This is a time when either summer vacations are looming, filling us with expectation of the relaxation soon to be experienced or, for those in the southern hemisphere, it brings a time when thoughts of the distant summer are what cheers us through nasty winter weather! There are those lucky international rock gardeners who travel the world so much they can turn the seasons around – but most of us are resigned, if not content, to live out our local seasons with stoicism. That is not to say that even those “stay-at-homes” are not able to be cheered by hearing of the travels of others – something the IRG can bring.

Cover picture: *Armeria filicaulis* subsp. *trevenqueana*, photo by Dieter Zschummel

---Gardens in the Mountains ----

**A Portrait of Mount Trevenque in the Spanish Sierra Nevada** by Dieter Zschummel

West of the main high part of the Sierra Nevada, well separated by a rather deep valley, the highest point is Mt. Trevenque (2089m). It is possible to go by car on a gravel road from La Zubia to a trailhead about 3km behind the little village of Cumbres Verdes. There is a place where cars can be parked. It is even possible to drive farther on a gravel road beneath the crest (on the right side of the road) and to reach the far side of Mt. Trevenque. But to take the path near the crest or even on the crest leading to the mountain is much more interesting.

Already along the roadside to Cumbres Verdes a yellow member of the Labiatae is evident. It is *Phlomis lychnites* (right). *Iris xiphium* can be in flower at the same time.

Starting at about 1500m elevation it is an easy walk: a path slopes gently until one reaches the foot of Mt. Trevenque. The whole area along the walk is dolomitic limestone, sometimes it is rocky, sometimes with fine silt and sometimes the surface is covered with gravel.
**Fumana cf. ericoides**

Several attractive plants at this elevation are more or less tender, like *Lavandula stoechas*, *Cistus* and various species of *Fumana*, though appropriate conditions and climate change may enable the cultivation of some plants farther north in Europe in the future.

(All photos taken late May to mid June)
Plants only hardy when there is no real winter – such as in 2013/14 – are *Coris monspeliensis* (above) and *Putoria calabrica*. The *Coris* belongs to the Primulaceae but probably gardeners would imagine more it to be a relative of *Veronica*. It is a dwarf plant with a woody stem and blue violet tubular flowers with unequal petal lobes in short racemes.

*Putoria calabrica* (above – and with a pollinator) is also a little shrub but this time it can be seen that it is a member of the Rubiaceae: the pink flowers immediately remind you of *Asperula*. 
Another shrub in flower in May is *Thymelaea tartonaira* subsp. *valentina* (syn. *Th. myrtifolia*). The light yellow flowers are rather inconspicuous but its habit – round shrubs only to 20cm tall – is very much to a rock gardener’s taste.

*Thymelaea tartonaira* subsp. *valentina*: close up of the flowers

Many plants are members of the Fabaceae. One of the tallest is *Retama sphaerocarpa*; *Adenocarpus decorticans* is not a gem while *Genista versicolor* (syn. *G. baetica*), below, is common.
The spiny shrublets of *Erinacea anthyllis* grow everywhere: at the lower part of the trail they are past flowering (in mid-May) but will be full of blue flowers as you ascend the hill.
A nice contrast to the *Erinacea* is the similarly prickly *Vella spinosa* (Brassicaceae) (below right) with its light yellow blooms.

Above: Just occasionally one can discover *Chamaespartium undulatum* (synonym *Genistella undulata*)

Two species of the genus *Anthyllis* have to be mentioned: *Anthyllis vulneraria* subsp. *argyrophylla* with red flowers is the first. Unfortunately it can have much paler flowers in cultivation; the same happens with the subspecies *arundana* from higher up in the non-dolomitic part of the Sierra Nevada.
A second speciality is the yellow flowering *Anthyllis tejedensis* (below left) with blue-grey woolly leaves.

Soon you will find the first cushions of that good garden plant *Convolvulus boissieri*. It appears frequently and the flowers can be variable in shades from white to a good pink sitting amongst the silvery leaves.

*Convolvulus boissieri* on limestone in the Sierra Nevada
Convolvulus boissieri
A similar silver but finer cushion is made by *Santolina elegans* with yellow button-like flowers on a stem about 10 cm tall. A different habit but also with silvery hairy leaves is *Echium albicans*. From rosettes of these leaves arise stems with several flowers of an Indian red fading to violet and blue. Unfortunately it is not perennial but can be grown with some shelter against rain.

