THE RHODODENDRON COLLECTORS: GEORGE FORREST

Julian Taylor-Whall

The Rhododendron Collectors:

Forrest - F; Kingdon-Ward - KW; Wilson - W; Rock - R; Ludlow and Sherriff - L&S; Cox - C; and Clark - AC: initials and names most rhododendron enthusiasts will be familiar with from avidly seeking out the labels dangling from the lower branches of the plants those collectors introduced, mature specimens of which can be found populating all the principal UK gardens that specialise in the genus and are open to the general public throughout the flowering season.

Yet the exquisite treasures they discovered have never before been gathered together and illustrated within the pages of a single volume, each opus highlighting the work of an individual plant hunter.

So a host of photographs portraying those plants in UK cultivation - images captured over the course of the last three decades on myriad visits to the leading horticultural establishments of England, Scotland and Wales - have been gathered together across the heptad, with each volume augmented with pertinent texts and articles, most written at the time the expeditions took place, plus full field number listings of all the species and natural hybrids that were so painstakingly amassed on those trips across the rhododendron-rich regions of Southeast Asia.

THE RHODODENDRON COLLECTORS

Julian Taylor-Whall

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Julian Taylor-Whall has asserted the moral right
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- Front Cover -
F 27657 - *R. dichroanthum* ssp. *herpesticum* var. *scyphocalyx.*

- Title Page -
F 24633 - *R. lepidostylum.*

- Contents -
George Forrest with his dogs,
photographed in the Moongate of the China Inland Mission, Dali,
Yunnan, China, c. 1904-1905.

- Historical Texts -
F 20476 - *R. trichostomum.*

- The Forrest Plant Hunting Expeditions -
F 25601 - *R.haematodes* ssp. *chaetomallum.*

Contents:

Historical Texts: 9

George Forrest, 1873-1932. 10
by Professor W. Wright Smith, M.A.

Rhododendrons Discovered Recently In China. 14
A lecture given by George Forrest on November 16th, 1920.

Rhododendrons of 1921 and 1922, and some trees and shrubs of Yunnan. 26
A lecture given by George Forrest in November 1923.

The Journeys. 32
by Dr. J. Macqueen Cowan.

The Forrest Plant Hunting Expeditions: 53

A map showing the area covered by George Forrest 54
on his seven expeditions.
E Tibet & Yunnan, 1904/1906. 56
Burma & Yunnan, 1910. 58
Burma & Yunnan, 1912/1914. 76
NE Burma, Sichuan, Tibet & Yunnan, 1917/1919. 104
Yunnan, 1921/1922. 188
NE Burma, SE Tibet & Yunnan, 1924/1925. 300
Sichuan & Yunnan, 1930/1931. 458

Photographic Acknowledgements 482

Plant Portraits Index 484

About the Author 487



Historical Texts:

George Forrest, 1873-1932.

by Professor W. Wright Smith, MA.

> "Here he lies, where he longed to be;
> Home is the sailor, home from sea,
> And the hunter home from the hill."
> R. L. S.

Fate deals her mortal blow oftentimes at the most inopportune and unexpected moments, and George Forrest's death on the eve of his departure for home is yet another instance of such unkind coincidence. The heavy work of the expedition was practically over and there was no mention of ill-health resulting from any of the hardships of travel. Apparently on the 6th January, 1932, he had been out shooting some four miles from Tengyueh, and suddenly feeling faint, he had called to his men to come to his assistance. They reached him as he collapsed, and all was over in two minutes. Men of his robust type may end thus from heart failure. In the old sagas the heroes looked askance at a 'straw-death', preferring to fall in the field. Much as we all lament his untimely passing, his end was that of a lover of the wild and of the open. He lies in the graveyard of Tengyueh, side by side with his aforetime comrade Consul Litton, who died after their adventurous journey to the upper parts of the Salwin Valley in 1906.

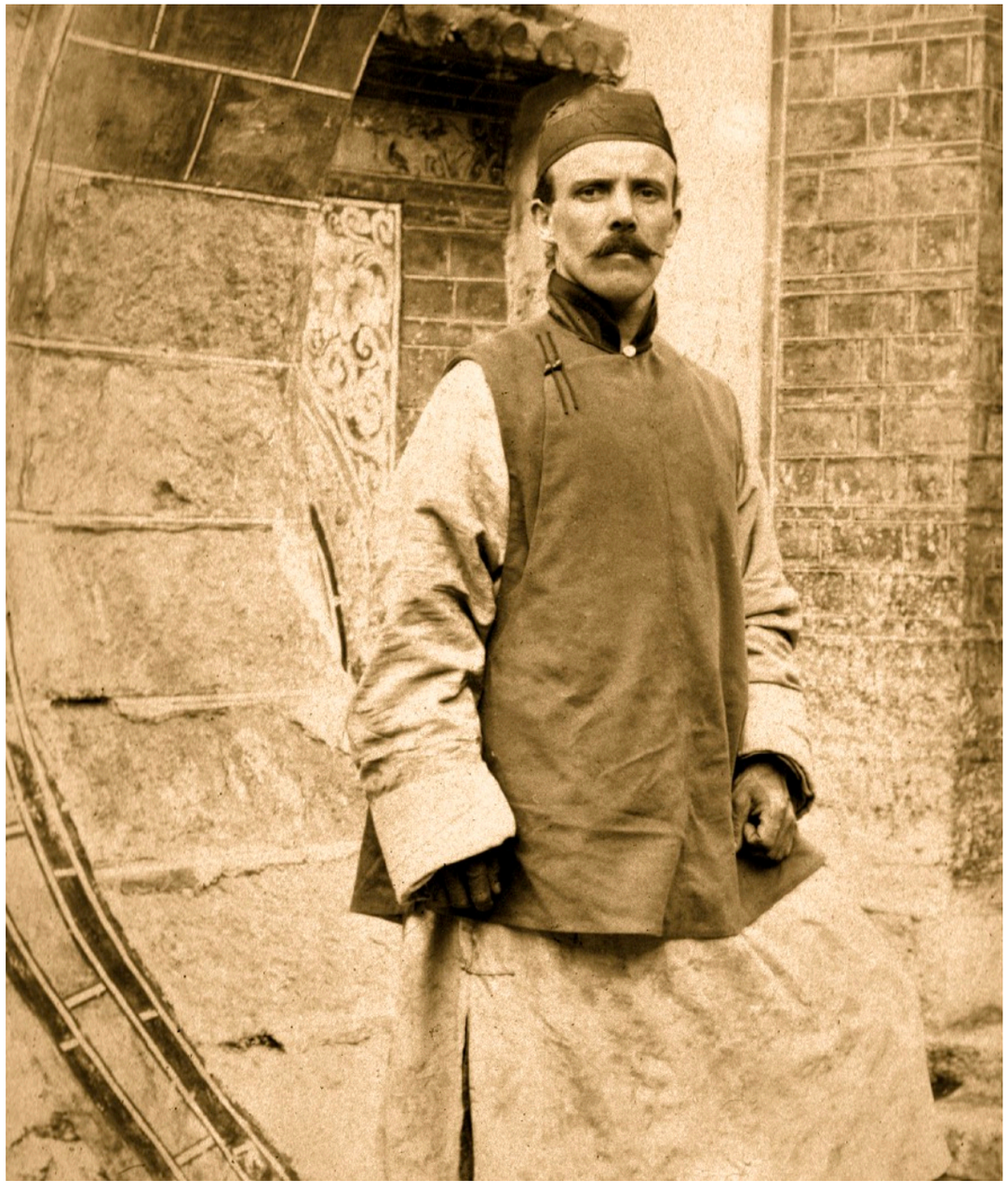
In this brief personal tribute to a great explorer space must be found for a glance at his early life. It is of more than passing interest to know how opportunity fashioned the man and how the man made full use of opportunity. Born at Falkirk on 13th March 1873, he had his education at Kilmarnock Academy in Ayrshire - the usual hard but withal sound training which seems to urge so many of Scotland's sons to seek their fortune abroad. On leaving school his first venture was a post in the shop of a pharmaceutical chemist. This was probably little to his liking, but he stayed long enough to acquire a useful knowledge of medicines and simple surgery, which was of great avail to him in later years when both Chinese and Tibetans sought his aid. Much of his influence with all classes in Western China was due to his generous spirit in giving both time and money to the alleviation of their sufferings. Time and again he had lymph forwarded from Burma at his own expense, and inoculated thousands of the inhabitants of Western Yunnan. When he could be induced to speak of his experiences as medical attendant, his anecdotes were full of self-criticism as well as of humour. As an embryo-pharmacist at Kilmarnock, he had to devote some time to the study of botany and acquired an acquaintance with his native flora, collecting and drying many of the local plants. After this interlude he made his way to Australia to find what fortune he could. Here he spent several years, chiefly in the open and in the 'bush.' Then was fashioned the George Forrest we knew, with sturdy frame, deep chest and tough muscles, for he had plenty of hard work with the felling-axe and of hard riding on the sheep-stations. There was, however, but little prospect of advancement and he returned home in 1902, making a short stay in South Africa en route. His previous interest in plants induced him to apply to Professor Sir Isaac Bayley Balfour in Edinburgh on the chance that employment could be found for him. Nothing was then available except a meagre post in the Herbarium, which fortunately he accepted - until something better came into view. Indoor work on dried plants was a decided change from life in the Australian bush. But as an antidote he lived six miles out of Edinburgh, tramped both ways each day to the Botanic Garden, and *stood* to his task from nine till five, disdaining the use of chair or stool. Forrest's line of choice never led him to the easy path, and he was ever his own hard taskmaster. But once again chance proved a kindly guide, for his duties involved the scrutiny and arrangement of thousands of specimens from all over the world, and he acquired in these two years a sound acquaintance with the chief families and genera of flowering plants. To this experience also is no doubt due the wonderfully fine quality of his dried material - *0, si sic omnes!* Any ill-effects of an indoor occupation were nullified by his keenness for fishing and shooting, for tramping in hill country and for gardening. His interest in these continued to the end. He was but little attracted by games. He may have seen in his time a football or cricket match, but in a long acquaintance I cannot recall an instance of his attendance at any sporting event where thousands congregate. The best of companions, he had no liking whatever for the town, and was generally restless and unhappy there. In the country he was quite a different man. His friends will always call him to remembrance as the sturdiest of figures, clad in the trim knickerbockers which were his almost invariable wear. Determination was stamped on his somewhat grim features, and he might well have borne the badge *Nemo me impune lacessit*. It was but rarely he offended his own feelings and those of his friends by garbing himself when occasion demanded in the clothes deemed to befit a townsman, and never was he seen in plus-fours. The ineffaceable impression he left on all who met him was that of a man who knew exactly what he wanted to do and was certainly going to do it.

To the man of thirty-one thus fashioned and equipped came his opportunity in 1904. Mr. A. K. Bulley of Neston, Cheshire, keenly interested in alpine plants, applied to Sir Isaac Bayley Balfour for someone who was qualified to undertake botanical exploration in Western China, and Forrest entered a field which he was never to forsake. The richness of the flora of the provinces of Western China was long unsuspected. The botanical collections of Professor Augustine Henry were evidence enough for the less westerly areas; the material obtained by the French missionaries such as David, Soulié, and Delavay in Szechuan and Yunnan provided an abundant supply of new and interesting species for elaboration by Franchet and his co-workers in Paris; Wilson had already begun his journeys which were to result ultimately in the publication of *Plantae Wilsonianae*. But most of the evidence concerned only dried material in various herbaria, and the whole of the territory was almost virgin ground for the horticultural explorer. The results of exploration work at various hands during the last thirty years have shown that the area embracing Yunnan and Szechuan contains possibly the finest alpine flora in the world. Forrest was thus most fortunate in his lot. He began with Yunnan, and in all his seven expeditions Yunnan was ever the centre. He made incursions into alpine Burma, S.E. Tibet and S.W. Szechuan, but he never believed even at the end that he had secured all the floral treasures of his favourite province.

On his advent in 1904 Yunnan was no peaceful country. From 1904 to 1906 he had as much in the way of perilous adventure as a man of his type could desire. The Chinese were having one of their periodical disputes with the Tibetans, and the latter did not discriminate between Chinese and other foreigners and were massacring Chinese and French missionaries with equal zest. Forrest was at Tzekou as a guest of Père Dubernard, a veteran of the French Mission. A party of eighty (including Forrest and his seventeen collectors and servants) had hurriedly to evacuate Tzekou and flee. Overtaken by the pursuing Tibetans, all were killed except a bare dozen. Père Dubernard was brutally tortured to death and a fellow-priest killed on the spot. Of Forrest's personal following only one survived. Forrest had the good fortune to escape after a pursuit of some ten days without shelter and practically without food.

To this first expedition belongs also his venturesome tour with Litton into the Upper Salwin Valley among tribes who owed allegiance neither to China nor to Tibet. Two German explorers who repeated the journey a little later were killed by the same tribesmen. The subsequent expeditions of Forrest were not fraught with the same risks, as the country was

relatively quiet - it was never quite free from disturbance. But Forrest's personality contributed to good relations. He was soon on friendly terms with the Chinese, with the Tibetans, and with the tribesmen of many names. He took great interest in their life and manners, doctored them by his own methods, and helped them in many ways.



Forrest in the Moongate of the China Inland Mission, Dali, Yunnan.
A note on the back of the original photograph reveals that it was taken in August 1905,
shortly after his 'fun up North'.

One cannot venture here on any account of his various journeys, but it is needful to give a survey of the general results. His collections from Yunnan in the way of botanical specimens number over 30,000, and form the most important contribution to the flora of that province ever likely to be made. On his earlier expeditions his choice was very general, but on other occasions he devoted special attention to trees and shrubs and especially Rhododendron, while Primula was never forgotten. Gleaners in his field will not find much in the way of flowering plants which he failed to notice, except it be in those families such as grasses and sedges where the flowers are inconspicuous or where they are natives of the warmer regions below 5000 ft. Apart from mere numbers the material is of the very highest standard, and each gathering is accompanied usually by very complete notes. The copiousness and choice of the material are as remarkable as the beautiful way in which it is dried. I must here cite the opinion of a Japanese botanist, Professor Kudo, who published recently, after fifteen years' study, a monograph on the Labiatae of Eastern Asia. He visited over forty of the chief herbaria in Europe, Asia, and America, and states in his book that Forrest's specimens of Chinese plants are 'die beste in der Welt'.

It is of special interest to the members of this Society to know that for quantity and quality his Rhododendron collection is unique, and is easily the finest extant. Forrest was very devoted to this genus, and was ever hoping to find the "centre of the Rhododendron world". Whether there is such a place I gravely doubt - unless it is defined broadly as Western Yunnan. But Forrest's contribution to the genus is as his memorial, something "more lasting than bronze". Primula probably came next in his affections, and he made many notable additions to the known species.

I have already referred to some of the reasons which made Forrest so successful an explorer, but there are still some of his characteristics well worth recording. He shared very markedly in the attributes of the *naturalist* of the days before this era of specialisation. His collections of mammals, birds, and insects have been overshadowed by his botanical finds, but they were noteworthy in their way and he was much interested in securing them. He was full of information regarding the various peoples he came in contact with - their manners, customs, and pursuits. He knew much of the geological formations and minerals of the province, and his notes on plants generally included reference to the character of the soil. Long before it was admitted, he knew that many Rhododendrons would grow on limestone.

He was singularly successful in the training of the native collector. These hillmen became remarkably adept, and served the useful purpose of covering more ground than even his energetic self could hope to do. They were most loyal assistants. A cable from Forrest was enough to set them going, and on his arrival at Bhamo he was welcomed by men who had in some cases journeyed six weeks to meet him. His seed-collections consequently were on a generous scale. He was even reproached sometimes for too catholic a taste in his choice of plants. It is easy to prophesy after the event, and no easy matter for a collector in the wild to interpret horticultural value. There are many Gentians in Yunnan which rival *G. sino-ornata*, but will they adapt themselves to our climate? There are many Primulas there transcending *P. malacoides,* but not one of them is likely to receive a similar welcome and attention from horticulturists throughout the world. There are glorious alpines on the cliffs of Yunnan such as *Isopyrum, Solms-Laubachia,* and *Lithospermum,* but have they been successfully introduced? Forrest went on the principle of securing all he could and so tried to satisfy both horticulturist and botanist. Members of the Society may be assured that from the scientific point of view the mass of material at different stages obtained by Forrest has proved of the utmost value in interpreting the many problems of their favourite genus.

Forrest had good powers of organisation, and his explorations were carried out very methodically. He acquired a fair facility with that most difficult language, Chinese, and some acquaintance with hill dialects. An enthusiastic photographer, he was the possessor of some thousands of illustrations of the country, its peoples, and its plants. His photographic records of alpines show conclusively that, much as he relied on his men for the detailed collecting, he never spared himself his full share of hard work on the highest cliffs and screes. Among the noteworthy Forrestian plants I can recall only one or two which he himself had not seen in situ.

He was well acquainted, as he had to be, with the written records of the discoveries of his predecessors, and was a persistent searcher after their more important and often elusive finds. One such, *Primula glacialis* from the Lichiang, cost him long and almost vain pursuit - the book-description was all he had to go by - and years after, it was clear that he had secured it without its identity being realised at the time. The notes attached to his specimens are indicative at all times of keen observation, sound knowledge of the systematic position of each plant, and withal an eye for beauty.

It is a thousand pities that he could never be induced to write an account of his travels. The story of these last twenty-seven years would have been a fascinating one. Often spoken of, it was always postponed till his days of retirement - days which never arrived. The task did not appeal to him, and yet in his letters it was evident enough that he had the gift of narration. In many ways he was reserved and not a talker except in the company of his personal friends, and then he always held his own. Diffident of his powers of speech, he was not often persuaded to give a lecture. In his earlier attempts he was, in the parlance of the Scottish Church, a 'reader', but in his later years he spoke with freedom and delighted large audiences, illustrating his story with numerous lantern slides taken from his own excellent photographs.

There was no mistaking the fine quality of the man and the evidence of power. He was in many ways a 'bonny fechter'. Sternly self-disciplined and eminently a man of his word, he was ever scrupulously anxious to do his best for those in whose interest he undertook his explorations. It is pleasing to record that in one of his last letters home he expressed himself satisfied with the spoils of 1931. *Ipsissima verba:-* "I may with safety say that this will be the best year I have yet had. If all goes well, I shall have made a rather glorious and satisfactory finish to all my past years of labour". A true prophecy… but how gladly would his many friends have stayed the hands of fate, were it only for a little longer. *Ave et vale!*

"They told me, Heracleitus, they told me you were dead;
They brought me bitter news to hear and bitter tears to shed.
I wept, as I remembered, how often you and I
Had tired the sun with talking and sent him down the sky.
And now that thou art lying, my dear old Carian guest,
A handful of grey ashes, long, long ago at rest,
Still arc thy pleasant voices, thy nightingales, awake,
For Death, he taketh all away, but them he cannot take."

(From the Greek of Callimachus. Trans. W. Cory.)

W. WRIGHT SMITH, EDINBURGH, 1932.

This appreciation of George Forrest was originally published in the 1929-1931 edition of *The Rhododendron Society Notes* (Volume 3, Number 5).





Forrest’s camp at 3,350m in the Lichiang Range (Yulong Shan) on his first collecting trip.

Rhododendrons Discovered Recently In China.

A lecture given by George Forrest to the members of the Rhododendron Society, at the Linnean Society's Rooms, Burlington House, Piccadilly, London, on Tuesday November 16th, 1920, a transcript of which was published in the 1920 edition of *The Rhododendron Society Notes* (Volume 2, Number 1).

Mr. Gerald Loder:

I move that Mr. J. C. Williams takes the chair.

The Chairman (Mr. J. C. Williams):

There is no Agenda and I have only to tell you that Mr. Forrest at the end of the meeting will be glad to answer any questions, and anything which turns up during the lecture which may interest you and you have made notes of, he will deal with them at his leisure.

Mr. George Forrest:

In recent years our knowledge of the genus Rhododendron has so increased that, except for those engaged in the actual work of collecting and determination, it has become a somewhat difficult task to keep pace with the large number of novelties described. As late as 1907, 305 was the total of species known, of which 46 were Indian and fully 136 Chinese, but now that total has been more than doubled, and one may safely say that 80 per cent. of the new species have as their home the Alpine region of North-West Yunnan, West China. Unquestionably the greatest concentration of species is to be found in that wild and rugged region lying on the China-Tibetan frontier, formed by the continuation of the Himalayas, which at that point turn due southward from the Tibetan plateau, and in a perfect chaos of peaks, spurs and ranges enclose the water systems of the Salwin, Mekong and Yangtze.

The first slide, a map of Yunnan showing the Yunnan-Burmese frontier, was then thrown on the screen:

Here we have Tengyueh which is on the road from Upper Burma, and shows the country I have been working in. The route I travelled by is across eastwards to Talifu, and from Talifu on to the North. The nucleus and radiating point of the genus I place somewhere North-West of Batang, approximately in latitude 33° N., longitude 95° E., in the Tibetan province of Tsarong or Chiamo.

The whole lesson of my ten years' exploration of Yunnan and South-West Szechwan, when speaking of the genus, is told in a very few words. Travel north-westwards and the species are ever on the increase, break east or north and immediately there is a marked decrease. From somewhere near the above-mentioned point the genus spreads out in a fan-shaped drift south and south-east, gradually thinning off in numbers as lowlands and plains are reached. And though little or nothing is as yet known of the country lying to the west and south-west of Tsarong, between that province and the Brahmaputra where it breaks through the Himalayas into the plains of Assam, I do not consider it rash to say that when that region is explored it may prove as prodigal in its flora as Tsarong and North-west Yunnan.

There is little doubt that the highly specialised and exuberant flora seen on the Chino-Tibetan alps, in which Rhododendron is such a prominent feature, is due in great measure to the geological formation. Practically the whole of the area, from 7,000 feet to the altitude of the highest known peaks, which run to about 23,000 feet, is capped with limestone. In the lower valley levels, below 7,000 feet are found other strata such as slates, sandstones, shales, clays, etc., and there one sees a totally different flora, the line of demarcation being most pronounced in certain districts. In the higher valleys, and the still higher plateaux, the soils are heavy reddish clay-marls, gritty limy clays and loams, lime-silts and cements.

The next slide:

This shows a point in one of the upper altitudes. Practically the whole meadow is filled with this formation [pointing lo the slide] which is washed down from the range and is almost like China clay. Many of these enclosed valleys and plateaux, some of them of considerable extent, such as that of the Lichiang, Hoching, Chien-chuan and Teng-chuan, give every evidence of having been the sites of extensive lakes; the bed rock is composed of an extremely hard limestone deposit varying from a crust of a few feet to over 100 feet in thickness, built up in all probability from the debris of glaciers. In the Tali valley there is still the lake, a body of water 35 miles long by 6½ miles in breadth, but that, if one may place any reliance on native evidence is in the process of shrinking. The limestone of the country has nothing chalky in it, but is apparently a strong magnesian limestone, greyish-white in colour, very hard and durable, such as is seen in the Dolomites.

Towards the Tsarong frontier on the Mekong-Salwin divide where, I think, I found a greater number of new Rhododendrons than in any other area explored, the strata, though still limestone, is much freer in composition, more readily disintegrated and deeply stained ruddy-brown by the presence of minerals.

In recent years there has been much discussion regarding lime and limy soils in connection with the cultivation of Rhododendrons, and many experiments have been and are still being made with species from the Yunnan limestone area, though so far with very little success. As I am not a cultivator, I am not in a position lo give a definite opinion, but were I asked I should suggest that failure arises from the limestone we have here being of different composition to that of North-west Yunnan. Certainly most of the Rhododendrons I have collected grow directly in or on that limestone. The lower level plants such as RHODS. RACEMOSUM, OLEIFOLIUM, MICROPHYTON, RIGIDUM, SPINULIFERUM, AUREUM, TRICHOCLADUM, etc., are found flourishing in soils heavily charged with limestone rubble, whilst species such as RHODs. CRASSUM, NERIIFLORUM, BULLATUM, FLOCCIGERUM, SANGUINEUM and all its allies, IDONEUM, DIACRITUM, YUNNANENSE, PRAECOX, HAEMATODES, SALUENENSE, APODECTUM, CILIICALYX, nearly all of the CEPHALANTHUM group, BRACHYANTHUM, DICHROANTHUM, and a host of other species belonging to the groups those named represent, have their roots fixed in the crevices of limestone cliffs and boulders or in the limy rubble at the bases thereof. The taller tree species, though having a bed of humus for support, have their rootlets similarly placed, or at least overlying or in contact with the limestone.

The next slide:

This is a truss of RHOD. TALIENSE, one of the species on the Tali range. The flowers are white-flushed pink on the exterior with crimson markings. This is one of the biggest plants I have seen in the highest altitudes. Even those which may be classed as bog-plants occupying as they do boggy peaty pasture (generally the character of the openings in pine-forests at higher altitudes) as RHODS. HIPPOPHAEOIDES, SCINTILLANS, TELMATEIUM, etc., though luxuriating in soil of more or less peaty consistency with abundance of moisture, are in a surface soil which is shallow, seldom more than 18 inches in depth, most often much less, with beneath a deep layer of limestone-gravel through which, during the rainv season at least, water is constantly flowing.

The next slide:

This shows a picture of a bank of R. HIPPOPHAEOIDES and in front you have a boggy meadow with patches of water. The picture was taken principally for the plant in front, and the next picture shows the same meadow with a very large mass of plants growing behind the bog, quite a typical sight at that altitude.

Of course too much stress cannot be laid on the fact that all those Rhododendrons have as a bed, or a support at the least, a certain amount of peat or humus; even those growing in the most barren exposed situations, on cliffs and boulders, as they attain a certain size gather around them a quantity of vegetable debris which eventually becomes soil. From all of which, naturally, the plants must extract a certain amount of nourishment, but still it is difficult to believe, as many people assert, that the limestone plays little or no part in the existence of the plant. One great fact remains: that in Yunnan, if one gets beneath the altitudinal level of the limestone formation or beyond it, Rhododendrons, both in numbers and species, are few and far between. At least such has been my experience.

Nearly all Rhododendrons under natural conditions are social plants, a fact which, were we to acknowledge it in our treatment of them would, I think, tend to greater success in their cultivation. Very few are found as isolated plants; one or two I have noted, but as to whether it is a natural condition of the species, I cannot say. R. GRIERSONIANUM, a most symmetrical shrub found in the open country at the head waters of the Shweli valley on the Burmese frontier, is one. It attains a height of 5 to 8 feet, and has large blooms of the STAMINEUM type of a most beautiful shade of soft rose-scarlet, almost vermilion in some lights. Another species with brilliant flowers, of a shade of deep scarlet which grows in almost single plants is R. SPINULIFERUM, but, though this species is not gregarious, it is usually found in dense scrub which it overtops by a foot or two, and so has the protection and support which is apparently desired by all members of the family.

But all others are found in masses, covering from acres to square miles in extent, and where one species does not entirely dominate a situation several or many have apparently adapted themselves to the environment for the necessary mutual protection. This is especially evident in some of the deeper side valleys of such a range as the Tsang-shan, the mountains which form the western boundary of the Tali valley where one finds RHODS. BRACHYANTHUM, NERIIFLORUM, HAEMATODES, and others, whilst luxuriating in their shade, is seen the beautiful R. CAMPYLOGYNUM with its minute Buxus-like foliage and graceful plum-coloured solitary blooms.

At higher altitudes and more open situations the tree-species form impenetrable thickets and forests of vast extent to the complete exclusion of all other ligneous vegetation, banding the mountain sides with colour, and presenting in late May or June scenes of indescribable beauty. These forests may contain many species, and that is generally so, though often one species is dominant. One such, R. TRAILLIANUM - which is a shrub of 25 to 30 feet with flowers white or white-flushed rose - I noted in 1917, on the Eastern flank of one of the spurs of the Bei-ma-Shan, in a belt nearly three miles in length, and clothing an altitude of fully 1,000 feet, so densely flowering that at a distance of some miles the mountain side seemed veiled in a silvery sheen.

One interesting feature of the Rhododendron seen in the Northern area of the province - particularly striking on the Mekong-Salwin divide - is that the greater number of species are most luxuriant in situations having a Northern or North-Eastern exposure. This is most pronounced in the lateral valleys draining eastwards from the summit of the divide into the Mekong. Most of these valleys are rugged in character separated by sharply defined spurs, heavily clothed on the Northern face with dense forests and thickets which, above a certain altitude, are composed chiefly of Rhododendrons, whilst the southern faces are mostly bare rock-strewn grassy slopes or covered with scrub or more or less dry pine forests.

Three degrees further south, towards the South-West or Central-West of the province, a totally different distribution prevails, especially on the frontier ranges, those forming the Shweli-Salwin and N'Maikha-Salwin divides. There it is mostly the western flanks which bear the heaviest vegetation and there the greatest wealth of Rhododendron is seen. That is undoubtedly due to the much heavier rainfall and comparatively higher temperature during the monsoon season. Still, those ranges attain an altitude of 12,000 feet, or slightly over that at one part, are snow clad during the winter as low as 6,000 or 8,000 feet, with the atmosphere exceptionally dry and frosty. Thus it is possible to conclude that many of the species might prove hardy with us.

On their Eastern flanks the dry, death-like atmospheric conditions of the Salwin valley forbid any wealth of vegetation other than what is purely tropical, or sub-tropical in character, up to 9,000 feet or thereabout; above that to the summit what arborescent vegetation is seen is dwarfed and stunted. These conditions obtain as far North as I have explored on those ranges - to approximately Lat. 27° N.

The next slide:

This is a typical picture of the Western flank of the Shweli-Salwin divide, the home of RHOD. SINOGRANDE and others, and these growths are simply on chalk with tropical vegetation, gradually thinning off to temperate vegetation, and to alpine at the crest.

During two years spent at Tengyueh as a base my men and I explored the Shweli-Salwin range as thoroughly as possible, and a very fine haul of new species was made. I had been quite prepared to find there more or less a linking up with the Indian Rhododendrons, for geographically the area is in Burma, the Shweli and N'Maikha draining into the Irrawaddy. However, it did not prove to be so, for the affinities of the species found are more with those seen in the North of the province.

In the short period mentioned it was impossible to complete the work; almost certainly many species yet remain to be discovered, for many of the side valleys and ravines, choked as they are by dense forest and scrub formations, may remain unexplored for years.

Of the species found the finest is R. SINOGRANDE, which forms fairly extensive forests, and is also seen at lower altitudes as isolated specimens in open pine and mixed forests. It is a magnificent foliage shrub, 25 to 35 feet in height. I have seen leaves measuring 26 x 12 inches or even more, and many of the hill tribes use them for thatching their huts. The flower-heads are very large, the individual blooms borne on very stiff pedicels are also large, widely campanulate, fleshy and brittle, of a dull white colour with a blotch of deep crimson at the base. A plant of merit either for flower or foliage.

Another large-leaved species, of 20 to 30 feet, forming forests higher on the range is R. BASILICUM. The flowers, as numerous as in R. SINOGRANDE, but of better form and substance, are pale-yellow with a crimson blotch. I have seen blooms of this species heavily flushed with crimson.

Yet another fine species, growing in the shelter of pine forests as well as in the open is R. HABROTRICHUM. It is a shapely shrub of 4 to 8 feet with rose-coloured blooms.

Another found in like situations belonging to the Ovatum Series is R. AUSTRALE. It is a very free flowerer, forming symmetrical shrubs of 6 to 10 feet, with attractive dark-green, glossy foliage and blooms deep rose with crimson markings.

Two fine plants of the Triflorum Series are R. ERILEUCUM, 6 to 9 feet in height, with white flowers, and R. ZALEUCUM, of 6 to 20 feet with blooms white or pinkish-rose, flushed

a deeper shade. Except in size the foliage is much alike in both, having a beautiful bluey-grey wax-coated under surface.

R. DIAPREPES, 10 to 12 feet in height with fragrant blooms 4 inches long, white or flushed rose, and another beautiful shrub RH. RASILE are both allied to the R. DISCOLOR of Franchet.

R. FULVUM is one of the species forming thickets at mid-altitude on the range and has flowers deep rose in colour, sometimes even purple-rose, especially in bud, and very handsome foliage.

Two excellent new species of the Maddeni Section, both with very large blooms, are R. MEGACALYX and R. SINONUTTALLII. The corollas are very widely funnel-shaped, waxy white with or without a touch of yellow at the base, flushed purplish-rose outside and deliciously fragrant. The flower of R. MEGACALYX is 4½ inches long, that of R. SINONUTTALLII fully an inch more.

The next slide:

Forms of R. CILIICALYX are abundant on many of the cliffs in side valleys, though the finest form of that group - R. SCOTTIANUM - is found much further to the east.

This is one of the finest forms on the hills round Tengyueh.

R. AMULORUM is an exceedingly attractive species of the Haematodes Section, with deep crimson flowers and beautifully wrinkled dark-coloured foliage, coated on the under surface with a heavy reddish-brown tomentum. It is a plant of the N'Maikha-Salwin divide, as also is R. GENESTIERIANUM a unique plant, 4 to 6 feet in height, with large willow-like foliage and loose umbels of numerous small nodding plum-purple blooms identical in appearance and substance to those of R. CAMPYLOGYNUM, and borne on long pedicels.

Another grand large-leaved species from that divide is R. SIDEREUM, 8 to 20 feel in height, with flowers a clear yellow blotched crimson at the base, whilst R. MACKENZIANUM, one of the Stamineum group, 12 to 30 feet in height, is common in both ranges. This last has very large flowers, narrowly funnel-shaped, rather fleshy and fragrant, in colour ranging from rose to deep rose with a greenish blotch at the base, the tube very deep purple.

I have already mentioned R. GRIERSONIANUM, the flowers of which I consider one of the finest bits of colour I have ever seen.

Another species, similar in habit to R. GRIERSONIANUM, found in pine forests as well as in the open, is R NEMATOCALYX. It is a shapely shrub of 8 to 12 feet, with loose umbels of few but large flowers of the Stamineum type, white or white-flushed rose. I will show you now a single truss of this species.

Slides 10 and 11:

Other large-leaved species forming forests and thickets on the range are R. MEGAPHYLLUM, 10 to 30 feet, with flowers yellow-flushed rose; R. PREPTUM, creamy-white; and R. ARIZELUM, 10 to 30 feet, with campanulate blooms, yellow in colour, flushed rose.

At higher altitudes are found forests of R PLEBEIUM, a fine species of the Heliolepis Section, with deep rose-coloured blooms marked crimson. Also R. STENAULUM, another of the Stamineum group; whilst yet higher is found R. CALLIMORPHUM, a shrub of the Souliei group, 4 to 8 feet in height, with flowers in loose umbels closely resembling in colour, form and texture, those of R. ORBICULARE. In company with that is seen the beautiful R. MEDDIANUM, a species of the Thomsonii Section, 4 to 6 feet in height, with loose, umbels of 5 to 7 very large fleshy deep crimson blooms. The last two species form close thickets on boulder-strewn slopes.

Towards the summit of the range are many beautiful dwarf species, such as R. APODECTUM, with crimson flowers flushed orange-yellow at the base; R. THEIOCHROUM with sulphur-yellow flowers and dark-green, glossy, leathery foliage; R. LEPIDOSTYLUM, a yellow-flowered species of the Trichocladum Series. R. LASIOPODUM and R. ROSEATUM are seen at about the same altitude, whilst above, all in the wildest and most barren situations, is found the beautiful yellow-flowered dwarf of the Ciliatum group, R. VALENTINIANUM.

Again, last autumn on one of our last journeys to the foot-hills of the N'Maikha-Salwin divide we found what is at present the tallest known species in the genus now named R. GIGANTEUM. Only a few specimens were seen though possibly it may yet be found in greater numbers in other areas. The largest tree was measured. The height just reached 80 feet, the spread of branch over 40 feet, whilst the trunk at five feet from the ground was 7 feet 9 inches in girth. The bark is rough for a Rhododendron and of a light greyish-red colour. The largest leaves ran to about 13 or 14 inches. Unfortunately the species being apparently an early flowerer, as many of that region are, we only secured specimens in fruit, leaf and flower-bud, the latter too immature to give even a hint as to the colour or form of the flower. A fair quantity of seed was collected.

From Tengyueh to Talifu is a journey of twelve days, some 280 miles, the road winding over the water-sheds of the Shweli, Salwin and Mekong, which last in that latitude traverses a very deep and precipitous gorge. Beyond that the country gradually rises towards the Western flank of the Tali Range, the actual base of which is about 6,000 feet, thence round the Southern end of the range and North to the City of Tali, which lies at the Eastern base of the mountains at about 6,500 feet altitude. Fully two-thirds of that valley area is occupied by the beautiful lake Erh-hai, the actual plain, of small extent, lies along the base of the range which towers directly west of the City to an altitude of fully 14,000 feet.

Though the altitude of the valley is approximately the same as Tengyueh, lying so much farther east and north, and with the proximity of such a huge range, the climate is more rigorous. The winter is quite severe; for four months of the year the snow descends to about 1,000 feet above the valley - occasionally even that is coated for days - and the atmosphere is dry and frosty. In summer the rainfall is fairly heavy though there is no excessive heat.

The next slide:

This gives a picture of the Tali Range taken on the eastern fringe in mid-January. The limit of the scene there is about 1,500 feet above the plain, approximately 8,000 feet.

Much of the country between Tengyueh and Tali is of a highland pastoral character, the summits of the intervening ranges rise from 9 to 11,000 feet, clothed with pine forests, with scrub and thickets in the more enclosed side valleys. Little of that country has been explored; though I have been over the route some eighteen times, I have only collected on and at short distances from the road, so that is yet another field which should repay investigation. For the greater part of the way R. DELAVAYI is abundant everywhere, forming forests and thickets alone or in company with Conifers and deciduous trees, gradually thinning off in numbers as the Tali Range is approached.

