During an explorative expedition to Vietnam, Richard Baines discovered several new species to cultivation. Here he holds up the enormous leaves of *Rhododendron suoilohense* growing in the forest half way up Y Ty mountain in Vietnam.

The Phan Si Pan and beyond! Part II

In October 2016 **RICHARD A. BAINES**, Curator at RBGE Logan, participated in a three week collaborative expedition to Northern Vietnam with representatives from three other UK botanic gardens, namely Andrew Luke from RBG Kew, Will Ritchie from Glasgow BG, Alex Summers from Cambridge UBG and the Institute of Ecology and Biological Resources (IEBR) in Hanoi. Here is describes some of the woody species they observed in this undiscovered paradise.

During our expedition three extended trips into the Hoang Lien Mountains region were carried out to collect plant material and record the flora that we encountered. The trip built on a previous visit in 2014 (see *IDS Yearbook 2015* pp. 69–78) where over 500 collections were made, some of them identified as new to science and others new records for Vietnam.

This article will highlight some of the amazing plants and landscapes that we encountered during the trip.

Our first trip took us to the summit of Phan Si Pan Mountain, the tallest mountain in Indochina at 3,143 m. Subtropical evergreen forests on the lower slopes were replaced by temperate and montane forests as we climbed to altitudes exceeding 3,100 m. We took the recently constructed cable car to the summit and this gave us a flavour of the mountain's floral offerings. Rice terraces filled the lower valley and forest clothed its steeper gradients and gullies. As we crested 2,800 m stands of *Abies delavayi* subsp. *fansipanensis* stood out, the trees forming a sparse flat-topped canopy resembling ancient araucarias in Chile.

This taxon has a very narrow altitudinal range on Phan Si Pan and has been greatly reduced in recent years by deforestation. Unfortunately natural regeneration appears to be infrequent and it remains extremely rare in cultivation.

From the cable car we descended through bamboo thickets, a plant community resulting from degradation of the forest near the summit. Here we made valuable collections of forest remnants such as *Rhododendron*, *Schefflera* and *Rhodoleia*. *Rhodoleia championii*'s habit at a first glance resembles a rhododendron. Rarely cultivated in the UK, it has been successfully grown outdoors in Cornwall being suitable for only the mildest areas. It is a large attractive shrub or small tree with large, thick, shining green leaves above and silvery white below. The flowers emerge in spring and are held in drooping clusters consisting of numerous silky, multi-coloured bracts through which emerge the bright pink petals and black anthers. A member of the Hamamelidaceae family it was first introduced by Kingdon-Ward in 1952 and has much to offer in terms of its luxuriant foliage and showy flowers.

As we descended below 2,800 m the bamboo receded giving way to a magical eerie forest of giant specimens of *Rhododendron sinofalconeri* towering

The Group: back row, from left to right, Richard Baines, Bui Hong Quang, Vu Tien Chinh, Will Ritchie and Nguyen Van Du. Front row, left to right, Alex Summers and Andrew Luke at Phan Si Pan Mountain.

above our heads. This species, like so many from Vietnam, has proved to be remarkably hardy in the UK. Its flowers closely resemble those of *R. falconeri* and it has beautiful large leaves with attractive rust-coloured indumentum on the lower surface. In April and May it bears huge dome-shaped trusses of waxy, creamy-yellow bell-shaped flowers.

Overnight we camped below the towering rhododendrons where we were treated to Vietnamese spring rolls cooked from scratch on a forest fire. Few words can express just how truly delicious they tasted after a hard day's trekking!

En-route back to Ton station we saw occasional specimens of *Sorbus fansipanensis* with its long-lasting attractive berries. More or less evergreen this species is proving to be surprisingly hardy, growing to a height of 4 to 5 metres at Ness Botanic Gardens. It is however thought that some shelter (of light woodland for example) would optimise its chances of thriving.

