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峨眉植物圖誌

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峨眉植物圖誌

ICONES PLANTARUM OMEIENSIIUM

Volume 1

Number 1

英國愛丁堡大學博士 方文培主編
國立四川大學教授

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Published by
The National Szechuan University
Chengtou and Omei-hsien*
Szechuan, China

MAY 1942

*War-time address

英園愛丁大學生物學系

ICONES PLANTARUM OMEIENSIS

Number 1

Volume 1

英文部主任 英國愛丁大學生物學系

The first number of the first volume of this Icones is respectfully dedicated to

WEN-PEI FANG, Ph.D., Professor

PROFESSOR S. S. CHIEN 錢雨農先生.

Director of the Biological Laboratory of the Science Society of China, at Peh-pei, Chungking, Szechuan, who has devoted his work in Botany and has made valuable contribution to Chinese Flora. Professor Chien also laid the foundation of the Department of Biology, College of Science, National Szechuan University, while he was the head of the department here from 1935 to 1937.

Szechuan, China

Published by

The National Szechuan University

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MAY 1942

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序

峨眉譽滿天下，其名也以佛教聖地彰，以風景幽勝彰，以珍禽罕獸奇花異卉彰，而自植物學觀點言之，其種類蘊藏之宏富，新種發現之繁多，亦宜其騰聽中外也。

昔時我國之山隅林叢，每為人跡罕到之處，野生植物僅具有醫藥價值者，始爲人所注意，故峨山植物雖自古遠之時，卽曾爲人所採集，然皆耗於醫藥之需，自純植物學立場採取標本者，實以歐美植物學者爲始。遠在前清光緒三年時，卽有英國駐渝領事巴伯氏 Bal 登臨峨山，觀察其植物情形，是爲外人來峨之始。越十年（前清光緒十三年）德國萊茵社教士費伯氏 Faber 首次採集峨山植物，氏居我國有年，熟識我國語言風俗，行旅所及，輒作植物標本之搜集，其峨山之行，獲得大量植物標本，經後鑑定，有一新屬及七十餘新種，是爲峨眉植物知名於植物學界之首次也。至前清光緒三十三年，復有英植物學家威爾遜氏 Wilson 銜倫敦維琪苗圃公司 James H. Veitch & sons 之命來華西採集，氏於是年五月抵峨採集，歷時約半載，其所獲之豐尤愈前人，後於余建德氏 Sargent 之威氏植物誌內發表之，新種至多，此外歐西人氏之來訪峨眉者，尚有多人，如荷時氏 Hosie 於前清光緒十年，巴特氏 Pratt 於前清光緒十六年，保太寧氏 Potanin 於前清光緒十九年，均蒞臨是山，或係旅行所經，或係採集途程，觀察所及，均深讚其盛大之植物寶藏，而播揚於世也。

近年我國科學進步，植物學漸爲國人所注重，國內植物學者及採集員之臨是山工作者，乃漸衆多。自中華民國十七年以來，先後在峨採集者計有陳嶸（十七年），汪發鑽（二十年），俞德浚（二十一年），鄭萬鈞（二十五年），杜大華（二十四年），錢崇澍（二十六至二十七年），許紹南（二十六年），鍾心煊（二十八至二十九年），孫祥鐘（二十八年），周鶴昌（二十七至二十八年），孫祥麟（二十八至二十九年），馬萬文（二十九年），李彩祺（二十九年），周承烈（三十年）諸君。編者曾於十七，十八，十九，及二十七年，數次採集於此，自二十八年夏，國立四川大學遷峨，編者教授植物學於斯校，乃得繼續此項工作，歷數載之不斷採集，發現此地植物之爲世人所不知者尚多。而外人所發表之峨眉植物，多散諸歐美各國簡編，其所名之新種，間有材料不全，及尚待攷證，而在疑難間者，實有更行探討之必要。爰是之故，峨山植物圖誌之編行，實不容再緩也。

本書所載之範圍，以峨眉山及其附近之新種植物，區原種植物，疑難不確種類及重要之經濟植物爲主，每種除備詳圖外並有說明，凡記載新種均用拉丁文，英文及中文三種文字，其餘均用中英文記載，拉丁文與英文記載係相互對照，而英文與中文記載則不盡同，前二者係按科學體裁，後者則稍近通俗形式，蓋爲業餘愛好植物之人士閱覽方便也。

本圖誌每卷分裝兩號，每號載五十圖，第一卷第一號所記載植物五十種中有新種五，峨眉植物種類廣博，已如前言，本書行當繼續刊行，以求正於海內外人士也。

此項工作進行時，承國立四川大學校長程天放先生之提倡與鼓勵，又承蕭洪模先生製圖，誠靜容先生協助編輯及採集員諸君搜集材料，使於抗戰期中，物資困難異常時，猶能照原定計劃進行，此編者深爲感謝者也。

中華民國三十一年五月

方文培序於峨眉保寧寺

ICONES PLANTARUM OMEIENSIIUM

Volume 1

Number 1

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Plate 1.

CARPINUS FANGIANA Hu.

Betulaceae.

Carpinus Fangiana Hu in Journ. Arn. Arb. X (1929), 154.*Carpinus Wilsoniana* Hu in Journ. Arn. Arb. X (1929), 155.

Deciduous tree 10 to 15 metres rarely up to 20 metres high; bark grey or brownish grey, smooth or rarely scaly; branchlets purple or greenish-purple, glabrous, with conspicuous ovate lenticels; winter-buds axillary, conical or long conical, with many imbricate ovate scales ciliate on the margin, glabrous on both sides. Leaves chartaceous, alternate, usually 2-ranked, ovate-oblong, rarely ovate, 11-16 cm. long, 4.5-6 cm. broad, acuminate on the apex, subrotund or subcordate at the base, biserrate on the margin, teeth acute with slender acumen on the apex, yellowish hirsute especially on the nerves while young, glabrescent when matured or slightly pubescent on the nerves of lower surface, upper surface brightly green, lower surface pale green, midrib slightly grooved above, prominent below, lateral nerves 25-30, rarely 34 pairs, reaching to the tips of teeth, more or less depressed above, prominent below, 4 mm. distant; petioles, 1 cm. long, hirsute while young, glabrous when matured. Flowers small, greenish yellow, unisexual, monoecious, appearing while the developing of leaves; staminate flowers in axillary pendulous pubescent catkins about 12 cm. long, bracts greenish purple or greenish yellow, triangular-ovate, 5 mm. long, puberulous outside, pubescent inside, with a stalk 1 mm. long, without perianth, stamens 13-15, inserted at the base of bracts, filaments slender, usually 2-forked near apex, anthers ovoid, deep yellow with a tuft of hairs on the apex; pistillate flowers in terminal erect pubescent catkins 9 to 5 cm. long, bracts lanceolate, 6-8 mm. long, sparsely hirsute outside, puberulous inside, enclosed 2 flowers, bractlets sessile, ovate, 3 mm. long, pubescent, perianth adnate to the pubescent ovary, with 4-6 teeth at its apex, style short and stout, with 2 slightly curved linear stigmas. Fruit a slightly ribbed oblong-ellipsoid pubescent nutlet 4 mm. long, 2-3 mm. in diameter, with persistent style, subtended by a chartaceous ovate bract 15 mm. long, 8 mm. broad, slightly and remotely serrate near the apex, with a hirsute stalk 2 mm. long. Fruiting catkins 20-27 cm. rarely to 35 cm. long.

MOUNT OMEI: Hung-chun-ping, alt. 1200 m., in shaded slopes, small tree 7 metres high, S.S. Chien, No. 5505, May 5, 1936; at roadside from Hung-chun-ping to Chiu-lao-tung, alt. 1500 m., in forests, small tree 6 metres high, W.P. Fang, No. 12709, July 29, 1938; same locality, in forests, small tree 5 metres high, W.P. Fang, No. 14666, May 18, 1940; same locality, small tree 6-7 metres high, T. C. Lee, No. 3105, July 31, 1940; same locality, T. C. Lee, Nos. 3762 & 4701, October 1940; same locality H. C. Chow, No. 7518, June 12, 1938; same locality, C. W. Yao, No. 2842, June 1939; Hsi-hsin-so, alt. 1600 m., in woods, tree 14 metres high, C. L. Sun, No. 2265, May 31, 1940; Chiu-lao-tung, alt. 1800 m., C. L. Sun, No. 1827, May 1, 1940; west of Mt. Omei, Opieh-sien, at the bank of a river, tree 10 metres high, bark greyish brown, W. C. Cheng, No. 6080, June 30, 1936; Opieh-sien, Shaping, small tree 6 metres high, C. L. Sun, No. 973, August 11, 1939.

A very distinct species is characterized by its long fruiting catkins and by its ovate-oblong leaves with about 30 pairs of lateral nerves. It was discovered at Chiu-lao-tung of Mt. Omei and has been known as a common species in southwestern Szechuan, eastern Sikang and northern Kweichow.

W. P. Fang.

Fig. 1, a fruiting branch (natural size);

2, a bract with a nutlet (10 times enlarged);

3, a staminate inflorescence (natural size);

4, a staminate flower (10 times enlarged);

5, a pistillate inflorescence (natural size);

6, a pistillate flower (10 times enlarged);

7, a portion of the lower surface of a young leaf to show the hairs (10 times enlarged)



圖版一

方氏鵝耳櫪

樺木科

落葉喬木。高十至十五公尺，罕達二十公尺；樹幹灰色，或棕灰色，光滑，或罕成鱗片狀；幼枝紫色或青紫色，無毛而具顯明卵形皮孔；冬芽腋生，圓錐形或長圓錐形，被多數卵形週圍有纖毛芽鱗，兩面俱光滑無毛。葉紙質，互生，通常排成兩行，卵狀長方形或罕為卵形，長十二至十六公分，寬四至五至六公分，先端尖尾形，基部亞圓形或亞心臟形，葉緣具複鋸齒，齒狀尖銳。葉背幼時具淡黃色鬚毛，尤以葉脈上為多，及長變為光滑或僅脈上稍具毛，葉面鮮綠色，葉背蒼白淡綠色，中脈在葉面微凹，在葉背突出，側脈二十五至三十對，罕多至三十四對，脈長直達齒緣之頂，在葉面下凹，在葉背突出，每對間距離四公厘；葉柄長一公分，幼時有鬚毛，長成後脫落。花小，黃綠色，單性，大小蕊花同株，開花與發葉同時；小蕊花成腋生下垂被毛之柔荑花序，長約十二公分，苞片青紫色或黃綠色，三角卵形，長五公厘，外面具柔毛，內面被細毛，具柄長約一公厘，無花被，小蕊十三至十五本，着生於苞片基部，花絲細長，於近頂端處分為二枝，花藥卵狀，深黃色，頂端被毛一叢；大蕊花成頂生直立被毛柔荑花序，長三至五公分，苞片披針形，長六至八公分，外面具甚少鬚毛，內部具柔毛，每苞片具二花，小苞片無柄，卵形，長三公厘，被毛，花被與被毛之子房貼合，頂端齒裂為四至六片，花柱粗短，具稍向外曲之線形柱頭二枝。果實為一稍扁圓蓋被細毛之長方橢圓形小堅果，長四公厘，直徑二至三公厘，花柱宿存於其上，果外被紙質卵形苞片，長十五公厘，闊八公厘，先端有稀疏淺鋸齒，基部具被鬚毛之柄，長二公厘，果序長二十至二十七公分，罕達三十五公分。

產於峨山海拔一千二百至一千八百公尺間，起洪椿平，息心所，迄九老洞，均多此樹，峨山以西，經峨邊沙平等處迄西康東部，此樹亦為習見，此外更遍佈於四川西南部及貴州北部。

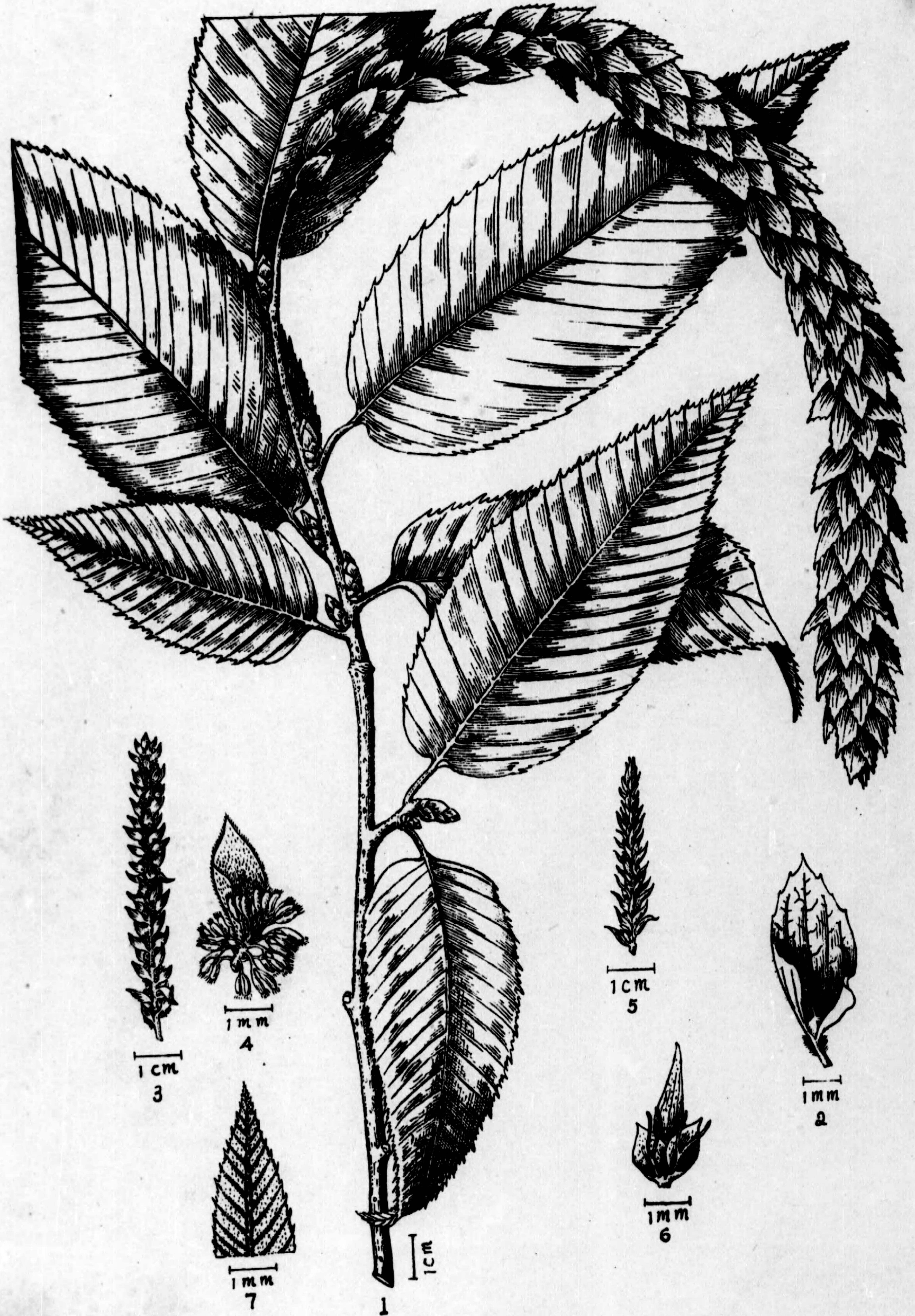
本種首次發現於峨山九老洞，四月開花，五六月果實成熟，其長形果序，卵狀長方形之葉及其約為三十對側脈均為確定本種之特性。

圖解：1. 着果之枝（原大）；2. 苞片及一堅果（放大十倍）；3. 小蕊花序（原大）；4. 小蕊花（放大十倍）；5. 大蕊花序（原大）；6. 大蕊花（放大十倍）；7. 幼葉葉背之一部示其所被之毛（放大十倍）

Fig. 1. A fruiting branch (natural size);
 2. A bract with a nutlet (10 times enlarged);
 3. A staminate inflorescence (natural size);
 4. A staminate flower (10 times enlarged);
 5. A pistillate inflorescence (natural size);
 6. A pistillate flower (10 times enlarged);
 7. A portion of the lower surface of a young leaf to show the hairs (10 times enlarged).



蕨眉植物圖志



1. *Carpinus Fangiana* Hu.

二 圖
Plate 2

MAGNOLIA OFFICINALIS Rehder et Wilson.

Magnoliaceae.

Magnolia officinalis, Rehder et Wilson in Sargent, Pl. Wilson. I (1913), 391.

一、*Magnolia hypoleuca*, Diels (non Siebold et Zuccarini) in Engler, Bot. Jahrb. XXIX (1900), 311. (Fl. Central China).

Small tree 7-9 metres high; bark grey; young branchlets of the current year greenish and densely silky tomentose at first, then sparingly pubescent, those of more than one year old yellowish or yellowish-grey or grey, covered with woolly indumentum or quite glabrous on still older ones, lenticels rounded or elliptical, prominent, leaf-scars large, elliptical or subcordate; buds triangular-ovoid or horn-like, greenish with rather scanty pubescence. Leaves decussate, coriaceous, green, glabrous above, pale glaucous and sericeous beneath, oblong-ovate, narrow towards the base, 25-45 cm. long, 12-24 cm. broad, apex rotund and very shortly acuminate, rarely emarginate, base rounded or broadly cuneate, midrib prominent beneath; more or less villose pubescent, lateral nerves 25-35, elevated beneath; petiole subterete, greenish, sparingly pubescent or glabrescent, 28-45 mm. long. Flowers solitary, terminal on young branchlets, subtended by lvs, whitish, fragrant(?), about 15 cm. across, peduncles stout, sericeo-villose; sepals 3, oblong-obovate about 10 cm. long, 5 cm. in diameter, greenish white usually tinged purplish, petals 9-12, whitish, spoon-shaped, 7-9 cm. long, 3.4-5 cm. broad, stamens numerous, matured anthers yellowish-white, 1.5 cm. long, filaments 5 mm. long, dilate at base; gynaecium about 3.5 cm. long, oblong-ovoid, carpels numerous, ovary elliptic-oblong, dorsally grooved, greenish-white, about 1 cm. long, stigma reddish, 5-8 mm. long, decurrent on inner surface, ovules 2 in each carpel. Fruit oblong ovoid, rarely cylindrical-oblong, 12 cm. long and 6 cm. in diameter, truncate at apex, subrotund at base, brownish-purple, all the carpels matured, carpels subrectangular with a beak 2-3 mm. long and recurved outward forming a right angle with the axis of the fruit, peduncle stout, 25 mm. long, 15 mm. in diameter, brownish; glabrous; seeds 1 in each carpel, triangular-obovoid, compressed, testa black, 11 mm. long, 8 mm. in diameter, ventral slightly sulcate.

MOUNT OMEI: Wan-nien-ssu, alt. 1159 m., cultivated in the temple, tree 8 metres high, flowers white, W.P.Fang, No. 18394, April 18, 1942; Kuan-hsin-po, alt. 1370 m., cultivated in the temple, small tree 7-10 metres high, flower white, W.P.Fang, No. 16629, May 12, 1941; Chu-tien, alt. 1920 m., cultivated in the temple, tree 7-8 m. high, flower white, C.L. Sun, No. 401, May 30, 1939.

This is a distinct species and differs from other species by the grey coloured bark and oblong-ovoid fruit. Those having leaves distinctly bilobed at apex had been classified to var. *biloba* Rehder et Wilson of Kiangsi,* but they are found also in Fang's 13498 (from Kuan-hsien) and 16629. Therefore var. *biloba* is either a form of the type species or identical with it. It is usually a handsome tree with giant foliage and showy flowers and has been commonly cultivated in the temples on Mount Omei as a garden favourite as well as cultivated by the inhabitants for the medicinal uses of its bark and floral buds.

C. Y. Ch'eng

。(附十大花)手其示以花箭一之葉。2; (大風) 夾心之葉如一。4; (一之花二

- Fig. 1, a flowering branch (1/2 dimension);
- 2, a flower having perianth removed showing stamens and gyanecium (natnral size);
- 3, a fruit (1/2 dimension);
- 4, a matured carpel (natural size);
- 5, a portion of leaf showing hairs (10 times enlarged),

*Rehder et Wilson in Sargent, Pl. Wilson. I (1913), 392.

圖版二

厚朴

木蘭科

小喬木高七至十公尺：樹幹灰色，本年生幼枝淡綠色，幼時被密厚白色絲狀短毛，稍長毛漸稀少，一年以上幼枝淡黃色或黃灰色或灰色，密被細毛，較老之枝則殊光滑，皮孔圓形或橢圓，枝上葉痕大而顯著；葉三角卵形或角狀，淡綠色，被疏鬆之毛。葉縱橫相錯，革質，葉面綠色無毛，葉背藍綠有白粉狀物附着，被絲狀細毛，長方倒卵形，基部狹小，長二十四至四十五公分，闊十二至二十四公分，先端圓形具極短之尖尾，罕為內缺成二裂片，基部圓形或闊楔形，中脈於葉背突起，在長成之葉中脈甚為光滑，尤以基部為然，側脈二十五至三十五對，在葉背突起；葉柄亞圓形，淡綠色，被毛甚少，或基部光滑，長二十八至四十五公厘，花單生於幼枝之頂端，白色，芬香(?)，直徑十五公分；花梗粗壯，被絲狀柔毛，花萼三片，長方倒卵形，長約十公分，闊五公分，白綠色，常帶紫紅色渲染，花瓣九至十二，白色，匙形，長七至九公分，闊三十至四十五公厘，小蕊多數，成熟花藥黃白色，長十五公厘，花絲長五公厘，基部寬大；雌器長約三十五公厘，長方卵形，心皮多數，子房長方橢圓形，背部溝狀，白綠色，長約一公分，柱頭帶紅色，長五至八公厘，向內一面齒狀，每心皮內有二枚胚珠。果長方卵形，罕為圓柱長方形，長十二公分，直徑六公分，頂端截平，基部近於圓形，紫棕色，所有心皮俱皆發育成熟，心皮近於方形，頂端具尖頭，長二至三公厘，向外彎曲與果之長軸垂直，果柄粗壯，長二十五公厘，直徑十五公厘，棕色，光滑無毛；每心皮具種子一枚，三角倒卵形，側扁，種皮黑色，長十一公厘，直徑八公厘，腹面有淺溝。

峨眉山萬年寺觀心坡及初殿等處栽培者生長甚佳五月開花

本種植物為一美觀之樹，具大形樹葉，叢集小枝之頂端，白色美麗之花，以其灰色樹幹及長方卵形果而別於其相近之種。在方氏13494及16629號標本內，各有一葉先端成明顯二裂片，此為本種之變種即厚朴(*Magnolia officinalis* var *biloba*)之特徵。故作者深信厚朴，應為此種之變形或完全相同，此種樹正在峨山諸廟宇中普遍種植用為觀賞植物，而附近居民亦多種植，查取其樹皮及花芽以為藥用也。

圖解 1. 着花之枝(縮小二分之一); 2. 一花折去其花被以示大小蕊(原大); 3. 一果實(縮小二分之一); 4. 一成熟之心皮(原大); 5. 葉之一部分以示其毛(放大十倍)。

Fig. 1. a flowering branch (1/2 dimension);
2. a flower having perianth removed showing stamens and gynoecium (natural size);
3. a fruit (1/2 dimension);
4. a matured carpel (natural size);
5. a portion of leaf showing hairs (10 times enlarged).

*Rehder et Wilson in Sargent, Pl. Wilson. I (1913), 392.

我 國 植 物 圖 志



2. *Magnolia officinalis* Rehder et Wilson

三 图 图
Plate 3.

MICHELIA WILSONII Finet et Gagnepain

Magnoliaceae
木兰科

Michelia wilsonii, Finet et Gagnepain in Bull. Soc. Bot. France, LII. Mem. 4. (1906), 45, t. 7A.

Michelia sinensis Hemsley et Wilson in Kew Bull. (1906), 149.