The next slide:

This is not a very good picture of R. DELAVAYI. It was taken very early in the morning before we broke camp, and it was taken partially against the light, but it is not an abnormal

specimen at all. There are plenty of trees taller than that and of much better growth.

From what I have seen of the species it seems to do best in rather dry situations, and is the one Rhododendron I have seen thrive on a slate formation. Nearly all these lower valleys running below the range dip below the limestone. It attains a height of 30 to 35 feet - this specimen is about 30 feet, I should say - and in the late spring from March to April makes a brave show with its handsome blooms which range from deep vivid crimson to the brightest cherry-red. It flowers very profusely.

The next slide:

In this picture R. RACEM0SUM is seen on the high lands, not between the valleys. Whilst R. RACEMOSUM is fairly abundant on the higher clayey downs so characteristic of that portion of the divides, on the dryer uplands, forms of the Fortunei Section are seen everywhere.

Many of the forms seen of R. RACEM0SUM differ considerably from the type.

The next slide:

This is a form which was found two days' journey from Talifu. It differs altogether from the type which dominates most of the area there, which is a spread-out shrub. It is quite irregular, and there was a considerable number of plants growing in the one spot, but which was covered with plants much the same as the typical Racemosum - with almost a white interior to the flower in some of them.

As the Tali Range is approached R. SCOTTIANUM and R. MICROPHYTON become the dominant species, both exceedingly free-flowering, the former, as I have already said, the finest of all the CILIICALYX group. Many of the rocky hillsides are flushed pink and white, with the masses of bloom. Both are shrubs of 4 to 7 feet, and of R. MICROPHYTON which, so far as I know, has not yet been introduced, I have seen specimens so smothered in the small blooms as scarcely to show a leaf.

The next slide:

This shows you a photograph of R. SCOTTIANUM. The flowers are very open, and their tips will be almost pure white and occasionally flushed pink on the outside, and with a yellowish-green blotch at the base and always fragrant.

The next slide I will show you is the truss of it.

Another splendid spot still unexplored is the Western flank of the Tali Range, a stretch of country 40 to 50 miles, clothed in heavy forest from its base to 12,000 feet. I have only been on it on two occasions, during one of which I found the finer darker-flowered form of the true R. LACTEUM of Franchet, a fine shrub of 20 to 25 feet, with dense trusses of large beautiful canary-yellow blooms, a soft yellow, with nothing transparent about it. This is the species with which R. FICTOLACTEUM was so long confused. The latter is a totally different species with white flowers, blotched and marked deep crimson. From seed secured then the true R. LACTEUM is now in cultivation.

Owing to the great bulk of the Tali Range acting as a screen, the rainfall on the Western flank is greatly in excess of that on the Eastern, and thus the heavier vegetation. The same applies to practically all of the greater ranges of Western Yunnan, owing to their North and South trend they have a wet and dry side.

The next slide:

Exclusive of the lateral gorges which score the Tali Range from summit to base, there is little arborescent vegetation on the Eastern flank below 9,000 feet, above which forests of Conifers begin to show and carry up to the Rhododendron thickets, and these to the actual alps. That range was the scene of most of Père Delavay's collecting, and will always be associated with his name. Many excellent Rhododendrons were discovered there by him, such as RHODS. BULLATUM, HAEMATODES, NERIIFLORUM, BRACHYANTHUM, YUNNANENSE, TALIENSE, CAMPYLOGYNUM, LACTEUM, RUBIGINOSUM, CYANOCARPUM, SULFUREUM, IRRORATUM, TRICHOCLADUM, AUREUM, CRASSUM, OLEIFOLIUM and others, all beautiful plants most of which have since been introduced to cultivation.

The next slide:

This is a single truss of R. BULLATUM.

On the lower dry grassland slopes are found many fine and brilliant forms of AZALEA INDICA in conjunction with which are seen R. AUREUM and R. OLEIFOLiUM. The latter I have always considered a superior plant in every way, more graceful in habit, foliage, and especially flower, than its ally R. RACEMOSUM, and I think most people would judge so were they to see the two species in situ.

In the gullies and on their rocky flanks amidst heavy growth of cane and deciduous shrubs are found RHODS. HAEMATODES, NERIIFLORUM, YUNNANENSE, BRACHYANTHUM, and the tiny R. CAMPYLOGYNUM, whilst on the cliffs are RHODS. BULLATUM, SULFUREUM, and CRASSUM. R. TRICHOCLADUM loves more open situations, rocky grassland on the spurs themselves.

The next slide:

This is Rhododendron CRASSUM, a cliff plant, and it is the commonest plant in that area. In the gorges it never attains to more than 2 feet or 3 feet at the most. The flowers are almost pure white, with flush-pink on the outside and very fragrant.

Above the altitude of the gullies and within the pine forests, and forming forests themselves at still higher elevation are found RHODOS. IRRORATUM, CYANOCARPUM, RUBIGINOSUM, TALIENSE, and LACTEUM. The last is rather a rare species - during several years' collecting I only saw two groups of it. It has canary-yellow flowers, and is a smaller tree, smaller even in foliage than R. FICTOLACTEUM, of which presently I shall show you a picture

The next slide:

R. FICTOLACTEUM is not, so far as I know, on the Tali Range. It was originally collected near the summit of the Lang-kong-Hoching divide, near Yen-tze-hay by Delavay.

The next slide:

This picture shows R. IRRORATUM. It is a type which always grows as a scrub-plant amongst dense scrub, or in a thicket, and the fact is, apparently, that it wants support. I have never seen this Rhododendron in any other situation but this, and the scrub had to be cleared in order to get a photograph.

As on all the Yunnan Ranges here above the Rhododendron belt, the species tail off until the actual alpine moorland and meadows are reached, where the whole landscape is dominated by mile upon mile of dwarf cushion-shrubs of the Lapponicum-Intricatum Series, bearing flowers of every conceivable shade from pure white through lavender and blues to the deepest shades of wine-purple. These formations, magnificent as they are on the Tali Range, are far eclipsed by similar scenes further North, pictures of some of which I shall presently show you, taken in May on the Sungkwei Pass.

The next slide:

This shows one of the Lapponicum-Intricatum Series, a typical cushion-shrub, standing out from the mass. That is the sort of country they are found in. This is an individual plant, but in many places you cannot put your foot down without treading on them. They are in masses, and in all probability, on most of the moors, there are half a dozen species at least intermingling.

Considering the large number of Père Delavay's discoveries, we were fortunate in taking toll of quite a few fine specimens: R. JUCUNDUM, a fine shrub of 5 to 20 feet, with rose-pink to white flowers is of the Souliei group; R. PACHYPODUM, 2 to 5 feet, with yellow flowers; R. PLATYPHYLLUM, with strongly aromatic foliage and very beautiful membranous blooms, white, delicately flushed rose; R. GLANDULUM of 4 to 6 feet, a fine species of the Selense Section, with flowers suffused deep-rose; R. PHOLIDOTUM, 3 to 8 feet, a most floriferous species akin to R. BREVISTYLUM, having deep-rose purple blooms.

The next slide:

This is a single plant of R. PHOLIDOTUM. It is about the average height, 7 to 8 feet, and it flowers much after the same style as Rh. RUBIGINOSUM.

The next series of slides:

R. SYCNANTHUM, of 4 to 9 feet, allied to R. YANTHINUM, growing on cliff ledges, with blooms deep lavender-rose; R. BALFOURIANUM, a very fine species 4 to 6 feet, with large fleshy flowers, pale rose marked crimson; R. DIMITRIUM, with flowers deep-rose; R. DICHROANTHUM, 2 to 3 feet, a shrub of the open hillsides, which has blooms ranging in different individuals from creamy-rose through shades of pinkish-yellow to deep flame-orange. R. RUBROLINEATUM, is a fine and most uncommon shrub of 2 to 5 feet, with small drooping blooms in loose umbels of an ivory-yellow shade, lines and flushed rose. These are only some of the most outstanding examples. There are others, amongst them a number of plants of the Irroratum Section, all first-class.

The country east of the Tali lake is of a somewhat arid character. Two days beyond it there is a low range of mountains named the Ghi Shan, and during one year that was explored. Much new material was secured, but only one Rhododendron of note - R. ERIOGYNUM, one of the Irroratum Series, a shrub of 10 feet, forming considerable thickets. The flowers are small, form compact trusses, and are deep crimson in colour.

I shall now show you pictures of typical Rhododendron growth as seen on the Sungkwei Pass. This is a low col, a rugged little frequented pass between the Lang-kong and Sungkwei valleys, three days' north of Tali, of an altitude of 11 to 12,000 feet, comparatively shallow, a broad cleft running almost east and west on the summit of the divide, two miles in length by about a half mile broad. The centre is occupied by a small lake with gritty limey meadows and moorland on both sides for a short distance up the slopes.

The next slide:

You can hardly see them in this picture. From there to the tops of the enclosing hills, 1,000 feet higher, is Rhododendron forest. The foreground is occupied by matted masses of Intricatums and Lapponicums.

The next slide:

These masses of flowers are mostly FICTOLACTEUM, and there are isolated plants of others. It is taken looking down on the gully from quite 500 feel above. The height of the individual plants run up to 30 or 40 feet.

A Member:
What is the shrub there in the foreground?

Mr. Forrest:
It is a spine-leaved oak, Sir.

The next slide:

There is a single specimen of FICTOI.ACTEUM. Near the part when this photograph was taken, another very fine species of the Irroratum Series was discovered. R. ANTHOSPHAERUM, a shrub of 20 to 30 feet, free flowering, with blooms bright rose-magenta, marked black-crimson.

Such formations are common on almost every range North and North-West of that point. This single truss of R. FICTOLACTEUM, flowers almost white, with an intense crimson blotch at the base. Every mountain side in April, May or June is lined with colours visible miles distant, every plateau a veritable flower garden. It is impossible to imagine the wealth of Rhododendron until one has seen it - and then at the flowering period. On the Lichiang Range, the highest point of which is nearly 20,000 feet, on the ranges around Muli, east of the Yangtze, in S.W. Szechwan, on the Ha-ba Range, N.W. of the Yangtze, on the Chungtien plateau, and the Bei-ma Shan, and the Mekong-Salwin divide, everywhere the genus is dominant above a certain altitude, and everywhere there are new species.

It is impossible to do more than name a few of the finer things of which photographs were secured.

The next slide:

This is another photograph of the Sungkwei Pass. You get a better view of R. RUPICOLUM here. All this is heath-like formation of Rhododendrons. The centre of the *col* is pure limestone formation.

The next slide:

You have another typical scene there, a Rhododendron forest with undergrowth of bamboo.

The next slide:

And yet another. One peculiarity about that Pass is - I have already mentioned it - the various Rhododendrons are on the North face. This flank here has a Southern exposure, and it is almost entirely covered with spinous leaved oaks growing to about 70 to 80 feet.

The next slide:

This is R. RUPICOLUM, a dwarf rock species, with deep plum-coloured blooms, speckled with golden scales.

The next slide:

This is R. VERNICOSUM, a shrub of the pine forests, with pale rose self-coloured flowers, about 10 or 12 feet in height, one of the finest species on the Eastern and Western flank of the Lichiang Range.

The next slide:

R. OREOTREPHES. Has very open short-tubed flowers of a soft rose colour, with dorsal

crimson markings.

The next slide:

R. ADENOGYNUM, a rock shrub, with large blooms, flushed and lined purplish-rose.

The next slide:

R. BEESIANUM, also with large blooms, which are fleshy and crimson-rose in colour.

The next slide:

R. SPHAERANTHUM, found in open forests, with small ball-like trusses of tiny rose tubular blooms.

The next slide:

R. IDONEUM, a rock shrub, with purple-blue flowers, having a white throat.

The next slide:

R. DIACRITUM and R. PROSTRATUM, two almost prostrate shrubs of the highest alps, found at the very edge of the perpetual snows, the first with small purplish-blue flowers, the last with rather large open crimson blooms, spotted a darker shade.

The next slide:

R. EUANTHUM, 10 to 20 feet, a fine species of the Souliei or Selense Section, has handsome flowers, rose-lavender with crimson markings.

I will show you more photographs of a few of these now. This is a truss of the R. DIACRITUM. It is rather a poor picture of it. The next is R. BEESIANUM. It is a single truss. The next, I think, is R. EUANTHUM. This is a plant of the pine forest, almost in the Northern part of the range up towards the Yangtze.

The next slide:

On the Lichiang Range is seen in fullest glory the finer forms of R. CHARTOPHYLLUM and the variety named R. CHARTOPHYLLUM PRAECOX. They dominate quite an extensive area on the lower stretches of the range, as do also forms of - *the next slide* - R. FORTUNEI, R. RACEMOSUM and R. RIGIDUM.

On the higher marshy meadows is found R. HIPPOPHAEOIDES, 2 to 4½ feet, with foliage silvery-green, and flowers which at their best, are the nearest approach to blue in any of the genus. It is an ally to R. FASTIGIATUM, and is abundant on such meadows at an altitude of 11,000 to 13,000 feet.

I will show you now some pictures of the Lichiang plants.

The next slide:

This is R. LEDOIDES, a shrub of about 3 to 4 feet, and one of the freest flowering of the small leaf section.

A Member:
Would it not be convenient for us to ask questions at this stage?

Mr. Forrest:
Just as you please.
The next picture shows a branch of it.

A Member:
Is that R. SPHAERANTHUM?

Mr. Forrest:
No, it is R. LEDOIDES.

A Member:
Can you distinguish between the two?

Mr. Forrest:
No, not very well.
The next is another plant of the Lichiang range.

It runs up to 50 to 60 feet, but these are isolated specimens growing on the windy range, on the Eastern part of the range. There is a forest of these, I should say, of about 50 to 60 miles in length, at about 2,000 feet altitude. The flowers of these species are white with pink on the outside.

A Member:
Is that grassy herbage in the foreground?

Mr. Forrest:
Yes, all grass. Alpine pasture.

The next slide:

Now we have R. CHARTOPHYLLUM. These, by which the man is standing, are taken as isolated plants, so as to show how it flowers amongst shrub. You never get it in very large masses. It is almost always isolated, 20 or 30 yards between them. It is generally a plant growing in the open.

A Member:
Is it of stiff, hard growth?

Mr. Forrest:
Yes. There is a great variety and difference in the flower. Some are purplish, some pure white, and one curious point about them is that in some cases if you get white, you get crimson spottings, and if you get purplish shade, green spottings. It is distinct from R. YUNNANENSE. The foliage is much stiffer and harder.

A Member:
What nature is the scrub?

Mr. Forrest:
Very often oak-scrub. The whole of the range is covered with prickly evergreen oak.

A Member:
Do you know which evergreen oak? There must be several species.

Mr. Forrest:
Yes. Q. semicarpifolia and Q. spinosa. There must be several additional species which dominate a very large area, and it is always in the lower altitudes that the shrub is found.

The next slide:

This form of R. YUNNANENSE is called PRAECOX. It is certainly deciduous, but I think it is purely a matter of situation.

A Member:

Will it grow taller?

Mr. Forrest:

This is about the size of the plant, and in more open situations it takes this form. Although there is no distinct graduation many of those I have sent home have not yet been determined. This growth is a very characteristic one, as it stands on a limestone outcrop, and you still have oak-scrub here.

The next slide:

This is also one of the many forms of R. FORTUNEI, which I have found in the Lichiang range. I do not know what it is.

A Member:

What is the altitude here?

Mr. Forrest:

Between 10,000 and 11,000 feet.

A Member:

Well below the timber level?

Mr. Forrest:

Yes.

The next slide:

This is a picture of one of the Lapponicums found on the highest plateau, It was simply taken as an illustration of the pictures which are to follow, showing their very wide spread on the highest plateau.

A Member:

How high is it?

Mr. Forrest:

About 3 or 4 feet. The flowers are purplish-blue without markings.

On the mountains around Mu-li, a small Tibetan village, in the Litang valley, in South-west Szechwan, explored in 1918-19, quite a number of new species distinct from those of Yunnan, were collected. A few of them are: R. AGGLUTINATUM, 4 to 6 feet; R. HEMITRICHOTUM, 2 to 3 feet, with flowers rose-colour, margined a deeper shade; R HORMOPHORUM; R. PUBESCENS; R. HYPOPHAEUM; R. MULIENSE, and others as yet undescribed. Seed of nearly all of them was secured.

During 1917 and 1918, the Chungtien plateau, the Bei-ma Shan, and the rugged highlands North-east of Chungtien and Atuntze, were partially explored, and many more new species collected.

The next slide:

Most of the Moorlands on the Chungtien plateau, and the higher altitudes of the Bei-ma-Shan are densely covered with shrubs of the Lapponicum type, bog and rock plants, so much so that the scenery resembles that of our highland moors where heather dominates; at mid-altitudes, about 14,000 feet, in the damper situations, there are plant associations - as Birch and Rhododendrons - very similar to the Birch and heather formation of our higher valleys.

The next slide:

Whilst at the higher points on the Bei-ma-Shan, the moors and shallow glens are carpeted for miles with the more dwarf cushion shrubs growing consistently on a lime-rubble soil, drained by small mountain torrents, backed and surrounded by barren rugged snow-clad peaks and screes. The altitude of the Pass is fully 16,000 feet. Even in the height of summer, snow is never absent from the scene, and very little imagination is required to picture just such landscapes at home.

The next slide:

This shows one of the Birch and Rhododendrons on the Chungtien plateau. The whole of the country is coated like that for miles, covered with Rhododendron. The whole sides of the ranges and the meadows are lined with birch and pine.

A Member:

Which birch is it?

Mr. Forrest:

I do not know, Sir.

A Member:

Are some of those in the foreground birches?

Mr. Forrest:

This is a birch here, they are mostly in birch-formation. You get birch coming out of the thickets to the open and mingling with the Rhododendrons.

A Member:

Is there more than one species of birch or does one of the species dominate?

Mr. Forrest:

One of the species dominates that area right through. The colour of the Rhododendron varies from the deepest purple through light lilac-purple to the clearest pink. One pink formation has got on that area.

The next slide:

This shows one of the Moorlands. The main track running through the plateau, cuts through this country passing over plateau like this, and deep into the gorges.

A Member:

Are forest fires fairly frequent?

Mr. Forrest:

Yes, in many places.

In those two areas a few of the most striking species collected were: R. WARDII, a plentiful shrub in pine forests at 10,000 to 11,000 feet, 4 to 8 feet in height, with fine yellow campanulate blooms, beautifully tipped orange-crimson in bud; R. CHRYSEUM, one of the Lapponicums, of 2 to 3 feet, with bronzy foliage, and brilliant yellow blooms, a most profuse flowerer. I very well remember finding that. It gave such a good show. We were going to mid-day camp, and we saw glimpses of yellow, and looking at it through a glass I saw it was a Rhododendron, and shortly after that we came to the part where it was, about two miles distant and found about three or four acres of plants closely packed with hardly any space between them, and a shower of bloom.

The next slide:

R. CLEMENTINAE, 6 to 9 feet, with heavy leathery dark green foliage and very large flowers which are creamy-white with crimson markings.

The next slide:

R. NIPHARGUM, 20 to 30 feet. This was got in the same area, with lanceolate foliage, silvered beneath, and crimson-rose flowers with darker markings.

The next slide:

R. CROCEUM, another tree species with large yellow fleshy blooms, marked and blotched deep crimson.

The next slide:

R. PURALBUM, of the Souliei section, with very large pure white flowers, and so on to fully thirty species.

Many of the areas around the forest were burnt down, and I will show you how the Rhododendron springs up after the forests have been burnt.

The next slide:

We have three species here, possibly more. One of the species is CHARTOPHYLLUM PRAECOX, and this one is RACEMOSUM, which is growing alongside it here, and is assuming its communal form with the other Rhododendrons. These forms I should say are peculiar to limestone. When the Rhododendrons as well as all the growth around is burnt down and nothing is left, the Rhododendrons spring up into growth again, as is seen in the picture.

The next slide:

The next picture shows mostly the growth of R. FORTUNEI in the same area, with the pine forest behind, and those also you can see tailing off away in the distance here.

The next slide:

Another species I found in these regions is R. RUBIGINOSUM, which attains a height of almost 30 feet. It forms a forest sheltered, or nearly always, by a pine forest.

The next slide:

You have here a particular area on the Lichiang Range, on the Eastern flank. And here on this spur which is topped by the forest also you have a huge mass of RUBIGINOSUM forming a thicket.

The next slide:

And this is typical of the same range showing views of Rhododendron-formation with Alpine meadows, and the usual conditions further in front. In here you have the Rhododendron forest, and this is a single specimen of the R. RUBIGINOSUM.

But all these areas, rich as they are, are eclipsed in number and beauty of species by the Mekong-Salwin divide from 28 degrees N., northwards to far beyond the Southern frontier of the province of Tsarong. There the peaks are higher, the sacred mountains of Doker-la and Ka-gwr-pu surpassing even the Lichiang range in altitude and rugged grandeur, and, as on the Bei-ma-Shan above 14,000 feet, there is scarcely any ligneous vegetation but Rhododendron forest, thickets, and meadows carpeted by them in unbelievable numbers: in the flowering season a riot of colour, gorgeous beyond description; mountain sides splashed with colour like a giant palette. Almost anywhere one can note a dozen species within a hundred yards. Indeed, it is not uncommon to see six or eight species growing together for mutual support.

Such species as R. SALUENENSE, with glossy foliage and large open short-tubed deep rose-purple flowers are everywhere.

The next slide:

This picture shows R. SALUENENSE as it grows there, clothing the bank.

A Member:
What is the aspect?

Mr. Forrest:
That was really taken on the Southern exposure from a high altitude.

A Member:
What is the colour of the plants growing on the shady side?

Mr. Forrest:
Probably deeper; the plants growing on the shady side are everywhere deeper in colour.

The next slide:

The next photograph gives the flowers of the R. SANGUINEUM, and also their companions. The shade of the flower seems to be very difficult to photograph. I made several photographs, but 1 had no screen, no colour screen. I think you will be able to see the flowers here, but I should explain that this photograph was taken during a frightful storm; we had waited for four days and l was afraid to wait longer, you can see in the picture how the blooms are dashed over with the rain.

The next slide:

R. SANGUINEUM, with brilliant scarlet-crimson blooms, and R. FLOCCIGERUM with pale-green foliage and cherry-scarlet flowers, and R. BRACHYANTHUM are ail as plentiful.

Many species known only from types collected in past years by Père Soulie and other members of the French Tibetan Mission, in the Upper Mekong valley, were found to be only the nuclei of groups as, for instance, R. SANGUINEUM, the following new species, allied to that, being collected.

R EUDOXUM. Flowers dark rose.

R. POTHINUM. Flowers dark crimson.

R. LEUCOPETALUM. Flowers pure white.

R. HAEMALEUM. The flowers of which are practically black-crimson, and looked at reflecting the light, it shows absolutely black, but if you hold it up to the light, you will see a shade of deep crimson.

R. CLOIOPHORUM has a bright rose flower.

R. ROSEOTINCTUM, with flowers creamy-white, margined deep rose.

R. CITRINIFLORUM, with flowers bright lemon yellow.

R. COMISTEUM. Flowers soft rose with crimson markings.

R. MICROGYNUM, flowers dull rose with deep crimson spots.

This series gives a range of colour unknown in any other section of the genus, and, as I say, it is not uncommon to see many of them flowering in company, you can imagine, more readily than I can describe, the beauty of the scene.

Most of them are scrub plants forming bushes of 1 to 3 feet, clothing the slopes and cliffs of the divide.

The next slide:

This picture is R. BRACHYANTHUM, which one could tell almost in passing through in the dark. It is odorous, the leaves have a very strong aromatic smell. The flowers are yellow.

The next slide:

This picture is R. FORRESTII. Several fine species were added to this group, mostly climbing plants or semi-prostrate, ail with flowers with the most lovely shades. Here are a few of them:-

The next slide:

R. ERASTUM, with blooms pure soft rose.
R. PORPHYROPHYLLUM, colour deep rose.
R. REPENS. Scarlet-crimson.
R. SERPENS, deep rose without markings.

I saw these species the first time I collected in 1905 (unfortunately all the specimens were lost), growing on boulders. It is found on the ground also, and on margins and faces of cliffs, and one peculiar feature about it is that it roots on the undersurface of the stems. Thus it supports itself. The flowers are almost as large as in the SANGUINEUM series, and I should like to have got a specimen showing a row of the blooms growing down the stems.

A Member:
What colour?

Mr. Forrest:
Deep crimson.

The next slide:

Another fine species with much the same habit. but of a different phylum is R. TSARONGENSE, flowers white with the tube yellow.

One of the most interesting and beautiful species is R. PROTEOIDES. The foliage is thick and leathery, each leaf with the margins rolled in upon its under surface, so that only a fine streak of the very heavy rich brown indumentum shows. The flowers are large, in compact trusses, canary-yellow, copiously marked deep crimson. It is a shrub of 1 to 2½ feet, found in the most barren situations, a gem, but of very slow growth.

The next slide:

R. ROXIEANUM, a shrub of 4 to 10 feet, with white flowers flushed rose, and very beautifully marked crimson, is another new species with close allies in R. RECURVUM and R. IXEUTICUM, both with flowers of much the same size and colouring.

The next slide:

This is a photograph of R. IXEUTICUM growing on cliff slopes in a large forest. This specimen is about 4 feet in height, and the next slide shows the flower of it.

The next slide:

New Lapponicums were found in R. RUSSATUM, with deep purple blooms, R. DRUMONIUM, with flowers deep blue, R. IMPEDITUM, with blooms a lighter shade of purple-blue, and many others.

The next slide:

A few of many large-leaved species discovered are R CORYPHAEUM, with yellow flowers. R. PRAESTANS, 30 feet, with rose-coloured flowers.

The next slide:

This is a single truss of R PRAESTANS. Most of these shrubs grow in places that are difficult to photograph. They are surrounded on all sides by plants of their own kind in Rhododendron forests, all growing on very steep slopes.

The next slide:

R. SEMNUM. A shrub of 20 feet, flowers yellow with a crimson blotch at the base.

The next slide:

The next photograph shows R. SEMNUM. It gives you an idea of the situations in which they grow, on the slopes in the open.

The next slide:

The next shows a truss of R . SEMNUM.

A Member:
It is wider at the end of the leaf?

Mr. Forrest:
Yes, it tapers away to the base.

The next slide:

R. PROTISTUM. A shrub of 20 to 30 feet, which are fleshy blooms, with creamy white-flushed rose. R. COLLETUM, with white rose shading and a crimson blotch. R. DENDROTRICHUM, 15 feet, creamy-while with crimson marking and a blotch, and also R. DRYOPHYLLUM, 20 feet, white with crimson markings.

The next slide:

Others of lesser statue, but of equal interest and beauty, found in opener situations are R. FLAVORUFUM, 4 to 10 feet, white soft rose blooms. R. LEPTOTHRIUM, which is 6 to 20 feet, with deep rose flowers. R. RUSSOTINCTUM, 5 to 8 feet, with white flowers margined rose. R. SCHIZOPEPLUM, 3 to 8 feet, rose, crimson markings. R. SETIFERUM, 9 feet, creamy-white, lined rose. R. CHAETOMALLUM, 3 to 8 feet. deep crimson. R. ECLECTEUM, 6 to 8 feet, crimson. R. FULVOIDES, R. NAKOTILTUM, and many others.

But what has been already done in that far North-West is little else than preparation fur the future, it has but whetted our appetites, and from my knowledge I believe that what has been collected is but a tithe of what is yet to come, not only of Rhododendrons, but of many other genera - *Primula, Gentiana,* etc. Members of the American Baptist Mission, stationed at Batang, one or two of whom had the opportunity of travelling in Chiamdo, whilst acting as intermediaries between the Chinese and the Tibetans, during the frontier trouble of 1916-17, informed me that the country west and north-west of Batang, as far as they penetrated was of the same character as that I have described, undulating plateau of vast extent and high altitude, enclosed by higher ranges and everywhere clothed

in Rhododendrons, great and small, to the exclusion of almost all else. How far country of that character carries west none of us can yet say, but can we doubt the existence of many other beautiful and new species.

[Applause].

A series of slides were then put on the screen showing native scenes of the places visited by the lecturer.

Professor Sir Isaac Bayley Balfour:

I rise at the request of your Chairman to give expression to our thanks to Mr. Forrest for the interesting address which he has given to us. We must all have gathered many impressions from it, and foremost of these I would put that of the enormous amount of work which Mr. Forrest has carried through, of the energy and enthusiasm and of the self-sacrifice he has displayed. You will all with me assure him that we appreciate very much what he has done. He has left his mark on the history of the Rhododendron, and that of itself must afford him great satisfaction. Another impression left by this address is that Mr. Forrest's work touches upon interesting biological problems. His has not been only the work of a collector. Of its value in that respect we have eloquent testimony in his discoveries of so vast a number of new Rhododendrons which are beautifying our gardens, whilst at the same time they add immensely to our scientific knowledge of the Plant Kingdom. I wish to direct attention to what Mr. Forrest has pointedly referred in his address - the close resemblance and yet difference between a large number of the forms of Rhododendrons, which he has found. They run in phyla of distinct lines of descent, and near as the members of each phylum are to one another they show sufficient, if minute, characters by which they can be recognised in the field. They are evidently forms developing under the many varying climatic conditions in which they are growing. We have heard from Mr. Forrest of the great altitudinal range over which these plants are distributed in Western China, and he has described the consequent differences in climatic environment to which they are subject - some under the influence of the monsoon - some further east where the atmosphere is drier - and in relation to these environmental conditions we have this multitude of forms in several phyla attaining the impress of microforms of an original type and representing what we may speak of as species in the making. Our difficulty with these at the present moment is that - that differential characters are minute, and dried specimens unfortunately do not preserve these in as sufficiently marked a form as we could desire. I have brought with me today, some of Mr. Forrest’s dried specimens by way of illustration of that to which I am referring. They belong to the Sanguineum Series, including the deep-coloured R. HAEMALEUM, and other forms of the phylum. A casual glance at the specimens shows that they are all nearly related to one another and that they differ just in those characters which we could correlate with the conditions under which they grow. In particular the water-relationship seems to be paramount, and its effect is shown in the leaf-form, and the clothing of indumentum on the leaves, particularly on the under side. I have had the benefit of Mr. Forrest's co-operation in connection with the examination of these forms, and of discussing with him their relationship to environment, and now that he is going out again, he will, I am sure, in his future work, give special attention to the conditions under which have been developed, these several forms which are so distinct to the eye, and yet have only such minute individual characters by which their definition can be established. Further information on this point will be extremely interesting, because we shall then have definite observational data upon modifications of forms, within one phylum, and growing within compass of comparatively short distances, in relation to their environment and obtain facts bearing upon the evolutionary problem of the acquirement of characters in Nature. The immediate physiological problem of which I have spoken, is as I have said, that of water-relationship - one of profound significance - and through Mr. Forrest, we have an opportunity of learning how in Nature variation of plant-form for the satisfaction of its necessity may develop in an area of exceptional land-surface and consequent atmospheric conditions. Careful study ought to give us far-reaching results.

There is another biological problem touched by Mr. Forrest's work, and to which he has most emphatically referred, namely, the relationship of these Rhododendrons to lime in the soil. It came as a surprise - which perhaps was greater than it need have been had Botanists given attention to information given by other explorers - when Mr. Forrest first told us that so many of these Rhododendrons grow on limestone, and with their roots actually in limestone - crevices or in a surface-soil of limestone-debris. The repugnance of the Rhododendron to lime is not perhaps so much an idiosyncrasy of the Rhododendron itself as of its handmaid the fungus that it enlists in its service to give it an adequate supply of nitrogen. We have for long known of such a fungus as penetrating or enveloping the roots of Rhododendrons and other plants constituting a mycorrhiza, and acting as adjuvant in nitrogen feeding. More recently it has been shown that in our common Heather the fungus penetrates the whole plant - even enters the seed, so that when the seed is sown the fungus is with the embryo to help it from the beginning. This aid-giving fungus of the mycorrhiza apparently does not like lime, and because of this repugnance probably experiments in growing these Rhododendrons on limestone in this country have failed. How then we may ask does the Rhododendron thrive in limestone in its home? Mr. Forrest has brought home specimens of some of the lime-material in which these plants grow, and its analysis will, we hope, throw some light upon the soil conditions in which the roots of these Rhododendrons find themselves, and may lead to our being able to cultivate them in soils infiltrated with lime upon the basis of soil-character. But from the biological point of view, Mr. Forrest has made what may be a most important discovery in explanation of how it comes about that these Rhododendrons flourish on their native limestone. He has brought specimens showing the indumentum of the under leaf-surface infiltrated with a fungus mycelium which penetrates the surface of the leaf after the fashion of the fungus that, penetrating the root, makes the mycorrhiza. In some cases this fungus is so abundant that it changes altogether the character of the indumentum, and becomes itself almost indumentum. The suggestion is an obvious one - that possibly the adjuvant fungi of these limestone Rhododendrons, disliking the lime-environment of the root in the soil have transferred their activities to the leaf in the air, forming what we may call a mycophyllon and function there as nitrogen suppliers to the Rhododendrons by bringing into combination the free nitrogen of the atmosphere surrounding the aerial parts of the plant. Were this so, it would carry further our concept of the mutual dependence of the green plant-world, and the non-green plant world typified in the Fungi. As Horticulturists, it might help us by teaching us primarily the crude method of infecting the Rhododendron leaf with its right fungus, and ultimately lead us to finding ways by which we could give our Rhododendrons nitrogen after the fashion in which on these limestone hills of Yunnan they get it from the atmosphere. Whatever the future may have in store for us in that particular sense, the matter is one to which I hope Mr. Forrest will give some study when he returns to Yunnan by observing the distribution of what I have called mycophyllon in relation to the limestone soil-conditions in which the Rhododendrons exhibiting it are growing, and by observing the relative amount of development of mycorrhiza and mycophyllon.

I say again that we are under a great debt of gratitude to Mr. Forrest for what he has done for us in the East and we welcome heartily the interesting story which he has given to

us of his experience, and of the plants that he has seen and collected, illustrated by these beautiful photographs, and I convey our thanks to him.

[Applause].

Sir Frederick Moore:

Mr. Chairman, I have very great pleasure in seconding the vote of thanks to Mr. Forrest for the very interesting lecture we have listened to. I think everybody will agree with me that it has been a very informative lecture and good humoured, and there has been such an inclination on his part to give information of every sort. I may, I think, distinguish it as a distinctly non-commercial lecture, and therein lies its great value to us all. We are all so accustomed to hear " I cannot inform you about this, because there is some secret in it." Mr. Forrest, however, has put his heart into it, and he has told us what he has seen, and the result is that we have had a most instructive lecture, and our thanks are due to him for his most delightful photographs. There are very few of us who have watched this exhibition on the screen, who have not learned important lessons. These photographs have been most instructive, and very effective, and there are few of us who will not carry away something from the lessons we have had. I am sure we have got great satisfaction from our attendance at this lecture this evening. It has been, as I have said, a most instructive and informative lecture of what I might term garden botany. We have not had merely dried specimens, and in that lies the great charm of the lecture. It is one of those things we do not get sufficient of, and all through the lecture, I think, it must have occurred to those who are interested in plants what a valuable aid photography is in recording a lecture on Rhododendrons, such as we have heard, taken under natural conditions. In spite of what Mr. Forrest has said with regard to limestone, it must be very different limestone to what we have here, for all our hopes have been shattered in this respect, because Mr. Forrest has said he had seen Rhododendrons growing in limestone, with their leaves flattened against the cliffs. There may be something in what Sir Bayley Balfour has said. It is a new hope, and we have now something to live for. Now we have a new hope that Mr. Forrest will bring us back Rhododendrons that will grow in the limestone. I am sure I only echo the feelings of everyone in this room when I say how very much we are indebted to the lecturer for his very informative lecture.

[Applause].

Mr. Forrest:

I am very grateful for the attention you have given me tonight, for the kind way in which you have received my photographs. I only wish I could have shown you more. I think I may probably return to the Yunnan next year, and I think then that I shall have a chance to have colour photographs, in which case I hope to have the opportunity of showing you these on my return, because the ordinary black and white prints do not show up the colour of the foliage and flower of the Rhododendron. Some are very much alike in their class in black and white, and if we can get a series of proper coloured photographs they will be of interest to the grower and scientist as well. I thank you all, and I am very grateful to all of you.

[Applause].

The thanks of the Society are due to Professor Sir I. Bayley Balfour and his staff at Edinburgh for assistance in preparing the transcript of this lecture for the press.

C. C. F.

Addendum:

Subsequent reclassifications of the genus, along with the accompanying imposition of synonymy, have wrought several changes to George Forrest's original text with regard to the individual epithets he used:

AGGLUTINATUM =	*R. x agglutinatum*
AMULORUM =	*R. mallotum*
BULLATUM =	*R. edgeworthii*
CHAETOMALLUM =	*R. haematodes* ssp. *chaetomallum*
CHARTOPHYLLUM =	*R. yunnanense* ssp. *yunnanense*
CHARTOPHYLLUM PRAECOX =	*R. yunnanense* ssp. *hormophorum*
CHRYSEUM =	*R. rupicola* ssp. *chryseum*
CITRINIFLORUM =	*R. citriniflorum* ssp. *citriniflorum*
CLOIOPHORUM =	*R. sanguineum*
COLLETUM =	*R. beesianum*
COMISTEUM =	*R. x comisteum*
CORYPHAEUM =	*R. praestans*
CROCEUM =	*R. wardii*
DELAVAYI =	*R. arboreum* ssp. *delavayi*
DENDROTRICHUM =	*R. uvariifolium*
DIACRITUM =	*R. telmateium*
DIAPREPES =	*R. decorum* ssp. *diaprepes*
DISCOLOR =	*R. fortunei ssp. discolor*
DRYOPHYLLUM =	*R. phaeochrysum*
ERILEUCUM =	*R. zaleucum*
ERIOGYNUM =	*R. elliottii* ssp. *facetum*
EUANTHUM =	*R. vernicosum*
EUDOXUM =	*R. x eudoxum*
FICTOLACTEUM =	*R. rex* ssp. *fictolacteum*

GIGANTEUM = *R. protistum*

GLANDULUM = *R. neoglandulosum* or *R. camtschaticum* ?

