

International Rock Gardener

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---International Rock Gardener---

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“September man is standing near to saddle up and leave the year and Autumn is his bridle.....”
So wrote [Dave Goulder](#) in his wonderful song “The January Man” – and here in the UK there is certainly an autumnal feeling in the air as our friends in the southern hemisphere have the excitement of their approaching spring – characterised by Goulder as: “The man of March he sees the Spring and wonders what the year will bring and hopes for better weather....”
The transition of our season begs a reminder to everyone to collect seed to support the Seed Exchange - all seed donations are much appreciated: [see here](#) for details.
Cover photo: *Tigridia pavonia* by Rogan Roth, page 6.

--- Gardens in the Mountains ---

Two Czech Rock Gardeners in Nepal

by Zdeněk Zvolánek, photographs by Mojmir Pavelka and Vladimír Staněk

Two of my close friends, the well-seasoned Czech seed collectors Mojmir Pavelka and Vladimír Staněk visited Northern Nepal in October 2012 and Mr Staněk offered me his first article for our Prague Club Quarterly Journal Skalničky.



View of Ganesh Himal, north/north West of Kathmandu by M.P.

Vladimír Staněk described their journey to the [Langtang National Park](#), which is situated north of Kathmandu at an elevation of 4000m. Their 100km long journey - by bus - took 12 hours. There was the same number of people sitting on its shallow roof as were sitting inside the bus!

In two places the road was impassable so our travellers twice walked a distance of 2km to another two buses. The starting point of their trail was in Syabrubensi at an elevation of 2000m and the end of their hike was at 4600m.

Cyananthus lobatus is not rare plant but always nice to see.

The trail has small lodgings and cabins for accommodation; the last ones are above 4000m elevation.



---International Rock Gardener---



This visit was in October, when this area has good weather; 25° during the day and around zero at night. The local forest of *Picea* and *Abies* ends above 3000m and these are replaced with thickets of rhododendron.

There are, at this lower elevation, quite low woolly patches of *Leontopodium jacotianum* (left) as prepared for our admiration in this photo by Mojmir.

Both friends were looking for evidence of variability in two famous species of *Gentiana*, which are usually found growing together in the zone above the trees to an elevation of 4400 m. They are *Gentiana ornata* and *G. depressa*.

The picture below shows a stunning *Gentiana ornata* in a vertical crevice in a bigger cliff. So I

share with you this rare picture in an unusual habitat hoping to spark an inspiration of how to try to cultivate a sometimes difficult Asiatic gentian.



Gentiana ornata, photo M.P.

---International Rock Gardener---

This species, endemic to Nepal, is still a rarity in gardens. It is one of the finest of the Asiatic species and it is not as difficult as is sometimes suggested in literature. In some ways it can be likened to a more compact shorter-stemmed *Gentiana sino-ornata*. This Nepalese beauty forms a small basal rosette, from which radiate short, leafy stems ending in solitary blue flowers. They are rounded bell-shaped, striped purple-brown and cream outside, white within. It flowers from August onward.



Pale *Gentiana ornata* with leaves scorched by frost, photo V.S.



Above: *G. ornata*, whitish form, photo M.P.
Left: *G. ornata*, blue and white form, photo V.S.

Gentiana ornata needs the coolest place in the acid part of the rock garden (no scorching sun radiation) and plenty of lime-free (rain) water while in growth and just moist in winter. Propagation is best by careful division in March-April or by sowing freshly collected seed. Vladimír Staněk is very proud that they had the chance to photograph *G. ornata forma alba* as well as the white form of *G. depressa*.

---International Rock Gardener---

A pale blue flowered ***G. ornata*** found in Langtang was an exquisite alpine deserving of a picture. Photo M.P.

Another species was seen at the highest coolest acid stony slopes. It was the short stemmed, dark blue *Gentiana tubiflora* and at the same level at wet places, the attractive bluish *Gentiana prolata*. Another alpine from this elevation above 4000m was *Androsace lehmannii* in flat mats 30cm across and merry red eyes in white flowers. I must mention one saxatile plant decorating rock outcrops around the trail. It is *Arenaria densissima*. The Czech visitors had missed the earlier show, where local high cool rock gardens are covered with the spectacular yellow Petiolarid primrose *Primula aureata*. This species is in love with *Primula deuteronana* and their hybrids with small leaves produce here interesting colour combinations.

