium amplexicaule*. An industrious Dung Beetle in the road was tenderly pushed to the side by David, and five Griffon Vultures were spotted in the air.

The second quick stop was a small goat-grazed doline (flat clay-filled sinkhole on the limestone rocks) for a place to picnic. The ground was awash with the fully open white star-like flowers of *Romulea bulbocodium*, with more *Scilla nana* subsp. *albescens* under bushes, and some *Lecokia cretica*. A couple of Painted Lady butterflies flitted around, whist Woodlark sang overhead as did the ubiquitous Chaffinch and Wren. The main stop was in a larger doline, near two small shepherds' huts by the road, where our picnic was planned. As the picnic was being laid out some exploration of the area had us finding perfect *Scilla nana* subsp. *albescens* amongst the spiny *Berberis cretica* bushes. Spiny *Astragalus* and *Acantholimon* cushions made looking in shady places, where the winter snow had not long disappeared, painful for some! We were rewarded by *Corydalis uniflora*, *Gagea chrysantha*, and about 50-60 *Crocus sieberi* subsp. *sieberi*, with deep purple and white tepals. Again *Erophila verna*, *Lepidium hirtum* subsp. *oxyotum*, and *Lamium amplexicaule* were common, and Ian showed some one of the rarest species on the trip. Something that was beneath our feet - an inconspicuous knotgrass *Polygonum idaeum*, like the familiar weedy species found in Britain but with huge woody rootstocks well adapted to severe weather and grazing. It grows only on the Nidha plain on Psiloritis, and rarely on the Dikti mountains, and nowhere else in the world. Woodlark, Wheatear, Red-billed Chough, Raven and Linnet were all seen or heard.

With the picnic finished we drove to the taverna at Analpisi, a bleak concrete building on the edge of the Nidha plain, to walk to the Idean cave. From here the views were spectacular in brilliant sunshine, with the grey rocky hillsides and mountains almost a moonscape, with only the flat Nidha Plain with barely green vegetation – snow had not long melted from here! Leaves of *Arum idaeum* were seen on the path (sadly not in flower as in 2004), as well as the leaves of *Lecokia cretica*. The *Prunus prostratus*, still had leaves to appear, and many of the smaller trees had some time before leafing. On the track up to the cave Martin saw Large Tortoiseshell, Cretan Small Heath, and pointed out Alpine Accentor, Ortolan Bunting, and all could see several Sardinian Warbler darting through the bushes. Most of the group reached the cave and on the shaded wall *Arabis alpina* was flowering, and, unusually, some *Phyllitis scolopendrium* was growing in the cave, one of its few sites on Crete. The return walk down was rapid, and on driving back down the road we stopped at shepherds' rounded stone-built huts, for photos and a quick look at a newly erected display board explaining the importance of the mountain for flora, making it one of the biodiversity hotspots in Crete.

The drive back to Spili was an hour and a half, but we arrived by 6.30pm, in time for refreshment and a shower. Supper again in Maria and Costas had us sampling Beef Stifado (stew), cheese and spinach pies and plates of fruit - welcome after a few days of rich food.

Wednesday 9th April – Festos, Gortys and above Agia Triada

The day dawned hazy and warm. At 9am we travelled south towards Timbaki, stopping first at a slumping area beside the road, good for orchids in previous years. The slopes here and all along the road to Agia Galini were masses of white *Ranunculus asiaticus*. On the slumps were a host of differently coloured legumes, with the brick-red Dragon's Blood, pink and white Spiny Sainfoin and numerous medicks, vetches, trefoils and clovers. Interspersed with these were *Bellardia trixago*, *Helichrysum barrerellii*, *Serapias bergonii* with *Ophrys cretica* subsp. *ariadne*, *Ophrys bombyliflora*, *Orchis italica* and *Orchis collina*. Some of these were going past their best but there were numerous colour and pattern forms of *Ophrys heldreichii* on recently burnt phrygana along a small stream, where huge *Orchis laxiflora* grew in wet flushes, *Ornithogalum narbonneense* and *Gladiolus italicus* on the stream sides. John found a perfect *Ophrys mammosa*.

The next destination was Festos, a ruined Minoan palace. Along the route we noted *Medicago arborea*, *Cistus creticus*, *Ricinus communis* and much *Chrysanthemum coronarium* var. *bicolour* (yellow and white). By mid-morning the weather had become humid. Driving to Festos through the sea of polytunnels and glass houses of the market town of Timbaki, ripe oranges were hanging off the trees and all sorts of vegetables were seen in the greenhouses. Most of the group wanted to visit the archaeological site, but a few wanted to explore the hot slopes on the adjacent hillside, which has always been good in previous years. The tinder dry conditions here were in contrast to those on the Gious Kambos – several *Ophrys* had already dried up. Goats or sheep had not long been over the hill, so what we did find was noteworthy including *Ophrys sicula*, *Anacamptis pyramidalis*, *Serapias bergonii*, and a few *Serapias orientalis*. A few fossils were found on eroded slopes, with perfect examples of scallops, shells and sea-urchin spines, which pleased Walter. Also on the slopes was a mass of different legumes, composites and some very small species that drew attention. These included *Linum strictum*, *Atractylis cancellata*, with birdcage-like fruit, *Centaureum pulchellum*, *Ononis pubescens* (a sticky plant with rich yellow

flowers), *Echium angustifolium*, *Crupina crupinastrum*, *Echinops spinosissimus*, *Onobrychis caput-galli* and *Onobrychis aequidentata*, all amongst the taller *Phlomis fruticosa*, *Anagyris foetida*, *Salvia fruticosa* and *Thymelaea hirsuta* plants. A few *Ebenus cretica* bushes were in full flower. Whilst exploring, we flushed three Chukar, which flew away, their chicken-like cackles echoing down the valley. Around the roadsides were masses of *Chrysanthemum coronarium* var. *bicolour* (yellow and white), *Lavatera cretica*, *Convolvulus althaeioides*, *Cerinthe major* and various thistles. Sardinian Warblers chattered noisily in the scrubby bushes, and Stonechat and Kestrel were seen.

After lunch at Festos we drove a short distance east to Gortys where some of the group wanted to see the engraved tablets which had old Cretan dialect writing (Law Code), and the interesting ruins. The drifts of *Chrysanthemum coronarium* on the way changed from white and yellow to pure yellow. In the ruins itself *Spergularia bocconeii* and *Linaria micrantha* were added to the list. Martin found Long-tailed Blue butterfly around geraniums near the café, and Hoopoe was heard calling. The open ruins across the road through olive groves with a yellow understorey of *Chrysanthemum coronarium* were riotously colourful without the neatness seen at Festos earlier. Eileen and David admired an octagonal church ruin. With the weather so humid and warm it was energy sapping but once going new enthusiasm gathered for the low hills above the ruins of Agia Triada, the 'summer palace' near Festos. The red-pink flowered *Ebenus cretica* (endemic to Crete) along the low cliffs along the road was photogenic, and a short stop at the top of the hill beside the road produced *Allium nigrum*, *Ornithogalum narbonense*, *Nepeta melissifolia*, pink forms of *Ranunculus asiaticus*, *Serapias orientalis* (some intermediate with *Serapias bergonii* and one *Serapias parviflora*), some huge *Ophrys mammosa* over a foot tall, *Ophrys cretica* subsp. *ariadne* and *Orchis fragrans*, still in bud. *Phlomis cretica* and *Osyris alba* were found on the hilltop, the latter smelling like fresh straw and dung – it is supposed to smell of sandalwood! Painted Lady and Clouded Yellow butterflies added to the scene. A short stop further down to photograph one fine-flowering specimen of *Dracunculus vulgaris*, its huge deep-red velvety spathe and mottled stem, truly dragon-like, and we were on our way to Spili, past flower-rich verges and hillsides. Supper at Maria and Costas included smoked pork, *stifado* and *saganaki*. In the evening Wynn heard a Cuckoo and later on Ian a Scops Owl calling to another.

Thursday 10th April – Amari Valley

The day dawned misty and cool, and at 7am Ian made sure that Tim, Jenny, Susan and John were safely in a taxi to catch their flight back to England at 10.30am. With the remaining 12 gathered earlier than usual we soon wound our way up on the road to Gious Kambos, taking the side road to Patsos. Near the gorge entrance roadworks made the group walk a little way to get there through pleasant olive groves where the spring birdsong was well underway with Cetti's Warbler, Serin, Corn Bunting as well as Chaffinch all singing. Walter found some *Serapias lingua* and Fiona a *Campanula tubulosa* plant on the roadside cliff. Into the gorge and the coolness of the vegetation and shade in the now hot sunshine was welcome. Near the top entrance a shaded area near the river had a picnic area near a chapel set in the cliff, with colourful icons and a pile of crutches outside – a place to cure oneself? *Viola cretica*, *Saxifraga chrysosplenifolia*, *Adiantum capillus-veneris*, *Lecokia cretica*, *Cyclamen creticum*, *Symphytum creticum* and *Arum concinatum* were all seen in the shaded areas, and *Petromarula pinnata*, *Verbascum*

arcturus and *Linum arboreum* flowering on the cliffs with *Stachelina fruticosa*, and *Coronilla valentina*. The small narrow gorge becomes a deep chasm in a short distance, extremely scenic, and characteristic gorge birds such as Jackdaws, a few Crag Martin (some collecting mud from the river), two Kestrels, and many others amongst the trees singing including Robin, Blue Tit, Wren and Grey Wagtail. On returning a Balkan Green Lizard was disturbed on the road, and near the vans Wall Brown, a Hummingbird Hawkmoth and Scarce Swallowtails were seen. The route to the Amari valley took us through wonderfully scenic valleys where the trees and shrubs were just coming into leaf and a hazy view to Psiloritis. A few Cleopatra butterflies and a Turtle Dove was seen on the way, and on sandstone hills *Cistus salviifolius*, with *Erica arborea* was flowering.

Into the Amari Valley past Kalogeros we stopped at a small Byzantine chapel, which was open. In the fields, lots of *Allium nigrum*, *Scandix pecten-veneris*, and a rough patch in a damp field had *Orchis laxiflora*, with *Ophrys heldreichii*, *Serapias lingua* and *Anacamptis pyramidalis* on a bank, and a Bonelli's Eagle showed off its aerobatics for Wynn and David.

Our picnic stop was a phrygana slope east of Fourfouras, luckily as yet not cultivated, fertilised or sprayed, yet even here parts are being nibbled away. As we parked the vans Martin spotted a Red-Backed Shrike, obliging enough to stay for a look through the scope. Near the top of the area, on flood pans, hundreds of *Moraea sisyrinchium* were in bud but as the picnic was eaten they were out everywhere. Orchids were rather sparse but we saw thirteen species including *Orchis quadripunctata*, including a pure white one, *Orchis italica*, *Orchis papilionacea* subsp. *alibertis*, *Orchis collina*, *Ophrys tenthredinifera*, *Ophrys heldreichii*, *Ophrys sicula*, *Ophrys phrygana*, old *Ophrys fusca* agg. and in a wet flush *Orchis laxiflora*. The views to the snow-capped Psiloritis at close range were spectacular. Before lunch finished Walter and John stalked a calling Cretan Edible Frog in a pond, and Painted Lady and Clouded Yellow butterflies were common.

A phrygana slope looked promising. Again *Orchis italica*, *Orchis papilionacea* subsp. *alibertis*, *Orchis collina*, were found as well as *Ophrys bombyliflora*, and a good patch of blue *Lupinus pilosus*. The *Moraea sisyrinchium* had a deeper violet colour form here. A couple of quick photo stops and we wound our way through high villages a short distance to the Gious Kambos, on the south side of the Amari Valley. We arrived back in good time for tea at Heracles, or some shopping. Supper at Maria and Costas' was simple and hearty again and included horta, briam (vegetable stew), green beans and sausages. In the warm moonlit night, two or three Scops Owls were heard in the olive groves below Spili, and the Rastoni 'gang' paid homage to the three or four Common Tree Frogs noisily calling to each other in the murky swimming pool.

Friday 11th April – Kotsifou and Plakias

A hot day promised so a trip to the coast was in order. We also welcomed Diana and Frances who were joining us for the second week. A little to do inland first though so we soon arrived at Armeni Minoan cemetery, an archaeological site of half buried tombs under a flowery oakwood. *Gagea graeca* and many legumes were growing in a jumble with the red form of *Ranunculus asiaticus*, *Osyris*, *Rubia peregrina*, and several orchids including fresh *Ophrys heldreichii*, *Ophrys sicula*, many *Serapias bergonii* and *Serapias lingua* with a possible hybrid between the two. Lizards were seen scuttling off rocks and a large Cat Snake was seen

disappearing down a hole. Though Chaffinch was vocal it was surprisingly quiet for spring – the main migration just hasn't happened yet. The return brought us to the hillside of Viglotopi. Beside a small spring below a chapel, Ian was pleased to see that the flat area with wet pans had not been affected and the *Isoetes* (a small spiky fern ally with a rosette of leaves) was present. In past visits this had been recorded as *Isoetes histrix* but it is more likely to be *Isoetes duriei*. Lots of bright purple-pink *Orchis laxiflora* were looking healthy with two huge patches of *Serapias lingua* below, and much *Oenanthe pimpinelloides*, the white umbel so frequently found in damp areas. *Orchis italica*, *Orchis papilionacea* subsp. *alibertis*, *Ophrys heldreichii* and *Anacamptis pyramidalis* were all found. In a small area near the wet areas, Ian found one perfect *Ophrys candica*, then another and another! Eight plants were found and much admired, and compared to the *Ophrys heldreichii* growing nearby. As we were looking David watched three Bonelli's Eagle perching and riding the thermals on a rock outcrop.

Feeling pleased we drove towards the Kotsifou Gorge via Agios Ioanis. Not far from Agios Vassilios, we saw Rosemary - who we had seen on the first day – photographing orchids. A quick stop to swap sites and notes, and a good look at the *Orchis simia* which Rosemary was photographing, we were soon at the top of the Kotsifou Gorge. Some fresh *Arum creticum* were photogenic, and the group walked down to the little chapel carved into the rock. Ian showed Diana and Francis the special plants of the gorge including *Verbascum arcturus*, *Symphytum creticum*, *Brassica cretica* and *Linum arboreum*, whilst Martin saw a dragonfly – a *Cordulegaster* sp.

With the picnic calling we drove through Plakias to Souda beach, the far western end of Sweetwater Bay where some fine endemic Cretan Palm (*Phoenix theoprasti*) trees grow. Against the cliff the palms were set off beautifully and after paying homage to one of the rarest palms, some beach-combed whilst others enjoyed the sunshine and hot afternoon sun. After another delicious picnic we stopped in Plakias for a quick refreshment stop and a chance to buy wildflower books. The rest of the afternoon was spent at the far southern end of the beach with a walk along the Kakomouri headland.