*Jurinea humilis* (above) has grey leaves; a plant one can find also in higher elevations on mica-schist in the Sierra Nevada. It also seems to be easy in cultivation: we have had it for about ten years growing in a sand bed, where it flowers in some years. The *Centaurea*-like flowers of a pale pink with a violet tint are on short stems over dissected leaves.
A plant family represented by many members is Cistaceae. *Cistus* and *Fumana* (about 8 species in the area) have already been mentioned, *Halimium* has to be added. Still more taxa are in the genus *Helianthemum*.

In “Flora Vascular de Andalucia Oriental” (available on the internet) 25 species of *Helianthemum* are mentioned and about 17 are enumerated in “La Flora de Sierra Nevada” by Molero-Mesa and Perez-Raya (Granada 1987). Most of the species prefer basic soils and so these are to be found not in the highest parts of the Sierra Nevada, where mica-schist prevails, but in the lower parts of the mountains up to about 2100m. There on dolomitic ground many plants are growing suitable for a sunny place in the rock garden. Three of them stand out as being to our taste.

The first is perhaps *Helianthemum marifolium subsp. origanifolium* (above). It has strong yellow flowers several at the end of stems to 10cm long, lying flat on the ground.
The second is the dwarf subspecies *estevei* of the well-known *H. apenninum*. It is here less than 10cm tall and has tomentose leaves and very large white flowers. The best and rarest is an endemic of Trevenque and the somewhat westerly situated Sierra del Manar. Its name is *Helianthemum pannosum* (right). This *Helianthemum* is a gem with mostly light yellow flowers. The leaves have a silvery aspect because they are tomentose/ hairy. It prefers the higher situated areas only and so it proved to be fully hardy in the garden – again in a raised sand bed.

Only at one place on the crest which leads to the Trevenque we have seen *Pterocephalus spathulatus* (left and below) a plant also growing in the Sierra de Cazorla of Andalusia. In May it is not yet in flower. But the silvery compact cushions are beautiful already without its big typical scabiosa-like pink flowers. It does well in a sunny garden with shelter against rain or in an alpine house and is easily propagated by cuttings.
More dwarf plants to be found in rocky ground are *Draba hispanica* and *Saxifraga erioblasta*. The *Saxifraga* will be still in flower at shady places, whereas its small rosettes already are getting brown where its situation is more open in full sun. The plants are dormant in summer. *Alyssum serpyllifolium* is a common small plant with small flowers whereas *Thymus longiflorus* has the largest flowers amongst several other members of its genus. *Paronychia aretioides* (right) is found nearby.
Thymus longiflorus

Relatively unknown by rock gardeners is the dwarf variant of Armeria filicaulis, sometimes called subspecies trevenqueana (below) with flower stems less than 5cm tall and the usual neatly composed head of white to pink flowers. It is easy in the garden like most of the genus.

Quite unknown by gardeners seems to be Rothmaleria granatensis (right) a member of the Asteraceae. The ray florets of its dandelion like yellow flowers carried on a stem not taller than 8cm are brown at the end. The dark green leaves are heavily lobed. It is the only one member of its genus and named after Werner Rothmaler (1908-1962), a German botanist who worked for several years in Spain and Portugal and in the late German Democratic Republic.

He is well known as the author of “Exkursionsflora von Deutschland” (3 volumes, volume 4 1966), volume 5 (2008) for garden grown plants.)
Another plant probably not found in a rock garden is *Erodium boissieri* (left and above). It has pink flowers, the green leaves lie flat on the ground and have purple venations.