Below: *G. depressa* forms, photos V.S.



The main companion species to *G. ornata*, ***Gentiana depressa***, spreads into even higher countries, like Chinese Tibet and Sikkim, climbing to elevations up to 5000m. Dense mats of crossed rosettes hugs stony grounds and single flowers form sessile short cups. It is a distinct species, still rare in cultivation but not difficult for skilful British growers with their gardens placed in highlands. [Note from Ed.Team in Aberdeen – we wish that were so here. Friends in Ireland and New Zealand do better than us with *G. depressa*!]

---International Rock Gardener---



Gentiana depressa, white and blue forms, photos M.P.



Descending the trail back to Syabrubensi took three days. After their bad bus experience my friends hired a car and were in Kathmandu in just 4 hours, but had to wait there another three days for their flight connection to Prague. For this kind of expedition you must have strong guts.

Z.Z.

Langtang Lirung, the highest mountain in the Langtang Himal. Photo M.P.

--- World of Bulbs ---

When it all started.....My life-long passion for *Tigridia pavonia* text and photos by Rogan Roth, Kwa-Zulu Natal, South Africa.

It is difficult to say when I noticed flowers for the first time; was it in my grandmother's garden, where she grew Anemone, Aquilegia and Nasturtium (which my grandfather used to harvest for his salads - leaves, stems, the lot!) or on her windowsill where she grew a magnificent specimen of Venus' Flytrap (*Dionaea muscipula*, which probably succumbed to malnutrition by not being able to trap any prey because the traps were forever sprung by the likes of me!)?

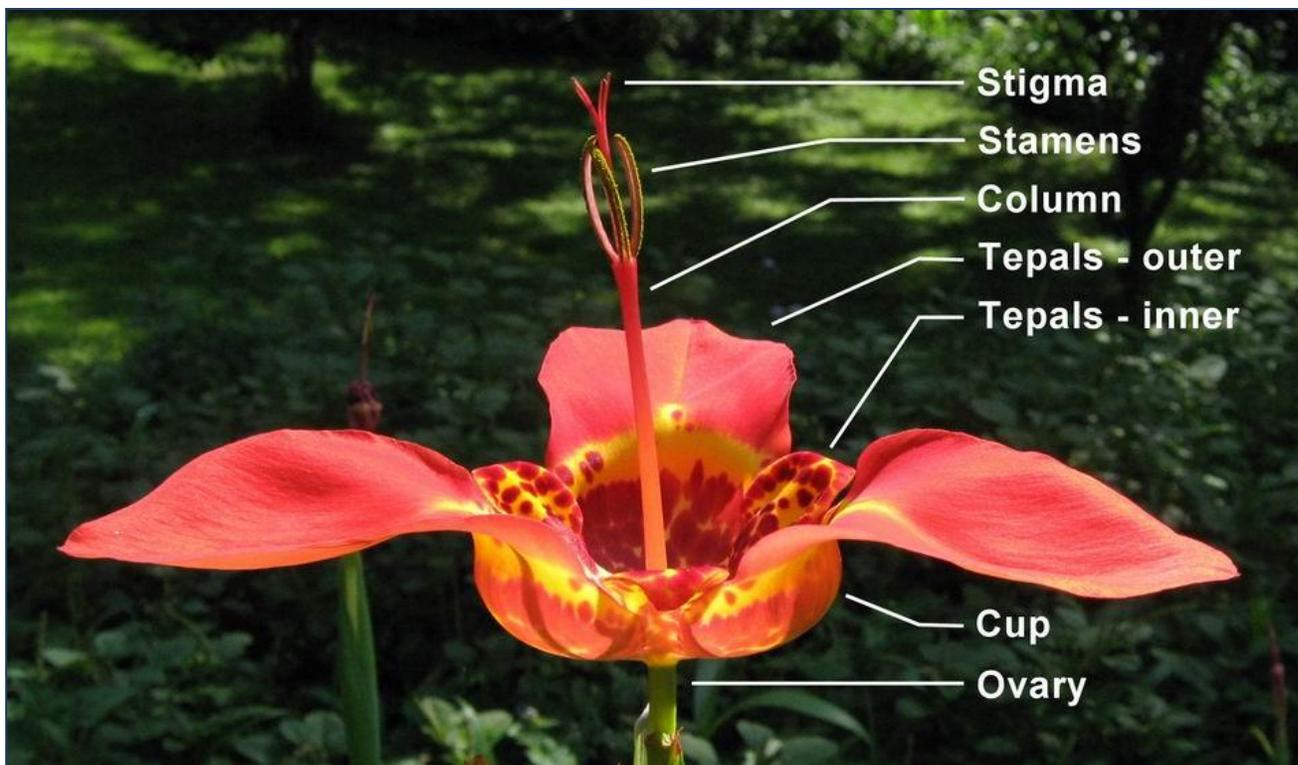
I am not too sure when I first became aware of *Tigridia pavonia* (aka: 'Flower of Tigris', 'Peacock Flower', 'Tiger Flower', 'Shell Flower', 'Cacomitl') - was it when my mother carelessly left a Kirchhoff's seed catalogue lying around, not realising the profound effect it would have on a young boy's passion for plants? The [Kirchhoff's](http://www.kirchhoff.com) catalogue was pivotal: I still remember pouring over the dozens of colourful pictures and reading the vivid descriptions of unknown and exotic plants, one of which was *T. pavonia*. This all happened a long time ago, probably in the mid 1960's, so memories have dulled and many favourites forgotten, but the mouth-watering description of this amazing bulb, no doubt written by a passionate gardener, will remain with me forever.

