

春天的火紅大使

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The Spring-blooming Rhododendrons

An Interview with Prof. Yen-hsueh Tseng
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隨處可見的杜鵑花，在生物學上有著重要的地位 / 攝影本事攝影比賽金牌獎，邱家終攝
Rhododendrons can be seen everywhere and are of great importance in biology. / Golden Award in "Photography Skills"
photography contest; taken by Jia-zhong Chiu

淡淡的三月天，杜鵑花開在山坡上……

這首由知名的愛國作曲家黃友隸老師所作的曲兒，唱的正是台灣人所熟悉的杜鵑花。除了陽明山國家公園每年初春的花季引人入勝，台灣其他國家公園裡，也還有許多美麗嬌艷的杜鵑花，而且各個大有來頭。有的還是冰河時期孑遺植物，在生物學上有著重要地位。本期季刊將帶大家認識「熟悉卻又陌生」的杜鵑花。

Look at the beautiful rhododendrons blooming on the hillside on a cool March day...

The lyrics, which was written by famous composer You-li Huang, describe the rhododendrons that most Taiwanese people find so close to. Rhododendrons are in bloom as flower season opens in Yangmingshan National Park, and they also thrive in other national parks in Taiwan. In fact, some of the species are the relic plants from the ice age and bear much biological significance. In this issue, we take readers to have a closer look at rhododendrons.



著生杜鵑分布於海拔1,500 ~ 2,500公尺霧林帶，為台灣野生杜鵑花中唯一具有黃色花冠且長在台灣特有種紅檜枝幹上之植物 / 曾彥學提供

Rhododendron kawakamii Hayata grows at cloud forests ranging from 1,500m to 2,500m in altitude, and it is the only species with yellow corollas and dwell on the branches of red cypress endemic to Taiwan. /Photo provided by Yen-hsueh Tseng



金毛杜鵑分布於海拔150 ~ 2,700公尺地帶，族群數量最多 / 曾彥學提供

Rhododendron oldhamii Maxim can be spotted from 150m to 2,700m above sea level, and the population size of it is the largest among all rhododendrons in Taiwan. /Photo provided by Yen-hsueh Tseng



太魯閣國家公園中的南湖杜鵑，其背面密貼著金黃色的毛茸 / 曾彥學提供

The picture shows *Rhododendron hyperythrum* Hayata in Taroko National Park and the back of its leaves is covered with golden yellow velvet. / Photo provided by Yen-hsueh Tseng

地球上沒有完全靜止的地方。世界屋脊喜馬拉雅山，大自然塑造地球的動態力量，不論是山峰、峽谷、斷崖或是風口等複雜地形，在這裡幾乎隨處可見。而這座離世界最遠，離藍天最近的秘境，正是杜鵑花的家鄉。

全世界的杜鵑花大約有九百種左右，廣泛地分布於北半球熱帶、亞熱帶至高山寒帶地區。「依照杜鵑花的生長習性，可以分為地生型與著生型兩大類，」任教於中興大學森林學系的曾彥學教授提到，「長在泥土中的地生型杜鵑以中國大陸雲南一帶為主要分布地區，沿著喜馬拉雅山、雲南、廣西、印度、緬甸以及越南等地向外擴展分布。另一群長在樹上的著生型杜鵑則是以東印度群島為界，即印尼、馬來西亞、菲律賓賓等地為主要分布區域。」

山巒疊翠 啼紅了杜鵑

曾教授指出，由於台灣正好位於東亞地生型杜鵑花與著生型杜鵑花的交匯地帶，加上島內氣候多變，具有暖、溫、寒三型，山巒層疊，地形複雜，因此衍生許多野生杜鵑花。原來在幾百萬年以前，與亞洲大陸相連的台灣，突出雲表的高山也曾是杜鵑花的家鄉。

以研究台灣野生杜鵑花見長的曾教授表示，台灣原生杜鵑花約有16種，就生態習性來說，有分布於海拔1,500 ~ 2,500公尺霧林帶，是台灣野生杜鵑花中

In the Himalayas, roof of the world, dynamic forces that shape the various terrains of the Earth including mountains, gorges, cliffs and wind gaps are at play. What's more, rhododendrons also stem from here, at the height of the Himalayas.