The large smooth cliff looming up on the bay's western side was impressive and gave some of the geology experts much to discuss. On the back of the beach, the sands were pink with *Silene colorata*. *Muscari spreitzenhoferi* was growing together with *Cakile maritima*, the leaves of *Pancreatium maritimum*, *Thymelaea hirsuta* and *Euphorbia paralias*. Some of the group stayed around the beach and found a few fossils and interesting shells and rocks. Along the path at the base of the cliff, the vertical rock face, hundreds of feet high and, although looking man-made is a natural feature, where a Blue Rock Thrush was seen with nest material circling us – we had disturbed it from its endeavours. Only one plant of *Verbascum arcturus* was flowering, but further along drifts of the white flowered form of *Ranunculus asiaticus*, *Gagea graeca* and a few *Cynoglossum creticum* were found. Towards the end of the path some leaves of *Aristolochia cretica*, the food plant of the Cretan Festoon butterfly, and several were flying along with Southern Comma and Painted Lady. Near the small tunnel entrance at the end of the path, some very fresh *Tulipa cretica* was growing, and on the way back *Ophrys heldreichii* and *Ophrys sphegodes* subsp. *cretensis* were found. *Ophrys episcopalis* was also found amongst the *Euphorbia dendroides*, *Asphodeline lutea*, *Sarcopoterium spinosum* and *Euphorbus acanthothamnus* coastal phrygana. Walking back the view across the bay was wonderful. We were soon back in Spili for a tea or coffee at Heracles. After checklists we tried the Panoramios taverna just south of Spili, which was OK but didn't have the atmosphere of Maria and Costas'!

Saturday 12th April – Gious Kambos

The morning dawned clear and sunny, and the promised heat arrived today with temperatures in the afternoon around 33° Celsius. The area to be explored was only a few miles around Spili, towards the hilltop village of Mourne, near the peak of Xiron (904m), and the Gious Kambos. The sites to be explored have always been good for orchids. The first stop is at some ultrabasic green-coloured serpentine rock outcrops, with limited vegetation cover. Immediately we found one *Neotinea maculata*, a few *Orchis pauciflora* and several *Orchis sitiaca*, an 'elongated' open flowered orchid with green centres to lateral sepals. The scrubby hillside also had hundreds of *Orchis simia*, growing with *Orchis italica* (and a possible hybrid between the two), *Orchis lactea*, *Orchis boryi*, as well as *Ophrys episcopalis* and *Barlia robertiana*, *Serapias bergonii* and *Serapias lingua*, and a suite of species typical of these outcrops including *Fumana arabica*, *Cistus creticus*, *Cistus salvifolius* and *Hypericum empetrifolium*. Several *Orchis* plants looked like *Orchis anatolica*, but the range with *Orchis sitiaca* was too great to say if we had them for definite. Back near the vans Walter found *Atractylis gummifera* for the list.

A short drive took us to a small cemetery where a small church had a range of interesting but rapidly degrading frescoes. A few interesting weedy species grow amongst the graves including *Salvia verbenaca* and *Scrophularia lucida* and on the north side of the chapel wall the small fern *Anogramma leptophylla*. Goldfinches and Stonechats were around and a Bonelli's Eagle was seen hunting over the hillside. Only a little further along the road many species were seen on slopes either side of the track. *Orchis pauciflora* was in profusion, its cream and yellow blooms contrasting nicely with the darker purple *Orchis boryi*. *Orchis lactea* was still fairly fresh, with *Aceras anthropophorum*, *Ophrys tenthredinifera*, *Ophrys cretica* subsp. *ariadne*, *Ophrys sicula* and *Ophrys phryganae* – actually looking different from each other to see the difference – and *Ophrys heldreichii*. Only a short way along, where the hillside had been fenced and some trees (very stunted) had been planted, was the *Orchis provincialis* site. The cream flowers and purple-spotted leaves were well contrasting with adjacent *Orchis pauciflora*, and were in perfect condition. Some opted to walk down the lane to the picnic stop, beside a small chapel, and on the way many other orchids were seen, including huge *Ophrys iricolor*, with stems a foot high and robust *Orchis simia*.

The picnic was laid out and included the favourite treats. After the picnic the rocky phrygana around the chapel was explored and some huge *Barlia robertiana* plants were growing in the open ground. Ian looked for *Ophrys spruneri* but could not find it in the lush growth – the small terraces and rocky areas were full of wild flowers, with many *Orchis italica*, no doubt helped on by the heavy rains the week before. Along a small cobbled donkey track other delights were found – *Thymelaea tartonraira*, *Anagyris foetida*, more *Ophrys iricolor*, *Ophrys episcopalis*, *Aceras anthropophorum*, the hybrid between *Orchis quadripunctata* and *Orchis pauciflora* (*Orchis* × *pseudoanatolica*), *Centaurea idaea* and the mix of *Salvia fruticosa*, *Calicotome*, *Asphodeline lutea* and *Euphorbia acanthothamnos*. A Queen of Spain Fritillary, and Swallowtail flew by and numerous lizards, including Balkan Green Lizard, bejewelled with green scales, scuttled off rocks at the first sight of feet. Eighteen species of orchids were seen here in this small area. After the picnic, we stopped to admire the *Ophrys iricolor*, and two perfectly white *Orchis simia* – tipped off by a walking group who saw us at lunch.

The afternoon heat was getting wearisome, so some wanted to be dropped back in Spili for a

last half free day, and the rest went for tea and beer at Heracles. After refreshing drinks we drove up to the Gious Kambos to see what a week had done to the flowers – we were overjoyed to see so many had advanced, including many *Orchis italica*, *Orchis boryi* and *Orchis pauciflora*, with several *Ophrys iricolor*, *Ophrys fusca* subsp. *creberrima*, *Ophrys cinereophila*, and intermediates between, probably hybrids, and *Aceras anthropophorum*. A few *Orchis tridentata* were found. The orange *Tulipa doerfleri* was also more advanced, many being found in fallow fields. The time of afternoon was also just right for thousands of *Moraea sisyrinchium*, along tracks, in fallow fields and on rocky phrygana. The mix of colours will be unforgettable. Pleased to see so much, we explored the area behind the chapel to see if the *Fritillaria* had advanced. Walking up the slope many of the species listed were found with *Neotinea maculata* in small numbers. Near a small rocky outcrop several perfectly formed *Fritillaria messaniensis* subsp. *sphaciotica* were found flowering, some with the dreaded red lily beetle! Pleased to see so much we headed for Spili, and after checklists we were the first customers into Heracles new shop of Cretan produce. Tonight's supper was back at Maria and Costas again, where saganaki was a huge hit. The last night in Spili was truly Mediterranean with temperatures not going below 21°C, and whilst the Rastoni group boarded the bus Walter spotted Gecko up Heracles Rooms wall and Scops Owl piped in the night.

Sunday 13th April – Spili to Anapoli

We woke to brilliant sunshine and clear skies, with the promise of another hot day. The day is a long one with a drive from Spili to Anapoli, our base for two further nights, high above Hora Sfakion in the Lefka Ori (White Mountains). Along the route, the coastal road is awash with colourful weedy species including the yellow Crown Daisy, red poppies, purple thistles and blue lupins. The usual stop at the small coastal settlement of Frangokastello, a very good spot for birders in previous trips, will be the return journey, as Poppy, the hostess at Anapoli, informed us that the road through the Imbros Gorge would be closed for a week and our chance to see flowering *Paeonia clusii* in a small valley just off the Imbros Gorge, since Owen Mountford found some on a trip he was on, would be lost. So this was our goal for the morning. Flowering Paeony is something elusive on previous trips (though it has been seen flowering well in the Samaria Gorge in 2004), with plants usually in bud. We could see why the Imbros road would be shut for a week as it was ripped up in places, and road widening and small tunnels being built indicated a major project. We drove to the first taverna for mountain tea (*dictamos*), sweetened with honey, and coffee. Someone noticed that in a pot on the taverna floor was a perfectly flowering *Paeonia clusii*, drawing everyone to it for photos. It was promising that the flowers at the site would be open. After the refreshments we drove back down the road to the small valley. The road working project appeared to be taking scree from the valley sides (of which there was much), but the gorge sides looked promising so the group started walking up in what was now hot humid weather but with a nice breeze to temper the heat. Ian and John led the way looking for suitable habitat but after a good 30 minutes were not finding any, even leaves. There were plenty of Dragon Arum leaves, and in places some *Aubretia deltoidea* and *Ranunculus creticus* and a small patch of flowering Arum *idaeum*. With no luck they returned only for David to say that eagle-eyed Rachel had seen some flowering plants! One perfect flower was admired and made Margaret's day. Flushed with success we opted to have the picnic where we were and soon polished off most of the fresh dips, salad, cheese and salami.

We then drove to Hora Sfakion. From here the road to Anapoli is precipitous and twists with breathtaking hairpins, but there again were major roadworks going on with smooth tarmac, double lines (we passed the lorry line-painting the road) and new crash barriers. However this stopped about a quarter of the way up and soon we were on dirt track where the previous tarmac had been lifted. Eventually we reached the small high plain with its isolated settlements, pastures and olive groves, nestling in the shadow of Pachnes (2453m), which this year had just a little snow left, though they had had a lot of snow in the winter, even down to Anapoli. With all safely offloaded at the hotel cum local hostelry, and welcomed by Poppy, the owner, rooms allocated and refreshments had, we drove along a short road to the Aradena Gorge.

The small now mostly deserted, settlement of Aradena is reached by crossing a box girder bridge, which spans the very narrow and deep Aradena Gorge, and as we rumbled over the wooden sleepers only the brave looked down! Before this bridge was built Aradena was reachable by a donkey track (calderimi) that zigzags into and up out of the gorge and almost all opted to do this old walk. We crossed the bridge and gathered to explore the village. More goat fencing had been erected but we managed to wind around the small cobbled streets through the ruins, where a fine Dragon Arum, fully out and smelling of rotten meat belied its exotic red and black velvety inflorescence. Some people opted to walk down into the gorge whilst others potted around the village. Before snaking our way down, Hoopoe and Black Redstart were heard calling. The walk down is worth taking and if done at one's own pace, easily managed. Despite the presence of many goats we saw several species on the cliff sides, such as *Verbascum spinosum* (endemic to this part of Crete), and along the track, *Anchusella variegata*, *Silene cretica*, *Delphinium staphisagria*, *Arabis verna* and *Sedum creticum*. One plant of *Serapias orientalis* was seen, as was only a few *Orchis quadripunctata*. In a small cave on the track, cooler on the shady side, a huge dangling plant of *Verbascum arcturus*, seen in 2004, was still dangling! Once at the bottom, the cliffs loomed around us and if we had had more time we could have walked down the gorge to the sea. On the cliff base the aromatic furry-leaved *Origanum microphyllum* was frequent, with *Cyclamen creticum*, *Symphytum creticum*, *Linum arboreum*, *Stahelinia fruticosa*, all on the gorge sides, and *Geranium lucidum*, *Scrophularia peregrina*, and *Saxifraga hederacea*. By now it was hot and humid (30°C) and the walk up the other side seemed daunting but taken at an easy pace we all managed to walk up relatively easily. The views across the gorge to the bridge and back to the calderimi on the other side were breathtaking. Once the level area was reached, at the top of the track small clay pans between the rocks were covered with *Gagea graeca* and *Ornithogalum exscapum*. There was much *Asphodeline lutea* and *Asphodelus aestivus* amongst the rocks, so that everywhere you looked were yellow and pink-white with it - a sign of serious over-grazing. The drive back to Anapoli passed a good patch of *Ricotia cretica*, and a Cretan gentleman whose face could have been carved out of the local rock!

Supper from Poppy is always a true taste of the area and she prepared her special (goat!) kid (the juicy meat fell off the bones) and stuffed peppers and tomatoes, and with a greek salad with feta cheese so mild it melted in the mouth, finished off with mountain tea, Greek coffee and local wine - which once you were used to it it was pleasant. And as the evening was warm we ate outside, but gathered a small crowd of locals who may have been watching us, the football on TV through the window, or the world go by! As dusk descended, a Scops Owl started calling, and in the night at least five were calling. The calm, clear warm night looked good for the next day's trip into the snow on the slopes of Kakovoli (2214m, though we would

be going to about 1800m).

Monday 14th April – Anapoli

Another hot day so after a breakfast of local Anapoli yoghurt and honey, and lots of coffee we walked the short distance south along the road through the old city of Anapoli, mostly ruins, to the lookout and small church on the high point of the cliffs overlooking the coast and the charming fishing port of Loutro. A few *Ophrys phryganae* was growing between rocks and sheets of poppies along old terraces luminous in the morning sun. Several Erhardt's Wall Lizards, with blue-green bodies, scarpred into crevices, Alpine Swift reeled above, and Martin saw Cretan Grayling amongst the tall spikes of golden Yellow Asphodel, prominently growing from between the weathered rocks. Loutro looked quiet and definitely a place to visit for a peaceful holiday. We returned through modern Anapoli passing Roman Nettle, Musk Storksbill, and a multitude of colourful weedy roadside species, lush with recent rains. With bread collected we gathered to drive the track up to the high part below the mountain of Kakovoli. Though Anapoli and the White Mountains (Lefka Ori) had had much snow in the winter, periods of heat had reduced the remaining snow patches on the highest parts markedly and it seemed that much had gone in the week since we could see the mountains covered in snow from Spili. The track, visible from Anapoli, looked clear.

Before we ascended Ian wanted to check a site for *Ophrys spruneri*, which was seen alongside the road on a bit of phrygana vegetation in 2005. We hadn't seen good specimens which when fresh have the most wonderful combination of a rich chocolatey brown labellum, with bright blue markings and a two-tone pink and green lateral sepals. A short look and Ian realised that the areas had become lush with fertiliser, but an area of phrygana vegetation enclosed by a small barbed wire fence, no more than 50m square, presumably fenced for a reason other than protecting orchids from goats and sheep, had a magnificent display of almost 200 plants of *Ophrys spruneri* – some a foot tall and with fresh flowers. Further searches amongst the vegetation revealed *Orchis papilionacea* subsp. *heroica*, *Orchis collina*, *Ophrys sicula*, *Ophrys cinereophila*, *Orchis italica*, *Serapias bergonii* and *Serapias parviflora*. Looking outside of this little oasis, the adjacent flower-free olive groves and fields lush with weed-free barley seemed so sterile. Once many photos were taken, we drove the rocky track zigzagging up the slopes to Kakovoli and soon everyone became used to the potholes and bumps and enjoyed the fantastic views down to Anapoli and beyond.

The tree layer changed, with *Pinus halepensis* ssp. *brutia* and *Cupressus sempervirens* becoming the main trees as we climbed, with the odd *Acer sempervirens* just coming into leaf. The *Quercus coccifera* had been bitten into extraordinary shapes – bonsai and topiary - courtesy of goats, and on the return journey photos were taken of various ones which Eileen likened to a couple dancing. On the way up we saw Lammergeier, Griffon Vulture and Hobby, and the odd Black-eared Wheatear darted on roadside rocks. A short stop in a small gully where large clumps of *Paeonia clusii* grows was rewarded with good plants in bud, but no flowers. In the stony ground *Cerastium scaposum* was everywhere, with a few *Gagea chrysantha*, one *Muscari neglectum*, *Helianthemum salicifolium* and *Myosotis incrassata*. As we neared our destination, we passed some extremely old *Cupressus sempervirens* trees, with massive trunks but 'flattened' against the rocks, as was some *Juniperinus oxycedrus* subsp. *oxycedrus*. Some of these trees have

had limbs cut off, coppiced for firewood. In a high valley between Kakovoli and Troharis (2410m) a melting snowdrift blocked the track. Immediately out of the vans lots of *Crocus sieberi* subsp. *sieberi* were flowering in the trickling meltwater from the snowdrift, some with brilliant purple markings on outer tepals, *Scilla nana* subsp. *nana* (which has bluer tepals than subsp. *albescens* found on other Cretan mountain ranges) growing between the *Berberis cretica* bushes, and small areas of *Corydalis uniflora*. The prickly smaller hummocky shrubs of *Astragalus angustifolius* and *Acantholimon ulicinum* together with *Juniperinus oxycedrus* subsp. *oxycedrus* made walking and kneeling a hazardous affair! John and Walter found flowering *Prunus prostrata*, *Draba cretica* and *Veronica thymiifolia*.