---International Rock Gardener---



My next encounter with this flower was a few years later when my family pulled up roots and relocated to a remote farm in the southern Drakensberg regions of what is now KwaZulu-Natal. There, much to my amazement, I discovered a large patch of *T. pavonia* sporting a bright orange-red flower that had been grown by my grandmother (my maternal grandmother this time) for many years – probably long before I was born. I still grow this particular clone, of which I have become the self-appointed custodian, to this day and it is still as vigorous and floriferous as the first day I noticed it all those years ago. Occasionally I still get asked the question: “you know that red lily that used to be in the garden? Can I have a few bulbs back please as the moles have eaten the lot”!

What else can I say about Tigridia? Well, it is a member of the large Iris family (Iridaceae) and there are some 35 species, depending on your point of view. All are fascinating plants arising as a fan of bright green pleated leaves arising from a shallow tunicated bulb; *T. pavonia* is especially robust, with the largest flowers in the genus and probably the tallest stems too. The flower is an amazing construction of two tri-lobed whorls of brightly-coloured tepals – one long and plain, the other short and spotted, and a tall column-like structure bearing the reproductive organs, the stigma and stamens, rising from the centre of a prominent floral cup (responsible for the ‘Shell Flower’ moniker perhaps?).



---International Rock Gardener---

Why *T. pavonia* hangs its reproductive parts so far above the flower is a mystery to me, and my limited literature resources make me none the wiser – what pollinates this extraordinary flower (besides me, of course)? Bees seem to love the flowers and spend a lot of their time trundling about the confines of the floral cup forcing their proboscises between the intersecting tepal bases - for sweet rewards perhaps? I have noticed bees with the pollen ‘sacks’ on their legs stuffed with the abundant yellow-green pollen, so they obviously make the long journey up the column to partake of this windfall; but do they actually pollinate the flower? I’m not sure.



T. pavonia is renowned for its short-lived flowers, opening early in the morning and lasting but one day. However, the daily feast of flowers produced in the garden will never go unnoticed and will persist for many weeks during the summer months. As I mentioned previously bright colour is the hallmark of a Tigridia flower and the range a mouth-watering hues includes red, yellow, white and pink, all with red-spotted floral cups – or not: modern breeding has produced a range of flower colours without any spotting in the cup at all – a little silly in my view as the very essence of a Tigridia flower is its spots – why else would you want to call it a ‘Peacock Flower’ or a ‘Tiger Flower’ – perhaps we ought to call it a ‘Leopard Flower’ - tigers don’t have spots!