Currently there are about 900 species of rhododendrons worldwide, and they are widely distributed in the tropical and subtropical zones as well as the alpine frigid zone in the northern hemisphere. " Rhododendrons can be classified into terrestrial and epiphytic ones" said Prof.Yen-hsueh Tseng of the Dept. of Forestry, Nat'l Chung Hsing Univ. "The former grow mainly in Yunnan and Guangxi Provinces in Mainland China, as well as in India, Burma and Vietnam, whereas the latter grow in Indonesia, Malaysia and the Philippines.

Mountains Reddened by Rhododendrons

Taiwan's unique location, diverse climate and complex terrains make it home to various wild rhododendrons. In fact, millions of years ago, Taiwan, which was then connected to the continental Asia, was also a native land of rhododendrons.

Tseng, who specializes in the study of wild rhododendrons in Taiwan, noted that there are about 16

唯一具有黃色花冠，且長在台灣特有種紅檜枝幹上的著生杜鵑；分布於台灣北部新店溪上游的北勢溪鷓鴣潭一帶，是台灣原生杜鵑花中唯一屬於亞熱帶低海拔的河岸杜鵑的烏來杜鵑；成群出現的南澳杜鵑、台灣杜鵑、南湖杜鵑、玉山杜鵑、細葉杜鵑、紅毛杜鵑及台灣高山杜鵑；分布於海拔150～2,700公尺地帶，族群數量最多卻零星出現的金毛杜鵑等原生杜鵑花。

16種原生杜鵑花分布於不同海拔，由溪畔一路開到了4,000公尺高山，春天也跟著杜鵑花上山，花期幾乎綿延整年。而外觀型態更有黃色、白色、粉紅色、桃紅色、磚紅色、淡紫色、紫紅色等繽紛的花冠，難怪中國人稱呼開滿山的杜鵑花為映山紅。當映山紅開在小溪畔、山坡上時，真叫人忍不住哼唱幾句：「淡淡的三月天，杜鵑花開在山坡上，杜鵑花開在小溪畔，多美麗啊……。」

「世界上很少有一個國家能像台灣一樣，擁有許多生態多樣的原生杜鵑花，」曾教授說，「在海拔150公尺的北宜公路旁可以發現磚紅色金毛杜鵑的蹤跡，甚至到了海拔約2,680公尺，在中橫公路的大禹嶺附近，還是可以看到它的蹤影。」

有趣的是，植物也像人一樣，隨著海拔高度遞升，「衣服也跟著越穿越多」，像是樹型可長成大喬木，是台灣原生杜鵑花中唯一可以形成森林的台灣杜鵑，在葉子背面就密貼著銀白色的毛茸，而暮春初夏之際，生長於太魯閣國家公園中高海拔山區南湖杜鵑，花冠雖不豔麗，但因葉子表面密貼著金黃色的毛茸，每當落日餘暉，南湖大山的五岩峰宛如萬丈光芒的金鑽，景象令人嘆為觀止。

矮如侏儒 高如樑棟

台灣原生杜鵑花又分為特有種和廣泛種兩大族群。廣泛種，顧名思義是分布範圍廣，除了台灣之外其他國家或地方亦有分布。曾教授指出，例如在雪霸國家公園武陵地區的馬銀花，因分布於中國大陸及台灣等地而被歸類為廣泛種。其他像西施花以及陽明山國家公園的唐杜鵑，都因散見於台灣及亞洲等地也屬於廣泛種。至於台灣野生杜鵑花中最早開花的南澳杜鵑、從紅毛杜鵑基因突變的台灣高山杜鵑、稱霸於台灣中海拔山區的紅毛杜鵑、因興建翡翠水庫而已於野外滅絕的烏來杜鵑、喜好酸性土質且生命力旺盛的金毛杜鵑、擁有鐵鏽色葉片的南湖杜鵑、分布海拔最高的玉山杜鵑、植株可以長成像大喬木的台灣杜鵑、分布於陽明山國家公園內僅有20～30公分高的爬地杜鵑(屬於唐杜鵑)等，都是屬於只有在台灣才有的特有種。

species of native rhododendrons in Taiwan. For example, some epiphytic ones grow at cloud forests ranging from 1500m to 2500m in altitude. They are the only species with yellow corollas and dwell on the branches of red cypress endemic to Taiwan. Some native species, such as *Rhododendron kanehirai* Wilson, are distributed around Peishih River in northern Taiwan, and they are the only species that grow in the subtropical low-altitude areas. Species such as *Breviperulatum*, *Rhododendron formosanum*, *Rhododendron hyperythrum*, *Rhododendron noriakianum*, and *Rhododendron rubropilosum* grow in clusters; and species with the largest number but scatter from 150m to 2700m above the sea level include *Rhododendron oldhamii* Maxim as well as other native ones.