The picnic was laid out and in the brilliant sunshine and warm temperature the sense of just being there was invigorating. A few Alpine Choughs flew over and Chukar was heard. Some very elegant Black-eared Wheatears were seen and heard, as well as Short-toed Lark, Rock Bunting and Wren. After the picnic some walked down the track to take more photos.

The landscape is essentially a high desert, and though it gets lots of snow much of the moisture is either frozen or evaporated as it melts. Many species found here have adapted to exploit the short periods of available meltwater or have features that reduce moisture loss, such as having huge taproots, small, resinous leaves or dense hairs. They have also adapted to continuous grazing and one of these is *Anchusa caespitosa*, which looks like a big flat dish – the flattest of plants! We are usually too early to see the brilliant blue flowers, but two plants in an area that Martin remembered seeing in 2002, had a grand total of two flowers on one plant and nine on another! These were brilliant gentian blue and well worth a photograph. Other species flowering included the lilac *Aubrietia deltoidea*, yellow *Ranunculus subhomophyllus*, *Allysum* spp. and white *Lepidium hirtum* subsp. *oxyotum*. The heavy grazing was evident and goats nibbled in the slopes around us. The geology was interesting with many crystallized rocks and strata exciting David.

The drive down was scenic, seeing all the views we had missed as we drove up, and watching Griffon Vultures below us circling on the thermals and two Bonelli's Eagle were seen. By now it was 4pm, so everyone went for teas and cold drinks at Poppy's, and with checklists organised for 7pm, most had a chance for a nap or just some chill-out time. Supper of rabbit, and a courgette and potato bake (topped with feta cheese) was had outside again, but the evening was markedly cooler – at last the temperature by day was forecast to be a more bearable 24°C for our drive to Omalos the next morning. Something that was noticeable was the absence of several birds that we had seen on previous trips – no wagtails, flycatchers, even swallow was absent. Migration just hadn't happened yet, so the planned early morning bird walk was postponed until we got to Omalos, which had had some good species in previous years.

Tuesday 15th April – Anapoli to Omalos

The day dawned cooler than the day before and the visibility had improved considerably giving fine views of Lefka Ori from the hotel. After another delicious and simple hearty breakfast from Poppy, we loaded the vans and headed to Hora Sfakion. Zigzagging down the road we had great views towards eastern Crete along the coast. The road seemed shorter going

down than up and not as scary as some previous trips, mostly as the grading has made it much wider. Crested Lark and Wheatears were seen beside the road and near the bottom *Ebenus cretica* was in full, glorious flower. We headed to Frangokastello, at the tip of a wide, low coastal plain. As we arrived Walter spotted an Osprey close-by, which seemed to drop a fish as it flew over. With the magnificent snow-capped Lefka Ori in the distance, we had a leisurely time to explore the beach, marshes and the impressive, but empty square fortress built in 1371 to stop pirates. On the beach it was noticeably quiet for birds, but a Ruff was seen, as well as Swallowtail, Common Blue and Clouded Yellow butterflies. In the sandy waste areas around the fortress *Glaucium flavum* flourished and many yellow-flowered composites, and small white, pink and yellow annuals coloured the ground. In a ditch near a marshy area with sedges, rushes, *Nerium oleander* and *Myrtus communis* (which had recently been burnt) a Terrapin was sunning itself, and dragonflies and damselflies were zooming around. A small flock of Night Heron was seen in the distance. This area appeared to be drier this year, perhaps because of drought, and this is a site where *Ophrys apifera* was seen in 2004, and this was searched for diligently by the leader, and at last two plants were found, one with a flower almost open, much paler than the pink ones found in the British Isles. Clumps of flowering *Narcissus tazetta*, with *Orchis laxiflora* and *Ophrys heldreichii*, and many *Serapias lingua* were found. Some perfect *Arum concinatum* were also seen. Along the beach was *Salsola kali*, *Medicago marina*, *Silene colorata*, *Eryngium maritimum*, *Parentucellia viscosa*, *Euphorbia paralias*, *Echium arenarium* and *Silene sedoides*, and Ian found some of the Neptune's Balls (small fibrous balls formed by the motion of the sea on the old roots and stems of *Posidonia* plants). With a quick break for tea and coffee in a local taverna, we drove the longer route to Omalos via Rethymno, as the Imbros road was closed the day before. Just a little way along the road, over thirty Dragon Arum plants were flowering, some a metre high with huge spathes and a disgusting smell. The coastal road takes in some super scenery, and drifts of *Chrysanthemum coronarium* along the roadside is delightful. We stopped at Rodakino to take a photo of the small packhorse bridge in the gorge, and soon made our way to the Pirogos taverna, on the main Spili-Rethymno road. The views of Psiloritis along the valley from the taverna were pin-sharp, and as we admired the view, the taverna efficiently served up a delicious light lunch, including a third variation of saganaki – melted cheese and tomato which was very good. Diana was brave enough to try saligaria (snails – the ordinary garden ones we get at home), which were good. Whilst we were eating we had good views of Stonechat.

The drive to Agia Reservoir took about an hour passing hillsides of white-flowering *Cistus salvifolius* south of Rethymno, and along the coastal Rethymno to Chania road, *Oleander* was in full bloom with Spanish Broom, and False Acacia, a pink, yellow and white combination. The views of the Lefka Ori again were wonderful. We soon arrived at Agia Reservoir to the sweet smell of orange blossom from nearby citrus groves. Since 2005 (and 2006) the dam area and taverna area had been cultivated a little more, but the bank of Mediterranean flora reported as being sprayed in 2006 appeared to be intact with *Lavendula stoechas* and *Cistus creticus* in full flower. The lake itself was rather quiet on birds with the most abundant being hundreds of Coot, Moorhen and Little Grebe which were grouped, as were a large flock of Yellow-legged Gulls. Swallows, Red-rumped Swallows, House Martins, Swifts and Alpine Swifts swooped their aerobatic displays. Two pairs of Shoveler and one of Garganey were seen on the open water and a Little Egret flew into the reeds. Along the water's edge of the dam, Martin spotted an American Bullfrog, and on the dam a couple of Balkan Green Lizards kept Walter occupied for several minutes and some good photos. Whilst having another coffee and a delicious

mountain tea in the swish taverna on the dam, Ian peered under the taverna pond pump to find two pale brown Common Tree Frogs perched on pipes. The combination of the dark blue water of the reservoir, the Lefka Ori with snow and the bright blue sky with wispy clouds made a stunning photo opportunity.

We were soon on our way to Omalos (1100m) and as we climbed into the Lefka Ori from the northern side, the hillsides were flowery with *Cistus*. At Lakki, a village perched on a steep hillside, almost Himalayan, we passed an unusual memorial (three soldiers standing one on top of the other representing Grandfather, Father and Son). Through rocky hills and small plains, we climbed until just over a ridge the small mountain plain of Omalos came into view, like Shangri-la! We drove past our hotel and around the plateau past fruit trees laden with blossom to see how the *Tulipa bakeri* (now considered a variant of *Tulipa saxatilis*) was looking in the small fields in the plain. In recent years local farmers have been fencing off the fields, to keep in grazing stock and creating small fruit orchards, making it difficult to range around, and this year was no exception. However some of the best flowers of the *Tulipa bakeri* were in these compounds – away from grazing animals. Numbers were much greater than in 2005, and after a brief stop to photograph the tulips with some purple *Anemone coronaria* in the evening light, we checked into the Neo Omalos hotel. Just outside in pots there were more *Paeonia clusii* flowering! By now everyone had had a long day and was glad of a hot shower and a cooked meal of pork stew and vegetable soup.

Wednesday 16th April – Omalos plain and path to Gingilos, Agia Irini Gorge

Most of the group started off for an early birding trip around the Omalos plain at 7am, in cool but brilliantly clear air – visibility was exceptional. The short drive around the plain aimed for small pools on the southwestern edge where good numbers of migrants had been seen in previous years. As in previous days it was still thin for migrants but there were good views of Wood Sandpiper, Corn and Cirl Buntings, Black-eared Wheatears and Woodlark.

Breakfast was welcome and once warmed up we headed for the head of the Samaria Gorge, where the entrance, (Xiloskalo = wooden staircase) to the gorge takes walkers down into the gorge 3000ft in one mile. We passed masses of *Tulipa bakeri* we had seen the previous evening closed in the chilly morning air. Unfortunately the gorge was not yet open so we all parked at Xiloskalo and started along the path to one of the peaks above the gorge to Gingilos (2080m). As we were due back for lunch at the Neo Omalos, only part of the walk was completed. The snow had disappeared from the first part of the walk, where in previous years we had had large patches to negotiate. However some of the later flowers were in full bloom such as patches of *Aubretia deltoidea*, *Prunus prostratus* and a few *Orchis pauciflora*. Tipped off by the AGS trip leaders at breakfast, we soon came to a splendid spike of *Orchis prisca*, beside the path and everyone managed to see it. Further along a snow gully had wiped out a section of track so some of the group decided to return down, where they either potted around the lower area or walked back along the track to the hotel. Some drove around the plateau and checked out more areas of tulips. The rest carried on up, where only a few *Crocus sieberi* subsp. *sieberi* leaves remained on the path, and *Cerastium scaposum* was everywhere. We started seeing some good birds including close views of Crag Martin, several which dodged around us, Alpine Swift,

Sardinian Warbler, a very obliging Blue Rock Thrush which perched on a tree and showed off its blue plumage, and the holy grail – a Lammergeier soaring high and twisting enough to give us good views of the wedge-shaped tail and buff-coloured head. We carried on to where the path at the top slowly descends and Ian, Fiona and John carried on to under a natural arch almost to the spring, where the views into the gorge were truly spectacular, especially as the visibility was perfect and we had perfect blue sky and an intense light. Only near this area was *Scilla nana* subsp. *nana* seen between the *Berberis cretica* with *Anemone heldreichii*. The three returned, seeing *Draba cretica* on the way, and passing a Polish walking group, and soon caught up with the other three who had waited near the steep washed out path. We all gingerly descended and soon were down to the car park, where again as in 2005, several school buses of Greek teenagers had offloaded (more interested in each other than the gorge) and once through the rowdy crush for a quick coffee in the small café, headed back for lunch at 1pm.

After a quick lunch of omelettes, saganaki and orange juice we took the opportunity to photograph more *Tulipa bakeri* but as we passed the best field, a farmer was in his pick-up truck watching over some sheep – farmers here are not happy when you enter fenced fields – so we pushed on to another area where there was a huge display of *Anemone coronaria*, in purples, lilacs, pinks and even a couple of red ones. Wynn also found a white one! Of course there were also the tulips, in pinks and deep pinks, which had opened even more in the sunshine. A Green Toad was seen by Martin, and was duly photographed by many.

The last stop was the Agia Irini Gorge, just west of the Samaria Gorge. The road to Agia Irini is on the way to Sougia, on the south coast of Crete, and the road to it in places reminds one of Wales – with slightly less rain! This western side of Crete gets more rain and is therefore greener and lusher than eastern Crete. Indeed on the return, we stopped on a shady road bend where a spring had *Primula vulgaris* with *Cyclamen creticum*, under Sweet Chestnut trees. The Agia Irini gorge starts at Agia Irini village and is well signposted. As we had packing and final checklists to do that evening, we only did a part of the gorge, but it was enchanting, with masses and masses of *Cyclamen creticum* under pines in shade, and also the pale pink var. *pallida-roseum* beside the river. On the sunlit side *Lithodora hispidula* was flowering with lovely blue flowers. Martin saw Short-toed Treecreeper, and a few Speckled Wood and Cleopatra butterflies flitted in the sunny glades between the freshly green Plane trees beside the cools rushing waters of the rapid stream. We walked further down and eventually the stream disappeared to a small trickle. For some this gorge was the best on the trip, and though we didn't see as many chasmophytes as others previously, it was indeed enchanting. A quick refreshing drink in a small taverna back at the entrance of the gorge, where the owner was playing a selection of taverna music and songs (loudly) and we drove up to Omalos (with the quick stop for primroses), for one last whiz around the plain before early checklists and dinner. At last we had wagtails – four Yellow Wagtail (subsp. *feldegg* with black heads) were seen on the small pond, but no one needed to stop for the glorious patches of *Tulipa bakeri*, and simply enjoyed them from the bus instead.

A final dinner of good mountain food, and Ian and Martin appreciated everyone's kind vote of thanks for leading.

Thursday 17th April – Omalos to Chania and home!

A very early flight (7.20am!) so we left Omalos in the dark (about 4am) and wound our way to Chania. We arrived in good time and said farewell to beautiful Crete. The flight to Athens was uneventful and soon we were winging back to our homes with the memories of Crete in our minds – Lammergeiers, orchids, orchids and more orchids, fritillaries, Paeonia clusii, the lovely hot weather, Poppy's kid stew supper, Cretan hospitality, crocuses and scillas, Chukars and Choughs, and a swimming pool full of calling frogs! We could remind ourselves of the holiday with our homeward bound samples of honey, olives, olive oil and fruit preserves. A wonderful holiday with a great group of people – roll on 2009!

Systematic List Number 1 Flowering Plants and Ferns

– compiled by Ian Bennallick

Note:

- The following list indicates the individual days a plant was noted, e.g. 1, 3, 5 or 2-8.
- Some species have a very brief “pen portrait” of each species is made in square brackets [] as an Aide-mémoire to remind us which species was which amongst the riches of the Cretan flora. (Use has been made of previous Greentours Cretan plant lists).
- The families are arranged alphabetically in each main group (PTERIDOPHYTA, GYMNOSPERMAE, DICOTYLEDONES, MONOCOTYLEDONES) and the taxa alphabetically in each family.
- The list follows Turland *et. al.* (1993) and Turland & Chilton (1997), and incorporates some name changes from Turland & Chilton (2008).

List of locations by day and date – 3rd April to 17th April 2008

Day 1 - Thursday 3 rd April	London to Heraklion via Athens
Day 2 - Friday 4 th April	Spili and Gious Kambos
Day 3 - Saturday 5 th April	Triopetra
Day 4 - Sunday 6 th April	Kourtaliotiko Gorge, Kotsifou Gorge, Agios Ioanis
Day 5 - Monday 7 th April	Melambes, Drimiskos Pass, south of Vatos
Day 6 - Tuesday 8 th April	Psiloritis
Day 7 - Wednesday 9 th April	Festos, Gortys and above Agia Triada
Day 8 - Thursday 10 th April	Antonios Gorge, Amari Valley and Fourfouras
Day 9 - Friday 11 th April	Armeni Minoan cemetery, Kotsifou and Plakias
Day 10 - Saturday 12 th April	Mourne slagheaps, and below Xiron; Gious Kambos
Day 11 - Sunday 13 th April	Spili to Anapoli via Imbros Gorge and Aradena Gorge
Day 12 - Monday 14 th April	Anapoli; Kakovoli
Day 13 - Tuesday 15 th April	Anapoli to Omalos via Hora Sfakion, Frangokastello, Rethymnon, Agia Reservoir and Lakki
Day 14 - Wednesday 16 th April –	Omalos plain and path to Gingilos, Agia Irini Gorge
Day 15 - Thursday 17 th April –	Omalos to Chania and home!