Tree 8-12 metres high; young branchlets of the current year greenish with scanty pubescence, compressed, those of more than one year old olive-green, free from pubescence, compressed or subterete, lenticellate, each node marked with a clear line; buds filiform or subcylindrical, brown or brownish, sericeous. Leaves coriaceous, broadly lanceolate or narrowly lanceolate, rarely elliptic-oblancoate or oblong-ovate, 8-18 cm. long and 3-6 cm. wide, apex short acuminate rarely acute, base cuneate or broadly cuneate, silky tomentose on both sides when young, glabrous above, glaucous and puberulent beneath, midrib prominent beneath, lateral nerves alternate, tertiary nerves reticulate; petioles 1.5-4 cm. long, green glabrous. Flowers yellowish, fragrant, about 5 cm. long, 6 cm. across, subterminal on branch, axillary to leaf, peduncle about 1 cm. long, 5 mm. in diameter, perianth lobes 9-12, oblanceolate, 4-5 cm. long and 2-3 cm. wide, the inner the smaller; stamens numerous, mucronate, anthers yellowish, about 1 cm. long, filaments greenish, about 2 mm. long, gynaecium 1.5 cm. long, carpels numerous, ovary elliptic-ovoid, greenish, sparingly pubescent, about 1 mm. long, style nearly as long as ovary, stigma small, ovules about 14. Fruit purple-brown with conspicuous yellowish lenticels, 12 cm. long, rachis twisted, about 1/4 carpels developed, matured carpels 15-20, long cylindrical, slightly constricted at middle portion or ovoid, 15-25 mm. long, 9-12 mm. in diameter, with a short and recurved beak at its apex, dehiscent by 2 valves, the dorsal suture dehiscent only near the tip and the basal 1/2 remaining indehiscent; seeds 1-2 in each carpel, subobovoid when 2, and truncate at the broader part, dull reddish-brown.

MOUNT OMEI: Kuan-hsin-po, alt. 1300 m., tree 10 metres high, C. W. Yao, No. 1598, August 23, 1939; 5 specimens sent to Wanning-shu, in forests, tree 8 metres high, flowers yellow or yellowish, only one tree seen, W. P. Fang, No. 16598, May 12, 1941; same locality, alt. 1041, tree 12 metres high, leaves oblanceolate, glabrous, flowers yellow, W. P. Fang, No. 15969, March 30, 1941.

This species is distinguished from its allies by its cuneate and reticulate leaves usually bluish-green at its lower surface and by its flowers with quite long style. The specimens cited agree with the original description of this species except the longer petioles, which according to Hemsley and Wilson on their description of this species under the name *Michelia sinensis* are "rather under 1.5 cm. long", and the leaves shortly puberulent beneath. No. 16698, found wild in a forest, has leaves much smaller than those of 15969, and the base of the latter tapering into cuneate. It is fairly common in the forests or at the margin of forests in the vicinity of Kuan-hsin-po and Hsi-hsin-so, C. Y. Ch'eng.

Fig 1, a flowering branch (natural size);

- 2, gynaecium (10 times enlarged);
- 3, a stamen (10 times enlarged);
- 4, & 5, single pistil & section of pistil showing the arrangement of ovules (20 times enlarged);
- 6, a portion of leaf showing the details on the leaf-back (10 times enlarged).

圖版三

威氏黃心樹

木蘭科

喬木高八至十二公尺：本年生幼枝帶綠色，被稀疏之毛，略呈扁形，一年以上者橄欖青色，無毛，扁

形或略成圓形。具皮孔，每節有環形綫痕；幼芽綫形或近於圓柱形，棕色或淡棕色，被毛帶絲狀光澤。葉革質，倒披針形或狹披針形，罕為橢圓倒披針形或長方卵形。長八至十八公分，闊三至六公分，先端短尖尾狀罕為銳形，基部楔形或闊楔形。幼時兩面均被絲狀短毛，及長葉面無毛。葉背呈藍綠色有稀微絲狀絨毛。主脈在葉背凸出，側脈互生，三刺支脈網狀。葉柄長十五至四十公厘，綠色無毛。花黃色，芳香。長約五公分，直徑約六公分，着生於枝頂端附近之葉腋間。花梗粗壯，長約十公厘，直徑約五公厘，花被九至十二瓣，倒披針形，長四至五公分，闊二至三公分，愈在內面着愈小，小蕊多數，頂端尖形，花藥淡黃色，長約一公分，花絲淡綠色，長約二公厘；大蕊長十五公厘，心皮多數，子房橢圓狀卵圓形，淡綠色，長約長一公厘，被毛甚少，花柱與子房等長，柱頭細小，每心皮具胚數約十四枚。幼果灰色，被絲狀短毛，成熟之果紫棕色，上具明顯淡黃色皮孔，長約十二公分，果軸扭曲，心皮約四分之一發育成熟，成熟心皮扁柄，長方圓柱形，中部略向內收縮，或為卵圓形，長十五至二十五公厘，直徑九至十二公厘，頂端具短粗略曲之尖頭，成熟後裂開成二瓣，背縫僅近頂端處裂開，基部一半通常不裂，每心皮內具種子一枚或二枚，一枚時為腎形，二枚時則近於卵形，在二種子交界處各成截平形，顯暗紅棕色。

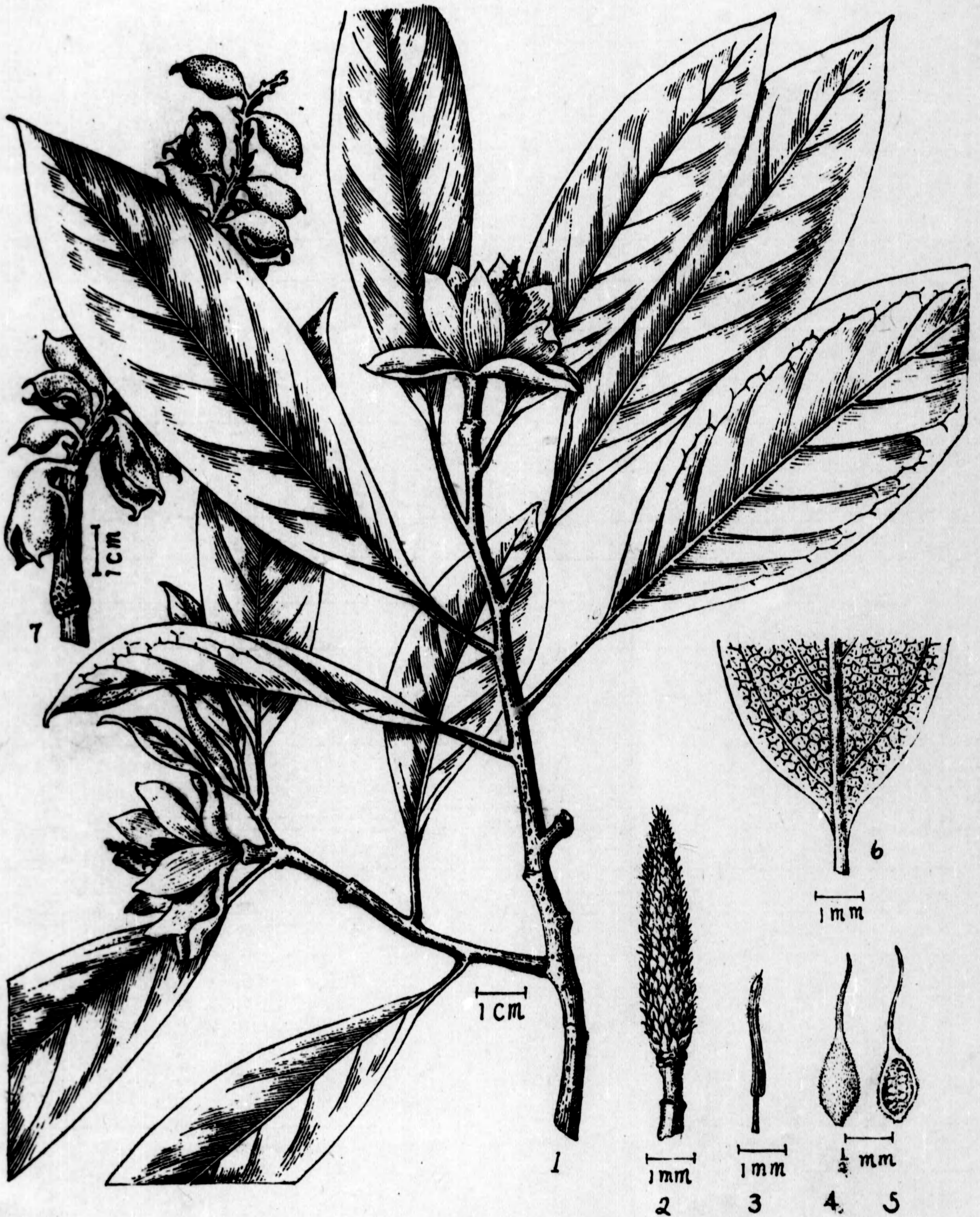
峨眉山觀心坡息心所，及至初殿沿途森林中均產之，三月至五月開黃色之花

異常美觀。

本種與其鄰近種之區別，在於其藍綠色背之楔形葉，具網狀脈，及其較長之花柱。峨眉所採之標本大致與原記載符合，惟種葉柄較長，且葉背有絲狀短毛，方氏 16598 號標本之葉甚小，葉之基部闊楔形或近於圓形，在 15969 號則具較大之葉及漸狹而成楔形之葉基。

圖解：1. 着花之枝（原大）；2. 大蕊（放大十倍）；3. 小蕊（放大十倍）；4及5. 單獨心皮及心皮之切面示胚珠之排列（放大二十倍）；6. 葉之一部示葉背之構造（放大十倍）。

峨眉植物圖志



3. *Michelia wilsonii* Finet & Gagnepain

Plate 4.

MICHELIA BODINIERI Finet et Gagnepain.

Magnoliaceae.

Michelia Bodinieri, Finet et Gagnepain in Bull. Soc. Bot. France, LIII (1906), 53.

Tree 12-20 metres high; young branchlets of the current year olive-green, free from pubescence, faintly lenticellate, those more than one year old greenish-brown or niger-brown with many prominent lenticels; buds oblong-lanceolate or oblong-ovoid, 3.5 cm. long and 1.8 cm. wide, scales greyish-brown or golden brown silky pubescent; Leaves evergreen, conduplicate in bud, simple, coriaceous, deep lustrous green above, light green beneath, glabrous on both surfaces, oblanceolate or lanceolae, 15 cm, long and 3.8-5 cm. wide, with acute or shortly acuminate apex and broadly cuneate base, margin entire; midrib depressed above, prominent beneath, primary veins pinnate and alternate, inconspicuous on both sides; petiole 15-18 mm, long, concaved above; stipules unseen. Flowers solitary, axillary to leaf, on a short, thickened golden-brown silky pubescent peduncle, 8-10 mm. long, 10 mm, across. ginger-yellow with a mild scent, 4 cm. long, 5 cm. across, perianth-lobes 6 rarely 8, in 2 whorles, the outer 3, larger, oblong-ovate, 40-45 mm. long, 20-24 mm, wide, the inner 3 smaller, oblanceolate with obtusish or obtusish acute apex, 4 cm. long, 1-1.3 cm. wide; stamens numerous, spirally arranged on a short rhachis below the carpels anthers greenish-yellow, linear, 1.2 cm. long, 2-celled, slit lengthwise, filaments about 2 mm. long, purple, carpels numerous, distinct, borne on a gynophore about 1 cm. long, greenish, glabrous, ovary elliptic-ovoid, 1 mm. long, 5 mm. across, style short, about 1 mm. long, stigma small, ovules 8-12 on axile placentation. Fruit unknown.

MOUNT OMEI; Hung-chun-ping, alt. 1200 m., in forests, tree 20 m. high, bark grey or blackish-grey, leaves coriaceous, persistent, flowering buds densely brown hairy outside, common, *W. P. Fang*, No. 13840, February 27, 1940; same locality, tree 15-20 m. high, flower yellowish, fragrant, *W. P. Fang*, No. 15926, March 19, 1941; Kuan-hsin-po, alt. 1300 m., tree 20 m. high, flower yellowish white, *W. P. Fang*, No. 13907, March 15, 1940; same locality, tree 15-25 m. high, bark dark grey, *C. L. Sun*, Nos. 1463 & 1469, April 11, 1940; Ta-ping, alt. 1400 m., at roadside, small tree 3 m. high, flowering buds yellowish hairy outside, occasionally, *T. C. Lee*, No. 4506, April 2, 1940; Hua-yen-ting, alt. 1950 m., tree 20 m. high, flower yellowish, fragrant. *W. P. Fang*, No. 15738, December 20, 1940.

This species, belonging to the group whose leaf-back and gynaecium are free from any pubescence, is readily separated from those with pubescent leaves and gynaecium. It is characterized by its glabrous lanceolate leaves, large flower with very short-styled pistils and buds and peduncles covered with dense golden-brown pubescence.

.....C. Y. Cheng.

- Fig. 1, a flowering branch (natural size);
 2, The gynaecium with gynophore (natural size);
 3, a pistil longitudinally dissected (magnified 10 times).

圖版四

保氏黃心樹

木蘭科

喬木高十二至二十公尺；本年生幼枝。嫩欖青色，光滑無毛，皮孔不顯明，一年以上幼枝帶棕綠色或棕褐色，上有許多顯著皮孔；芽長方披針形或長方卵圓形，長三至五公厘，寬十八公厘，芽鱗被灰棕色或金黃棕色之絲狀毛。葉常綠，在芽內時對摺，革質，葉面深綠色有光澤，葉背淡綠色，兩面均光滑無毛，長方披針形，長十三至十五公分，寬三至五公分，先端尖銳或短尖尾狀，基部闊楔形，全緣，中脈在葉面下凹，在葉背則突起，側脈羽狀互生，在兩面均不明顯，葉柄長十五至十八公厘，上面內陷成溝狀；托葉未見。花單生於葉腋，花梗粗短，長八至十公厘，直徑十公厘，被毛金黃棕色，有光澤，花萼黃色，具煦和香氣，長四公分，直徑五公分，花被六至八瓣或二輪，外輪者較大，長方或長方卵形，長四十至四十五公厘，寬二十至二十四公厘，內輪較小，倒披針形，先端鈍圓或鈍尖，長四十公厘，寬十至十三公厘。小蕊多數，着生於心皮下之短軸上，排列成螺旋形，花藥黃綠色，綫形，長十二公厘，二室，縱裂，花絲長約二公厘，紫色；大蕊長約十公厘，具柄長九至十公厘，淡綠色，無毛，子房橢圓卵形，長一公厘，直徑半公厘，花柱長約一公厘，柱頭小，胚珠八至十二枚，着生於中軸胎座；果未見。

產峨眉山洪椿坪，觀心坡及大坪一帶，海拔一千二百至一千五百公尺間，早春二三月即開花。

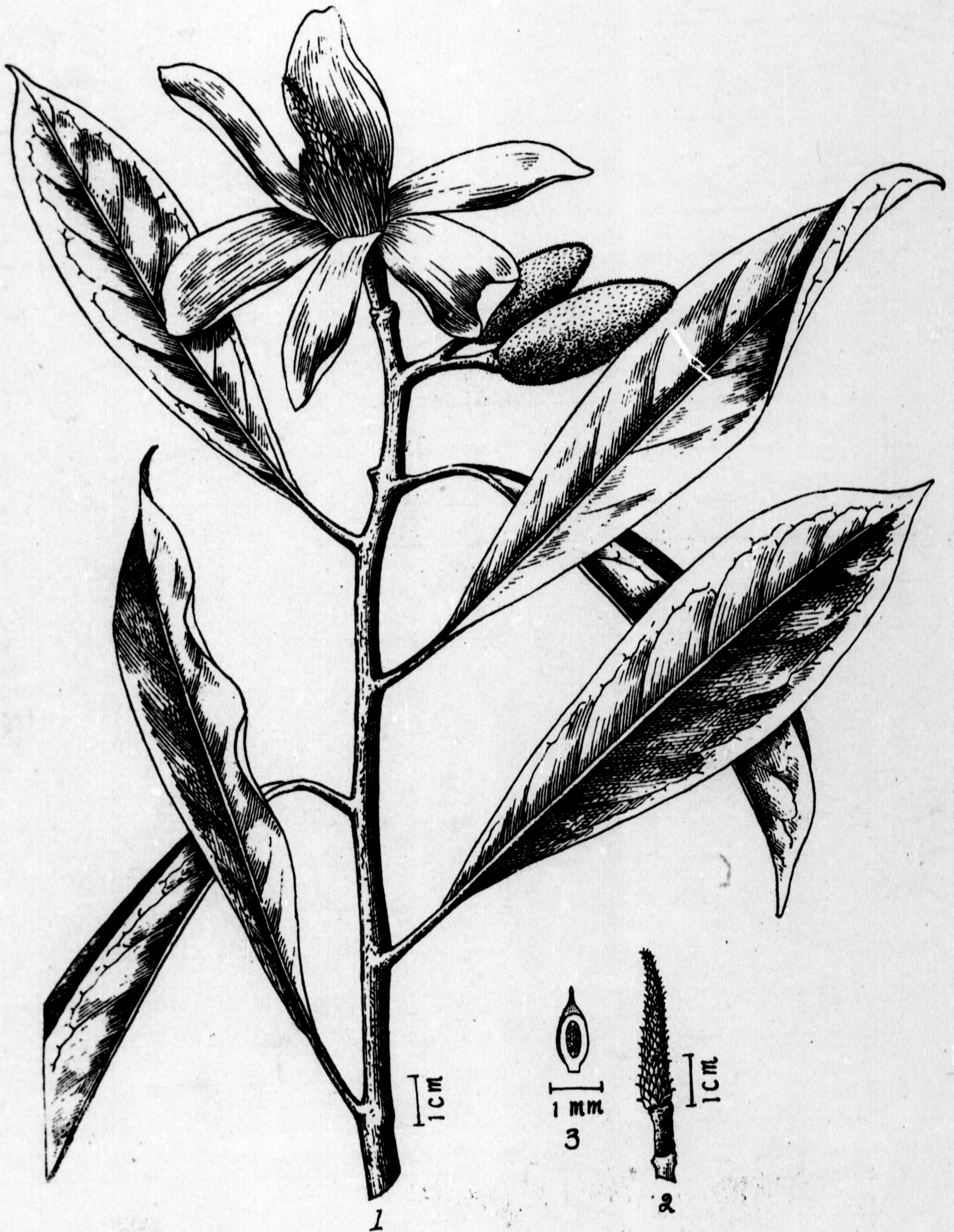
本種之葉背及大蕊完全無毛，花較其他種黃心樹為大，芽及花梗均被密厚金黃色毛，其樹幹挺直無枝，在洪椿坪及觀心坡一帶常見於林邊。

圖解：1. 着花之枝（原大）；2. 大蕊及柄（原大）；3. 大蕊之縱切面（放大十倍）。

This species, belonging to the group whose leaf-back and gynaeceum are free from any pubescence, is readily separated from those with pubescent leaves and gynaeceum. It is characterized by its glabrous lanceolate leaves, large flower with very short-styled pistils and buds and peduncles covered with dense golden-brown pubescence.

Fig. 1. A flowering branch (natural size);
2. The gynaeceum with gynophore (natural size);
3. A pistil longitudinally dissected (magnified 10 times).

峨眉植物圖志



4. *Michelia Bodinierii* Finet et Gagnepain

Plate 5.

ILICIIUM HENRYI Diels.

Magnoliaceae.

Illicium Henryi, Diels in Engler, Bot. Jahrb. XXIX (1900), 323 (Fl. Centralchina).

Illicium Silvestrii, Pavolini in Nuov. Giorn. Bot. Ital. XV (1908), 403.

Small tree, evergreen, 10-12 metres high; bark grey; young branchlets of the current year green, glabrous, those more than one year old olive-green or greyish-brownish; buds subovoid, naked. Leaves simple, alternate, coriaceous, deep green above, light green beneath, elliptic-lanceolate or oblong-lanceolate or rarely oblong-ovate, acuminate or acute-acuminate at apex and tapering at the base, 11-17.5 cm. long and 2.5-4.5 cm. wide, midrib depressed above, elevated beneath, lateral nerves pinnate, alternate or sub-opposite, inconspicuous on both surfaces; petiole green, about 2 cm. long, centrally grooved above; ex-stipulate. Flowers red, solitary, about 2 cm. across, axillary to leaf, either on young branchlets or on old branchlets, peduncle subterete, green, 2-3 cm. long, subtended at base by a pair of woody bracts; sepals 3, ovate-triangular, greenish often tinged red, about 6 mm. long and 6-8 mm. wide; petals 18, red, broad-ovate or oblong-ovate, the inner the smaller; stamens numerous (about 25), arranged quite in one whorle, matured anthers brownish, 2-celled, introrse, about 1 mm. long, filaments greenish-white, flattened and dilated, twice the length of the anther; carpels numerous (usually 13), ovary compressed, brownish white 2-4 mm. long, 2 mm. across, style 2 mm. long, brownish, stigma minute, ovule 1, matured carpels 10-13 in a star-shaped cluster, woody, purplish-brown, strongly scented, triangular-ovate, 4 mm. long and 2.5-3 cm. in diameter, apex with a rostrum 2-5 mm long, slightly recurved at tip, 1.5 cm. long, 1 cm. across; seed 1. in each carpel, subnephroid, hard, lustrous, bony-yellow or olive-brown, 8 mm. long, 5 mm. wide.

MOUNT OMEI: Hung-chun-ping, alt. 1200m., in shaded woods, tree 10 m. high, flowers red, S. S. Chien, No. 5494, May 4, 1936; same locality, in front of the temple, in forests, tree 8-10 m. high, bark grey, flower purplish-red, rare, C. L. Sun, No. 134, May 8, 1939; same locality, in forests, tree 10 m. high, fruit light green, occasionally, T. C. Lee, No. 2694, July 7, 1940; same locality, in forests, tree 12-14 m. high, flower red, C. L. Sun, No. 1625, April 21, 1940; route from Hung-chun-ping to Chiu-lao-tung, alt. 1400 m., W. W. Ma, No. 2385A, June 16, 1940; Chiu-lao-tung, Cha-ping-tze, tree 12 m. high, flowers red, W. P. Fang, No. 16311, May 6, 1941; Chiu-lao-tung, alt-1800 m., in woods, tree 8-12 m. high, bark grey, flower red, C. L. Sun, No. 2167, May 52, 1940; without precise locality, H. C. Chow, No. 9756, in 1938; without precise locality, C. W. Yao, No. 4510, in 1939.

This species is readily distinguished from other species by its oblanceolate leaves, red flower, and purplish-brown fruit.....C. Y. Ch'eng.

- Fig 1, a flowering branch (natural size);
- 2, a flower (magnified 4 times);
- 3, a portion of flower having perianth removed (magnified 10 times);
- 4, a portion of flower having perianth & stamens removed to show gynaecium (magnified 10 times);
- 5, a single stamen (magnified 20 times);
- 6, a pistil (magnified 20 times);
- 7, a fruit (natural size).

圖版五

紅茴香

(別名：亨利茴香)

木蘭科

小喬木。常綠。高十至十二公尺；樹幹灰色。本年生幼枝綠色，光滑無毛。一年以上者橄欖青色或灰棕色；幼芽近於卵圓狀，裸露。葉互生。革質，葉面深綠，葉背淺綠。葉橢圓披針形或長方披針形抑或鮮長方卵形。先端尖尾狀或尖銳尖尾狀，基部漸狹，長一百一十至一百七十五公厘，闊二十五至四十五公厘。主脈在葉面下凹，在葉背突起，側脈羽狀，互生或近於對生，不顯明；葉柄綠色，長約二公分。上面中間溝狀，無托葉。花紅色，單生於葉腋，着生於幼枝或老枝上，直徑約二公分，花梗近於圓形，綠色，長二至三公公分，基部具木質小苞片一對；萼片三枚，三角狀卵形，淡綠色常帶紅色宣染，長約六公厘，闊六至八公厘；花瓣十八枚，紅色，闊卵形或長方卵形，愈在內者形愈小，小蕊多數（約二十五枚），排列成一輪。成熟花藥淡棕色，二室，內向，長約一公厘，花絲綠白色，扁闊，長為花藥長之二倍；心皮多數（常為十三枚）子房左右扁縮，棕白色，長二至三公厘，直徑二公厘，花柱長二公厘，淺棕色，柱頭小，胚珠一枚；成熟心皮十至十三聚為星狀，木質，紫棕色，具濃重藥香，三角狀卵形，長四公厘，直徑二至三公厘，先端成喙狀突出，長約二至五公厘，尖端稍微上曲，心皮長十五公厘，闊十公厘，每心皮內有種子十五至二十枚，腎形，堅硬，有光澤，骨黃色或橄欖棕色，長八公厘，闊五公厘。

在峨眉山洪脊平至九老洞沿山森林中，極為常見。五月開花，九月間果可成熟。湖北西部及貴州北部亦產之。具紅色之花，倒披針形之葉，及紫棕色之果實為此種最重要之特性，極易與別種辨別。

圖解：1. 着花之枝（原大）；2. 花（放大四倍）；3. 移去花被之花（放大十倍）；4. 移去花被及小蕊之花示雌器（放大十倍）；5. 小蕊（放大二十倍）；6. 大蕊（放大二十倍）；7. 果實（原大）。

Fig. 1. a flowering branch (natural size);
 2. a flower (magnified 4 times);
 3. a portion of flower having perianth removed (magnified 10 times);
 4. a portion of flower having perianth & stamens removed to show gynoecium (magnified 10 times);
 5. a single stamen (magnified 20 times);
 6. a pistil (magnified 20 times);
 7. a fruit (natural size).