---International Rock Gardener---

I have often been asked if you get blue-flowered Tigridias, well the short answer is no, not when it

comes to *T. pavonia*, however, there are other species of Tigridia that do have bluish flowers, for example: ***Tigridia durangensis***, a little treasure with essentially white flowers spotted and splashed with lavender blue – a real beauty! It has a very curious pollination strategy: the inner tepal lobes have wavy margins bearing prominent ‘auricles’ which are coloured bright yellow, masquerading as pollen-bearing stamens; pollinators, drawn by the promise of pollen and nectar, trundle about the modest floral cup looking for their reward whilst rubbing against the stamens and stigma suspended above them and thus ensuring pollination – clever!



I have to mention at least one more Tigridia before signing off: ***T. orthantha*** (left) perhaps better known by its original name, *Rigidella orthantha*, has a bright red flower with strongly reflexed petals and is adapted for pollination by a species of hummingbird. Here the yellowish inner tepals are bent forward thus protecting and reinforcing the column from suffering mechanical damage by a hovering hummingbird’s beak. I suppose there has to be a nectar reward for the probing tongue deep down in the centre of the flower, or else why does the bird bother?

Generally Tigridias grow in parts of central and South America (Mexico and Guatemala and a few little known species in Chile and Peru), mainly confined to the edges of forests and clearings in the cool montane regions at high altitude. This makes them a little tricky to cultivate in sub-tropical gardens, and here it is important to know the provenance of the bulbs you want to grow or to select clones that are better adapted to your particular

growing conditions. Most gardens will have a place for a few Tigridias at least (in certain cases, quite a few!) as their bright colours and easy-going nature, make them hard to ignore. R. R.

---International Rock Gardener---



Rogan Roth lives in Pietermaritzburg, KwaZulu-Natal, South Africa and has broad plant interests, including cactus and succulents. He particularly enjoys growing his plants from seeds. This photo, taken in the hillside above his home of ***Gerbera aurantiaca***, a very rare and endangered plant endemic to the midlands of KwaZulu-Natal, is typical of the pictures Rogan shares in the SRGC Forum.

The popularity of Tigridia has spread far from its native climes - as evidenced by this Czech postage stamp.



Those wishing to learn more about Tigridias can find quite a lot on the Pacific Bulb Society [wiki pages](#) and as a Topic of the Week from [Mary Sue Ittner, with an introduction by Alberto Castillo](#).

A selection of other Tigridia pictures from the SRGC Forum:



Above: *T. hallbergii* subsp. *hallbergii*
Left: *T. vanhouttei* photos Fritz Kummert.



Tigridias coming into flower in Holland, by Luit van Delft



Scale of *T. pavonia* bloom, Rimmer de Vries, USA

---International Rock Gardener---

Tom Cameron who gardens in Ayrshire, South West Scotland, grows *T. pavonia*, in various colours:



Left: *T. pavonia* in the garden of François Lambert in Herne, Belgium with a climate that could be classified as an 8a zone, but the last 3 winters had temperatures down to -18°C where he lives – and collects seed for the Exchange.

Rogan Roth writes:

My botanical interests started at a very young age and a career in botany seemed a sure thing, however, geology and prospecting eventually became my abiding interest and I spent most of my career in that field. I corrected the error of my ways quite late in life as my love for plants developed into the passion that it is today.

I wish to continue fuelling the fire by building a small wooden cottage in the rural Western Cape Province in the very near future. There my proximity to the bulbs and succulents of the Little Karoo will enable me to indulge my hobby on a regular basis to the exclusion of all else – yeah, right!



---International Rock Gardener---

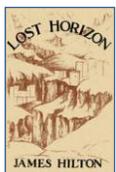
--- Gardens in the Mountains ---

Zhongdian (Part 1) Text and photos by Jozef Lemmens, Belgium

This is one story from my many journeys in China; it is about the famous Zhongdian Plateau in Yunnan. During the last days of our trekking through the [Waha Mountains](#) in June 2012, we had to drink water from little puddles, as we didn't have enough bottled mineral water. We did it even though there were some mosquito larvae in the water and the smell was not exactly appealing. Sometimes you've to be a little bit tough to find hidden beautiful plants and on the whole we made it here without too many problems. So we were very happy to have a half-day's rest in a hotel alongside the **Lugu Lake** where the Chinese beer tasted heavenly.



After Lugu Lake, we continued our journey towards Zhongdian. The Chinese government have now renamed this city as Shangri-La.