HAEMALEUM = *R. x haemaleum*

HORMOPHORUM = *R. yunnanense* ssp. *hormophorum*

HYPOPHAEUM = *R. yunnanense* ssp. *tatsienense*

IDONEUM = *R. telmateium*

IXEUTICUM = *R. crinigerum*

JUCUNDUM = *R. selense* ssp. *jucundum*

LASIOPODUM = *R. ciliicalyx*

LEDOIDES = *R. trichostomum*

LEUCOPETALUM = *R. sanguineum*

MACKENZIANUM = *R. moulmainense*

MEGAPHYLLUM = *R. basilicum*

MULIENSE = *R. rupicola* ssp. *chryseum*

NEMATOCALYX = *R. moulmainense*

NIPHARGUM = *R. uvariifolium*

OLEIFOLIUM = *R. virgatum*

PACHYPODUM = *R. ciliicalyx*

PLATYPHYLLUM = *R. cephalanthum* ssp. *platyphyllum*

PLEBEIUM = *R. heliolepis*

PORPHYROPHYLLUM = *R. erastum*

POTHINUM = *R. temenium*

PRAECOX = *R. yunnanense* ssp. *hormophorum*

PUBESCENS = *R. scabrifolium* ssp. *pubescens*

PURALBUM = *R. wardii*

RASILE = *R. decorum* ssp. *diaprepes*

RECURVUM = *R. roxieanum*

REPENS = *R. forrestii* Repens Group

ROSEATUM = *R. ciliicalyx*

ROSEOTINCTUM = *R. sanguineum*

RUBROLINEATUM = *R. trichocladum*

RUPICOLUM = *R. rupicola* ssp. *rupicola*

SCHIZOPEPLUM = *R. aganniphum*

SCOTTIANUM = *R. ciliicalyx*

SEMNUM = *R. praestans*

SERPENS = *R. erastum*

SPHAERANTHUM = *R. trichostomum*

STENAULUM = *R. moulmainense*

SYCNANTHUM = *R. rigidum*

THEIOCHROUM = *R. sulfureum*

TSARONGENSE = *R. primuliflorum*

YANTHINUM = *R. concinnum*

Those for his 1923 lecture article not covered above are:

ASTROCALYX = *R. wardii*

CATAPASTUM = *R. rubiginosum*

CERACEUM = *R. lukiangense*

CHAMEUNUM = *R. saluenense*

CHLORANTHUM = *R. trichocladum*

HYPOGLAUCUM = *R. argyrophyllum* ssp. *hypoglaucum*

LITIENSE = *R. wardii*

ROYLEI = *R. cinnabarinum* ssp. *cinnabarinum*

Rhododendrons of 1921 and 1922, and some trees and shrubs of Yunnan.

A lecture given by George Forrest to the members of the Rhododendron Society, during November 1923, the transcript of which was published within the 1923 edition of *The Rhododendron Society Notes* (Volume 2, Number 4).

Following the trend of the country covered during 1917-20 - an outline of which I gave in November, 1920 - exploration was continued farther north and west, westwards to and beyond the summit of the Salwin-Kiu Chiang divide, as well as northwards on that range and much farther north on the Mekong-Salwin watershed, especially the western slopes thereof in the Salwin Valley.

The Salwin-Kiu Chiang divide is the watershed of the Salwin and the Taron, the latter river being the most north-eastern affluent of the Irrawaddy, and I use its Chinese name-Kiu Chiang - as the greater part of the region explored is, nominally, under Chinese jurisdiction.

Collecting was also carried on in other areas, some of which had been partially explored in previous years, as the mountains east and north of Atuntze; the ridges east of the Bei-ma Shan; as well as the Hom-po Shan, which is a large buttress extending west from the Bei-ma Shan to the Mekong Valley. Also the highlands east of the Chungtien plateau in an attempt to link up with the Mu-li district, an object frustrated by trouble arising amongst the tribespeople towards the end of 1921.

No further work was done around Tali or Tengyueh, though there is still much virgin country in both districts, for instance, the Ghi Shan east of the Tali Lake, the heavily timbered western flank of the Tali Range itself, as well as the mountainous country east and north-west of Tengyueh.

Whilst passing through the latter district on my way east in March, 1921, a short journey was made to the frontier hills to get good flower specimens of R. GIGANTEUM, which had not been collected in 1919. We were fortunate in finding the plants in full bloom. In keeping with the prodigious growth of the species the inflorescence is of great size, individual trusses having as many as 15-20 large fleshy blooms, each 2½-3 inches in length by 1½-2 inches across, in colour deep crimson throughout, or deep rose-crimson shaded to almost white at base, with a deep crimson blotch. It is, assuredly, a magnificent species, apparently very rare for, though further search was made, only the three specimens found in 1919 were seen.

New country was also entered, roughly in a wide circle west, north and east of Mu-li, but, though collecting was successfully carried on during 1921, early in the summer of the following year it had to be abandoned owing to trouble with the lamas of Mu-li arising, not from any fault in my men - for we had been on particularly friendly terms with the head lama and his adherents since 1913 - but from other causes.

However, though rather a set-back to us as, following successful spring and early summer work, we had been looking ahead to a bountiful harvest of seed of good things, occurrences such as these may always be expected in Yunnan, and we were therefore prepared to strike out elsewhere.

Parties of men fell back on the ranges enclosing the Litang River to the south, which form the watershed between it and the Yung-ning plain or valley, whilst others pushed farther east than we had ever before penetrated, into the riot of subsidiary ranges there, all of which drain into the Litang northwards or south to the Yangtze.

At the same time in a further attempt to compensate for our losses in the north a party of collectors was sent to a portion of the eastern watershed of the Mekong, hitherto unexplored, lying west of Chienchaun, in Lat. 26° 20' to 27° 10' N. and Long. 99° 18' to 100° E.

It proved exceptionally rich, quite a number of rhododendrons new to us being found, as well as many other alpine shrubs and herbs.

Particularly interesting was the discovery of types of rhododendrons which hitherto we have only known from the higher mountains of the north-west, on the Mekong-Salwin divide in Lat. 28° N. and beyond that, such as R. PROTEOIDES, R. REPENS., R. CERACEUM and others of the Irroratum group; a form of R. FORRESTII or that species itself; R. SALUENENSE, R. CHRYSEUM and R. CORIACEUM; several known species of the Selense group and the same of the Lapponicum. All of which points to the fact that many species have a much wider distribution than we have ever thought and that more thorough exploration will be necessary before we reach definite conclusions regarding them in that respect.

Unfortunately our search in that district was begun so late in the season that the great majority of species were past flowering and so only fruiting material was secured. However, a number of my men have continued the work there this year and I have recently heard of their success and that a large collection of herbaria is on its way to us. So we hope very soon now to get on with the determination and naming of the species.

It is interesting to note that in that area, though adjacent to the Lichiang Range - distant only a matter of 50 miles in an air line - and of similar limestone formation, and though no natural barrier intervenes, yet only three species common to both were found: R. TALIENSE, R. PLEBEIUM and R. OREOTREPHES. One species found in late flower is of the Maddenii group.

Work was also continued further afield east and north of Yung-peh, that country being thoroughly ransacked during the two seasons, but the region is particularly arid during most of the year and, though xerophytic forms abound of shrubs and herbs typical in more favoured parts of Yunnan, it is not prolific in Rhododendron. The formation is mostly pure grey limestone and such, given a steady moderate rainfall, will give a richer flora than any other, but, inversely, there is none more niggardly in yield.

One fine species was secured there early in the spring of 1922 - R. CATAPASTUM of the Heliolepis series - which though for many years collected in fruit had never been seen by us in flower. It is in full bloom as early as February, a shrub of 6-12 feet, with the short very open purplish-rose or rose-pink flowers and russet-brown foliage of all of the group. However, the leaves are markedly divergent from the type, broadly ovate, even elliptic, and with such handsome foliage and its free-flowering habit I should place it as a garden plant next in value to R. PHOLIDOTUM, the most floriferous of the group!

The mountains tailing south from the Lichiang Range were also explored for the first time. Those form the highlands between the Hoching and Chienchaun Valleys. Towards their southern extremity is the “Koua-la-po”, a pass collected on by Père Delavay or his men, and also the Sung-kwei Pass.

Quite a few new forms were found, most having affinity with species of the Racemosum and Scabrifolium groups. One unexpected.

The best of them, the finest and dwarfest form of R. RACEMOSUM I know, was discovered by us on the high ridges enclosing the Sung-kwei Pass and is present in the collection under No. 19404.

At 12,000 ft. altitude whole hillsides were clothed with it, bunchy little shrubs of 6-14 inches literally smothered in blooms of the purest cerise-pink. The formation on which it flourishes is a loose rubbly limestone sparingly covered with alpine grasses and herbs. It is a form far removed from any other of the species met with in the province, and the striking uniformity of the plants leads me to believe it may retain its dwarf floriferous habit under cultivation. A plentiful supply of seed was collected.

On the way north to the Mekong Valley we crossed from that of the Yangtze by way of the Li-ti-ping Pass, about 12,000 ft. altitude, the home of many fine species already known to us as R. CHAMEUNUM, R. CHLORANTHUM, R. GLISCHRUM, R. LITIENSE, etc., and although apparently a poor flowering year for the last named, photographs were secured of it. It is a very beautiful species with open bell-like blooms, of the Souliei series, allied to R. WARDII, R. CROCEUM, and R. ASTROCALYX, and, as with these species, the flower colour is yellow with the exception of R. ASTROCALYX, the best yellow of the group.

The habitat, as may be seen, is generally on the margins of conifer forests, and most often, a northern exposure.

R. CHLORANTHUM, a deciduous species 2-3 feet in height of the Trichocladum series, was seen at its best then, early June, the flanks of some of the corries running down to the pass being masked with masses of its tender green newly opened foliage, a beautiful contrast to the clusters of semi-pendent greenish-yellow blooms. A form with very deep-coloured flowers running almost to orange was marked down, but unfortunately we failed to get seed of it.

R. GLISCHRUM was seen in quantity in dense lichen-clad conifer forests on the higher ridges enclosing the pass at about 13,000 ft., but a rather poor form of it, spreading, straggly, loosely-branched plants with flowers a washy purple-rose, not the fine form originally discovered on the Kari Pass which has a compact habit and well-formed trusses of deep plum-crimson blooms. A few specimens were noted which had pure white flowers with rich rose-crimson calyces, a striking contrast, but being of the same poor habit were not collected.

However, I merely mention those lesser fields to draw attention to the fact, that, though collecting has been prosecuted off and on for fully 30 years, the South-west, Central-west, and East of the Province have yet much to yield us.

Our real work lay in the far north-west and our finds on the great ranges of the Tibetan marches during 1917-20, astonishing as they undoubtedly proved, were totally eclipsed by the multitude of beautiful species and forms discovered by us during 1921 and 1922 on the Salwin-Kiu Chiang divide - a wealth of rhododendron beyond our wildest expectation. Plants new to us were seen and collected every other day, even to the last day of our search, giving promise of even greater riches farther north-west.

In the two years' collections some 1,300 numbers denote species of rhododendron, inclusive of course of a goodly number of duplicates in fruit. Roughly, specimens of about 5-600 species were collected, of that number 100-150 being new to previous gatherings.

The work of determining these is now being carried on steadily at Edinburgh by Professor Smith and members of his staff, but as yet I can give no names for the species though very soon descriptions of a number will be published in the “Notes” of the Botanic Garden. Thus I can only describe to you, as best I can under number, a few of the most outstanding and beautiful groups and species.

As we now find many of the recently defined groups linking up with one another the work of final determination is going to prove most difficult. This is a natural and inevitable result which for long I have expected we should have to face, as for several years now we have been gradually working northwestwards towards what appears to be the focal centre of distribution of the genus, which I now believe will finally prove to be somewhere in the Zayal, probably on the S.E. or E. flanks of the Riraphazi and Meching Gangra Ranges in approximately Lat. 29° N., Long. 97° 20' E., or on the huge mountain system running north of that which encloses a portion of the head-waters of the Salwin and forms the watershed between that river and Assam.

As happened in regard to the Sanguineum series in 1917-18, we discovered during the past two years numerous species and varieties which appear to form groups around hitherto isolated types.

For instance, R. FLOCCIGERUM, *Franch.* The type is a shrub of 3-4 ft. having pale green lanceolate foliage coated on the under surface with a loose light cinnamon-coloured indumentum and bearing lax umbels of 5-7 light cherry-crimson flowers. In this recent collection are several species akin to it in foliage, indumentum and habit, but differing from it in many minor details and most distinct in flower colour, two having clear yellow flowers margined and lined pale rose, one rose-red, and another in which the blooms are black-crimson, the same shade as seen in those of R. HAEMALEUM.

And so also with the Haematodes group. A dozen or more species were collected agreeing with the type in having the characteristic heavy brown indumentum, but differing in stature, size and shape of foliage, as well as size and colour of blooms, all shades being represented from light rose through cherry-reds to crimson and the deep blood-crimson of the type, whilst one species has creamy white and another clear yellow flowers margined rose.

We also collected several forms of that group with flowers having abnormally developed calyces of the same fleshiness and colouring as the corollas in some enlarged to two-thirds the size of those, giving a very bunchy and charming effect to the inflorescences.

The same wide range of form was seen in a number of plants of the Eclecteum series which were collected.

With the Thomsonii form of foliage, the type species, a shrub of 4-6 ft. has beautiful rose-crimson flowers.

But, under sixteen numbers of the collection we have a series of shrubs, ranging from 3 to 7 feet in height, with flowers rose-crimson, rose-magenta, deep magenta-crimson, deep self-rose, pure self-white without markings, white spotted crimson, white margined rose, pure yellow, and yellow lined and margined rose, the last almost a picotee form!

Of many new plants of the Fulvoides series collected, the colour range is even more wonderful, from pure white through shades of pink and rose to the deepest crimson, either self shades or spotted and blotched crimson, whilst quite a few of the species have pure soft yellow blooms, or yellow faintly washed rose on the exterior.

Put to the acid test by botanists it may be concluded, and in a sense perhaps justly, that all or most of those plants are merely colour forms of a few species. Yet they differ one from the other and from the type in many small ways, and in the determination of them it will have to be borne in mind that they have been collected at many widely separated points - and altitudes - over a stretch of country of fully 100 miles latitude and, assuming they are only colour forms, it is just such plants which may become the very cream of our gardens in the future.

I consider the finest of the Fulvoides group collected to be that under No. 21869. A shrub of 25 feet, it has fine large foliage with a heavy pale cocoa-coloured indumentum, and flowers a most beautiful shade of pale, yet pure, rose-pink, almost an aniline shade.

R. SINONUTTALLII and R. MEGACALYX were seen in plenty, handsome shrubs of 6-18 feet in height, both with large trumpet-shaped almost pure-white blooms, more like shrubs garlanded with lilies than aught else.

The foliage of the former species is specially pleasing - large, with a puckered dark green glistening upper surface, the under surface shining golden brown with a multitude of glands and hairs. Both are shrubs of the open conifer forests on the slopes of warm sheltered side valleys at 8-10,000 ft. or even higher.

At a slightly higher altitude another species, fairly abundant - is R. GENESTIERIANUM

much more robust and free-flowering than it shows on the hills north of Teng-yueh where first discovered. With its willow-like foliage and habit, and stiff tier-like open trusses of numerous small nodding plum-coloured blooms it is quite effective.

Quite a number of new forms of the Sanguineum series were secured, and it is curious to note one feature in which many of them differ from their congenors of the Mekong-Salwin divide, in that, instead of having the ovary heavily tomentose, it is densely glandular with not the slightest vestige of tomentum.

One or two species of the Martinianum phylum were found, all very beautiful shrubs with rounded coriaceous leaves and clear-tinted bell-like flowers; and some 6-8 distinctly new species were added to the Selense series, several of them with lovely clear yellow blooms, one of which is the beautiful R. PANTEUMORPHUM, first discovered in 1905 and since lost sight of.

Though of all rhododendrons none excel those of the Selense group in the graceful beauty of their flowers, most of the species have unfortunately a most wretched habit of growth, straggly, and branched from the base with, in many, a very scanty show of foliage. It is to be hoped that they lose that under cultivation.

Two species were added to the Forrestii group, both larger-leaved shrubs than the type, one having the ruddy-purple under surface to the foliage as in R. FORRESTII whilst the other has bright green leaves, rugose above and coated beneath with a loose glandular biscuit-coloured indumentum.

One specially fine species is that under Nos. 21693 and 20322. It is of the same section as R. ADENOPODUM, and is a shapely shrub of 9-18 feet with handsome tapered leaves broadest just below the apex, dark green above, glaucous-grey beneath, somewhat like those of R. HYPOGLAUCUM. The flowers are numerous, in rounded though not crowded trusses, borne on long pedicels, are of medium size and openly bell-shaped, creamy white in colour with brown-crimson markings.

Another remarkable species, under Nos. 21811 and 22856, is epiphytic on the tallest trees in dense forest, its leaves and pendulous grey branches tough and leathery. The flowers are axillary, 3-5 on long pedicels, colour unknown as it was collected in fruit only. It somewhat resembles R. CAMELLAEFLORUM.

A very beautiful and graceful shrub was collected under Nos. 21707 and 21778. Branched from base or almost so, it attains a height of 6-l0ft., the bark on the older stems a rich ruddy-brown similar to that seen in R. ROYLEI and peeling off in thin strips in like manner, the young wood a dull grey. Foliage rather stiff and narrowly lanceolate, light green above, entirely grey beneath with glands and papilla. The flowers, usually in terminal compact trusses of 5-8, are long tubular or narrowly funnel-shaped and bright yellow, in colour almost an orange tinged green with the calyx coloured slightly lighter.

It is of the Aureum group, in fact so nearly resembles the type R. AUREUM, *Franch*. that I doubt if we can separate them. This is a very great disappointment to me for I had thought No. 21707 something distinctly new and I feel sure that anyone having seen the type as it grows on the Tali Range - a scraggy dwarf, sparingly foliaged and with very few and comparatively small flowers - would never associate the two plants. The type and its most divergent form are samples of what wonders favourable or unfavourable climatic conditions and environment can produce in a species, and the same applies to R. CRASSUM of Tali Range.

In almost the same locality was found and collected both in flower and fruit R. TEPHROPEPLUM, a very beautiful dwarf species of the same section as the preceding, first discovered by Mr. Reginald Farrer in 1920 shortly before his death. It is a shrub of 2-3 ft. with stiff narrowly lanceolate leaves bright green above and dark ash-grey beneath, the blooms sometimes solitary, occasionally in pairs or even threes, fleshy, semi-pendulous, openly funnel-shaped, varying in shade from dark to light rose, with large fleshy coloured calyces. A charming species and a decided acquisition should it prove hardy in our climate.

Whilst one party of men struck as far north as possible on the Salwin-Kin Chiang divide another worked southwards on it in an attempt to link up with the ground explored by Mr. Farrer during August, 1920. His farthest north was just beyond the Chaw-chi Pass in Lat. 27° 25' N. My men got as far south as Lat. 27° 40' N. and as a result, quite a few of the good things present in Mr. Farrer's collection were secured by them, such as R. TEPHROPEPLUM, *Primula Agleniana, Primula Valentiniana,* but, curiously enough, so far as I know, only that one of his rhododendrons though it is on record he discovered quite a few fine species in the vicinity of the Chaw-chi Pass. There is ample evidence that in the late summer of 1920 he had reached a comparatively rich area but, most unfortunately, he did not survive to reap the harvest promised.

On the Salwin-Kiu Chiang divide during those two years, besides the wonderful collection of rhododendrons, specimens of a great number of most interesting new trees and shrubs belonging to many other genera were collected for the lower altitudes are as rich in other ligneous growth as the alps are in Rhododendron.

As on most of the mountains of the region there is a distinct conifer belt commencing roughly at 7,000-8,000 ft. with open scattered forests of true pines - which in most areas is a dry and most un-prolific zone - to 12-14,000 ft. where are seen dense and extensive forests of *Abies, Picea, Tsuga, Larix,* etc. Quite a few new species were collected and it may be of interest to some that during the autumn of 1922 a large quantity of seed of the true Abies Delavayi was gathered in the forests on the Tali Range, the locality where the species was first collected by Père Delavay. From that seed there is now a good stock of young plants at the Edinburgh Garden.

It is needless to mention the wealth of the alpine herbaceous flora - so much is now in cultivation from the region that this is understood. Every meadow above 10,000 ft. is a veritable flower garden, a riot of colour, the scheme of which changes from month to month.

It is impossible with the time at my command to mention more than just a few of the trees and shrubs which have the mountains of Yunnan as their home and the pictures may convey more even than I could tell you.

One of the finest groups for horticultural purposes is *Magnolia* and quite a few are indigenous to those mountains, whilst one or two, such as *M. conspicua* and *M. Delavayi,* are cultivated by the Chinese.

Magnolia taliensis is of the Tali Range as the name denotes, and is a shrub of 8-20 feet with handsome foliage and fragrant cream-coloured flowers.

Magnolia rostrata - first collected in 1904 on the Mekong-Salwin divide in Lat. 28° N. It is a deciduous tree of 30-80 feet with immense obovate or obcordate leaves, 18 by 20 inches or even more with prominent veining on the under surface, and fragrant flowers 5-7 inches in diameter ranging in shade from a creamy white to a pure self pink. The blooms are precocious, and I shall ever remember my first sight of a small grove of the species in flower in May, 1904, a haze of pink nearly a mile distant and quite unapproachable on account of the heavy rotting snowfields by which it was surrounded.

The species was found again in 1919 by Mr. Farrer and myself as far south as Lat. 26° N. on the N'Maikha-Salwin divide. There the flower shade varies more, in some specimens being pure white, seldom the pure pink seen in the northern habitat.

Magnolia nitida is an evergreen free-flowering shrub of 25-40 feet generally branched from base with leathery glossy dark green foliage, at a short distance giving the impression

of a gigantic laurel. The flowers are white, occasionally flushed purplish on the exterior, 3-4 inches or even more in diameter and sweetly fragrant. Considered from every point a most attractive species.

Magnolia mollicomata, like *M. rostrata,* is deciduous, a tree of 20-60 or even 80 feet in height with large rose-pink flowers and much smaller leaves densely tomentose especially in the young state.

Magnolia tsarongensis is less in stature than any of the preceding, a shrub of only 18-20 feet, the leaves densely coated with brown glistening tomentum. The flowers are comparatively small only some 2½ inches in diameter, sweetly fragrant, pendent and coloured soft creamy white.

Three of these are now in cultivation - *M. rostrata, M. nitida,* and *M. mollicomata* - though not in any quantity, in fact of *M. rostrata* only some half-dozen plants are known.

Of *Enkianthus,* a charming family of shrubs, there are quite a few species in N.W. Yunnan. During 1922 four new species were discovered and seed of all of them secured. The finest is a shrub of 6-9 feet with unusually large leaves of a light green veined and marbled deep creamy yellow, whilst the pendulous flowers an inch or more in diameter, twice the size of any other species I know, are a dull yellow shade lined soft rose. Another species, a shrub of 20 feet, very free-flowering and with small deep green leaves, has blooms a deep shade of rose lined bright soft green.

Of *Styrax* I have collected some six or eight species in various parts of the province, all of them most beautiful free-flowering shrubs, but, like *Magnolia,* it is difficult to get seed of them home in good condition. Where all members of a genus are so attractive it is difficult to pick and choose, but I should give the palm to two - *Styrax shweliensis* and *S. langkongensis.* The first attains a height of 20 feet or even more and in the best situations becomes a most symmetrical shrub, in season simply a shower of pendulous fuchsia-like creamy white fragrant blooms. It seems to thrive best in sheltered sunny situations on the margins of forests, whereas *S. langkongensis* is most at home in arid clay soils on dry hillsides amongst dwarf scrub on the margins of scattered pine forests, flowering in the late spring when there is little or no rain. It is a dwarf of 2-4 feet, the flowers pendent, large, fragrant, almost pure white, the calyces, foliage and young wood densely coated with a shining golden-brown tomentum.

The genus *Pyrus* is well represented in all woodlands from 8-12,000 ft., *Pyrus yunnanensis* one of the finest, a shapely shrub or tree from 20-40 feet with light green foliage tomentose beneath-flowering and fruiting freely and admirable for its splendid autumn colouring. The fruits, almost as large as our crabs, are then softly brilliant shaded from golden-yellow to flame-scarlet.

The genus is carried to the higher alps by members of the *Sorbus* family, many of them beautiful in foliage and fruit, such as *Sorbus Wilsoniana,* the pale green foliage of which colours so richly in autumn that each individual stands out, a torch of intense orange-scarlet.

Many of the species have deep crimson flowers, in fact most of those collected in the far north-west are of that class. *Sorbus Harroviana* is one exception to that and is also distinguished by having the largest foliage of all species. The flowers are creamy yellow, the fruits abnormally small, less than half the size of any other, being a pure dead white.

Euonymus is an important genus and many new species have been discovered in recent years, ranging from shrubs of 5-6 feet to trees of 30-40 feet, most of graceful habit and with delicate foliage. Two of the most interesting are *Euonymus ilicifolia* and *E. porphyrea,* the first a compact shrub of 6-10 feet with glossy light green ovate spinous leaves and small green flowers. It is especially attractive in open fruit, the capsules of a grey-white suede shade contrasting wonderfully with the brilliant scarlet of the seeds. *Euonymus porphyrea* is an erect delicately branched shrub of 20-25 feet with a grey-lined light green bark, reminding one of some of the Acers, narrow willow-like foliage and deep ruddy-purple pendulous flowers borne on long delicate pedicels, the capsules also deep purple, the seeds scarlet.

Cornus is represented by quite a few species all good foliaged free-flowering shrubs or trees, the well-known *C. capitata,* however, the finest of them all. In some situations this species flowers so freely that scarce a leaf shows, the masses of creamy white bracts showing up at great distances. The fruits, about the size of a small walnut, are soft strawberry-red when ripe and are edible, being for sale on most Chinese markets in the early winter.

Of *Lonicera* there are also very many species, the majority erect, not scandent, shrubs. Of those which are climbers the largest flowered is *L. Braceiana,* an evergreen species with large leathery bright green leaves and immense blooms 6-7 inches in length, fragrant and of a deep golden colour. It flowers freely and is found in only one locality, on a large lava-bed west of Tengyueh where it forms huge tangled masses. It is closely akin to *L. tragophylla.*

Lonicera Henryi is also another evergreen climber with much smaller dark green netted leaves and flowers much resembling those of our home honeysuckle but without fragrance.

One of the most charming of the non-scandent species is *Lonicera ligustrina* var. *yunnanensis* which grows by most streams on the Lichiang Range. It closely resembles *L. nitida* in its charming evergreen buxus-like glossy foliage and small green flowers, and is finest of all in fruit when the deep blue-purple berries show in striking contrast to the dark leaves.

Other erect species are *Lonicera Koehneana,* 10-18 feet, with fragrant pale yellow blooms and dull scarlet fruits; *L. Maackii* var. *podocarpa,* somewhat similar with pale yellow fruits; *L. xerocalyx,* 6-10 feet, with dull green roughly netted lanceolate leaves, orange flowers and fruits - all deciduous - and *L. adenophora,* with foliage more or less persistent and short-tubed open deep crimson flowers and large crimson fruits, of 6-15 feet.

Of *Viburnum* there are at least 230 species, a goodly number of them being Himalayan forms. *V. erosum* is abundant on the Lichiang Range forming thickets at 10-11,000 ft. The fruits are edible, in flavour resembling our red currant, but more acid. It is quite a handsome shrub with creamy yellow flowers and large scarlet-crimson berries.

Dipelta yunnanensis is also a fine shrub, of 4-8 feet and flowers profusely. The blooms are yellowish veined purple with a blotch of orange at the base.

Another shrub seen commonly in thickets by streams is *Meliosma cuneifolia*. The flowers are creamy yellow and have a fragrance similar to that of our hawthorn.

Of *Pieris* there are many species some of which have very pleasing foliage, as *P. ovalifolia,* a shrub of 10-25 feet with fragrant waxy white flowers. *P. Forrestii,* an ally of *P. formosa,* is the most floriferous of any; an evergreen, it tints well in autumn and the young shoots are also most delicately coloured. It forms dense clumps 4-7 feet in height and often twice as much through. I give a picture of another species not yet named, a shrub of 8-10 feet with bronzy-green foliage and sweet-scented white flowers.

Ligustrum lucidum is common by streams in most of the valleys in the north centre of the Province, especially those of Hoching and Lichiang, at an altitude of from 7-10,000 ft. It is quite an effective shrub of 15-30 feet with large light green shiny leaves and creamy white flowers. Flowers and fruits most freely, the berries deep plum-purple. Deciduous.

Another ornamental species, from the Lichiang Range, now in cultivation, is *Ligustrum*

ionandrum. It is an evergreen small compact small-leaved shrub 3-6 feet in height and as many through. It flowers and fruits as freely as any of the genus, the blooms white, fragrant, the fruits large deep plum-purple.

Ligustrum Delavayi is also a native of the same area, though not so abundant. A shrub of 8-12 feet, it has rather a straggly habit, but is rather fine in fruit which it produces in great quantity.

Ligustrum Coryanum is a peculiar species discovered in 1921 on the mountains west of the Tali Range. The foliage, as well as all parts of the plant, are greyish with a close short down. It is a shrub of 6 feet with white flowers.

Buddleia Forrestii is already well-known to cultivators. It is a compact shrub of 4-10 feet, greyly tomentose on all its parts, with large erect spikes of soft grey-lavender blooms which are deliciously fragrant. It is a species delighting in a limestone formation.

One of the finest dwarf shrubs of the Lichiang Range and the limestone mountains of the Chungtien plateau is *Daphne aurantiaca,* Diels. It is most often a scree or cliff plant forming cushions 18 inches in height and about 3 feet in diameter, when in flower a glowing mass of orange backed by grey limestone.

Luculia gratissima is common in the lower valleys of the west and south-west from 3,500-6,000 ft., a most charming shrub of 4-25 feet, its beauty enhanced by it flowering in winter. The blooms are pure carnation-pink and very fragrant. It is grown as an ornamental plant by the Chinese.

Species of *Prunus* are plentiful in the mixed timber-belt on all ranges, and many of them have been introduced. One of the best is confined to the Tali Valley at 6,500 ft. altitude and has been, I believe, determined as *P. serrula* forma *magnifica*. It is a shapely shrub of 20-40 feet with a ruddy birch-like bark, flowering profusely in December. The flowers are precocious, deep rose-pink.

The one I show is a form, yet undetermined, of *Prunus Puddum*. It is a native of the hills around Tengyueh, attains a height of 40 feet, flowering precociously in March. The blooms are large, clear rose-pink and fragrant. A most beautiful form, but unfortunately not perfectly hardy even in Cornwall.

Another fine shrub of the Tengyueh hills is *Thea Forrestii.* It is an evergreen shrub of 20-25 feet with pink blooms 2½-3 inches in diameter.

Of Jasmines there are quite a number on the lower-level ranges of the frontier, some of them very beautiful though few, if any of them, would prove as hardy as *Jasminum polyanthum,* Franch., nor has any other species I know so wide a range for it is seen from the frontier to as far north-east and as high an altitude as Lichiang. It is a very free-flowering shrub of 10-30 feet, the blooms deliciously fragrant, waxy white within flushed purplish on the outside. It is grown by the Chinese in many districts. At the Botanic Garden, Edinburgh, it flowers in the open, though not so freely as seen in the picture.

Another species native to the Lichiang Valley and Range is *Jasminum Beesianum*. A scandent shrub of 6-10 feet or more, it has light green foliage and strongly fragrant light crimson flowers with deep crimson tubes.

In some of the more dry valleys one of the finest shrubs is *Pyracantha crenulata*. It is 5-10 feet in height and forms thickets of great extent in some of the opener areas, flowering and fruiting prodigiously and strikingly beautiful in both conditions. There are two forms, indistinguishable in leaf or flower, but one has brilliant scarlet, the other deep orange fruits, and yet though growing in company always I have never so far found an intermediate form.

There are several species of *Deutzia* on those mountains but only one really worthy of mention - *Deutzia discolor*. It is a shrub of 5-7 feet with white flowers. There is a dwarf alpine form of it on the Mekong-Salwin divide which has purplish-pink flowers.

There are 6-10 species of *Leptodermis,* all of them rather pretty shrubs with flowers white flushed rose on the exterior, or pure lavender, some of them very evil-smelling. They are usually in thickets by streams in more or less shady situations.

Leptodermis Forrestii, a shrub of 2-4 feet found on cliffs in ravines, has the largest flowers of any I know, about 1 inch diameter, deep lavender.

The figure shows a plant of *Leptodermis glauca,* of 3-4 feet, flowers white flushed purplish-rose on the outside.

Potentilla fruticosa is a common shrub on almost every range, from 10,000 ft. to 14-15,000 ft., varying widely in colour of flower from the deepest orange-yellow at the lowest altitudes, through light orange to shades of palest yellow. The most alpine form of all which I show you having pure white blooms and ruddy calyces. This white form is in cultivation under the name *Potentilla Veitchii.*

All forms flower freely and, in height, range from such cushion plants as this in the picture to shrubs of 4-5 feet.

Of *Photinia* there are great numbers, shrubs and trees, mostly with handsome evergreen foliage, creamy white flowers and orange or red fruits. They are found in many situations, though most often in thickets or mixed forests by streams, but seldom above 10-10,500 ft. The most interesting I have seen, though perhaps the least hardy of all, is *Photinia flauidiflora,* a species with large glossy dark green rubbery leaves, almost similar in size and texture to those of *Ficus elastica.* It makes good growth in some of the warmer parts of Cornwall.

Many of the drier pine forests are carpeted with masses of the beautiful *Vaccinium fragile,* a shrub of 6-14 inches, with neat dull-green foliage and abundant heath-like blooms pale-pink in colour.

Catalpa Ducloixii is generally in cultivation over most of the province, the timber hard and durable, dull yellow in colour, being much in demand for domestic purposes. When well grown it forms a stately tree of 50-80 feet, flowering most profusely.

Populus tibetica and *lasiocarpa* are fairly common forest trees on most of the Ranges from Lat. 26° N., north and west. Both good timber trees and used to some extent by the Tibetans in the north-west.

Of *Betula,* there are several species on the higher ranges, the finest of all in form, size of foliage and bark-colour, being that named *Betula Delavayi* var. *Forrestii*. The bark is a pure silvery white.

Rhodoleia Championii - ? - or a new species akin to that, is one of the most strikingly beautiful trees of the frontier, with delicately-coloured foliage and clusters of deep crimson fuchsia-like blooms. It is generally widely branched and attains a height of 60 ft.

Bucklandia populnea is another handsome tree of the frontier belt, and is common in mixed forests from 6-9,000 ft. Full-grown specimens run to 90 ft. in height.

GEORGE FORREST.

November, 1923.

- opposite -
Tengyueh, as photographed by Forrest in December 1905.



The Journeys.

Edited by Dr. J. Macqueen Cowan.

Plant collecting is as the plant collector wishes to make it; a part-time hobby, a one-man job, a specialist search for a particular plant or group of plants, or, as George Forrest made it, an all-embracing life's work.

There have been many instances where plant collecting has been a by-product of general exploration, during which the collection of a fine new plant has largely been a matter of luck, of being at a given place at exactly the right time. There have been collectors, like Kingdon-Ward and Farrer, who have followed a lone hand and have been responsible for every specimen and every seed. There have been collectors who have done their job on factory lines, whether from inclination or from force of circumstances. Of these George Forrest was the extreme example.

Let us state at the start that Forrest chose the hard way. The lone hand can suit himself. He can choose his own route, take his own time, collect when it pleases him and rest when it pleases him. Forrest was his own planner, chief executive, works manager, foreman and office staff, as well as collector. It often meant working eighteen hours a day under conditions that were far from pleasant.

N.W. Yunnan and S.E. Tibet, where most of Forrest's collecting was done, contain one of the largest accumulations of ornamental plants in the world. These areas are also among the most peculiar in their geographical features. Through them, running more or less from north to south, flow four of the great rivers of Eastern Asia, the Mai Hka (the eastern branch of the Irrawaddy), the Salween, the Mekong and the Yangtze. In between 27° and 28° north these four rivers are squeezed into an area barely a hundred miles wide. Considering the high ranges that form the watersheds and the deep valleys through which the rivers flow, it is not surprising that communications are difficult. Even more peculiar is the fact that in many cases the upper valleys, above 12,000 ft, are comparatively undulating and easy of access once sufficient altitude has been reached, while the lower valleys are gorges with precipitous sides. Thus plant collecting in these upper valleys may be fairly straightforward, but it may take several days to get from one watershed to the next, although it may look little more than a stone's throw away.

Forrest's main collections were made in an area of approximately fifty thousand square miles. Rich though this area as a whole may be, there are large sections of the country where the plant population dwindles, as for instance in the dry Mekong Valley where conditions encourage only xerophytic plants. Much of the Yangtze Gorge round the famous bend is similar country, while north of the bend the flora of much of the Chungtien Plateau is uninteresting, largely because of the everlasting wind. As a general rule western exposures have a richer flora than eastern, as they are more under the influence of the south-west monsoon with its heavy rainfall. The river valleys and this influence of the monsoon tend to contract first class collecting areas. Many gardeners, who have heard vaguely of the glories of the plant life of Western China, image that Rhododendron forests and alpine meadows stretch on and on beyond the horizon. That is very far from being the case. Where the flora is rich owning to suitable climatic conditions, it is quite outstanding in quantity and quality, but these areas may be separated by large stretches of country that hold a very poor flora.