PTERIDOPHYTA

Adiantaceae

Adiantum capillus-veneris - Maidenhair Fern – 4, 6, 9, 11, 12: [Like familiar house plant]

Aspidaceae

Dryopteris pallida – (a buckler-fern) – 4, 8, 11, 14

Aspleniaceae

Asplenium onopteris - Irish Spleenwort - 4

Asplenium trichomanes - Maidenhair Spleenwort – 2: [Small singly pinnate tufted fern]

Ceterach officinarum - Rusty-back Fern – 2, 3, 4, 8-14: [Small pinnately-lobed fern with underside covered in overlapping rusty scales]

Phyllitis scolopendrium subsp. *scolopendrium* – Hart’s-tongue – Around Idean Cave, Psiloritis 6

Equisetaceae

Equisetum ramosissimum - Branching Horsetail – 5, 9

Equisetum telmateia - Giant Horsetail – 8, 13: [Erect with stout pale stems]

Gymnogrammaceae

Anogramma leptophylla - Jersey Fern – 4, 10-14: [tiny erect annual fern with 2-3 pinnate fronds]

Hypolepidaceae

Pteridium aquilinum – Bracken – 2-4, 8-14: [Familiar tall branched fern]

Isoetaceae

Isoetes duriei – Quillwort – 9

Selaginellaceae

Selaginella denticulata - Toothed Clubmoss – 2-5, 7-14: [Adpressed to ground like a big branched moss]

Sinopteridaceae

Cheilanthes maderensis - Cliff Brake – 3, 10, 11: [Small tufted 2 pinnate fern - smells of coumarin]

SPERMATOPHYTA

GYMNOSPERMAE

Cupressaceae

Cupressus sempervirens - Italian Cypress – 2-4, 7, 9-14: [Large conifer with tiny paired scale leaves - native form broad (as along track to Kakovoli); introduced are columnar]

Juniperus oxycedrus - Prickly Juniper – 6, 12, 14: [Frequent above tree line; greyish shrub with awl-like leaves in 3's]

Pinaceae

Pinus halepensis subsp. *brutia* – (a pine) - 11-14: [Tall conifer with 1mm wide needles, 11-16 cm long and in pairs]

ANGIOSPERMAE

DICOTYLEDONES

Acanthaceae

Acanthus spinosus - Spiny Bear's Breech - 9

Aceraceae

Acer sempervirens - Cretan Maple – 6, 11-14: Mountain areas: [Small tree with 3-lobed leaves, and yellowish-green flowers]

Aizoaceae

Carpobrotus edulis - Hottentot-fig – 3, 5, 7-13: near coast by roads, on sand and rocks: [Mats of succulent leaves and pink daisy-like flowers]

Mesembryanthemum nodiflorum - Ice-plant – 3: rare in compacted sand at Triopetra: [Prostrate with narrow succulent leaves, white flower-buds]

Anacardiaceae

Pistacia lentiscus - Mastic Tree – 3-7, 9: Forming dense thickets: [Evergreen shrub whose pinnate leaves normally have no terminal leaflet]

Pistacia terebinthus - Turpentine Tree – 3, 6, 7: Scrub: [Small deciduous tree, whose pinnate leaves have a terminal leaflet; branched brownish flower-panicles]

Apocynaceae

Nerium oleander – Oleander – 4-13: Planted along the north coast road, clearly native by streams and wet gullies: [Shrub with long leathery leaves, and gaudy pink flowers]

Vinca major - Greater Periwinkle – 3, 6, 8, 13, 14: Naturalised: [Scrambling plant with opposite leathery leaves and blue flowers]

Araliaceae

Hedera helix - Ivy – 2, 4, 6, 8, 10, 13: [Familiar evergreen climber with lobed leaves]

Aristolochiaceae

Aristolochia cretica - Cretan Birthwort – 5, 9: Melambes and Plakias headland: [Low scrambling plant with heart-shaped leaves and large brown flowers like “Dutchman’s Pipe”. Endemic]

Berberidaceae

Berberis cretica - Cretan Barberry – 6, 12, 14: High mountains, Psiloritis, Kakovoli, Gingilos: [Low shrub with 3 spines at each node, and leaves emerging].

Leontice leontopetalum – Leontice – 7

Betulaceae

Corylus sp. – Hazel - 14

Boraginaceae

Anchusa cespitosa - (an alkanet) – 12: Stony ground from 1500-1900m on Kakovoli: [Cushion of strap-shaped leaves and bright blue flowers. Endemic]

Anchusa hybrida - Undulate Alkanet – 2, 3, 7, 9, 13: [Bristly herb with wavy leaves and bluish funnel-shaped flowers]

Anchusa italica - Large Blue Alkanet – 3-10, 13: Frequent by roads and in disturbed areas: [Large bristly herb with open panicle of big bright blue flowers]

Anchusella variegata - (an alkanet) – 4, 11, 12, inc. Aradena: [Like prostrate *A. hybrida*, but mottled leaves, red-marked whitish/bluish flowers]

Borago officinalis – Borage – 3, 4, 6, 8, 9: [Blue, star-like and almost nodding flowers, oval bristly leaves]

Cerinthe major – Honeywort – 7, 9, 10: [Nodding yellow flowers with reddish-purple base]

Cynoglossum creticum - Blue Hound's-tongue – 2, 7-13: [Herb with grey soft-hairy leaves, dark-veined pale blue flowers]

Echium angustifolium - Narrow-leaved Bugloss – 7: [Typical bugloss, but with narrow leaves and red flowers]

Echium arenarium – (a Viper's-bugloss) - 13

Echium italicum - Pale Bugloss – 3, 7-10, 13: Verges and waste ground: [Distinctive pyramidal inflorescence of bluish-white flowers]

Echium plantagineum - Purple Viper's-bugloss – 2-13: Verges: [Big violet-blue funnel-like flowers]

Lithodora hispidula – (a Lithodora) – 14, Agia Irini Gorge

Lithospermum incrassatum – (a Lithospermum) – 6, 12, Psiloritis, Kakovoli
Myosotis incrassata – (a Forget-me-not) – 6, 12, Psiloritis, Kakovoli
Myosotis ramosissima - Early Forget-me-not – 2, 14: Gravel: [Tiny blue-flowered forget-me-not]
Neatostema apulum - Yellow Gromwell – 3: Rocky point at Triopetra: [Typical small erect gromwell, with small yellow flowers]
Onosma erectum - Upright Golden-drop – 4: [Tufted, white haired, with narrow leaves and clusters of nodding yellow flowers]
Onosma graecum - Greek Golden-drop – 2, 3, 9
Symphytum creticum – Procopiana – 4, 11, Kotsifou and Aradena: On and below gorge cliffs: [Like a small white comfrey, but with divided flowers, lobes recurved]

Cactaceae

Opuntia ficus-barbarica - Barbary-fig – 7, 13: Verges and olive groves: [Large cactus, made up of flattened jointed stems]

Campanulaceae

Campanula erinus - Annual Bellflower – 3, 7, 11: Old walls and rocks: [Tiny herb with toothed leaves, and 3-5mm blue bells]
Campanula saxatilis – (a bellflower) – 9, Souda, on cliff
Campanula tubulosa - (a bellflower) – 8, Antonios Gorge: Rock-crevices: [Oblong-leaved and hairy, with pale blue bell-flowers. Endemic]
Petromarula pinnata - Cretan Blue-lettuce – 4, 58-11, 14: Despite its endemic status, common on walls as well as gorges and other rocky places. [Pinnate leaves (toothed leaflets) and spikes of pale blue flowers with recurved lobes]
Solenopsis minuta – Laurentia – 3, Triopetra: damp slope in valley: [Tiny blue plant resembling Lobelia]

Caprifoliaceae

Lonicera etrusca - Etruscan Honeysuckle – 7: [Honeysuckle, with leaves fused in pairs below flowers]
Sambucus nigra –Elder – 3, 9, 10, 13: Rough verges (planted?): [Familiar shrub with heads of creamy-white flowers]

Caryophyllaceae

Arenaria serpyllifolia - Thyme-leaved sandwort – 2, 4, 7, 10, 11: [Erect annual with opposite oval leaves and small white flowers with star-like sepals]
Cerastium brachypetalum - Grey Mouse-ear - 10, 11, 14: Gravel and clay soil: [Typical compact shaggy grey-haired annual mouse-ear]
Cerastium glomeratum - Sticky Mouse-ear – 2, 3: Roadside gravel: [Erect sticky, regularly branched annual mouse-ear]
Cerastium scaposum - (a mouse-ear) – 12, 14: [Compact mouse-ear with large white flowers on long stalks. Endemic]
Holosteum umbellatum – Jagged Chickweed - 12
Minuartia hybrida – Fine-leaved Sandwort – 12, 14
Moenchia graeca – (an Upright Chickweed) – 6, 12, 14
Petrorhagia velutina - (an annual pink) – 3-5, 8-11, 13: Disturbed ground and rocks: [Slender pink, brown papery bracts]
Polycarpon tetraphyllum - Four-leaved Allseed – 3, 4, 7, 8, 13
Sagina apetala - Annual Pearlwort – 3, 4, 7

Silene colorata - (a catchfly) - 3, 4, 9, 13: Common on sand at coast, also on roadside gravel in Kourtaliotiko gorge: [Short annual with narrow leaves and showy rose-pink flowers, deep-notched petals]

Silene cretica - Cretan Catchfly – 2-11: Widespread in rocky and disturbed places: [Slender sticky annual with rose-pink flowers]

Silene dichotoma subsp. *racemosa* - Forked Catchfly – 5: Gravel verges: [Widely fork-branched herb, spike-like inflorescences of white notched petals]

Silene gallica - Small-flowered Catchfly – 5, 9, 13: Disturbed or rocky sites: [Sticky hairy annual, one-sided spikes of pink flowers]

Silene gigantea - (a catchfly) – 4: Rocks in gorges: Kotsifou and Kourtaliotiko: [Lower leaves in houseleek-like rosette, sticky stems and nodding yellowish-green flowers]

Silene sedoides - Hairy Catchfly – 13, Frangokastello: Beach sand.

Silene vulgaris subsp. *macrocarpa* - Bladder Campion – 4: Rough land: [Grey hairless perennial with white flowers and inflated calyces]

Spergularia bocconei - Greek Sea-spurrey – 7, 9, 13

Spergularia salina - Lesser Sea-Spurrey - 9

Stellaria cupaniana -(a chickweed) – 14: [Resembles large-flowered Common Chickweed]

Stellaria media - Common Chickweed – 2-4, 10, 11: Disturbed ground: [The familiar weed]

Chenopodiaceae

Atriplex halimus - Shrubby Orache – 3: Stabilised sands and lower rocks at Triopetra: [Low shrub with silvery-white angled/oval leaves]

Chenopodium murale - Nettle-leaved Goosefoot – 13: [like *C. album*, with neatly toothed leaves]

Salsola kali – Prickly Saltwort – 13: Upper beach, Frangokastello: [Succulent, prickly annual]

Cistaceae

Cistus creticus - Cretan Cistus – 3-13: Common in phrygana and garigue: [Short shrub with oval crinkly leaves and rose-pink flowers 4-6cm]

Cistus parviflorus - Small-flowered Cistus – 5-8, 10-13: [Similar to *Cistus creticus*, neater, pale pink flowers ca. 2-3cm wide].

Cistus salviifolius - Sage-leaved Cistus – 4, 6, 8-11, 13, 14: Roadsides (locally abundant): [Sage-like leaves and white flowers 3-5cm wide]

Fumana arabica -Arabian Fumana – 3, 5, 9, 10: Open phrygana: [Like a narrow-leaved yellow rockrose, with 12-18mm flowers, all leaves alternate]

Fumana thymifolia - Thyme-leaved Fumana – 3: [most leaves opposite, and flowers only 9-14mm wide].

Helianthemum salicifolium - Willow-leaved Rockrose – 2, 3, 12: Rocky phrygana: [Hairy annual with plain yellow flowers, and oval leaves]

Tuberaria guttata - Spotted Rockrose – 2, 5, 9, 10: Open phrygana: [Similar to latter, but with basal rosette, and petals with purplish-brown blotch]

Compositae (Asteraceae)

Anthemis chia -Chian Chamomile – 4, 6, 7, 10, 14: Locally abundant in rocky or fallow land: [Similar to latter, but generally unbranched and hairless]

Anthemis rigida – Rayless Chamomile – 5, 9, 12, 13: [Short, often mat-forming annual, with yellow heads bearing no rays]

Asteriscus spinosus – Pallenis – 3, 7-11, 13: Near coast in sandy and rocky sites: [Like a yellow-flowered marigold or fleabane with spine-tipped bracts around the heads]

Atractylis cancellata - (no common name) – 7, 9: Open rocky slope, Festos: [Tiny thistle with heads surrounded in a “bird-cage” of bracts]

Atractylis gummifera - *Atractylis* – 10, near Mourne

Bellis annua - Annual Daisy – 2, 6, 8: Bare (seasonally damp) clay on Gious Kambos: [Very like common daisy, but tiny, annual and with heads only 5-15mm across]

Bellis longifolia - (a daisy) - 14?: Crevices in limestone rocks: [Like *Bellis perennis*, but with long toothed leaves. Endemic]

Bellis perennis – Daisy - 2-4: Moist grassland: spring on the Gious Kambos: [The familiar lawn daisy].

Calendula arvensis - Field Marigold – 2, 3, 12, 13: Stony land: [Like small-flowered orange Pot Marigold].

Carduus argentatus - (a thistle) – 10-12: [Prickly thistles with silver undersides to leaves and long stalked flower heads]

Carduus pycnocephalus - Plymouth Thistle – 4-11: Waste land: [Typical tall slender leafy thistle with many small rose-purple heads]

Carlina corymbosa subsp. *graeca* - Flat-topped Carline Thistle – 5, 7: Phrygana: [Like *Atractylis*, but branched leafy stems and remains of last year’s head]

Centaurea idaea - Cretan Star-thistle – 2-14: Frequent on stony ground: [Grey leaved star-thistle, young heads with straw-coloured spines. Endemic]

Centaurea raphanina subsp. *raphanina* - Stemless Knapweed – 3, 4, 14: Common on cliffs and rocky phrygana: [Distinctive rosette of pinnate leaves, with pinkish thistle-like stemless heads. Endemic]

Chrysanthemum coronarium - Crown daisy – 1, 3, 4, 6, 9-13: Common by roads: [Tall 2-pinnately leaved herb with yellow (or yellow and white = var. *bicolor*) heads 3-6cm wide]

Chrysanthemum segetum - Corn Marigold – 2, 9, 10: Rocky and fallow parts: [Greyish annual with toothed (or lobed) leaves and large yellow daisy-like heads]

Cichorium spinosum - Spiny Chicory – 11, 12, Imbros Gorge: Rocky ground: [Spiny, much branched and woody, blue heads like dandelions]

Crepis vesicaria - Beaked Hawk’s-beard – 13

Crupina crupinastrum – Crupina – 7, Festos

Cynara cornigera - (a cardoon) – 3, 9: [Like a short very prickly globe artichoke]

Cynara scolymus - Globe Artichoke – 4, 7, 9: Roadsides almost certainly cultivated: [Big non-prickly pinnately-cut leaves]

Dittrichia viscosa - Sticky Fleabane – 4, 8

Echinops spinosissimus – (an Echinops) - 7

Filago sp. – (a cudweed) – 3, 7

Filago pygmaea - (a cudweed) – 12: [Tiny annual, heads sessile in basal leaves]

Galactites tomentosa – Galactites – 2-13: Common on roadsides: [Thistle-like annual with white veined leaves, and purple-lilac rayed heads]

Helichrysum barrelieri - (an everlasting) – 2, 5, 7-10: [Tufted, woody-based; whitish stems, linear leaves, clustered small golden-yellow globular heads]

Lactuca serriola - Prickly Lettuce - 7

Matricaria recutita - Scented Mayweed – 7: [Like a weedy branched chamomile]