For those who don't know it, the former Tibetan name was Gyalthang. Shangri-La is the name of an earthly paradise from the book "Lost Horizon", which was written in 1933 by the British novelist James Hilton.

It's about three Britons and one American who, after surviving a plane crash, end up in a monastery (lamasery) at the foot of a Tibetan mountain. The beautiful monastery there is called Shangri-La in the book. Since then, Shangri-La has become synonymous with earthly paradise, but also specifically for an image of a utopia in the Himalayas. People have long sought to find the exact location where this story would have played out. Many cities have wrangled for this honour. To put an end to



---International Rock Gardener---

these arguments the Chinese government finally took the plunge and decided that Zhongdian could use the name "Shangri-La". Since then Zhongdian town has transformed into a major tourist attraction. OK, back to our journey. Getting to Zhongdian took two long, tedious days. The only event to note was a romantic field filled with *Primula bulleyana*.



Primula bulleyana subsp. *bulleyana* (left) is a robust plant with inflorescences of over 50cm high, which can have up to five whorls, with orange-yellow flowers, whereas the subspecies *beesiana* has pink-purple flowers.



A few plants of *Roscoea humeana* (right) were found here and there. They are usually in a light yellow form, but also with a few of pink variants.



Just before Zhongdian we passed a beautiful meadow with flowers including *Stellera chamaejasme*, *Thermopsis barbata*, *Euphorbia stracheyi* (above) and *Erigeron multiradiatus*.

---International Rock Gardener---



In the area of Zhongdian, *Stellera chamaejasme* has golden yellow flowers. This variety is usually called ***Stellera chamaejasme* var. *chrysantha*** (left).

Stellera chamaejasme is a clump-forming herbaceous perennial, a relative of *Daphne* in the family Thymeleaceae, about 20-50cm tall with a strong taproot. In the past I have also found other hues.

So the plants near Markam (Tibet) had the more familiar form with white flowers on the inside of mature flowers and purplish on the outside. There were white with pale yellow flowers near Garze (Sichuan) and partly light pink with partly dark pink flowers somewhere between Litang and Kangding (Sichuan).

Below, left to right: *Stellera chamaejasme* - forms from Markam (Tibet), Garze and Kangding (Sichuan)



Thermopsis barbata is a perennial herb of about 30cm in height with silvery white hairs and dark purple flowers. This species usually grows on poor, dry soil in stony meadows. Two other species from this genus are *Thermopsis smithiana* and *Thermopsis alpina*. It is difficult to see a difference between them. Both have yellow flowers. *T. alpina* is a little bit larger and *T. smithiana* is more hairy. These species usually occurs in cooler and moist meadows. *Thermopsis* species flower in May to July.



Ed.: The plant shown (left) is possibly *Thermopsis smithiana*. It [was pictured in Nepal](#) with *T. barbata* by New Zealander, Doug Logan.

---International Rock Gardener---

In Zhongdian we had a magnificent Tibetan hotel in the centre of the old town. The next day we drove to Tia Bao Shan. Through a valley we slowly went from 3200m up to an altitude of about 3600m. The valley was largely characterised by shrubs, meadows and pine forests. Here and there we would meet a farmer walking with his yaks. Between the shrubs grew many varieties of *Primulas*, such as *Primula chionantha*, *deflexa*, *sikkimensis*, *secundiflora*, *munroi* and *chungensis*.

Writing something about *Primulas* is a chancy business. My experience has taught me that the names change as our understanding changes. So I do apologise if the name is not entirely correct. But at least there are a number of people who have given this some thought, for which I thank them.



Primula chionantha



Primula deflexa

Primula chionantha forms enormous plants 40 to 50cm in height when in bloom and offers white flowers. The inflorescence consists of 1-3 whorls, each of which has about 15 flowers. This white form occurs only near Zhongdian. Later in our journey we would find two related species.

Primula deflexa has an elegant appearance. The densely packed spikes of downward pointing, pale to dark bluish-purple flower are formed on top of a rather high inflorescence (+/- 30cm) during the months of May and July.



Primula secundiflora



Primula chungensis



Primula sikkimensis



Primula munroi



Farther along in the Tia Bao Shan valley there were also *Daphne retusa* and *Daphne calcicola*, *Incarvillea mairei* var. *grandiflora*, *Podophyllum hexandrum*, *Corydalis pachycentra*, *C. kokiana* and *C. densispica*, *Lloydia ixiliroides* and many other plants in bloom.

