

## Notes on Some Plants of the Atlas Mountains

By JAMES C. ARCHIBALD

THE FOLLOWING paragraphs contain some comments on a few of the plants which were collected during an expedition to the mountains of Morocco in 1962, and of which I was glad to be able to spare a little seed for the S.R.G.C. Seed Distribution.

One of the few joys of going to collect seed in the wild, which means that one must often forego any sight of the flowers, is that one can visualise the possible appearance of the plants in cultivation. Though one's imagination may sometimes tend to over-estimate the value of a particular species, many fresh and pleasureable surprises outweigh any disappointments awaiting those whose skill and curiosity find an outlet in raising new or unknown plants from seed. I hope that these lines may give you an insight into those pleasures and excitements and that those of you who may have received some seeds from the distribution, as well as my patient subscribers, will find the long wait until the seeds finally produce flowering plants shortened by reading of my sanguine hopes. I can but mention some of the species which I found and these are not necessarily all of the best ones ; such possible delights as the little yellow *Erysimum wilczekianum*, *Gentiana verna* ssp. *penetii*, the white or scarlet daisies of *Chrysanthemum atlanticum*, *Arabis erubescens*, *Erodium atlanticum* and the almost stemless, mushroom-pink scabiouises of *Ptercephalus depressus*, as well as many others, must be left to a more comprehensive account of the alpinies of the Atlas Mountains.

It is now past time for us to leave the comforts of Britain and to go to that small land of many faces—of high, barren, snow-streaked mountains and empty, oven-hot desert wastes ; of cool forests of oaks and cedars and lush oases of date-palms and fig-trees—Morocco. If we find some of our plants hard to discover, as they are no longer wearing their hearts upon their sleeves, surely our excitement at finding them at all will be the greater and intensified by the anticipation of how they will behave in our own gardens. The first plant we shall come across, however, will give us no such difficulties.

*Aconitum lycoctonum* ssp. *neapolitanum* ? var. *rerayense*, J.C.A. 155. The first surprise that the plant-collector experiences in investigating the flora of Morocco is the discovery that a very high number of Central and Southern European occur there. They do so, however, usually in distinct forms or sub-species, evolved gradually as a result of the long period of separation from their homeland in the neighbouring continent ; in fact, for the botanist, as well as for the geologist and zoologist, the Atlas Mountains, while one of the great ranges of Africa, must really be considered as part of Europe. Hooker tried to draw some interesting comparisons with the Abyssinian flora and John Ball sought to find some affinity with the plants of the Canary Islands,

but the close relationship of the Atlas flowers with those of South and Central Europe, especially Spain and Portugal, cannot be disputed ; such plants as *Gentiana verna* in its lovely sub-species *penetii*, *Paeonia corallina*, *Arabis alpina* var. *caucasica*, *Digitalis purpurea*, *Aquilegia vulgaris* var. *ballii* and a host of others all point out this fact. Such a plant is the *Aconitum* sp., which I found at 8,300 ft. in the Djebel Erdouz massif of the High Atlas.

We had jolted up the valley of the Oued Anougal on top of a load of pit-props in a rattling lorry, going up to an isolated mine right at the foot of Erdouz. The track had been too rough to risk taking the car unnecessarily, so that the opportunity of utilising the lorry, which made a daily journey up from Marrakech to collect the load of lead and zinc-bearing sludge, was too good to miss. We camped in the valley below Erdouz and but a few hundred yards from our tents grew a single vast colony of the aconite, stretching ribbon-like down the length of a single, tiny rivulet, rushing down to join the river below. The plants were almost six feet high and their branching spires, rising above the dark, palmate leaves, were closely packed with the creamy-yellow flowers. Nowhere did it extend more than a few feet on either side of the narrow stream, which supplied the rich alluvial clay with abundant moisture. I see no reason why this should not prove an easy plant to grow in our cool damp climate, and it should certainly be worth growing as it is utterly distinct from the small, often sparse-flowered, Yellow Wolfsbane of the Alps.

? *Anacyclus* sp., J.C.A. 129, is one of the daisies of the Atlas. As a non-botanist, I have always been thoroughly confused by the current classification of *Chrysanthemum*, *Leucanthemum*, *Anacyclus* and so on, and I cannot definitely assign this one to any particular genus. In any case the plants from which seed was collected were not in flower. They were low-growing with much-dissected, grey foliage and short lax stems, bearing what doubtless had been a white flower but which, from the appearance of the dried ray florets, had turned pink or red as it had aged. This may be better or worse than what we have in cultivation as *A. depressus* and *A. atlanticus*, but it should at least be worth a trial.