In his very first experience in 1905, Forrest chose the line of bulk collecting. Throughout his many years in Yunnan he was always able to recruit a suitable labour force and keep it under his control. The mountains and valleys of N.W. Yunnan, Upper Burma and S.E. Tibet for centuries have been a kind of no-man's land, a last refuge of tribes who have been driven out of more fertile areas by stronger neighbours. The consequence is an extraordinary hodgepodge of small communities, each one differing from the next in speech and often in habit. That Forrest had so little trouble with his native collectors goes a long way to prove the very great respect in which he was held throughout these hills.

It was the geographical features that partly forced him to collect through groups of native collectors. If he were to have worked single-handed, difficulties of communications would have made him examine thoroughly each season a small area of perhaps four or five hundred square miles at the most. But the terms of reference in his agreements precluded this form of plant exploration. The particular paragraph referring to this aspect of one expedition reads as follows:

"Mr Forrest will as soon as practicable make and conduct to Bhamo in Upper Burma and thence to the regions or districts next hereinafter mentioned an expedition for the purpose of collecting bulbs seeds and plants of horticultural value and also botanical specimens of plants in the regions or districts situate in the western and north-western parts of the Province of Yunnan the western parts of the Province of Szechwan (in China) and the south-eastern parts of Tibet (or such of the said regions or districts as may for the time being be accessible) and for other purposes hereinafter mentioned."

Even with the complete absence of punctuation in this legal verbiage it is clear that the syndicate for whom he collected expected him to cover as large an area as possible, a task that was quite impossible without a large staff of native collectors. This point has had to be stressed, as one of the criticisms most often laid against there bulk collector, if he can be called such, is that for most of the collecting period he remained at his temporary H.Q.



Rain Forest in Western Yunnan, showing the influence of the Monsoon.

and had little time for personal collecting. Forrest seemed to find time for everything, but in doing so he worked himself to the bone, and usually by the end of the season he was completely worn out.

One of the most interesting questions, which unfortunately may never be cleared up, is what method he used in picking at the start, and then training, his native collectors. Even during his first expedition in 1905 he wrote about "a number of well-trained and faithful Lissoo followers". As this was in the area under the influence of Roman Catholic missionaries at Atuntze, on this occasion he may have borrowed men already partially trained. But later he chose the villagers of U-lu-kaey, a tiny hamlet at the foot of the great Lichiang Range, as the source of almost all his native collectors, a hamlet so remote that no one there could have had any experience of plant collecting. Forrest must have had an infinite capacity for taking pains, as in a very short time the men were well trained and capable of travelling long distances on their own to collect specimens and seed of special plants. That they were often successful is abundantly proved from the records.

It is not easy to produce a readable account of all Forrest's journeys. Although he was a voluminous letter writer, his letters were either very personal to his family or very businesslike to J. C. Williams or other gardening friends. In the middle of the collecting season he had little time to write about anything other than his job, which took up his time to the exclusion of almost everything else.

The amount of material on which to base an actual account of all his journeys is sketchy. In addition, as he or his men often covered the same ground on several different occasions, a detailed account of all his tours would tend to become a tiresome repetition of Chinese names. Luckily, however, a very full correspondence exists of his third expedition which was also one of his most important and successful. It has been thought better, therefore, to concentrate on these years, 1912 to 1915. These will give a better idea of how he managed his collecting and of the ground that was covered than would more shadowy outlines of all his expeditions.

Forrest was thirty-one when he first went to Yunnan to collect plants for that great character, A. K. Bulley, who was later to influence Reginald Farrer to collect in Kansu in N.W. China. During the years 1904 to 1906 Forrest covered a great deal of ground, collecting many specimens but little seed.

He started too late in the year and did not reach Tali until August 1904. From there he made a quick reconnaissance to the Lichiang Range, up the Yangtze Valley and crossed over the river to the Mekong by the Kari Pass, about 28° 10'. He came back in the middle of winter across the Chungtien Plateau down to Tali, a fierce journey over one of the most windswept areas in Yunnan.

In 1905 he retraced his steps to the Mekong. It was at Tseku on the Mekong that he was attacked by Tibetans and barely escaped with his life:

"In the summer of 1905 I found myself collecting in these mountains, my headquarters being with the hospitable and venerable chief of the Tseku mission, Père Dubernard… The region was unsettled, the Lama world around had been disturbed by the invasion of Lhasa in 1904 by Colonel Younghusband's expedition, and still more rudely shocked by the attempt of the Chinese to establish themselves at Batang, a small town on the great road from Szechwan to Lhasa. These circumstances led to a rebellion of the Batang Lamas, and the murder, with all his followers, of a high Chinese official at Batang in March of that year. At the same time the French missionaries stationed there, with all their converts, were killed, and the mission stations destroyed.

"The trouble was not long in spreading south to Atuntze, a small Chinese-Tibetan trading station, situated on a terrace high above the left or east bank of the Mekong, and only two and a half days' journey from Tseku, which nestled under the cliffs close to the right bank of the Mekong, in latitude 28° north. Chinese officials and troops were sent to Atuntze in April to restore order, but it is needless to add they only made confusion worse confounded, and in a few days they were completely hemmed in. Rumours and counter-rumours poured into the mission at Tseku day by day, adding to the difficulty of our situation, and the terror of the native Christians. It soon became clear that the Lamas meant business and were determined to pay off old scores of jealousy against the missionaries, who had endeavoured for so many years, not without success, to deliver the people from the moral and material chains of Lamaism.

"Even our friends among the Tibetans fell away from us or proved false. The mission house was indefensible, and, if defensible, we had no one to defend it save two aged French priests and myself. Therefore, when on the evening of July 19 the news came that the town of Atuntze had fallen, that the Chinese troops had been wiped out almost to a man, and that the Lamaseries were all up and concentrating their forces to attack Tseku, immediate flight became necessary.

"The rising moon that night saw us making our way by a narrow and dangerous track along the right bank of the Mekong, the two Fathers on their mules and myself and the little band of native Christians on foot; on our left roared the Mekong in furious flood, on our right rose the great Mekong-Salween dividing range. We hoped to reach the village of Yetche, 30 miles to the south on the left bank of the river, where there was a friendly chief and some Chinese troops; but, unfortunately, as in the dark we passed the Lamasery of Patong, owing to a noise made by some of our party, we were detected, and a shrill signal whistle was sent across the river to warn the countryside of our escape. Early the next morning, at the next village, we were told that the enemy, by executing a forced march, had crossed the river to the south, and had raised the people therein thus cutting off our retreat. The local headman, a drunken and treacherous rascal, found many excuses to delay our flight, and thus we lost more valuable time. Eventually we got away from him, and proceeding early in the forenoon we reached a height to the south of the village. From this point we had a clear and extensive view looking to the north, and saw a great column of smoke rising in the still morning air over the site of Tseku,. Then our last hope of escape left us and we knew the enemy was hot on our track… To the north I had a clear view of the crest of the ridge we had descended, and had not long to wait ere my expectations were realised. Suddenly there appeared a large number of armed men running at full speed in Indian file along the path we had just traversed. I gave the alarm at once and immediately all was confusion, our followers scattering in every direction. Père Bourdonnec became completely panic-stricken, made his way across the stream by a fallen tree, and despite my efforts to stop him, rushed blindly through the dense forest which clothed the southern face of the valley. However, escape in that direction I was sure would be impossible, as our delay had given the enemy time to mature their plans and close in on us; the Père had not covered a couple of hundred yards ere he was riddled with poisoned arrows and fell, the Tibetans immediately rushing in and finishing him off with their huge doubled-handed swords. Our little band, numbering about 80, were picked off one by one, or captured, only 14 escaping. Of my own 17 collectors and servants only one escaped.

- overleaf left -

George Forrest about to set off from Tali in the spring of 1905,
the photograph once again taken outside the Moongate of the China Inland Mission.
Regarding the pony, he wrote: 'It is piebald, biscuit and white… a tricky little devil… but with some fun in it'.

- overleaf right -

George Forrest's native collectors, photographed in northwestern Yunnan during the 1904/1906 expedition,
with Lao Chao, his head man, on the left.





"The valley in which we were surrounded was a rift in the hills some four miles long by one and a half broad, closed to the east by the Mekong, and to the west by the dividing range, while to the north and south were high ridges occupied by the enemy, and thickly clothed with pine and mixed forests. When I saw all was lost I fled east down a breakneck path, in places formed along the faces of beetling cliffs by rude brackets of wood and slippery logs.

"On I went down towards the main river, only to find myself, at one of the sharpest turns, confronted by a band of hostile and well-armed Tibetans, who had been stationed there to block the passage. They at once gave chase. For a fraction of time I hesitated; being armed with a Winchester repeating rifle, twelve shots, a heavy revolver and two belts of cartridges, I could easily have made a stand, but I feared being unable to clear a passage before those whom I knew to be behind me arrived on the scene. Therefore I turned back, and after a desperate run, succeeded in covering my tracks by leaping off the path whenever I rounded the corner. I fell into dense jungle, through which I rolled down a steep slope for a distance of two hundred feet before stopping, tearing my clothes to ribbons, and bruising myself most horribly in the process. I then got behind a convenient boulder and made every preparation for a stand should they succeed in discovering my ruse, which I never doubted but they would. Fortunately, however, they did not find me, and, presuming I had continued my course up the valley, rushed past my hiding place. There I lay till night fell, when I attempted to escape south, but after toiling up 3,000 ft. of rock and through forest and jungle, I found a cordon of Lamas with watch-fires and Tibetan mastiffs, which precluded all hopes of escape in that direction. As daylight approached I had to return to my hiding place by the stream. The following eight days and nights were hopeless repetitions of the first; the days were spent in hiding in the most convenient spot I could find at dawn, the nights in trying to elude the watchfulness of my enemies and get away south.

"For that time all the food I had consisted of two dozen ears of wheat and a handful of parched peas, which I providentially found where they had been dropped by a fugitive or some of the Lamas. On the second day I was forced to discard my boots to avoid leaving distinctive trails, burying them in the bed of the stream. Another day I had to wade waist deep for a full mile upstream to evade a party who were close on my heels. Once a few of them came on me suddenly and I was shot at, two of the poisoned arrows passing through my hat. Another time my hiding place was discovered by a Tibetan woman, one of many who had been sent out to track me down. Once as I lay asleep under a log in the bed of the stream I was awakened by the sound of visitors, and a party of thirty Lamas in full war paint crossed the stream a few yards above me.

"At the end of eight days I had ceased to care whether I lived or died; my feet swollen out of all shape, my hands and face torn with thorns, and my whole person caked with mire. I knew the end was near and determined to make one more bid for life. In the valley there happened to be two small villages of four to six huts in each, peopled by Lissus, a sub-tribe of Tibetans. I decided on holding up one of these to force the inhabitants to give me food. This plan I carried out on the evening of the ninth day. Fortunately, instead of opposing me, the people proved friendly. Their one and only food consists of parched barley, or wheat coarsely ground; it is called 'tsamba'. This they offered me, and having little self-control after such a long starve, I ate it ravenously, in fact to such an extent that I almost died of the effects.

"The headman of the village proved one of the best friends I ever had, and at once commenced making arrangements to smuggle me out of the country. After four days spent in restful hiding, we descended the valley until we reached its junction with the Mekong. Here we were met by the headman of a village situated there. He informed us that though the majority of the rebels had returned north, there were still many bands scouring the countryside in search of me; in fact, one had spent the previous night in his village. He suggested we should go into hiding until after sunset, when he would send out some of the native hunters to escort us to a farmhouse a few miles distant where we could spend the night in peace. Then on the following day with guides he would send me, I was to ascend westwards almost to the summit of the dividing range, and then striking south we should skirt the troubled regions and thus reach safety.

"This plan we eventually carried out, but the misery of it all is beyond my powers of description. It was the middle of the rainy season, and I soon found myself in the thick of the worst downpour Yunnan had known for a generation. Up and up we climbed, struggling through cane-brakes, cutting our way through miles of Rhododendrons, trampling over alps literally clothed with Primulas, Gentians, Saxifrages, Lilies, etc., till we reached the snowfields on the backbone of the range, at an elevation of from 17,000 to 18,000 ft. We had no covering at night; no food but a few mouthfuls of parched barely, and the rain and sleet fell in such deluges that to light a fire was impossible. On reaching the summit we turned south, travelling in that direction for six days, over glaciers, snow and ice, and tip-tiled, jagged, limestone strata, which tore my feet to ribbons. On reaching this point we hoped we had got beyond the danger zone, and commenced our descent eastwards towards the Mekong.



The south-west face of the Lichiang peak.

- *opposite* -
The Tali Range, looking north-west from the city.



"Down, down we went over sharp jagged rocks and through Bamboo brakes, until we reached the inhabited zone at about 9,000 ft. Here, to put the finishing touch to my misery, I seriously hurt one of my feet. Round most of the villages the inhabitants are in the habit of placing in the paths around their maize fields what they name 'panji'. These are sharpened and fire-hardened pieces of Bamboo of 12 to 18 ins. in length. They are buried in the ground fully three-quarters of their length, the sharpened end upwards, and covered loosely with soil or leaves. In approaching one of the villages by an exceptionally muddy path, I unfortunately stepped on one of these 'panji'. The spike, fully an inch in breadth, passed between the bones of my foot and protruded a couple of inches from the upper surface. I suffered excruciating agony for many days, and it was months before the wound healed completely.

"Finally we arrived on the right bank of the Mekong opposite the large village of Yetche, whose chief was a friend of mine. My troubles were almost over. This excellent man came across the river at great risk to himself, bringing clean cotton clothes for me, besides a large quantity of food, such as pork, eggs, chicken and cakes. At last I got what I required even more than those, a change of clothing, a good wash and a night's rest.

"As bands of Lamas were still prowling about near Yetche, disguised as a Tibetan and accompanied by my faithful guides, I continued my course down the right bank of the river, till four days later I arrived opposite the little Chinese-Tibetan township of Hsiaoweisi, where Chinese troops were stationed. On reaching the town I found another missionary, Père Monbeig, who had also escaped from a station in the west. He and the Chinese officials welcomed me as one returned from the dead. A few days later he and I accompanied by an armed escort commenced our journey south to the nearest city, Tali, which we reached in safety in 19 days.

"Although escaping with my life, I lost everything I possessed, all my camp equipment, ammunition and guns, cameras, stores. In fact, my all with the exception of the rags I stood in, my rifle, revolver and two belts of cartridges."

As if he had not had enough, Forrest returned to Tengyueh and started off again on October 11th 1905 with the British Consul, G. L. Litton, up the Salween Valley. This was pure exploration, as up to that time no white man had travelled far up the valley; and of course, it was not the time of year for plant collecting. Unfortunately, Litton fell ill in that unhealthy valley and died shortly after their return to Tengyueh from blackwater fever. Forrest wrote an account of this trip for the *Geographical Journal,* more than usually interesting, as it shows what an acute observer he was of his fellow human beings, when he could spare the time away from his plants. But most interesting of all are his descriptions of the country. He and Litton left the Salween Valley and climbed a pass on the Salween-Mekong Divide:

"This part of the upper Mekong differs widely from the Salween Valley in the same latitude. Instead of sharp crags and cliffs of limestone, dense semi-tropical jungles, extensive forests, and wild Lissus with their poisoned arrows, we viewed a peaceful scene of wide, bare, cultivated slopes of clay or disintegrated sandstone, shelving down in terraces to the river below. The basin of the Mekong at this point is twice the breadth of the Salween though the altitude of the latter river is a thousand feet less. The people, like the scenery, are altogether less wild than on the Salween.

"We ascended a spur, through oak scrub and over grassy slopes, rising in the day's march from 7,400 ft. to 10,500 ft. on the slope towards the Salween divide. At this altitude there was a superb view of all the great ranges of N.W. Yunnan east of the Mekong, from Tali-fu to the borders of Tibet.



- *opposite* -
The natural rock garden of a gorge in Northern Yunnan.

"Most of these panoramas are dominated by the glittering snow-mountain of Lichiang; and from the altitude we had reached Mr. Litton saw for the first time the peak which I had described to him after my return from my journey down the Chungtien Plateau. He estimated the height as being very near to what I put it down as, 22,000 ft.

"After an intensely cold night on the mountainside at 10,500 ft. we proceeded on November 19th up the pass, which for the first time was traversed by European feet. The path after topping a spur lay through pine woods deep in snow, and then over a frozen black marsh surrounded by tall sombrero firs, whose dark green foliage stood out against the snowy slopes of the pass and the deep blue sky above. Then an ascent through Rhododendron scrub, and over a bare down, where we passed a number of wild Lissu going down to the Mekong to barter for salt, brought us to the summit of the pass at 12,300 ft.

"Here a surprise awaited us, for the view to the west was perfectly clear, and the whole of the Salween-Irrawaddy Divide was spread out before us. From a little below the pass this range could be followed to the north as far as the eye could reach, until at a distance of about a hundred miles from where we stood, and in approximate latitude 28° 30' N. it was merged in a huge range of dazzling snow-peaks, trending westwards. This range is doubtless the east source of the Irrawaddy and forms the divide between it and the Zayal, the Brahmaputra system.

"The upper slopes of the Salween-Irrawaddy Divide which we saw spread out before us resemble a vast wall. The trend of this range is most regular from north to south, and there are no very conspicuous peaks. The average height of the summits in this latitude, 26° 55' N., would be probably 12,500 to 13,000 ft. There was practically no snow on it in November.

"Below the wall-like ridge which forms the backbone of the range, limestone spurs, crags and precipices in bewildering confusion fall down to the Salween. It was easy to see why the upper slopes of the range are uninhabited, and why this mountain barrier is an ethnographical boundary between the Lissu and the Kachin races."

This gives an almost perfect word picture of the great ranges and rivers of N.W. Yunnan. They were lucky to have seen such a large area so clearly, even at the beginning of winter.

What he had seen in 1905 of the Lichiang Range proved so inviting that in March 1906 he started off for Li-chiang-fu and made his headquarters for the season two days north of the town on the eastern flank of the huge snow range. He was able to spend a month or two in searching the southern portion of the easter flank before his health gave way as a result of the feverish conditions of the Salween trip of the year before. He became seriously ill and was lucky to get back to Tali-fu and the skill of Dr. Clark of the China Inland Mission. It says a great deal for the mutual trust already instilled between Forrest and his native collectors in such a short period that his collections continued to grow while he was on his sick-bed:

"For some days previously I had received warnings from my symptoms of what to expect, and had accordingly made arrangements in the event of sudden illness for my best man to continue the work and secure the season's harvest. I may mention that my expectations of them were more than realised. They worked excellently, only a few plants marked down being lost, and I had much reason to be grateful to them. A constant service of runners was bringing in spoil from my northern base nine days from Tali, and eventually I had the satisfaction of closing the season and the first three years' expedition most successfully."

In 1910 he returned to his base on the Lichiang Range. This was the expedition on which, more than any other, he confined his energies to exploring this magnificent hunting ground, particularly the northern half of the east flank and part of the west side. He returned home in 1911.

Forrest's third expedition, from February 1912 to March 1915, is almost the only one which can be worked out in detail. This is largely owing to the existence of a full and detailed series of letters from Forrest to John Charles Williams of Caerhays Castle in Cornwall, who financed almost the whole of these three years of intensive exploration. It is from these letters that we can learn how he utilised his man-power, fought with the weather a continuous and often losing battle, overcame the enormous distances that had to be covered on foot and juggled with the short flowering period and seed harvest so as to make the greatest use of his opportunities.

Actually at the start he was more than a little doubtful about the possibility of getting to his hunting grounds at all. China as a whole was in a state of chaos, and it was almost impossible to find out at home what exactly were the conditions in Yunnan. As a result Forrest chose Tengyueh, the nearest town to the Burma frontier of any importance, as his immediate base with a view to collecting on the Mai Hka-Salween and Salween-Shweli Divides, both within the moderately easy reach of Tengyueh and both with a more semi-tropical and rain-forest type of vegetation than he had previously collected.



Seed drying at the 'Snow Mountain Village' north of Lichiang.

On his arrival at Tengyueh in the middle of May he found conditions almost as bad as elsewhere in the country. He wrote:

"Since before October of last year the city has been in the hands of the revolutionary troops, a band of undisciplined ruffians purely and simply out for loot, and commanded, or led I should say, by two blackguards the principal of whom, Li-kin-yen by name, is hotly, I understand, to fill the place of Viceroy of the province. You will understand what all this may mean to us later when I tell you that this chap, previously to the revolution, was a common coolie. On the breaking out of the revolution the general then in command of the troops, with many of his officers, was brutally murdered at the instigation of this creature who then took command and turned the place into a perfect shambles. Squeezing and beheading was the order of the day, and is still, though in a lesser degree. In all fully 250 have been beheaded, not so bad out of a population of 5,000 to 6,000, and all of them without the slightest vestige of a trial. The last took place only a few days since.

"Affairs have reached such a pass that now the bulk of the populace realise that they are now ten times worse off than before the revolution, and there is now quite a revulsion of feeling in favour of the restoration of the Manchus. This obtains, not only here, but over the whole of the province.

"It is difficult to say what even a month may bring forth. Living in China just now is like camping alongside an active volcano. Yungchang-fu, about four days on the Tali road from here, has been practically burned out by the rebels and a very large number of the people killed and executed.

"To complicate matters, those in power now have issued a new republican dollar, more tin than silver, and have forced it on the people, at the same time calling in all the block silver, which was up to that date the currency of the province. As a result of this I find the greatest difficulty in getting any of the merchants to accept my cheques, and thus am hard put to it to get sufficient money for my present wants. Also the price of food is rapidly rising, and through this some of my men are demanding higher wages, though at present I am paying more than double what I did in 1906. Then again these few merchants who are willing to cash me cheques charge most exorbitant commission, giving me only rupee exchange and paying me in dollars."

Notwithstanding local conditions Forrest was able to collect freely round Tengyueh. Within a few weeks he had 35 drying presses going and on July 12th he was able to write:

"Though the rains have been so heavy during the past fortnight that I have been out only on a few days, still I have got some more good things and the collection is steadily increasing at about the rate of 150 specimens a week. I have now some 1,100 specimens in hand, 850 of which are dried, numbered, written up and packed."

Meanwhile the Yunnanese pot was beginning to boil again. The news from N.W. Yunnan was growing worse almost daily. He heard from M. Peronne, the great collector of musk, at Atuntze that his chances of getting there that season and using it as one of his main collecting centres had completely disappeared. The local commander of the Chinese troops had unwisely beheaded ten Lamas in a local Lamaserie. This, of course, had aroused the Tibetans and the neighbouring hill tribes like a swarm of bees.

Then at the end of August the storm broke at Tengyueh itself:

"I am exceedingly sorry to have to inform you that serious trouble has arisen near here and I may have to get out at any moment. You can understand how sick I feel. A very large number of Shans and many of the worst types of the disbanded soldiery are congregating two days west of here on the Bhamo road, under the leadership of Tussoo of Kan-ngai. Their intention is to attack, loot and burn Tengyueh. They only await the decision of the local soldiers, some 700 strong, as to their joining them before they advance. The armoury of the city has already been broken open, the officials are in a helpless panic, and many people are already fleeing.

"All this is just my usual luck. I think I told you before I was a Jonah. Just at the most critical period of the season. I have already over a hundred pounds of seed and fully 1,700 specimens in my dried collection; of these fully 1,400 are dried and packed, and I am taking the risk of sending them down to Bhamo disguised as Chinese export goods.

"My men are only a few days in from the Shweli-Salween Divide at 11,000 ft. and have brought in some fine things, amongst them many Rhododendrons."

Early in September the storm broke:

"I can realise how disgusted and disappointed you would be to receive the news of my retiral from Tengyueh, but you cannot be more so than I am. I presume you are thirsting for details as to what has really taken place. About three weeks before I left the situation became critical and consul Smith warned me that it would be advisable to be prepared to leave for Burma in case a crisis was reached. In the end he told me that if I did not go he would accept no further responsibility if I sustained any loss.



Packing cases ready for despatch to J. C. Williams at Caerhays Castle, Cornwall.

- opposite -

Forrest's Mossoo collecting team with stacks of drying papers roped to wooden saddles ready for mule transport. Lao Chao is seen here, fifth from the right.

"Even then I hung on.

"Things went from bad to worse. We were expecting a rising every evening and were kept in continual suspense. I couldn't go out collecting myself, nor could my men with any degree of safety. At last Smith insisted on my going. For my own safety I was not in the least afraid. I know the country so well that I could easily have made my escape, travelling by night and hiding during the day; but the thought of losing the results of my work was too much for me.

"The danger was a rising which was being organised by these two creatures, Li-kin-yuen and Chang-men-kuan, who engineered the Tengyueh revolution of last year. They are as proper a pair of cowardly blackguards as one could meet in a day's march in any country. Both are ultra anti-foreign. As in other provinces, in Yunnan most of the soldiers of the so-called new army have been disbanded, and each unit has been allowed to retain its full kit, including arms and ammunition, this probably in lieu of arrears of pay, held up by local officials.

"Those two braves, taking advantage of the disturbed conditions of the country, had for some months been gathering together those soldiers and as many rowdy characters as possible. Trade was practically at a standstill between Bhamo and Tengyueh. The route was closed, and I had to go to Myitkyina by the Sansi gorge. Two nights before I left the armoury was broken into and numbers of rifles and quantities of ammunition stolen.

"I was told to get out, so had to. I left on the morning on Sept. 4th, beginning my journey in torrents of rain. I was walking, had twelve mules for my kit, tents, etc., and my cases of seeds and plants required over thirty coolies. Besides these I brought some of my collectors with me on the off chance that I might be able to return later. We struck north west over the volcanic hills. From Tengyueh to Myitkyina in normal weather is an eight day journey, roughly 130 miles, the route passing over a range of some 10,000 ft. which forms the watershed between the Taping and Irrawaddy basins.

"The weather was execrable. As I told you we had continuous rain for eight of the twelve long weary days the journey took us. To make matters worse I had foolishly undertaken to pilot one of the Customs men and his wife, a Cantonese woman, down the road in safety. They had been ordered out because of the wife. They had to use my furniture and tents and part of my stores. They left Tengyueh with seventeen rupees in their pockets and had one boy with them, their cook, who in turn had his wife and three youngsters.

"In leaving Tengyueh we had great difficulty in securing mules and coolies: the lot I had were the most miserable I ever travelled with and the price the highest. The coolies were opium smokers to a man. One glance into the tent I gave them to use would have shown the door closed, forty pipes going and an atmosphere you could have cut with a microtome. At times it was only by sheer force of will and a display of language which astonished even myself that I kept the gang on the move.

"The journey was a nightmare. We had five large mountain streams to cross, at all of which the mules had to be towed or swam across, whilst the loads were broken up and carried over. Rain poured in solid sheets, the valleys were filled and the mountains swathed in heavy mists, and the streams continually rose. The last we crossed was about 150 ft. in breadth, just a streak of boiling beer-coloured foam with outcrops of huge boulders, the largest of these being in the centre. This was used as the central support for our bridge which consisted of eight bamboos lashed tightly together, padded with grass and foliage to prevent slipping, and carrying a slight single bamboo to hold on with. I was the last to cross, and when I did so the centre was almost submerged and the whole structure trembling. A few minutes after our crossing the whole was washed away."



George Forrest's photograph of a bamboo, grass and liana bridge across a tributary of the Salween River.

- opposite -
Forrest and his canine companion out in the field on his third expedition.

At Sadon he was welcomed by the post commandant with open arms. After resting a few days he moved on to Myitkyina, the rail-head in Upper Burma.

While resting at Bhamo, the frontier town to which he had gone from Myitkyina, he wrote a letter home giving the only clear account that is known to exist of his exact methods of working. This is particularly instructive in showing the large amount of detail required to run a successful plant expedition:

"I shall have to give you an idea of my system of working. When collecting I take a rough description of the species, height of plants, altitude, associates, nature of the soil, surroundings, and anything else noteworthy. These are numbered with the field numbers, and compose the material of my field book, and that of the labels. Then, when the species is completely dried, before being written up and put away, if it be a species of which I wish seed, I lay aside a sufficiently large specimen for a full description; a numbered label is attached to this tallying with that in the field book, where the species is also marked down as desirable.

"From these specimens, when seed has been collected, a technical description is drawn up, such as those I sent to you from Tengyueh. Also the seeds when brought in are numbered, so no mistake can arise later. These specimens serve a double purpose; when sending my men out I generally break up the party considerable, and, as all of them have not so retentive memories as myself and the chief collector, who can give me points at times, I used to take out the specimens for the day's collecting and freshen them up as to the localities of the plants."

By the middle of November Western Yunnan had settled down sufficiently for Forrest to return to Tengyueh. By the end of the month the seed harvest was in full swing, and he writes calmly about mule-loads of seeds having been brought back from the Shweli-Salween Divide by his men.

His account of one of the Rhododendrons collected on this occasion seems to indicate his first meeting with *R. sinogrande:*

"One seems to be a magnificent species. The capsules are 2-2½ inches long, slightly curved, and as thick as one's thumb. The foliage runs from one foot by six inches to as much as two feet by ten inches, dark green and glossy on the upper surface, ash coloured beneath. Very handsome tree of 20-30 ft. More later."

By the end of the year he was back again in Rangoon, as all activity in the high country was completely at a standstill until April or May at the earliest. By February 1913, however, his men started collecting again in the warmer zones like the country round Tengyueh and the Shweli-Salween Divide:

"I have just heard that three more of my old Mossoo collectors have come down from Li-chiang-fu, and that some others are on their way. My chief collector, Lao Chao, has apparently lost no time. He is a jewel. I shall give him a big present when I am finished with him. I have now seven men at Tengyueh, all busy I hear, so I expect heaps of stuff on my return. With the others coming down I should have in all twelve men working this season."

Much of this correspondence between Forrest and J. C. Williams consisted of question and answer, some of the latter being an amplification of his field notes. It is extraordinary how close the two appeared to be. Considering the time taken for letters to go to and fro, the impression is often given that they are continuing a conversation left off an hour or so before. It does not, however, make it easy to lay one's finger on the exact plant they are talking about, as in many cases neither the specific name nor the field number is given.

At the beginning of April Forrest was back in Bhamo. Here he found four of his men with the material collected during his absence in Burma. This consisted of 190 species with seed of 17. By the 19th of April he was in Tengyueh where he picked up another batch of 120 all pressed and dried with another 150 in process of drying.

He found that desultory fighting was still going on between the Chinese and Tibetans in the Upper Mekong and Yangtze Valleys, but no difficulties were placed in the way of his return to the north so long as he kept away from the fighting areas.

As 1913 was a typical collecting year it is interesting to see how he disposed of his forces. He left two men at Tengyueh under the guidance of Mr. Howell, the Commissioner of Customs, to fill in the blanks left in that neighbourhood. He left another two men at Yangpi to work the western flank of the Tali Range. These were joined later by a further two to work the eastern flank. Three or four men went a little later when the high ground was beginning to waken to work the ranges to the north-west of Chungtien. He himself with six or eight men was left to get on with the main exploration of his favourite Lichiang Range. This they continued without a break throughout the entire collecting season.

From Tali-fu he wrote:



"I had the usual rough journey up, and, to add to the natural difficulties of the route, I experienced intense heat all the way, and for the first five days heavy thunderstorms. I had the usual downpour in the Salween Valley. What a place that is, with heat and moisture just like a regular Turkish bath. The formation is mostly volcanic clay, and now, as the rains are just breaking, the roads become like toasted cheese. Though I have travelled the road many times now, some eight or nine, never yet have I escaped rain in the Salween Valley. However I managed to get my whole troop through without a touch of fever.

There had been some frontier trouble at P'ienma a little while before. In this same letter Forrest shows how repercussions will affect even an unoffending plant collector:

"I am sorry to say I had a little trouble coming up this time, through no fault of my own. While climbing the eastern slope of the Mekong Valley, a very narrow, and a most torturous and abrupt path, I met forty soldiers, a detachment from Yunnan-fu on their way to Tengyueh. The soldiers were most courteous, halting until I got past them. I was much ahead of my caravan, and had five of my collectors with me, two loaded with collecting boards and papers, one with camera equipment, another with rifle, etc., and one to attend my pony. After passing the soldiers, some distance further up the path, I met the officer in command engaged in making entries in a note book. I had scarcely gone another two hundred yards when one of my men called my attention to this officer and his orderly who were running up the path after us. I naturally halted to see what he wanted (he was a squat Japanese). We bowed and greeted one another, then without more palaver he commenced circling round my men examining all they carried. Eventually, I got rather incensed and asked him what he wanted. He replied in rather a sarcastic tone that he simply wanted to see what my men's loads consisted of. I got mad at that, my temper isn't the sweetest at the best of times, and turning my back on him I gave the order to march. We left him standing in the centre of the roadway. When my mules turned up, I was told that this same officer had stopped my caravan and insisted on examining some of the loads. On one of my boys protesting he was beaten by one of the soldiers, and on still further protesting the soldiers threatened to shoot him.

"On my arrival at Chu-tong in the Yungping Valley the local official sent his card round and requested to see my passport. I gave it to him and it was returned the next morning with the information that as it was not in order I could not proceed. He, the official, must have been a green hand and apparently fresh to the district, and not knowing me took me for a greener. I requested him kindly to point out in what the passport was lacking. He replied that though the passport bore the consulate seal, yet that of the Tengyueh Taotai was lacking. I know the Taotai's seal almost as well as I do my own. Of course the whole thing was pure bluff, and the official was acting at the instigation of the officer, who had probably wired from Yungchang to the Yungping official to stop me. In reply I sent over to the Yamen pointing out that the seal of the Taotai was alongside that of the British Consulate, that I was going on, if they cared they could stop me by force, and that I was also immediately wiring to our consul at Tengyueh. I did so and met with no opposition. In fact, I had scarcely got outside the village when his Number One man came tearing along with his card and apologies, and begged me to accept a guard of two of his soldiers. On my arrival here I had a reply from consul Smith saying that my passport was in perfect order, that he had made representations to the Taotai, and that I should be troubled no further."

He went straight through Tali and Li-chiang-fu to his base, the village of U-lu-kaey:

"This will be my base for the season, 15 miles north of the city, and from here I shall make journeys north, east and west. I have rented a house. I live in the garret, and, as the accommodation is somewhat cramped, am continuously banging my head on the beams, but that is a detail. I shall have enough canvas life, and I really must have some place as a base. This village is the home of my collectors, and consists of some ninety houses or huts. The people are all Mossoo. The name of the village means 'Snow Mountain Village'. As its name implies it is situated at the southern base of the main range, just below the main peak which towers some 9-10,000 ft. above us."



George Forrest's garret accommodation in Snow Mountain Village.
Note the bags of seeds hanging from the low beams and the camp bed (foreground right).

That year the rains did not break until the middle of June. This melted the snow on the lower snowfields and brought on all the plants with a rush. The rains also produced the flies. He ended one of his letters:

"We are afflicted with one of the plagues of Egypt just now - flies! Oh! If you only saw them. One has to wave one's arm in the air in case of breathing them! Eating is really a task!"

In one of his July letters he ended with a P.S. This is given in full, not for the particular garden interest of the plants collected, but to show the colossal wealth of the flora of such a district, for the plants in this list were collected by three men in only two and a half days:

"I cannot refrain from adding a P.S. to my letter to give you a bit of real good news, even though it should keep you on tenterhooks till you hear further from me. Some of my men have just come in from the north, three days journey, and have brought in a fine lot of stuff.

"First of interest to you are eight new Rhododendrons and three more I am doubtful of. One is a fine shrub of 14-20 ft., with handsome foliage, after the *decorum* or *lucidum* type - [the latter now *R. vernicosum*] - with very large bright yellow flowers, a rich yellow with just a spot of crimson on the interior base. Some of the blooms want this.

"Another, and when you read this don't think I am mad, colour blind or anything like that, has blue flowers, a real blue, as blue as those of *Cynoglossum amiable,* but a shade paler. It is a shrub of 3-5 ft. of the *intricatum* type, but with larger flowers and foliage. Another of them is *R. spinuliferum* or its brother.

"Then there are three new Primulas and two more I am doubtful of. Two fine Meconopsis, one dwarf, the other after the style of *M. Henricii,* but distinct I think.

"Two fine Bauhinias, both excellent shrubs, rose, and rose and white flowers. An entirely new Clematis with pure white flowers, not a form of *montana,* perianth 3 ins. in diameter of six segments.

"A heavenly Iris, with flowers of a black wine shade with gold lacing on the falls, 18-20 ins.

"A new Caragana with white tomentose foliage.

"A new Ipomaea with foliage similarly coated.

"A new shrubby Ainsliaea.

"A fine new Carpinus, foliage large, dark green, bullate on upper surface, undersurface cinnamon-brown with heavy tomentum.

"A new Aster with light wine-coloured ray florets.

"An excellent new Vitis with deep crimson flowers and scarlet fruits.

"A new Thymus, large in growth, and even more odorous than our home species.

"Two Abelias, one of which is *Abelia Forrestii.*

"An excellent evergreen Oak with lanceolate leathery foliage.

"A new Lily, or this may be *Lilium Davidii.*

"And a heap of other shrubs of lesser interest to me at present because I cannot place them."

All was not plain sailing even for such a skilful organiser and diplomat as Forrest. One of the men he left behind at Tengyueh sneaked home to his own village and was only found by Forrest after a few days. He had missed most of the seed harvest. Then some officious Chinese magistrate complained that Forrest had been mapping the country, a crime at that time owing to friction on the Burmese-Yunnan frontier. That was smoothed over with the help of Mr. Kok, the missionary at Li-chiang; but it all wasted time.