Perhaps the most desirable plant for rock gardeners is *Lomelosia pulsatilloides*, still better known as *Scabiosa pulsatilloides*. In May it will be just in bud. At that time it is sitting in the middle of a rosette with pulsatilla-like leaves. In June / July it is in flower with big heads of pink to violet, sometimes white flowers on stems to about 10cm tall. It is a tap rooted plant. In Erich Wocke “Die Kulturpraxis der Alpenpflanzen” (Berlin 1940) this plant is described as the “noblest, prettiest and fussiest” of all Scabiosas, but we are in doubt whether it had at that time, been tried in the garden. It is mostly found at the higher places, though also already on one place not far from the start of our walk.
Along the whole way butterflies are enjoying the many flowers just as we do, for instance a Swallowtail (Iphiclides feisthamelii), and after a short steep easy climb past a carpet of Arctostaphylos alpina you reach the top of Mt. Trevenque and may meet the Iberian ibex - Capra pyrenaica hispanica (below).
If you choose the way down from the top on the backside of Trevenque you will explore more flowers like *Paeonia coriacea* (below right) on the fringe of the forest and *Polygala boissieri* (below) or *Onosma tricerosperma* at more open places, but you have to walk a long distance on the gravel road back to your car.

Another plant of the limestone areas is *Linum suffruticosum* (right) which in the Sierra Nevada is a creamy colour with golden buds, rather than the more usual white version found elsewhere in S.W. Europe.

Photos: Kirsten Andersen and Dieter Zschummel
It takes time for many “monographists” to sort out fundamentals of any genus. *Cyclamen* has had a few champions but still, the habitat/ecology and collection and naming history of *Cyclamen* has been spotty. Inevitably, this has rendered the taxonomy a little mystifying. *Cyclamen elegans* is one of those real beauties in that most lovely genus of *Cyclamen* that people are most keen to grow. Despite some recent good molecular work to the contrary (Clennett, 2002: *An analysis and revision of Cyclamen L. with emphasis on subgenus Gyrophoebe O. Schwarz*) many taxonomists and authorities (*Plantlist* and the *Cyclamen Society* itself!) cling to the notion that *C. elegans* is a subspecies of the widespread *C. coum*.

However, as many researchers/authors and growers note, there are some significant differences that should be noted between these two. Besides the narrow ecological range of *C. elegans* (compared to the wide swath of *C. coum*), there are glaring morphological as well as physiological deviations. Morphological: Succinctly put, *C. elegans* has longer and more elegant leaves and noticeably larger flower petals. There is some ecotypical variation within *C. elegans* but nothing on the order of *C. coum* because of the limited range that *C. elegans* inhabits both from a footprint as well as altitudinal perspective. With *C. elegans*, the Caspian Sea is a pervasive influence providing warm temps and humidity.

Physiological: *Cyclamen elegans* is not as hardy as the type species of *C. coum* and this has largely contributed to its rarity. Due to its proclivity for temperate to subtropical climes and the high humidity during summer, in its native habitat, it flowers in winter well before *C. coum*. This flowering time “clock” remains a consistent feature when planted elsewhere. In maritime climes this means that it must be kept dry before and during its flowering time.
Habitat of *Cyclamen elegans*

The home of *C. elegans* is a lush forest classified by ecologists as the Caspian-Hyrcanian mixed forest. This ecological zone covers the Talysh range of mountains and also extends north into Iran and down onto the Lankara plains in Azerbaijan. *C. elegans* is listed as “Vulnerable” in the most recent assessment contained in the Red Book of Azerbaijan (2010).

In a very interesting study done in the journal, *BMC Evolutionary Biology* (2006) authors Yesson and Culham delve into *A Phytoclimatic study of Cyclamen*. They state, “We demonstrate phylogenetic structure for some climatic characteristics, and show that most *Cyclamen* have distinct climatic niches, with the exception of several wide-ranging, geographically expansive, species. We reconstruct climate preferences for hypothetical ancestral *Cyclamen*. The ancestral *Cyclamen* lineage has a preference for the seasonal Mediterranean climate characteristic of dry summers and wet winters. There is an established link between bioclimatic niche models and phylogenetic diversification (Peterson *et al* 1999).”

As it relates to the differences between *C. coum* and *C. elegans*, they state, “However, the phylogenetic structure in the data is not uniform across the (cladistic) tree; for example, comparing *C. elegans* with its wide-ranging sister taxon, *C. coum*, shows that they differ for most precipitation values.”

From their field data and modeling they further discover that *C. elegans* is more xeric in nature than *C. coum*. *C. elegans* lives with an average of just 1mm of precipitation during the warmest month compared to *C. coum* that has about 5mm during the warmest month.

Given that *C. elegans* native habitat includes the warm, coastal belt of the west Caspian Sea; it is not surprising that they are not quite as hardy as *C. coum*.