The plants from which seed was sent to the distribution grew below Djebel Erdouz at about 8,500 ft. but I discovered an envelope on my return without a number and which probably contained the same species. I remembered that I had collected more seed at a higher altitude so that the same plant probably extended to 10,000 ft. It grew in dry crevices and pockets, filled with gravel and hard-baked clay and usually in west- or east-facing situations, often shaded by an overhanging rock, so it will need full sun and a well-drained soil in cultivation.

*Arabis* ? *josiae*, J.C.A. 277, if it proves to be this species, should be quite a good plant, but its true identity must remain unknown until the seeds germinate and flower in cultivation, because it was not flowering when I collected it at 6,500 ft. on Mischliffen in the Middle

Atlas. This area of the range is a volcanic plateau, above which rise the rounded hummocks of extinct volcanoes, covered over with a vast cedar forest. Mischliffen is one of the most impressive of these craters—an enormous bowl down whose interior ski-runs and roads have been made and where a number of exciting plants grow in quantity. Right up on the southern lip of the crater I found a strange, outcropping, little cliff, facing due north and of much-weathered limestone, which was covered with sedums and saxifrages, *Endymion hispanicus* var. *algeriensis*, *Ornithogalum*s and *Muscari*, along with two species of *Arabis*, whose long capsules were just releasing their twin rows of minute lentils. All the plants seemed to revel in the deep pockets and holes in the limestone, filled with pure leafmould, and, while its August face was dry and crackling-brown, in April or May it must rejoice in a sheet of pink and blue and white.

One of the *Arabis* spp. formed neat rosettes of very dark green leaves, raspingly rough with a few pale hairs, and had a few erect stems to about six inches. This also grew at the margins of the woodland, among stones in the rich, leafy soil, and this I deduced was likely to be *Arabis josiae*, a Moroccan endemic with flowers of a penetrating violet. Shade and leafmould are not what one would always expect to be the best recipe for cultivating the genus *Arabis*, but such are the conditions under which several species grow.

? *Armeria allioides*, J.C.A. 188, is a doubtfully named collection from a plant out of flower at 7,300 ft. near the Cirque d'Arround below Djebel Toubkal in the High Atlas. I can say little about this other than that the plants grew in heavy clay and sent up tall, wiry stems to 1 ft. from small, neat rosettes. Whether or not it will be of any value will depend on the flowers, but I suspect that the clusters will be too small in proportion to the height, even if something is planted in front of it to hide its gawkiness.

*Asphodelus* sp., J.C.A. 204, grew in an imposing colony at 7,300 ft. on a level, grassy meadow beside a dried-up stream a few miles north of the Tizi n'Tichka pass across the High Atlas. The winters up there are worse than even a 1963 British one is and the barren pass is often closed by the snow even longer than Soutra Hill in Scotland has been this year! In summer no rain falls and the clay in which the plants grew was baked hard, but when the snow melts in spring they must be submerged in water. This is a tall plant of four or five feet in height and rather like *A. cerasiferus* in habit.

*Calamintha granatensis*, J.C.A. 248, is possibly more correctly *C. alpina* ssp. *granatensis* (or *Satureia alpina* ssp. *granatensis*). It is the Spanish and N. African counterpart of the well-known European plant and altogether very similar with many little bright-violet mint-flowers on semi-shrubby clumps of about six inches. It was collected at 6,000 ft. near Mischliffen, growing at the edge of cedar forest in a sunny place in gravelly clay overlying limestone.

I am very fond of *C. alpina*, which is a much neglected plant. It seeds itself about quietly in the garden and never fails to bloom for

months on end from midsummer onwards. If planted in a hot, dry place in poor soil, it will remain compact and floriferous and, if the frost does not do the job, clip the plants back almost to the root in spring. This African one will need the same treatment, I am sure.