Native rhododendrons can be found throughout different altitudes, from the low-lying riverbanks to mountains well over 4000m high, and they bloom in spring and flower nearly all year round. Rhododendrons have brilliant corollas ranging from yellow, white, pink, brick red, light purple and fuchsia, so when they bloom around the rivers and on the hills, those who watch them would naturally hum a few words of that famous song that describe the beauty of the flower.

“Few countries are like Taiwan, which prides itself in the wide variety of native rhododendrons. At the Taipei-Ilan Highway which is 150-m in altitude, there are *Rhododendron oldhamii* Maxim, and when you climb further up to around 2680m, you can still find some there.”

Interestingly, just as humans put on more clothes at higher altitudes, species such as *Rhododendron formosanum* also grow more leaves, and it is the only native species that can eventually forms a rhododendron forest. *Rhododendron hyperythrum* Hayata does not have colorful corollas, but the back of its leaves is covered with golden yellow velvet. During the sunset at Mt. Nanhu, the sun would shine upon the sea of rhododendrons, constituting a breathtaking scenery akin to dazzling gold jewelry.

Rhododendrons of Different Heights

Native rhododendrons can be further divided into endemic and spread species, with the latter suggesting those ones that are widely distributed. Tseng noted that *Rhododendron ovatum* (in SPNP), *Rhododendron ellipticum* and *Rhododendron simsii* Planch (in YMSNP) fall under the category of spread species as they are often seen across Taiwan, Mainland China or other parts of Asia; whereas *Rhododendron breviperulatum* Hayata, *Rhododendron rubropilosum* Hayata, *Rhododendron rubropilosum* Hay. var. *rubropilosum*, *Rhododendron kanehirai*, *Rhododendron oldhamii* Maxim, *Rhododendron hyperythrum* Hayata, *Rhododendron pseudochrysanthum* Hayata and *Rhododendron formosanum* are all endemic species native to Taiwan.

春寒料峭之際，從百木凋零的冬季殘景乍見野地、校園、公園，甚至種在人行道、安全島上萬紫千紅的杜鵑花，即烽烽火火地怒放著，落花多的來不及化為春泥，讓人們都不得不對其投以驚嘆。「其實，台灣目前最常見的平戶杜鵑、皋月杜鵑、西洋杜鵑及久留米杜鵑等，都是外來的園藝栽培品種，而非台灣原生杜鵑花，」曾教授舉例，「如果把已經習慣高山氣候的玉山杜鵑遷移到平地栽種的話，恐怕活不成。除此，儘管杜鵑花生命力旺盛且雜交速度很快，但氣候是影響其分布的主要因素之一。」

每年到了3月，整天被污濁的廢氣籠罩了半個視線的台北市，只見遍地杜鵑花，叢叢簇簇，此起彼落，「不論是台灣原生或是外來種杜鵑花，由苗栗三義往南，杜鵑花就不如北部開的繁花似錦。」曾教授補充說道。由於台灣北部受到東北季風影響，冬季多雨溼冷，反而適合杜鵑花的生長。加上杜鵑花採取「人海戰術」的繁殖策略，種子多而輕，即使微風薰吹，落在不毛之地、山壁峰頂、百木俱枯的火災地上，如入無人之境，成為來勢洶洶的所謂「先驅樹種」。

姹紫嫣紅 繁花似錦

在人類足跡罕至的台灣高山地區，為什麼野生杜鵑花依然存在且花冠顏色繽紛奪目呢？曾教授解釋，台灣野生杜鵑花大多藉由昆蟲夾帶花粉進而受精育種，因為受精的成功機率只有萬分之一，必須各顯神通才能順利繁衍子嗣。根據曾教授的觀察，具有鐘形花冠的野生杜鵑花比漏斗狀花冠的物種，更容易吸引大型的昆蟲前來傳粉或吸蜜，像是大型蛾類、高山區的蒼蠅、蝴蝶等昆蟲。

In the chilly early spring, among the withered leaves, rhododendrons in the wild, at campuses, parks and even sidewalks start to bloom into a riot of colors, enchanting passers-by or whoever sees them. "In fact, the most common species of rhododendrons in Taiwan, such as *Rhododendron mucronatum*, *Rhododendron indicum*, *Rhododendron Bergian Azalea Hybrids* and *Rhododendron obtusum*, are not native species but imported ones as cultivars. If we transport the *Rhododendron pseudochrysanthum Hayata*, which has been used to the mountain climate, to the sea level, the climate would be a threat to its survival despite the flower's great vitality and rapid hybridization," said Tseng.