我 國 植 物 圖 志



5. *Illicium Henryi* Diels

Plate 6.

ILLICIUM SZECHUANENSIS Cheng.

Magnoliaceae.

Illicium Szechuanensis Cheng, sp. nov.

Arbor parva vel frutex; ramuli juniores parvuli hornotini compressi flavo-viridi, annotini subtereti, brunnescentes; lenticellis paucis; gemmae terminalae linearo-ovoideae. Folia coriacea, oblanceolata vel oblongo-lanceolata, 10-14 cm. longa, 3-4 cm. lata, glabra, supra viridia, subtus flavo-viridia, apice acuminata, rostro 1-1.5 cm. longo, baso acuminato vel cuneato, costa media supra depressa, subtus elevatis, nervis utrinsecis 16-18 paris supra leviter depressis et subtus leviter elevatis vel utrinque inconspicuis; petiolis 1.5-1.8 cm. longis, supra canaliculatis et subtus rotundatis, glabris. Flores in solitariis axillis foliorum; pedunculi circiter 5 mm. longi, subtendi ut enclosi ad bracteae imbricatibus; bracteae subchartaceae, suborbiculatae ab baseae angustae, 5 mm. longae et latae; perianthia circiter 18, extra 3 oblongo-lanceolata, circiter 1 cm. longa, 5 mm. lata, subaequalia, occasia apice incidere, margine plus minusve ciliata, perianthia media lanceolata 1.5 cm. longa, 2 mm. lata, perianthia intra plerumque angusta; stamina numerosa (circiter 21); filamentis dilatis, apice contracta, basi angusta, circiter 2 mm. longa, glabra; anthera elliptico-oblonga 1 mm. longa, 2-loculosa, introsa; gynoecium subovoideum, 4 mm. longum, 3 mm. diametrum, carpellum 12; ovarium subovoideum, latere compressum, glabrum, 2 mm. longum, stylus leviter longus quam ovarius; stigma decurrentum; ovulis 1. Fructus ignotus.

Small tree or shrub; young branchlets of the current year compressed, yellowish-green, those more than one year old subterete, brownish; lenticels very few; terminal buds linear-ovoid. Leaves coriaceous, oblanceolate or oblong-lanceolate, 10-14 cm. long, 3-4 cm. broad, glabrous, green above, yellowish-green below, apex acuminate with the rostrum 1-1.5 cm. long, base tapering or cuneate, midrib depressed above, elevated beneath, lateral nerves 16-18 pairs slightly depressed above and slightly raised beneath or inconspicuous on both sides; petioles 1.5-1.8 cm. long, grooved above and rounded below, glabrous. Flowers solitary, axillary; peduncles about 5 mm. long, subtended as well as enclosed by imbricate bracts; bracts subchartaceous, suborbicular with narrowed base, 5 mm. long and as broad as long; perianth-lobes about 18, the outer 3 oblong-lanceolate, about 1 cm. long, 5 mm. broad, subequal, occasionally notched at apex, margin more or less ciliate, the middle ones lanceolate, 1.5 cm. long, 2 mm. broad, the inner ones usually narrowed; stamens numerous (about 21); filaments dilate, constricted at apex, narrowed at base, about 2 mm. long, glabrous; anthers elliptical-oblong, 1 mm. long, 2-celled, introrse; gynoecium subovoid 4 mm. long, 3 mm. in diameter; carpels 12; ovary subovoid, laterally compressed, glabrous, 2 mm. long; style slightly longer than ovary; stigma decurrent, ovule 1, Fruits unknown.

West of Mt. Omei: Opien-hsien, Sha-ping, in thickets, small tree or shrub, *H. T. Tung*, (木業公司採集員), No. 1018.

This new species is closely related to *Illicium Fargesii* Finet et Gagnepain, but differs in having shorter petioled leaves and non-mucronate stamens with oblong-obovate filaments instead of longer petioled (3 cm. long) leaves and mucronate stamens with oblong-ovate filaments. It is easily distinguished from other Chinese spp.; from *Illicium anisatum* Linn. it differs by its oblanceolate or oblong-oblanceolate and much larger leaves instead of oblong or oblong-elliptical and small leaves, by its 2-celled anthers, dehiscent by longitudinal slit instead of those mucronate, 4-celled anthers dehiscent by longitudinal valves and by its 12 carpels instead of 8; from *Illicium yunnanensis* (Franchet) Finet et Gagnepain it differs in having sepals and differentiated into unsimilar forms and non-mucronate stamens and from *Illicium Henryi* Diels it is readily distinguished by its very short peduncles and larger flowers with lanceolate petals.

.....C. Y. Cheng.

- Fig. 1, a flowering branch (natural size);
 2, a flower (magnified 10 times);
 3, a flower after petals removed showing stamens (magnified 10 times);
 4, a stamen (magnified 20 times);
 5, a pistil (magnified 20 times).

圖版六 川 茴 香

新種

木 蘭 科

小喬木或灌木；本年生幼枝扁狹形，黃綠色，一年以上之枝亞圓形，淺棕色，皮孔極少；預芽綫狀卵形。葉革質，倒披針形或長方披針形，長十至十四公分，闊三至四公分，光滑無毛，葉面綠色，葉背黃綠色，先端尖尾形，尖尾長十至十五公厘，基部漸狹或楔形，主脈在葉面內陷，在葉背凸起，側脈十六至十八對，在葉面略凹，在葉背略凸，或在兩面均不顯明；葉柄長十五至十八公厘，上面下凹成溝狀，下面圓形，光滑無毛。花單生於葉腋，花被長約五公厘，下有覆瓦狀排列之苞片，苞片半紙質，近於圓形，基部狹窄，長五公厘，闊如之；花被約具十八裂片，最外三枚長方披針形，長約一公分，闊五公厘，各瓣不等大，有時先端內缺，邊緣具纖毛，在中間之各瓣披針形，長十五公厘，闊二公厘，內部各瓣較外部者為窄小；小蕊多數（約二十一本），花絲闊大，先端狹形，基部漸窄，長約二公厘，光滑無毛，花藥長方橢圓形，長一公厘，二室，內向；大蕊近於卵圓形，長四公厘，闊三公厘，心皮十二枚，子房近於卵圓形，兩個扁狹，光滑無毛，長二公厘，花柱較子房略長，柱頭延長，胚珠一枚，果實未見。

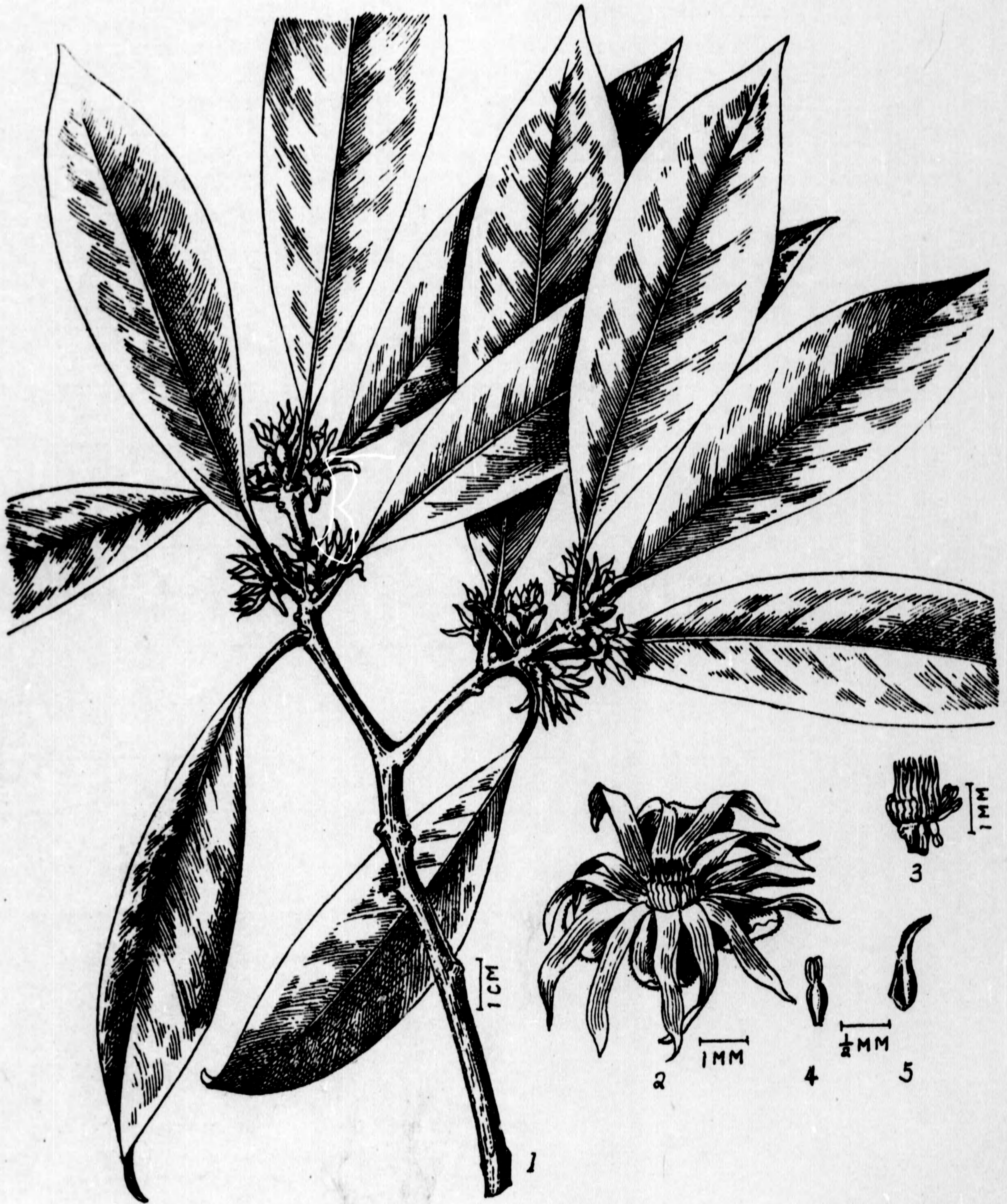
產於峨眉山西邊之峨邊縣沙坪山中。

此新種與法氏茴香 *Illicium Fargesii* 親緣最近，但以具有短柄之葉及平頂小蕊與長方倒卵形花絲異於法氏茴香之長柄葉及尖頂小蕊與長方卵形之花絲。與八角茴香 *Illicium anisatum* 亦為接近，但其倒披針形或長方披針形并較大之葉，則別於後者之長方或長方橢圓形且較小之葉，又本種花藥二室線裂，後者花藥四室，尖頂，鑿裂，本種心皮十二枚，後者心皮八枚。本種與雲南茴香 *Illicium yunnanensis* 之區別為前者具萼片，小蕊平頂，後者花被無萼瓣之分，小蕊尖頂。又與紅茴香 *Illicium Henryi* 主要之區別為其具極短之花梗，及大形之花，並具披針形之花瓣。……誠靜容

圖解：1. 着花之枝（原大）；2. 花（放大十倍）；3. 去瓣之花示大小蕊（放大十倍）；4. 小蕊（放大二十倍）；5. 大蕊（放大二十倍）。

Fig. 1. A flowering branch (natural size);
2. A flower (magnified 10 times);
3. A flower after petals removed, showing stamens (magnified 10 times);
4. A stamen (magnified 20 times);
5. A pistil (magnified 20 times).

我省植物圖志



6. *Illicium szechuanensis* Cheng.

Plate 7.

MUCUNA SEMPERVIRENS Hemsley.

Leguminosae.

Mucuna sempervirens Hemsley in Journ. Linn. Soc. Bot. XXIII (1887), 190.

Evergreen climbing shrub usually 5 to 10 rarely to 20 metres high; bark brown or yellowish brown rough; branchlets slender, greenish, glabrescent, with conspicuous lenticels. Leaves coriaceous, trifoliolate, leaflets entire on the margin, green and glabrescent on both sides, primary nerves 5 to 7 pairs slightly raised above and conspicuous below, lamina usually 7-12 cm. long, 5-7 cm. broad, middle leaflets ovate or oblong-ovate, acuminate on the apex and broadly cuneate at the base, lateral leaflets oblong-ovate, acuminate on the apex and obliquely cuneate or rounded at the base; petiolules stout, 5 mm. long; petioles slender, 12-15 cm. long, glabrous, stout at the base. Flowers in pendulous glabrescent racemes from 10 to 20 cm. long, from the old wood and usually branched near the base of rachis; calyx densely velutinous outside, campanulate, 10-13 mm. long, 13-20 mm. in diameter, calyx-lobes obtuse or acute, 5 mm. long and 1 mm. broad, corolla dark purple or purplish-red, 6-8 cm. long; standard 4 cm. long, 3 cm. broad, wings 5 cm. long, 13 mm. broad; keel 6-8 cm. long, with a limb 8-10 mm. broad; its tip acuminate and turned up abruptly; stamens 10, diadelphous, slightly shorter than and included in the keel; ovary inferior, many-ovuled; style slender, glabrous, slightly longer than stamens, usually curved near one-fourth of the upper part; stigma capitate. Fruit a flat legume, 30-46 cm. long, 4 cm. broad, clothed with yellow appressed barbed hairs, seeds rounded, yellow or blackish yellow.

MOUNT OMEI: Lung-men-tung, alt. 480 m., a woody vine climbing on a tree, flowers No. 16280, purple, large, about 5 cm. across, rare, W. P. Fang, 14175, April 21, 1940; same locality, W. P. Fang, April 19, 1941. Hung-chun-ping, T. C. Li, No. 2701, July 1940; near Ta-ping, a vine with blackish purple flowers, W. P. Fang, No. 16345, April 26, 1941.

This species was discovered at the neighbourhood of Ichang in Western Hupeh, and then it has been found in the provinces of Western and Eastern China. It is a very beautiful climber with showy flowers and with exceptionally long fruits.

- Fig. 1, a part of the plant with leaves (natural size);
- 2, a raceme with flowers (natural size);
- 3, a flower dissected to show the calyx; stamens and pistil (natural size);
- 4, a part of fruit (natural size).

(大果) 藤一葉果莢

圖版七

常綠黎豆藤

豆科

常綠攀援灌木，通常高五至十公尺，罕達二十公尺；樹皮棕色或黃棕色，粗糙；小枝纖細，淡綠色。光滑無毛，具明顯之皮孔。複葉革質，具小葉片三枚，全緣，兩面均為綠色，光滑無毛，側脈五至七對，在葉面微凸，在葉背清晰可見，小葉片長七至十二公分，闊五至七公分，頂端之葉片卵形或長方卵形，先端尖尾狀，基部闊楔形，兩側葉片長方卵形，先端尖尾形，基部斜楔形或圓形；小葉柄粗短，長五公厘；葉柄細長，長十二至十五公分，光滑無毛，基部粗壯。花成下垂光滑無毛之總狀花序，長十至二十公分，着生於老枝，常在近花軸基部處分枝；花萼外被濃密絨毛，鐘形，長十至十三公厘，直徑十五至二十公厘，裂片鈍圓或尖銳，長五公厘，闊一公厘，花冠深紫色或紫紅色，長六至八公分，旗瓣長四公分，闊三公分，翼瓣長五公分，闊三公厘，龍骨瓣長六至八公分，闊八至十公分，先端尖尾狀，向上陡折；小蕊十枚，分為兩束，較龍骨瓣稍短并包於其內；子房下位，胚珠多數，花柱細長，無毛，較小蕊稍長，常在近上端四分之一處彎曲，柱頭頭狀。果實為扁平莢果，長三十至四十六公分，闊四公分，外被黃色濃密粗毛，種子圓形，黃色或黑黃色。

產峨眉山龍門洞，洪椿坪，海拔四百八十至一千二百公尺處，四月開花，花色鮮明美觀，莢果長大後形長而扁平。

本種首次發現於鄂西宜昌附近，其後中國東部及西部各省均曾見之。

圖解：1. 枝葉之一部（原大）；4. 花序（原大）；3. 花之切面示花萼，小蕊及大蕊（原大）；4. 莢果之一部（原大）。

莢果之一部（原大）。

Fig. 1. A part of the plant with leaves (natural size).
2. A raceme with flowers (natural size).
3. A flower dissected to show the calyx, stamens and pistil (natural size).
4. A part of fruit (natural size).

峨眉植物圖志



7. *Mucuna sempervirens* Hemsl.

八 翅 圖

Plate 8.

ERYTHRINA ARBORESCENS Roxburgh.

Leguminosae.

Erythrina arborescens Roxburgh, Hort. Beng. (1814), 53.

Tree 10 to 15 metres high; bark grey, smooth; branchlets green or greyish green, smooth, hollow and with soft pith, stout, exceptionally long, with short prickles and conspicuous leaf-scars, usually wide-spreading or slightly pendent. Leaves chartaceous, 3-foliate, leaflets subrotund or broadly ovate, 14-17 cm. long, 15-19 cm. broad, acuminate on the apex, truncate at the base, entire on the margin, deep green above, whitish green below, glabrous on both sides, primary nerves subopposite, 6-7 pairs, slightly depressed above, conspicuous below; petiolules stout, green, with two globose appendages near the base, petioles cylindric, 30-40 cm. long, yellowish green or reddish green. Flowers in axillary compact racemes 6 to 8 cm. long, on a stout peduncle 12-18 cm. long, puberulous while young, then glabrous; calyx reddish-green, campanulate, finally splitting into bilabiate, 1 cm. long, 5-8 mm. in diameter, glabrescent outside, puberulous inside near the apex; standard oral-red, spatulate with its limb 3 cm. long, 6 mm. broad, wings obovate, 1 cm. long, 4 mm. broad, greenish or greenish white, keel greenish white, 12-14 mm. long, 10 mm. broad; stamens 10, with 5 longer ones about 3.5 cm. long and 5 shorter ones about 3 cm. long, diadelphous, upper one with its lower part of 1 cm. long united with other filaments, other stamens with their lower parts of 2 cm. long connate; ovary superior, with its style about 2.5 cm. long, pubescent outside, ovules 5 to 6. Fruit a slightly curved legume 12-15 cm. long, seeds globose.

OMEI-HSIEN: Hsiao-tien-tze, alt. 470 m., near tombs, tree 10 metres high, flowers oral-red, T. C. Lee, No. 3523, September 20, 1940; same locality, W. P. Fang, no 17753, September 22, 1941. Tieh-so-chiao, H. C. Chow, No. 8473, October 2, 1938.

This is a very nice tree has been found wild occasionally at Omei-hsien and other districts in Western Szechuan and as in Eastern Sikang. In Chengtu this species has been cultivated as roadside tree. W. P. Fang.

- Fig. 1, a flowering branch (natural size);
- 2, an inflorescence of flowers (natural size);
- 3, a flower (natural size);
- 4, the stamens and pistil (natural size);
- 5, a pistil dissected to show the ovules (natural size);
- 6, a fruit (natural size).

(大原)果實, 0; (大原)花和示種圖

圖版八

鸚哥花

豆科

喬木高十至十五公尺。樹幹灰色，平滑；幼枝綠色或灰綠色，平滑，粗壯而長，中空且具軟髓，上具短刺及明顯之葉痕，常為外向平斜，或稍形下垂，葉紙質，為小葉片三枚所組成之複葉，小葉片亞圓形或闊卵形，長十四至十七公分，闊十五至十九公分，先端尖尾狀，基部截形，全緣，葉面深綠，葉背淡綠，兩面光滑無毛，側脈略呈對生狀，六至七對，在葉面略向下凹，在葉背明顯；小葉柄粗壯，綠色，近基部有二球形附着物，葉柄圓柱形，長三十四至四十公分，黃綠色或紅綠色。花成腋生密集總狀花序，長六至八公分，着生於粗壯花梗上，花梗長十二至十八公分，幼時被柔毛，隨則後毛落而現極光滑之狀；花萼紅色或紅綠色，鐘形，最後裂為二層狀，長一公分，直徑五至八公厘，外面光滑，裏面近頂端處被柔毛，旗瓣珊瑚紅色，匙形，長三公分，闊六公厘，翼瓣倒卵形，長一公分，闊四公厘，淡綠色或青白色，龍骨瓣青白色，長十二至十四公厘，闊十公頂；小蕊十本，五長，長約三十五公厘，五短，長約三公分，分為兩束，在上一枚之基部有一公分長其與他花絲相連，相餘花絲基部連合者長達二公分；子房上位，花柱長約二十五公厘，外側被毛，具胚珠五至六枚，果實為微曲莢果，長十二至十五公分，種子球形。

產峨眉山麓平地海拔約四百七十公尺處，秋季九月間開花。
 鸚哥花為一極美觀之喬木，野生者常可見於峨眉及川西各縣以至西康東部，在成都此樹已有種為行道樹及觀賞樹者。

圖解：1. 着花之枝（原大）；2. 花序（原大）；3. 花（原大）；4. 小蕊及大蕊（原大）；5. 大蕊之切面示胚珠（原大）；6. 莢果（原大）

峨眉植物圖志



8. *Erythrina arborescens* Roxburgh

Plate 9.

ITEA OMEIENSIS Schneider.

Saxifragaceae. Section Sempervirentes Engler.

Itea omeiensis Schneider in Sargent, Pl. Wilson. III (1917), 421.

Shrub or small tree usually 3-5 rarely up to 11 metres high; branchlets slender, green or purple rarely yellowish brown, glabrous or rarely pilose; bark brown or greyish brown, rough; winter-buds small, conoid, with numerous imbricate shortly triangular-acuminate scales sparingly pilose outside. Leaves alternate, evergreen, subcoriaceous or chartaceous, long-elliptic rarely obovate or oblanceolate, 10-12 cm. long, 4-5 cm. broad, shortly acuminate on the apex, broadly obtuse at the base, remotely serrate with appressed gland-tipped teeth on the margin except entire near the base of blade, upper surface obscure green, glabrous, midrib grooved, lateral veins 6-8 on each side slightly depressed, lower surface pale green or yellowish green, sparingly pilose, midrib prominent, lateral veins raised; petioles 8-18 mm. long, grooved above, rounded below, glabrous. Flowers in an axillary raceme; rhachis 5-8 cm. long, sparsely short-pilose; bracts subulate; pedicels very slender, 3-4 mm. long, very sparsely pilose; calyx sparingly pilose at base, deeply 5-lobed, lobes anguste-lanceolate, acuminate, 1.5-2 mm. long; Petals 5, perigynous, whitish or yellowish white, lanceolate, acuminate, 2.5-3 mm. long, glabrous without, puberulous within especially near the base; stamens 5, slightly longer than and alternate with the petals, filaments puberulous at base, anthers yellow, subglobose; disk annular, puberulous; pistil 4 mm. long, ovary $\frac{3}{4}$ superior, subconoid, attenuate, whitish puberulous, style simple, glabrous, stigma capitate, sublobate. Fruits conoid capsules with persistent style, petals and sepals, 7 mm. long, puberulous, green while young, yellowish while matured, splitting through the dissepiment and style while developing.