*Campanula ? filicaulis*, J.C.A. 93, is one of many collections made under the name of this species. Some of the Moroccan Campanulas form a very puzzling group of plants and the multitude of similar-looking herbarium specimens will give the botanists much to chew over. Many of my '*C. ? filicaulis*' collections will no doubt prove to be of other species, but as far as the gardener is concerned all are on the same design. From a central, tap-rooted rosette of grey-green leaves radiate several procumbent stems of varying lengths, bearing at their ends flowers which may be anything from pale, bluish tones or rosey lilacs to a deep violet-purple. This collection was made at 4,000 ft. near Bab bou Idir in the Djebel Tazzeke massif of the Middle Atlas. The flowers were mostly of a pale to medium violet in flower and grew in the heavy clay of very hot, turfy pasture-land, between limestone boulders and lumps of volcanic scoriae. I collected this or a similar species as high as 10,500 ft., but it varied little in habit or habitat. It was always a plant of stony pastures and very seldom as saxatile as the one (which is very typical) illustrated in Clay's "Present Day Rock Garden." I did not once see anything in the least resembling the plant depicted in Crook's "Campanulas" under this name.

*Campanula ? mairei* var. *atlantica*, J.C.A. 117, may not be this species at all. The collection was made at 8,600 ft. from the hill above our camp-site in the Djebel Erdouz area. In the long grasses by a bubbling mountain stream a gorgeous campanula hung out its flowers of imperial violet on long, lax, wiry stems, twining among the grass stems ; it was in full flower and the seed had not yet matured, but a few feet away, on the drier, shady ledges of a basalt cliff I found some campanulas in seed. The latter were dwarfer but otherwise appeared more or less similar to the typical ones by the water, so I collected seed from one and herbarium specimens from the other, giving them both the same number, presuming that differences in habit were caused by the situations. However, my guess may be far out and, if the seeds produce something totally different from the plant described, you will know why.

*Carduncellus pinnatus*, J.C.A. 162. I am uncertain as to whether I like this more or less than *C. rhapsodicoides*, much publicised lately. I may be biased in favour of it, as it is a truly alpine species, whereas *C. rhapsodicoides* is a sub-alpine meadow plant from much lower altitudes, but it must be conceded that the latter is generally a more striking plant, especially in the flower colour ; I can view the case almost objectively as I found both.

This genus of strange thistles harbours many mediocrities, but *C. pinnatus* is a good one. I believe it has been in cultivation from lower altitude Algerian collections, but I collected it only at its highest altitudinal reaches in the distinct, absolutely stemless form which

occurs there. On our way up to the Djebel Toubkal from the village of Imelil, I first noticed it not far from the mule-path at around 7,000 ft. and, thereafter, every so often I would catch sight of it until we pitched the tent at 10,500 ft. Nearby, it grew in what was probably its highest station, in the drier areas among sparse turf and lumps of igneous rock. The flat, symmetrical rosettes adhere very closely to the ground and the leaves are spiny and pinnate (unlike those of *C. rhapsodicoides*). Tight in the centre of the rosette sits the stemless head of blue flowers with cream anthers; this is smaller than that of the lower altitude plant, but on the other hand the whole plant is smaller (about 6 ins. across) and very much less leafy and lush-looking. Exactly how they will compare in cultivation remains to be seen, but as I collected the seed and specimens of *C. pinnatus*, I thought, "Now, that would really look rather well sitting in a pot on the show-bench!"

The Middle Atlas is a particularly good area for shrubs. Much of it is covered with supremely beautiful forests of cedars, with a dense undergrowth in places of evergreen oaks. Apart from the cedars, the vegetation is extraordinarily similar to that of Provence or other parts of Southern France. Exactly in keeping with this similarity is that stalwart of so many Mediterranean 'maquis' areas, *Cistus laurifolius*, here in the Moroccan var. *atlanticus*. I had already seen this growing in the Rif Mountains and on the Djebel Tazzeke further north, where it covered acres of hillside, but here on the Djebel Hebri it grew in the rich volcanic clay at 6,500 ft. in a clearing among the cedars. It is certainly an indestructibly hardy shrub and one of the best of the genus with clusters of large, white, gold-centered 'roses' on 4 ft., leathery-leaved shrubs.