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*Cyclamen elegans*, Iran, Gilan, Rasht

However, the issue of paleobotanical hardiness asserts itself here. It would seem that not just cold but the wetness that is associated with it is a negative hardiness vector for *C. elegans*. Dry cool (even...
freezing) temps are not the only problem but rather the cycles of the seasons. The ideal rhythms for *C. elegans* would appear to be mild, vernal moist spring followed by a hot dry summer, then a relatively dry autumn and a dry winter with some wet but not a lot of freezing. Thus, in a maritime climate or even continental climes, unheated greenhouses (with some spot emergency heating) are an appropriate growth ally.

Yesson and Culham also state, “More than two-thirds of all comparisons show zero prediction of other species distributions, which suggests that most *Cyclamen* are climatically isolated.” Even more telling is the authors statement that, “The bioclimatic envelope for *C. coum* shows some overlap with the (bioclimatic) envelopes of all other *Cyclamen* except *C. somalense* (from Somalia in NE Africa).”

It certainly stands to reason then that *C. elegans* would be a good N. American candidate to establish in the warm coastal areas of California and the Carolinas.

Not surprisingly then, fanciers of *C. elegans* like to grow it in an unheated but dry greenhouse during the winter.
Jānis Rukšāns states in his book “Buried Treasures” (Timber Press, 2007, ISBN-10: 0881928186 ISBN-13: 978-0881928181) “On the riverbank where I had my second garden, I plowed up a narrow meadow. On one side were very large lime and maple trees, (and) on the other side gray alders. On this site (in Latvia) I grew different species of Corydalis, Galanthus, Leucojum, Cyclamen and Colchicum. At the base of an old lime tree some twenty years later, I found seedlings of Cyclamen elegans flowering marvelously. The tubers that I’d moved to my most recent garden hadn’t survived but the seeds they had produced, after a few years, resulted in plants with many blooms.” (p. 79-80).

Rukšāns also indicates that even the hardiest Cyclamen are notoriously fickle to raise outside in his Latvian winter. Thus, he takes absolutely no chances and recommends dry oak leaves topped by plastic. (p 111-2).

**Cultural Approaches for *C. elegans***

This cultural approach by Rukšāns underlines some very important and fundamental aspects of not only Cyclamen in general but *C. elegans* as well. With their propensity for a substrate of limestone, it is important that they have drainage at all times of the year. However, it is also equally important that they have some protection from the scorch of the afternoon sun in summer, lest their root hairs get scorched and their tubers desiccate.

This is one of the reasons that they do so well under shrubs and small trees in temperate maritime climes. First, they have the added protection from the afternoon sun and they have the roots of the shrubs to maintain and retain a degree of moisture during the summer yet wick up excess moisture during autumn and winter. One of the dominant shrubs for *C. elegans* in its native habitat is the Talysh endemic, *Parrotia persica*, a slow-growing tree popular in gardens for its autumn Colour.

Michael Kammerlander (seen above with Gerben Tjeerdsma, admiring Michael’s remarkable Dionysia collection in this photo by Henrik Zetterlund), the retired Head Gardener of the Wurzburg Botanical Garden, likes to raise cyclamen in his well-ventilated greenhouse.
The weak extractive power of *Cyclamen* roots means that it is a very demanding plant when it comes to trace elements. Furthermore, like most bulbs, they have a high oxygen demand but do not want an overly coarse medium. The root hairs of *Cyclamen* are an all important consideration. Phosphorous - as it relates to root hairs - is essential but it must be water-soluble.

Some growers report a lack of vigour with *Cyclamen elegans*. Problems in this regard often start with the soil mix. Herein lies a simplified formula: 1/3 fibre peat moss (Canadian), 1/3 “white” peat (sifted) and 1/6 Perlite with 1/6 mineral-rich sand.

Some like to have mixes using 30% perlite. Other ingredients that mimic these components are worth experimenting with. [Ed.: “white” peat is less decomposed than “black” peat.]

It is a very good idea to use pots that have many holes and are raised in their trays to allow for optimal aeration. Poppleman thermoformed pots doubled up are an excellent container to grow any *Cyclamen*.