MOUNT OMEI: near Pao-kuo-ssu, alt. 500 m., at side of ravines, small tree 10 metres high, S. S. Chien, No. 5441, May 2, 1936; Fu-hu-ssu, alt. 600 m., in thickets, shrub 3 metres high, W. P. Fang, No. 14536, June 10, 1940; same locality, in forests, small tree 5 m., high, fl. greenish white, rare W. P. Fang, No. 18523, April 24, 1942; Ching-yin-ko, alt. 900 m., small tree 4 metres high, C. L. Chow, No. 5507, November 20, 1941; Chin-lung-ssu, alt. 950 m., in woods, shrub or small tree 5 metres high, C. L. Sun, No. 1966, April 14, 1940; same locality, small tree 5-6 metres high, T. C. Lee, No. 3648, October 3, 1940; Kuang-fu-ssu, alt. 1000 m., small tree, W. P. Fang, No. 17434, July 23, 1941; Niu-hsin-ssu, alt. 950 m., small tree 5 metres high, W. P. Fang, No. 17847, September 29, 1940; Hou-tzu-po, alt. 1000 m., in thickets, shrub 2 metres high, flowers white, C. L. Sun, No. 1998, May 1, 1940; Hung-chun-ping, alt. 1200 m., H. C. Chow, No. 7768, July 3, 1938; Pao-chang-feng, alt. 1400 m., small tree 5 metres high, matured capsules brown, W. P. Fang, No. 18006, November 30, 1941; Ta-ping, alt. 1400 m., in woods, shrub 5 metres high, flowers white, C. L. Sun, No. 1750, April 26, 1940.

This species was discovered by Wilson on Mount Omei and has been only known from this mountain. It is closely related to *Itea chinensis* Hooker et Arnott (Bot. Beech. Voy. (1825), 59, t. 39), from which it is hardly to be distinguished. I have compared more specimens from the type locality of *Itea omeiensis* with few specimens named as *Itea chinensis* from southern China. The chief difference between these two species lies in the flower and fruit. In *Itea omeiensis* the slightly exerted pistil is usually longer than the stamens and the slightly puberulous ovary with its style divides longitudinally into two parts while the progress of developing. In *Itea chinensis* the pistil is slightly shorter than or as long as the stamens and the more puberulous ovary with its style does not divide until matured. The leaves of *Itea omeiensis* are usually broader than those of *Itea chinensis*. But the exceptional forms I have found among the specimens of *Itea omeiensis*. Therefore the shape of leaves is very variable and does not worth as a standard diagnostic characteristic between these two species.....W.P. Fang.

Fig. 1, a fruiting branch (natural size);
2, a flower (10 times enlarged).

圖版九

峨眉擬鐵

(別名峨眉鼠刺)

虎耳草科

灌木或小喬木，高三至五公尺，罕達十一公尺；小枝纖細，綠色或紫色，罕為黃棕色，光滑無毛，罕被長毛；樹皮棕色或灰棕色，粗糙；冬芽小，圓錐形，芽鱗多數，三角形，外側被稀少長毛，排列成覆瓦狀。葉互生，常綠，亞革質或紙質，長橢圓形，罕為倒卵形或倒披針形，長十至十二公分，闊四至五公分，先端短尖，基部闊鈍圓形，邊緣具稀疏鋸齒，齒尖有腺體，近葉基處完整無缺，葉面暗綠，無毛，中脈溝狀，側脈每側六至八，微凹，葉背蒼白綠色或黃綠色，被稀疏長毛，中脈側脈均突起；葉柄長八至十八公厘，上面溝狀，下面圓形，光滑無毛。花聚生成總狀花序；花軸長五至八公分，被稀疏散生短毛，苞片錐形，花梗極纖細，長三至四公厘，被極少散生長毛；花萼基部被稀疏長毛，深裂，裂片五枚，窄披針形，先端尖尾狀，長一公厘半至二公厘；花瓣五枚，週位，白色或黃白色，披針形，先端尖尾狀，長二公厘半至三公厘，外側光滑無毛，內側被短毛，以近基部處為多；小蕊五本，與花瓣互生，較花瓣稍長。花絲基部被短毛，花藥黃色，近於球形；花盤環形，被短毛；大蕊長四公厘，子房四分之三上位，近於圓錐形，細瘦，被白色短毛，花柱一，光滑無毛，柱頂頭狀，微裂。果為圓錐形蒴果，花柱及花萼花瓣均宿存其上，長七公厘，被短毛，幼時綠色，成熟淡黃色，當果實發育時，其子房及花柱由間隔處裂為二部。

產峨眉山報國寺，伏虎寺，清音閣，金龍寺，廣福寺，牛心寺，猴子坡，大坪及洪構坪等處，海拔五百至一千四百公尺間，四五月開花。

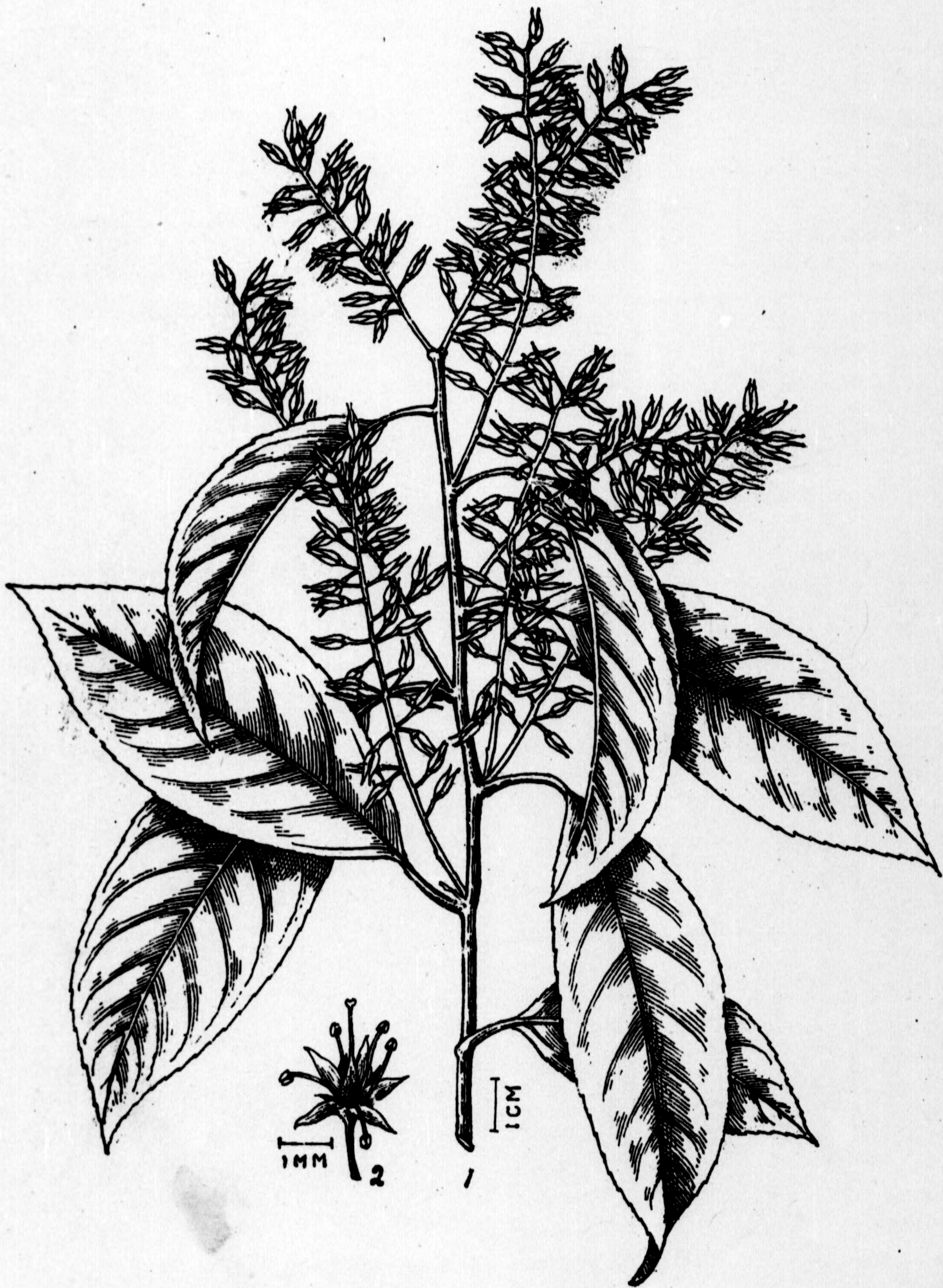
本種為威爾遜氏首先於峨山發現，其產地即限於峨山，本種與中國擬鐵為最近之種，幾於不可識別。其主要不同之處在於花果之上。本種之大蕊較小蕊為長，子房被毛甚少，於發育時即行分裂為二，在中國擬鐵之花內，則大蕊每較小蕊為短，或至少等長，子房被短毛較多，至果熟時始裂為二。又本種之葉常較中國擬鐵樹為闊，但本種葉形常多變異，殊難為區別此二種之標準也。

圖解：1. 着果之枝（原大）；2. 花（放大十倍）。

This species was discovered by Wilson on Mount Omei and has been only known from this mountain. It is closely related to *Itea chinensis* Hooker et Arnott (Bot. Beech. Voy. (1825), 50, t. 33), from which it is hardly to be distinguished. I have compared more specimens from the type locality of *Itea omeiensis* with few specimens named as *Itea chinensis* from southern China. The chief difference between these two species lies in the flower and fruit. In *Itea omeiensis* the slightly exserted pistil is usually longer than the stamens and the slightly puberulous ovary with its style divides longitudinally into two parts while the progress of developing. In *Itea chinensis* the pistil is slightly shorter than or as long as the stamens and the more puberulous ovary with its style does not divide until matured. The leaves of *Itea omeiensis* are usually broader than those of *Itea chinensis*. But the exceptional forms I have found among the specimens of *Itea omeiensis*. Therefore the shape of leaves is very variable and does not worth as a standard diagnostic characteristic between these two species. W.P. Fang.

Fig. 1. a fruiting branch (natural size);
2. a flower (10 times enlarged).

峨眉植物圖志



9. *Itca omeiensis* Schneider

Plate 10.

STAPHYLEA HOLOCARPA Hemsley.

Staphyleaceae.

Staphylea holocarpa Hemsley in kew Bull. Misc. Inform. (1895), 15.

Staphylea Emodi Diels (non Wallich) in Engler, Bot. Jahrb. XXXVI. Beibl. No. LXXXII (1905), 73.

Small tree or shrub usually 5 metres high, rarely up to 10 metres high; branchlets slender, purple or dark purple, glabrescent. Leaves chartaceous, deciduous, opposite, 3-folliolate, leaflets elliptical or elliptical-oblong, rarely obovate-oblong, 5-10 cm. long, 2-3 cm. broad, acuminate, short-acuminate or rarely tacute on the apex, broadly cuneate, or cuneate subrotund at the base, serrulate with appressed minute teeth, upper surface bright green, glabrescent, lower surface pale green or rarely glaucescent, middle nerve prominent, lateral nerves 8-10, slightly raised, terminal leaflet with a slender petiolule 1.5-2.5 cm. long, lateral leaflets subsessile or with petiolule 2-3 mm. long; petiole 5-9 cm. long, slender, glabrous, stipules linear, caducous. Flowers pinkish, appearing while the developing of leaves, in pendulous slender, long-stalked panicles 5-20 cm. long, from current leafy branchlets terminal or axillary on old branchlets; sepals 5, ovate or ovate-oblong, obtuse, 10-12 mm. long, 5-7 mm. broad; glabrescent on both sides; petals 5, alternate with the sepals, obovate or oblanceolate, 10-12 mm. long, 5 mm. broad, glabrous, stamens 5 inserted on the outside of the disk, as long as the sepals, filaments slender, glabrous, anthers yellow, 2-celled; ovary superior, with 2-3 carpels united below, ovules many in each cell, styles 2-3, as long as the stamens or slightly longer, free or connate at apex. Fruit usually with 3 ellipsoid capsules united at the middle, 2 cm. long, 1 cm. in diameter, seed obovoid.

MOUNT OMEI: from Hung-chun-ping to Chiu-lao-tung, alt. 1600 m., on slopes shaded, tree in, 5 metres high, leaves with stipules caducous, flowers pinkish, S. S. Chien, No. 5549, May 5, 1935; same locality, W. P. Fang, No. 12730, July 30, 1938; near Chang-lao-ping, alt. 1500 m. in woods, shrub 5 metres high, bark bright brown, flowers purple or pinkish, C. L. Sun, No. 1910, May 7, 1940.

This nice small tree is characterized by its pinkish flower and obovoid capsules.

W. P. Fang.

- Fig. 1, a flowering branch (natural size);
 2, a flower (enlarged 2 times);
 3, a fruit dissected to show its seeds (natural size).

圖版十

大果省沽油

省沽油科

落葉小喬木或灌木，高五至十公尺；枝圓形，光滑，綠色或灰黑色。複葉對生，具三小葉；小葉長卵形卵狀披針形，長五至十公分，寬二至三公公分，先端漸尖，基部楔形，邊緣具細鋸齒，表面綠色，背面灰白色，主脈微凸起且略被細毛，側脈不顯著。頂端小葉具長十五至二十五公厘之葉柄，兩側小葉各具長三公厘之短葉柄，總葉柄長五至九公分。花開於發葉之前，初為粉紅色，繼變淡白色，成下垂腋生之圓錐花序；萼片五枚，卵形，長十至十二公厘，寬五至七公厘；花瓣五枚與萼片互生，倒卵形或倒披針形，與萼片等長，寬五公厘；小蕊五本，着生於環狀花盤之外，與花瓣等長，花絲纖細，花藥黃色；子房上位，具三心皮下部合生上部分離，花柱三枚與小蕊等長或略長，上部合生；花梗細長，光滑。蒴果外具膜質或膨脹之殼，三裂；種子倒卵形。

在峨眉山洪椿坪九老洞，長老坪等處極普遍。多生於森林旁邊。五月開花，九月果可成熟。花與果均極美觀，極有價值之觀賞植物也。

此種除峨眉山外，四川各高山以及鄂西陝南均產之。與遍產於長江流域及日本之省沽油 *Staphylea Bumalda* Dc. 極相近，其主要區別在省沽油具扁形二裂之蒴果，頂端小葉之柄極短；此種具圓形三裂之蒴果，頂端小葉之柄極長。

圖解：1. 着花之枝（原大）；2. 花（放大二倍）；3. 果實（原大）。

W. P. Fang.

Fig. 1. a flowering branch (natural size);
2. a flower (enlarged 2 times);
3. a fruit dissected to show its seeds (natural size).

峨眉植物圖志



10. *Staphylea holocarpa* Hemsley

一十 圖

Plate 11.

EUSCAPHIS JAPONICA Dippel,

Staphyleaceae

Euscaphis Japonica Dippel, Handb. Laubholz. II (1892), 480, fig. 229.

Sambucus japonica Thunberg, Fl. Jap. (1784), 125.

Euscaphis staphyleoides Siebold et Zuccarini, Fl. Jap. I (1835), 124, t.67.

Small tree or shrub usually about 5 metres high, rarely up to 7 metres high; branchlets slender, purple or purplish-brown, rarely greenish-purple, glabrous, with numerous oval lenticels; winter-buds axillary, subellipsoid, with two outer-scales ciliate on the margin and sparingly pubescent outside. Leaves deciduous, chartaceous, opposite, odd-pinnate, leaflets 5-7 rarely 9 or 11, ovate or ovate-oblong, 5-9 cm. long, 3-4.5 cm. broad, acuminate or rarely caudate-acuminate at the apex, rounded or broadly cuneate at base, serrulate with minute appressed-teeth, upper surface green or yellowish green, glabrous, lower surface pale green or yellowish green, sparingly pubescent, main nerve and its 6-8 lateral nerves slightly depressed above, prominent below, usually pubescent, terminal leaflet on a petiolule 1-2 cm. long, pubescent, lateral leaflets on petiolules 2-6 mm. long, pubescent, petioles 15-20 cm. long, cylindrical, sparingly pubescent. Flowers pale green or yellowish-green, small, 4-5 mm. in diameter, in upright panicles 10-15 cm. long, from terminal or lateral leafy branchlets after the developing of leaves; sepals 5, ovate or ovate-oblong, obtuse or rounded, 2-3 mm. long, 2 mm. broad, glabrescent; petals 5, obovate, as long as the sepals; stamens 5, inserted on the outer edge of the annual disk, as long as and opposite the sepals; ovary superior, 3-celled, styles 3 connate near the apex, stigma capitate, ovules several in each cell. Fruit consists of 3 purple, leathery, ellipsoid pods 1-1.5 cm. long, of which 1 or 2 sometimes undeveloped, seeds ellipsoid, 1-3 in each pod, usually covered by purple flesh aril.

MOUNT OMEI: at roadside, from Pao-kuo-ssu to Fu-hu-ssu, alt. 500 metres, in forests, shrub 4 metres high, S. S. Chien, no. 5403, May 2, 1936; same locality, small tree 6 metres high, W. P. Fang, No. 12515, July 26, 1938.

A very nice small tree or shrub occurs commonly in the forests or along the roadside near the foot of Mount Omei. Its black seeds and purple aril as well as the the seed-coat resemble the eye of the chicken. Therefore it is locally known as Chi-yen-ching 雞眼睛 in this mountain.

W.P. Fang

- Fig. 1, a flowering branch (natural size);
- 2, a flower showing sepals, petals, stamens and ovary (enlarged 10 times);
- 3, a flower showing the pistil but its sepals, petals and stamens removed (enlarged 10 times);
- 4, a fruit (natural size).

圖版十一

野鴉椿

(俗名：雞眼睛)

省沽油科

落葉喬木或灌木高五至七公尺；枝圓形，光滑。幼枝綠色或淡綠色，老枝綠褐色。多芽腋生，外被較大之鱗片二枚。羽狀複葉，對生，具七至十一小葉，小葉長卵形，長四至九公分，寬三至四公分，先端漸尖；基部楔形或圓形，邊緣具極密之細鋸齒，兩面均綠色，主脈略向背面凸出，具細毛，側脈四至六對，亦微具細毛；小葉柄長五至八公厘，密被灰白色細毛。總葉柄圓形，疎被灰白色細毛。花淡綠色或黃綠色。小形，直徑僅五公厘，着生於直立頂生之圓錐花序。萼片五枚，卵形，長二至三公厘，寬約二公厘。花瓣五枚，倒卵形，與萼片等長。小蕊五本，與萼對生，且略等長。子房三室，常被花盤所包圍。花柱甚短，三枚，頂端合生。莢果皮質，紫紅色。種子圓形，具肉質紅色之假種皮。

峨眉山山麓極普遍，在伏虎寺與清音閣附近林畔亦甚常見。淡綠色之花與紫紅色之果，均足以表現其為極美觀之植物。俗名雞眼睛，蓋因其圓形黑色之種子與紫色之種子殼及假種皮，形似雞眼睛也。

野鴉椿屬 *Euscaphis* S. & Z. 僅此一種，分佈於長江流域各省及日本。

圖解：1. 着花之枝（原大）；2. 花（放大十倍）；3. 心皮及花柱（放大十倍）；4. 果實（原大）

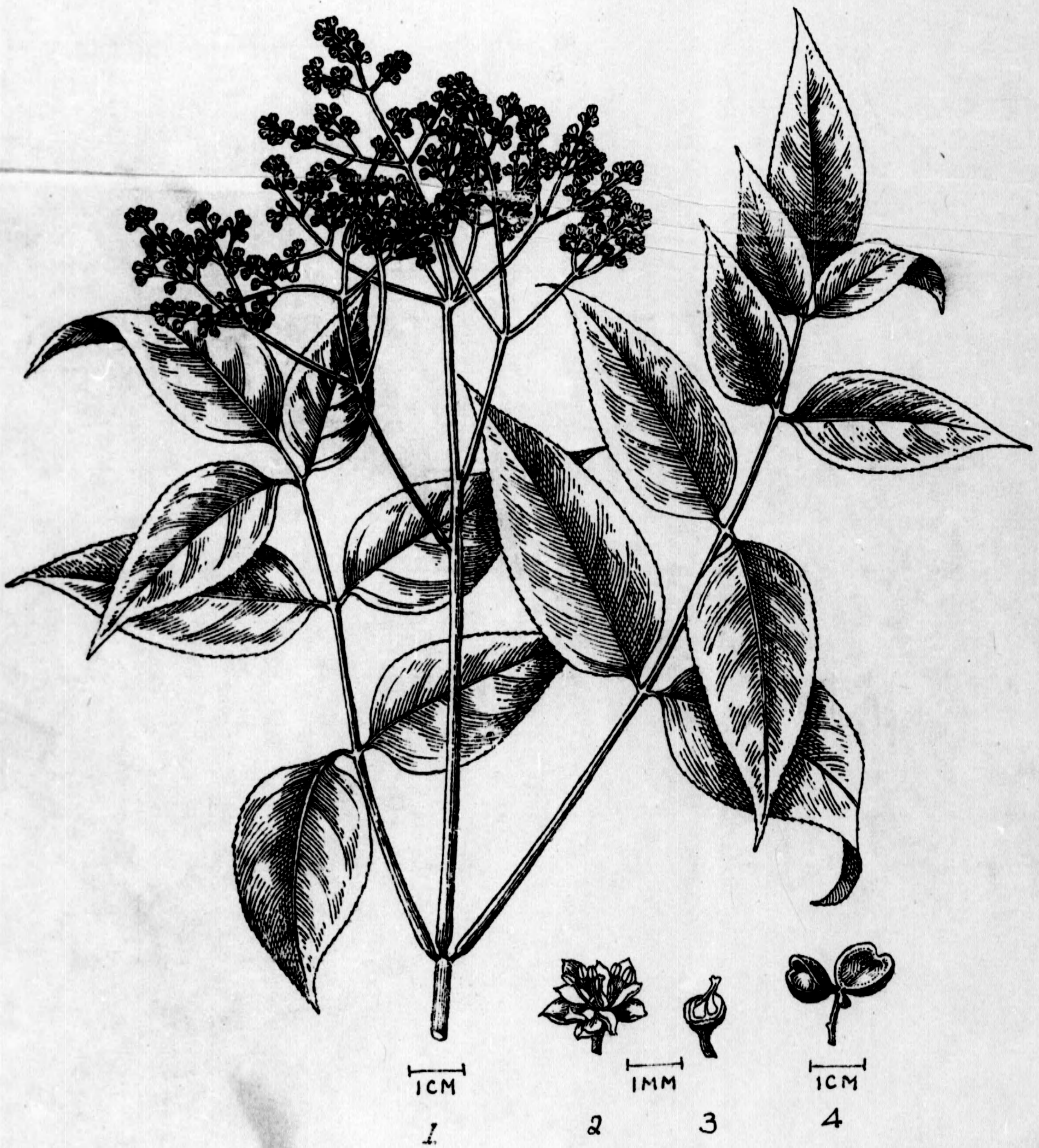
Fig. 1. A flowering branch (natural size).
 2. A flower showing sepals, petals, stamens and ovary (enlarged 10 times).
 3. A flower showing the pistil but its sepals, petals and stamens removed (enlarged 10 times).
 4. A fruit (natural size).

A very nice small tree or shrub occurs commonly in the forests or along the roadside near the foot of Mount Omei. Its black seeds and purple stipe as well as the seed coat resemble the eye of the chicken. Therefore it is locally known as Chi-ven-ching (雞眼睛) in this mountain.

MOUNT OMEI: at roadside from Pao-kuo-szu to Fu-hu-szu, alt. 500 metres, in forests, shrub 4 metres high, S. S. C. C. C. no. 5405, May 2, 1936; same locality, small tree 6 metres high, W. P. Fang, No. 12315, July 26, 1938.

W. P. Fang

峨眉植物圖志



11. *Euscaphis japonica* Dippel

Plate 12.

HOSIEA SINENSIS (Oliver) Hemsley et Wilson.

Icacineaceae.

Hosiea sinensis (Oliver) Hemsley et Wilson in Kew Bull. Misc. Inform. (1906), 154.*Natsiatum sinense* Oliver in Hooker Icon. Pl. XIX (1889), t.1900. Diels in Engler, Bot.

Jahrb. XXIX (1900), 447.— M. Smith ex Hemsley in Journ. Linn. Soc. XXXVI (1905), 495.