Towards the end of July he was in the middle of the busiest collecting season:

"All my men are out, bar two who assist me here and who accompany me when I go out. Three have gone north to the happy hunting ground of the blue and yellow Rhododendrons; they have been away for ten days, and I hope they will remain another ten. Prolonged absence in such cases has always proved good to me. It means they have got something to keep them. Three others have crossed the Yangtze and are crawling slowly north along the eastern flank of the Chungtien Plateau. I sent them there because, though only viewed from a distance in 1904-1905, I know it to be excellent country, even more mountainous than this. This range, massive and forbidding as it is, is bisected by the Yangtze, the northern half forming the eastern barrier between the Chungtien Plateau and that huge unsurveyed tract occupied by the Lolos and drained by the Litang and Yalung Rivers. Of course I may be disappointed, but I hope for great things from that part, and, should my expectations be realised, I may spend next season in that region, making Hsia Chungtien my base, and driving my surplus men west and north, as I am now doing. But I must not look too far forward; I fear I am too ambitious, or should I say greedy?"

All his men returned a fortnight later with a good haul. He wrote home that about 200 species were new to him. By the 17th of August five cases of dried material were ready for despatch, containing about 900 different species.

While most of his men had been with him for several seasons, occasionally he made use of a fresh recruit:

"Another solitary individual, a new hand, but full of pluck, has volunteered to cut right over the range from here, work along the north-west flank at an altitude of 12,000-15,000 ft. rather a feat as that side in parts is like the roof of a house, crossing again north of the main peak and returning by the base of the eastern flank. I have great hopes of this chap, quite a genial piece of humanity, but an absolute savage. I wish you could see him, bare head, legs, feet, clothed to the knees in a single garment minus sleeves, composed of dark goat hide, hairy side out, girt in the middle with a piece of rawhide rope, and filth galore! All he wants to make him prehistoric is a stone axe. But beneath all of it there is a good fellow I think."

Unfortunately none of the letters that follow describes the end of this adventure.

There is no doubt that Forrest left a good deal to the intelligence and common sense of his chief collectors, once he knew and trusted them. As a rule his letters do not give exact localities in which the various groups collected, but from occasional references one gathers the freedom of movement he allowed his men so long as they collected in the given area in a given direction. He mentions Lao Song, head man of one of the groups, went off on his own to the mountains north-west of Lancing, one of Delavay's old hunting grounds. On another occasion two of his men were sent to the mountains around Yung-pe and found them extremely dry and barren. They cut their trip short of their own accord.

After a series of letters consisting of long discussions about various Primulas and Rhododendrons, Forrest goes on to write:

"I would give a good deal to have the pleasure of showing you and other enthusiasts over this range. How you would enjoy it. Large as it is I think I know the greater portion of it better than my own home hills, the Pentlands, Moorfoots and Lammermuirs!

"Again I say I fear you will be grievously disappointed in your expectations regarding what you call the stories of my doings and seeings. By now, long ere now probably, you must be aware of the fact that I am no writer. As a practical worker I may be a good average, but when it comes to describing scenery or incidents I am nowhere. It is not that I am unobservant or that I do not appreciate the beauties of nature, quite the reverse. I think that often I feel too intensely for words; on such occasions words fail me; they seem bald and unsatisfactory. I have not the journalistic instinct nor ever shall have now."

By early October the flowering season was over, and he was in the throes of the seed harvest.

The amounts collected of many plants were enormous. He writes of a pound of this and a pint and a half of that so frequently that the reader is left wondering what happened to all the seed and why so few plants have been introduced from the huge harvests sent home by Forrest. In this particular instance the 1914-1918 war intervened and it was unlikely that many of the herbs would come to maturity in gardens at home.

But from what is known of other of his expeditions seed was often sent home on the lavish scale. Although his prime objective was Rhododendrons, yet the number of herbs he collected was impressive

He mentions that in 1913 he collected 67 distinct species of Primula, and of these he collected seed of 51.

On the 3rd of November he wrote:

"I have now only the bulk of the Rhododendrons and a few of the shrubs to harvest, when the season, so far as this region is concerned, will be finished. Two parties went off this morning, each of four men; one north-east and one north-west and they will secure most of the new Rhododendrons. In a fortnight they return and three weeks from receipt of this I hope you will receive the first consignment of the blue and yellow Rhododendrons. I remain here with a few men to harvest the local species of the genus. Excuse more just now. This is only a stop-gap. The northern portion of the range is coated with snow. We were camped at 12,000 ft., heavy frosts at night and several slightly snowfalls. I have never felt so cold all the time I have been on the range. The blood must be getting thin or I'm a bit run down."

A week later he wrote:

"I am quite alright again, as hard as whipcord, but a bit weary at times with all the hustle. I never seem to get a rest or even an hour to myself. Every minute is fully occupied. My day is from 6.30 a.m. till 11 or more p.m. with scratch half-hours for meals. However, there's a good time coming and I keep looking ahead."

Towards the end of November the harvest was complete:

"I have most of my seeds numbered and packed, only some thirty or forty to finish. How many I cannot say just now; later I shall be able to give you a list, some 400 to 600 I should say, three cases, one and a half mule-loads, fully 200 pounds. So you see what you will have to face in a month or two! This is without counting the Tali lot, probably another case. I shall be glad to see the last of them. There are ten cases of herbaria containing fully 2,000 species. At Tali there may be another 1,000 species, and at Tengyueh 500, but I think we may discount at least 500 species for duplication. Allowing that, the season's haul will number fully 3,000 species."

Forrest left the Lichiang Range shortly after this letter. He was at Tengyueh until the end of January 1914, and then spent a couple of months in Burma having a much needed rest.

As early as October of the previous year Forrest wrote about his preparations and plans for 1914:

"I am making enquiries with a view to making Yungning my base for next season. It lies northeast of the Yangtze Bend, latitude 27° 50' N., midway between the Yangtze and the Litang rivers. It lies in the centre of an arc-shaped range of mountains which forms the watershed between those two rivers, is an entirely new area, and, as I have been getting most of my best and newest things in the extreme north of the Yangtze Bend, I have felt I have been tapping the fringe of a new flora the nucleus of which lies, I think, on that divide. There is a large lake near the township, and the level of the plain is greater even than this. Within less than a day's journey there are mountains over 15,000 ft. in height. It is an exceptionally well wooded country I am told. I mean to have a try at it if all goes well."

He made his way north by his usual route through Tali and Li-chiang, reaching Yungning in early June. Then came a letter from the Yungning Valley dated June 12th:





- *opposite above* -
A scratch half-hour on his fourth expedition:
resting with his dog in camp, a whisky and soda on hand for refreshment.

- *opposite below* -
The great man in relaxed mode post the harvest (photo undated, but likely taken in Burma in early 1914).



"Just a very hasty note to intimate my arrival and also my very early departure from here. I got in on the 10th and hope to leave on my return journey on the 14th. This will surprise you, but I find I have made a miscalculation. I have struck a real dry area and am hustling to get out of it. With such a huge rain-screen as the Lichiang Range to the south-west I strongly suspected that such a region as this existed but thought it would lie more to the south-west. Unfortunately I am wrong, and intend at once to return to my old base north of Li-chiang, U-lu-kaey, and from there work some of the beautiful alpine country I passed through on my way up, and which I also saw stretching north and west of where I was.

"I had a very rotten journey up through beautiful but very rugged country, the main road a goat track! First few days heavy thunderstorms and rain, the last three a veritable 'Tierra del Fuego'. Seldom in all my wanderings here have I struck such a barren and blistering hot country as the Yangtze valley at Fengkow. A descent and ascent of 9,000 ft. and all practically desert. We spent one night and the greater portion of a day camped on a sandbank; rocks too hot to touch, tents unbearable, climate like Rangoon in August minus the rain. If you can imagine that, temperature over 110 in the shade, brazen skies and the previous day we were at 14,000 ft.! I simply lay, gasped and drank muddy Yangtze water. And I've got to face it all over again."

A little later he was rewarded by a remarkable sight:

"Another lovely shrub I should love to see growing at home as it does here is the double white form of *Rosa Banksiae.* On this journey I saw it in absolute perfection in the Lashi-pa Valley. Can you imagine a rose mass a hundred or more feet in length, thirty feet high and twenty through, a veritable cascade of the purest white backed by the most delicate green, and with a cushion of fragrance on every side? One sight such as that, and it is only one of many, is worth all the weariness and hardship of a journey from England. Looking down on the Lashi-pa Valley, which is a circular basin, backed on the east by the massive peak of the Li-chiang, one could see hundreds of those huge flower clumps showing up white even at a distance of four or five miles like bosses on a green shield. What a pity one can only bear away mind-pictures of these scenes!"

This year of 1914 was a constant disappointment. Apart from the useless journey to Yungning that wasted over three weeks of valuable collecting time it was a summer and autumn of tremendous rains in all Western China. The floods in the Yangtze and the Red River drowned hundreds of thousands. Forrest had pinned his hopes on a good season by planning more extensive trips than usual for himself and his men. He himself was going to continue his detailed exploration of the main Lichiang Range and yet be sufficiently near his headquarters to be able to cope with all the material his men brought back.

His planning was widespread. One party went north by way of the mountains to the east of the Chungtien Plateau. From there they were to turn west crossing into the Yangtze Valley by the Mao-nui-chang, a pass of 14,000 ft. Another party went off to the mountains enclosing the north west of the Chienchʼuan Valley, a range that lies between that and the Mekong.

The largest party of his four best men were to travel via the Yangtze Valley to Chy-tien, thence to Weisi. After travelling down the Wei Valley to the Mekong they were to cross the latter at Yeh-chih, a small place south of Tseku, climb the Mekong-Salween Divide and collect on the upper portions of that range northwards. Returning to Yeh-chih they were to cross the Kari Pass between the Mekong and the Yangtze, make for Chungtien, then cross the Chungtien Plateau to the Yangtze which they were to cross at Taku, and so back to headquarters.

- *opposite* -
Forrest and his collectors out and about on August 17th, 1914.



Much of this journey was made abortive by the Chinese authorities on the Mekong, who refused to let them cross the river owing to trouble with the Tibetans. In all Forrest had nineteen wholetime collectors working for him that year in addition to occasional local help.

During the rest of the season his letters are filled with bitter complaints against the weather. As a sample:

"For the past five the weather has been beyond all telling, atrocious. For three weeks I have scarce been outside the house. During that period it has rained almost incessantly. Work has been more or less at a standstill, and, though my men have gone out, they have been much hampered in their work with most serious results for me. The whole country is under water, the hills and mountains bathed in dank mist. Every forty-eight hours we have a thunderstorm of several hours' duration by way of breaking the monotony. Most of the neighbouring provinces are worse off than we are. The Yangtze and other rivers have been breaking all previous records and few of the ferries are open."

The news of the war in Europe that trickled in to him weeks late did not help matters. Temporarily he lost heart and constantly wrote to say how he wished he was away from the hills.

While the crop of herbarium material was poor owing to the constant rain, the weather improved sufficiently towards the end of the year to make a fair seed harvest possible, particularly of Rhododendrons and other shrubs. He left U-lu-kaey early in November and was in Bhamo in time for Christmas on his way home.

As an epilogue to this short account of the 1912-1914 expedition, here is a letter that gives a more detailed account of the kind of country in which he revelled. It is more elaborate than usual, because it was written about his journey through the hills on the way to his abortive base at Yungning. As mentioned before, this area turned out to be a failure. He had little or nothing to collect, and he had no chores to take up his time on getting to camp in the evening. Thus he had more time to write letters and less technical information to write about:

"For the first five days from here (U-lu-kaey) the country is beautifully wild and I should have enjoyed travelling had the weather been good. But, with my usual ill-luck, rain commenced the evening of the first day, and the following morning I awoke to hear it still pattering steadily on my tent. We were camped on the flank of a deep rift running down from the main range east flank and ought to have had a magnificent view of the peak, but everything was swathed in rain and mists which billowed around us, bounding our vision to a few yards. I was much disgusted. Unless it is setting camp, there is nothing more disagreeable than breaking camp in rain. Everything dripping, tents, baggage, etc., the ground a mire from the trampling of men and mules, even the things under cover damp with the humidity of the atmosphere - and everyone's temper very raw.

"Here *Primula Bulleyana* showed up in sheets in every side gully, and on every patch of pasture growing in conjunction with *Primula Poissonii.* Hybrids were brought in to me ranging from the deepest flame-crimson, through all shades of pink to the orange-buff of the type. One was a clear biscuit-coloured self without eye. I commissioned a farmer near whose hut we camped to mark down and secure seed of the best forms.

"The main road, which is only a path through the forests, passes through very wild and broken country, a jumble of broken subsidiary ranges and others to the north which form the backbone of the country in the Bend. The average altitude of the road is, I should say, 11,000 ft. approximately, but there are many steep ascents and descents in crossing the ridges and valleys. At one point we rose to over 14,000 ft.

- opposite -

Forrest with his friend Arie Kok, a missionary priest from Amsterdam.

"The weather continued bad for four days, heavy thunderstorms with occasional fair blinks, so I was not able to do much in the way of photographing. I snapped the peaks when opportunity offered but I fear the results won't be of any value. When a break occurred, many miles of snow-capped peals were visible, some I feel sure much higher than that of Lichiang. One fine evening away to the north we saw the mountains of the Chungtien Plateau stand out in all their grandeur. A magnificent sight, fully 4,000 feet of snow on them. My first sight since I travelled among them in 1904-1905. I should say in the compass of the Bend alone there is work, sufficient for many years for several Schneiders, Wards and Forrests. It is a glorious country and sure to produce many fine things. How I wish I had the money and freedom to explore it systematically.

"All is limestone country or mostly all, and everywhere, without exception, are heavy forests from the bottom of the deepest valleys up almost to the snowline. In and on the flanks of the lower valleys and gullies are Alder, Oak, Birch, Tsuga and Pine. Higher up are Tsuga and Pine with a sprinkling of deciduous Oak, then magnificent forests of huge Abies and Picea and Larch, and last of all, Abies alone showing up in their black-green masses even above the limit of the alpine pastures. This is, I think, *Abies Delavayi,* of which I sent seed last season. Many of the Abies and Picea measured 6-7 ft. in diameter 6 ft. from the base. The banks of the streams and in the gullies and valleys were clothed with a dense scrub of many species of shrubs, most of which were known to me. Where marshy openings occurred, the turf was gaudy with the blooms of a multitude of herbaceous plants. I saw *miles,* really, of *Primula Bulleyana* and the same of *Primula vitiate* and *sikkimensis;* a glorious sight. *Primula Bulleyana s*eems a purely local plant; after the first two days it disappeared.

"Of Rhododendrons, the spring flowering species showed up in acres, *racemosum, rigidum, rubiginosum,* mostly in open scrub, whilst in the more open Pine forests were *Rh. Fortunei* and *Rh. lucidum* in glorious bloom. In one alpine meadow there was nearly a square mile of a fine lavender-flowered form of *Rh. intricatum* in full feather. A wonderful sight which I should have liked to photograph for you, but I know no photograph would do it justice. Most of those taller forms of *Rh. intricatum* are apparently marsh-loving plants. Where limestone was not and clayey sandstone took its place, mostly in drier situations, were forests of evergreen Oak. There also *Rh. racemosum* was best, on a clayey loam.

"There are some lovely spots to be seen in the Pine and deciduous Oak forests, magnificent turfy glades carpeted with *Roscoea cauteoides, R. purpurea, Cypripedium tibeticum, Stellar chamaejasme,* a new dwarf species of Hemerocallis with deep red-orange flowers, Anemones, Iris, etc.

"The second morning was beautifully clear and I got my first uninterrupted view of the range, a magnificent sight. It runs for about 60 miles and bending off to the north-west is cut through by the Yangtze, continuing its course up on the east side of the Chungtien Plateau. The whole was spread out in a panorama at a distance of some 15-20 miles, and, so far as I can, I feel sure two of the peaks are higher than the one I have been working on in past years in the south. There is also a much heavier glacier on one of them, but this could only be partially seen from where I was.

"Part of the third day was occupied in passing through most uninteresting country, the formation being mostly clays and sandstones. Here was met the first population, a few scattered houses occupying terraces on one side of a valley, and here also we had our first view of the mountains on the opposite side of the Yangtze through a rugged gorge leading down to the river.

"Just beyond this, I struck the richest patch of the whole journey. We had to cross a pass of 14,000 ft. before entering the Fongkou Valley which leads down to the Yangtze. On the summit of this were four or five circular pasture basins, boggy to a degree with pools of water scattered over them. The soil was almost pure peat. Shut in by forest-clad slopes and bare limestone peaks they formed a pretty picture. Clusters of Willows and large patches of *Rhododendron intricatum* covered the drier portions, and round the margins of each pool were huge clumps of *Rheum Alexandrae.* I always understood from Wilson's writings that this was purely a pasture plant. Here at least it was perfectly at home, growing almost in water. Unfortunately only one or two of the plants, and those isolated specimens in sheltered situations, were in flower."

Forrest had a theory that the greatest wealth of Rhododendrons was to be found in the Taron-Salween Divide and the Salween-Mekong Divide somewhere to the north of the Dokar La and west and north-west of Atuntze, that is north of latitude 28° 30'. On his next journey east in 1917 after collecting a little in the sub-tropical areas around Tengyueh he moved to Tali and then went directly to the Upper Mekong. On the 17th of July 1917, he wrote:

"I am camped in the house of a Tibetan farmer, an old friend of mine of 1905. The house is on a small flat, 4-6 acres, situated in a big bend on the left bank of the Mekong. The valley here is a mere gorge, some 2,000 ft. in depth, flanks angled to 70°, air-stagnation and climate almost tropical. On every side we are enclosed by mountains, the divides rising to about 15,000 ft. with isolated peaks, such as the sacred mountain Dokar La and Ka-gwr-pu - [Editor's note: the latter probably the mountain group marked on modern maps as Khakarpo] - of 20,000 ft. or even more, which lie only a few miles to the north, snow-capped and glacier-clad. It is a difficult and trying country to work. At our feet runs the Mekong, a raging cocoa-coloured torrent of 200 yds. breadth with a 10 knot current, rising and falling like a gigantic pulse, 16 ft. or more day by day."

He found much to be said for his theory. He went on:

"Before going further I wish to point out that above a certain altitude in this region of the Yunnan province the genus Rhododendron is the dominant feature in the scheme of vegetation and I must warn you that in consequence species of that genus will bulk largely in my collection this year."

Then again:

"Take the moors and hills surrounding the head waters of any of our principal highland streams in the early spring, in full flood, with patches of snow around. For heather and heath imagine mile up mile of dwarf Rhododendron, at that season almost the exact brownish shade of dry heather and you have the scenery of the summit of the Bei-ma-shan at 15,000 ft. The raw damp wind strengthened the impression for me, and, as I stood there my heart warmed to it and I could almost imagine myself at home."

All that year of 1917 Forrest collected on the Upper Mekong, being careful not to stray actually into Tibet owning to the unsettled state off the frontier.

In 1918 there was almost open warfare between the Chinese and Tibetans in the Taron area. Although he was able to keep his Tibetan collectors at work in the same area as in 1917, Forrest was unable to go back himself and had to make his base north of Li-chiang-fu. He and his men were to work on the mountains in the very north of the Yangtze Bend, while another party was sent to Muli in S.W. Szechwan. 1918 was another year of atrocious weather:

"For the past six weeks it has rained almost incessantly, and is still raining. The greater part of the Province is under water; much damage has been done everywhere to crops and roads, and conditions are fast developing into a tragedy for the poorer classes of the population. In consequence our work has been hampered most seriously, and the harvest of this season will not, I fear, equal that of last."



In 1921-1923 he repeated his work on the Shweli-Salween Divide and moved even further north on the Salween-Taron and Mekong-Salween Divides. His men again went eastwards to Muli and worked southwards to the east of the Yangtze Bend.

In 1924-1925 he did not go so far afield. The frontier between Burma and Yunnan, formed by the Mai Hka-Salween Divide, was more thoroughly worked than ever before, and so was the wide stretch of country between the Mekong and the Yangtze centred on Weisi, 27° 20′, as well as an area far to the south round the large town of Shunning.

In 1930 Forrest started off on what was to be his last trip before retiring. He set out with the very definite intention of rounding off all his previous work in Yunnan. This required his full complement of native collectors, who were sent off with the strictest orders to fill gaps in his previous collections, either plants collected decades ago by Delavay and other French collector-missionaries and so far missed by Forrest, or seeds of plants that he thought particularly worthy, which previously had not germinated at home or where the plants were in short supply. This expedition required the greatest skill in organisation and an enormous amount of office work. He himself rarely left his base at Tengyueh.

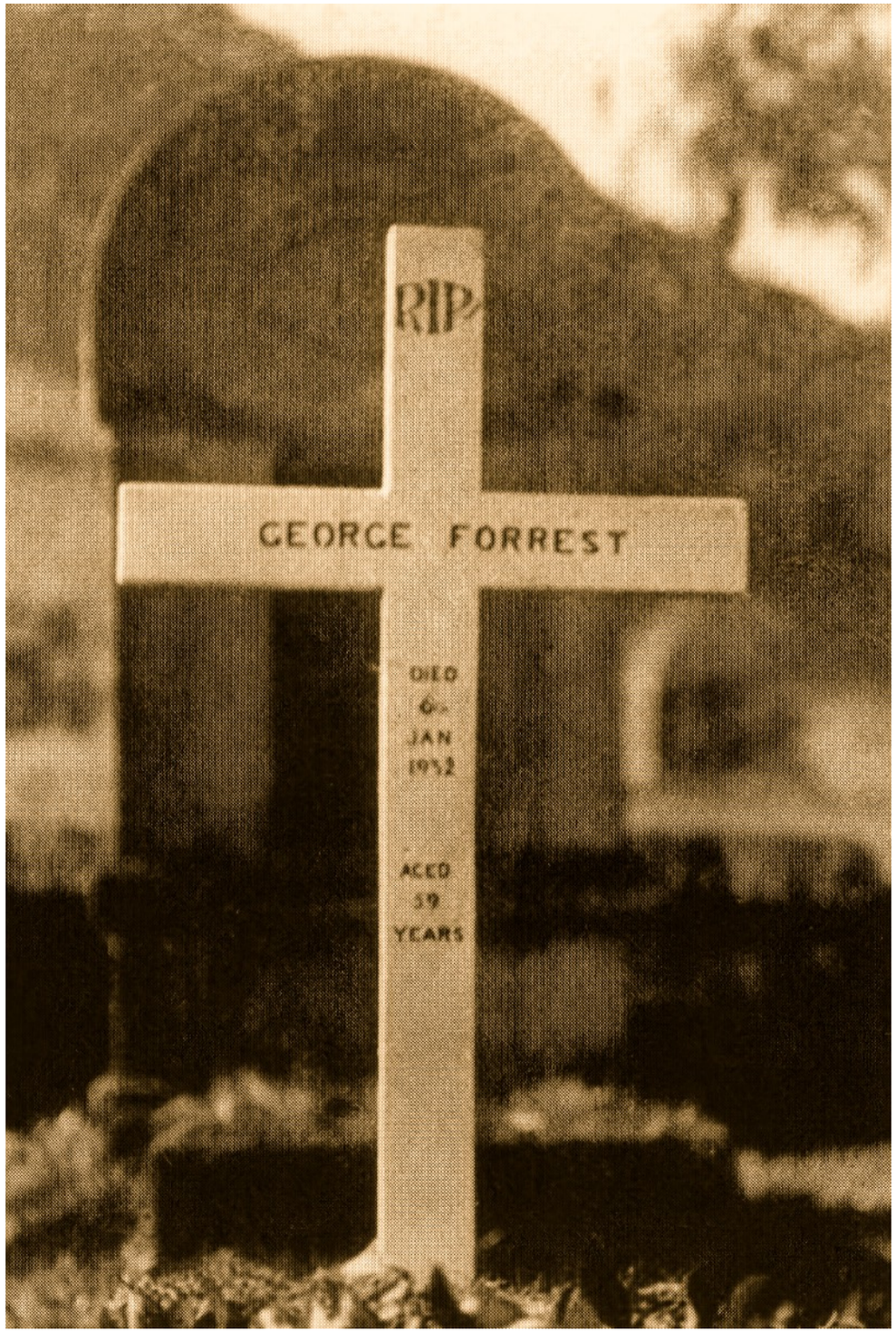
In one of his last letters before his death, he wrote:

"Of seed such an abundance, that I scarce know where to commence, nearly everything I wished for and that means a lot. Primulas in profusion, seed of some of them as much as 3-5 lb., same with Meconopsis, Nomocharis, Lilium, as well as bulbs of the latter. When all are dealt with and packed I expect to have nearly if not more than two mule-loads of good clean seed, representing some 400-500 species, and a mule-load means 130-150 lb. That is something like 300 lb. of seed. If all goes well I shall have made a rather glorious and satisfactory finish to all my past years of labour."

That last sentence has proved to be a wonderfully true epitaph. George Forrest died on January 5th 1932 while out shooting game within a few miles of Tengyueh.

- *opposite* -
A photo of Forrest from the 1930/1931 expedition, playing with a pet monkey.

This account was originally published within the book *The Journeys And Plant Introductions Of George Forrest V.M.H.,* edited by the Assistant Regius Keeper of the Royal Botanic Garden, Edinburgh, Dr. John MacQueen Cowan, and published for the Royal Horticultural Society by the Oxford University Press in 1952.



George Forrest's grave, in the foreign cemetery just outside the city of Tengyueh.

The Forrest Plant Hunting Expeditions:

98° 99° 100° 101°

29° 28° 27°

Scale of Miles
10 0 20 40 60

Area covered by the Botanical Expeditions of George Forrest between 1904 & 1931

T I B E T

S Z E C H U A N

M A

KHAKERPO

BEI MA SHAN

Kuichiang

Taron

Nmai Hka (Irrawaddy)

Tehtsin (Atuntze)

Doker la

Sila

Londre Pass

Tseku

Patong

Kari Pass

Yetche

Yangtze Kiang

CHUNGTIEN PLATEAU

Chung Ho

Hsiaoweisi

Chytien

Weisi

Lutien

FU CHUAN RANGE

Chungtien

Litang

Yalung

Muli

Kulu

Yungning

Feng kou

LICHIANG RANGE

U-lu-kaey

Lichiang

Yung pei

R

U

B

Y U N N A N

Chimili

Hpimaw

Htawgaw

Fengshuiling Pass

Salween

Mekong

Chienchuan

Hoching

MAO KU CHONG

Sungkwei

Sungkwei Pass

Langkiung

Tapintze

Tengchwan

Paiyentsing

Tali

Yangpi

Hsia-kuan

Yungping

Kunming

LUNGFAN SHAN

JAN TZOW SHAN

Myitkyina

Sadon

Tengyueh

Yungchang

Kanai

Machangkai

Shunning

Taiping

Shweli

Bhamo

26°

25°

98°

99°

100°



The 1904/1906 Collections made in E Tibet & Yunnan:

F 475	campylogynum	F 2282	indicum
F 501	fictolacteum	F 2323	beesianum
F 502	delavayi	F 2395	adenogynum
F 503	sanguineum	F 2408	taliense
F 504	campylogynum	F 2409	taliense
F 505	floccigerum	F 2505	lepidotum
F 506	bureavii	F 2770	lepidotum
F 507	siderophyllum	F 4093	delavayi
F 508	edgeworthii	F 4130	haematodes
F 509	spinuliferum	F 4131	balfourianum
F 510	racemosum	F 4132	virgatum
F 511	saluenense	F 4133	virgatum
F 512	spiciferum	F 4134	racemosum
F 513	chasmanthum	F 4135	xanthostephanum
F 689	siderophyllum	F 4136	taliense
F 692	hypolepidotum	F 4137	cyanocarpum
F 694	brevistylum	F 4138	dichroanthum
F 698	mekongense	F 4139	crassum
F 699	forrestii	F 4140	neriiflorum
F 951	sulfureum	F 4141	edgeworthii
F 2009	racemosum	F 4142	dichroanthum
F 2030	hormophorum	F 4143	sulfureum
F 2042	anthosphaerum	F 4144	neriiflorum
F 2043	irroratum	F 4145	trichocladum
F 2050	rubiginosum	F 4146	irroratum
F 2058	irroratum	F 4147	neriiflorum
F 2062	racemosum	F 4148	souliei
F 2097	rubiginosum	F 4149	fastigiatum
F 2119	decorum	F 4150	souliei
F 2159	lacteum	F 4151	campylogynum
F 2181	unidentified species	F 4152	campylogynum
F 2182	cephalanthum	F 4153	brachyanthum
F 2190	vernicosum	F 4154	souliei
F 2207	racemosum	F 4155	platyphyllum
F 2222	vernicosum	F 4156	rubiginosum
F 2253	decorum	F 4157	dichroanthum
F 4158	dichroanthum	F 4170	virgatum
F 4159	ciliicalyx	F 4172	microphyton
F 4160	taliense	F 4173	indicum
F 4161	haematodes	F 4173a	indicum
F 4162	brevistylum	F 5063	yunnanense
F 4163	yunnanense	F 5068	selense
F 4164	neriiflorum	F 5069	stewartianum
F 4165	dichroanthum	F 5070	trichostomum
F 4166	balfourianum	F 5071	lukiangense
F 4167	taliense	F 5072	uvariifolium
F 4168	decorum	F 5073	x haemaleum (NH)
F 4169	virgatum		

Addendum:

The listings shown in the table above were compiled from the full catalogue of herbarium sheets gathered on Forrest's premier expedition as set out by Dr. Ludwig Diels in Volume 7 of *Notes from the Royal Botanic Garden, Edinburgh,* published in 1912. A. K. Bulley, the owner of Bees Limited and the chief sponsor of the trip, received all the seed collected, while the pressed specimens went to Edinburgh.

Principally tasked with collecting alpine and herbaceous material, Forrest also gathered 95 rhododendron species during the trip, yet very few of those listed by Diels are believed to have been officially introduced at the same time, with F 4135 one of the few exceptions. It is hard to imagine that viable capsules were simply ignored by the Scotsman in the field, or if gathered, not despatched back to Bulley. But if the Cheshire-based Bees Ltd did indeed distribute them - as either packets of seed or juvenile plants - then they exited the doors of the nursery without a Forrest field number reference attached.

Regrettably, another explanation has also come to light:

A transcript of the Presidential Address given to the Royal Institute of Cornwall by F. J. Williams in November 1998 - *J. C. Williams: An Enthusiast* (available on the Caerhays Castle website) - cites Bulley as 'not having the resources to deal with so much new material'. Equally, first-hand observations made on a visit to the nursery premises by J. C. Williams himself are quoted in the text.

One states that Williams was: 'quite sad to see stuff so knocked about'.
Another adds that: 'thousands of things are dead through sheer ignorance of how to handle them'.

Respected cotton merchant; founder of Ness Botanic Gardens; supporter of women's suffrage: Arthur Kilpin Bulley was all these things. Yet what he was not, despite developing an all-consuming lifelong passion for plants, was a hands-on experienced nurseryman.

The full text of *Plantae Chinenses Forrestianae: plants discovered and collected by George Forrest during his first exploration of Yunnan and Eastern Tibet in the years 1904, 1905, 1906,* can be read online and downloaded from the Biodiversity Heritage Library or the Internet Archive.

- opposite -
George Forrest with his chief collector Lao Chao (Zhao Chengzhang).
The photograph is undated.



The 1910 Collections made in Myanmar & Yunnan:

F 5843	fictolacteum	F 5882	racemosum
F 5847	fastigiatum	F 5889	yunnanense
F 5848	anthosphaerum	F 6755	trichocladum
F 5851	irroratum	F 6756	cephalanthum
F 5862	prostratum	F 6757	fastigiatum
F 5863	fastigiatum	F 6761	dichroanthum
F 5864	lepidotum	F 6762	pholidotum
F 5865	rupicola	F 6767	xanthostephanum
F 5866	primuliflorum	F 6768	microphyton
F 5868	adenogynum	F 6769	delavayi
F 5868	x detonsum (NH)	F 6770	virgatum
F 5869	decorum	F 6771	rigidum
F 5870	traillianum	F 6772	taliense
F 5871	adenogynum	F 6773	haematodes
F 5871	x detonsum (NH)	F 6774	balfourianum
F 5872	traillianum	F 6775	cyanocarpum
F 5873	oreotrephes	F 6776	decorum
F 5874	hormophorum	F 6777	sulfureum
F 5876	impeditum	F 6778	lacteum
F 5877	rubiginosum	F 6779	cyanocarpum
F 5879	telmateium	F 6780	neriiflorum
F 5880	vernicosum	F 6781	dichroanthum
F 5881	vernicosum		

Two bridges:

- *opposite above* -
A liana bridge over the Yang-pi River, a tributary of the Mekong in NW Yunnan.
The photo was taken during March 1906.

- *opposite below* -
A chain suspension bridge over the Mekong River on the main trade route
between Tengyueh and Talifu (now respectively Tengchong and Dali).
Forrest took the photograph in February 1906.