A little lower down on the hill grew that most spectacular of North African endemic shrubs, *Cytisus battandieri*. Large specimens from 10 to 12 ft. in height were dotted about in the open, grassy spaces between the cedars. They must have been covered in bloom earlier in the year, judging by the masses of seed-heads. The vision in one's imagination of the dozens of these huge, blue-green-leaved shrubs, covered with the large clusters of golden, pineapple-scented flowers, backed by the glaucous tones of the cedars and with hundreds of rosy pink paeonies strewn in the fresh, spring-green grass at their feet, makes the plant-collector's heart ache and his feet itch to be off again. It is worth noting that both of these shrubs are calcifuge species and did not occur on the nearby crater of Mischlifien, where there were limestone outcrops.

Not far from the *Cytisus* and in a similar situation grew occasional bushes of *Cotoneaster nummularia* var. *fontanesii* (syn. *C. fontanesii*), erect six-foot bushes spangled with small, glossy leaves and crimson berries.

In winter a ski-lift operates to the top of the Djebel Hebri, giving a clear run of 525 ft. down the steep slope. In August right in the middle of the ski-run, six-foot high clumps of the Dwarf Elder, *Sambucus ebulus*, were laden with massive cymes of translucent-crimson

berries. The lush, large-leaved stems grew among lumps of lava and I presumed that it was the herbaceous form which occurred—unless, of course, the snow-fall was sufficient to cover the shrubs entirely. This is hardly a choice plant but one which I should like to grow, given an area of rough woodland to 'wild garden' in.

More interesting is *Daphne gnidium* var. *lanata*, J.C.A. 181, which I collected on cliffs and sunny, dry slopes in the Cirque d'Arround of the High Atlas at 7,000 ft. I had seen the plant some weeks earlier in the Rif Mountains, in the var. *sericea* (the High Atlas collection may be this also). It is not spectacular, but rather pleasant, forming yard-high shrubs with erect stems, clad evenly in grey leaves and bearing clusters of smallish, cream-white, scented flowers to be followed by squashy, orange berries.

My strange activities while collecting *Sempervivum atlanticum* and subsequently the berries of the *Daphne*, while perched high on a cliff-edge, were watched with considerable interest by two Berber boys, who were passing by with their cattle. Their charges continued on their way and, while I had an audience for over an hour, I never saw the animals again; I suppose they knew their way around. In due course one of the boys vanished, to re-appear below me offering up handfuls of *Daphne* berries. I knew enough by that time to decline, as accepting would only have meant some return remuneration and the more disconcerting fact that I should have had embarrassing companions for the rest of the day. Perhaps I was ungrateful and the offer was just a kind gesture. I doubt it, though.

*Draba* ? *hispanica*, J.C.A. 145, and *D.* ? *oreadum*, J.C.A. 174, are two high-alpine cushions from similar situations at 10,000 ft. on Erdouz and 12,500 ft. on Toubkal, respectively. Neither of them was in flower when I found them, so that my tentative naming may be wrong: they may both be forms of the same species or the names may even have to be changed round. However, as these are two out of the only three really high altitude *Drabas* recorded from the Atlas, I can be fairly certain that one of the names at least will be applicable.

*Draba* sp., J.C.A. 145, occurred in crevices on cliffs of a black, igneous rock, possibly a basalt, facing north-west. I came across it while searching for a route up to collect seeds of a mossy saxifrage, whose clumps I could see high above my head on the sheer, black cliffs. The plants has ceased to flower, but the many seed capsules evidenced that it was a most floriferous plant. The capsules were in just the right condition for gathering—an all too rare occurrence when one is collecting in the wild—and I was delighted to find myself with a good quantity of seed of this species. The genus *Draba* is all too often parsimonious with its seeds. If it is *D. hispanica*, it will be good with large clusters of golden flowers—Farrer will tell you all about it; if it is not, I think that it is promising in any case.

*Draba* sp., J.C.A. 174 is from porphyry cliffs on Djebel Toubkal, where it grows in tight fissures and is one of the highest species. *Draba*

*oreadum*, if this it be, is a Moroccan endemic with white flowers instead of the more usual yellow.

Both of these plants will need similar conditions in cultivation, such as are accorded to the other cushion Drabas, like *D. polytricha* or *D. mollissima*. While I only found them on igneous rock, I think that the tufa method of culture would suit them admirably. If attempted on the open rock-garden, it would be advisable to plant them on their sides in a narrow, west-facing crevice and to put a pane of glass over them during our wet winters, as I am sure that they will resent stagnant moisture wholeheartedly.