Another attractive berry-fruiting tree is *Ilex chapaensis*, an evergreen tree growing to 12 m which was laden with showy berries held in clusters. One of the most remarkable things about mature seed bearing trees is the range of epiphytic plants that thrive on their moist trunks. Their moist mossy barks are a breeding ground for epiphytic rhododendrons, pleiones, agapetes and a range of rhizomatous ferns.

We also observed *Castanopsis lecomtei* at an altitude of just over 2,000 m which should have reasonable hardiness. As a genus they are somewhat under-represented in gardens but their scarcity may be due to their spiny, tightly held husks that house the seeds! This species has attractive rich green, lanceolate foliage and grows into a dense multi-stemmed tree up to 10 m tall.

The flower and seed of *Uocodendron whartonii*.

From here we headed to Y Ty Mountain located on the border with China. Known as 'The Mountain in the Clouds' it is a remote mountain that to date has received minimal exploration and is inhabited by the local Hani population.

Starting off in a boggy forest we negotiated a myriad of giant spiders' webs. It was here that we observed *Uocodendron whartonii,* a taxa new to science and a member of the *Hamamelis* family. With classic spider-like pinkish flowers this plant grows in a wide altitudinal range being observed from the base of the mountain almost to the summit. It will be interesting to see the range in hardiness depending on the altitudinal location from where the seed

Below, left, *Polyspora* species and below right, the seed and foliage of *Aesculus wangii*.

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Above, top left, the massive leaves of *Rhododendron suoilohense* (see also page 11).
Above, left, seed of *Rehderodendron*. Right, porters trekking through the forest.

was collected. Its seeds were plentiful and closely resembled a pair of cow's horns in their structure.

Alongside a spectacular waterfall we observed a fine single-stemmed specimen of *Rhoiptelea chilantha* that is endemic to Vietnam. A member of the walnut family with compound pinnate leaves it was covered in ripe seed in terminal racemes which had turned from green to jet black. I am not aware of this currently being in cultivation in the UK.

The base of the mountain was exceedingly rich in *Rhododendron* species

such as *R. excellens, R. maddenii* and a number of unidentified species in sub-section *Maddenia*. As we progressed through the canopy of mixed deciduous and evergreen forest we were surrounded by a rich and diverse array of interesting plants such as *Rehderodendron, Schefflera, Craibodendron, Huonodendron* and *Magnolia*.

Huonodendron tibeticum is a relative newcomer to cultivation being successfully grown at Tregrehan in Cornwall. A typical member of the Styracaceae it enjoys a warm, sheltered position in moist acid soil. Apart from its flowers its other major asset is its peeling crimson bark resembling that of a gum tree that becomes more conspicuous with age.

Named in honour of William G. Craib a botanist from Kew *Craibodendron henryi* is an evergreen shrub growing up to 10 m tall. Only observed as a single small population it is closely allied to the genus *Lyonia* and prefers a sheltered site with moist acidic soil. In many ways it closely resembles *Craibodendron yunnanense* that we grow outside at Logan with its fiery-red bright foliage set against the rich green glossy leaves. I am unsure if this species is currently in cultivation.

Rehderodendron macrocarpum (or so we believe until we can confirm this at flowering) is another delightful member of the Styrax family. Thriving in a warm, sheltered, moist acidic site it produces pendulous white flowers as the new leaves are emerging. We observed enormous trees some as tall as 30 m which were shedding a mass of barrel-shaped red tinged seeds similar in many ways to *Davidia involucrata*. Germination is often erratic and can take up to three years. A *Rehderodendron macrocarpum* that was planted at Logan is making excellent progress so it will be interesting to see how the resultant seedlings compare.

The weather here was quick to turn and we were lashed with rain as we entered the forest proper. Massive trees such as magnolias towered 30 m above our heads with their trunks and limbs smothered with epiphytes and ferns. As usual our pace was slow due to intense collecting and data recording that accompanies such botanical expeditions. At night we pitched our tents beneath a giant majestic *Tsuga dumosa* commonly known as the Himalayan hemlock. Tender in most areas of the UK and subject to injury from late frosts it is often shrubby in cultivation with graceful drooping branches.