Notobasis syriaca – Syrian Thistle – 3, 7

Phagnalon graecum - (a phagnalon) - 3-5, 7, 8, 10: Rocky phrygana: [Dwarf shrub, with narrow leaves white-felted beneath, and with long-stalked yellowish button-like heads]

Ptilostemon chamaepeuce - Shrubby Ptilostemon - 4, 9-11: Frequent on cliffs in gorges, on rocky banks, and at coast: [Small, rather pine-like, shrub with white undersides to leaves]

Pulicaria dysenterica - Common Fleabane – 7: Ditchsides: [Cottony with oblong clasping leaves]

Rhagadiolus stellatus - Star Hawkbit – 4, 7, 8: Shady and disturbed sites: [Like low weedy Nipplewort, distinctive star-like fruiting heads]

Scorzonera cretica - Cretan Viper's-grass – 3-5, 7, 9, 13: [Linear cottony leaves, and dandelion-like heads]

Senecio rupestris – (a ragwort) – 4: Debris below cliff, Kotsifou

Senecio vulgaris - Common Groundsel – 3, 7: Bare soil: [Familiar weed]

Silybum marianum - Milk Thistle - 1-13

Sonchus asper - Prickly Sow-thistle – 3, 7: Waste places: [Thistle-like plant with milky sap, and many small dandelion-like heads]

Sonchus oleraceus - Smooth Sow-thistle – 3, 5, 7-10: Waste ground in Kotsifou gorge: [Similar to *Sonchus asper*, but almost without prickles]

Staehelina fruticosa - (a Staehelina) – 11: Limestone cliffs in gorges

Staehelina petiolata - (a Staehelina) – 4, 8, 9, 11, 13: Limestone cliffs in gorges: (1m shrub, with oval leaves, white beneath. Endemic]

Tanacetum parthenium – Feverfew – 3: Trackside in groves below Heracles' rooms [Strongly-scented leafy herb, pinnately divided]

Taraxacum sp. - (a dandelion) – 6, 12, 14: Bare soil at high altitudes: [A typical, if rather neat, dandelion]

Tragopogon hybridus - (a goat's-beard) – 3, 4, 7-11: Rough ground: [Like a slender salsify with 5 florets]

Tragopogon sinuatus - (a salsify) – 3, 5, 7, 9: Rocky or sandy sites: [Like leek with lilac dandelion-like heads, forming large “clock”]

Convolvulaceae

Convolvulus althaeoides - Mallow-leaved Bindweed – 7, 8: Rough grass, roadsides: [Clamberer with cordate or lobed leaves and decorative deep pink funnel-like flowers - see also below]

Convolvulus elegantissimus - (a bindweed) – 4: Gorge edge: [like *C. althaeoides*, differing in its finely-divided silvery leaves]

Convolvulus oleifolius - Olive-leaved Bindweed - 3, 13: Rocky slopes: [Low erect woody, with narrow silvery leaves and pink flowers]

Cuscuta epithymum – Common Dodder – 3, 5, 8, 9

Cuscuta palaestina – (a dodder) – 3, 11

Crassulaceae

Crassula tillaea – Mossy Stonecrop - 5

Rosularia serrata - (no common name) – 4, 8, 11, 14: Cliffs and ledges: [Rosettes like neat grey houseleek].

Sedum creticum - (a stonecrop) – 5, 7, 9-12: Cliffs and rocky debris: [Like *S. album*, but slender and with pale yellow-green flowers. Endemic]

Umbilicus horizontalis - (a wall pennywort) – 4, 11: Walls and rocks: [Typical small navelwort, with reddish-green flowers].

Umbilicus parviflorus - Small-flowered Navelwort – 3-6, 8-14: Walls by track also on rocks: [Typical navelwort with large yellow flowers]

Cruciferae (Brassicaceae)

Aethionema saxatile subsp. *creticum* - Burnt Candytuft – 4, 5, 12, 14: [Short herb, crowded oval grey untoothed leaves, dense head of pink & white flowers]

Alyssum foliosum - (an alison) – 12: Gravel at 1900m in Kakovoli pass. [Dwarf herb with narrow crowded ciliate leaves and dense heads of tiny yellow flowers]

Alyssum spp. - (an alison) – 4, 6, 11, 12, 14 – not identified to species – a critical group

Arabidopsis thaliana - Thale cress – 4: [Slender branched herb with white flowers and thin pods]

Arabis alpina - Alpine Rockcress – 6: Cliffs and rocks above 1800m on Psiloritis: [Low perennial cress with coarse toothed leaves and large (>1cm) white flowers]

Arabis verna - Spring Rockcress - 8-14: Open rocky areas: [Low cress, oval toothed leaves and yellow-eyed purple flowers]

Aubrieta deltoidea –Aubrietia – 11, 12, 14: Rocky places: [Low straggling grey cress with big purple flowers and long-beaked fruit]

Biscutella didyma - Buckler Mustard - 2-14: Widespread, gravel verges and stony land: [Hairy annual with yellow flowers and distinctive pods comprising two joined disks]

Brassica cretica - Cretan Cabbage – 4, 9: Gorge cliffs, Kotsifou: [Tall cabbage with pale yellow flowers]

Brassica nigra - Black Mustard – 4: Road verges: [Tall yellow mustard with thin pods appressed to stem]

Cakile maritima - Sea Rocket – 3, 7, 9: Sandy beaches: [Decumbent succulent annual, with pinkish flowers and lanceolate pods]

Capsella bursa-pastoris - Shepherd's-purse – 2-4, 7, 8, 11: Disturbed areas: [Familiar white cress with triangular fruit].

Cardamine graeca - (a bittercress) – 11, 12, 14: Shady rocks: [Wide-branched bittercress with 3-lobed leaflets, white flowers and large flattened pods]

Cardamine hirsuta - Hairy Bittercress – 4, 7: [Short white cress; pinnate leaves; narrow flattened pods]

Cardaria draba - Hoary Pepperwort – 10, verges by Heracles rooms: [Patch-forming grey perennial, wide “frothy” white heads of flowers]

Clypeola jonthlaspi – Disk Cress - 14

Draba cretica - (a whitlow-grass) – 12, 14: Open stony ground at 1500-1800m on Kakovoli and Gingilos: [Procumbent cress with few leaves and quite large golden-yellow flowers. Endemic]

Erophila verna s.l. - Early Whitlow Grass – 5, 6, 12, 14: [Tiny white cress, all leaves basal and pods ca. 6mm. All plants seen are probably *E. verna* in the strict sense]

Eruca sativa – Eruca – 11: Fallow land: [Weedy annual with large white flowers veined in purple]

Erysimum raulinii - (a wallflower) – 2, 10: Craggs [Similar but more densely tufted. Endemic]

Lepidium hirtum subsp. *oxyotum* - a Pepperwort – 6, 12, 14: High areas in mountains

Malcolmia chia - Chian Stock – 4: Rocky slope below cliff in Kotsifou gorge: [Pink-flowered cress with long narrow pods]

Mathiola sinuata - Sea Stock – 4: [Large hairy stock with coarse toothed leaves and pinkish flowers].

Raphanus raphanistrum - Wild Radish – 2, 7: Field-weed [Similar to *Eruca*, but with jointed fruit]

Ricotia cretica – Ricotia – 4, 9, 11, 12, 14: Scree/rubble in gorges:[Low pink cress, distinctive pods like “purple mange-tout”. Endemic]

Rorippa nasturtium-aquaticum - Water-cress – 2, 6, 9, 10: Stream/ditches: [Familiar aquatic with pinnate leaves and white flowers]

Sinapis alba – White Mustard – 4, 5, 7, 10: Roadsides

Sisymbrium officinale - Hedge Mustard – 4: Pathsides: [Erect yellow cress with pinnately-lobed leaves and pods appressed to stem]

Thlaspi perfoliatum - (a pennycress) – 6, Psiloritis

Cucurbitaceae

Bryonia cretica subsp. *cretica* - White Bryony – 3, 5, 7, 11, 14: Scrub/rubble in gorges: [Climber with mottled maple-like leaves opposite tendrils, greenish-white flowers]

Ecballium elaterium - Squirting Cucumber – 6: Waste ground: [Coarse bristly scrambler with heart-shaped leaves, yellow flowers and 4-5cm long fruit]

Dipsacaceae

Knautia integrifolia subsp. *mimica* - (a scabious) – 4, 5, 7, 9, 10: Rocky phrygana: [Tall typical scabious, variable leaves]

Lomalosia brachiata - (a scabious) – 3, 9: Behind shores: [Short scabious with leafy bracts]

Ericaceae

Arbutus unedo - Strawberry-tree – 4, Agios Ioanis: Maquis: [Evergreen tree with lanceolate leaves and warty berries]

Erica arborea - Tree Heath – 4, 8, 13, 14: [1-4m tall, but otherwise a typical white-flowered heather]

Erica manipuliflora - (a heath) – 4, 5, 8, 9, 13: [Shorter species, in fruit, with longer leaves]

Euphorbiaceae

Euphorbia acanthothamnus - Greek Spiny-spurge – 2-14: Phrygana: [Intricately branched domed, spiny shrubby spurge]

Euphorbia characias - Large Mediterranean Spurge – 2, 4, 7-14: Scrub and rocky slopes: [Tall tufted hairy perennial]

Euphorbia dendroides - Tree Spurge – 4, 9: Rocky slopes: [Thick-stemmed hairless shrub]

Euphorbia exigua – Dwarf Spurge - 7

Euphorbia helioscopia - Sun Spurge – 2, 3, 7, 8, 10, 13: Disturbed ground: [Familiar weedy spurge, toothed leaves]

Euphorbia paralias - Sea Spurge – 9, 13: Low dunes: [Fleshy greyish perennial, many oblong leaves]

Euphorbia peplus - Petty Spurge – 2, 3, 8, 14: Damp soil: [Similar to Sun Spurge, but untoothed, smaller]

Mercurialis annua - Annual Mercury – 2, 7-14: Olive groves and walls: [Like neat nettle, with erect green spikes]

Ricinus communis - Castor Oil Plant – 6, 7, 9: Waste ground: [Coarse purplish shrub, with palmate leaves]

Fagaceae

Castanea sativa – Sweet Chestnut - 14

Quercus coccifera - Kermes Oak – 2-14: Scrub and garigue: [Shrub or tree with evergreen, holly-like leaves]

Quercus ilex - Holm Oak – 8, 11: [Evergreen tree with lanceolate leaves paler (downy) beneath]

Quercus ithaburensis subsp. *macrolepis* - Valonia Oak – 4, 9: [Tree with large leaves, lobed with pointed teeth; huge acorn-cup]

Quercus pubescens - Downy Oak – 2, 4, 5, 10: Woodland and scrub: [Small tree/shrub, typical oak-leaves, downy]

Gentianaceae

Blackstonia perfoliata subsp. *intermedia* - Yellow-wort – 3, 7: Damp or compacted soil in phrygana: [Greyish erect annual with leaves joined in pairs around stem]

Centaureum pulchellum – Lesser Centaury – 3, 7, 9, 13

Geraniaceae

Erodium cicutarium - Common Stork's-bill – 3-12: Pathsides and disturbed ground: [Typical stork's-bill with fern-like leaves, pink flowers and beaked fruit]

Erodium gruinum - Long-beaked Stork's-bill – 2-4, 7, 8, 12: Pathsides: [Large annual with lobed leaves, violet flowers 4cm wide, and very long (6-11cm) fruit]

Erodium malacoides - Soft Stork's-bill – 3, 7: Olive groves [Like *E. cicutarium*, but with oblong, slightly-lobed leaves]

Erodium moschatum - Musk Stork's-bill – 3, 7, 8, 12, 13: [Like *E. cicutarium*, but coarser and aromatic]

Geranium columbinum - Long-stalked Crane's-bill – 4, 12: Rocky slopes: [Narrow-lobed palmate leaves; 12-18mm flowers with pink un-notched petals]

Geranium dissectum - Cut-leaved Crane's-bill – 4, 8: Damp soil: [small flowers, notched petals]

Geranium lucidum - Shining Crane's-bill – 2, 4, 6-14: Walls and shady rocks: [Shiny bluntly-lobed palmate leaves, and pink flowers]

Geranium molle - Dove's-foot Crane's-bill – 2, 12, 14: Disturbed ground: [Like *G. dissectum*, but wedge-lobed and with more purplish-pink flowers]

Geranium purpureum - Little Robin – 2-14, common

Geranium rotundifolium - Round-leaved Crane's-bill – 2-14, common: Groves and waste ground: [Like *G. molle*, but shallowly-lobed, un-notched petals]

Guttiferae (Hypericaceae)

Hypericum empetrifolium - Shrubby St. John's-wort – 3, 8, 10: Garigue and phrygana: [Dwarf heather-like shrub with many yellow flowers. Mostly subsp. *oligatum*, though Lefka Ori plants are probably subsp. *tortuosum*. Both endemic]

Hypericum triquetrifolium - Crisped St John's-wort – 7, 10

Juglandaceae

Juglans regia – Walnut – 2-14: Planted: [Trees with pinnate leaves and coarse catkins]

Labiatae (Lamiaceae)

Ballota acetabulosa -Garden Horehound - 4, 11, 14: [Grey-downy perennial, oval leaves and purple/white flowers]

Ballota nigra subsp. *uncinata* - Black Horehound – 12: [Strongly scented, with coarsely toothed leaves, small purple flowers]

Ballota pseudodictamnus -False Dittany – 8: [Woody-based perennial, woolly-felted, oval, almost untoothed leaves]

Coridothymus capitatus – Thyme - 3

Lamium amplexicaule – Henbit – 2-14: Disturbed ground: [Annual pink dead-nettle, long flowers]

Lamium bifidum subsp. *bifidum* – (a Dead-nettle) - 14

Lamium purpureum - Red Dead-nettle – 2, 14: [Familiar weed]

Lavandula stoechas - French Lavender – 13, Agia: Bank of dam: [Linear-leaved shrub, flower spikes with purple tassel]

Mentha pulegium – Pennyroyal – 8: Ditch: [strong-smelling creeping mint]

Nepeta melissifolia – (a catmint) – 7, Agia Triada

Nepeta scordotis – (a catmint) – 2

Origanum dictamnus - Dittany (diktamus) – 4, 8, 10, 11: Limestone cliffs, mainly in gorges: [White-woolly round-leaved, with overlapping bracts. Endemic]

Origanum microphyllum - (a dwarf dittany) – 11, at foot of Aradena gorge: [Like a dwarf patch forming form of true dittany. Endemic]

Phlomis cretica - (a Jerusalem Sage) – 7, 12?, 13?: Some of the plants at exposed sites near Anopoli are probably referable to this, rather than *Phlomis fruticosa*: [Much shorter and more orange flowers]

Phlomis fruticosa - Jerusalem Sage - 2-14: [Grey-felted shrub, with leaves like a sage, and dense heads of 23-35mm long flowers]

Prasium majus - Shrubby Woundwort – 2-14: Banks in groves etc. and on rocks: [Evergreen shrub, with white flowers and aroma similar to a *Stachys*]

Prunella laciniata - Cut-leaved Self-heal – 10: [Typical self-heal with pinnately-lobed leaves and pink-flushed flowers]

Rosmarinus officinalis – Rosemary – 4, 9: [Familiar shrub]

Salvia fruticosa - Three-leaved Sage – 2, 3, 7-13: Garigue: [Typical lilac-flowered shrubby sage with 3-lobed leaves]

Salvia pomifera – (a sage) - 14

Salvia verbenaca - Wild Clary – 2, 3, 9: Disturbed ground. [Herb with wrinkled leaves, and spike of dense purple whorls]

Salvia viridis - Red-topped Sage – 3, 4, 7, 8: [Short neat annual, with bright green bracts]

Satureja nervosa – (a Satureja) – 3, 4, 7

Satureja spinosa – Spiny Savory – 4

Satureja thymbra – (a Satureja) – 3: Scrub and phrygana: [Like a large-leaved, very aromatic, pink thyme]

Stachys arvensis – Field Woundwort – 8, 13

Stachys cretica – Mediterranean Woundwort – 3, 7-9, 11: Rocky slopes, often by roads: [Like a slender white-felted pink “Lamb’s-ears”]

Lauraceae

Laurus nobilis – Laurel – 13: [Evergreen tree with scented leaves]

Leguminosae (Fabaceae)

Acacia retinoides – Water Wattle – 4, 7, Gortys: Planted by roads: [Shrubs with grey willow-like “leaves” and yellow mimosa blooms]

Anagyris foetida - Bean Trefoil – 7: [Trefoil shrub 1-4m tall and foetid]

Anthyllis hermanniae – (a kidney vetch) - 7

Anthyllis vulneraria subsp. *praepropera* - Kidney Vetch – 2, 5, 7, 9, 10, 13: Rocky phrygana: [Typical kidney vetch, but here red-flowered]

Astragalus angustifolius - (spiny milk-vetch) – 6: Open rocky slopes. [“Vegetable hedgehog”, pinnate leaves with 6-10 pairs of leaflet]

Bituminaria bituminosa - Pitch Trefoil – 2-14: Olive groves and verges: [Dull green, often tall trefoil, flower-heads violet-blue, and smelling of bitumen]

Calicotome villosa - Spiny Broom – 2-14: Often abundant in phrygana: [Like an elegant gorse, scenting the air with honey]

Ceratonia siliqua – Carob – 3, 6-11, 13: Olive groves and scrub: [Evergreen tree with coarse pinnate leaves and big hanging pods]

Cercis siliquastrum - Judas-tree – 4, 6-10: Planted: [Small tree, heart-shaped leaves, and pink flowers on stems].