Climbing shrub 5 rarely up to 10 metres high; bark grey or yellowish grey, smooth, lenticels conspicuous; branchlets slender, pubescent, those of the current year green, those more than one year old grey or greenish grey; with conspicuous oval lenticels; winter-buds terminal or axillary, conical, with ovate scales densely yellowish-pubescent outside. Leaves chartaceous, alternate, ovate, acute or rarely short-acuminate on the apex, rounded rarely subcordate at the base, remotely serrate with appressed teeth on the margin, upper surface deep green, puberulous, with depressed midrib and slightly depressed lateral nerves, lower surface pale green, white-pubescent, with prominent midrib and raised lateral nerves; petioles 2.5—4.5 cm. long, slender, glabrous. Flowers small, green, in slender axillary, compound corymbs 5—8 cm. long; calyx small, brownish, deeply 5-lobed, lobes acute, 1 mm., long, densely pubescent outside; petals 5, green, lanceolate or oblong-lanceolate, 4 mm. long, pubescent outside, puberulous inside; stamens 5, alternate with the petals, 1—1.5 mm. long, filaments glabrous, anthers introrse, yellow, subglobose; glands 5, each of them inserted between two stamens; pistil 4 mm. long, ovary inferior, with attenuate short style, stigma 3-sided. Fruit a flattened, oval drupe 2 cm. long, brown or reddish brown when matured, with persistent calyx.

MOUNT OMEI; at roadside from Hung-chun-ping to Chiu-lao-tung, alt. 1200 m., open slopes, climbing shrub with green flower, S. S. Chien, No. 5544, May 5, 1936; same locality, in forests, shrub 5 metres high, fruits brown, common, W. P. Fang, No. 12634, July 28, 1938; near Hung-chun-ping, alt. 1200 m., in forests, climbing shrub, flowers greenish, rare, C. L. Sun, No. 156, May 8, 1939; same locality, C. L. Sun, No. 516, June 14, 1939; same locality, climbing shrub 10 metres high, flowers greenish, W. P. Fang, No. 18465, April 20, 1932; Chang-lao-ping, alt. 1600 m., in forests, climbing shrub with green flower, C. L. Sun, No. 1909, May 7, 1940; Chu-tien, alt. 1800 m., climbing shrub with red fruits, T. C. Lee, No. 3391, August 24, 1940; Chiu-lao-tung, alt. 1800 m., climbing shrub with green flower, W. P. Fang, Nos. 14702A & 14712, May 19, 1940; same locality, in forests, climbing shrub, flowers green, C. L. Sun, No. 2180, May 26, 1940; Lien-hwa-shih, alt. 1900 m., in thickets, climbing shrub, flowers greenish, rare, C. L. Sun, No. 376, May 28, 1938; without precise locality, T. H. Tu, Nos. 31, 213, & 813, in 1935; without precise locality, H. C. Chow, No. 9952, May 1938; without precise locality, C. W. Yao, No. 4796, in 1939.

This monotypic species is very common at the lower part of this mountain. It has been highly appreciated by the horticulturists for its very attractive reddish brown fruits..... W.P. Fang.

- Fig. 1, a flowering branch (natural size);
 2, a fruiting branch (natural size);
 3, a flower showing its petals, stamens, glands and pistil (15 times enlarged);
 4, back view of a flower showing sepals (15 times enlarged).

圖版十二

荷時藤

茶茱萸科 (別名麥撒科)

攀援藤本高五公尺，罕達十公尺；樹皮灰色或黃灰色，平滑，皮孔明顯；小枝纖細，被毛，本年生者淡綠色，一年以上者灰色或青灰色，具明顯卵形皮孔；冬芽頂生或腋生，圓錐形，芽鱗卵形，外側被濃密黃色細毛。葉紙質，互生，卵圓形，先端尖銳，罕成短尖頭，基部圓形，罕為近於心臟形，葉緣鋸齒稀疏，葉面深綠色，被短毛，中脈下凹，側脈亦稍凹，葉背蒼白綠色，被白色毛，中脈及側脈均凸起；葉柄長二十五至四十五公厘，纖細，光滑。花小，綠色，成細長腋生複繖房花序，長五至八公分；花萼小，淡棕色，深裂，裂片五枚，銳形，長一公厘，外側被濃密之毛；花瓣五枚，綠色，披針形或長方披針形，長四公厘，外側被毛，內側被短毛；小蕊五本，與花瓣互生，長一公厘至一公厘半，花絲無毛，花藥內向，黃色，近於圓球形；每二小蕊間有腺體一枚，共有五枚，大蕊長四公厘，子房下位，花柱細短，柱頭三角形。果為扁平卵圓形核果，長二公分，成熟時棕色或紅棕色，花萼宿存其上。

產峨眉山洪椿坪，長老坪，初殿，九老洞及蓮花石等處，海拔一千二百至一千九百公尺之間，四月開花，八月果實成熟。

本屬僅此一種，遍佈峨山較低之處，其紅棕色果實甚為引人注目而為園藝家所喜好焉。

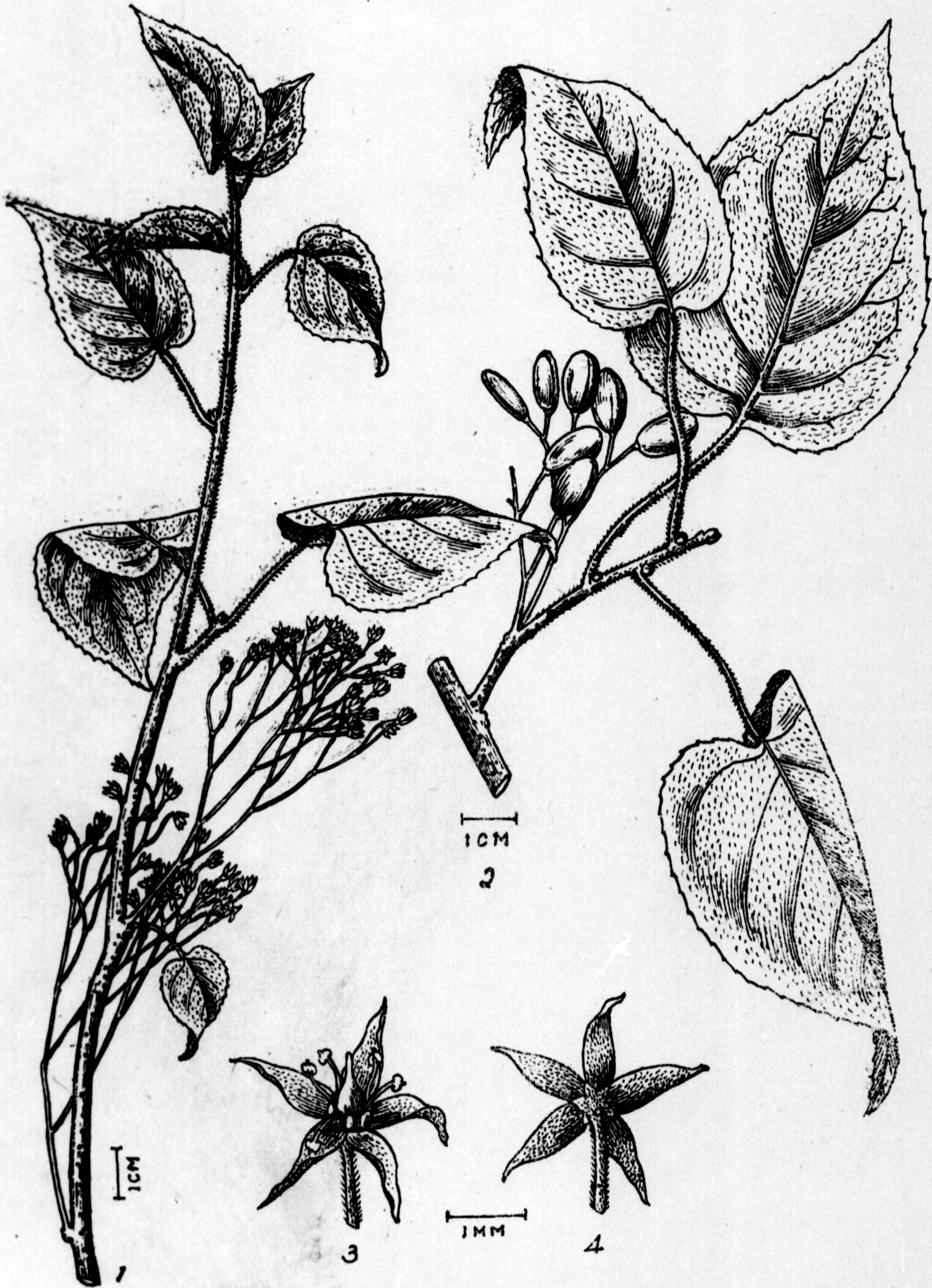
圖解：1. 着花之枝(原大)；2. 着果之枝(原大)；3. 花示花瓣大小蕊及腺體(放大十五倍)；

4. 花之背面觀示萼片(放大十五倍)。

1200 m., in forests, climbing shrub, flowers greenish, rare, no locality.
 C. L. Suen, No. 216, June 14, 1933; same locality, climbing shrub 10 metres high, flowers greenish.
 W. P. Fang, No. 1843, April 20, 1933; Guang-ao-ping, alt. 1800 m., in forests, climbing shrub with green flower. C. L. Suen, No. 1900, May 7, 1940; Gu-tien, alt. 1800 m., climbing shrub with red lutea.
 T. C. Lee, No. 5221, August 21, 1940; Chia-ho-tung, alt. 1800 m., climbing shrub with green flower.
 W. P. Fang, Nos. 17702 & 17713, May 10, 1940; same locality, in forests, climbing shrub, flowers green.
 C. L. Suen, No. 2180, May 26, 1940; Lien-hwa-shih, alt. 1900 m., in thickets, climbing shrub, flowers greenish, rare. C. L. Suen, No. 376, May 28, 1938; without precise locality, T. H. T. M. Nos. 213 & 213.
 in 1933; without precise locality, W. C. Chow, No. 992, May 1938; without precise locality, C. W. Yao, No. 4738, in 1933.
 The monotypic species is very common at the lower part of this mountain. It has been highly appreciated by the horticulturists for its very attractive reddish brown fruits.....W. P. Fang.

Fig. 1. a flowering branch (natural size);
 2. a fruiting branch (natural size);
 3. a flower showing its petals, stamens, glands and pistil (15 times enlarged);
 4. back view of a flower showing sepals (15 times enlarged).

我國植物圖志



12. *Hosiea sinensis* (Oliver) Hemsl. et Wilson.

Plate 13.

ACTINIDIA CORIACEA Dunn.

Actinidiaceae.

Actinidia coriacea Dunn in Journ. Linn. Soc. XXXIX (1911), 405.

Twining shrub usually 5 metres high rarely up to 8 metres high; bark brown or greyish brown; branchlets slender, subterete, green or greenish purple, glabrous, with conspicuous ovate or linear lenticels, pith solid, white. Leaves alternate, coriaceous, obovate-oblong or elliptical oblong, 6-9 cm. long, 2-3.5 cm. broad, acuminate or abruptly acuminate at the apex, cuneate or broadly cuneate at the base, remotely mucronate-serrulate with minute appressed teeth except entire near the base, glabrous, deep green above, whitish green below, midrib slightly depressed above, prominent below, lateral nerves 5-7 pairs, usually inconspicuous above, slightly raised below; petioles 1-1.5 cm. long, glabrous. Flowers cup-shaped, 8-12 mm. in diameter, polygamous, 2 or 3 in cymes from the separate leafless branches or from the leafless base of young branchlets; sepals 5, green or yellowish-green, oblong-ovate, 3-5 mm. long, 3-3.5 mm. broad, ciliate on the margin, petals 5, red or deep red, ovate or ovate-elliptical, 5-7 mm. long, 4 mm. broad; stamens numerous anthers yellow, ovoid, filaments 2 mm. long, very slender, glabrous; ovary superior, oblong ovoid, pubescent, styles many, radiating, stigma subglobose; pedicels 5-8 mm. long, slender, glabrous. Fruit an oblong-ovoid berry, 1.5-2 cm. long, 7 mm. in diameter, spotted, glabrous when matured, with persistent styles and calyx on pedicels 1.5-2 cm. long.

MOUNT OMEI: Fu-hu-ssu, alt. 650 m., in woods, vine 5 metres high, flowers red, *W. P. Fang*, No. 14406, May 29, 1940; same locality, in thickets, small shrub 3 metres high, fruits brown, *T. C. Lee*, No. 3422, September 5, 1940; same locality, in forests, scandent shrub 5 metres high, flowers ruby red, *W. P. Fang*, No. 14406, May 3, 1941; Ching-yin-ko, alt. 900 m., in thickets, woody vine 5 metres high, flowers red, *C. L. Sun*, No. 1960, May 14, 1940; same locality, in woods, shrub 3 metres high, young fruits green, *C. L. Sun*, No. 2279, June 12, 1940; at the roadside from Ching-yin-ko to Niu-hsin-ssu, alt. 1000 m. woody vine, fruits green with yellow spots, *W. W. Ma*, No. 2648, July 6, 1930; Hung-chun-ping, alt. 1200 m., twining shrub, fruit an ovoid berry, *W. P. Fang*, Nos. 15253 & 15452, November 1930; same locality, twining shrub, fruit oblong-ovoid and green with yellow dots, *W. P. Fang*, No. 14982, October 7, 1940; same locality, *H. C. Chow*, No. 8012, August 5, 1938; in woods at the roadside from Hung-chun-ping to Ta-ping, twining shrub 4-6 metres high, bark blackish purple, young fruits green, *C. L. Sun*, No. 2328, June 14, 1940; Pao-chang-fung, alt. 1500 m., woody twining shrub, *T. C. Lee*, No. 3157, August 2, 1940; near Chiu-lao-tung, alt. 1500 m., woody vine, leaves coriaceous, *W. P. Fang*, No. 12756, July 10, 1938; without precise locality, woody vine, fruits oblong-ovoid, *W. P. Fang*, No. 15560, November 25, 1940; without precise locality, *C. W. Yao*, Nos. 3595 & 3670, in 1939; west of Mt. Omei, opien bsien, *W. C. Cheng*, Nos. 6022 & 6513, July 1936. Shrub and

This is an ornamental twining is very commonly found at the foot of Mt. Omei. It is easily recognized by its red flowers and by its coriaceous obovate-leaves..... *W. P. Fang*

- Fig. 1, a flowering branch (natural size);
 2, a flower to show the sepals (10 times enlarged);
 3, a flower to show the petals and stamens (10 times enlarged);
 4, a pistil (10 times enlarged);
 5, a fruit (natural size).

圖版十三

革葉獼猴桃

獼猴桃科

纏繞灌木，通常五公尺高，罕達八公尺；樹皮棕色或灰棕色；幼枝纖細，近於圓形，青色或青紫色，光滑無毛，具顯明之卵形或線形皮孔；髓堅硬，白色。葉互生，革質，倒卵長方形或橢圓長方形，長六至九公分，闊二十至三十五公厘，先端尖尾狀，基部楔形或闊楔形，葉緣具稀疎之小鋸齒，近葉基處則無齒而成全緣，光滑無毛，葉面深綠，葉背淺綠，中脈在葉面稍向下凹，在葉背稍形突起；葉柄長十至十五公厘，光滑無毛。花杯狀，直徑六至八公厘，雜性，二至三朵成一聚繖花序，生於無葉之老枝上或在無葉幼枝之基部；萼片五枚，綠色或黃綠色，長方卵形或卵狀橢圓形，長三至五公厘，闊四公厘；花瓣五枚，紅色或深紅色，卵形，長五至七公厘，闊四公厘；小蕊多數，花藥黃色，卵形，花絲長二公厘，極細弱，光滑無毛；子房上位，長方卵圓形，被毛，花柱多數排列成放射形，柱頭亞球形，花梗長五至八公厘，細弱，無毛。果實為長方卵形漿果，長十五至二十公厘，直徑七公厘，成熟時光滑無毛，花柱及萼片宿存。果梗長十五至二十公厘。

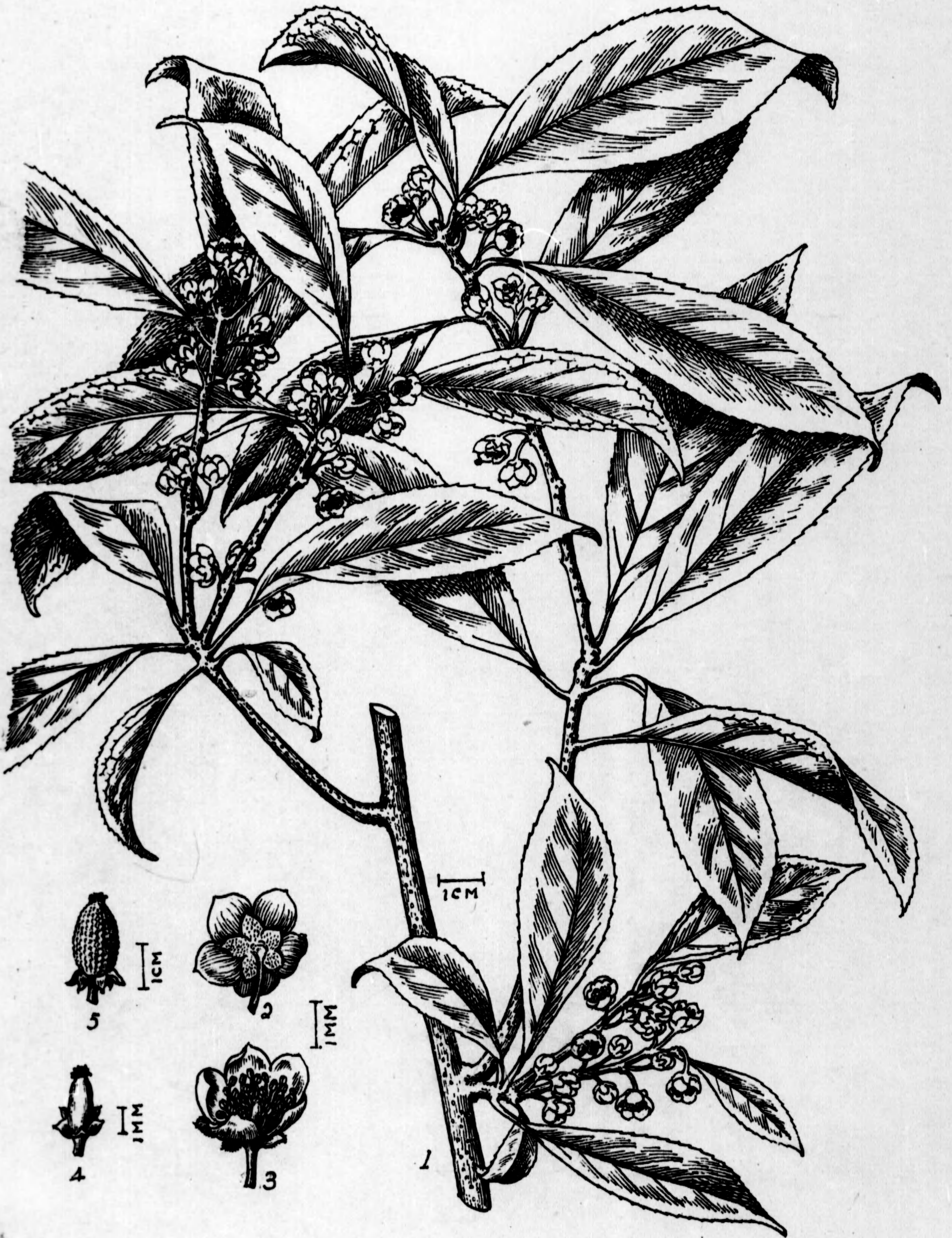
產峨眉伏虎寺，清音閣，洪椿坪，九老洞附近之叢林中，分佈高度在海拔六百五十至一千五百公尺間。峨山以西峨邊縣亦產之。

本種為峨眉山地勢較低處極普遍之植物，開花期約在四月下旬至五月，其紅色之花及革質之葉極易與他種辨別。

圖解：1. 着花之枝（原大）；2. 放大之花示花瓣及小蕊（放大十倍）；3. 放大之花示花萼（放大十倍）；4. 大蕊（放大十倍）；5. 果實（原大）。

Fig. 1. A flowering branch (natural size).
 2. A flower to show the petals and stamens (10 times enlarged).
 3. A flower to show the sepals (10 times enlarged).
 4. A stamen (10 times enlarged).
 5. A fruit (natural size).

峨眉植物圖志



13. *Actinidia coriacea* Dunn

Plate 14.

ACTINIDIA CHINENSIS Planchon.

Actinidiaceae.

Actinidia chinensis Planchon In Lond. Journ. Bot. VI (1557), 303.

Deciduous twining shrub 5 to 8 metres high; branchlets of the current year purple or greenish purple, slightly angular, densely hairy with shaggy hairs red when young, yellow or yellowish-white while matured, those of more than one year old subterete, brown or brownish purple, glabrescent, with numerous ovate lenticels; pith white, lamellate; winter-buds small, usually enclosed in the swollen base of the petioles. Leaves chartaceous, alternate, orbicular or suborbicular, rarely obovate, 6-13 cm. long, 5-12 cm. broad, rounded or emarginate rarely acuminate at the apex, rounded, subcordate or broadly cuneate at the base, ciliate-serrulate on the margin, upper surface dark green, glabrous except pubescent on the nerves, lower surface whitish green, densely pubescent with red or yellowish shaggy pubescence or whitish tomentose, midrib and 8 to 10 pairs of lateral nerves conspicuous above, prominent below; petioles 3-7 cm. long, terete, yellowish pubescent. Flowers polygamous, usually 2 or 3 in axillary cymes, rarely solitary, 4 cm. in diameter, creamy-white, then changing to yellow; sepals 5, imbricate, ovate or oblong-ovate, 7-12 mm. long, 5-8 mm. broad, densely pubescent outside, tomentose inside; petals 5, emarginate, glabrous, obovate, 15-20 mm. long, 12-15 mm. broad; stamens numerous, anthers versatile, yellow, 2-celled, filaments slender, glabrous; ovary superior, densely pubescent, many-celled, ovules 1 in each cell, styles many, radiating, glabrescent, stigma capitate; pedicels 15-20 mm. long, pubescent. Fruit an ovoid or subglobose berry 3.5-5 cm. long, 2-2.5 cm. broad, densely hairy with purple or yellow shaggy hairs.

MOUNT OMEI: Niu-hsin-ssu, alt. 1200 m., woody vine 4 metres high, *C. L. Sun*, No. 2042, May 18, 1940; Hung-chun-ping, alt. 1200 m., a woody vine with reddish hairy fruits, *H. C. Chow*, No. 7800, July 3, 1938; same locality, alt. 1200 m., at roadside, woody vine with matured fruits, *T. C. Lee*, No. 2746, July 9, 1940; same locality, in forests, woody vine 5 metres high, bark grey, flowers white, *C. L. Sun*, No. 1778, April 29, 1940; same locality, under forests, woody vine, flowers whitish yellow *C. L. Sun*, No. 2136, May 24, 1940; above Hung-chun-ping, Pien-dan-ai, alt. 1400 m., in forests, woody vine 4 m. high, flowers whitish, *C. L. Sun*, No. 2094, May 20, 1940; near Hung-chun-ping, Pao-chang-feng, alt. 1500 m., woody vine 5 metres high, fruit a densely brownish hairy berry, *T. C. Lee*, No. 3680, October 6, 1940; near Hung-chun-ping, Ta-ku, alt. 1300 m., *T. C. Lee*, 4742, October 1940; San-tao-ho, Chiu-lung-ping, alt. 1850 m., woody vine 5 metres high, fruit a green oblong-ovoid berry covered with yellow hairs, *T. C. Lee*, No. 2990, May 24, 1940; west of Mt. Omei, Opien-hsien, *W. C. Cheng*, No. 6003, July 1936; Opien-hsien, Wu-keng-su, under forests, woody vine, young fruits densely hairy, *C. L. Sun*, No. 688, July 15, 1939.

This species is very common along the Yangtze-river valley. It has been highly valued not only for its ornamental flowers but also for its edible fruits with a nice flavour.W. P. Fang

- Fig. 1, a flowering branch (natural size);
 2, a stamen (10 times enlarged);
 3, an ovary with radiating styles (10 times enlarged);
 4, a portion of leaf to show the hairs (10 times enlarged);
 5, a fruit (natural size).