*Euphorbia* sp., J.C.A. 151, may be *E. nicaeensis* var. *demnatensis*, but this matters little as it played a most evil deception on me by failing to produce more than a few dozen fertile seeds out of a very large collection of capsules. So there was not enough to spare any for the Distribution.

*Lavandula* sp., J.C.A. 101, was collected at 4,500 ft. on the Djebel Tazzeke, the northernmost mountain of the Middle Atlas. The bushes were 18 ins. high hummocks of grey leaves, whose rounded, compact habit was, I surmised, due to the activities of goats. There is no reason, however, why the gardener should not also act the goat and clip over his plants after flowering. It may be a form of the fine *Lavandula stoechas*, which occurs here and there in the 'maquis' around the Mediterranean, but of this no-one can be certain until it flowers. It should be easy in any warm, sunny place, while its hardiness should be fairly well ensured as its home is snow-covered for much of the winter.

*Linaria tristis* ssp. *lurida*, J.C.A. 171, brings us to one of the more exciting things. The porphyry screes of 13,665 ft. Djebel Toubkal and 13,415 ft. Dj. Ouenkrim, for all their magnitude, yielded only two species of real interest to the gardener, but two very remarkable species indeed. The more fantastic was *Viola dyris*, but almost as extraordinary is this linaria. It is a pity that the botanists have reduced this to a sub-species of the inferior and dowdy *L. tristis* from lower altitudes; surely the plants from these high screes show such a distinct and inherent environmental adaptation as to merit specific rank. Along the surface of the scree it sends out several, prostrate stems, grey-leaved and bearing at their ends a cluster of weird flowers. Lurid these are, indeed, bloated and livid Toadflaxes, in shades of dusky apricot and pale-slate with a lip of maroon velvet and a short fat spur striped with maroon in a manner both bizarre and spry; a little Richard III this—the sinister hunchback clad in a king's clothes and, I fear, like that unfortunate monarch, the Lurid Toadflax too is heading for an untimely end.

Every summer more and more goats are grazed on these high screes, eating every available scrap of vegetation, except the spiny shrubs, and, even worse, moving the screes downhill at an alarming rate. All day and every day from June until October, one can hear the sound of falling stones rattling down from hundreds of feet above. Some-

times a hissing roar will make the animals rush headlong across the slopes as tons of stones dislodged by their ill-fated activities cascade down the mountain. No plant can withstand all this. Centuries of evolution have adapted this linaria and the viola to the scree-conditions of these mountains so that their growth proceeds downhill with the slow, natural movement of the stones ; now with the increasing numbers of goats, those plants that are missed by the animals stand but little chance of furthering the species, as the rapid movement of the stones beneath the hoofs of the herds makes it almost impossible for the young seedling to anchor itself in the loose scree ; they must either adapt their mode of growth rapidly or face extinction. They are altering their habits and taking to growing beneath the larger, stable rocks, under overhangs where the tough mouths of the animals cannot reach them, but I doubt if they can adapt themselves quickly enough. The viola is not a profuse seeder and is obviously slow of growth ; the linaria is more generous, but it still took several hours of zig-zagging up and down the slopes of Ouenkrim and Toubkal before I could collect sufficient capsules of it. In this time I did not see one large plant of the species. All the curses and energy spent trudging about on these screes, which move downhill with each step almost as quickly as one moves uphill—a very aggravating affair at over 11,000 ft., will be well spent if I can see these two plants in cultivation, but, alas, I am afraid that they will prove awkward customers.

*Orchis ? munbyana*, J.C.A. 120, was collected for the curious, because it is unlikely that it will germinate under ordinary conditions, but sowing in a pot of one of our British *Dactylorchis* spp. may produce some plants. It grew within a few yards of our camp at 8,300 ft. in the valley below Erdouz, luxuriating in the squelching, stony alluvium among grasses by a stream and sending up tall stems to three feet. It is closely related to our native *O. incarnata* (syn. *O. latifolia*) and has been described as a variety of it, but it is certainly a giant version.

*Paeonia corallina* ssp. *coriacea* var. *maroccana*, J.C.A. 242. I should not say much about this as a crate containing the majority of the seed-bags of this and other heavy seeded species seems to have vanished without trace somewhere between Gibraltar and Glasgow. As a result, hardly a seed could be spared for the Distribution, although I had anticipated a good supply. Notwithstanding this catastrophe, I must say a few words about the plant.