Coronilla valentina - (a Crown-vetch) - 8

Ebenus cretica - Shrubby Sainfoin – 4, 7, 9, 11, 13: Cliffs: [Shrub, palmate leaves and silky heads of pink flowers. Endemic]

Genista acanthocloda - (a greenweed) – 2-11: Phrygana: [Similar to Cretan Dwarf-broom, but with tiny leaflets, and coming into flower]

Hedysarum spinosissimum - Spiny Sanfoin – 7

Hippocrepis biflora - (a horseshoe vetch) – 3, 4, 8: Bare ground among rocks: [Short annual with pinnate leaves, single yellow flowers and pods like a string of horseshoes]

Hymenocarpus circinnatus - Disk Trefoil – 3, 5, 8-10: Similar habitats to last: [Pinnate-leaved; big terminal leaflet, flowers orange-yellow; fruit a toothed disc 1-1.5cm across]

Lathyrus annuus – Annual Yellow Vetch – 9, 13

Lathyrus aphaca -Yellow Vetchling – 10: [Pale yellow vetch with tendrils and prominent arrow-shaped stipules]

Lathyrus clymenum – (a vetchling) - 5

Lathyrus setifolius - (a vetchling) – 2, 3, 8, 10, 11: [Similar but narrow-winged with orange-red flowers]

Lotus edulis -Edible Lotus – 3, 4, 7: Mostly coastal rocks and sand: [Typical yellow Lotus with long inflated pod]

Lotus ornithopodioides – (a trefoil) - 3

Lotus pedunculatus - Greater Bird's-foot Trefoil - 9

Lupinus pilosus - Hairy Blue Lupin – 5-8, 10-12: Striking patches by roads: [Bright blue hairy lupin]

Medicago arabica - Spotted Medick – 4, 8, 9: Olive groves and fallow: [Bur-fruited yellow trefoil, dark blotches on leaflet]

Medicago arborea - Tree Medick – 7-9

Medicago constricta – (a medick) - 3

Medicago lupulina – Black Medick – 5, 8

Medicago marina - Sea Medick – 3, 13: Sandy beaches, low dunes: [White-downy creeping perennial trefoil with yellow heads]

Medicago orbicularis - Large Disk Medick – 3, 7: [Typical yellow medick with large smooth spiral disc fruit]

Medicago polymorpha - Toothed Medick – 3, 7, 10: [Weedy yellow medick with long-spined bur fruit]

Melilotus indicus – Small Melilot – 7-9

Onobrychis aequidentata - (a sainfoin) – 7: [Pinnate-leaved, few pink flowers and fruit with cockscomb crest]

Onobrychis caput-gallii - Cockscomb Sainfoin – 7-10: [Similar to above, flowers smaller and bur fruit]

Ononis natrix subsp. *hispanica* - Large Yellow Restharrow – 7, Festos: [Sticky sub-shrub whose 1-2cm yellow flowers have red veined standard]

Ononis reclinata - Small Restharrow – 9: [Hairy annual with trefoil leaves, winged petiole and pink flowers]

Robinia pseudacacia - False Acacia – 4, 7, 9, 10: Planted/naturalised by coast road etc. [Spiny tree with pinnate leaves, pendent white racemes]

Scorpiurus muricatus – Scorpiurus – 3, 4, 7: Rocky banks: [Long elliptical undivided leaves, yellow flowers and pods like coiled caterpillars]

Securigera cretica - (a scorpion vetch) – 3, 12

Spartium junceum- Spanish Broom – 2-4, 9, 10, 13: Roadsides: [Shrub with many rush-like branches and large yellow flowers]

Tetragonolobus purpureus - Dragon's Blood – 2, 5, 7, 8, 10: Groves and disturbed ground: [Hairy trefoil herb, crimson flowers, big winged pods]

Trifolium arvense - Hare's-foot Clover – 5: [Annual hairy clover, pale pink hare's-foot heads]

Trifolium boissieri - Brown Trefoil – 3, 7-9, 11: Rocky slope [Low annual yellow clover, turning brown with age]

Trifolium campestre - Hop Trefoil – 3, 4, 7-12: Rocky places: [As latter, but not going brown]

Trifolium fragiferum subsp. *bonannii* - Strawberry Clover – 2, 9: Moister turf of paths: [Creeping clover with pink flowers, and inflated fruit heads, resembling raspberries!]
Trifolium physodes – (a clover) – 4
Trifolium repens - White Clover – 3, 4, 7, 9-11: [Familiar clover: creeping, rooting at nodes]
Trifolium resupinatum - Reversed Clover – 8-10, 13: [Pink annual clover, flowers are “upside down”]
Trifolium stellatum - Star Clover – 2, 4, 7-14: Stony areas: [Hairy annual clover with round leaflets, globose pink heads, calyx teeth spreading star-like, reddish]
Trifolium tomentosum - Woolly Trefoil – 3, 8-13: Stony turf: [Like *T. resupinatum*, but flowers “right way up”, fruit heads like balls of cotton]
Trifolium uniflorum - (a clover) – 2, 4, 6, 7, 9-12: Locally common on rocky turf and phrygana: [Mat or cushion-forming perennial, with stalkless white flowers in ones (-3) not heads]
Tripodium tetraphyllum - Bladder Vetch – 3, 7, 9
Vicia bithynica - Bithynian Vetch – 5, 7-11: Low phrygana: [Vetch with tendrils, and violet and white flowers].
Vicia hybrida – Hairy Yellow-vetch – 2, 7-9
Vicia lutea - Yellow Vetch – 3, 9: Waste areas: [Like smaller *V. hybrida*, but standard hairless and flowers cream]
Vicia sativa - Common Vetch – 4, 5, 7-13: Tracksides and fallow: [Familiar pink leafy vetch]
Vicia villosa - Fodder Vetch – 2, 5, 8-10, 13: roadsides

Linaceae

Linum arboreum - Shrubby Flax – 4, 8-11, 14: Limestone gorge cliffs: [Small shrub, spatulate leaves, yellow flowers]
Linum bienne - Pale Flax – 2-4, 7-10, 13: Roadsides, rough grass: [Slender pale blue flax]
Linum strictum – Upright Yellow Flax - 8
Linum trigynum - (a flax) – 3, 7: Open ground in coastal phrygana: [Small yellow-flowered flax, alternate leaves]

Lythraceae

Lythrum junceum - (a loosestrife) – 2, 4, 7-10: Seasonally wet places, ditches: [Larger often ascending perennial, petals 5-6mm]

Malvaceae

Hibiscus rosa-sinensis – Hibiscus - 7
Lavatera cretica - Small Tree-mallow – 4, 7-13: Disturbed ground: [Like Common Mallow, but broad epicalyx lobes]
Malva aegyptia – (a mallow) - 3
Malva cretica - Cretan Mallow – 7: Rocks [Like a dwarf, delicate Musk Mallow – pale pink flowers]
Malva parviflora - Least Mallow – 4, 7, 10: Pathsides and ruins: [Usually prostrate mallow with tiny (<1cm) flowers]
Malva sylvestris - Common Mallow – 3,4, 7-13

Moraceae

Ficus carica – Fig – 2, 4, 7, 9-13: [Familiar shrub/tree with large palmately-lobed leaves]
Morus alba - White Mulberry – 1-11, widely planted: [Tree with oval and cordate leaves, dense flower spikes]

Myrtaceae

Eucalyptus sp. – (a gum) – 1-10, Planted by roads: [Large trees with flaking bark, grey leaves]
Myrtus communis - Common Myrtle – 3, 13: [Opposite-leaved evergreen aromatic shrub]

Nyctagineaceae

Bougainvillea glabra – Bougainvillea – 3, 7, 13: Planted. [Familiar ornamental climber with bright purple bracts]

Oleaceae

Olea europaea – Olive – 2-14, abundantly cultivated: [Evergreen tree with greyish narrow leaves]

Phillyrea latifolia – Green Olive – 9: Rocky gorge scrub [Resembles a scentless myrtle]

Onagraceae

Epilobium hirsutum - Great Hairy Willow-herb – 8: Wet tracksides [Familiar tall hairy herb]

Orobanchaceae

Orobanche alba – Thyme Broomrape - 5

Orobanche pubescens - Downy Broomrape – 3, 4, 7-11, 13: On various hosts (often umbellifers): [Medium yellow to purple-flowered broomrape, flowers hairy]

Orobanche ramosa - Branched Broomrape – 2-4, 7-11: Olive groves (often on *Oxalis pes-caprae*): [Small prolific broomrape, with pale purple flowers contrasting with light brown stems]

Oxalidaceae

Oxalis pes-caprae - Bermuda Buttercup – 2-14: Often abundant in olive groves and by roads everywhere, [Trefoil leaves, and umbels of yellow flowers]

Paeoniaceae

Paeonia clusii subsp. *clusii* - Clusius's Peony – 11 (flowers in the Imbros Gorge), and non-flowering plants on 12 (route to Kakovoli), also flowering in pot on patio of Omalos Hotel! 13, 14: [White flowers 7-12cm across and narrowly-divided leaves. Endemic]

Papaveraceae

Corydalis uniflora - Cretan Corydalis – 6, 12, 14: Sparse on bare clay among stones: 1600-1900m on Kakovoli, Psiloritis and 1350-1600m above Xiloskalon: [Short herb with greyish lobed leaves, whitish flowers tipped in maroon. Endemic]

Fumaria capreolata - Ramping Fumitory – 2: Clambering on coarse vegetation: [Large fumitory, greyish divided leaves, pale flowers tipped reddish-black]

Fumaria macrocarpa – (a fumitory) – 7, 13

Fumaria officinalis - Common Fumitory – 5: [Typical non-climbing fumitory]

Glaucium flavum - Yellow Horned-poppy – 3, 5, 8, 9, 11, 13: [Big grey-leaved poppy with yellow flowers and long pods]

Papaver dubium – Long-headed Poppy - 14

Papaver rhoeas - Corn Poppy - 2-14: Rocky and disturbed ground:[Typical red poppy, sometimes with black blotches, globular pods]

Plantaginaceae

Plantago afra - (a plantain) - 2-7: [Typical plantain flowers, but branched leafy stem]

Plantago bellardii - (a plantain) – 10-14

Plantago cretica - Cretan Plantain – 3, 10: Seashores and rocks [Similar to latter but with stems thickening and recurved in fruit]
Plantago lagopus - Hare's-foot Plantain – 2, 3, 7, 9, 10: [Like hairy more toothed Ribwort, soft silky heads]
Plantago lanceolata - Ribwort Plantain – 7, 10, 13: Olive groves and grasslands: [Familiar plantain]
Plantago major - Rat's-tail Plantain – 11-13: roadsides: [Cosmopolitan broad-leaved weed]
Plantago weldenii - (a plantain) – 3, 13

Platanaceae

Platanus orientalis - Plane Tree – 2-14: Lining streams/rivers, forming groves: [Tree with alternate palmate leaves, scaling bark]

Plumbaginaceae

Acantholimon ulicinum - (a prickly thrift) – 6, 12: "Vegetable hedgehog" zone on rock slopes 1600-1900m on Kakovoli and Psiloritis: [Differs from other components of zone in its linear spiny leaves]
Limonium graecum – (a sea-lavender) – 3, Triopetra

Polygalaceae

Polygala venulosa - Eastern Milkwort – 2, 4, 10: Phrygana: [Typical milkwort, with pale mauve veined flowers, rather pea-like]

Polygonaceae

Polygonum idaeum – (a knotgrass) – 6: [on flat clay pans on Nidha Plain, Psiloritis. Endemic]
Rumex bucephalophorus subsp. *gallicus* -Bull's-head Dock – 2, 3, 10-12: [Small annual, distinctive recurved fruit]
Rumex pulcher subsp. *woodsii* - Fiddle Dock – 7, 9, 11, 12: Moist sites: [Typical dock, widely branched]
Rumex tuberosus - Tuberous Sorrel – 2, 8-14

Primulaceae

Anagallis arvensis (including the blue var. *caerulea*) - Scarlet Pimpernel – 2, 8-11, 13: [Familiar weed]
Anagallis foemina - Blue Pimpernel – 2-10: [bright blue]
Asterolinon linum-stellatum – Asterolinum – 2, 10, 12
Cyclamen creticum - Cretan Cyclamen – 2, 4, 8-11, 14: Shade, scree and crevices: [White cyclamen. Some of the non-flowering plants in the Kotsifou resemble *C. graecum*. The pinkish flowered form var. *pallida-roseum* seen in Agia Irini Gorge].
Primula vulgaris subsp. *vulgaris* – Primrose – 14, on damp bank on road to Agia Irini Gorge.
Samolus valerandi – Brookweed – 2: [Like white cress, but 5 petals]

Rafflesiaceae

Cytinus hypocistis subsp. *clusii* - (a *Cytinus*) – 4, Agios Ioanis: In old terraces: [Scales always crimson and flowers white or pink - parasitic on pink-flowered *Cistus*]

Ranunculaceae

Anemone coronaria - Crown Anemone – 2, 3, 5, 10-13, 14: [Distinguished from Turban Buttercup by absence of green sepals]

Anemone hortensis subsp. *heldreichii* - (an anemone) – 2-6, 10-14: Frequent on phrygana and rocky places: [Short anemone, white flushed pink]
Clematis cirrhosa - Virgin's Bower – 4, 8: [Typical Clematis, but evergreen and in fruit]
Delphinium staphisagria - (a delphinium) – 11: Abundant in the ruins and groves at Aradena, rarer in the gorge: [Typical hairy delphinium]
Nigella damascena – Love-in-a-mist – 3, 9
Ranunculus asiaticus- Turban Buttercup – 3, 5, 7, 9, 10, 11, 14: Drifts of white on phrygana and rocky road-sides. Rare red form seen at Armeni: [The only big white or red buttercup here, red separated from *Anemone* by presence of green sepals]
Ranunculus bullatus – (a buttercup) – 2, 3
Ranunculus creticus -Cretan Buttercup – 2, 4, 9, 11: Cliffs (often shady) of gorges [Big buttercup with shallowly lobed leaves, mostly in fruit]
Ranunculus ficaria subsp. *chrysocephalus* - Lesser Celandine – 2, 4, 6, 10, 11, 14: [Familiar plant, but big-flowered]
Ranunculus gracilis - (a buttercup) – 4: Abundant in rocky phrygana [Neat buttercup, leaves 3-lobed (mostly basal), sepals recurved]
Ranunculus muricatus -Bristly Buttercup – 4, 7-9: Wet ruts and ditch edges: [Hairless annual, with shallow-lobed leaves and fruit with spines on both surfaces]
Ranunculus subhomophyllus - (a buttercup) - 12, 14
Ranunculus velutinus - (a buttercup) – 2, 9, 14

Resedaceae

Reseda alba - White Mignonette – 2, 3, 8: Roadsides [Typical tall mignonette with white flowers]
Reseda lutea - Wild Mignonette – 5: Rocky ground: [As latter, shorter and pale yellow flowers].