圖版十四

獼猴桃 (別名: 羊桃)

獼猴桃科

落葉藤本灌木，高五至八公尺；本年生幼枝紫色或青綠色，略成方形，被密毛，毛色幼時紅色長成變為黃色或黃白色，一年以上幼枝近於圓形，棕色或紫棕色，光滑無毛，有極多卵形之皮孔；髓白色中空間以薄膜；冬芽小，常包於葉柄之膨大基部中。葉紙質，互生，圓形或亞圓形，罕為倒卵形，長六至十三公分，闊五至十二公分，先端圓形或內缺，罕為尖尾狀，基部圓形或亞心臟形或闊楔形，邊緣細鋸齒狀，有纖毛，葉面暗綠，光滑僅葉脈上被毛，葉背青白色，具濃厚紅色或淡黃色蓬毛，或白色短毛，中脈及側脈（八至十對）在葉面明顯，在葉背突起；葉柄長三至七公分，圓形，被淡黃色毛。花雜性，通常二至三朵成腋生聚繖花序，罕為單生，直徑四公分，乳白色，久之變為黃色；萼片五枚，排列成覆瓦狀，卵形或長方卵形，長十至十二公厘，闊五至八公厘，外面被濃毛，裏面被白色短毛；花瓣五枚，先端內凹成缺刻，光滑無毛，倒卵形，長十五至二十公厘，闊十二至十五公厘；小蕊多數，花藥腹聯成了字形，黃色，二室，花絲纖細，無毛；子房上位，被濃毛，多室，每室具胚珠一枚，花柱多數，排列成放射狀，近於光滑，柱頭頭狀；花梗長十至二十公厘，被毛。果實為卵狀或近圓球形之漿果，長三十五至五十公厘，闊二十至二十五公厘，被濃密紫色或黃色蓬毛。

產峨眉山牛心寺，洪椿坪，扁担岩，寶掌峯，大溝等地，分佈高度在海拔一千二百至一千八百五十公尺間。花期在四月下旬至五月，花美觀。果實味美適口為水菓中珍品之一種。

本種在揚子江流域山谷中至為普遍。峨眉山以西，峨邊縣及西康省均有。

圖解：1. 着花之枝（原大）；2. 小蕊（放大十倍）；3. 子房之縱切面示胚珠（放大十倍）；4. 葉之一部示毛被（放大十倍）；5. 果實（原大）。

Fig. 1. A flowering branch (natural size);
 2. A stamen (10 times enlarged);
 3. An ovary with radiating styles (10 times enlarged);
 4. A portion of leaf to show the hairs (10 times enlarged);
 5. A fruit (natural size).

我國植物圖志



14. *Actinidia chinensis* Planchon

Plate 15.

CAMPTOTHECA ACUMINATA Decaisne.

Nyssaceae.

Camptotheca acuminata Decaisne in Bull. Soc. Bot. France, XX(1837), 157.

Camptotheca yunnanensis Dode in Bull. Soc. Bot. France, LV (1908), 651, fig. c.

Deciduous tree 15 to 20 metres high, rarely up to 25 metres high, with a straight trunk about 1.5 to 2 metres in diameter; bark slightly fissured, grey or pale grey; branches horizontally spreading and usually making a rounded crown, branchlets slender, those of the current year green or purplish green, grey-pubescent, those of more than one year old glabrescent, greenish grey, lenticels sparse, rounded or ovate; winter-buds axillary, conical, with 4 pairs of opposite ovate scales pubescent outside. Leaves alternate, chartaceous or subcoriaceous, ovate-oblong or elliptical-oblong, 12-28 cm. long, 6-12 cm. broad, shortly acuminate or acute on the apex, subrotund or broadly cuneate at the base, entire on the margin, upper surface bright green, puberulous on the nerves while young, then glabrous, lower surface pale green, sparingly pubescent and densely so on the nerves while young then glabrescent or less so when matured midrib slightly depressed above, raised below, lateral nerves 13-15 pairs, conspicuous above, prominent below; petioles 15-20 mm. long, purple, sparingly pubescent. Flowers in terminal or axillary globose heads about 15 to 20 mm. in diameter, on white pubescent terete peduncle 4-6 cm. long, the terminal one consists of pistillate flowers and the remnants consist of staminate flowers; both kinds of flowers with 3 triangular-ovate bracts 2.5-3 mm. long, densely pubescent on both sides; calyx 5-lobed, triangular, ciliate on the margin; petals 5, greenish, oblong or oblong-ovate, acute, 2 mm. long, densely pubescent outside, caducous, disk prominent, slightly lobed; staminate flowers with 10 white stamens, the 5 outer ones longer than petals, the 5 inner ones usually shorter, anthers 4-celled, filaments glabrous, rudimentary ovary present or absent; pistillate flowers with inferior ovary, style white, glabrous, 4 mm. long, stigma 3-lobed. Fruit a lanceolate samara 20-25 mm. long, with persistent style and slightly winged on both sides.

MOUNT OMEI: Yang-kang, alt. 480 m., tree 8 metres high, *W. P. Fang*, No. 15650, December 3, 1940; Pao-kuo-ssu, alt. 480 m., at roadside, tree 8 metres high, *S. S. Chien*, No. 5454, May 3, 1936; same locality, *S. S. Chien* No. 5994, July 10, 1937; same locality, *H. C. Chow*, No. 8450, September 29, 1938; same locality, on grassy slopes, tree 10 metres high, *W. P. Fang*, No. 13658, September 29, 1939; same locality, tree 8 metres high, *W. P. Fang*, No. 14634, July 2, 1940; Fu-hu-ssu, alt. 500 m., in woods, tree 10 metres high, *W. P. Fang*, No. 17378, July 24, 1941; Ching-yin-ko, *Y. T. Liu*, without number, November 1936; Hung-chun-ping, alt. 1200 m., *H. C. Chow*, No. 8230, August 20, 1938; without precise locality *C. W. Yao*, No. 5049, in 1939.

This very handsome tree is very common at the foot of Mount Omei below 1000 metres of sea level. On account of its straight trunk, spreading branches, dense foliage and nice flowers it has been cultivated as shade tree at the roadside of the high ways. *W. P. Fang*

- Fig. 1, a flowering branch (natural size);
 2, a staminate flower without petals to show the stamens (10 times enlarged);
 3, a staminate flower with the caducous petals (10 times enlarged);
 4, a pistillate flower without petals to show the style and stigma (10 times enlarged).
 5, samaras (natural size);
 6, 2 samaras to show the inner and outer surfaces (natural size).

圖版十五

旱蓮木

(別名：千丈樹或喜樹)

梔薩科

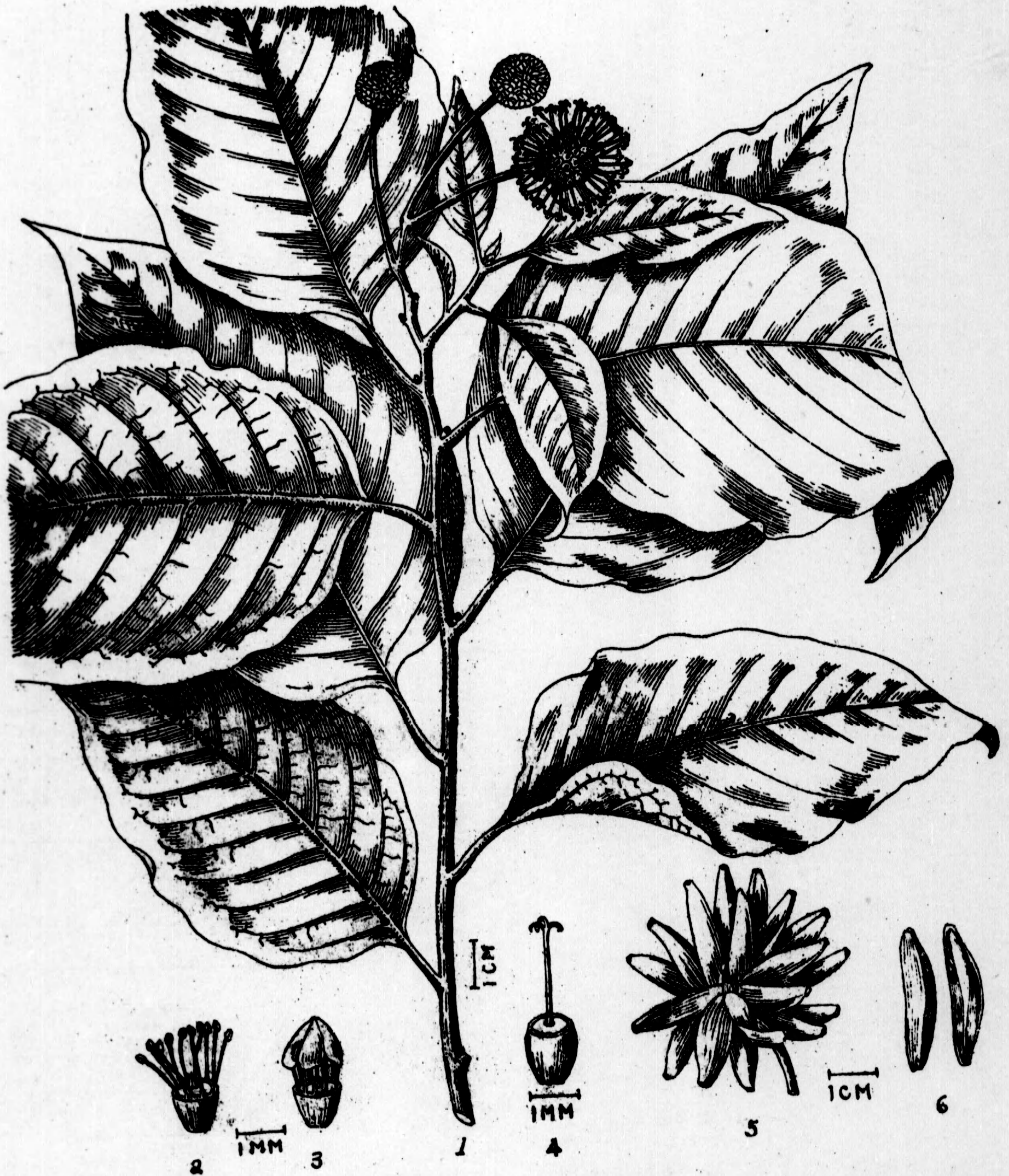
落葉喬木高十五至二十公尺，罕達二十五公尺。樹幹挺直，直徑約一百五十至二百公分；樹皮微裂為溝狀，灰色或淡灰色，樹枝平射向外或為圓冠形，小枝纖細，本年生者綠色或帶紫綠色，被有灰色毛，一年以上者光滑無毛，青灰色，皮孔甚少，圓形或卵形；冬芽腋生，圓錐形，被對生卵形外側被毛之鱗片四對。葉互生，紙質或半革質，卵狀長方形或橢圓長方形，長十二至二十八公分，闊六至十二公分，先端短尖尾形或銳形，基部亞圓形或闊楔形，全緣，葉面亮綠色，幼時脈上被細小柔毛，及長脫落，葉背蒼白綠色，幼時葉脈被毛濃密，葉身被毛稀少，及長毛漸少或完全無毛，中脈在葉面稍微下凹，在葉背凸起，側脈十三至十五對，在葉面清晰，在葉背凸起；葉柄長十五至二十公厘，紫色，被毛甚少。花成頂生或腋生球形頭狀花序，直徑十五至二十公厘，花梗長四至六公分，圓形，被白色毛，頂生花序中完全為大蕊花，其餘腋生者均為小蕊花；大小蕊花均被苞片三枚，苞片三角形，長二至三公厘，兩面被濃毛，花萼具五裂片，三角形，邊緣有纖毛；花瓣五枚，淡綠色，長方或長方卵形，尖銳，長二公厘，外側被濃毛，早落，花盤發達，微裂；小蕊花具白色小蕊十本，外圍五枚長於花瓣，內圍五枚較短，花藥四室，花絲光滑無毛，退化子房有時存在；大蕊花具下位子房，花柱白色，無毛，長四公厘，柱頭三裂。果實為披針形翅果，長二十至二十五公厘，兩側微具翅，花柱宿存果上。

產峨眉山平地及報國寺，伏虎寺，清音閣，洪椿坪等處，海拔四百八十至一千二百公尺之間，在峨山基部一千公尺以下之地此為一種常見喬木。

本種曾植於公路兩旁以為遮蔭樹，因其樹幹挺直，枝多葉濃，開花清俊悅目故也。

圖解：1. 着花之枝（原大）；2. 去瓣之小蕊花示小蕊（放大十倍）；3. 小蕊花及其早落之瓣（放大十倍）；4. 大蕊花移瓣之後示子房（放大十倍）；5. 翅果（原大）；6. 二翅果示其內外兩側（原大）。

我國植物圖志



15. *Carptotheca acuminata* Cassino

Plate 16.

DAVIDIA INVOLUCRATA Baillon.

Nyssaceae.

Davidia involucrata Baillon in Adansonia, X (1871), 115.

Davidia tibetana David in Nouv. Arch. Mus. Paris, sér. 2, XV (1882), 161 (nomen nudum).

Deciduous tree 10 to 15 metres high, rarely up to 20 metres high, with a trunk usually 1.5 to 2 metres in diameter, its upper branchlets ascending and lower branches usually wide-spreading; branchlets of the current year green or greenish grey, glabrous, those of more than one year old brown or dark brown; bark dark grey, rough, usually exfoliated into thin and small irregular flat flakes; winter-buds conical, purple or brown, with 4-5 pairs of ovate imbricate scales. Leaves alternate, exstipulate, usually aggregated near the apex of young branchlets, chartaceous, broadly ovate or subrotund, 9-15 cm. long, 7-12 cm. broad, acuminate or shortly acuminate on the apex with slightly curved acumen, cordate or deeply cordate at base, coarsely serrate with triangular acuminate teeth, upper surface bright green, at first with sparingly white long hairs and finally glabrous, lower surface densely white silky-pubescent, middle rib and 8-9 pairs of lateral nerves conspicuous above and prominent below; petioles 4-5 rarely to 7 cm. long, dark purple or greenish purple, more or less pubescent. Flowers andro-monoecious, apetalous, numerous staminate flowers and one perfect flower in dense subglobose head about 2 cm. in diameter, with two large opposite bracts at base, on pedicels 1.5 to 2 cm. long, from a short spur-like branchlet; bracts chartaceous, at first greenish, afterwards creamy-white, finally brown and fallen away, ovate, oblong-ovate or oblong-obovate, 7-15 cm. long, 3-5 cm. broad, acute or acuminate on the apex, cordate or rounded at base, and the margin entire or remotely serrate near the apex, sparingly puberulous below; sepals and petals absent; in staminate flowers 1-7 stamens 1.5-2 cm. long, anthers purple, filaments slender, glabrous; in perfect flower ovary inferior, 6-10-celled, adnate to the receptacle, on the top of the ovary with rudimentary perianth and a circle of short stamens, styles short, stout, as numerous as the cells of the ovary, stigma spreading, ovules pendulous, 1 in each cell. Fruit an oblong-ovoid drupe, 3-4 cm. long, 1.5-2 cm. in diameter, greenish-purple with yellow spots, exocarp very thin, mesocarp flesh, endocarp very hard and deeply ridged, seeds 3-5, on peduncles 5-7 cm. long.

MOUNT OMEI: Chiu-lao-tung, alt. 1800 m., *H. C. Chow*, No. 8307, September 9, 1938; Chu-tien, alt. 1800 m., tree 10-12 metres high; *W. P. Fang*, Nos. 16365 & 16366, April 26, 1941; without precise locality, *C. W. Yao*, Nos. 3803 & 4511, in 1938; without precise locality, *T. H. Tu*, No. 96, in 1935; west of Mt. Omei, Opien-hsien, Yen-ching-chi, *W. C. Cheng*, No. 6204, August 1936; west of Mt. Omei, Opien-hsien, Sha-ping, Wu-keng-shu, tree 8-12 metres high, *C. L. Sun*, No. 924, August 5, 1939.

- Fig. 1, Flowering branch (natural size);
 2, perfect flower (10 times enlarged);
 3, staminate flower (10 times enlarged);
 4, young fruit (natural size);
 5, lower surface of a portion of leaf (10 times enlarged);
 6, upper surface of a portion of leaf (10 times enlarged).

Davidia involucrata var. *Vilmoriniana* Hemsley in Bot. Mag. CXXXVIII (1912), t. 8432.

Davidia Vilmoriniana Dode in Rev. Hort. (1908), 406.

Davidia laeta Dode in Rev. Hort. Hort. (1908), 407.

This variety differs from the type species by the leaves green and glabrous or sometimes glaucescent beneath or sparingly pubescent on the nerves of the under surface while young.

MOUNT OMEI: Chu-tien, tree 15 metres high, *S. S. Chien*, No. 6152, July 15, 1937; same locality, alt. 1800 m., tree 10-14 metres high, flowers white, *C. L. Sun*, No. 1886, May 6, 1940; same locality, tree 15 metres high, *W. P. Fang*, No. 17430, April 6, 1941; Chiu-lao-tung, alt. 1800 m., *S. L. Sun*, No. 192, May 12, 1939; at the roadside from Chiu-lao-tung to Yu-hsien-ssu, tree 15 metres high, bark blackish grey, *S. L. Sun*, No. 2404, June 17, 1940; Chiu-lao-tung, in forests, tree 9 metres high, *W. P. Fang*, No. 14700, May 19, 1940; same locality, tree 10 metres high, *T. C. Lee*, No. 2818, July 4, 1940; same locality, in woods, tree 10 metres high, *T. C. Lee*, No. 3218, July 14, 1940; same locality, *W. P. Fang*, No. 16559, May 10 1941, without precise locality, *W. C. Cheng*, No. 6684, October, 1936; Without precise locality, *H. C. Chow*, No. 9697, in 1938.

This high-valued horticultural species was discovered from Pao-hsing-hsien (Mupin) and is very common in southwestern Szechuan. On Mt. Omei the type species and its variety occur at Chiu-lao-tung and Chu-tien at about 1700 to 2000 metres above the sea level.....W. P. Fang

圖版十六

琪桐

梔薩科

落葉喬木，高十至十五公尺，罕達二十公尺，樹幹直徑通常一公尺半至二公尺，頂端之枝率上伸，較低之枝則向外平伸；本年生幼枝綠色或青灰色，光滑無毛，一年以上者棕色或暗棕色；樹幹灰色，粗糙，常成小而薄之不規則扁塊而脫落；冬芽圓錐形，紫色或棕色，被四至五對卵形覆瓦狀鱗片。葉互生，無托葉，常集於幼枝頂端，紙質，闊卵形或亞圓形，長九至十五公分，闊七至十二公分，先端尖尾狀或短尖尾狀，具有微曲之尖頭，基部心臟形或深心臟形，葉緣有粗大鋸齒，齒狀為三角尖尾形，葉面鮮明綠色，初時被稀疏白色長毛，及後脫落，葉背被濃密絲光白毛，中脈及側脈（八至九對）在葉面清晰，在葉背突起；葉柄長四至五公分，罕達七公分，暗紫色或青紫色，被毛時多時少。花常兩性花與小蕊花同株，無大蕊花，無被，多數小蕊花與一完全花或亞圓球形頭狀花序，直徑約二公分，基部具對生大苞片三枚，花梗長十五至二十公厘，着生於一矩形短枝上；苞片紙質，初為淡綠色，後變乳白色，終為棕色而脫落，卵形，長方卵形或長方倒卵形，長七至十五公分，闊三至五公分，先端銳利或尖尾狀，基部心臟形或圓形，全緣或於近頂端處有稀疏齒裂，背面有少許細小柔毛；無萼，無瓣；小蕊花具小蕊一至七本，長十五至二十公厘，花藥紫色，花絲細長，無毛；完全花具下位子房，六至十室，與花托貼合，子房之頂端有退化花被及一圈短小之小蕊，花柱短粗，與子房分室同數，柱頭向外平射，胚珠下垂，每室一枚。果實為長方卵形核果，長三至四公分，直徑十五至二十公厘，青紫色上帶黃點，外果皮極薄，中果皮肉質，內果皮堅硬具脊，種子三至五枚，果梗長五至七公分。

產峨眉九老洞及初殿一帶，海拔一千八百公尺處。峨眉以西峨邊縣亦曾見之。四月中旬或下旬開花。

圖解：1. 着花之枝（原大）；2. 完全花（放大十倍）；3. 小蕊花（放大十倍）；4. 幼果（原大）

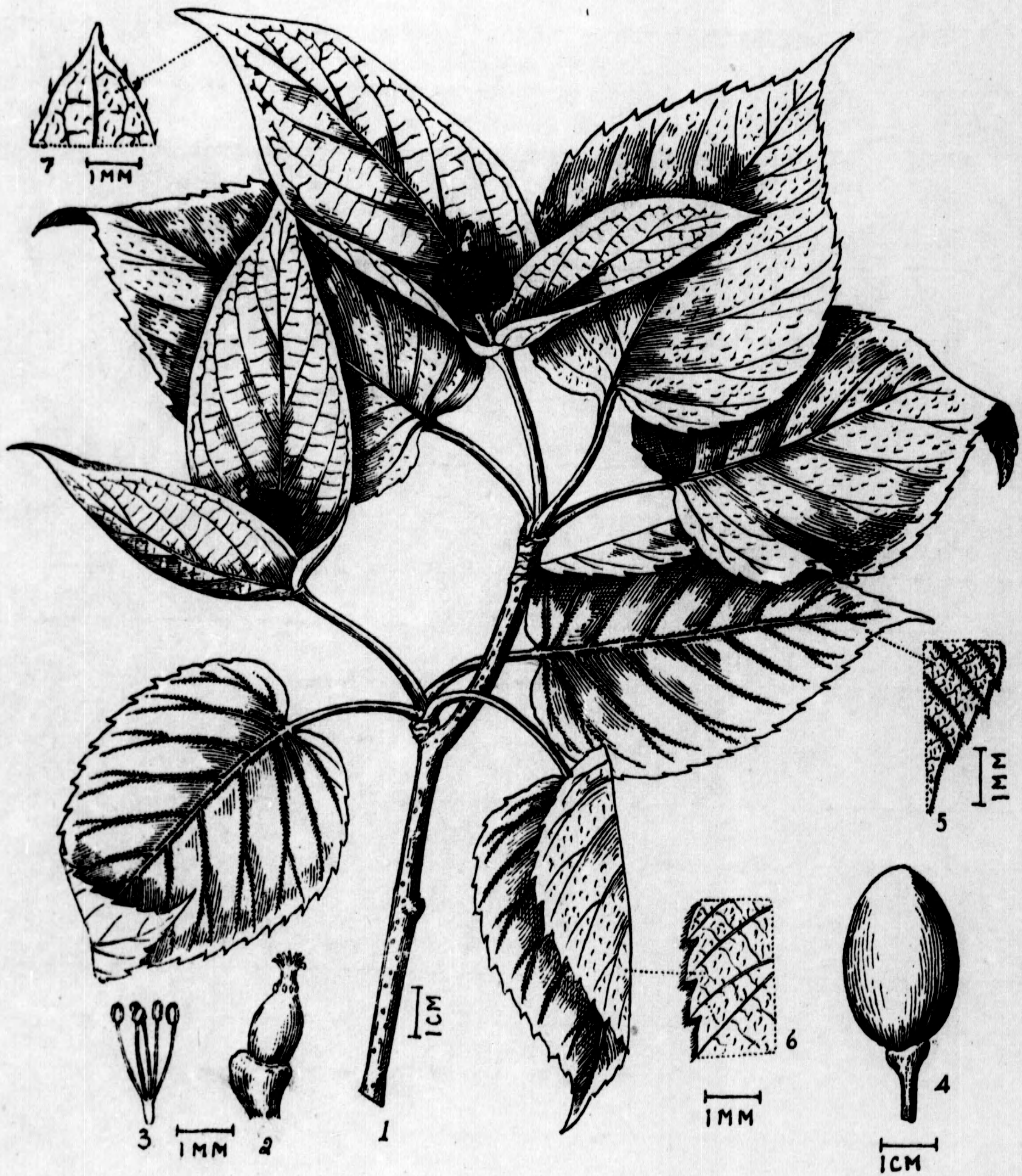
；5. 葉背之一部（放大十倍）；6. 葉面之一部（放大十倍）。

光葉琪桐（變種）

本變種與前種不同之處在於其葉綠色無毛或幼時葉背有粉狀物或稀疏被毛。

產眉山初殿九老洞及遇仙寺一帶，在海拔一千七百至二千公尺間。

我 國 植 物 圖 志



16 *Doidia invalucrata* Baillon

Plate 17.