Each year in March, in defiance of the smog that thickens the air over Taipei, rhododendrons spring up all over the city. "At places south of Miaoli, the flowers are not as full-blown as they are up north," noted Tseng. This is because northern Taiwan are more prone to the northeast monsoon, and in winter it's usually wet and cold, fostering a favorable breeding ground for rhododendrons. Besides, rhododendrons are easily propagated and can produce abundant seeds that can be carried by the breeze to places normally inaccessible, such as barren soil, cliffs, mountain peaks or even charred lands. That is why they are also known as one of the "pioneer species."

A Luxuriant Spectacle with Blooms

Yet speaking of dazzling corollas, wild rhododendrons in Taiwan's alpine regions are in no respect inferior to their counterparts in the lowland plains. Wild rhododendrons rely on insects for pollination, and since the rate of successful fertilization is miserably low, they have to strive for propagation. According to Tseng, species with campanulate (bell-shaped) corolla are more advantaged than those with infundibular (funnel-shaped) corolla in attracting large insects including large moths, alpine flies and butterflies.



淡紫紅色花冠上有玫瑰色斑點是南澳杜鵑的特色 / 曾彥學提供
Rhododendron lasiostylum Hayata is characterized by the rosy flecks on its lilac corolla. / Photo provided by Yen-hsueh Tseng



因興建翡翠水庫而已於野外滅絕的烏來杜鵑，為台灣特有种 / 曾彥學提供
Rhododendron kanehirai Wilson is endemic to Taiwan, but it has become extinct in the wild due to the construction of Fei-Tsui Reservoir. /Photo provided by Yen-hsueh Tseng

隨著四季的改變，杜鵑花也組合形成了千百種的花色變化。曾教授說，杜鵑花的基本花色有白色、粉紅色、紫色、紫羅蘭色、黃色、藍色等顏色，在這幾種顏色多重組合變化下，玉山杜鵑的顏色從白色、桃紅色到紫色都有，而南澳杜鵑的淡紫紅色花冠上則有玫瑰色斑點。

為了提升生活水準，對於賞心悅目的花卉植栽也漸漸引起人們的注意，而色彩斑斕、抗病蟲害能力強的台灣原生杜鵑花，即成為與外來種雜交的對象。曾教授解釋，「以扦插方式育種，只需一年時間就可以開花結果；如果以種子播種的話，大約需要5至7年的時間。」他也特別提到，已在野外絕跡的烏來杜鵑便是採用扦插的方式來進行人工復育。而對於部分登山客採摘台灣原生杜鵑花的行為，曾教授很不以為然地表示，台灣原生杜鵑花不好照顧與牠的根瘤菌有關，「根

The basic floral colors of *rhododendron* include white, pink, purple, violet, yellow, blue, etc., yet with the change of seasons, a remarkable assortment of shades can be observed. For instance, *Rhododendron pseudochrysanthum* Hayata boasts a variety of shades from white, fuchsia, to purple, while *Rhododendron lasiostylum* Hayata has rosy flecks on its lilac corolla.

As gardening and landscaping become a trend, ornamental plants start to gain more attention. Native rhododendrons in Taiwan with their spectacular floral colors and high resistance against diseases and pests, have thus become target of hybridization. "For the native rhododendrons, it takes just one year to bloom if bred by cutting; with the seeding method, it would take five to seven years," explained Tseng. Though the restoration of *Rhododendron kanehirai* Wilson, once extinct in the wild, was achieved through the method of cutting, Tseng



玉山杜鵑習慣高地氣候，若移到平地栽種恐無法存活 / 呂理雍攝
Rhododendron pseudochrysanthum Hayata is accustomed to the mountain climate, and may not survive if cultivated at sea level. / by Li-yong Lyu

瘤菌和原生杜鵑花的根部共生，一旦離開了根瘤菌，杜鵑花根本活不了！」他說道，「除了人為採摘和開發會影響台灣原生杜鵑花的族群變化以外，其他像是病蟲害、地形崩塌、土石流...等自然因素，也會影響族群的變化。」

cannot approve of the willful act of *rhododendron* plucking by some mountain climbers. "Without root nodule bacteria, it is impossible for native rhododendrons to survive!" said Tseng. "Other than human plucking and exploitation, natural factors like pests, blights, landslides and mudflows could also afflict *rhododendron* populations."