Rhamnaceae

Rhamnus alaternus - Mediterranean Buckthorn – 10, 11: Scrub: [Evergreen shrub with glossy thick leaves and reddish berries]

Rosaceae

Crataegus monogyna subsp. *azarella* – Hawthorn – 2, 4, 6, 8, 11-14: [Familiar shrub, but here the densely hairy].
Eriobotrya japonica – Loquat – 7, 9: Planted [Robust shrub, large (to 30cm) ribbed and brown-felted leaves]
Prunus dulcis – Almond – 3, 7-9: ?Naturalised [Spiny shrub with narrow leaves, pale flowers and oval velvety fruit]
Prunus persica – Peach – 7: ?Naturalised [Familiar fruit tree]
Prunus prostrata - Prostrate Cherry – 6, 12, 14: On high mountains: [Prostrate shrub, with bright pink flowers]
Pyrus communis – Pear – 3, 9, 14: Naturalised: [Familiar orchard tree]
Pyrus spinosa - Almond-leaved Pear – 3, 10-14: Rocky slopes and woodland: [Somewhat spiny shrub with narrow elliptical leaves, white flowers]
Rosa sp. – Rose – 2: [Roses difficult to identify without hips]
Rubus sanctus – Bramble – 1-14: Scrub, stream-banks: [Typical bramble, but with small trefoil leaves]
Sanguisorba cretica - (a burnet) – 11: Limestone cliff in Aradena gorge: [Typical burnet but with leaflets 2.5-3cm. Endemic]
Sanguisorba minor - Salad Burnet – 2, 4, 5, 7, 11: Grass slopes and olive groves: [Familiar herb, represented by subspp. *muricata* and *verrucosa*]

Sarcopoterium spinosum - Spiny Burnet – 2-14: Often dominant in phrygana: [Intricate spiny shrub (“barbed wire plant”), pinnate leaves, globose flower-heads]

Rubiaceae

Galium aparine – Cleavers – 2, 3, 8-10, 14: [Familiar coarse clambering weed]

Galium murale – (a bedstraw) - 2

Rubia peregrina - Wild Madder – 4, 9: Climbing on bushes in scrub: [Like a coarse evergreen cleavers with berries]

Sherardia arvensis - Field Madder – 2, 8, 12: Disturbed ground: [Like a compact bedstraw with pink flowers].

Valantia hispida – Valantia - 2, 4, 11, 12: Rocks: [Like a tiny bristly crosswort]

Valantia muralis – (a Valantia) - 3

Rutaceae

Ruta chalepensis - Fringed Rue – 2: [Two-pinnate blue-green leaves, pungently scented with yellow flowers, fringed with hairs]

Salicaceae

Populus nigra - Black Poplar – 2: [Tall tree with fluttering leaves shaped like ace of spades]

Populus tremula - Aspen - 9: [Medium-sized tree with roundish leaves, slender stalks]

Santalaceae

Osyris alba – Osyris – 7, 9, 10: Often common in rocky sites: [Broom-like shrub, with three-lobed yellowish flowers and narrow leaves - usually short but up to 2m tall]

Saxifragaceae

Saxifraga chrysosplenifolia - (a saxifrage) – 2, 8, 10, 11, 14: Shaded gorge rocks: [Round-leaved saxifrage, white flowers, spotted yellow or red]

Saxifraga hederacea - (a saxifrage) – 11: [Slender herb with single white flower and rather ivy-like leaves]

Scrophulariaceae

Bellardia trixago – Bellardia – 2, 3, 7, 9, 10: Rough grass: [Erect opposite-leaved annual; 4-sided spike of white flowers flushed pink/yellow]

Cymbalaria muralis - Ivy-leaved Toadflax – 4, 7-9: Walls at Spili: [Trailing plant with ivy-like leaves; spurred violet and yellow flowers]

Linaria micrantha – (a toadflax) - 7

Linaria pelisseriana - Jersey Toadflax – 2, 4, 5, 8-12: Stony ground and fallow: [Delicate erect toadflax, purple-violet flowers]

Misopates orontium -Weasel's-snout – 3, 7: Rough ground: [Slim annual pink snapdragon]

Parentucellia latifolia - (a bartsia) - 2, 3, 5, 8-10: Bare areas in phrygana: [Short erect herb, opposite leaves, red-purple flowers]

Parentucellia viscosa -Yellow Bartsia – 7, 9: Damp ground: [Sticky hairy erect herb, with opposite leaves and yellow flowers]

Scrophularia lucida - (a figwort) – 3-5, 7, 9, 10, 13: Banks: [Typical figwort flowers, but pinnately-lobed leaves]

Scrophularia peregrina -Nettle-leaved Figwort – 3, 7, 11-13: Pathsides: [Typical figwort, shiny nettle-like leaves]

Verbascum arcturus - (a mullein) – 4, 9, 11, 13: Cliffs in gorges: [Lower leaves lobed (densely soft-hairy), short spikes of yellow flowers, violet filament hairs. Endemic]

Verbascum macrurum - (a mullein) – 3, 11, 13: Stony ground: [Typical mullein, with ovate leaves and tall spikes]
Verbascum sinuatum - Wavy-leaved Mullein – 3, 7: Pathsides: [Differs from other mulleins in pinnately lobed undulate leaves]
Verbascum spinosum - Spiny Mullein – 11-14: Gorges and phrygana: [Small spiny domed shrub with narrow white-downy, toothed to lobed leaves. Endemic]
Veronica arvensis - Wall Speedwell – 10: [Small erect annual with oval leaves and tiny blue flowers]
Veronica cymbalaria - White Speedwell – 2-14: Paths/walls: [Decumbent annual, lobed leaves and white flowers]
Veronica hederifolia – Ivy-leaved Speedwell - 6
Veronica persica – Persian Speedwell - 4, 6
Veronica thymifolia – (a speedwell) – 12, Kakovoli

Solanaceae

Hyoscyamus albus - White Henbane – 4, 13: Nutrient-rich margins: [Irregularly lobed leaves, greenish-white flowers with purple throat]
Mandragora autumnalis – Mandrake – 2, 3, 7, 9, 10: Rocky turf: [Violet flowers on stalks in centre of big crinkly rosettes]
Solanum nigrum – Black Nightshade - 7

Styracaceae

Styrax officinalis – Styraç – 3, 4, 6: Scrub: [Shrub with alternate oval leaves, and pendant fragrant white flowers]

Tamaricaceae

Tamarix parviflora - (a tamarisk) – 3, 13

Theligonaceae

Theligonum cynocrambe – Dog Spinach – 2-14 [small, foetid-smelling plant of waste places]

Thymelaeaceae

Daphne sericea - (a Daphne) – 2, 8, 10, 13, 14: Scattered in rocky phrygana, [Short dense evergreen shrub, crowded evergreen leaves; fragrant pink flowers]
Thymelaea hirsuta - (a Thymelaea) – 7, 9, 13: Rocky hills: [1m shrub, white stems, scale-leaves (white-downy within)]
Thymelaea tartonraira subsp. *argentea* - (a Thymelaea) – 2, 8, 10: Limestone phrygana: [Small shrub with many silvery oblong leaves, and clusters of yellowish flowers]

Ulmaceae

Zelkova abelicea – Zelkova – 6, Psiloritis: Rocky slopes: [Large shrub with small coarsely lobed leaves. Endemic]

Umbelliferae (Apiaceae)

Apium graveolens - Wild Celery – 5, 10: Ditches: [Yellow-green biennial, with broad segments to the divided leaves and a strong celery smell]
Apium nodiflorum - Fool's Watercress – 8: Ditch: [Singly pinnate leaves, rooting at nodes; umbels stalkless]
Berula erecta – Lesser Water-parsnip - 2

Crithmum maritimum - Cliff Samphire – 9, 13: Coastal slopes (rocks and walls): [Succulent 1-2 pinnate leaves; perennial]
Daucus carota subsp. *maxima* - Wild Carrot – 2-4, 7-13: [Familiar herb, divided bracts, bur fruit;]
Eryngium campestre - Field Eryngo – 2, 3: Phrygana: [Wide branched greenish spiny perennial, heads 10-15mm]
Eryngium maritimum - Sea Holly – 3, 9, 13: Low dunes and upper beaches: [Stiff leathery and spiny blue-green perennial]
Ferula communis - Giant Fennel – 2, 3, 5, 7-11, 13: Roadsides and abandoned land: [Striking big herb with feathery leaflets and many yellow umbels]
Foeniculum vulgare - Common Fennel - 5: Fallow ground: [Smaller than *Ferula*; aniseed aroma]
Lagoecia cuminoides – Lagoecia – 2: Rather open phrygana: [Tiny annual like Yarrow; globose silky heads, and oblong feathery leaves]
Lecokia cretica – (a *Lecockia*) – 2-4, 6, 8-10, 14
Oenanthe pimpinelloides - Corky-fruited Water-dropwort – 2-4, 7-11, 13: Moist areas: [White perennial with parts of umbel distinct from one another]
Scandix pecten-veneris - Shepherd's-needle – 4, 8, 10-14: Disturbed or cultivated sites: [Some petals usually larger than others]
Smyrniium olusatrum - Alexanders – 3, 7
Smyrniium creticum – (an alexanders) – Antonios Gorge 4
Smyrniium perfoliatum - Perfoliate Alexanders – 2, 3, 7-10, 13: [Differs in brighter yellow flowers; upper leaves simple, oval and clasping]
Tordylium apulum - (a hartwort) – 2, 3, 8, 9: Disturbed ground: [Annual with singly pinnate leaves, outer petal much larger; fruit disk-like with beaded margin (“false-teeth plant”)]
Torilis arvensis – Spreading Hedge-parsley – 3, 7, 8
Torilis nodosa - Knotted Hedge-parsley - 10

Urticaceae

Parietaria cretica - Cretan Pellitory – 4, 7-13: [Spreading annual, alternate leaves <15mm]
Parietaria judaica - Pellitory-of-the-wall – 4, 7: Walls and rocks: [Similar perennial, with leaves 1-7cm long]
Urtica pilulifera - Roman Nettle – 8, 11-13: Caves, ledges, areas frequented by goats: [Annual with jagged toothed leaves, globular fruiting heads and stinging hairs]
Urtica urens – Small Nettle - 6

Valerianaceae

Centranthus calcitrapae – (a valerian) – 4, 5, 10, 12, 14
Centranthus ruber - Red Valerian – 13: [Familiar garden plant, with undivided leaves]
Valeriana asarifolia - Cretan Valerian – 2-5, 7-11, 14: Limestone cliffs/crevices: [White valerian, basal leaves kidney-shaped; flower-head dense. Endemic]
Valerianella coronata - (a corn-salad) – 3, 4, 9, 11, 14: [Regularly branched annual, narrow leaves, globose inflorescence, calyx regularly 6-lobed]

Verbenaceae

Lantana comosa – Lantana – 11, 13: Introduced and naturalised: [heads of orange and yellow flowers]
Vitex agnus-castus - Chaste-tree – 13: Damp gullies: [Aromatic scrub and opposite digitate leaves, and fruiting spikes like peppercorns]

Violaceae

Viola cretica - Cretan Violet – 6, 8: In shade: [Typical small violet. Endemic]

Vitaceae

Vitis vinifera - Common Vine – 2-14: Naturalised and grown in groves and hedges: [Familiar climber]

MONOCOTYLEDONES

Agavaceae

Agave americana - Century Plant – 3, 4, 8, 9, 11: Naturalised on roadsides. [Huge rosettes of grey spear-shaped leaves and last year's tall stems bearing saucer-sized heads]

Amaryllidaceae

Narcissus tazetta - Polyanthus Narcissus – 2, 13, Gious Kambos and Frangokastello: [Typical daffodil leaves and several-fruited stems]

Pancratium maritimum - Sea Daffodil – 3, 9: Coastal sands: [Grey daffodil leaves]

Araceae

Arisarum vulgare - Friar's Cowl – 2-5, 8-12, 14: Rock ledges and scrubby areas in shade: [Patch-forming with heart-shaped leaves and spadix under a hooded spathe].

Arum concinatum - Large Cuckoo Pint – 2, 4, 8, 11, 13, 14: Olive groves and gorge woodland: [Like big Cuckoo Pint].

Arum creticum - Cretan Arum – 4, 9, 11: Rock, scree, stone-heaps in/above Kotsifou Gorge. [As latter but with yellow spadix and spathe - this folded backward]

Arum ideaum - Cretan Mountain Arum – 6, 11 (flowers), 12, 14: [Like Cuckoo Pint Endemic]

Dracunculus vulgaris - Dragon Arum – 2, 4, 7, 9-14, good flowering specimens on 7, 11-13: Olive groves and disturbed rocky ground: [Purple-striped stems, digitally divided leaves, long purple spathe].

Zantedeschia aethiopica - Arum-lily – 2, 3, 11, 13: Naturalised [Familiar garden plant]

Cyperaceae

Carex pendula - Pendulous Sedge – 4, 8: Shady ditch/stream banks: [Big tufted sedge, with distinct female and male spikes, both long and pendulous].

Cyperus longus – Galingale – 2, 7, 9: wet places by water: [Tall with triangular stems and “umbels” of clustered flat spikelets]

Eleocharis palustris -Common Spike-rush – 9: Marsh [Bed-forming, leafless stems with terminal spike]

Schoenus nigricans - Black Bog-rush – 9: Marks seepages: [Densely tufted, blackish heads with long bract].