F 5847 - *R. fastigiatum* ssp. *fastigiatum*

F 5847 - *R. fastigiàtum* ssp. *fastigiatum*


F 5848 - *R. anthosphaerum*


F 5848 - *R. anthosphaerum*


F 5848 - *R. anthosphaerum*

F 5848 - *R. anthosphaerum*



F 5851 - *R. irroratum* ssp. *irroratum*


F 5851 - *R. irroratum* ssp. *irroratum*


F 5851 - *R. irroratum* ssp. *irroratum*


F 5851 - *R. irroratum* ssp. *irroratum*

F 5873 - *R. oreotrephes*

F 5881 - *R. vernicosum*

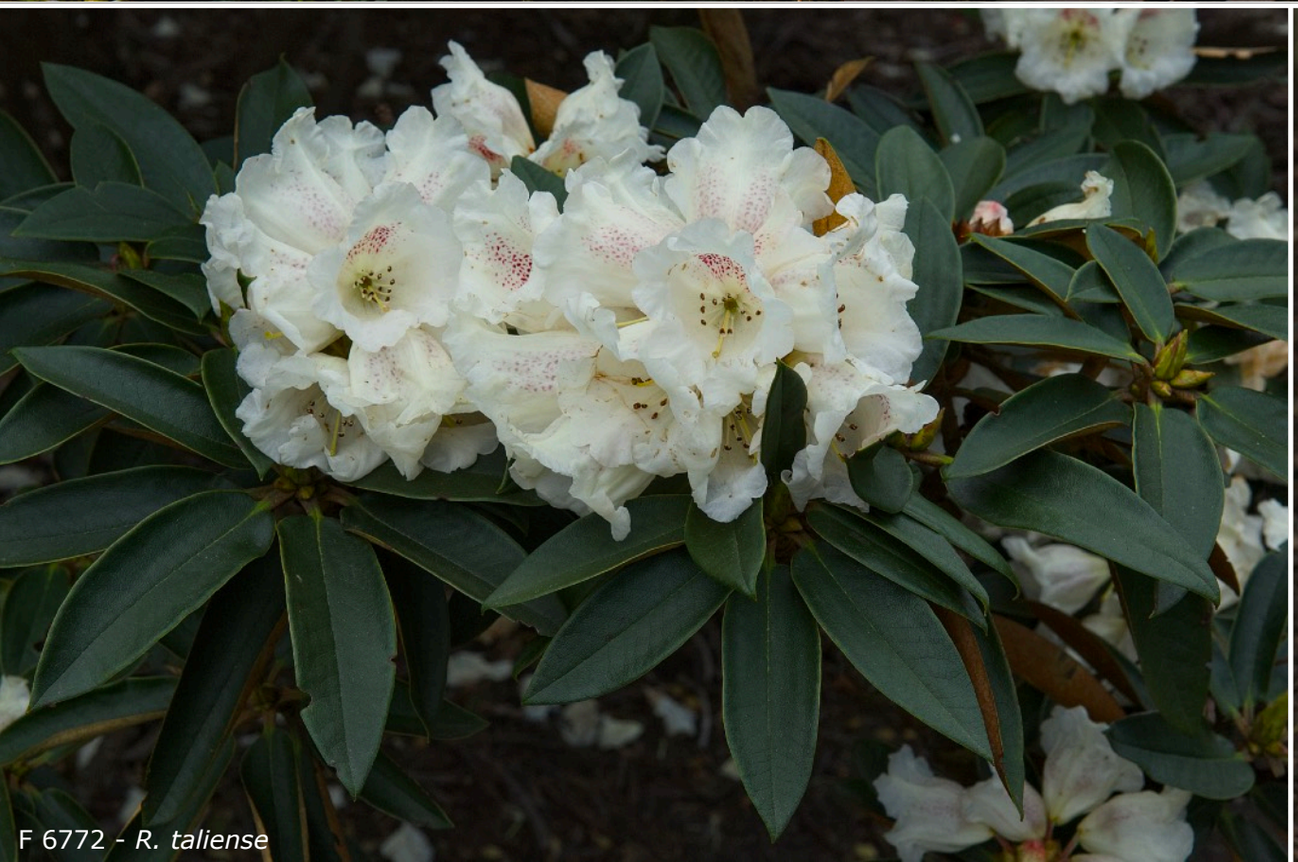

F 6762 - *R. pholidotum*


F 6762 - *R. pholidotum*


F 6762 - *R. pholidotum*

F 6772 - *R. taliense*

F 6772 - *R. taliense*



F 6772 - *R. taliense*



F 6772 - *R. taliense*



F 6773 - *R. haematodes* ssp. *haematodes*

F 6778 - *R. lacteum*

F 6780 - *R. neriiflorum* ssp. *neriiflorum*

F 6780 - *R. neriiflorum* ssp. *neriiflorum*



F 6781 - *R. dichroanthum* ssp. *dichroanthum*

F 6781 - *R. dichroanthum* ssp. *dichroanthum*

The 1912/1914 Collections made in Myanmar & Yunnan:

F 7463	delavayi	F 10195	beesianum
F 7504	microphyton	F 10204	traillianum
F 7505	microphyton	F 10210	oreotrephes
F 7516	ciliicalyx	F 10213	oreotrephes
F 7673	moulmainense	F 10278	trichostomum
F 7832	simsii Mesembrinum	F 10284	fastigiatum
F 8172	edgeworthii	F 10285	prostratum
F 8905	trichocladum	F 10292	uvariifolium
F 8923	zaleucum	F 10297	oreotrephes
F 8938	heliolepis	F 10311	impeditum
F 8939	neriiflorum	F 10312	primuliflorum
F 8987	apodectum	F 10314	rupicola
F 8989	fulvum	F 10333	hippophaeoides
F 8990	basilicum x ? (NH)	F 10347	mollicomum
F 9021	sinogrande	F 10367	rupicola
F 9048	habrotrichum	F 10423	ravum
F 9054	apodectum	F 10428	wardii
F 9055	callimorphum aff.	F 10429	adenogynum
F 9341	leptothrium	F 10434	drumonium
F 9342	virgatum	F 10435	ravum
F 9431	crassum	F 10438	brevistylum
F 9901	leptothrium	F 10460	beesianum
F 9919	ciliicalyx	F 10477	beesianum
F 10014	scintillans	F 10481	orthocladum
F 10035	yungningense & impeditum	F 10540	roxieanum
F 10055	fastigiatum	F 10546	beesianum
F 10056	impeditum	F 10547	phaeochrysum
F 10057	rubiginosum	F 10616	puralbum
F 10071	cuneatum	F 10639	uvariifolium
F 10073	rubiginosum	F 10651	anthosphaerum
F 10074	rubiginosum	F 10680	wardii
F 10075	vernicosum	F 10857	clementinae
F 10086	racemosum	F 10974	fictolacteum
F 10113	adenogynum	F 10991	roxieanum
F 10114a	vernicosum	F 11031	scabrifolium
F 10156	traillianum	F 11072	scabrifolium
F 11073	delavayi	F 12109	basilicum
F 11074	irroratum	F 12113	delavayi
F 11246	trichostomum	F 12461	hippophaeoides
F 11299	tatsienense	F 12505	trichostomum
F 11312	dasycladum	F 12568	telmateium
F 11313	beesianum	F 12607	clementinae
F 11317	wardii	F 12609	roxieanum
F 11321	phaeochrysum	F 12623	telmateium
F 11421	uvariifolium	F 12731	wardii
F 11450	orthocladum	F 12845	leptothrium
F 11466	wardii	F 12889	anthosphaerum
F 11486	clementinae	F 12893	floccigerum
F 11487	hippophaeoides	F 12899	lukiangense
F 11503	anthosphaerum	F 12901	glischrum
F 11547	ciliicalyx	F 12934	saluenense
F 11575	lacteum	F 12942	megeratum
F 11579	taliense	F 12944	crinigerum
F 11583	taliense	F 12947	roxieanum Oreonastes
F 11597	dichroanthum	F 12948	fictolacteum
F 11601	callimorphum aff.	F 12950	dasycladum
F 11626	fastigiatum	F 12968	chameunum
F 11629	cyanocarpum	F 12969	wardii
F 11630	trichocladum	F 12982	dasycladum
F 11736	ravum	F 13005	roxieanum Oreonastes
F 11875	sinogrande	F 13023	praestans
F 11896	apodectum	F 13032	beesianum
F 11910	sulfureum	F 13143	beesianum
F 11958	diaprepes	F 13244	crinigerum
F 12054	habrotrichum	F 13258	chameunum
F 12078	basilicum	F 13259	forrestii
F 12084	microphyton	F 13299	floccigerum
F 12085	microphyton	F 13301	martinianum
F 12094	apodectum	F 13302	hypolepidotum
F 12095	habrotrichum	F 13303	campylogynum
F 12096	neriiflorum	F 13304	sanguineum
F 12100	virgatum	F 13315	wardii

F 13348	proteoides	F 13508	facetum
F 13380	lukiangense	F 13512	sulfureum
F 13383	chameunum	F 13518	campylogynum
F 13387	anthosphaerum	F 13526	platyphyllum
F 13438	anthosphaerum	F 13550	hypolepidotum
F 13439	martinianum	F 13568	beesianum
F 13440	floccigerum		



R. fastigiatum.

- opposite -

R. saluenense.



F 8989 - *R. fulvum* ssp. *fulvum*

F 8989 - *R. fulvum* ssp. *fulvum*

F 8989 - *R. fulvum* ssp. *fulvum*

F 10014 - *R. scintillans*



F 10057 - *R. rubiginosum*



F 10057 - *R. rubiginosum*



F 10057 - *R. rubiginosum*

F 10075 - *R. vernicosum*

F 10075 - *R. vernicosum*

F 10195 - *R. beesianum*

F 10195 - *R. beesianum*



F 10195 - *R. beesianum*



F 10195 - *R. beesianum*



F 10195 - *R. beesianum*

F 10195 - *R. beesianum*

F 10292 - *R. uvariifolium* ssp. *uvariifolium*

F 10292 - *R. uvariifolium* ssp. *uvariifolium*

F 10292 - *R. uvariifolium* ssp. *uvariifolium*



F 10292 - *R. uvariifolium* ssp. *uvariifolium*

F 10435 - *R. ravum*



F 10547 - *R. phaeochrysum* var. *phaeochrysum*

F 10616 - *R. wardii* var. *puralbum*

F 10616 - *R. wardii* var. *puralbum*

F 10639 - *R. uvariifolium* ssp. *uvariifolium*



F 10639 - *R. uvariifolium* ssp. *uvariifolium*


F 10639 - *R. uvariifolium* ssp. *uvariifolium* 'Yangtze Bend' AM 1965


F 10639 - *R. uvariifolium* ssp. *uvariifolium* 'Yangtze Bend' AM 1965


F 10639 - *R. uvariifolium* ssp. *uvariifolium* 'Yangtze Bend' AM 1965

F 10639 - *R. uvariifolium* ssp. *uvariifolium* 'Yangtze Bend' AM 1965

F 11312 - *R. selense* ssp. *dasycladum*

F 11312 - *R. selense* ssp. *dasycladum*

F 11312 - *R. selense* ssp. *dasycladum*



F 11312 - *R. saluenense* var. *saluenense*





F 12968 - *R. saluenense* var. *chameunum*



F 12968 - *R. saluenense* var. *chameunum*

The 1917/1919 Collections made in NE Myanmar, Sichuan & Yunnan:

F 13768	telmateium	F 13965	x edgarianum (NH)
F 13789	detonsum (NH)	F 13990	uvariifolium
F 13936	erythrocalyx (NH)	F 13996	glischrum
F 13938	erythrocalyx (NH)	F 14000	chryseum
F 13768	drumonium	F 14004	campylogynum
F 13789	x detonsum (NH)	F 14005	chryseum
F 13791	hippophaeoides	F 14008	crinigerum
F 13792	hippophaeoides	F 14009	selense
F 13793	hippophaeoides	F 14011	forrestii
F 13794	hippophaeoides	F 14012	sanguineum
F 13798	racemosum	F 14021	aganniphum
F 13799	hippophaeoides	F 14024	dryophyllum
F 13800	hippophaeoides	F 14038	vernicosum
F 13803	racemosum	F 14041	dryophyllum
F 13804	racemosum	F 14043	chameunum
F 13841	primuliflorum	F 14050	aganniphum
F 13842	hippophaeoides	F 14052	hypolepidotum
F 13847	telmateium	F 14054	saluenense
F 13852	anthosphaerum	F 14055	cephalanthum
F 13853	irroratum	F 14057	selense
F 13864	irroratum	F 14059	megeratum
F 13881	leptothrium	F 14060	nakotiltum
F 13896	lukiangense	F 14061	roxieanum
F 13897	dasycladum	F 14062	crinigerum
F 13899	scintillans	F 14063	fictolacteum
F 13900	mekongense	F 14066	setiferum
F 13904	chameunum	F 14068	nakotiltum
F 13905	dasypetalum	F 14094	x schizopeplum (NH)
F 13905a	x compactum (NH)	F 14095	wardii
F 13915	russatum	F 14102	x schizopeplum (NH)
F 13931	oreotrephes	F 14114	dryophyllum
F 13933	selense	F 14115	dryophyllum
F 13935	floccigerum	F 14116	beesianum
F 13947	chryseum	F 14119	x schizopeplum (NH)
F 13949	martinianum	F 14119	x schizopeplum (NH)
F 13951a	x erythrocalyx (NH)	F 14128	wardii

F 14134	aganniphum	F 14372	rubiginosum
F 14135	brevistylum	F 14373	erastum
F 14138	forrestii	F 14416	citriniflorum
F 14142	roxieanum	F 14421	x comisteum (NH)
F 14145	dryophyllum	F 14432	roxieanum
F 14160	mekongense	F 14450	beesianum
F 14166	x haemaleum (NH)	F 14452	rubiginosum
F 14181	lukiangense	F 14458	selense
F 14190	wardii	F 14461	beesianum
F 14195	albertsenianum	F 14464	duseimatum
F 14208	x tritifolium (NH)	F 14485	eclecteum
F 14209	praestans	F 14488	beesianum
F 14210	brevistylum	F 14492	x triplonaevium (NH)
F 14226	beesianum	F 14499	fulvoides
F 14231	fictolacteum	F 14508	x comisteum (NH)
F 14233	praestans	F 14509	proteoides
F 14242	microgynum	F 14519	dryophyllum
F 14243	x iodes (NH)	F 14605	beesianum
F 14245	x eudoxum (NH)	F 14685	proteoides
F 14268	x didymoides (NH)	F 14686	beesianum
F 14269	sanguineum	F 14718	x bathyphyllum (NH)
F 14270	x leucopetalum (NH)	F 14732	x flavorufum (NH)
F 14271	citriniflorum	F 14774	x eudoxum (NH)
F 14272	citriniflorum	F 14790	beesianum
F 14274	citriniflorum	F 14809	x dictyotum (NH)
F 14286	crinigerum	F 14810	x flavorufum (NH)
F 14291	brevistylum	F 14811	beesianum
F 14331	calvescens	F 14911	crinigerum
F 14334	primuliflorum	F 14987	chaetomallum
F 14344	cephalanthum	F 14988	fulvoides
F 14345	x flavorufum (NH)	F 15002	yunnanense
F 14352	beesianum	F 15004	chasmanthum
F 14356	citriniflorum	F 15018	selense
F 14364	temenium	F 15023	floccigerum
F 14365	temenium	F 15035	mekongense
F 14368	x flavorufum (NH)	F 15038	aganniphum

F 15039	x iodes (NH)	F 15166	primuliflorum
F 15043	x tritifolium (NH)	F 15168	fictolacteum
F 15070	adenogynum	F 15169	primuliflorum
F 15071	brevistylum	F 15171	adenogynum
F 15072	adenogynum	F 15203	mollicomum
F 15076	impeditum	F 15204	tatsienense
F 15077	primuliflorum	F 15206	racemosum
F 15079	primuliflorum	F 15210	drumonium
F 15080	primuliflorum	F 15216	uvariifolium
F 15085	telmateium	F 15218	cuneatum
F 15086	primuliflorum	F 15219	rubiginosum
F 15087	trichostomum	F 15222	oreotrephes
F 15088	primuliflorum	F 15243	adenogynum
F 15091	impeditum & fastigiatum	F 15245	primuliflorum
F 15092	primuliflorum	F 15248	unidentified species
F 15093	primuliflorum	F 15249	fastigiatum
F 15095	anthosphaerum	F 15251	hippophaeoides
F 15096	trichostomum	F 15257	unidentified species
F 15097	irroratum	F 15259	trichostomum
F 15102	delavayi	F 15262	trichostomum
F 15103	scabrifolium	F 15263	tatsienense
F 15120	telmateium	F 15264	hippophaeoides
F 15123	traillianum	F 15265	hippophaeoides
F 15124	beesianum	F 15266	racemosum
F 15126	primuliflorum	F 15267	complexum
F 15127	primuliflorum	F 15268	drumonium
F 15128	adenogynum	F 15269	complexum
F 15129	unidentified species	F 15270	rupicola
F 15130	vernicosum	F 15271	primuliflorum
F 15132	telmateium	F 15278	fulvoides
F 15137	trichostomum	F 15293	eclecteum
F 15154	telmateium	F 15305	traillianum
F 15155	primuliflorum	F 15354	x agglutinatum (NH)
F 15159	complexum	F 15356	tapetiforme
F 15164	adenogynum aff.	F 15367	rupicola
F 15165	vernicosum	F 15370	drumonium

F 15386	drumonium	F 15578	rigidum
F 15391	rupicola	F 15579	jucundum
F 15392	complexum	F 15581	rigidum
F 15399	primuliflorum	F 15582	unidentified species
F 15400	complexum	F 15588	cyanocarpum
F 15412	wardii	F 15589	rigidum & sulfureum
F 15414	dasycladum	F 15594	sulfureum
F 15415	x agglutinatum (NH)	F 15606	vernicosum
F 15417	puralbum	F 15609	bureavii
F 15418	oreotrephes	F 15612	fastigiatum
F 15427	cuneatum	F 15613	fastigiatum
F 15444	uvariifolium	F 15614	fastigiatum
F 15446	tatsienense	F 15615	fastigiatum
F 15448	ravum	F 15645	telmateium
F 15449	trichostomum	F 15651	schistocalyx
F 15450	hippophaeoides	F 15658	trichocladum
F 15452	trichostomum	F 15659	sinogrande
F 15459	hippophaeoides	F 15660	fulvum
F 15462	racemosum	F 15663	neriiflorum
F 15464	cuneatum	F 15665	x diphrocalyx (NH)
F 15465	oreotrephes	F 15667	ciliicalyx
F 15466	primuliflorum	F 15673	leptothrium
F 15467	drumonium	F 15688	zaleucum
F 15468	telmateium	F 15701	heliolepis
F 15487	brachyanthum	F 15706	araiophyllum
F 15497	balfourianum	F 15719	delavayi
F 15500	unidentified species	F 15732	araiophyllum
F 15504	scabrifolium	F 15733	leptothrium
F 15515	unidentified species	F 15734	annae
F 15519	unidentified species	F 15736	leptothrium
F 15520	cyanocarpum	F 15745	pennivenium
F 15521	haematodes	F 15756	moulmainense
F 15542	unidentified species	F 15761	rubiginosum
F 15545	unidentified species	F 15764	basilicum
F 15570	cyanocarpum	F 15766	tanastylum
F 15575	dimitrium	F 15767	meddianum

F 15770	sulfureum	F 16277	impeditum
F 15774	megacalyx	F 16282	yungningense
F 15776	trichocladum	F 16284	impeditum
F 15777	fulvum	F 16287	orthocladum
F 15778	habrotrichum	F 16288	telmateium
F 15779	neriiflorum	F 16289	drumonium
F 15782	sulfureum	F 16291	oreotrephes
F 15791	diaprepes	F 16292	impeditum
F 15808	callimorphum	F 16295	primuliflorum
F 15815	griersonianum	F 16296	telmateium
F 15816	diaprepes	F 16299	unidentified species
F 15887	crassum	F 16300	telmateium
F 15898	arizelum	F 16301	x eudoxum (NH)
F 15899	valentinianum	F 16302	phaeochrysum
F 15908	campylogynum	F 16305	nigropunctatum
F 15917	facetum	F 16306	primuliflorum
F 15932	apodectum	F 16307	nigropunctatum
F 15933	heliolepis	F 16308	primuliflorum
F 15954	annae	F 16311	trichostomum
F 15967	praestans	F 16312	primuliflorum
F 15968	x flavorufum (NH)	F 16313	telmateium
F 15969	balfourianum	F 16314	roxieanum Cucullatum
F 15975	peramoeunum	F 16315	adenogynum
F 15976	peramoeunum	F 16316	balfourianum
F 15977	fictolacteum	F 16318	dasycladum
F 15998	moulmainense	F 16319	x agglutinatum (NH)
F 16000	araiophyllum	F 16320	mimetes aff.
F 16002	basilicum	F 16321	wardii
F 16006	habrotrichum	F 16351	protistum
F 16032	ciliicalyx	F 16352	leptopeplum
F 16084	moulmainense	F 16352	x agastum (NH)
F 16128	hippophaeoides	F 16353	lukiangense
F 16249	tatsienense	F 16354	anthosphaerum
F 16250	hemitrichotum	F 16355	leptothrium
F 16252	chryseum	F 16356	primuliflorum
F 16257	telmateium	F 16360	chasmanthum

F 16361	coriaceum	F 16576	brevistylum
F 16362	hormophorum	F 16577	tapetiforme
F 16363	cephalanthum	F 16579	rupicola
F 16364	coriaceum	F 16580	chryseum
F 16367	lukiangense	F 16581	esetulosum
F 16375	beesianum	F 16583	rupicola
F 16377	sphaeroblastum	F 16584	oreotrephes
F 16378	lukiangense	F 16591	anthosphaerum
F 16379	roxieanum Cucullatum	F 16595	primuliflorum
F 16380	dryophyllum	F 16597	rubiginosum
F 16428	roxieanum Globigerum	F 16598	tapetiforme aff.
F 16436	primuliflorum	F 16604	proteoides
F 16439	x agglutinatum (NH)	F 16606	roxieanum
F 16449	chameunum	F 16609	proteoides
F 16450	tapetiforme	F 16616	roxieanum Cucullatum
F 16451	aganniphum	F 16617	rupicola
F 16455	adenogynum	F 16631	irroratum
F 16459	x agglutinatum (NH)	F 16632	delavayi
F 16463	x chlorops (NH)	F 16637	roxieanum Oreonastes
F 16464	x agglutinatum (NH)	F 16643	adenogynum
F 16467	dryophyllum	F 16652	clementinae
F 16469	roxieanum Cucullatum	F 16655	rex
F 16472	aganniphum	F 16656	dryophyllum
F 16473	adenogynum	F 16667	roxieanum Globigerum
F 16474	beesianum	F 16668	x bathyphyllum (NH)
F 16477	roxieanum Cucullatum	F 16673	dryophyllum
F 16488	x schizopeplum (NH)	F 16677	aganniphum
F 16489	x agglutinatum (NH)	F 16679	selense
F 16493	wardii	F 16680	x flavorufum (NH)
F 16508	roxieanum Oreonastes	F 16681	chryseum
F 16509	proteoides	F 16683	beesianum
F 16511	wardii	F 16684	selense
F 16531	uvariifolium	F 16687	microgynum
F 16533	floccigerum	F 16688	anthosphaerum
F 16543	oreotrephes	F 16691	chaetomallum
F 16555	glischrum	F 16692	chasmanthum

F 16693	beesianum	F 16806	balfourianum
F 16695	erastum	F 16811	balfourianum
F 16699	beesianum	F 16816	hormophorum
F 16702	temenium	F 16836	dryophyllum
F 16711	x eudoxum (NH)	F 17100	phaeochrysum
F 16713	anthosphaerum	F 17110	sphaeroblastum
F 16721	fulvoides	F 17165	trichostomum
F 16724	beesianum	F 17205	fictolacteum
F 16726	x schizopeplum (NH)	F 17220	unidentified species
F 16727	x himertum (NH)	F 17227	dendricola
F 16728	x himertum (NH)	F 17330	chaetomallum
F 16729	x iodes (NH)	F 17333	x alutaceum aff. (NH)
F 16734	x dictyotum	F 17357	x russotinctum (NH)
F 16735	beesianum	F 17406	sinogrande
F 16736	x haemaleum (NH)	F 17407	beesianum
F 16739	saluenense	F 17447	x iodes (NH)
F 16742	x iodes (NH)	F 17456	chasmanthum
F 16743	beesianum	F 17461	lukiangense
F 16745	x iodes (NH)	F 17463	lukiangense
F 16746	beesianum	F 17464	rubiginosum
F 16749	wardii	F 17466	x flavorufum (NH)
F 16750	selense	F 17473	dryophyllum
F 16751	x eudoxum (NH)	F 17476	chasmanthum
F 16752	x bathyphyllum (NH)	F 17483	rubiginosum
F 16753	x flavorufum (NH)	F 17495	anthosphaerum
F 16754	x agglutinatum (NH)	F 17501	trichocladum
F 16755	x dictyotum (NH)	F 17539	ciliicalyx
F 16760	x schizopeplum (NH)	F 17551	diaprepes
F 16764	x flavorufum (NH)	F 17559	ciliicalyx
F 16765	proteoides	F 17560	apodectum
F 16770	aganniphum	F 17572	crassum
F 16771	x flavorufum (NH)	F 17586	diaprepes
F 16778	x flavorufum (NH)	F 17588	virgatum
F 16779	x iodes (NH)	F 17596	valentinianum
F 16780	dryophyllum	F 17610	facetum
F 16790	aechmophyllum	F 17616	facetum

F 17622	heliolepis	F 17996	neriiflorum
F 17626	neriiflorum	F 18000	suberosum
F 17636	fulvum	F 18022	trichocladum
F 17637	schistocalyx	F 18028	arizelum
F 17650	basilicum	F 18030	campylogynum
F 17651	callimorphum	F 18036	meddianum
F 17665	pseudociliipes	F 18041	platyphyllum
F 17678	basilicum	F 18042	zaleucum
F 17681	fulvum	F 18044	callimorphum
F 17696	griersonianum	F 18045	arizelum
F 17703	meddianum	F 18049	griersonianum
F 17708	peramoeunum	F 18052	basilicum
F 17735	rubiginosum	F 18054	sidereum
F 17738	dendricola	F 18069	habrotrichum
F 17750	trichocladum	F 18108	basilicum
F 17819	moulmainense	F 18153	apodectum
F 17824	genestierianum	F 18167	apodectum
F 17827	anthosphaerum	F 18168	anthosphaerum
F 17829	tanastylum	F 18171	facetum
F 17832	moulmainense	F 18173	crassum
F 17835	tanastylum	F 18210	crassum
F 17836	araiophyllum	F 18273	facetum
F 17851	neriiflorum Agetum	F 18310	fulvum
F 17852	facetum	F 18329	genestierianum
F 17853	mallotum	F 18349	trichocladum
F 17854	fulvum	F 18355	pseudociliipes
F 17900	pseudociliipes	F 18393	protistum
F 17918	microphyton	F 18394	protistum
F 17920	rubiginosum	F 18395	kyawii
F 17927	basilicum	F 18458	protistum
F 17928	kyawii	F 18475	moulmainense
F 17930	peramoeunum	F 18548	protistum
F 17937	zaleucum	F 18686	sanguineum aff.
F 17943	anthosphaerum	F 18900	virgatum
F 17950	neriiflorum	F 18901	eclecteum
F 17963	valentinianum	F 18902	decorum

F 18903	chasmanthum	F 18938	citriniflorum
F 18904	aechmophyllum	F 18943	eclecteum
F 18905	saluenense	F 19006	proteoides
F 18906	chasmanthum	F 19007	vernicosum
F 18907	brevistylum	F 19008	sanguineum
F 18908	moulmainense	F 19009	sanguineum
F 18909	mekongense	F 19010	beesianum
F 18912	x iodes (NH)	F 19011	beesianum
F 18914	praestans	F 19014	pholidotum
F 18917	chaetomallum	F 19015	rubiginosum
F 18918	keleticum	F 19019	selense
F 18920	x flavorufum (NH)	F 19154	proteoides
F 18933	rubiginosum	F 19165	proteoides
F 18934	x haemaleum (NH)	F 19169	sanguineum
F 18937	x eudoxum (NH)	F 19193	vernicosum



R. praestans.



- *opposite left* -
R. racemosum on the mountains of W. China.



F 13900 - *R. trichocladum* var. *mekongense*

F 13904 - *R. saluenense* var. *chameunum*

F 13904 - *R. saluenense* var. *chameunum*

F 13905 - *R. dasypetalum*

F 13905 - *R. dasypetalum*

F 13915 - *R. russatum*

F 13915 - *R. russatum*

F 14009 - *R. selense* ssp. *selense*



F 14195 - *R. x albertsenianum*



F 14242 - *R. microgynum*



F 14242 - *R. microgynum*



F 14242 - *R. microgynum*

F 14368 - *R. x flavorufum*

F 14718 - *R. x bathyphyllum*

F 14988 - *R. fulvum* ssp. *fulvoides*

F 14988 - *R. fulvum* ssp. *fulvoides*



F 14988 - *R. fulvum* ssp. *fulvoides*



F 14988 - *R. fulvum* ssp. *fulvoides*

F 14988 - *R. fulvum* ssp. *fulvoides*

F 15097 - *R. irroratum* ssp. *irroratum*

F 15097 - *R. irroratum* ssp. *irroratum*


F 15097 - *R. irroratum* ssp. *irroratum*


F 15097 - *R. irroratum* ssp. *irroratum*


F 15097 - *R. irroratum* ssp. *irroratum*



F 15097 - *R. irroratum* ssp. *irroratum*

F 15392 - *R. complexum*

F 15392 - *R. complexum*



F 15570 - *R. cyanocarpum*

F 15575 - *R. x dimitrium*

F 15575 - *R. x dimitrium*

F 15575 - *R. x dimitrium*

F 15606 - *R. vernicosum*

F 15609 - *R. bureavii*

F 15609 - *R. bureavii*

F 15609 - *R. bureavii*

F-15609 - *R. bureavii*

F 15609 - *R. bureavii*

F 15665 - *R. x diphrocalyx*

F 15665 - *R. x diphrocalyx*

F 15688 - *R. zaleucum* var. *zaleucum*

F 15688 - *R. zaleucum* var. *zaleucum*

F 15778 - *R. habrotrichum*

F 15778 - *R. habrotrichum*

F-15778 - *R. habrotrichum*

F 15778 - *R. habrotrichum*

F 15782 - *R. sulfureum*

F 15782 - *R. sulfureum*

F 15887 - *R. maddenii* ssp. *crassum*

F 15887 - *R. maddenii* ssp. *crassum*

F 16249 - *R. yunnanense* ssp. *tatsienense*

F 16375 - *R. beesianum*

F 16450 - *R. tapetiforme*

F 16463 - *R. x chlorops*

F 16463 - *R. x chlorops*

F 16463 - *R. x chlorops*

F 16472 - *R. aganniphum*



F 16579 - *R. rupicola* ssp. *rupicola*



F 16579 - *R. rupicola* ssp. *rupicola*



F 16579 - *R. rupicola* ssp. *rupicola*

F 16687 - *R. microgynum*

F 16790 - *R. aechmophyllum*

F 16790 - *R. aechmophyllum*

F 16790 - *R. aechmophyllum*

F 16790 - *R. aechmophyllum*

F 16811 - *R. balfourianum*

F 16811 - *R. balfourianum*



F 16811 - *R. balfourianum*



F 16811 - *R. balfourianum*

F 16811 – *R. balfourianum*

F 17827 - *R. anthosphaerum*

F 17853 - *R. mallotum*

F 17853 - *R. mallotum*

F 17853 - *R. mallotum*

F 17853 - *R. mallotum*

F 17943 - *R. anthosphaerum* Eritimum Group

F 18310 - *R. fulvum* ssp. *fulvum*

F 18310 - *R. fulvum* ssp. *fulvum*

F 18310 - *R. fulvum* ssp. *fulvum*

F 18904 - *R. aechmophyllum*

F 18914 - *R. praestans*

F 18914 - *R. praestans*

F 18914 - *R. praestans*

F 18943 - *R. eclecteum*

F 18943 - *R. eclecteum*

F 19193 - *R. vernicosum*

F 19193 - *R. vernicosum*



F 19335 - *R. protistum*

F 19335 - *R. protistum*



F 19335 - *R. protistum* FCC 1953

F 19335 - *R. protistum* FCC 1953

The 1921/1922 Collections made in Yunnan:

F 19335	protistum	F 19758	aganniphum
F 19355	protistum	F 19769	floccigerum
F 19404	racemosum	F 19772	lukiangense
F 19437	chameunum	F 19773	aganniphum
F 19440	russatum	F 19781	lukiangense
F 19450	scintillans	F 19783	phaeochrysum
F 19458	russatum	F 19793	dryophyllum
F 19467	wardii	F 19798	dryophyllum
F 19468	anthosphaerum	F 19814	chasmanthum
F 19479	saluenense	F 19819	lukiangense
F 19492	cephalanthum	F 19822	x agglutinatum (NH)
F 19512	wardii	F 19825	chasmanthum
F 19515	forrestii	F 19827	x alutaceum
F 19540	martinianum	F 19828	aganniphum
F 19541	hypolepidotum	F 19844	monanthum
F 19544	oreotrephes	F 19866	chryseum
F 19552	beesianum	F 19869	moulmainense
F 19554	lukiangense	F 19872	hypolepidotum
F 19555	fictolacteum	F 19911	chaetomallum
F 19562	x russotinctum (NH)	F 19911a	x hemigymnum (NH)
F 19567	x iodes (NH)	F 19912	mekongense
F 19569	x didymoides (NH)	F 19913	saluenense
F 19570	megeratum	F 19915	keleticum
F 19574	x triplonaevium (NH)	F 19917	genestierianum
F 19597	nigropunctatum	F 19919	keleticum
F 19607	chryseum	F 19930	mekongense
F 19674	tapetiforme	F 19952	eclecteum
F 19695	rubiginosum	F 19954	setiferum
F 19701	hormophorum	F 19955	chaetomallum
F 19704	x tritifolium (NH)	F 19956	monanthum
F 19713	aganniphum	F 19958	x haemaleum (NH)
F 19714	x agglutinatum (NH)	F 19959	chaetomallum
F 19716	aganniphum	F 19960	dealbatum
F 19733	x agglutinatum (NH)	F 19977	pocophorum
F 19743	wardii	F 19978	chaetomallum
F 19744	aganniphum	F 19982	x didymoides (NH)
F 19983	pocophorum	F 20220	didymum
F 19993	chryseum	F 20230	tephropeplum
F 19994	chameunum	F 20235	keleticum
F 20003	sperabiloides	F 20239	didymum
F 20005	heliolepis	F 20246	martinianum
F 20008	lukiangense	F 20253	x haemaleum (NH)
F 20015	chaetomallum	F 20255	keleticum
F 20019	pocophorum	F 20262	habrotrichum
F 20020	fulvoides	F 20286	x flavorufum
F 20021	xanthostephanum	F 20291	vernicosum
F 20023	caloxanthum	F 20297	bainbridgeanum
F 20025	chaetomallum	F 20299	chaetomallum
F 20026	chaetomallum	F 20302	stewartianum aff.
F 20027	forrestii	F 20305	floccigerum aff.
F 20028	x hemidartum (NH)	F 20306	arizelum
F 20062	cephalanthum	F 20318	dryophyllum
F 20063	chasmanthum	F 20321	floccigerum
F 20064	chasmanthum	F 20322	coryanum
F 20067	virgatum	F 20323	bainbridgeanum
F 20071	temenium	F 20330	dryophyllum
F 20075	fulvoides	F 20332	megeratum
F 20078	catacosmum	F 20333	chaetomallum
F 20085	anthosphaerum	F 20338	setiferum
F 20090	citriniflorum	F 20347	x agglutinatum (NH)
F 20094	megacalyx	F 20365	arizelum
F 20095	rubiginosum	F 20381	rex
F 20106	protistum	F 20387	sinogrande
F 20118	crassum	F 20388	nuttallii
F 20120	fictolacteum	F 20415	adenogynum
F 20176	aechmophyllum	F 20416	sphaeroblastum
F 20185	aechmophyllum	F 20418	dryophyllum
F 20196	primuliflorum	F 20419	mimetes
F 20208	tapetiforme	F 20425	x russotinctum (NH)
F 20213	x agglutinatum (NH)	F 20426	x iodes aff. (NH)
F 20215	chaetomallum	F 20428	x sinosimulans (NH)
F 20218	horaeum	F 20429	primuliflorum

F 20430	yunnanense	F 20498	rex
F 20432	chryseum	F 20525	mollicomum
F 20434	yunnanense	F 20625	rubiginosum
F 20440	sphaeroblastum	F 20629	oreotrephes
F 20442	dryophyllum	F 20648	tatsienense x ? (NH)
F 20444	adenogynum	F 20678	irroratum
F 20445	sphaeroblastum	F 20693	lepidotum
F 20446	sphaeroblastum	F 20708	rupicola
F 20447	sphaeroblastum	F 20783	oreotrephes
F 20450	intricatum	F 20793	yunnanense
F 20451	beesianum	F 20795	aechmophyllum
F 20452	primuliflorum	F 20801	puralbum
F 20454	impeditum	F 20814	anthosphaerum
F 20455	balfourianum	F 20816	fulvum
F 20456	balfourianum	F 20817	fictolacteum
F 20457	telmateium	F 20819	sinogrande
F 20460	yungningense	F 20821	rex
F 20461	telmateium	F 20824	trichocladum
F 20462	nigropunctatum	F 20825	sperabiloides
F 20463	yungningense	F 20826	martinianum
F 20464	pseudorupicola	F 20832	coryanum
F 20465	primuliflorum	F 20834	wardii
F 20470	wardii	F 20835	hypolepidotum
F 20476	trichostomum	F 20840	oreotrephes
F 20477	telmateium	F 20845	genestierianum
F 20480	trichostomum	F 20861	keleticum
F 20481	oreotrephes	F 20863	protistum
F 20482	tatsienense	F 20864	keleticum
F 20484	racemosum	F 20865	anthosphaerum
F 20485	hormophorum	F 20877	floccigerum aff.
F 20486	tatsienense	F 20879	monanthum
F 20488	orthocladum	F 20880	xanthostephanum
F 20489	oreotrephes	F 20881	bainbridgeanum
F 20491	hemitrichotum	F 20884	tephropeplum
F 20492	impeditum	F 20885	floccigerum aff.
F 20493	orthocladum	F 20886	stewartianum x ? (NH)

F 20887	unidentified species	F 21022	roxieanum
F 20888	didymum	F 21027	rubiginosum
F 20889	temenium	F 21030	cuneatum
F 20891	sanguineum	F 21031	intricatum
F 20893	sanguineum	F 21036	leptothrium
F 20895	catacosmum	F 21039	sphaeroblastum
F 20896	riparium	F 21040	sphaeroblastum
F 20897	megacalyx	F 21045	x agglutinatum (NH)
F 20899	nuttallii	F 21047	dryophyllum
F 20905	sanguineum	F 21048	dryophyllum
F 20906	megeratum	F 21049	roxieanum Cucullatum
F 20910	sanguineum	F 21051	sphaeroblastum
F 20911	sanguineum	F 21052	dryophyllum
F 20912	saluenense	F 21055	balfourianum
F 20917	crassum	F 21056	balfourianum
F 20923	aechmophyllum	F 21239	telmateium
F 20926	aechmophyllum	F 21241	orthocladum
F 20934	lukiangense	F 21248	intricatum
F 20950	russatum	F 21250	telmateium
F 20956	chryseum	F 21252	racemosum & tatsienense
F 20961	hylaeum	F 21253	trichostomum
F 20973	chasmanthum	F 21265	prostratum
F 20978	lukiangense	F 21270	tatsienense
F 20987	mekongense	F 21274	orthocladum x ? (NH)
F 21000	selense	F 21282	yungningense
F 21006	oreotrephes	F 21287	dryophyllum
F 21009	sphaeroblastum	F 21288	orthocladum
F 21010	sphaeroblastum	F 21289	orthocladum
F 21011	dryophyllum	F 21292	elegantulum
F 21012	dryophyllum	F 21297	glomerulatum
F 21013	eclecteum	F 21299	trichostomum
F 21017	wardii	F 21301	nigropunctatum Stictophyllum
F 21018	dryophyllum	F 21304	dasypetalum
F 21019	dryophyllum	F 21306	racemosum
F 21020	x agglutinatum (NH)	F 21321	racemosum
F 21021	phaeochrysum	F 21323	irroratum

F 21339	hemitrichotum	F 21559	scintillans
F 21344	intricatum	F 21560	racemosum
F 21348	rubiginosum	F 21563	dasycladum
F 21351	racemosum	F 21564	edgeworthii
F 21358	yunnanense	F 21577	telmateium
F 21375	cuneatum	F 21581	fastigiatum
F 21377	telmateium	F 21582	crassum
F 21390	phaeochrysum	F 21586	beesianum
F 21400	phaeochrysum	F 21588	adenogynum
F 21405	sphaeroblastum	F 21680	nuttallii
F 21408	roxieanum Cucullatum	F 21681	floccigerum
F 21409	adenogynum	F 21682	lukiangense
F 21410	adenogynum	F 21683	lukiangense
F 21442	tatsienense	F 21685	lukiangense
F 21462	fimbriatum	F 21686	anthosphasrum
F 21463	xanthostephanum	F 21687	stewartianum aff.
F 21470	chasmanthum	F 21688	bainbridgeanum
F 21475	irroratum	F 21689	selense
F 21476	fimbriatum	F 21690	unidentified species
F 21478	lukiangense	F 21691	moulmainense
F 21483	scintillans	F 21692	genestierianum
F 21487	scintillans	F 21693	coryanum
F 21488	racemosum	F 21694	eurysiphon
F 21490	russatum & rupicola	F 21695	martinianum
F 21492	telmateium	F 21696	megacalyx
F 21506	russatum	F 21697	bainbridgeanum
F 21507	fastigiatum	F 21698	leptothrium
F 21528	scintillans	F 21699	mekongense
F 21529	russatum & rupicola	F 21700	anthosphaerum
F 21531	phaedropum	F 21701	megeratum
F 21533	fastigiatum & rigidum	F 21702	floccigerum
F 21539	fictolacteum	F 21703	floccigerum
F 21546	roxieanum	F 21704	floccigerum
F 21547	telmateium	F 21705	sinogrande
F 21549	racemosum	F 21706	tephropeplum
F 21551	wardii	F 21707	xanthostephanum