RHODODENDRON SIMSII Planchon.

Ericaceae.

Rhododendron Simsii Planchon in Fl. des Serr. IX (1853-4?), 78.

Azalea indica Sims in Bot. Mag. XXXVI (1812), t. 1480

Rhododendron indicum (Linnaeus) Sweet, var. *ignescens* Sweet in Brit. Fl. Gard. ser. 2, II (1833), t. 128.

Rhododendron indicum (Linnaeus) Sweet, var. *puniceum* Sweet in Brit. Fl. Gard. ser. 2, II (1833), sub. t. 128.

Rhododendron Calleryi Planchon in Fl. des Serr. IX (1853-4?), 81.

Rhododendron indicum (Linnaeus) Sweet?, var. *Simsii* Maximowicz in Mem. Acad. Sci. St.-Petersbourg, ser. 7, XVII. No. IX (1870), 38.

Rhododendron indicum Hemsley (non Sweet) in Journ. Linn. Soc. Bot. XXVI (1889), 25.

Azalea indica, var. *Simsii* Rehder in Bailey, Cycl. Amer. Hort. I (1900), 122.

Shrub usually 1 or 2 metres rarely up to 5 metres high; branchlets slender, usually several from the same node of stem, densely clothed with appressed yellow or brown hairs; floral-buds ovoid, with several ovate scales, ciliate on the margin, strigose outside near the apex. Leaves persistent, chartaceous, usually several closely setting on the upper part of branchlets, elliptical to elliptical-oblong, or ovate to obovate, rarely obovate to oblanceolate (usually found in summer leaves), 3-5 cm. long, 2-3 cm. broad, acute or rarely acuminate on the apex, cuneate or broadly cuneate at the base, deep green and sparingly strigose above, pale green and densely strigose below, midrib depressed above, prominent and densely strigose with yellow hairs below, lateral nerves 3-5, slightly depressed above and slightly raised below; petioles 3-5 mm. long, densely strigose. Flowers 2 or 3, rarely 5, terminal on a leafy branchlet; calyx with 5 triangular, acuminate lobes, 4 mm. long, ciliate and densely strigose outside, corolla rose-red or rarely dark red funnel-form, 4-5 cm. long, 4.5-5.5 cm. in diameter, lobes 5, obovate, 2.5-3 cm. long, 1.8-2 cm. broad, darker red spotted inside the upper petal or rarely the upper three petals; stamens 10, unequal, 4-4.5 cm. long, inserted on the receptacle surrounding the ovary, filaments slender, purple, glabrous above the middle and scarcely pubescent below the middle, anthers introrse, purple, 2-celled, ovary ellipsoid, densely strigose, 10-celled, ovules numerous, style slender, 5-5.5 cm. long, purplish, glabrous, stigma minute. Fruit an ovoid capsule, 7 mm. long, densely setose, with calyx persistent at base.

MOUNT OMEI: Pao-ning-ssu, alt. 480 metres, under forests, shrub 2 metres high, W. P. Fang No. 13630, September 20, 1939; same locality, under forests, shrub 1 metre high, W. P. Fang, No. 14206, April 22, 1940; same locality, W. P. Fang, No. 14281, May 10, 1940; same locality, shrub 1 meter high, W. P. Fang, No. 16376, May 1, 1941; same locality, C. L. Chow, No. 4925, October 30, 1941; Pao-kuo-ssu, alt. 480 m., shrub 2 metres high, flowers rose-coloured, W. P. Fang' No. 13709, November 15, 1939, Fu-hu-ssu, small shrub 2 metres high, W. P. Fang. No. 15502, November 20, 1940; west of Hsiao-Tien-tze small shrub 1 metre high, flower pink, common, W. P. Fang, No. 15687, December 4, 1940; without precise locality, C. W. Yao, No. 3717.

This is the commonest species of *Rhododendron* occurred in thickets or under forests from 450 to 1000 metres above the sea level and it has been commonly cultivated in parks as well as in the private gardens..... W. P. Fang.

- Fig. 1, a flowering branch (natural size);
- 2, a pistil with Calyx (enlarged 1½ times);
- 3, a stamen (enlarged 1½ times);
- 4, an ovary crossly dissected (enlarged 10 times);
- 5, a portion of branch to show the hairs (enlarged 10 times);
- 6, a portion of the leaf to show the hairs on the lower surface (enlarged 10 times);
- 7, a portion of the leaf to show the hairs on the upper surface of the leaf (enlarged 10 times)

義 州 植 物 圖 志



17. *Rhododendron Simsii planchon*

附杜鵑花屬之特性及峨眉種類檢索表

杜鵑花屬 *Rhododendron* Linnr 在峨眉山俗名梭羅花，共有八百餘種分布遍於全世界其中國產者有五百餘種，峨眉山產者亦有二十餘種，春夏開放鮮艷之花，美麗奪目，增色名山，使成天然之花園，自山麓以迄山巔，幾無處無杜鵑，大者常為高大喬木，小者則僅矮小之叢莽，最能引人入勝，謂其價值駕百花而上之，非過譽也。各國人士均極愛好，積極移植或播種繁殖，不僅具常綠美觀之葉，而其奇麗彩色之花，確係超羣出類者也。花冠鐘形或漏斗形，長僅數公分，其色或白或黃或紫紅，開花時期早者春初遲者晚夏，前後六七月均係其開花時期也，而每種之開花期亦常維持兩月之久，始漸凋謝。故春夏遊峨眉山者，無不觀杜鵑花而興賞不已也。為愛好杜鵑花者方便計，特將峨眉山產之重要種類，依其特性，作為檢索表，於並每種之後，附以摘要之說明。

峨眉山杜鵑花屬檢索表

1. 葉通常落葉性，罕常綠性，絕不具鱗斑；花形較小，具小蕊五至十本；子房五室，光滑，罕被剛毛或絨毛。
 2. 葉通常落葉性，具剛毛；花紫紅色自頂芽生出，成繖形花序；子房密被剛毛 杜鵑(映山紅) *Rh. Simsii*.
 27. 葉常綠性，通常光滑，花白色自腋芽生出，單生或數花成繖形花序；子房具絨毛或光滑 長蕊杜鵑 *Rh. stamineum*.
1. 葉常綠，平滑無毛，或具絨毛及鱗斑；花形較大，具小蕊十至二十本；子房五室以上，平滑無毛，或具鱗斑及絨毛，但稀具剛毛者。
 2. 葉花及蒴果均不具鱗斑。
 3. 葉背面密被細毛。
 4. 葉背面被白色淺毛；累積較薄，花序及花梗均較長。
 5. 花冠白色，長約三十公厘，基部窄小 銀葉杜鵑 *Rh. argyrophyllum*.
 55. 花冠紫粉紅色或紫色，長二十八至三十五公厘，基部極窄 秉氏杜鵑 *Rh. Pingianum*.
 555. 花冠紫色，長十至五十公厘，基部甚寬大 來麗杜鵑 *Rh. Ririei*
 44. 葉背面具黃色或紅色長毛，累積甚厚，花梗較短。
 5. 花萼形大長十二公厘，邊緣密被長腺毛；子房密被較粗之絨毛及腺毛；葉面平滑， 費伯杜鵑 *Rh. Faberi*,
 55. 花草萼形小，長二公厘，不具腺毛，子房密被絨毛，但不具腺毛，葉面絨形 縐葉杜鵑 *Rh. Wiltonii*.
33. 葉之背面或僅其中肋及葉柄具較粗之毛。
 4. 嫩枝及葉柄具短而分枝之細毛，其尖端不具腺體；另具小腺毛混雜其間 絨毛杜鵑 *Rh. pachytrichum*.
 44. 嫩枝及葉柄密被長剛毛，剛毛之尖端具有腺體。 芒刺杜鵑 *Rh. strigillosum*
333. 葉背面平滑。
 4. 喬木或灌木，直立，葉形長而狹，成橢圓形，卵圓形或披針形，基部圓形，稀成心臟形；花形大，白色紫色，或粉紅色，無斑點，具六至七花瓣，不具或罕具蜜槽，常具形小而顏色不顯著之花萼，果實甚大。
 5. 花柱不具腺毛。
 6. 花冠鐘形，基部膨大。
 7. 葉長二十至三十公分，寬五至十七公分 美麗杜鵑 *Rh. calophyllum*,
 - 77 葉長九至十五公分，寬三至五公分 歐本孝杜鵑 *Rh. Openshawianum*
 - 66 花冠漏斗狀鐘形，基部較小 大衛杜鵑 *Rh. Davidii*.
 - 55 花柱全部具腺毛。

- 6. 葉倒披針形，基部楔形。花冠漏斗形.....兩色杜鵑 *Rh. discolor*.
- 66 葉長方形或長方卵形，基部心臟形，花冠狹鐘形。
- 7. 葉柄及果梗均具長柄腺毛.....赫斯烈杜鵑 *Rh. Hemsleyanum*.
- 77. 葉柄及果梗均光滑.....程氏杜鵑 *Rh. Chengianum*.
- 44 小灌木，匍匐於岩石上或其他高大喬木上，葉形寬而短，常成橢圓形，基部心臟形，花形較小，淡紫色，具五花瓣，常具蜜槽；具形大而色亦較深之花萼，果實較小.....惟麗杜鵑 *Rh. Williamsianum*.
- 22. 葉花及蒴果均具鱗斑。
- 3. 小灌木，寄生於樹枝上；花序頂生，僅具一至二花。
- 4. 花紫紅色；花梗具剛毛，不具鱗斑.....樹生杜鵑 *Rh. dendrocharis*.
- 44. 花白色；花梗具鱗斑，不具剛毛.....寶興杜鵑 *Rh. moupinense*.
- 33. 非寄生之灌木或喬木，罕為小灌木，花序頂生，罕腋生，通常繖形，具三花。
- 4. 葉厚革質，倒卵形或卵形；花萼極大，萼片長卵形，長八公厘，宿存.....漢士杜鵑 *Rh. Hanceanum*.
- 44. 葉薄革質，披針形，花萼極小，萼片鈍形或鈍三角形，長罕達二公厘。
- 5. 葉背無白粉，具黃色小鱗斑，相距約為鱗斑直徑四至六倍.....黃花杜鵑 *Rh. lutescens*.
- 55. 葉背被白粉，具棕色或棕褐色大鱗斑，相距約等於鱗斑之直徑.....承光杜鵑 *Rh. chengshienianum*.

Plate 18.

RHODODENDRON STAMINEUM Franchet.

Ericaceae.

Rhododendron stamineum Franchet in Bull. Soc. Bot. France, XXXIII (1886), 236.

Rhododendron aucubaeifolium Hemsley in Journ. Linn. Soc. XXVI (1889), 19, in part, excluded description of leaves.

Rhododendron Pittosporaeifolium Hemsley in Journ. Linn. Soc. XXVI (1889), 29.

Rhododendron Chaffanjonii Leveille, ms.

Shrub or small tree 3 to 5 rarely to 7 metres high; branchlets slender, glabrous, those of the current year green or purplish-green, those of more than one year old greyish green or pale brown; bark smooth. Leaves usually 4 or 5 whorled near the apex or at the nodes of branchlets, evergreen, coriaceous, glabrous obovate or oblong-obovate, rarely lanceolate or oblong-lanceolate, 6-8 cm. long, 2-3 cm. broad, acute or acuminate at apex, cuneate at base, entire and slightly revolute on the margin, shining and deep green above, pale green below, midrib depressed above, prominent below, lateral nerves obscure; petioles 8-12 mm. long, glabrous. Flowers fragrant, usually 3 to 5 in axillary fascicles; bud-scales ovate, imbricate, glabrous except pubescent on the margin; calyx small, glabrous, obsolete 5-lobed, lobes triangular; corolla white or rarely rose, the upper lobe usually yellow spotted inside, narrowly tubular at the base, about 1-1.5 cm. long, with 5 reflexed obovate lobes. 1.5-2 cm. long, 8 mm. broad stamens 10, slender, exserted, 3-4 cm. long, filaments slightly pubescent, anthers yellow, extrorse; ovary cylindrical, white-pubescent or glabrous, style glabrous, 4-5 cm. long, stigma capitate; pedicels 1.5-2 cm. long, glabrous. Fruit a glabrous, slightly curved, 7-ribbed cylindrical capsule, 4-5 cm. long, on pedicels 2.5-3.5 cm. long.

MOUNT OMEI: Pao-ning-ssu, alt- 470 m., small tree 5 metres high, flowers white, *W.P. Fang*, No. 14350, May 11, 1940; Lung-men-tung, alt. 475 m., in mixed Woods, small tree 5 metres high, flowers pinkish, *W.P. Fang*, No. 14180, April 21, 1940; Ta-o-ssu, alt 1000 m., in thickets, shrub 3 metres high, flowers white. common, *C.L. Sun*, No. 62, May 3, 1939; Ching-yin-ko, alt. 900 m., in woods, shrub 3 metres high, bark greyish brown, fruits green, *W.W. Ma*, No. 2309, June 12, 1940; Hei-lung-kiang, in thickets, small tree 3 metres high, flowers white, *C.L. Sun*, No. 80, May 5, 1939; same locality, *W.P. Fang*, No. 16104 April 3, 1941; Hung-chun-ping, alt. 1200 m., *H.C. Chow*, No. 7767, July 3, 1938; Ta-ping, alt. 1400 m., in woods, shrub 3 metres high, flowers white, *C.L. Sun*, No. 1713, April 26, 1940; same locality, shrub 2 metres high, flowers white, *C.L. Sun*, No. 154, May 8, 1939; same locality, *H.C. Chow*, No. 8021, August 6, 1938; Pai-lung-tung, small tree with green fruits, *T.C. Lee*, No. 3642 October 3, 1940; Hsi-hsin-so, alt. 1600 m., in woods, shrub 3 metres high, flowers white, *C.L. Sun*, No. 1923, May 8, 1940; same locality, small tree 6-7 metres high, young fruits light green, *T.C. Lee*, No. 2966, July 24, 1940; 新開寺 Hsing kai ssu, alt. 1600 m., in forests, shrub 3 metres high, *W.P. Fang*, No. 14120 April 15, 1940; north-west of Mt Omei, Yung-ching-hsien, Wa-wu-shan, in thickets, shrub 5 metres high, fruits green; *C.L. Sun*, No. 1255, September 12, 1939; without precise locality, *C.W. Yao*, No. 3716; without precise locality, *T.C. Lee*, No. 4611, October 1940; without precise locality, *W.C. Cheng*, Nos. 10111 & 10492, April to June, 1941.

By the long-exserted stamens this species can easily be distinguished from its nearer allies. This is one of the very common species of *Rhododendron* in the provinces of Hupeh, Szechuan, Kweichow and Yunnan in low altitude from 450 to 1200 metres above the sea level. It is very common as small tree at the foot of Mount Omei.

.....W.P. Fang.

- Fig. 1, a flowering branch (natural size);
 2, 2 stamens (2 times enlarged);
 3, a pis.il (2 times enlarged);
 4, an ovary crossly dissected (10 times enlarged);
 5, a fruit (natural size).

圖版十八

長蕊杜鵑

石南科

灌木或小喬木，高三至五公尺罕達七公尺；小枝纖細光滑，本年生者綠色或帶紫綠色，一年以上者灰綠色或蒼白棕色；樹枝光滑。葉通常四或五輪生於幼枝之頂端或節上，常綠，革質，光滑，倒卵形或長方倒卵形，罕為披針形或長方披針形，長六至八公分，闊二至三公，先端尖銳或尖尾形，基部楔形，全緣或邊緣稍向外捲。葉面光亮深綠色，葉背蒼白綠色，中脈在葉面下凹，在葉背突出，側脈不顯明；葉柄長八至十二公分，光滑無毛。花具芳香，通常三朵至五朵，成腋生之叢；芽鱗卵形，覆瓦狀，除邊緣被毛外，通體光滑無毛；萼片小，無毛，微裂為五瓣，裂片三角形；花冠白色，或有時成玫瑰色，內部通常皆具黃點，基部成漸窄之管狀，長約十至十五公厘，具外屈之倒卵形裂片五枚，長十五至二十公厘，闊八公厘；小蕊十本，纖細，伸出花外，長三至四公分，花絲略被柔毛或光滑無毛，花藥黃色，外向；子房圓柱形，被白色毛或無毛，花柱光滑無毛，長四至五公分，柱頭頭狀；花梗長十五至二十公厘，無毛。果為微彎七肋之柱形蒴果，光滑無毛，無鱗斑，長四至五公分，着生於長二十五至三十五公厘之果梗上。

峨山保寧寺，龍門洞，大峨寺，清音閣，黑龍江，洪椿坪，大坪上迄息心所由海拔四百七十至一千六百公尺之處均盛產之。開花期在四五月間，為峨眉山基部最普遍之小喬木。

本種因具有甚長之小蕊伸出花被之外極易與其相近之種分別，除峨山外，在四川，湖北，貴州及雲南諸省分佈極廣，其產地均在海拔四百五十至一千二百之間。

圖解：1. 着花之枝（原大）；2. 小蕊（原大）；3. 大蕊（原大）；4. 果實（原大）。

Fig. 1. A flowering branch (natural size);
 2. A stamen (2 times enlarged);
 3. A pistil (2 times enlarged);
 4. An ovary cross-section (10 times enlarged);
 5. A fruit (natural size).

峨眉植物圖志



18. *Rhododendron stamineum* Franchet

Plate 19.

RHODODENDRON ARGYROPHYLLUM Franchet.

Ericaceae

Rhododendron argyrophyllum Franchet in Bull. Soc. Bot. France, (1886), 291.

Shrub 3 to 7 metres high; bark grey or blackish grey, rough; branchlets slender, green or purplish green, grey-tomentose while young, then glabrous; winter-buds ellipsoid, scales numerous, acute, imbricate, puberulous outside, ciliate on the margin. Leaves evergreen, coriaceous, usually 5 to 7 setting closely near the apex or at the node of branchlets, oblong-lanceolate, 6-13 cm. long, 1.5-3 cm. broad, acuminate or narrowly acute on the apex, cuneate, broadly cuneate or rarely subrotund at the base, entire and slightly reflexed on the margin, upper surface deep green and slightly floccose while young, glabrous when matured, lower surface clothed with whitish felty or plastered indumentum while young, then changed into crustaceous when the leaves matured, midrib grooved above, prominent below, primary veins 12-14 on each side, slightly depressed above, obscure or slightly raised below; petioles 1-1.5 rarely to 2 cm. long, slender, glabrescent, flattish and slightly grooved above, rounded below. Flowers 7-9 in a racemose umbel; rhachis about 1 cm. long, greyish or rufous floccose or tomentose; calyx small, 1-2 mm. long, 5-lobed, lobes acute, slightly floccose; corolla glabrescent, campanulate, 3-3.5 cm. long, white occasionally rose flushed and with purple or rose spots on the inner upper part of the corolla, lobes 5, obovate, emarginate, 1 cm. long, 1.5 cm. broad; stamens 12-14 rarely 16, unequal, 1.5-2.5 cm. long, shorter than and included in the corolla, filaments whitish pubescent, anthers yellow, ellipsoid; pistil 2.5-3 cm. long, ovary cylindrical-oblong, 5 mm. long, 9-chambered, greyish or greyish-yellow tomentose, style purplish, glabrous, stigma capitate; pedicels 2.5-3 cm. long, slightly greyish-floccose. Capsules cylindrical, 1.5-3 cm. long, usually curved, pubescent while young, glabrescent when matured.

MOUNT OMEI: Hwa-yen-ding, alt. 1950 m., in forests, shrub 3 metres high, W. P. Fang, No. 12868, August 3, 1938; west of Mount Omei, O-pien-hsien, Sha-ping, in thickets, shrub 3-4 metres high, bark grey, flowers purplish, C. L. Sun, No. 869, July 30, 1939.

This is a comparatively common species of Rhododendron of the Eurhododendron group in western Szechuan. It, however, is very rare on Mount Omei, for which we have only found few shrubs at Hwa-yen-ding. From other species it differs distinctly by its narrow leaves and small white flowers.

- Fig. 4, a pistil (2 times enlarged);
- 5, a leaf (natural size);
- 6, a flower (natural size):

Rhododendron argyrophyllum Franchet var. Omeiense Rehder et Wilson Sargent, Pl. Wilson. I (1913), 527.

MOUNT OMEI: Chiu-lao-tung, alt. 1800 m., in forests, shrub 3-5 metres high, leaves green, yellowish-pubescent below, occasionally, W. P. Fang, Nos. 12771 & 12838 July 31 to August 1, 1938; same locality, in thickets, shrub 2-3 metres high, bark grey, flowers white, C. L. Sun, Nos. 193, 202 & 205, May 12, 1939; same locality, in forests, shrub 2 metres high, flowers white with purple spots within, occasionally, W. P. Fang, Nos. 14668, 14670 & 14671 May 10, 1940; same locality, in forests, shrub 5 metres high, flowers white, W. P. Fang, No. 16566, May 10, 1941; Hwa-yen-ding, alt. 1950 m., in thickets, shrub 2-3 metres high, bark grey, flowers white, rare, C. L. Sun, No. 369, May 28, 1939; without precise locality, H. C. Chow, Nos. 9704 & 9868, May 1938.

This variety is fairly common at Mount Omei. It differs from the type-species in its smaller flowers with broader corolla and with ovary only slightly floccose and its smaller leaves usually brownish or yellowish pubescent on the lower surface.....W. P. Fang,

- Fig. 1, a flowering branch (natural size);
- 2, a pistil (2 time enlarged);
- 3, a fruit (natural size);
- 4, a stamen (2 times enlarged).

圖版十九

銀葉杜鵑
石南科

灌木，高三至七公尺；樹皮灰褐色，粗糙；小枝細長綠色或紫綠色，幼時被灰色短毛，及長光滑；冬芽橢圓形，鱗被多數，銳形，排列成覆瓦狀，外側被細毛，邊緣有纖毛。葉常綠，革質，通常七或五片排列於小枝之頂端處或節上，長方披針形，長六至十三公分，闊十五至三十公厘，先端尖尾狀或窄銳形，基部楔形或闊楔形，稀為亞圓形，葉緣完整，稍捲曲，葉面深綠，幼時被叢塊軟毛，及長光滑，葉背幼時具白色絨毛或絨毛，及長變為脆硬，中脈在葉面下凹，在葉背突起，側脈每側十二至十四，在葉面稍凹，在葉背不顯或略凸；葉柄長十至十五公厘，罕達二十公厘，纖細，近於無毛，上面扁形，淺溝狀，下面圓形。花七至九朵，成繖狀花序；花軸長約一公分，被灰黃色叢塊柔毛或短毛；花萼小，長一至二公厘，具五裂片，裂片尖形，略具叢塊柔毛；花冠幾無毛，鐘形，長三十至三十五公厘，白色，間有變淡玫瑰紅色，花管內側上部有紫色或玫瑰紅色點，具五裂片，裂片倒卵形，先端有缺刻長一分，闊十五公厘；小蕊十二至十四罕達十六本，不等長，長十五至二十五公厘，較花冠為短，包於冠內，花絲被白色毛，花藥黃色，橢圓形；大蕊常長二十五至三十公分，子房圓柱長方形，長五公厘，九室，被灰色或灰黃色短毛，花柱淡紫色，光滑無毛，柱頭圓狀；花梗常二十五至三十公分，略被灰色軟毛叢。蒴果圓柱形，長十五至三十公厘，通常彎曲，幼時被毛，及長則近於光滑。

產峨眉山華嚴頂一帶，在海拔約二千公尺處，四五月間開花，峨山以西峨邊亦有。

本種在西川一帶原較普遍，但在峨眉山則殊罕見，僅於華嚴頂有數株而已。

本種別於他種之處，為具窄葉及較小之白色花。

圖解：4，大蕊（放大二倍）；5，葉（原大）；6，花（原大）。

峨眉銀葉杜鵑 (變種)

產峨眉山九老洞，華嚴頂一帶，在海拔一千八百至二千公尺處，五月開花。

本變種在峨眉山頗為普遍，與模式種銀葉杜鵑不同之處為其較小之花具有較闊花冠及少毛之子房，又其葉較小，通常於葉背具有淡棕色或淡黃色毛。

圖解：1，着花之枝（原大）；2，大蕊（放大二倍）；3，果實（原大）。

峨眉植物圖志



19. *Rhododendron argyrophyllum* Franchet and
var. *omeiense* Rehder et Wilson

Plate 20.