I collected it between 6,300 and 6,500 ft. on both the Djebel Hebri and Mischliften in the Middle Atlas, where it grew in light shade among the cedars, revelling in the rich volcanic clays or in pure leaf-mould. It provides one of the most notable floral spectacles of Morocco when it blooms and, judging by the large numbers of plants present, it must certainly be a wonderful sight. I have made a mental note to return one day to see the grassy clearings blooming with paeonies and to find the multitudes of bulbs and orchids in the more inaccessible parts of the range. I wonder if I ever shall do so, but the prospect will be an incentive for a very long time.

*Papaver ? rupifragum* var. *atlanticum*, J.C.A. 132, is a lovely little lady whom some of you may have met already. I found her among rocks and wispy grasses at 8,500 ft., near Djebel Erdouz, facing north-west and with her feet firmly planted in the stony clay. Although she seemed to like dry feet, she was very shy about showing her face to the sun and, unless you rose as early as she did, you might pass her by unnoticed because she fled from the heat long before midday. But what delicacy there was in her crinolined skirt of muted-tangerine, silken petals, dancing at the end of a fragile stem above the close clump of roughly hairy, notched, grey leaves ; and what a multitude of fat, modest-headed buds pushed up, eagerly awaiting for their turn to burst out to kiss the dawn of each successive day.

*Polygonatum odoratum*, J.C.A. 265, is, of course, the valid name for what I had in my field-notes as *P. officinale*. I hope that I may be forgiven for carrying coals to Newcastle by bringing back seed of a rare British native, but how many gardens contain this, although it is certainly one of the best of the dwarfer Solomon's Seals. To find it in Morocco, we must return to the Djebel Hebri, where its stems pushed up here and there among the turf and lava-lumps at the feet of *Sambucus ebulus*. The foot-high, arching wands were hung with bloomy-black berries, as they had been earlier with the creamy flowers. Nearby grew a lush form of the evil-looking Henbane and, with all these familiar wildflowers about, one quite forgot that one was in the 'Dark Continent.'

*Ptilotrichum spinosum*, J.C.A. 125, is another old friend, but in a slightly more worthy dress than the dirty-white flowered plant of our gardens and Southern France. The Spiny Alyssum is one of the commonest plants of the High Atlas and a thoroughly goat-resistant fellow too, whose low, jaggy hummocks I found from 8,300 to 10,000 ft. on Erdouz, dotted about on dry stony slopes and fixing unstable scree most efficiently. Higher up many plants still had a modicum of flower on them, varying in colour from a washy blush to a surprisingly deep carmine-pink. I collected from what appeared to be the deepest forms, but how many will retain this good colour in cultivation, when raised from seed, remains to be seen.

The two *Rosa* spp. I shall dismiss cursorily as I cannot say much about either except to correct an error on my part. Both species grew on shales—not basalt, as appeared in the Seed Distribution List ; an unaccountable mistake for which I apologise. Neither of them was in flower but the taller one (J.C.A. 97) from the Djebel Tazzeke looked extremely interesting.

*Salvia taraxacifolia*, J.C.A. 105, is a good plant. I am told that there was quite a demand for this in the Distribution and all my subscribers received it, so that I can now only hope that it will live up to my expectations. It was in cultivation before the war, but I have not seen it nor do I know of any plants still surviving. To save your reading unnecessary words of description, there is an excellent photograph of this, growing wild, in Clay. When I collected it at 5,300 ft.

in a gorge of the Oued Anougal, just north of the village of Azegour on our way up to Erdouz, few flowers remained but seed was almost matured. The six-inch high spikes of blush-pink flowers must have combined most attractively with the coarsely cut, grey leaves.

A word of advice is necessary, however. The dwarfer plants grew on east-facing crevices in gravelly sand, but a few plants had seeded down into the damp mud by the river ; there they grew to more than twice the height and much leafier, while still relatively attractive. So, if we want to preserve the compact character of this, it will be necessary to starve it in a poor compost and to expose it to full sun ; keep it dry both in winter and in summer, as I do not think that it will be able to stand much moisture at any time.