On the third day we set for the summit of Y Ty and this was the hardest trek so far, the path was steep and treacherous, but our spirits remained buoyant with the many new collections that we were able to document.

Magnolia sapaensis is another recent newcomer to cultivation with dark green foliage above with a silvery underside. To date it has survived -9 °C unscathed at Logan and should prove to be another fantastic introduction of this magnificent genus. Easily propagated from fresh seed it was observed in small populations with very few mature trees present.

Towards the summit the forest became stunted and patchy with mosaics of

open, low vegetation. Here we collected *Rhododendron* species, *Lilium* species and *Allium wallichianum* that appears to be a new record for Vietnam. The views were stunning into the valley below and cloud draped over us and disappeared as quickly as it had arrived. *Pseoudovireya* rhododendrons provided a welcome show of colour with their starry yellow flowers on exposed cliff faces. *Rhododendron sororium, R. densifolium* and *R. emarginatum* were growing profusely with rich green foliage. It was here that we had our first encounter with a venomous snake which was almost sat on!

The summit (approx. 2,700 m) proved a step too far and after deliberation we decided that it wasn't worth risking the final 50 m ascent due to safety concerns.

Our final trip to Bach Moc Luong Tu held much promise from information received prior to the trip. This area is very remote with minimal intrusion from people outside the region and its highest peak was measured for the first time only four years ago. It may have come as a surprise when the mountain was declared the fourth highest mountain in Vietnam in 2012 at 3,045 m. It was thought that only a handful of botanists have visited this montane landscape on the western perimeter of Lao Cai province and there was much potential to observe a rich diversity of plants.

Sunday is market day in Vietnam, so as we headed into the hills each of the towns and villages that we passed through were hives of activities, rich in colours, sounds and smells from the woks (and livestock). Each mountain pass was skilfully negotiated by our driver framing some spectacular views across the Hoang Lien Mountains.

The high humidity made our initial ascent though sub-tropical forest a hot and sweaty affair. At 1,500 m we observed *Gelsemium*, a plant rarely grown in cultivation but well known to our Vietnamese colleagues due to its poisonous properties. The initial stage of our ascent to the peak was dominated by a landscape of bamboo (*Sinoarundinaria griffithii*), rhododendrons and the occasional *Schefflera* standing tall amongst the dense thickets.

As we neared the top taking a much needed rest we stumbled across *Rhododendron edgeworthii* which we believe is a new record for Vietnam. With its characteristic pinkish/white, funnel shaped flowers this should make an excellent introduction to gardens as it was collected at over 2,700 m. The highly degraded landscape at the summit was characterised by the remains of burnt out mature trees. There were obvious signs of fire damage and forest clearing; a concerning sight in such a biodiversity-rich area.

Close to a small settlement near to the peak we observed a small, fragmented population of *Edgeworthia chrysantha*. This highlighted the role that botanic gardens can play in the long term survival of plant species as it is only a matter of time as to when this small group disappears through overgrazing. I have to admit that this is one of my favourite shrubs with terminal clusters of fragrant yellow flowers clothed on the outside with white, silky hairs. In Japan it is

The vast tracts of forest on Phan Si Pan Mountain.

used for manufacturing high quality paper for currency.

At an elevation of 2,100 m we noted a rich collection of *Camellia* species with many of them producing a mass of ripe fruit perfect for collection. I could not believe my eyes when I noted a camellia tree with a girth of over 3 m, truly enormous!

When we observed fragmented sections of the original forest, there were many botanical treasures that will hopefully end up growing in Scotland's most exotic garden! During the trip we made nearly 70 *Rhododendron* collections namely in the form of DNA, seed and herbarium material. Many of these currently have only been identified down to sub-section level and it is likely that some may be new species to Science.

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References

Hillier & Sons. (1977). *Hillier's Manual of Trees & Shrubs*.
Grimshaw, J. & Bayton, R. (2009). *New Trees*. Kew Publishing.
Nguyen, N. T. (1988). Diversity of Vascular Plants of high Mountain Areas; Sa Pa – Phan Si Pan.