

It is difficult precisely to calculate the cost saving of having all three tunnels inflated, but we use the two additional insulated tunnels in winter to store weaned cuttings, pot up early liners and ericas and carry out other operations under protection and in relative warmth.

VOICE: What is the light reduction with a double skin?

J. Van der BORGH: Estimation with a light meter from a camera suggests that the extra sheet cuts out a further 9% of light, but this has not affected plant growth.

PLANT HUNTING IN SPAIN

KELVIN LAWRENCE
Kelvin Lawrence Nurseries
Tilford, Surrey

Our purpose in going to Spain in December, 1980, was to renew acquaintance with two species of plants which we had previously found growing wild and flowering in mid-winter on the Sierra de Ronda in southwest Spain, inland from Gibraltar. These plants were *Clematis cirrhosa* and *Iris planifolia*, both flowering naturally in mid-winter, whose presence would be unsuspected unless you were travelling in that part of Spain in December and January. Both Chris Brickell and Roy Lancaster, who had seen my photographs, thought the *Clematis cirrhosa* of that region was a particularly good form and well worth introducing into cultivation here if we could bring plants back.

From Le Havre, our first stop in France was at the famous Minier Nurseries near Angers, where we spent two rewarding days. We then pointed the car south towards Spain and crossed the snow-covered Pyrenees by the Somport Pass, 5,000 ft. high. Although this is a "Chaines Obligatoire" pass in winter, we had crossed several times before without chains, and had no trouble this time. The sun on the Pyrenean snows was dazzling — what a marvelous combination sun and snow can be. It is worth mentioning here that in early summer the Pyrenees are a rich source of alpine plants, in our experience more varied than in the Alps. One can spend many happy days among the gentians, primulas, *Daphne cneorum* scenting the air, *Saxifraga longifolia* spewing from the perpendicular cliffs, and if you look in the right places *Ramonda myconi* (Syn. *R. pyrenaica*) in rocky crevices, but now sadly becoming scarce. On the top of the Bonaigua Pass at 6,000 feet, we once counted 180 flowers on a huge clump of *Gentiana verna* within an area of a square foot.

There are many alternative routes from northeast to southwest Spain, and we try to plan a new route each time, as far as possible using secondary rather than main roads. The Gredos Mountains west of Madrid, rising to 6,000 feet are often snow covered in mid-winter, but if the roads are open they are well worth driving through. Travellers taking a more easterly route should not miss a marvelous bit of country between Teruel and Cuenca in New Castille. In one area, in lovely open hilly moorland, the slopes are covered with a patchwork of *Juniperus sabina* in circular mats, a single plant sometimes covering a diameter of 15 feet. Towards Cuenca on high ground at the top of an extensive natural pine forest, is an extraordinary area of rock called the Ciudad Encantada, the Enchanted City, where rocks have been eroded into fantastic shapes by wind and rain over the centuries. This should not be missed, being one of the least known, but most rewarding sights in Spain. The surrounding country is spectacular and full of interest. If a southerly route is preferred, the road from Puerto Lumbreras to Granada passes through a village where most of the houses are built into the rock and are literally cave dwellings with a mere facade of bricks and mortar. Chimneys poking up here and there through the rock give the only clue to the rock dwellings beneath. One understands that it is not poverty that prompts people to live in these caves, so much as the need for cool conditions in the hottest area of Spain, and the freedom from the necessity of paying rates. Beyond is a remarkable bit of country, reminding one more of a moonscape, comprising a huge area of eroded rock, resembling miles of grey slag heaps — perhaps more intriguing than beautiful. Approaching Granada, the snow-covered Sierra Nevada massif rears up on the left to over 11,000 feet. It is interesting that the highest motor road in Europe winds up the mountain from Granada to 10,000 feet up, little short of the summit.

From the coast between Gibraltar and Marbella, the Sierra de Ronda rises in a series of hills up to 5,000 feet for about 40 miles inland. This was the area in which we were interested, and where we had previously found our two species of plants. We discovered the Iris again on Christmas Eve alongside a tiny road some 20 miles N.E. of Ronda, just outside a village, on rocky stony ground, well grazed over, but undamaged by sheep and goats. *Iris planifolia* is a lovely plant with wide leathery leaves and flowers some 4 inches or more across on 3 to 5 inch stems, of a lovely translucent pale to dark blue. Two pure white forms were discovered. This is a fleshy rooted Iris and probably difficult to establish in gardens. But what a reward awaits anybody succeeding.

On Christmas Day, in sight of the Rock of Gibraltar far below we renewed our acquaintance with the clematis, in full flower, clinging to brambles for support. Later we found it growing among the branches of young olive trees. In colour the flowers are deepish primrose yellow with the faintest green flush, up to 2 inches diameter, in stalkless open bells in profusion on the hanging stems. On the higher ground we found only isolated plants; but lower down behind Algeciras, along the "Strada de Toros" — the Road of the Bulls — we found it in greater profusion. We extricated a few roots from among the brambles on the higher ground, and these survived the journey and are flourishing.

Other plants we found growing wild and in flower in late December were a most attractive white *Narcissus tazetta* variety, and *Vinca difformis*. An unlikely plant association was to see a cactus (*Opuntia*) growing out of the middle of the vinca. We were too early for miniature narcissi; but it was sufficient reward to find and bring back two such beautiful plants flowering naturally in mid-winter.

DISCUSSION GROUP REPORTS

I. CUTTING HANDLING

Chairman: David Clark
Speaker. Brian Morgan
Reporter: Paul Labous

The chairman of the group, David Clark, opened the discussion by making reference to the paper given by John Stanley and Ian Baldwin, on "Work Flow and Costings in Propagation" which set the scene for our topic.

Brian Morgan then outlined the main points at which cuttings are handled, as follows:

1. At the stock plant
2. Collection and storage of cuttings
3. Compost mixing and preparation of trays
4. Preparation and insertion (this is the "bottleneck" in the whole system)
5. Transportation to the propagation unit
6. Hygiene, e.g. application of fungicides.

Having identified the "bottleneck" as preparation and insertion of cuttings, Brian Morgan, through A.D.A.S. has developed a system which should be applicable to a wide range of nurseries, to speed up these operations. This has led to an