F 21708	stewartianum	F 21751	citriniflorum
F 21709	x hemidartum (NH)	F 21752	citriniflorum
F 21710	unidentified species	F 21753	haematodes
F 21711	pocophorum	F 21754	x didymoides (NH)
F 21712	pocophorum	F 21755	caloxanthum
F 21713	pocophorum	F 21756	keleticum
F 21714	edgeworthii	F 21757	keleticum
F 21716	virgatum	F 21758	chaetomallum
F 21718	chamaethomsonii / forrestii	F 21759	haematodes
F 21720	pocophorum	F 21760	saluenense
F 21721	pocophorum	F 21761	bainbridgeanum
F 21723	chamaethomsonii	F 21762	bainbridgeanum
F 21724	forrestii aff.	F 21763	stewartianum
F 21725	x xanthanthum (NH)	F 21764	x eudoxum (NH)
F 21727	catacosmum	F 21765	x didymoides (NH)
F 21728	x hemigymnum (NH)	F 21766	bainbridgeanum
F 21729	x xanthanthum (NH)	F 21767	x eudoxum (NH)
F 21730	x xanthanthum aff. (NH)	F 21768	x chamaethauma (NH)
F 21731	x xanthanthum (NH)	F 21769	eclecteum
F 21732	x haemaleum (NH)	F 21770	x bellatulum (NH)
F 21733	temenium Gilvum	F 21771	fictolacteum
F 21734	temenium	F 21772	saluenense
F 21735	x haemaleum (NH)	F 21773	anthosphaerum
F 21736	x hillieri (NH)	F 21774	lukiangense
F 21737	x hillieri (NH)	F 21775	martinianum
F 21738	x eudoxum (NH)	F 21776	mekongense
F 21739	sanguineum	F 21777	floccigerum
F 21740	x haemaleum (NH)	F 21778	xanthostephanum
F 21741	x erythrocalyx (NH)	F 21779	floccigerum
F 21743	selense	F 21780	floccigerum
F 21744	dealbatum	F 21781	stewartianum
F 21745	chaetomallum aff.	F 21782	sanguineum
F 21746	x didymoides (NH)	F 21783	x didymoides (NH)
F 21747	x didymoides (NH)	F 21784	temenium Gilvum aff.
F 21748	x didymoides (NH)	F 21785	chaetomallum aff.
F 21750	didymum	F 21786	forrestii

F 21787	stewartianum	F 21844	temenium Gilvum
F 21809	temenium	F 21845	x eudoxum (NH)
F 21810	fulvum	F 21846	stewartianum x ? (NH)
F 21811	leptocarpum	F 21848	chaetomallum aff.
F 21812	glischrum	F 21849	chaetomallum aff.
F 21813	glischrum	F 21850	horaeum
F 21814	fulvoides	F 21851	horaeum
F 21815	fulvum	F 21852	horaeum
F 21816	uvariifolium	F 21853	haematodes
F 21817	uvariifolium	F 21854	horaeum
F 21818	coriaceum	F 21855	horaeum
F 21819	x haemaleum (NH)	F 21856	x didymoides (NH)
F 21821	bainbridgeanum	F 21857	chaetomallum
F 21822	oreotrephes	F 21858	x hillieri (NH)
F 21823	x haemaleum (NH)	F 21860	horaeum
F 21824	sperabiloides	F 21861	arizelum
F 21825	monanthum	F 21862	arizelum
F 21826	chaetomallum	F 21863	fictolacteum
F 21827	x eudoxum (NH)	F 21864	arizelum
F 21828	x bellatulum (NH)	F 21865	arizelum
F 21828	pocophorum	F 21866	arizelum
F 21829	bainbridgeanum	F 21867	fictolacteum
F 21830	pocophorum	F 21868	fictolacteum
F 21831	chaetomallum	F 21869	rex
F 21832	bainbridgeanum	F 21870	semnoides
F 21833	bainbridgeanum	F 21871	arizelum
F 21834	bainbridgeanum	F 21872	chaetomallum
F 21835	oreotrephes	F 21873	chaetomallum
F 21836	caloxanthum	F 21874	selense
F 21837	x hemigymnum (NH)	F 21875	caloxanthum
F 21838	eclecteum	F 21876	selense
F 21839	x bellatulum (NH)	F 21877	setiferum
F 21840	eclecteum	F 21878	selense
F 21841	stewartianum	F 21879	selense
F 21842	eclecteum	F 21880	crinigerum
F 21843	coriaceum	F 21881	eclecteum

F 21882	eclecteum	F 21932	telmateium
F 21884	x hemigymnum (NH)	F 21934	traillianum
F 21885	stewartianum	F 21936	crassum
F 21886	x bellatulum (NH)	F 21944	roxieanum Cucullatum
F 21887	x bellatulum (NH)	F 21948	cuneatum
F 21888	stewartianum	F 21954	wardii
F 21889	stewartianum	F 21955	racemosum
F 21891	stewartianum	F 21959	racemosum
F 21892	selense	F 21965	racemosum
F 21893	bainbridgeanum	F 21969	delavayi
F 21894	bainbridgeanum	F 21972	telmateium
F 21895	bainbridgeanum	F 21974	telmateium
F 21896	fulvoides	F 21975	rupicola
F 21897	fulvoides	F 21977	lukiangense
F 21898	fulvoides	F 21981	anthosphaerum
F 21899	coriaceum	F 21987	russatum
F 21900	chamaethomsonii	F 21988	longistylum
F 21901	dealbatum	F 21990	russatum
F 21902	dealbatum	F 21995	russatum
F 21903	dealbatum	F 22014	roxieanum Cucullatum
F 21904	dealbatum	F 22019	dasycladum
F 21905	temenium Gilvum aff.	F 22020	fictolacteum
F 21906	x hillieri (NH)	F 22092	hemitrichotum
F 21907	x haemaleum (NH)	F 22108	scintillans
F 21908	x hillieri (NH)	F 22187	roxieanum Cucullatum
F 21909	x eudoxum (NH)	F 22197	fimbriatum
F 21910	stewartianum x ? (NH)	F 22202	clementinae
F 21911	x hillieri (NH)	F 22203	cuneatum
F 21912	x hillieri (NH)	F 22295	russatum & rupicola
F 21914	temenium Gilvum	F 22299	scintillans
F 21915	x haemaleum (NH)	F 22300	campylogynum
F 21916	x chamaethauma (NH)	F 22320	primuliflorum
F 21917	selense	F 22610	stewartianum
F 21918	stewartianum	F 22611	stewartianum
F 21919	stewartianum	F 22612	stewartianum
F 21923	cephalanthum	F 22613	stewartianum

F 22614	stewartianum	F 22695	dealbatum
F 22615	stewartianum	F 22697	temenium Gilvum
F 22617	stewartianum	F 22698	dealbatum
F 22618	stewartianum	F 22699	temenium Gilvum
F 22619	stewartianum	F 22700	x eudoxum (NH)
F 22620	stewartianum	F 22702	stewartianum
F 22621	stewartianum	F 22703	fictolacteum
F 22647	eclecteum	F 22705	sanguineum
F 22648	eclecteum	F 22706	x chamaethauma (NH)
F 22649	chaetomallum aff.	F 22708	x bellatulum (NH)
F 22652	xanthostephanum	F 22709	temenium Gilvum aff.
F 22653	xanthostephanum	F 22710	eclecteum
F 22654	monanthum	F 22711	selense
F 22656	x xanthanthum (NH)	F 22713	bainbridgeanum
F 22657	chaetomallum	F 22714	bainbridgeanum
F 22658	chaetomallum	F 22715	bainbridgeanum
F 22659	keleticum	F 22716	bainbridgeanum
F 22665	xanthanthum (NH)	F 22717	bainbridgeanum
F 22666	saluenense	F 22718	bainbridgeanum
F 22667	x didymoides (NH)	F 22719	bainbridgeanum
F 22668	horaeum	F 22720	bainbridgeanum
F 22670	haematodes	F 22721	bainbridgeanum
F 22671	haematodes	F 22722	bainbridgeanum
F 22674	chamaethomsonii	F 22723	hypolepidotum
F 22675	horaeum	F 22724	x haemaleum (NH)
F 22676	sanguineum	F 22725	sanguineum
F 22677	x haemaleum (NH)	F 22726	x haemaleum (NH)
F 22679	citriniflorum	F 22728	eclecteum
F 22680	citriniflorum aff.	F 22729	bainbridgeanum
F 22682	x haemaleum (NH)	F 22730	temenium Gilvum
F 22683	citriniflorum	F 22733	lukiangense
F 22685	x didymoides (NH)	F 22735	lukiangense
F 22687	x haemaleum (NH)	F 22739	selense
F 22688	chaetomallum	F 22751	nuttallii
F 22690	horaeum	F 22758	selense
F 22694	horaeum	F 22761	sinogrande

F 22767	setiferum	F 22883	chaetomallum
F 22768	fulvoides	F 22884	anthosphaerum
F 22770	rex	F 22885	anthosphaerum
F 22771	arizelum	F 22886	x hemidartum (NH)
F 22772	rex	F 22890	fictolacteum
F 22784	rex	F 22891	eclecteum
F 22785	fictolacteum	F 22892	eclecteum
F 22786	arizelum	F 22893	eclecteum
F 22787	arizelum	F 22894	pocophorum
F 22788	rex	F 22895	setiferum
F 22800	selense	F 22897	caloxanthum
F 22802	chamaethomsonii	F 22898	selense
F 22803	floccigerum	F 22899	selense
F 22804	floccigerum	F 22900	sperabiloides
F 22805	floccigerum	F 22901	bainbridgeanum
F 22806	floccigerum	F 22902	fulvoides
F 22807	floccigerum	F 22903	fulvoides
F 22808	floccigerum aff.	F 22905	selense
F 22809	floccigerum	F 22906	selense
F 22810	floccigerum	F 22909	pocophorum
F 22822	megacalyx	F 22910	catacosmum
F 22831	edgeworthii	F 22911	pocophorum
F 22833	virgatum	F 22912	pocophorum
F 22842	didymum	F 22913	pocophorum
F 22846	bainbridgeanum	F 22915	catacosmum
F 22847	x xanthanthum (NH)	F 22916	pocophorum
F 22850	eclecteum	F 22918	fulvoides
F 22853	eclecteum	F 22922	forrestii
F 22856	leptocarpum	F 22923	forrestii x ? (NH)
F 22857	chaetomallum	F 22924	forrestii
F 22858	chaetomallum aff.	F 22938	eurysiphon
F 22859	chaetomallum aff.	F 22939	martinianum
F 22860	chaetomallum aff.	F 22940	martinianum
F 22862	horaeum	F 22941	x hemidartum (NH)
F 22863	chaetomallum aff.		

Addendum:

The table entries for both this expedition and the 1924/1925 trip contain field numbers that separately refer to flower and seed collections, in effect, doubling the number of items. For instance, Forrest made a grand total of 24 gatherings of *R. aperantum* over the course of two expeditions - the 1924/1925 trip, and the 1930/1931 trip - but 45 are listed. The three collections made during his seventh expedition, are not duplicated, but those made on the sixth excursion are, with 21 actual seed gatherings resulting in 42 table entries, resulting in an aggregate of 45 instead of 24.

The reason for this was given in the 1980 edition of the *Rhododendron Handbook:* in cultivation, the numbers had become confused, with both being used in gardens to identify plants raised from the seed. Sticking with *R. aperantum,* F 26925 - presumably for the flower - equals F 27597 - for the seed - while F 26926 equals F 27587, and F 26930 equals F 27651, which illustrates the complete lack of any coherent linkage between the pairings.

Accepting this as a fait accompli was the easiest solution: that a plant germinated from the F 27597 gathering might also bear an F 26925 label. The 1998 *Rhododendron Handbook* maintains this compromise, as do the tables herein.



R. decorum.

- opposite -
R. bullatum (now *R. edgeworthii*) on the eastern flank of the Tali Divide..





F 19404 - *R. racemosum*



F 19404 - *R. racemosum*



F 19404 - *R. racemosum*



F 19450 - *R. scintillans*



F 19450 - *R. scintillans*

F 19450 - *R. scintillans*

F 19450 - *R. wardii* var. *wardii*



F 19479 - *R. saluenense* var. *saluenense*



F 19479 - *R. saluenense* var. *saluenense*



F 19479 - *R. saluenense* var. *saluenense*



F 19515 - *R. forrestii* var. *forrestii* Repens Group



F 19515 - *R. forrestii* var. *forrestii* Repens Group



F 19515 - *R. forrestii* var. *forrestii* Repens Group

F 19567 - *R. x iodes*

F 19567 - *R. x iodes*


F 19695 - *R. rubiginosum* Desquamatum Group


F 19695 - *R. rubiginosum* Desquamatum Group


F 19695 - *R. rubiginosum* Desquamatum Group

F 19713 - *R. x flavorufum*

F 19769 - *R. floccigerum* ssp. *floccigerum*

F 19769 - *R. floccigerum* ssp. *floccigerum*

F 19822 - *R. x agglutinatum*

F 19822 - *R. x agglutinatum*

F 19915 - *R. calostrotum* ssp. *keleticum*



F 19915 - *R. calostrotum* ssp. *keleticum*



F 19919 - *R. calostrotum* ssp. *keleticum*

F 19919 - *R. calostrotum* ssp. *keleticum*

F 19958 - *R. x haemaleum*

F 20028 - *R. x hemidartum*



F 20078 - *R. haematodes* ssp. *catacosmum*



F 20078 - *R. haematodes* ssp. *catacosmum*

F 20246 - *R. martinianum*



F 20246 - *R. martinianum*

F 20253 - *R. x haemaleum*

F 20253 - *R. x haemaleum*

F 20305 - *R. floccigerum* ssp. *floccigerum*

F 20305 - *R. floccigerum* ssp. *floccigerum*

F 20305 - *R. floccigerum* ssp. *floccigerum*

F 20305 - *R. floccigerum* ssp. *floccigerum*

F 20333 - *R. haematodes* ssp. *chaetomallum* ‘Tower Court’

F 20333 - *R. haematodes* ssp. *chaetomallum* ‘Tower Court’



F 20416 - *R. sphaeroblastum* var. *sphaeroblastum*



F 20416 - *R. sphaeroblastum* var. *sphaeroblastum*



F 20416 - *R. sphaeroblastum* var. *sphaeroblastum*

F 20425 - *R. x russotinctum* ‘Easter Island’ AM 1980

F 20442 - *R. phaeochrysum* var. *dryophyllum*



F 20442 - *R. phaeochrysum* var. *dryophyllum*


F 20444 - *R. adenogynum*


F 20444 - *R. adenogynum*


F 20444 - *R. adenogynum*

F 20444 - *R. adenogynum*

F 20454 - *R. fastigiatum* ssp. *impeditum*

F 20454 - *R. fastigiatum* ssp. *impeditum*


F 20476 - R. trichostomum


F 20476 - R. trichostomum


F 20476 - R. trichostomum

F 20476 - *R. trichostomum*



F 20476 – *R. trichostomum*

F 20476 - *R. trichostomum*

F 20482 - *R. yunnanense* ssp. *tatsienense*

F 20482 - *R. yunnanense* ssp. *tatsienense*

F 20485 - *R. yunnanense* ssp. *hormophorum*

F 20485 - *R. yunnanense* ssp. *hormophorum*

F 20485 - *R. yunnanense* ssp. *hormophorum*

F 20485 - *R. yunnanense* ssp. *hormophorum*


F 20488 - *R. orthocladum*


F 20488 - *R. orthocladum*


F 20488 - *R. orthocladum*

F 20489 - *R. x exquisitum*

F 20489 - *R. x exquisitum*

F 20489 - *R. x exquisitum*

F 20625 - *R. rubiginosum*


F 20625 - *R. rubiginosum*


F 20625 - *R. rubiginosum*


F 20625 - *R. rubiginosum*

F 21250 - *R. telmateium*

F 21250 - *R. telmateium*

F 21321 - *R. racemosum*

F 21348 - *R. rubiginosum*

F 21348 - *R. rubiginosum*



F 21348 - *R. rubiginosum*

F 21358 - *R. yunnanense ssp. yunnanense*

F 21470 - *R. augustinii ssp. chasmanthum*

F 21470 - *R. augustinii ssp. chasmanthum*

F 21470 - *R. augustinii ssp. chasmanthum*

F 21488 - *R. racemosum*

F 21549 - *R. racemosum*

F 21549 - *R. racemosum*

F 21549 - *R. racemosum*

F 21551 - *R. wardii* var. *wardii*

F 21551 - *R. wardii* var. *wardii*

F 21735 - *R. x haemaleum*

F 21740 - *R. x haemaleum*

F 21756 - *R. calostrotum* ssp. *keleticum*

F 21757 - *R. calostrotum* ssp. *keleticum*

F 21770 - *R. x bellatulum*

F 21772 - *R. saluenense* var. *saluenense*

F 21772 - *R. saluenense* var. *saluenense*

F 21839 - *R. x bellatulum*

F 21840 - *R. eclecteum*

F 21843 - *R. coriaceum*

F 21843 - *R. coriaceum*



F 21843 - *R. coriaceum*

F 21850 - *R. citriniflorum* ssp. *horaeum*

F 21850 - *R. citriniflorum* ssp. *horaeum*

F 21861 - *R. arizelum* ssp. *arizelum*

F 21865 - *R. arizelum* ssp. *arizelum*



F 21865 - *R. arizelum* ssp. *arizelum*



F 21866 - *R. arizelum* ssp. *arizelum*

F 21866 - *R. arizelum* ssp. *arizelum*



F 21870 - *R. semnoides*

F 21870 - *R. semnoides*

F 21870 - *R. semnoides*



F 21871 - *R. basilicum*

F 21878 - *R. selense* ssp. *selense*

F 21878 - *R. selense* ssp. *selense*

F 21878 - *R. selense* ssp. *selense*

F 21880 - *R. crinigerum* var. *crinigerum*

F 21887 - *R. x bellatulum*

F 21897 - *R. fulvum* ssp. *fulvoides*

F 21897 - *R. fulvum* ssp. *fulvoides*

F 21900 - *R. forrestii* var. *chamaethomsonii* x ?



F 22020 - *R. rex* ssp. *fictolacteum*

F 22197 - *R. hippophaeoides* var. *fimbriatum*

F 22197 - *R. hippophaeoides* var. *fimbriatum*

F 22941 - *R. x hemidartum*

F 22941 - *R. x hemidartum*

The 1924/1925 Collections made in NE Myanmar, SE Tibet & Yunnan:

F 24009	delavayi	F 24321	campylogynum
F 24022	leptothrium	F 24331	apodectum
F 24060	tanastylum	F 24347	valentinianum
F 24070	tanastylum	F 24350	callimorphum
F 24071	leptothrium	F 24496	crassum
F 24088	unidentified species	F 24528	stewartianum
F 24091	neriiflorum	F 24529	trichocladum
F 24101	zaleucum	F 24530	stewartianum
F 24104	meddianum	F 24532	scyphocalyx
F 24107	x diphrocalyx (NH)	F 24535	rubiginosum
F 24110	fulvum	F 24542	kyawii
F 24113	apodectum	F 24544	unidentified species
F 24116	griersonianum	F 24546	scyphocalyx
F 24117	annae	F 24562	zaleucum
F 24131	sulfureum	F 24563	sidereum
F 24138	valentinianum	F 24570	campylogynum
F 24139	basilicum	F 24571	cephalanthum
F 24140	sinogrande	F 24572	calostrotum
F 24149	pennivenium	F 24574	rupicola
F 24154	shweliense	F 24575	trichocladum
F 24160	trichocladum	F 24577	heliolepis
F 24193	arizelum	F 24587	campylogynum Myrtilloides
F 24201	facetum	F 24592	facetum
F 24219	meddianum	F 24598	stewartianum
F 24220	neriiflorum	F 24600	anthosphaerum
F 24225	basilicum	F 24603	scyphocalyx
F 24228	virgatum	F 24616	herpesticum
F 24229	sulfureum	F 24618	suberosum
F 24235	sulfureum	F 24620	herpesticum
F 24283	pseudociliipes	F 24633	lepidostylum
F 24284	leptothrium	F 24660	hylaeum
F 24305	apodectum	F 24680	kyawii
F 24308	pseudociliipes	F 24683	scyphocalyx
F 24312	tanastylum	F 24688	megacalyx
F 24314	fulvoides	F 24712	apodectum
F 24315	habrotrichum	F 24728	apodectum

F 24729	megacalyx	F 25508	chameunum
F 24730	crassum	F 25509	mekongense
F 24739	facetum	F 25512	fictolacteum
F 24740	arizelum	F 25513	beesianum
F 24742	sidereum	F 25514	roxieanum
F 24747	crassum	F 25515	roxieanum Oreonastes
F 24748	facetum	F 25516	beesianum
F 24774	dendricola	F 25518	sanguineum
F 24775	protistum	F 25520	aganniphum
F 24831	genestierianum	F 25521	sanguineum
F 25011	calostrotum	F 25524	chamaethomsonii / forrestii
F 25020	fulvum	F 25526	yungningense
F 25064	preptum	F 25529	rupicola
F 25065	scyphocalyx	F 25532	rupicola
F 25067	mallotum	F 25534	wardii
F 25076	fulvum	F 25535	dasycladum
F 25090	sidereum	F 25542	riparioides
F 25100	basilicum	F 25543	sanguineum
F 25340	sulfureum	F 25553	russatum
F 25446	yungchangense	F 25555	scintillans
F 25447	weihsiense	F 25560	chameunum
F 25448	leptothrium	F 25563	aperantum x ? (NH)
F 25449	rubiginosum	F 25564	x chionanthum (NH)
F 25458	leptothrium	F 25565	chaetomallum aff.
F 25474	sperabile	F 25569	weihsiense
F 25477	molle	F 25570	charitopes
F 25481	weihsiense	F 25572	tephropeplum
F 25483	fulvum	F 25574	unidentified species
F 25494	wardii	F 25575	hypolepidotum
F 25496	fastigiatum	F 25576	zaleucum
F 25498	scintillans	F 25577	septentrionale
F 25500	russatum	F 25578	dumicola
F 25503	riparioides	F 25579	herpesticum
F 25505	roxieanum Cucullatum	F 25580	dumicola
F 25506	riparioides	F 25581	charitopes
F 25507	x didymoides (NH)	F 25583	lacteum

F 25584	kyawii	F 25638	unidentified species
F 25585	crinigerum	F 25639	semnoides
F 25586	crassum	F 25640	floccigerum aff.
F 25588	leptocarpum	F 25641	crinigerum
F 25589	lacteum	F 25642	stewartianum
F 25593	x erythrocalyx (NH)	F 25643	ciliicalyx
F 25597	chaetomallum	F 25644	tephropeplum
F 25601	chaetomallum	F 25645	rude
F 25602	chaetomallum	F 25646	stewartianum
F 25603	eclecteum	F 25647	coelicum
F 25604	eclecteum	F 25679	sinogrande
F 25605	x hemigymnum (NH)	F 25683	riparioides
F 25606	zaleucum	F 25684	protistum
F 25607	chaetomallum	F 25697	x flavorufum (NH)
F 25608	arizelum	F 25701	proteoides
F 25609	zaleucum	F 25705	clementinae
F 25610	glischrum	F 25707	telmateium
F 25611	zaleucum	F 25714	tephropeplum
F 25612	leptocarpum	F 25716	praestans
F 25614	martinianum	F 25717	rothschildii
F 25615	stewartianum	F 25718	roxieanum Oreonastes
F 25616	glischrum	F 25719	fictolacteum
F 25617	monanthum	F 25725	glischrum
F 25618	stewartianum	F 25737	dasycladum
F 25619	euadenium	F 25738	roxieanum Cucullatum aff.
F 25620	stewartianum	F 25739	x bathyphyllum (NH)
F 25622	coriaceum	F 25740	traillianum
F 25624	nuttallii	F 25742	clementinae
F 25625	coelicum	F 25744	fulvoides
F 25627	arizelum	F 25749	roxieanum
F 25629	crassum	F 25765	zaleucum
F 25630	coriaceum	F 25766	tephropeplum
F 25631	sulfureum	F 25767	crassum
F 25633	euadenium	F 25775	tephropeplum
F 25634	euadenium	F 25777	rude
F 25636	calvescens	F 25782	arizelum

F 25784	coriaceum	F 25858	monanthum
F 25785	glischrum	F 25859	stewartianum
F 25786	pocophorum aff.	F 25862	chaetomallum
F 25787	septentrionale	F 25864	stewartianum / taggianum
F 25789	charitopes	F 25865	taggianum
F 25794	euadenium	F 25869	stewartianum
F 25796	zaleucum	F 25870	coelicum
F 25799	zaleucum	F 25872	coriaceum
F 25800	floccigerum aff.	F 25873	stewartianum
F 25803	crinigerum	F 25875	sinogrande
F 25806	calvescens	F 25877	haematodes
F 25808	charitopes	F 25878	aperantum x ? (NH)
F 25811	martinianum	F 25880	dasycladum
F 25814	stewartianum	F 25883	roxieanum Cucullatum
F 25817	riparium	F 25891	roxieanum Cucullatum
F 25818	euadenium	F 25896	fictolacteum
F 25820	tephropeplum	F 25899	dasycladum
F 25821	eclecteum x ? (NH)	F 25901	horeaum aff.
F 25822	coriaceum	F 25902	x flavorufum (NH)
F 25825	protistum	F 25904	scintillans
F 25830	semnoides	F 25906	sanguineum
F 25831	floccigerum aff.	F 25907	rupicola
F 25834	coelicum	F 25913	horeaum aff.
F 25835	chameunum	F 25914	rubrum
F 25840	x xanthanthum (NH)	F 25915	x triplonaevium (NH)
F 25841	arizelum	F 25916	clementinae
F 25843	hypolepidotum	F 25917	clementinae
F 25845	x hemigymnum (NH)	F 25918	traillianum
F 25849	unidentified species	F 25919	weihsiense
F 25850	euadenium	F 25920	sperabile
F 25852	sulfureum	F 25921	riparioides
F 25853	nuttallii	F 25922	riparioides
F 25854	crassum	F 25923 (?)	chameunum
F 25855	herpesticum	F 25923	weihsiense
F 25856	coelicum	F 25926	roxieanum Oreonastes
F 25857	crassum	F 25927	glischrum

F 25928	x russotinctum (NH)	F 26045	facetum
F 25929	roxieanum Oreonastes	F 26046	neriiflorum
F 25935	weihsiense	F 26047	moulmainense
F 25936	fulvoides	F 26048	griersonianum
F 25938	rubiginosum	F 26065	virgatum
F 25941	rupicola	F 26066	peramoeunum
F 25942	sanguineum	F 26068	crassum
F 25943	x didymoides (NH)	F 26071	facetum
F 25944	fulvum ssp. fulvoides	F 26078	pennivenium
F 25945	roxieanum	F 26081	basilicum
F 25947	rothschildii	F 26091	megacalyx
F 25957	x didymoides (NH)	F 26092	sinogrande
F 25958	fulvoides	F 26093	unidentified species
F 25959	rex	F 26109	crassum
F 25960	aganniphum	F 26110	ciliicalyx
F 25961	chamaethomsonii / forrestii	F 26112	valentinianum
F 25978	wardii	F 26113	sulfureum
F 25979	wardii	F 26120	crassum
F 25981	fastigiatum	F 26122	unidentified species
F 25982	fastigiatum	F 26145	ciliicalyx
F 25983	beesianum	F 26157	delavayi
F 25984	irroratum	F 26240	leptothrium
F 25984a	anthosphaerum	F 26316	protistum
F 25987	roxieanum	F 26347	tanastylum
F 25988	mekongense	F 26418	moulmainense
F 25992	praestans	F 26419	genestierianum
F 25993	dasycladum	F 26421	araiophyllum
F 25999	megacalyx	F 26422	sulfureum
F 26022	unidentified species	F 26423	edgeworthii
F 26023	tanastylum	F 26424	tanastylum
F 26024	simsii	F 26425	glischroides
F 26025	unidentified species	F 26426	glischroides
F 26027	simsii	F 26427	tanastylum
F 26040	tanastylum	F 26428	glischroides
F 26043	basilicum	F 26429	protistum
F 26044	unidentified species	F 26430	anthosphaerum

F 26431	tephropeplum	F 26473	hypolepidotum
F 26432	anthosphaerum	F 26474	oreotrephes x ? (NH)
F 26433	anthosphaerum	F 26475	delavayi
F 26434	sperabile	F 26476	atrokermesinum
F 26435	sperabile	F 26477	pennivenium
F 26436	anthosphaerum	F 26478	weihsiense
F 26437	tanastylum	F 26480	anthosphaerum
F 26438	araiophyllum	F 26481	araiophyllum
F 26439	tephropeplum	F 26482	rubiginosum
F 26440	taggianum	F 26483	araiophyllum
F 26441	dendricola	F 26484	tanastylum
F 26442	sperabile	F 26486	suberosum
F 26443	anthosphaerum	F 26487	neriiflorum
F 26444	pseudociliipes	F 26488	rubiginosum
F 26445	araiophyllum	F 26489	tanastylum
F 26446	sperabile	F 26490	araiophyllum
F 26447	sulfureum	F 26491	araiophyllum
F 26448	glischroides	F 26492	araiophyllum
F 26449	atrokermesinum	F 26494	araiophyllum
F 26449	neriiflorum	F 26495	atrokermesinum
F 26450	unidentified species	F 26499	atrokermesinum
F 26452	anthosphaerum	F 26507	leptothrium
F 26453	weihsiense	F 26528	araiophyllum
F 26454	anthosphaerum	F 26596	suberosum
F 26455	glischroides	F 26597	leptothrium
F 26456	sinogrande	F 26615	pseudociliipes
F 26457	tephropeplum	F 26618	edgeworthii
F 26458	sidereum	F 26629	habrotrichum
F 26459	dendricola	F 26632	habrotrichum
F 26461	pseudociliipes	F 26633	sidereum
F 26462	dendricola	F 26634	sidereum
F 26463	suberosum	F 26636	leptocarpum
F 26464	pseudociliipes	F 26791	sidereum
F 26465	sperabile	F 26792	araiophyllum
F 26466	delavayi	F 26797	araiophyllum
F 26472	pseudociliipes	F 26798	caesium

F 26921	stewartianum	F 26993	stewartianum
F 26922	basilicum	F 27002	aperantum
F 26923	crassum	F 27003	herpesticum
F 26924	scyphocalyx	F 27011	scyphocalyx
F 26925	aperantum	F 27012	herpesticum
F 26926	aperantum	F 27013	stewartianum
F 26927	scyphocalyx	F 27018	scyphocalyx
F 26928	brevistylum	F 27019	scyphocalyx
F 26929	stewartianum	F 27020	aperantum
F 26930	aperantum	F 27022	aperantum
F 26931	aperantum	F 27025	aperantum
F 26932	stewartianum	F 27050	herpesticum
F 26933	aperantum	F 27051	herpesticum
F 26934	aperantum	F 27052	herpesticum
F 26935	arizelum	F 27054	scyphocalyx
F 26936	aperantum	F 27057	scyphocalyx
F 26937	aperantum	F 27059	scyphocalyx
F 26938	aperantum	F 27061	herpesticum
F 26961	heliolepis	F 27063	herpesticum
F 26962	stewartianum	F 27065	calostrotum
F 26963	herpesticum	F 27067	arizelum
F 26964	aperantum	F 27069	facetum
F 26965	herpesticum	F 27071	herpesticum
F 26966	herpesticum	F 27073	aperantum
F 26974	herpesticum	F 27075	aperantum
F 26977	herpesticum	F 27077	aperantum
F 26978	scyphocalyx	F 27079	aperantum
F 26980	stewartianum	F 27081	aperantum
F 26981	stewartianum	F 27083	aperantum
F 26984	stewartianum	F 27085	glischrum
F 26985	caloxanthum	F 27089	herpesticum
F 26986	stewartianum	F 27093	herpesticum
F 26987	rupicola	F 27095	herpesticum
F 26988	campylogynum	F 27097	herpesticum
F 26991	campylogynum	F 27099	herpesticum
F 26992	stewartianum	F 27101	megacalyx

F 27103	zaleucum	F 27359	apodectum
F 27105	facetum	F 27367	araiophyllum
F 27108	arizelum	F 27368	araiophyllum
F 27109	pseudociliipes	F 27370	delavayi
F 27110	crassum	F 27372	tanastylum
F 27111	aperantum	F 27374	araiophyllum
F 27113	herpesticum	F 27376	araiophyllum
F 27115	scyphocalyx	F 27377	pennivenium
F 27116	herpesticum	F 27378	genestierianum
F 27117	trichocladum	F 27389	callimorphum
F 27118	campylogynum	F 27399	habrotrichum
F 27119	rupicola	F 27400	habrotrichum
F 27121	calostrotum	F 27404	suberosum
F 27122	cephalanthum	F 27405	suberosum
F 27123	caloxanthum	F 27413	basilicum
F 27125	caloxanthum	F 27415	annae
F 27126	kyawii	F 27416	annae
F 27128	kyawii	F 27426	araiophyllum
F 27129	stewartianum	F 27427	araiophyllum
F 27131	stewartianum	F 27455	tephropeplum
F 27132	scyphocalyx	F 27456	anthosphaerum
F 27133	stewartianum	F 27457	tanastylum
F 27134	scyphocalyx	F 27458	sulfureum
F 27135	stewartianum	F 27459	basilicum
F 27136	stewartianum	F 27460	araiophyllum
F 27137	scyphocalyx	F 27461	scyphocalyx
F 27138	stewartianum	F 27462	glischrum
F 27140	scyphocalyx	F 27463	glischroides
F 27142	myiagrum	F 27464	anthosphaerum
F 27143	stewartianum	F 27465	atrokermesinum
F 27144	stewartianum	F 27466	neriiflorum
F 27250	kyawii	F 27467	aperantum
F 27343	habrotrichum	F 27468	facetum
F 27355	protistum	F 27469	sperabile
F 27357	campylogynum	F 27470	glischroides
F 27358	neriiflorum	F 27471	herpesticum

F 27473	rubiginosum	F 27575	scyphocalyx
F 27474	aperantum	F 27576	aperantum
F 27475	stewartianum	F 27577	stewartianum
F 27477	scyphocalyx	F 27578	kyawii
F 27478	anthosphaerum	F 27579	aperantum
F 27479	stewartianum	F 27580	herpesticum
F 27480	scyphocalyx	F 27581	sperabile
F 27482	stewartianum	F 27582	stewartianum
F 27483	aperantum	F 27583	scyphocalyx
F 27484	stewartianum	F 27584	aperantum
F 27485	scyphocalyx	F 27585	scyphocalyx
F 27486	aperantum	F 27586	stewartianum
F 27487	scyphocalyx	F 27587	aperantum
F 27488	myiagrum	F 27588	stewartianum
F 27489	brevistylum	F 27589	scyphocalyx
F 27490	scyphocalyx	F 27590	aperantum
F 27491	aperantum	F 27591	rupicola
F 27492	stewartianum	F 27592	stewartianum
F 27493	aperantum	F 27593	crassum
F 27494	herpesticum	F 27594	scyphocalyx
F 27495	caloxanthum	F 27595	sperabile
F 27496	herpesticum	F 27596	stewartianum
F 27497	calostrotum	F 27597	aperantum
F 27498	delavayi	F 27598	oreotrephes
F 27499	herpesticum	F 27599	herpesticum
F 27500	stewartianum	F 27600	glischroides
F 27501	cephalanthum	F 27601	sperabile
F 27502	scyphocalyx	F 27603	zaleucum
F 27503	campylogynum	F 27604	aperantum
F 27568	herpesticum	F 27605	weihsiense
F 27569	campylogynum	F 27606	atrokermesinum
F 27570	herpesticum	F 27607	anthosphaerum
F 27571	rupicola	F 27608	anthosphaerum
F 27572	aperantum	F 27609	glischroides
F 27573	scyphocalyx	F 27610	araiophyllum
F 27574	caloxanthum	F 27611	tephropeplum

F 27612	anthosphaerum	F 27652	stewartianum
F 27613	herpesticum	F 27653	anthosphaerum
F 27614	protistum	F 27654	herpesticum
F 27615	crassum	F 27655	pseudociliipes
F 27616	arizelum	F 27656	campylogynum
F 27617	edgeworthii	F 27657	scyphocalyx
F 27620	araiophyllum	F 27658	calostrotum
F 27622	sulfureum	F 27659	stewartianum
F 27623	atrokermesinum	F 27660	trichocladum
F 27624	arizelum	F 27661	pseudociliipes
F 27625	glischroides	F 27662	herpesticum
F 27626	herpesticum	F 27663	herpesticum
F 27627	tanastylum	F 27664	caloxanthum
F 27628	pseudociliipes	F 27665	scyphocalyx
F 27629	stewartianum	F 27666	aperantum
F 27630	aperantum	F 27667	stewartianum
F 27631	rubiginosum	F 27669	pseudociliipes
F 27632	tanastylum	F 27670	tephropeplum
F 27633	scyphocalyx	F 27671	anthosphaerum
F 27635	sperabile	F 27672	herpesticum
F 27636	aperantum	F 27673	sidereum
F 27637	neriiflorum	F 27677	sidereum
F 27638	taggianum	F 27678	kyawii
F 27639	sperabile	F 27679	sidereum
F 27640	aperantum	F 27685	dendricola
F 27641	herpesticum	F 27686	leptocarpum
F 27642	brevistylum	F 27687	dendricola
F 27643	stewartianum	F 27688	pseudociliipes
F 27644	herpesticum	F 27689	dendricola
F 27645	aperantum	F 27690	dendricola
F 27646	herpesticum	F 27697	delavayi
F 27647	stewartianum	F 27698	araiophyllum
F 27648	aperantum	F 27700	araiophyllum
F 27649	stewartianum	F 27701	peramoeunum
F 27650	herpesticum	F 27702	araiophyllum
F 27651	aperantum	F 27703	annae

F 27705	annae	F 27744	araiophyllum
F 27706	annae	F 27745	yunnanense
F 27713	annae	F 27746	araiophyllum
F 27714	tanastylum	F 27757	tanastylum
F 27715	valentinianum	F 27758	genestierianum
F 27717	delavayi	F 27759	pseudociliipes
F 27718	delavayi	F 27761	sidereum
F 27722	dendricola	F 27766	araiophyllum
F 27724	crassum	F 27768	delavayi
F 27725	pseudociliipes	F 27769	edgeworthii
F 27727	diaprepes	F 27771	araiophyllum
F 27730	protistum	F 27775	araiophyllum
F 27731	dendricola	F 27776	crassum
F 27737	dendricola	F 27792	arizelum
F 27738	dendricola	F 27794	arizelum
F 27739	caesium		





R. yunnanense on the Lichiang Range.

- *opposite left* -
R. fictolacteum (now *R. rex* ssp. *fictolacteum*) in Yunnan.