資源整合 教育著手

曾教授以國外保育原生杜鵑花的作法為例，這幾十年來，英國有許多基金會在全世界各地（主要是針對亞洲地區）蒐集原生杜鵑花，並透過種子播種、保存的方式，讓愛丁堡皇家植物園擁有世界杜鵑花園的美譽。其他像是日本、美國、歐洲等國家，對於原生杜鵑花的生態保育，也不遺餘力。反觀台灣，可能因為還沒有一個專責單位來負責這項任務，或是因為人事異動而使得復育計畫停頓，讓台灣原生杜鵑花隨時處於野外滅絕的壓力。他也提到，研究經費的支持、政府部門之間的合作，或是政府部門與民間研究機構之間的合作，這些因素都會影響台灣原生杜鵑花的生態保育成功與否。

「和動物比起來，台灣稀有植物的現況比較可憐，」曾教授語帶感嘆地繼續說道，「台灣不應該只有一個經濟奇蹟，歐亞大陸最高的樹是長在台灣的台灣杉；屬於恐龍時代的子遺植物檫樹全世界只有3種，台灣就有一種台灣檫樹。」他認為透過教育推廣，可以讓更多的民眾了解台灣稀有植物的生存狀況，進而降低族群減少的壓力。至於保育政策，他建議政府應該成立最高權責單位並與其他相關單位形成共識之後，往下紮根，再推廣到民間乃至於園藝界。

杜鵑花是舉世聞名的觀賞花卉，但是顏色多、花型大、花色美而且抗病蟲害強的台灣原生杜鵑花，也不遑多讓。16種台灣原生杜鵑花中，有一大半分布於台灣國家公園保育區內，「有些生長在步道旁的杜鵑花，還是會有面臨登山客採摘的壓力。」曾教授仍不免憂心忡忡地說道。為了能使生活在這塊土地的人們，都能親身體驗台灣原生杜鵑花的魅力，採摘之前，請大家想想「路邊的野花不要採」這句話吧！

Resource Integration Starts from Education

The conservation of rhododendrons has been valued by many countries for decades. Many foundations in the U.K. have collected native rhododendrons worldwide (primarily those in Asia), then through further cultivation, brought the fame to Royal Botanic Garden Edinburgh as the world's best rhododendron garden. Japan, the U.S., and some European countries are also as keen in conserving native rhododendrons. Unfortunately, Taiwan has not been able to catch up in this respect as restoration programs demand stronger and continuous personnel support, and a specific government unit is yet to be assigned to prevent the native rhododendrons from extinction. Besides, research funding support, cooperation between government agencies and with NGOs are also determinants in the success of the conservation.

“Compared to the endangered animals, rare plants in Taiwan are even more deplorable,” lamented Tseng. “Taiwanese have much more to take pride in than the Economic Miracle: the tallest tree in Eurasia is our Taiwania (*Taiwania cryptomerioides* Hayata); among the world's three extant species of sassafras, a relic of the dinosaur era, one of them is Taiwan Sassafras (*Sassafras randaiense*)!” Tseng believes the situation will improve if people in Taiwan can be educated with the status of rare botanical species, and the government authorities start to take the issue seriously.

Already a well-known ornamental flower, Taiwan's native rhododendrons have a broad range of fine colors, large floral sizes, and high resistance against diseases and pests. Yet despite the fact that a majority of the sixteen species are distributed within the nature reserves of national parks, “those growing along the hiking trails are still potential victims of wild flower pickers,” worried Tseng. While more conservation measures are awaited to guard these spectacular blooms, everyone can make a meager contribution by refraining from plucking these charming plants.

簡介 Profile

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With a Ph.D. degree from Dept. of Forestry, Nat'l Taiwan Univ., Tseng is currently an assistant professor of Dept. of Forestry at Nat'l Chung Hsing Univ. Tseng specializes in dendrology, plant taxonomy, forest plant ecology, botanical resource survey and the restoration of endangered plants; he had also participated in the restoration of *Rhododendron kanehirai* Wilson.