Left: *Cyclamen elegans*, JJA original collection. 1966, Iran, Prov. Mazandaran, S of Chalus: 20m (p.49 of *JJA masterlist from the Archibald Archive*)

End Notes

For more details on the humidity and sub-tropical climate of *C. elegans* in nature - see this [web-link](#) from Wikipedia.

Some terrific pictures of *C. elegans* in Azerbaijan by Seregei Mayorov from January 2009 [here](#) with pictures taken in Hirkan National Park, [here](#).

The Journal of Plant Development (*Selimov & Ibadli*) recently listed the endangered geophytes of Hirkan National Park. This list includes *C. elegans*.

**John Lonsdale** grows *C. elegans* (and many more species!) at his place in Pennsylvania. They are all grown in plastic pots.

The SRGC Seedex 2014/5 had #1170- *C. elegans ex Iran* - on offer this past season.

There is evidence to suggest that seed collections from Arnis Seisums collected in the hills northwest of Lerik are hardier than the type. This bias is mentioned in the later *Jim Archibald* seedlists.
Left: *C. elegans* KV93 – foliage, as grown and photographed by J. Ralph Carpenter.

**Kurt Vickery** has been offering seed of *C. elegans* recently as KV93 collected from Sari, Iran at 200 m. Contact via post at: Hillview, Shipham Lane, Winscombe, Somerset BS25 1JU England

**Bob & Rannveig Wallis** report seeing *C. elegans* at 1600m on their trip to N Iran in 2008 (Their report can be found in the *AGS Central Sussex Group Newsletter October 2009* (p 2).

**Peter Nijssen** has a good selection of *Cyclamen* plants and has *C. elegans* on offer from his **Netherlands nursery**.

**Jan & Mieke Bravenboer** of **Green Ice Nursery** have a dizzying array of *Cyclamen seeds* (and plants) including different forms of *C. elegans*. Some are listed as flowering in November and others in January.

**---Plant Naming---**

One of the keenest hybridisers of miniature daffodils in the UK is Anne Wright of **Dryad Nursery** but Anne, who is also an accomplished artist, does not restrict her plant breeding interest to narcissus and we are pleased to present her article on the naming of her new group of yellow *galanthus*.

Anne Wright’s early compilation picture of the “Dryad Gold Group” – including ‘Wendy’s Gold’ in the centre for comparison.
A New Group of Yellow Snowdrops - text and photos by Anne Wright.

Back in 2006, I had just begun collecting snowdrops, and being a beginner, tried to buy varieties that I could see were distinct. At the time the only two yellow snowdrops I was able to buy were *G. plicatus* 'Wendy's Gold' and *G. nivalis* 'Lutescens' (as it was then - now classed under 'Sandersii').

I had been breeding miniature daffodils for some time, and decided to try my luck with crossing these two varieties in the hope of producing some new yellows of my own. It seems I was very lucky as the seeds I produced by hand pollination produced 20 seedlings. When they first flowered in 2010, I was delighted to find that almost all of them were yellow.

Over the last 5 years, I have been propagating and assessing these different clones, both in my garden and with friends, and have finally decided to name some of them, prior to releasing some to other growers. The group name is **Dryad Gold Group**, and all varieties retain the first two words of the group name.

They are all good growers in the garden, with strong stems which remain more or less erect, unlike 'Wendy's Gold', which dips its flower stems after flowering. The leaves of all the varieties are mostly applanate, with some showing a tendency to plicate edges on one or both sides.

The parents of the Dryad Gold Group: *G. ‘Wendy’s Gold’* and *Galanthus* ‘Lutescens’

**Photographs of the plants to be named:**

Galanthus ‘Dryad Gold Bullion’
Galanthus ‘Dryad Gold Charm’

Galanthus ‘Dryad Gold Ingot’

Galanthus ‘Dryad Gold Medal’
Galanthus ‘Dryad Gold Nugget’

Galanthus ‘Dryad Gold Sovereign’ in the garden

Galanthus ‘Dryad Gold Ribbon’