F 24104 - *R. meddianum* var. *meddianum*

F 24104 - *R. meddianum* var. *meddianum*


F 24104 - R. meddianum var. meddianum


F 24104 - R. meddianum var. meddianum


F 24104 - R. meddianum var. meddianum


F 24104 - R. meddianum var. meddianum

F 24110 - *R. fulvum* ssp. *fulvum*



F 24110 - *R. fulvum* ssp. *fulvum*

F 24116 - *R. griersonianum*

F 24116 - *R. griersonianum*

F 24116 - *R. griersonianum*

F 24139 - *R. basilicum*

F 24139 - *R. basilicum*

F 24139 - *R. basilicum*

F 24139 - *R. basilicum*

F 24154 - *R. shweliense*

F 24154 - *R. shweliense*

F 24154 - *R. shweliense*

F 24154 - *R. shweliense*

F 24219 - *R. meddianum* var. *meddianum*


F 24219 - *R. meddianum* var. *meddianum*


F 24219 - *R. meddianum* var. *meddianum*


F 24219 - *R. meddianum* var. *meddianum*



F 24331 - *R. dichroanthum* ssp. *apodectum*



F 24347 - *R. valentinianum* var. *valentinianum*

F 24347 - *R. valentinianum* var. *valentinianum*



F 24347 - *R. valentinianum* var. *valentinianum*

F 24347 - *R. valentinianum* var. *valentinianum*

F 24347 - *R. valentinianum* var. *valentinianum*

F 24347 - *R. valentinianum* var. *valentinianum*

F 24535 - *R. rubiginosum* Desquamatum Group

F 24546 - *R. dichroanthum* ssp. *herpesticum* var. *scyphocalyx*

F 24598 - *R. stewartianum*



F 24598 - *R. stewartianum*



F 24633 - *R. lepidostylum*



F 24633 - *R. lepidostylum*

F 25064 - *R. preptum*



F 25065 - *R. dichroanthum* ssp. *herpesticum* var. *scyphocalyx*

F 25065 - *R. dichroanthum* ssp. *herpesticum* var. *scyphocalyx*

F 25065 - *R. dichroanthum* ssp. *herpesticum* var. *scyphocalyx*

F 25500 - *R. russatum*

F 25506 - *R. riparioides*

F 25508 - *R. saluenense* var. *chameunum*

F 25508 - *R. saluenense* var. *chameunum*



F 25512 - *R. rex* ssp. *fictolacteum*

F 25512 - *R. rex* ssp. *fictolacteum*

F 25534 - *R. wardii* var. *wardii*



F 25534 - *R. wardii* var. *wardii*

F 25534 - *R. wardii* var. *wardii*

F 25534 - *R. wardii* var. *wardii*

F 25555 - *R. scintillans*

F 25555 - *R. scintillans*

F 25570 - *R. charitopes*

F 25570 - *R. charitopes*



F 25581 - *R. charitopes*

F 25581 - *R. charitopes*

F 25585 - *R. crinigerum* var. *crinigerum*



F 25585 - *R. crinigerum* var. *crinigerum*

F 25597 - *R. haematodes* ssp. *chaetomallum*

F 25601 - *R. haematodes* ssp. *chaetomallum*


F 25601 - *R. haematodes* ssp. *chaetomallum*


F 25601 - *R. haematodes* ssp. *chaetomallum*


F 25601 - *R. haematodes* ssp. *chaetomallum*

F 25601 - *R. haematodes* ssp. *chaetomallum*



F 25608 - *R. arizelum* ssp. *arizelum*



F 25608 - *R. arizelum* ssp. *arizelum*

F 25608 - *R. arizelum* ssp. *arizelum*

F 25608 - *R. arizelum* ssp. *arizelum*

F 25614 - *R. martinianum*



F 25615 - *R. stewartianum*

F 25622 - *R. coriaceum*


F 25622 - *R. coriaceum*


F 25622 - *R. coriaceum*


F 25622 - *R. coriaceum*


F 25625 - *R. coelicum* var. *coelicum*


F 25625 - *R. coelicum* var. *coelicum*


F 25625 - *R. coelicum* var. *coelicum*

F 25625 - *R. coelicum* var. *coelicum*



F 25627 - *R. arizelum* ssp. *arizelum*

F 25630 - *R. coriaceum*

F 25630 - *R. coriaceum*



F 25630 - *R. coriaceum*

F 25633 - *R. crinigerum* var. *euadenium*

F 25633 - *R. crinigerum* var. *euadenium*



F 25633 - *R. crinigerum* var. *euadenium*





F 25633 - *R. crinigerum* var. *euadenium*



F 25633 - *R. crinigerum* var. *euadenium*

F 25633 - *R. crinigerum* var. *euadenium*



F 25640 - *R. floccigerum* ssp. *floccigerum* aff.

F 25714 - *R. tephropeplum*

F 25714 - *R. tephropeplum*

F 25714 - *R. tephropeplum*

F 25716 - *R. praestans*

F 25717 - *R. rothschildii*



F 25718 - *R. roxieanum* Oreonastes Group

F 25744 - *R. fulvum* ssp. *fulvoides*

F 25831 - *R. floccigerum* ssp. *floccigerum*

F 25872 - *R. coriaceum*

F 25872 - *R. coriaceum*

F 25872 - *R. coriaceum*

F 25901 - *R. citriniflorum* ssp. *horaeum*

F 25901 - *R. citriniflorum* ssp. *horaeum*

F 25914 - *R. augustinii* ssp. *rubrum*

F 25914 - *R. augustinii* ssp. *rubrum*

F 25914 - *R. augustinii* ssp. *rubrum*

F 25914 - *R. augustinii* ssp. *rubrum*



F 25917 - *R. clementinae*

F 25917 - *R. clementinae*

F 25984a - *R. anthosphaerum*

F 25984a - *R. anthosphaerum*

F 25984a - *R. anthosphaerum*

F 26432 - *R. anthosphaerum*

F 26432 - *R. anthosphaerum*

F 26433 - *R. anthosphaerum*

F 26448 - *R. glischroides*

F 26448 - *R. glischroides*



F 26449 - *R. meddianum* var. *atrokermesinum*

F 26457 - *R. tephropeplum*

F 26463 - *R. suberosum*

F 26463 - *R. suberosum*

F 26463 - *R. suberosum*

F 26463 - *R. suberosum*

F 26478 - *R. weihsiense*

F 26478 - *R. weihsiense*

F 26482 - *R. rubiginosum*

F 26482 - *R. rubiginosum*

F 26486 - *R. suberosum*

F 26632 - *R. habrotrichum*

F 26632 - *R. habrotrichum*

F 26798 - *R. caesium*

F 26798 - *R. caesium*

F 26798 - *R. caesium*

F 26929 - *R. stewartianum*

F 26933 - *R. aperantum*

F 26933 - *R. aperantum*



F 26935 - *R. arizelum* ssp. *arizelum*



F 26977 - *R. dichroanthum* ssp. *herpesticum* var. *herpesticum*



F 26978 - *R. dichroanthum* ssp. *herpesticum* var. *scyphocalyx*

F 26985 - *R. campylocarpum* ssp. *caloxanthum*

F 27003 - *R. dichroanthum* ssp. *herpesticum* var. *herpesticum*

F 27011 - *R. x didymoides*



F 27051 - *R. dichroanthum* ssp. *herpesticum* var. *herpesticum*

F 27052 - *R. dichroanthum* ssp. *herpesticum* var. *herpesticum*

F 27052 - *R. dichroanthum* ssp. *herpesticum* var. *herpesticum*

F 27052 - *R. dichroanthum* ssp. *herpesticum* var. *herpesticum*

F 27059 - *R. dichroanthum* ssp. *herpesticum* var. *scyphocalyx*

F 27061 - *R. dichroanthum* ssp. *herpesticum* var. *herpesticum*

F 27089 - *R. dichroanthum* ssp. *herpesticum* var. *herpesticum*

F 27089 - *R. dichroanthum* ssp. *herpesticum* var. *herpesticum*

F 27093 - *R. dichroanthum* ssp. *herpesticum* var. *herpesticum*



F 27095 - *R. dichroanthum* ssp. *herpesticum* var. *herpesticum*

F 27125 - *R. campylocarpum* ssp. *caloxanthum*

F 27129 - *R. stewartianum*

F 27138 - *R. stewartianum*

F 27343 - *R. habrotrichum*

F 27343 - *R. habrotrichum*

F 27343 - *R. habrotrichum*



F 27357 - *R. campylogynum*



F 27357 - *R. campylogynum*

F 27389 - *R. callimorphum* var. *callimorphum*



F 27389 - *R. callimorphum* var. *callimorphum*

F 27389 - *R. callimorphum* var. *callimorphum* ‘Second Attempt’ AM 1980



F 27389 - *R. callimorphum* var. *callimorphum* ‘Second Attempt’ AM 1980

F 27603 - *R. zaleucum* var. *zaleucum*

F 27603 - *R. zaleucum* var. *zaleucum*

F 27657 - *R. dichroanthum* ssp. *herpesticum* var. *scyphocalyx*

F 27657 - *R. dichroanthum* ssp. *herpesticum* var. *scyphocalyx*

F 27745 - *R. yunnanense* ssp. *yunnanense*

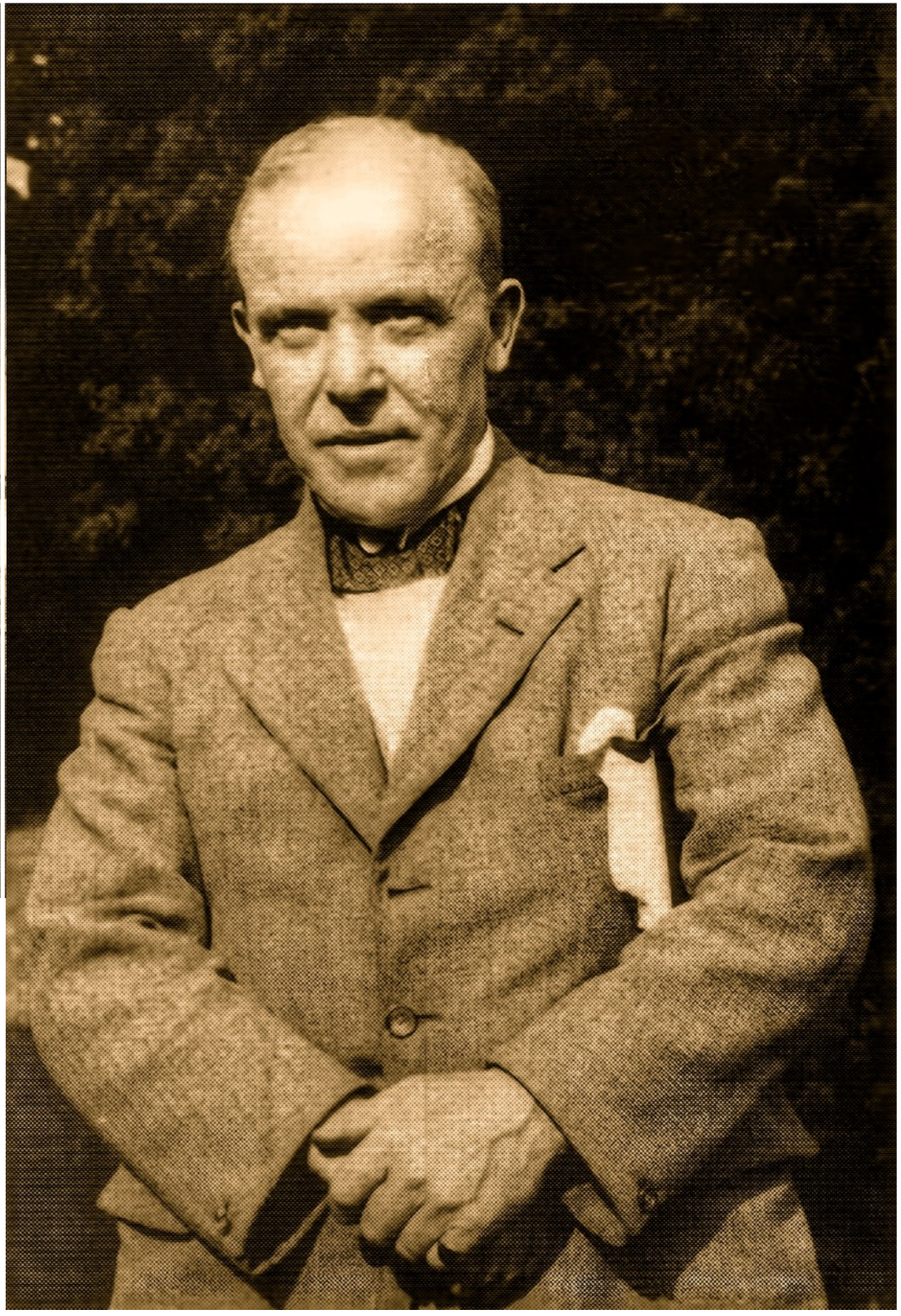
The 1930/1931 Collections made in Sichuan & Yunnan:

F 28236	rubiginosum	F 29243	dryophyllum
F 28237	taliense	F 29244	balfourianum
F 28241	platyphyllum	F 29245	sphaeroblastum
F 28248	lacteum	F 29246	sphaeroblastum
F 28250	trichocladum	F 29247	beesianum
F 28253	taliense	F 29248	beesianum
F 28254	campylogynum	F 29248	hemitrichotum
F 28254a	russatum	F 29249	chryseum
F 28266	brachyanthum	F 29250	trichostomum
F 28283	dichroanthum	F 29251	nigropunctatum
F 28290	dichroanthum	F 29252	taliense aff.
F 28295	racemosum	F 29253	dryophyllum
F 28297	rigidum	F 29254	dryophyllum
F 28301	neriiflorum	F 29256	adenogynum
F 28302	cephalanthum	F 29257	roxieanum Cucullatum
F 28304	irroratum	F 29258	taliense aff.
F 28305	edgeworthii	F 29259	glomerulatum
F 28311	crassum	F 29260	glomerulatum
F 28312	crassum	F 29262	sphaeroblastum
F 28315	decorum	F 29263	balfourianum
F 28319	crassum	F 29264	balfourianum
F 28323	adenogynum	F 29266	intricatum
F 28326	rigidum	F 29267	primuliflorum
F 28342	lepidotum	F 29268	impeditum
F 28343	rupicola	F 29269	telmateium
F 28344	telmateium	F 29271	trichostomum
F 28347	unidentified species	F 29273	hemitrichotum
F 28348	dichroanthum	F 29278	balfourianum
F 28351	haematodes	F 29280	x sinosimulans aff.
F 28353	taliense	F 29281	x sinosimulans
F 28355	taliense	F 29282	balfourianum
F 28357	taliense	F 29283	primuliflorum
F 29130	taliense aff.	F 29293	primuliflorum
F 29131	dryophyllum	F 29305	wardii
F 29132	taliense aff.	F 29312	adenogynum
F 29242	wardii	F 29313	adenogynum

F 29314	adenogynum	F 30393	edgeworthii
F 29317	roxieanum Cucullatum	F 30394	scyphocalyx
F 29320	sphaeroblastum	F 30395	rupicola
F 29321	sphaeroblastum	F 30526	beesianum
F 29322	wardii	F 30527	mekongense
F 29323	yunnanense	F 30528	rothschildii
F 29325	dryophyllum	F 30531	traillianum
F 29326	taliense aff.	F 30532	beesianum
F 29327	dryophyllum	F 30533	stewartianum
F 29328	taliense aff.	F 30534	aperantum
F 29329	taliense aff.	F 30535	haematodes
F 29331	tatsienense	F 30536	aperantum
F 29333	sphaeroblastum	F 30539	chaetomallum
F 29341	x detonsum (NH)	F 30540	riparioides
F 29545	neriiflorum	F 30543	prostratum
F 29559	ciliicalyx	F 30880	pronum
F 29588	habrotrichum	F 30883	campylogynum
F 29599	ciliicalyx	F 30887	decorum
F 29647	myiagrum	F 30888	adenogynum
F 29655	tephropeplum	F 30889	pseudorupicola
F 29663	stewartianum	F 30891	prostratum
F 29666	calostrotum	F 30892	beesianum
F 29685	stewartianum	F 30893	fictolacteum
F 29687	yunnanense	F 30894	beesianum
F 29762	griersonianum	F 30896	rubiginosum
F 29763	facetum	F 30910	oreotrephes
F 29785	arizelum	F 30911	unidentified species
F 29809	megacalyx	F 30912	weihsiense
F 29894	rupicola	F 30937	unidentified species
F 29926	kyawii	F 30940	hemitrichotum
F 29929	kyawii	F 30941	impeditum
F 29937	campylogynum	F 30942	chryseum
F 29938	aperantum	F 30967	campylogynum
F 30375	kyawii	F 30977	heliolepis
F 30392	griersonianum		



Board & Lodgings:
the room George Forrest occupied at one of his Yunnan bases.
Seed packets have been put up to dry, animal skins serve as carpets, travel cases are neatly stacked,
and his leggings hang down above the metal-frame folding camp bed.



- *opposite* -
The great man photographed at Headfort, near Kells, Dublin, on May 25th, 1930.

F 29256 - *R. balfourianum*

F 29259 - *R. yungningense*

F 29259 - *R. yungningense*

F 29259 - *R. yungningense*

F 29260 - *R. yungningense*

F 29266 - *R. intricatum*

F 29266 - *R. intricatum*

F 29331 - *R. yunnanense* ssp. *tatsienense*

F 29331 - *R. yunnanense* ssp. *tatsienense*

F 30394 - *R. dichroanthum* ssp. *herpesticum* var. *scyphocalyx*



F 30394 - *R. dichroanthum* ssp. *herpesticum* var. *scyphocalyx*

F 30526 - *R. beesianum*

F 30528 - *R. rothschildii*

F 30528 - *R. rothschildii*

F 30528 - *R. rothschildii*

F 30528 - *R. rothschildii*

F 30880 - *R. pronum*

F 30887 - *R. decorum* ssp. *decorum*

F 30896 - *R. rubiginosum*

F 30896 - *R. rubiginosum*

F 30910 - *R. oreotrephes*

F 30940 - *R. hemitrichotum*

Photographic Acknowledgements:

The array of historical black-and-white images taken by George Forrest during the course of his seven expeditions, a selection of which are displayed within this volume, are preserved in *The George Forrest Photographic Archive,* at the Royal Botanic Garden, Edinburgh, and much gratitude is due that institution for allowing their use in this book.

They are:

p. 7 - Forrest and his two dogs, in the Moongate of the China Inland Mission, Dali, Yunnan, China, *c.* 1904-1905;
p. 11 - Forrest in the Moongate of the China Inland Mission, August 1905;
p. 12 - George Forrest, V.M.H.;
p. 13 - Forrest's camp in the Lichiang Range (Yulong Shan);
p. 31 - Tengyueh, as it was in December 1905;
p. 31 - rain forest in western Yunnan, showing the influence of the monsoon;
p. 34 - Forrest about to set off from Tali in the spring of 1905;
p. 35 - Forrest's native collectors, photographed in northwestern Yunnan during the 1904/1906 expedition, with Lao Chao, his head man, on the left;
p. 36 - the south-west face of the Lichiang peak;
p. 37 - the Tali Range, looking north-west from the city;
p. 38 - the natural rock garden of a gorge in northern Yunnan;
p. 39 - seed drying at the 'Snow Mountain Village' north of Lichiang;
p. 40 - packing cases ready for despatch to J. C. Williams at Caerhays Castle, Cornwall;
p. 41 - Forrest's Mossoo collecting team with stacks of drying papers roped to wooden saddles ready for mule transport (Lao Chao is seen here, fifth from the right);
p. 42 - a bamboo, grass and liana bridge across a tributary of the Salween River;
p. 43 - Forrest and his canine companion out in the field on his third expedition;
p. 44 - Forrest's garret accommodation in Snow Mountain Village;
p. 46 above - resting with his dog in camp on his fourth expedition, a whisky and soda on hand for refreshment;
p. 46 below - in relaxed mode post the harvest (photo undated, but likely taken in Burma in early 1914);
p. 47 - Forrest and his collectors out and about on August 17th, 1914;
p. 48 - Forrest with his friend Arie Kok, a missionary priest from Amsterdam;
p. 50 - Forrest on the 1930/1931 expedition, relaxing with a pet monkey;
p. 51 - George Forrest's grave, in the foreign cemetery just outside the city of Tengyueh;
p. 57 - Forrest with his chief collector Lao Chao (Zhao Chengzhang);
p. 58 above right - A liana bridge over the Yang-pi River, a tributary of the Mekong in NW Yunnan, March 1906;
p. 58 below right - A chain suspension bridge over the Mekong River on the main trade route between Tengyueh and Talifu, February 1906;
p. 77 left - *R. fastigiatum;*
p. 77 right - *R. saluenense;*
p. 108 left - *R. racemosum* on the mountains of western China;
p. 108 right - *R. praestans;*
p. 193 left - *R. decorum;*
p. 193 right - *R. bullatum* on the eastern flank of the Tali Divide;
p. 305 left - *R. fictolacteum* in Yunnan;
p. 305 right - *R. yunnanense* on the Lichiang Range;
p. 459 left - One of the rooms Forrest used as a base in Yunnan;
P. 459 right - Forrest photographed at Headfort, near Kells, Dublin, on May 25th, 1930.

The full colour plant portraits presented in this and the other six volumes of *The Rhododendron Collectors* resulted from innumerable trips to the woodland gardens and botanical/horticultural institutes of England, Scotland and Wales that specialised in Genus *Rhododendron,* which were open to the general public across the bulk of the flowering season, and that had accurately labelled collections. The images were mostly captured on a Nikon D200, and later, on a Nikon D810, using a variety of prime and zoom Nikkor lenses. In the main, RAW format files were used to store the digital images, this avoiding any unnecessary compression, and all the portraits were achieved 'handheld', on site, even the macro close-ups. No colour modification has been made to any of these photographs, nor were any filters employed to enhance or otherwise change the palette, pre or post capture, with natural light the only source of illumination.

What was photographed where is set out below, along with the website details of those gardens visited. Thanks is extended to each establishment for allowing images taken in a private-use capacity, to be reproduced herein, with the Royal Botanic Garden, Edinburgh, not unexpectedly, home to the most extensive collection of Forrest introductions in the UK.

Appreciation is also due their gardening staff, who maintain the species and hybrids in such robust good health despite the depredations of a changing climate. Getting to know many of these dedicated and world-class horticulturalists over repeated visits often prompted an exchange of invaluable knowledge, including insights into cultivation issues, provided the locations of some of their rarer specimens - that might otherwise have been missed despite the most diligent searching - and frequently occasioned an escort over or around beds of foreground perennials to admire and photograph a particularly distant-from-the-permitted-path or extremely well-hidden individual.

In addition, especial thanks is extended once again to Alan, Colin, Douggie, Mark, Maurice, Nigel, Pam, Patrick and Richard, some of whom, sadly, are no longer with us, so for them, this laudation must be posthumous.

Key to the plant portraits:

AL - above left; AC - above centre; AR - above right; ACL - above centre left; ACR - above centre right; BL - below left; BC - below centre; BR - below right; BCL - below centre left; BCR - below centre right; L - left; R - right.

Arduaine Garden, Oban, Argyll:
https://www.nts.org.uk/visit/places/arduaine-garden
p. 172; p. 407; p.

Benmore Botanic Garden, Argyll:
https://www.rbge.org.uk/visit/benmore-botanic-garden/
p. 53; p. 61 - L, AR, BR; p. 62; p. 72; p. 73; p. 85; p. 86; p. 87 - L, AR, BR; p. 88; p. 99 - AL, R; p. 100; p. 130; p. 136; p. 137; p. 164; p. 165; p. 166 - R; p. 167; p. 173; p. 174; p. 175; p. 177; p. 178; p. 179; p. 206; p. 207; p. 218; p. 219; p.220; p. 221; p. 228 - AL, BL, R; p. 229; p. 260; p. 261; p. 281; p. 282; p. 317; p. 318; p. 323; p. 335; p. 338; p. 345; p. 346; p. 348; p.351; p. 352; p. 358; p. 359 - AL, BL, R; p. 360; p. 363; p. 409; p. 410; p. 411; p. 412; p. 417; p. 419; p. 420; p. 421; p. 429; p. 436.

Brodick Castle Garden, Isle of Arran:
https://www.nts.org.uk/visit/places/brodick-castle-garden-country-park
p. 184; p. 185; p. 186; p. 187.

Exbury Gardens, Hampshire:
https://www.exbury.co.uk/
p. 222; p. 223.

Glendoick Gardens Ltd, Perth:
https://glendoick.com/
p. 71; p. 231; p. 242; p. 369 - L, AR.

Inverewe Gardens, Poolewe, Wester Ross:
https://www.nts.org.uk/visit/places/inverewe
p. 103- AL; p. 276; p. 277.

Logan Botanic Garden, Stranraer:
https://www.rbge.org.uk/visit/logan-botanic-garden/
p. 67 - L, AR, BR; p. 150; p. 151; p. 467; p. 468.

Muncaster Castle Gardens, Ravenglass, Cumbria:
https://www.muncaster.co.uk/
p. 324; p. 325; p. 326; p. 327 - L, R; p. 328.

Nymans Garden, Handcross, West Sussex:
https://www.nationaltrust.org.uk/nymans
p. 148; p. 149; p. 387; p. 405; p. 406; p. 408; p. 413; p. 414; p. 443; p. 449; p. 450; p. 453; p. 454; p. 457; p. 481.

Ray Wood, Castle Howard, North Yorkshire:
https://www.castlehoward.co.uk/visit-us/the-gardens/the-woodland-garden
p. 5; p. 155; p. 156; p. 157; p. 160; p. 204; p. 205; p. 255; p. 256; p. 257; p. 306; p. 307; p. 308; p. 333; p. 334; p. 472; p. 473; p. 474; p. 475.

Royal Botanic Garden, Edinburgh:
https://www.rbge.org.uk/visit/royal-botanic-garden-edinburgh/
p. 1; p. 9; p. 63; p. 64 - AL, BL, R; p. 66; p. 68; p. 69 - A, BL, BR; p. 74; p. 75; p. 78; p. 81; p. 82 - L, AR, BR; p. 83; p. 84; p. 89; p. 90; p. 93; p. 94; p. 95; p. 96; p. 97; p. 98; p. 101 - L, R; p. 102; p. 103 - BL, R; p. 109; p. 110; p. 111; p. 112; p. 113; p. 114; p. 115; p. 117; p. 119; p. 121 - R; p. 122 - R; p. 123; p. 124; p. 125; p. 126 - L, AR, BR; p. 127; p. 128; p. 129; p. 134; p. 139; p. 141; p. 142; p. 143; p. 144; p. 145; p. 146; p. 147; p. 154; p. 159 - L, AR, BR; p. 161 - L, R; p. 162; p. 163; p. 166 - L; p. 176; p. 180; p. 181; p. 194 - L, AR, BR; p. 195 - L, R; p. 196; p. 198 - L, AR, BR; p. 200; p. 201; p. 209; p. 210; p. 212; p. 213; p. 216; p. 217; p. 230; p. 232 - L, AR, BR; p. 233; p. 234; p. 235; p. 238; p. 239; p. 240; p. 241; p. 246; p. 247 - AL, BL, R; p. 248; p. 249; p. 252; p. 253; p. 254; p. 259; p. 262; p. 263; p. 264; p. 266; p. 267; p. 269; p. 270; p. 273; p. 274; p. 275; p. 283; p. 284; p. 285; p. 292; p. 293; p. 294; p. 295; p. 298; p. 299; p. 321; p. 322 - AL, BL, R; p. 330; p. 336; p. 337; p. 339; p. 341; p. 342; p. 343; p. 344; p. 349; p. 350; p. 361; p. 362; p. 380; p. 381; p. 382; p. 383; p. 384; p. 388; p. 389; 390; p. 391; p. 392; p. 393; p. 394; p. 395; p. 396; p. 415; p. 416; p. 428; p. 430; p. 432; p. 433; p. 434; p. 435; p. 437; p. 438; p. 439; p. 441; p. 447; p. 448; p. 455; p. 456; p. 464; p. 465; p. 466; p. 471; p. 476; p. 488-AL, AR, BL, BR.

Royal Botanic Garden, Wakehurst Place:
https://www.kew.org/wakehurst
p. 59; p. 60; p. 168 - R; p. 169; p. 170; p. 171; p. 198; p. 208 - BR; p. 296; p. 297; p. 314; p. 315; p. 316; p. 319; p. 320; p. 340; p. 367; p. 368 - AL, BL, R; p. 402; p. 403; p. 461; p. 462; p. 463.

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https://www.rhs.org.uk/gardens/wisley
p. 54 & 55 - Map of the areas botanised during Forrest's seven expeditions, published in the 1952 book The Journeys and Plant Introductions of George Forrest V.M.H, edited by Dr. John MacQueen Cowan; p. 65.

Savill Garden, Windsor Great Park:
https://www.windsorgreatpark.co.uk/en/experiences/the-savill-garden
p. 208 - L, AR; p. 226; p. 227; p. 353; p. 354.

Valley Gardens, Windsor Great Park:
https://www.windsorgreatpark.co.uk/en/experiences/the-valley-gardens
p. 70; p. 79; p. 80; p. 91; p. 92; p. 99 - BL; p. 116; p. 118 - L, AR, BR; p. 120; p. 121 - L; p. 122 - L; p. 131; p. 132; p. 133; p. 138; p. 140; p. 152; p. 153; p. 158; p. 168 - L; p. 182; p. 183; p. 197; p. 202 - L, AR, BR; p. 203; p. 211; p. 214; p. 215; p. 224 - L, AR, BR; p. 225; p. 236; p. 237; p. 243; p. 244; p. 245; p. 250; p. 251; p. 258; p. 265; p. 268; p. 271; p. 272; p. 278; p. 279; p. 280; p. 286; p. 287; p. 288; p. 289; p. 290; p. 291; p. 309; p. 310; p. 311; p. 312; p. 313; p. 329; p. 331; p. 332; p. 347; p. 355; p. 356; p. 357; p. 364; p. 365; p. 366; p. 369 - BR; p. 370; p. 371; p. 372; p. 373; p. 374; p. 375; p. 376; p. 377 - AL, BL, R; p. 378; p. 379; p. 385; p. 386; p. 397; p. 398; p. 399; p. 400; p. 401; p. 404; p. 418 - L, R; p. 422; p. 423; p. 424; p. 425; p. 426; p. 427; p. 431; p. 440; p. 442; p. 444; p. 445; p. 446; p. 451; p. 452; p. 460; p. 469; p. 470; p. 477; p. 478; p. 479; p. 480.

Plant Portraits Index:

adenogynum 228, 229
aechmophyllum 161, 162, 163, 176, 488
aganniphum 158
agglutinatum 206, 207
albertsenianum 117
anthosphaerum 61, 62, 168, 399, 400, 401, 402, 403, 404
anthosphaerum Eritimum Group 172
aperantum 423, 424
arizelum ssp. arizelum 278, 279, 280, 281, 282, 361, 362, 363, 364, 371, 425
augustinii ssp. chasmanthum 255, 256, 257,
augustinii ssp. rubrum 393, 394, 395, 396
balfourianum 164, 165, 166, 167, 460
basilicum 286, 314, 315, 316
bathyphyllum 120
beesianum 85, 86, 87, 88, 153, 471
bellatulum 268, 271, 291
bureavii 135,136, 137, 138, 139
caesium 419, 420, 421
callimorphum var. callimorphum 449, 450
callimorphum var. callimorphum 'Second Attempt' 451, 452
calostrotum ssp. keleticum 208, 209, 266, 267
campylocarpum ssp. caloxanthum 428, 441
campylogynum 447, 448
charitopes 351, 352, 353, 354
chlorops 155, 156, 157
citriniflorum ssp. horaeum 276, 277, 391, 392
clementinae 397, 398
coelicum var. coelicum 369, 370
complexum 128, 129
coriaceum 273, 274, 275, 367, 368, 372, 373, 374, 388, 389, 390
crinigerum var. crinigerum 290, 355, 356
crinigerum var. euadenium 375, 376, 377, 378
cyanocarpum 130
dasypetalum 112, 113
decorum ssp. decorum 477
dichroanthum ssp. apodectum 323
dichroanthum ssp. dichroanthum 74, 75
dichroanthum ssp. herpesticum var. herpesticum 426, 429, 431, 432, 433, 434, 436, 437, 438, 439, 440
dichroanthum ssp. herpesticum var. scyphocalyx 1, 330, 336, 337, 338, 427, 435, 455, 456, 469, 470
didymoides 430
dimitrium 131, 132, 133
diphrocalyx 1140, 141
eclecteum 180, 181, 272
exquisitum 243, 244, 245
fastigiatum ssp. fastigiatum 59, 60
fastigiatum ssp. impeditum 230, 231
flavorufum 119, 203
floccigerum ssp. floccigerum 204, 205, 218, 219, 220, 221, 387
floccigerum ssp. floccigerum affinity 379
forrestii var. chamaethomsonii x unknown 294
forrestii var. forrestii Repens Group 198
fulvum ssp. fulvoides 121, 122, 123, 292, 293, 386
fulvum ssp. fulvum 78, 79, 80, 173, 174, 175, 309, 310
glischroides 405, 406
griersonianum 311, 312, 313
habrotrichum 144, 145, 146, 147, 418, 444, 445, 446, 488
haemaleum 210, 216, 217, 264, 265
haematodes ssp. catacosmum 212, 213
haematodes ssp. chaetomallum 53, 357, 358, 359, 360
haematodes ssp. chaetomallum 'Tower Court' 222, 223
haematodes ssp. haematodes 70,
hemidartum 211, 298, 299
hemitrichotum 481
hippophaeoides var. fimbriatum 296, 297
intricatum 465, 466
iodes 200, 201
irroratum ssp. irroratum 63, 64, 124, 125, 126, 127, 488
lacteum 71
lepidostylum 5, 333, 334
maddenii ssp. crassum 150, 151
mallotum 168, 169, 170, 171
martinianum 214, 215, 365
meddianum var. atrokermesinum 407
meddianum var. meddianum 306, 307, 308, 321, 322
microgynum 118, 160
neriiflorum ssp. neriiflorum 72, 73
oreotrephes 65, 480
orthocladum 242
phaeochrysum var. dryophyllum 226, 227
phaeochrysum var. phaeochrysum 94
pholidotum 67
praestans 177, 178, 179, 383
preptum 335
pronum 476
protistum 184, 185, 186, 187
racemosum 194, 250, 258, 259, 260, 261
ravum 93
rex ssp. fictolacteum 295, 343, 344
riparioides 340

rothschildii 384, 472, 473, 474, 475
roxieanum Oreonastes Group 385
rubiginosum 82, 246, 247, 251, 252, 253, 415, 416, 478, 479
rubiginosum Desquamatum Group 202, 329
rupicola ssp. rupicola 159
russatum 114, 115, 339
russotinctum ‘Easter Island’ 225
saluenense var. chameunum 103, 110, 111, 341, 342
saluenense var. saluenense 103, 198, 269, 270
scintillans 81, 195, 196, 349, 350
selense ssp. dasycladum 101, 102
selense ssp. selense 116, 287, 288, 289
semnoides 283, 284, 285
shweliense 317, 318, 319, 320
sphaeroblastum var. sphaeroblastum 224
stewartianum 331, 332, 366, 422, 442, 443
suberosum 409, 410, 411, 412, 417
sulfureum 148, 149
taliense 68, 69
tapetiforme 154
tephropeplum 380, 381, 382, 408
telmateium 248, 249
trichocladum var. mekongense 109
trichostomum 9, 232, 233, 234, 235
uvariifolium ssp. uvariifolium 89, 90, 91, 92, 97, 98
uvariifolium ssp. uvariifolium ‘Yangtze Bend’ 99, 100
valentinianum var. valentinianum 324, 325, 326, 327, 328
vernicosum 66, 83, 84, 134, 182, 183
wardii var. puralbum 95, 96
wardii var. wardii 197, 262, 263, 345, 346, 347, 348, 488
weihsiense 413, 414
yungningense 461, 462, 463, 464
yunnanense ssp. hormophorum 238, 239, 240, 241
yunnanense ssp. tatsienense 152, 236, 237, 467, 468
yunnanense ssp. yunnanense 254, 457
zaleucum var. zaleucum 142, 143, 453, 454



About the Author.

Julian Taylor-Whall was born in Lowestoft at the end of November, 1957. He received a grammar school education before embarking on a three-decades-long career with the BBC at Television Centre. During that time he worked on many of the now classic shows made in the production facilities there, the studios at Lime Grove and Elstree, and at the Television Theatre.

He retired early in 2008, moving to a small village in West Cumbria, just outside the Lake District National Park.

His interests include landscape and plant photography, music, film, writing, and of course, the cultivation of rhododendrons. His previous multivolume treatise on that genus, can be freely downloaded at:

https://www.rhodogroup-rhs.org/publications/books/temperate-rhododendrons.

- above -
Atop Great Gable, a self portrait against cloud.

- *back cover* images -

F 16790 - *R. aechmophyllum*	F 15097 - *irroratum* ssp. *irroratum*
F 21551 - *R. wardii* var. *wardii*	F 15778 - *R. habrotrichum*