台灣國家公園之原生杜鵑花賞花時間表

Bloom Time of Native Rhododendrons in National Parks of Taiwan

植物名稱 Species	花色及花型 Color and Shape of flowers	自然分布 Type of Distribution	花季 Bloom Time	分布地區 Local Distribution
馬銀花 <i>Rhododendron ovatum</i> Plancha	白色至淡紫色；花冠漏斗狀 white to violet; funnel-shaped corolla	廣泛種 widespread	3~5月 Mar.-May	雪霸國家公園武陵遊憩區 Wuling Recreation Area of Shei-Pa National Park
著生杜鵑 <i>Rhododendron kawakamii</i> Hayata	黃色；花冠漏斗狀 yellow; funnel-shaped corolla	特有種 endemic	5~7月 May-Jul.	太魯閣國家公園清水山區 Mt. Qingshui area of Taroko National Park
台灣杜鵑 <i>Rhododendron formosense</i> Hemsl.	白色或淡紫紅色；花冠鐘形 white to lilac; bell-shaped corolla	特有種 endemic	4~5月 Apr.-May	雪霸國家公園觀霧遊憩區榛山步道沿線 Jhenshan Trail of Guanwu Recreation Area in Shei-Pa National Park
玉山杜鵑 <i>Rhododendron pseudochrysanthum</i> Hayata	白色、桃紅色或紫色；花冠鐘形 white, pink, or purple; bell-shaped corolla	特有種 endemic	4~6月 Apr.-Jun.	太魯閣國家公園的南湖山區及合歡山區、雪霸國家公園雪山主峰線、玉山國家公園玉山主峰 Mt. Nanhu and Mt. Hehuan areas in Taroko National Park; Main Peak of Syue Mountain in Shei-Pa National Park; Mt. Jade Main Peak in Yushan National Park
南湖杜鵑 <i>Rhododendron hyperythrum</i> Hayata	白色至淡紫紅色；花冠鐘形 white to lilac; bell-shaped corolla	特有種 endemic	5~6月 May-Jun.	太魯閣國家公園南湖大山及清水山區 Mt. Qingshui area of Mt. Nanhu in Taroko National Park
金毛杜鵑 <i>Rhododendron oldhamii</i> Maxim	磚紅色；花冠漏斗狀 brick red; funnel-shaped corolla	特有種 endemic	3~7月 Mar.-Jul.	雪霸國家公園武陵地區、陽明山國家公園的山坡上及小路旁 Wuling area in Shei-Pa National Park; slopes and paths in Yangmingshan National Park
紅毛杜鵑 <i>Rhododendron rubropilosum</i> Hayata	桃紅色、淡紫紅色至深紫紅色；花冠漏斗狀 pink, lilac, to maroon; funnel-shaped corolla	特有種 endemic	4~6月 Apr.-Jun.	雪霸國家公園七卡山莊到雪山東峰的步道旁、玉山國家公園塔塔加遊憩區、太魯閣國家公園合歡山區 The trail from Cika Cabin to the East Peak of Syue Mountain in Shei-Pa National Park; Tataka Recreation Area of Yushan National Park; Mt. Hehuan in Taroko National Park
細葉杜鵑 <i>Rhododendron noriakianum</i> T. Suzuki	淡紫紅色至深紫紅色；花冠漏斗狀 lilac to maroon; funnel-shaped corolla	特有種 endemic	4~6月 Apr.-Jun.	雪霸國家公園武陵遊憩區雪山登山口 Trailhead of Syue Mountain in Wuling Recreation Area, Shei-Pa National Park
台灣高山杜鵑 <i>Rhododendron rubropilosum</i> var. <i>taiwanalpinum</i>	桃紅色、淡紫紅色至深紫紅色；花冠漏斗狀 pink, lilac, to maroon; funnel-shaped corolla	特有變種 endemic variety	4~6月 Apr.-Jun.	玉山國家公園塔塔加遊憩區、太魯閣國家公園的南湖山區及合歡山區 Tataka Recreation Area of Yushan National Park, Nanhu and Hehuan Mountains in Taroko National Park
西施花 <i>Rhododendron ellipticum</i> Maxim	白色至桃紅色；花冠漏斗狀 white to pink; funnel-shaped corolla	廣泛種 widespread	3~5月 Mar.-May	雪霸國家公園茂密森林邊緣、玉山國家公園塔塔加一帶 The fringe of dense forest in Shei-Pa National Park, Tataka area of Yushan National Park
唐杜鵑(大屯杜鵑) <i>Rhododendron longiperulatum</i>	紅色至深紅色；花冠漏斗狀 red to dark red, funnel-shaped corolla	廣泛種 widespread	2~9月 Feb.-Sep.	陽明山國家公園的山坡上、小路旁以及墾丁的南仁湖畔 slopes and paths of Yangmingshan National Park, lakeside of Nanren Lake of Kenting National Park.

註：曾彥學教授口述，本刊記者整理。

Note: This table is organized by NPQ on Prof. Tseng's oral account.