Galanthus ‘Dryad Gold Sovereign’
There has been a lot of interest in the Dryad Golds, and requests for them to be released for sale. I hope the first 2 or 3 varieties will be available this summer, but there will be a VERY limited supply until I can bulk them up further.
Descriptions of the named varieties:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
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<tbody>
<tr>
<td>'Dryad Gold Bullion'</td>
<td>Flowering height 8cm. Scapes upright, flower length including ovary 35mm. Leaves at flowering time 7x36mm, glaucous, arching. Pedicel straight, half as long as the spathe. ‘Claw’ 2mm long. Ovary yellow, cylindrical, just less than one third the length of the outer segments. Inner segments with yellow inverted U to 40% of the length, the curve of the U more acute than Gold Sovereign, and this is also a shorter plant.</td>
</tr>
<tr>
<td>'Dryad Gold Charm'</td>
<td>Flowering height 10cm. Scapes very upright, flower length including ovary 40mm. Leaves at flowering time 5x50mm, glaucous, arching. Buds long and narrow. Pedicel almost straight, two thirds as long as the curved spathe. No obvious ‘claw’. Ovary yellow, narrowly cylindrical, one third the length of the outer segments. Outer segments broad and smooth. Inner segments with slightly greenish yellow inverted heart to 50% of the length. Newly opening flowers shaped like large, long teardrops.</td>
</tr>
<tr>
<td>'Dryad Gold Ingot'</td>
<td>Flowering height 9cm. Scapes very upright, flower length including ovary 30mm. Leaves at flowering time 9x45mm, glaucous, arching. Pedicel curved, two thirds as long as the straight spathe. ‘Claw’ 3mm. Ovary light yellow, cylindrical, almost half the length of the outer segments. Outer segments smooth and broad. Inner segments with olive green inverted U to 60% of the length, bleeding yellow almost to the base, and fading to yellowish green. In effect, a reverse 'Blonde Inge'.</td>
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<tr>
<td>'Dryad Gold Medal'</td>
<td>Flowering height 15cm. Scapes upright to arching, flower length including ovary 40mm. Leaves at flowering time 7x70mm, glaucous, spreading. Pedicel almost straight, two thirds as long as the spathe. ‘Claw’ 4mm long. Ovary yellow, cylindrical, one third the length of the outer segments. Outer segments smoother, broader and more cupped than Gold Sovereign. Inner segments with yellow inverted V to 40% of the length. Very lovely rounded flowers.</td>
</tr>
<tr>
<td>'Dryad Gold Nugget'</td>
<td>Flowering height 8cm. Scapes upright, flower length including ovary 26mm. Leaves at flowering time 3x45mm, glaucous, upright. Pedicel almost straight, half as long as the curved spathe. No obvious ‘claw’. Ovary yellow, cylindrical, one third the length of the outer segments. Outer segments smooth. Inner segments with pea green inverted heart to 50% of the length. A smaller version of Gold Ingot.</td>
</tr>
<tr>
<td>'Dryad Gold Ribbon'</td>
<td>Flowering height 16cm. Scapes very upright, flower length including ovary 45mm. Leaves at flowering time 10x70mm, glaucous, arching. Pedicel almost straight, half as long as the spathe. ‘Claw’ 2mm long. Ovary yellow, cylindrical, one third the length of the outer segments. Outer segments broad and lightly ribbed. Inner segments with yellow inverted heart to 55% of the length. Prolific flowerer.</td>
</tr>
<tr>
<td>'Dryad Gold Sovereign'</td>
<td>Flowering height 15cm. Scapes upright, flower length including ovary 40mm. Leaves at flowering time 7x80mm, glaucous, spreading. Pedicel straight, almost as long as the spathe. ‘Claw’ 4mm long. Ovary yellow, cylindrical, one third the length of the outer segments. Inner segments with yellow inverted U to 40% of the length. Has performed very well in the garden, long lasting large flowers on strong stems.</td>
</tr>
<tr>
<td>'Dryad Gold Star'</td>
<td>Flowering height 9cm. Scapes upright, flower length including ovary 30mm. Leaves at flowering time 4x30mm, glaucous, upright to arching. Buds long and narrow. Pedicel almost straight, half as long as the straight spathe. No obvious ‘claw’. Ovary yellow, narrowly cylindrical, one third to one half the length of the outer segments. Outer segments broad and smooth. Inner segments with yellow inverted heart to 40% of the length. Dwarf plant, large flowers open like drop-earrings, distinct long narrow ovary.</td>
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