Scirpus holoschoenus - Clustered Club-rush - 9

Dioscoreaceae

Tamus communis - Black Bryony – 8, 14: Shaded gorge-beds/gullies: [Unarmed climber with cordate leaves]

Gramineae (Poaceae)

Aira elegantissima – (a hair-grass) – 2, 3

Anthoxanthum odoratum - Sweet Vernal-grass – 9: [Familiar spiked grass with taste of new mown hay]

Arundo donax - Giant Reed – 2-4: Naturalised by roads and ditches: [Bamboo-like to 6m]

Briza maxima - Large Quaking-grass – 3: Disturbed areas: [Short annual with a few 14-25mm pendulous spikelets]

Cynosurus echinatus - Rough Dog's-tail - 3

Hyparrhenia hirta – (a grass) – 2-4

Lagurus ovatus - Hare's-tail – 2, 3: Widespread: [Distinctive hairy annual with dense soft, woolly oval flower-head with long awns]

Melica ramosa – (a melick) - 4

Poa bulbosa - Bulbous Meadow-grass – 2-4: Rocky places: [Tufted perennial with narrow leaves and branched heads, spikelets sprouting (Viviparous)]

Poa infirma – (Early Meadow-grass) – 2-4

Sesleria doefleri – (a grass) – 4 Kotsifou Gorge.

Sporobolus pungens – (a grass) - 13

Iridaceae

Crocus sieberi subsp. *sieberi* - (a crocus) – Good flowers on Psiloritis 6, Kakovoli 12, leaves on Gingilos: Stony ground 1500-1900m (only in flower at 1900m, around melting snow patches: [Typical white crocus, purple streaked outside; narrow leaves with white midrib. Endemic]

Gladiolus italicus - Field Gladiolus – 3-5, 7-14: Olive groves and fallow terraces: [Typical large pink-purple gladiolus]

Iris tuberosa - Widow Iris – 2, 5, 6, 9, 10, 14: Fallow and scrubby banks: [Iris-like flowers, yellow-green with blackish blotch on falls; leaves quadrangular. All in fruit]

Iris albicans - White Iris – 3, 5, 9, 11: Introduced, around cultivation and cemeteries in villages: [Typical large iris, always with white flowers]

Iris unguicularis subsp. *cretensis* - Cretan Iris – 2, 5-8, 10: [Compact purple iris with yellow blotches; Endemic]

Moraea sisyrinchium - Barbary-nut – 2-13: Common [Blue Iris-like flowers, opening in sun; leaves narrow and sheathing stem]

Romulea bulbocodium – Romulea – 5-10: Compacted clay (paths etc): [Small, crocus-like; white flowers have a yellow throat; leaves narrow-linear]

Liliaceae

Allium ampeloprasum - Wild Leek – 9: Fallow ground and roadsides: [Tall stout leek with dense terminal pink head]

Allium nigrum – Black Garlic – 7, 8, 11

Allium roseum - Rosy Garlic – 9: Moister sites, often in shade [Low garlic with grass-like leaves and loose heads of rosy-pink flowers]

Allium subhirsutum - (Hairy Garlic) – 7, 8, 10: Rocky areas and phrygana. [Grass-like leaves with sparse hairs and umbels of white flowers]

Asparagus aphyllus subsp. *orientalis* - (an asparagus) – 2, 8-11, 14: Olive groves and phrygana: [Scrambling branched woody perennial, thorny “leaves” (actually branches)]

Asphodeline lutea - Yellow Asphodel – 2-14: Phrygana: [Stiff leaves and stout yellow spikes]

Asphodelus aestivus - Common Asphodel – 2-14: Phrygana and fallow ground: [Stout branched candelabra head of pinkish-white flowers]

Asphodelus fistulosus - Hollow-stemmed Asphodel – 3: Roadside

Colchicum macrophyllum - (an autumn crocus) – 2, 10: Fallow terraces [Rosettes of large corrugated leaves, with a fruit capsule hidden at their base]

Drimia maritima -Sea Squill – 2-14: Rocky phrygana [Rosettes of large leathery leaves emerging from a big exerted bulb – “dog onion”]

Fritillaria messanensis subsp. *sphaciotica* - (a fritillary) – Frequent above chapel on Gious Kambos 2, on return trip saw them in flower 10: Local below cliffs: [Typical slender fritillary with linear leaves and nodding brownish flowers, usually mottled/chequered]

Gagea chrysantha - (a star-of-Bethlehem) – 6, 11, 13: [Like tiny yellow-green crocus, with thread-like leaves]

Gagea graeca – (Greek Star-of-Bethlehem) – 2, 3, 5-12, 14.

Gagea peduncularis - (a star-of-Bethlehem) – 6

Muscari comosum - Tassel Hyacinth - 2-5, 7-11, 13: Widespread in rocky phrygana and roadsides: [Spike of pale brown tubular flowers with cream teeth, and prominent bright violet terminal tassel]

Muscari neglectum - Common Grape-hyacinth – 12: Woods and rocks from 1300-1800m, Anopoli to Kakovoli: [Typical grape-hyacinth, but rather dwarfed]

Muscari spreitzenhoferi - (a tassel hyacinth) – 3, 4, 9: Rock-crevices near the sea: [Similar to latter, but shorter, teeth of fertile flowers yellow, and tiny terminal tassel]

Ornithogalum divergens - (a star-of-Bethlehem) – 5, 9: Fallow and open land: [Typical white star-of-Bethlehem with widely-branched corymb of 1cm flowers]

Ornithogalum exscapum - (a star-of-Bethlehem) – 9, 11

Ornithogalum narbonense - (a star-of-Bethlehem) – 3, 7, 13: Dry stony slopes:[Elongate white spikes of white star-like flowers]

Ruscus aculeatus - Butcher's Broom – 2, 4, 8, 10: Shaded or sheltered: [Low evergreen shrub with lanceolate spine-tipped “leaves” (branches)]

Scilla nana subsp. *albescens* - Cretan Squill – Psiloritis, 6: Frequent on recent snow-lie 1700-1900m: [Low delicate squill with pale-blue star-like flowers, fading whitish. Endemic]

Scilla nana subsp. *nana* - Cretan Squill – Kakovoli 12, Gingilos 14: Frequent on recent snow-lie 1700-1900m: [Low delicate squill with pale-blue star-like flowers, fading whitish. Endemic]

Smilax aspera - Common Smilax – 2, 4, 8-10: Clambering on scrub [Cordate leaves with some prickles on leaves, stalks and/or stems]

Tulipa bakeri - Baker's Tulip – 13, 14: [Similar to *T. saxatilis* (from which possibly not distinct) but smaller darker flowers. Endemic]

Tulipa cretica - Cretan Tulip – 4, 5, 6, 9, 12, 14: [Small white tulip, yellowish base to petals and wavy leaves. Endemic]

Tulipa doerfleri - Orange Tulip – 9, 10: Often common in cultivated and fallow fields: [Orange-red tulip; linear-lanceolate leaves. Endemic]

Tulipa saxatilis - Rock Tulip – 2, 10: [Pink tulip with white-edged yellow base to petals and rather oblong leaves]

NOTE: The following list of orchids seen follows Kretzschmar *et al.* (2002), which is published in German. It offers a sensible approach to the orchids found in Crete, and with the more recent English version (Kretzschmar, *et al.*, 2004), has many good colour photos, which are very useful in the field. It gives common names and those taken from the book are marked with a *, others have not been changed from the Greentours checklist. There is much research and debate on Orchid nomenclature and taxonomy, and some authors, including Delforge, tend to recognise many more species, sub-species and varieties than other authors. Since 2003, due to DNA work, many of the taxa have been transferred to other genera (e.g. some *Orchis* spp. to *Anacamptis*) but the names below follow Kretzschmar *et al.* (2004), to avoid confusion, though for the changes see Turland & Chilton (2008).

Orchidaceae

Aceras anthropophorum - Man Orchid – 2, 5, 7, 9, 10: [Greenish yellow flower-spikes, edged in red – no spur, lip “anthropoid”]

Anacamptis pyramidalis - Pyramidal Orchid – 3, 5, 7-10: Widespread in phrygana, locally scrub: [Dense pink spikes with long thin spur, deeply 3-lobed lip; narrow leaves]

Barlia robertiana – Giant Orchid – 2-5, 7-10: Light shade and lush phrygana [Stout and fragrant, with many greenish-purple flowers]

Dactylorhiza romana - Roman Orchid – Agios Ioanis 4, nearly 100 seen on grazed terraces below small chapel.

Limodorum abortivum - *Violet Limodore – 4: in Kermes Oak scrub: [Purplish saprophyte with scale-like leaves]

Neotinea maculata - Dense-flowered Orchid – 2, 10: Locally frequent in phrygana [Small, dense spike of tiny greenish white flowers; stem and leaves spotted/streaked]

Ophrys apifera - *Bee Ophrys – 13: Coastal marsh, Frangokastello.

Ophrys bombyliflora - *Bumble-bee Ophrys – 2, 5, 7-10: Often gregarious in phrygana: [Round right green sepals and brown very furry lip]

Ophrys candida – *White Ophrys – 9: eight flowering below chapel at Viglotopi.

Ophrys cinereophila – *Small-flowered Brown Ophrys – 5, 10, 12

Ophrys cretica subsp. *ariadne* – *Ariadne’s Ophrys – 2, 3, 5, 7-10: Common in phrygana: [Sepals green (or rose-tinted below); lip marked (or speculum outlined) in white]

Ophrys episcopalis – *Large-flowered Bee Ophrys – 2, 3, 5, 7, 9, 10: [larger flowers with spreading hairs, 3-5mm long “horns” and white/yellow band around speculum]

Ophrys fusca agg. - Sombre Bee Orchid group – 2, 3, 5, 8, 10: [Green sepals, 15-23mm brown lip, without any pale “omega” mark] A difficult group, plants not able to be identified to species included as this.

Ophrys fusca subsp. *creberrima* - *Creberrima Ophrys – 2, 10

Ophrys heldreichii – *Heldreich’s Ophrys – 3, 5, 7-10, 13: Phrygana: [Distinguished from all other pale pink-sepalled Ophrys by its deeply three-lobed labellum, the central lobe long-ovate]

Ophrys iricolor - *Rainbow Ophrys – 2, 10: Phrygana: [Like large *O. fusca* agg. flower whose labellum is 14-26mm and strongly red or purple underneath]

Ophrys mammosa - *Breasted Ophrys – 2, 7: [Striking, with bicoloured lateral sepals and large velvety labellum]

Ophrys omegaiifera subsp. *omegaiifera* - *Omega Ophrys – 2: Phrygana

Ophrys phryganae – *Phrygana Ophrys – 2, 5, 8, 10, 12, 14. Plants with larger yellow-lipped flowers probably belong here.

Ophrys sicula – *Small Yellow Ophrys – 2-5, 7-10, 12, 14. Like *Ophrys phryganae*.

Ophrys sphegodes subsp. *cretensis* – *Small Cretan Spider Ophrys – 2, 3, 7-9: Phrygana: [Green sepals, square labellum 6-9mm. Endemic]

Ophrys sphegodes subsp. *gortynia* – *Gortys Ophrys – 5, 7, 8, 11: Phrygana

Ophrys spruneri subsp. *spruneri* – *Spruner’s Ophrys – 2, 5, 12: Rare in phrygana: [Exquisite! Rose pink sepals, bright blue speculum on brown-black labellum]

Ophrys tenthredinifera – *Wasp Ophrys – 2, 5, 8-10: [Round pale pink sepals, and large square brown labellum with a wide straw-yellow margin – like Neopolitan ice-cream! Plants with little or no pink colour (“chlorantha”) occasional]

Orchis anatolica - Anatolian Orchid – ?10: Rare in phrygana: [Long purple spikes, flowers with long narrow spur and labellum with two rows of dark spots]

Orchis sitiaca - *Sitia Orchid – 2, 5, 8, 10: [Differs from *Orchis anatolica* in pale pink flowers, with a green blotch on lateral sepals. Endemic]

Orchis boryi - Bory's Orchid – 2, 5, 8-10: Commonest in grassy phrygana: [Resembles large Green-winged Orchid, upper flowers opening first, white or pink forms not uncommon]

Orchis collina - *Hill Orchid – 2, 3, 5, 7-10, 12: Grassy phrygana: [Few flowered spikes, olive-brown flowers, pink centre to labellum]

Orchis fragrans – Bug Orchid – Agia Triada, 7

Orchis italica - *Italian Orchid – 2-5, 7-12: Frequent and often gregarious in phrygana, grassy areas and old terraces: [Large bright pink spikes, labellum of each flower with long thin lobes]

Orchis lactea - Milky Orchid – 2, 5, 7-10: Phrygana: [Dense milky white spikes, with many pink spots; sepals with some green, notably at base]

Orchis laxiflora - Lax-flowered Orchid – 2, 4, 7-10: Mostly in damp seepage areas: [Long purple spikes, leafy stems. Odd plants at Viglotopi had leafier bracts, and approached *O. palustris*]

Orchis papilionacea subsp. *alibertis* – *Albertis’ Butterfly Orchid – 5, 8, 9: Often frequent in phrygana etc: [Distinctive few-flowered spike, large pink flowers with darker pink lines, flowers from April-May]

Orchis papilionacea subsp. *heroica* – *Heroic Butterfly Orchid – 5: Phrygana: [Distinguished from subsp. *alibertis* by more and larger flowers, and flowering period from February to April]

Orchis pauciflora - Few-flowered Orchid – 2, 5, 8, 10, 11, 14: [Spikes of 3-7 yellow flowers, labellum brighter yellow]

Orchis prisca – *Cretan Orchid – On path to Gingilos, 14: [Endemic. Thanks to AGS group for finding this]

Orchis provincialis - Provence Orchid – above Mourne, 10

Orchis quadripunctata - Four-spotted Orchid – 2, 3, 5, 7, 8, 10-12, 14: Carpeting open phrygana and soil-pockets in rocks: [Often tiny, flowers small, usually pink with 2-6 small spots in centre of labellum. White plants often found]

Orchis simia - Monkey Orchid – 5, 9, 10: [Dense spikes, flowers with grey-pink “helmet”, labellum like dark purple dancing monkey, with a white form on road to Xiron]

Orchis tridentata – *Three-toothed Orchid – 2, 5, 10, 14: [Short almost conical spike, with violet-lilac flowers whose 13-20mm long labellum is strongly marked with purple lines]

Serapias bergonii – *Bergoni’s Serapias – 3, 5, 7-12: Grassy sites: [Reddish-brown spikes with tongue-like lip with two dark blobs at base, and long bracts]

Serapias lingua - *Tongue Serapias – 2, 4, 5, 8-10, 13: Generally in damper phrygana: [Differs in long lip with 1 basal swelling, often much paler or pinker than the rest of flower]

Serapias orientalis subsp. *orientalis* – *Eastern Serapias – 7, 11: With other *Serapias*, local and mainly in drier areas: [From other tongue orchids by its lip being 11-23mm wide near base and markedly hairy]

Serapias parviflora - *Small-flowered Serapias – 7, 9, 12: Phrygana: [Similar to *S. bergonii*, but shorter bracts and lip more closely recurved under flower].

Hybrids –

?*Ophrys tenthredinifera* x *Ophrys cretica* subsp. *ariadne* – near Melambes, 5. Looked like it but not confirmed.

Orchis pauciflora x *Orchis quadripunctata* = *Orchis* × *pseudoanatolica* – seen with both parents north of road, Gious Kambos, 10.

?*Orchis simia* x *Orchis italica* – With both parents between south of Vatos 5, and near Mourne 10. Looked like it but not confirmed.

?*Serapias bergonii* x *Serapias orientalis* - With both parents at Agia Triada, 7. Looked like it but not confirmed.

Serapias bergonii x *Serapias lingua* – Armeni, 9. Possibly the ‘chunkier’ plants seen elsewhere are this hybrid?

Palmae (Arecaceae)

Phoenix theophrasti - Cretan Date-palm – 5, Souda 9: [Typical date-palm with pinnately cut leaves]

Potamogetonaceae

Posidonia oceanica - Posidonia – 3, 9, 13

Typhaceae

Typha domingensis – (a reedmace) - 13

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