Daphne retusa (left) is an evergreen shrub 40-80cm tall, with dark green, leathery leaves. The flower colour varies between pink and purple-red on the outside with some white variations. The inside of the flower is pale pink to whitish in colour in an inflorescence containing 5-10 flowers which are, as with most *Daphnes*, fragrant. The plants, which flower in April to June occur on open shrub-covered slopes and meadows with humus-rich soil. *Daphne retusa* has a large distribution area ranging from most of Western China to the Himalayas.



Incarvillea mairei
var. *grandiflora*

---International Rock Gardener---



Above: *Corydalis pachycentra*
 Left: *Corydalis kokiana*
 Far left: *Corydalis densispica*
 Below: *Lloydia ixiolirioides*



Ed.: [Lloydia ixiolirioides](#) – illustration from its original description in Hooker's *Icones Plantarum* 1892

Podophyllum hexandrum (far left) or *Sinopodophyllum hexandrum* (according to the Kew Plant List) is a member of the Berberidaceae family. This plant is quite common in west China with a further distribution in the Himalayas, ranging from Bhutan, Nepal, and India to Afghanistan.

The plants are between 20 and 50cm tall. The leaves are 10 to 25cm in diameter and they are deeply divided into 3-5 lobes. Their colour is green, with brownish-purple spots. The single, bowl shaped flowers with a diameter of about 3-4cm, usually appear before the leaves are fully developed. The flower is made up of six petals with yellow anthers. In their natural environment, the flowering season is in May/June. In China, the flowers are pale to deep pink on the outside. The inside is lighter in colour. In other areas the flower can also be white. After flowering, large orange-red fruits, 4-5cm in size are borne, hanging down under the leaves (usually hidden under the foliage). The plants grow in forests, moist forest margins and on slopes with low scrub, at an altitude of between 2200 and 4500m. It is a robust plant, offered by various nurseries so we can enjoy it in our gardens.

J.L.

---International Rock Gardener---
---Gardens in the Mountains---

Campanula hacerae by Zdeněk Zvolánek, photos: Mojmír Pavelka

Our journal, "the IRG" is known for its quick reports about the broader introducing of new desirable species into cultivation. The best method of introduction is to offer true-to-name seed. This year will see the offering of seed of lovely small Turkish bellflower – ***Campanula hacerae***, which is endemic to a small area in Central Anatolia (between Pinarbasi and Darende), so it is practical to know the basic information about a rock garden plant with a name little known in literature.



Campanula hacerae in a gypsum crevice



This *Campanula*, found only four years ago, [was described](#) by Dr. Ahmet İlçim, Lütfi Behçet and Ahmet Zafer Tel in *Annales Botanici Fennici* in 2011.

It was found by Dr. İlçim on arid slopes of hills formed from gypsum rocks, at an elevation 1640-1670m. *Aethionema armenum*, *Scabiosa graminifolia* and *Ebenus depressus* also grow in this open habitat with other dry resistant perennials.

Dr. Ahmet İlçim pictured with an image of the *Campanula* he named in honour of his wife, Hacer. There are [videos online](#) of him speaking of the plants discovered through his work.



This bellflower is described as a perennial making dense sterile rosettes. Stems are suffruticose-caespitose, 4-14 cm long covered with a thick indumentum of adpressed hairs. Basal leaves (up to 4 x 1mm long) are hirsute on both sides and its flowers have hairs inside and outside of a deep blue corolla (8 x 5 mm). The leaves have ornamental segments in their upper parts. So, with those leaves and flowers it differs from its Turkish relatives *Campanula ledebouriana* and *Campanula pulvinaris* (both from the Section Rupestres, which contains 20 taxa). This species flowers in June and fruits in August – the [seeds are tiny](#), a shiny light brown colour.



Now we have a dry loving saxatile plant from a strange substrate, this sedimentary gypsum rock, made from hydrous calcium sulphate (or $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) and we can expect some troubles in outdoor cultivation. So, I recommend to grow it first in pots, sheltered from bad wet summers and winters. Growing it in tufa holes under a sheet of glass will probably produce beautiful specimens for shows. Z.Z.