*Salvia* sp., J.C.A. 224, was what I had in my field-notes as being possibly *S. battandieri*, which I now find is likely to be an invalid name. Although I did not see it in flower, I am still sure that it belongs to the same rather confused aggregate as this name. It is one of the few plants from the Cirque de Jaffar in the Djebel Ayachi area which was collected in a fair quantity. I found it down at the bottom of the bowl-shaped Cirque at 6,900 ft., growing in turfy clay among lumps of limestone. The flowers were long past but the seed-heads, from which much seed had already dispersed, were profuse on the stems of eight inches or so, above the rosettes of crinkled, dull-green leaves. It looked as if it might be quite a good plant so we spent some time gathering it. I shall make the guess that the flowers will be anything from pale-blue to deep-violet, which leaves me a good margin for inaccuracy.

*Saxifraga ? demnatensis*, J.C.A. 175, introduces us to the 'mossies' of the High Atlas—a fine, large-flowered plant from the highest reaches and not to be despised or treated with indifference. In fact, I can say that it was without doubt the most spectacular plant which I saw at the peak of its flowering in Morocco.

Away up on Djebel Toubkal I found it growing right at the tops of sheer, dark cliffs, at 12,500 ft.—blotches of white dabbed on to the sinister rock away above my head. Another species of the *Dactyloides* section had already led me a fine dance on the cliffs of Erdouz, so it was with seemingly familiar steps that I climbed up towards the plants. However, the wayward beauties remained out of my reach, but a few feet of smooth cliff, wet from the afternoon hail-storm, separating them from my grasp. I foiled their defences by managing to poke a couple of clumps loose with my walking-stick (a trusty and indispensable aid, which I always tried to have with me no matter how awkward the terrain) and, having watched where they fell after plumping dizzily down, I made a scrambling descent to seize them eagerly. There at 12,500 ft., flowering was almost over and I was able to pick a fair number of mature capsules from the two plants ; 200 ft. higher it was still at its best.

At 12,700 ft. on the highest mountain in North Africa, in the last days of July, the great sticky, bright-green clumps of this saxifrage

are dressing themselves in bridal garb of billowing white. How their marriage is consummated I cannot say. The pollination of high-alpines is always an interesting affair, but I shall not trouble too much over this, as long as we can see the children of this immaculate bride in our gardens. Treat them gently and keep their heads cool in hot weather, because we do not have here any sun-loving African ; she is no kindred spirit to your *Asphodelus acaulis* nor your *Ranunculus calandrinoides* nor your *Carduncellus rhaponticoides*, but dwells more than a mile above their heads, among the Oreads, not the Cook's tours. There she shyly hides beneath the mountain's snowy cloak from October until May, and even then so loves the purity of white that she must produce her own cloak of snow in summer ; there where the air is becoming thin and cold she lives, seemingly bursting the very rocks apart with her vitality, gay in spite of the nightly freezing and the battering with hail every other afternoon, quivering with laughter as the cold winds whip her dress about. Who fears that she will sulk in Britain's cold and wet ; of course, she would not think of any such thing, but she may leave us in disgust because the life is too soft a one for her.

*Sedum* sp., J.C.A. 198, is a modest sedum but is certainly not *Sedum modestum* ; it is rather more likely to be *S. atlanticum*. I found it on north-west facing slabs of crumbling shale (again not basalt) at 7,300 ft. near the Tizi n'Tichka, hanging from crevices in close mats of tiny, metallic-blue leaves all sprinkled over with starry flowers of pinkish-grey—a subtle colour combination but one which I find an anticlimax after writing of the saxifrage. I have no great love for sedums, but 'chacun a son gout.' Where would we gardeners be if we all liked the same plants ? What is more, where would the plant-collector be ?

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## Counterblast to a Critical Conifer Expert

With reference to the December<sup>1</sup> Bulletin,  
 In which some, it's said, are guilty of sin,  
 A reviewer, while condemning some innocent chaps,  
 Condones the behaviour of barbarous Japs,  
 Who practise their fell art like "comprachicos" of old—  
 What these are, in a book by Victor Hugo<sup>2</sup> we're told.

Now why should he make such complaints vociferous  
 Against poor collectors of dwarfs coniferous,  
 When Far Eastern sadists stunt and starve,  
 And twist with copper wire and carve  
 Their trees to stop them growing tall ?  
 We do *our* dwarfs no harm at all,  
 But try our best to grow them well,  
 Care for and cosset them, not give them hell !

<sup>1</sup>Dec. 1960 A.G.S. Book review by Miller Bradfield.

<sup>2</sup>" L'homme qui rit."