RHODODENDRON PINGIANUM Fang.

Ericaceae.

Rhododendron Pingianum Fang in Contrib. Biob. Lab. Sci. Soc. Ohina, Bot. Ser. XII, No. 1 (1939), 20.

Shrub or small tree 4-9 metres high; branchlets stout, grey-pubescent with thick indumentum while young, then glabrescent; bark grey or brownish grey; winter-buds subglobose, scales ovate, inner surface glabrous, outer surface and the margin pubescent. Leaves evergreen, coriaceous, usually 5 to 7 closely aggregated near the apex of the branchlets, oblong, oblanceolate or lanceolate, 9-15 cm. long, 2.5-3.8 cm. broad, obtuse, subrotund and mucronate on the apex, obtuse, broadly cuneate or sub-rotund at the base, slightly revolute on the margin, upper surface light green, glabrous or floccose on the midrib, lower surface clothed with whitish or greyish indumentum, midrib depressed above, prominent below, primary veins 12-16 on each side, slightly depressed above, obscure or slightly raised below; petioles 1-2 cm. long, flattened and slightly grooved, above, rounded below, slightly pubescent. Flowers 12 to 22 on a racemose-umbel; rhachis 1-2 cm. long, more or less pubescent; bracts oblanceolate, 15 mm. long, densely whitish-pubescent outside, less pubescent inside; calyx small, about 5 mm. long, 5-lobed, lobes acute or obtuse; corolla campanulate-funnel-form, 2.8-3.5 cm. long, 2-2.5 cm. broad, purple or pinkish purple, glabrous outside, glabrescent inside, lobes 5, obovate, emarginate, 1 cm. long, 1.5 cm. broad; stamens 10, unequal, 8-15 mm. long, filaments slender, glabrous, anthers oblong, yellow; pistil 1.8-2 cm. long, ovary oblong-cylindrical, about 4 mm. long, 8-chambered, with densely reddish branched hairs, style glabrous, purplish, stigma capitate; pedicels 2-4 cm. long, whitish floccose-pubescent and rarely glandular. capsules cylindrical, 1.5-3 cm. long, about 5 mm. in diameter, slightly curved, glabrous while matured.

MOUNT OMEI: Ta-cheng-ssu, alt. 2300 m., in forests, small tree 6 metres high, flowers pinkish purple, W. P. Fang, No. 14763, May 20, 1940; same locality, shrub 3 metres high, T. C. Lee, No. 3902, October 14, 1940; same locality, in forests, small tree 7-9 metres high, leaves oblanceolate, white hairy below, flowers tubular, purplish, common, W. P. Fang, No. 16583, May 10, 1941; Pai-yun-ssu, W. P. Fang, Nos. 16451 & 16454, May 6, 1941; Lei-tung-ping, alt. 2500 m., in forests, small tree 6 metres high, flowers purple, common, W. P. Fang, Nos. 14759 & 14760, May 20, 1940; same locality, in forests, shrub 3-7 metres high, fruits green, T. C. Lee, Nos. 3917, 3918, 3919 & 3923, October 15, 1940; Chieh-yin-tien, alt. 2600 m., shrub 3 metres high, young capsules brownish tomentose, W. P. Fang, No. 14615, June 27, 1940; same locality, in forests, small tree 5 metres high, flowers purple, common, W. P. Fang, No. 16558, May 10, 1941; Chi-li-po, alt. 2700 m., in forests, shrub 5 metres high, bark grey, flowers purplish-red, C. L. Sun, No. 2228, May 29, 1940; west of Mount Omei, Opien-hsien, T. S. Chao, No. 79, in 1938; without precise locality, H. C. Chow, No. 9807, in 1938.

This is a very beautiful *Rhododendron* discovered in the districts of Mapien-hsien, Opien-hsien and Leipo-hsien, about 60 to 150 miles southwest of Mount Omei. After our explorations held in the recent years we found that this species occurring abundant near the summit of Mount Omei. It differs from other species in its broad leaves with whitish tomentum on the lower surface and its purple flowers with densely reddish branched hairs on the ovary. It was named after Prof. C. Ping, Director of the Biological Laboratory of the Science Society of China.....W. P. Fang.

- Fig. 1. a flowering branch (natural size);
- 2. a stamen (5 times enlarged);
- 3. a pistil (5 times enlarged);
- 4. a fruit (natural size).

圖版二十

秉氏杜鵑

石南科

灌木或小喬木，高四至九公尺；小枝粗壯，幼時被灰色密厚毡狀之毛，長成後光滑無毛；樹皮灰色或灰棕色；冬芽亞球形，芽鱗卵形，內側光滑，外側及邊緣被毛。葉常綠，革質，倒披針形或披針形，長九至十五公分，闊二十五至三十八公厘。先端鈍圓形或亞圓形具短尖，基部鈍圓形闊楔形或亞圓形，葉緣略向外捲，葉面淡綠色，無毛或中肋具柔毛，葉背覆以白色或灰色毡毛，中脈在葉面下凹，在葉背不顯或稍凸；葉柄長一至二公分，上面扁平有溝，下面圓形，略被細毛。花十二至二十二朵成一總狀繖形花序長約二公厘。花軸長一至二公分，被毛多少不定；苞片倒披針形，長十五公厘，外側密生白毛，內側較少；花萼小，長五公厘，五裂，裂片銳形或鈍形；花冠鐘狀漏斗形，長二十八至三十五公厘，闊二十至二十五公厘，紫色，外側光滑無毛，內側近於光滑，具五裂片，裂片倒卵形，先端有缺刻，長十公厘，闊十五公厘。小蕊十本，不等長，長八至十五公厘，花絲細長，光滑無毛；花藥長方形，黃色；大蕊長十八至二十公厘，子房長方圓柱形，長約四公厘，八室，被濃密分枝之紅色毛，花柱無毛，淡紫色，柱頭頭狀；花梗長二至四公分，被白色軟毛，罕具腺點。蒴果圓柱形，長十五至三十公厘，直徑約五公厘，微曲。成熟時光滑無毛。

產峨眉山大乘寺，雷洞坪，接引殿，七里坡等高山上。在海拔二千三百至二千七百公尺處。四五月開花。

此為一種有觀賞價值之杜鵑，初時僅於距峨眉山西南約六十至一百三十英里處之馬邊，峨邊及雷波等縣發現之，近年始發現其在峨眉山頂部生長普遍。本種別於其他杜鵑之處在其具有闊葉及覆有白色毡毛之葉背，且其紫色花內具有被紅色分叉毛之子房。本種之名係從中國科學社生物研究所所長秉農山先生之姓。

杜鵑在峨山谷稱杪樞。昔宋子京有杪樞花贊曰：秉葩共房，葉附花外，根不可徙，見偉茲世意即指此花。又時人之贊咏此花花亦不乏人，川太程天放校長之杪樞花詩云：淺絳微黃秀可餐，清芬直欲傲蘭芝。奇詭不願沾塵俗，留與山靈帶笑看，甚贊此花之秀麗也。

圖解：1. 着花之枝（原大）；2. 小蕊（放大五倍）；3. 大蕊（放大五倍）；4. 果實（原大）。

This is a very beautiful *Rhododendron* discovered in the districts of Mapien-hsien and Leipo-hsien, about 60 to 150 miles southwest of Mount Omei. After our explorations held in the recent years we found that this species occurring abundant near the summit of Mount Omei. It differs from other species in its broad leaves with whitish tomentum on the lower surface and its purple flowers with densely reddish branched hairs on the ovary. It was named after Prof. C. Ping Director of the Biological Laboratory of the Science Society of China.....W. P. Fang.

Fig. 1. a flowering branch (natural size);
2. a stamen (5 times enlarged);
3. a pistil (5 times enlarged);
4. a fruit (natural size).

峨眉植物圖志



20. *Rhododendron Pingianum* Fang

Plate 21.

RHODODENDRON RIRIEI Hemsley et Wilson.

Ericaceae.

Rhododendron Ririei, Hemsley et Wilson in Kew Bull. (1910), 111.

Shrub or bush 4 to 7 metres high; branchlets stout, glabrous, slightly curved, those of the current year green or purplish green, those of more than one year old brown or greyish brown; winter-buds conical, with numerous, glabrous, imbricate ovate scales. Leaves evergreen, coriaceous, usually 3 to 5 setting closely near the apex or at the nodes of branchlets, and horizontally spreading or slightly pendulous, oblong-elliptical, obovate or oblanceolate, 6-18 cm. long, 2.8-6.5 cm. broad, obtuse or shortly acute, occasionally cuspidate on the apex, cuneate or broadly cuneate rarely rounded at the base, deep green and glabrous above, silvery white below with very thin white indumentum, midrib grooved above, prominent below, primary nerves 13-15 on each side, slightly depressed or just showing above, raised near the midrib below; petioles stout, glabrous, 1-3 cm. long, green or purplish green, flattened and grooved above, rounded below. Flowers 5 to 10 in a corymbose raceme; rhachis 5-8 mm. long, whitish or yellowish floccose; bud-scales and bracts persistent during flowering period, bracts 2-3 cm. long, obovate, densely white-tomentose on both surfaces; calyx about 5 mm. long, pink, slightly pubescent, unequally 5-lobed, lobes triangular or oblong; corolla campanulate, 4-5 cm. long, 2 mm. in diameter, purplish, with 5 purple nectar-pouches at the base of the tube, lobes 5 or 7, rounded, emarginate, 1-1.5 cm. long, 2-2.5 cm. broad; stamens 10, included in the corolla, unequal, 2.5-4.5 cm. long, filaments purple, glabrous, anthers brown; ovary oblong-conical, 5 mm. long, densely grey-tomentose, style glabrous, 3-4 cm. long, stigma green, capitate. Fruit a stout oblong-cylindrical capsule, 3-3.5 cm. long, 1-1.2 cm. in diameter, 10-12-chambered, with withered tomentum or glabrous.

MOUNT OMEI: Pien-tan-ai, alt. 1500 m., on slopes, shrub 5 metres high, flowers purple, T. C. Lee, No. 4387, March 20, 1940; Chiu-lao-tung alt. 1800 m., shrub 3 metres high, S. S. Chien, No. 6107, July 14, 1937; same locality, in forests, shrub 5 metres high, W. P. Fang, Nos. 12779 & 12843, July 31 to August 1, 1938; same locality, in thickets, shrub 4 metres high, young fruits green, tomentose, C. L. Sun, Nos. 220 & 222, May 13, 1939; same locality, on slopes, shrub 5 metres high, flowers purple, common, T. C. Lee, No. 4451, March 19, 1940; same locality, T. H. Tu, No. 245; same locality, W. P. Fang, Nos. 16020 & 16022, March 19, 1941; south of Chiu-lao-tung, Chiu-li-kong, alt. 1800 m., shrub 4 metres high, flowers purple, C. L. Sun, No. 1408, March 15, 1940; same locality, shrub 2 metres high, flowers rosy purple, W. P. Fang, No. 18243, March 23, 1942; Chu-Tien, alt. 1700 m., in forests, shrub 5 metres high, flowers purple, C. L. Sun, Nos. 1391 & 1401, March 13, 1940; same locality, in forests, shrub 5 metres high, flowers purple, C. L. Sun, No. 1510, April 12, 1940; same locality, W. P. Fang, No. 15909, March 19, 1941; Yu-lisen-ssu, shrub 3 metres high, flowers purplish pink, W. P. Fang, No. 181216, March 23, 1942; Hwa-yen-ting, alt. 1950 m., in forests, shrub 5 metres high, fruits green, W. P. Fang, No. 12878, August 3, 1938; same locality, W. P. Fang, No. 15998, March 31, 1941; west of Mount Omei, Opien-hsien, Sha-ping, in thickets, shrub 6 metres high, fruits green, C. L. Sun, No. 874, July 30, 1939; without precise locality, C. W. Yao, No. 5190, in 1939; without precise locality, W. C. Cheng, No. 10165, April 23, 1941.

This species differs from its nearest allies by its short-pedicelled flowers with large corolla which is broad at base.....W. P. Fang.

- Fig. 1. a flowering branch (natural size);
 2. a stamen (natural size);
 3. a pistil (natural size);
 4. an ovary crossly dissected (15 times enlarged);
 5. an ovary longitudinally dissected (15 times enlarged);
 6. the inner surface of a corolla to show the spots and 5 nectar pouches (natural size);
 7. a fruit (natural size).

圖版二十一

來麗杜鵑

石南科

灌木或小叢樹，高四至七公尺；幼枝粗壯，光滑無毛，微彎，本年生者綠色或紫綠色，一年以上者棕色或灰棕色；冬芽圓錐形，被多數覆瓦排列之無毛卵形芽鱗。葉常綠，革質，通常三至五枚密聚輪生於小枝之頂端或節上，平射向外或略向下垂，長方橢圓形，倒卵形或倒披針形，長六至十六公分，闊二十八至六十五公厘，先端鈍圓形，或短銳形偶或成硬尖之頭，基部楔形或闊楔形，罕為圓形，葉面深綠色，光滑無毛，葉背銀白色，具極薄之白色毛被，中脈在葉面溝狀，在葉背凸出，側脈每側十三至十五，在葉面微凹或恰可見，在葉背於近中脈處凸起；葉柄粗壯，光滑無毛，長一至三公分，綠色或紫綠色，上面扁平具溝，下面圓形。花五朵至十朵成一繖房總狀花序；花軸長五至八公厘，被白色或淡黃色柔軟絨毛；芽鱗及苞片在開花期尚存，苞片長二至三公分，倒卵形，兩面被濃厚白色短毛；花萼長約五公厘，淡紅色，略帶毛，上部分為不等長之五裂片，裂片三角形或長方形；花冠鐘形，長四至五公分，直徑二公厘，淡紫色，花管基部有紫色蜜腺囊五個，裂片五枚，圓形，頂部有缺刻，長十至十五公厘，闊二十至二十五公厘；小蕊十本，包於花冠內，不等長，長二十五至四十五公厘，花絲紫色，無毛，花藥棕色；子房長方圓錐形，長五公厘，被濃密灰色短毛，花柱無毛，長三至四公分，柱頭綠色，頭狀。果實為粗壯長方圓柱形之蒴果，長三十至三十五公厘，直徑十至十二公厘，十至十二室。外被乾枯毛被或光滑無毛。

產峨眉山，扁担岩，九老洞，初殿，華嚴頂等處，由海拔一千五百至二千公尺間，三四月開花。峨眉以西峨邊沙坪亦產之。

本種具短花梗，花冠大而基部寬闊，與其相近諸種均不同。

圖解：1. 着花之枝（原大）；2. 小蕊（原大）；3. 子房（原大）；4. 子房之橫切面（放大十五倍）；5. 子房之縱切面（放大十五倍）；6. 花冠裏面之紫色斑點及蜜腺囊（原大）；7. 果實（原大）。

This species differs from its nearest allies by its short-peduncled flowers with large corolla which is broad at base..... W. H. Evans

Fig. 1. a flowering branch (natural size);
 2. a stamen (natural size);
 3. a pistil (natural size);
 4. an ovary cross-section (15 times enlarged);
 5. an ovary longitudinally dissected (15 times enlarged);
 6. the inner surface of a corolla to show the spots and 5 nectar pouches (natural size);
 7. a fruit (natural size).

峨眉植物圖志



21. *Rhododendron Ririei* Hemsley et Wilson

Plate 22.

RHODODENDRON PACHYTRICHUM Franchet

Ericaceae.

Rhododendron pachytrichum, Franchet in Bull. Soc. Bot. France, XXXIII (1886), 231; in Nouv. Arch. Mus. Paris, sér. 2, X (1888), 49 (Pl. David. II. 87).

Shrub 3 to 5 rarely to 6 metres high; bark grey or yellowish grey, rough; branchlets slender, straight, those of one year old densely clothed with yellowish or brownish shaggy branched hairs, those of more than one year old more or less glabrous, yellowish grey; winter-buds ellipsoid, scales numerous, imbricate, puberulous outside, outer ones long-acuminate, inner ones acute. Leaves evergreen, coriaceous, 5-7 closely setting near the apex of branchlets, narrowly oblong or oblanceolate, 6-12 cm. long, 25-35 mm. broad, acuminate to acute with sharp acumen on the apex, rounded or broadly cuneate at base, slightly reflexed and at first slightly ciliate on the margin, both surfaces bright green, glabrous, midrib grooved above, prominent and clothed with yellowish shaggy hairs especially near the leaf-base of lower surface, primary veins 14-19 on each side, very slightly depressed or obscure above, very slightly raised below; petioles 1.5-2 cm. long, slightly grooved above, densely clothed with brown or dark brown shaggy hairs. Flowers 7-10 in racemose umbel; rachis 1.5-2 cm. long, sparingly pubescent; pedicels slender, 1-1.2 cm. long, yellowish pubescent; bracts obovate, 1-2 cm. long, densely grey-pubescent outside, glabrous inside; calyx small, 2 mm. long, sparsely pubescent, 5-lobed, lobes acute or obtuse; corolla campanulate, base broad, 4-4.5 cm. long, rose or white rarely purple-magentate, the inner basal part of the corolla usually with a deep blotch; stamens 10, unequal, 2.5-3.5 cm. long, filaments very slender, puberulous at base, anthers yellow, style 4 cm. long, ovary oblong-conoid, 5-7 mm. long, 5-7-chambered, densely yellowish tomentose, style slender and glabrous, stigma small, rounded. Capsules cylindrical, 2-3 cm. long, furrowed, covered with brownish strigose hairs.

MOUNT OMEI: Lei-tung-ping, at. 2500 m., in thickets, shrub 2-3 metres high, flowers pale rose or deep rose, C.L. Sun, Nos. 247, 266 & 269, May 14, 1939; same locality, in forests, shrub 4-5 metres high, leaves oblong-lanceolate or oblanceolate, flowers pale rose or white, rare, W.P. Fang, Nos. 14749, 14750, 14751, 14754, 14757 & 14758, May 19, 1940; same locality, in forests, shrub 3-4 metres high, leaves green and glabrous above, midrib on the lower surface pubescent, fruit green, sparingly pubescent, common, T.C. Lee, Nos. 3921, 3924, 3936, 3927, 3928, 3929, & 3930 October 15, 1940; same locality, in forests, shrub 3 metres high, flowers rose or whitish rose, abundant, W. P. Fang, Nos. 16449 & 16557, May 10, 1941; without precise locality, C.W. Yoo, Nos. 4000 & 5188.

This species is characterized by the shaggy branched hairs on the petioles, young branchlets and midribs of the lower surface of leaves. On Mount Omei it grows mixed with *Rhodo. Pingianum* Fang under the forests of *Abies Delavayi* Franchet and *Tsuga yunnanensis* Franchet.....W. P. Fang.

- Fig. 1, a truss of flowers and surrounding foliage (natural size);
 2, a stamen (5 times enlarged);
 3, a pistil (5 times enlarged);
 4, a fruit (natural size).

植物學雜誌
編輯部

本報自創刊以來，承蒙各界人士之愛護，不勝感荷。茲因業務需要，特將本報遷往新址出版。本報宗旨，在於報導植物學之最新動態，促進學術交流。本報內容豐富，包括植物分類、生理、生態、地理等各個領域。本報歡迎各界人士踴躍投稿，共同推動植物學之發展。本報地址：上海南京路。本報電話：XXXXXX。本報訂閱：每月一元。本報廣告：每行每日五角。本報印刷：精美大方。本報發行：全國各大書局均有代售。本報宗旨：報導植物學之最新動態，促進學術交流。本報內容：豐富多樣，涵蓋植物學各個領域。本報歡迎：各界人士踴躍投稿。本報地址：上海南京路。本報電話：XXXXXX。本報訂閱：每月一元。本報廣告：每行每日五角。本報印刷：精美大方。本報發行：全國各大書局均有代售。

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圖解：1. 花序及果實之構造 (放大)；2. 葉片 (放大)；3. 果實 (放大)；4. 果實 (放大)；5. 果實 (放大)。

本報自創刊以來，承蒙各界人士之愛護，不勝感荷。茲因業務需要，特將本報遷往新址出版。本報宗旨，在於報導植物學之最新動態，促進學術交流。本報內容豐富，包括植物分類、生理、生態、地理等各個領域。本報歡迎各界人士踴躍投稿，共同推動植物學之發展。本報地址：上海南京路。本報電話：XXXXXX。本報訂閱：每月一元。本報廣告：每行每日五角。本報印刷：精美大方。本報發行：全國各大書局均有代售。



22. *Rhododendron pachytrichum* Franchet

Plate 23.

RHODODENDRON STRIGILLOSUM Franchet.

Ericaceae.

Rhododendron strigillosum, Franchet in Bull. Soc. Bot. France, XXXIII (1886), 232; in Nouv. Arch. Mus. Paris, sér. 2, X (1888), 48 (Pl. Daivd. II. 87).

Shrub or bush 2-3 rarely up to 7 metres high; bark grey or yellowish grey, rough; young branchlets slender, purplish-green or yellowish-green, densely clothed with long stiff bristles and most of them tipped with glands. Leaves evergreen, coriaceous, 5-8 closely setting near the apex of branchlets, oblong-lanceolate or oblanceolate, 8-14 cm. long, 2-3 cm. broad, acuminate, cuspidate on the apex, subrotund or rounded rarely broadly cuneate at the base, entire, slightly recurved and ciliate on the margin while young, upper surface slightly convex, bright green and glabrous above, lower surface dull green, sparingly clothed with isolated crisped hairs, midrib grooved above, distinctly prominent below and usually clothed with tawny floccus and purplish strigose hairs, primary veins 15-18 on each side, slightly impressed above, obscure below; petioles about 1 cm. long, clothed with yellowish branched floccus and purplish long bristles which are usually tipped with glands. Flowers 8-12 in a racemose umbel; rachis about 8 mm. long, sparsely pubescent; pedicels 1-1.5 cm. long, densely clothed with short reddish bristles which are tipped with glands; bracts obovate, 25 mm. long, 8 mm. broad, grey-pubescent without, sparsely grey-pubescent on the upper part within; calyx small, deeply 5-lobed, lobes triangular, 3 mm. long, covered with setose hairs which are tipped with glands; corolla campanulate, 4.5-5.5 cm. long, deep red, 5-lobed, lobes oval to rounded, 1-1.5 cm. long, 2-2.5 cm. broad, emarginate, slightly spreading; stamens unequal, 1.5-2.5 cm. long, filaments purplish, slender, glabrous, anthers oblong-ellipsoid, dark purple; pistil 4.5-5 cm. long, ovary ovoid, about 4 mm. long, 7-8-chambered, densely covered with brownish or reddish ascending setose hairs, some of them tipped with glands, style purplish, slender, glabrous, stigma capitate dark red. Capsules cylindrical-oblong, 2-2.5 cm. long, furrowed, densely reddish or brownish setose, with persistent style.

MOUNT OMEI: Ta-cheng-ssu, alt. 2300 m., in woods, shrub 4 metres high, bark grey, flowers red, C. L. Sun, No. 1864, May 5, 1940; same locality, in forests, small tree 7 metres high, flowers purple in buds, occasionally, W. P. Fang, No. 14764, May 20, 1940; Yen-wang-po, alt. 2400 m., shrub 4 metres high, bark grey, flowers red, C. L. Sun, Nos. 248, 250, 252 & 253, May 14, 1939; without precise locality, C. W. Yao, No. 4002, in 1939; without precise locality, H. C. Chow, No. 9779, in 1936; without precise locality, W. C. Cheng, No. 10221, May 8, 1940.

This species of ornamental shrub is rare in distribution. It has been found in Mount Omei in Wa-shan of Opien-hsien in western Szechuan and Pao-hsing-hsien in eastern Sikang.....W. P. Fang

- Fig. 1. a flowering branch (natural size);
 2. a stamen (2 times enlarged);
 3. a pistil (2 times enlarged);
 4. a fruit (natural size).

圖 版 二 十 三

芒 刺 杜 鵑

石 南 科

灌木或小叢，高二至三公尺，罕達七公尺；樹皮灰色或黃灰色，粗糙；幼枝纖細，紫綠色或黃綠色，被濃密長硬尖端多具腺體之剛毛。葉常綠，革質，五至八葉密聚於小枝頂端，長方披針形或倒披針形，長八至十四公分，闊二至三公分，先端尖尾狀或針鋒狀，基部截圓形，或圓形，罕為圓楔形，全緣，幼時葉微向外捲并有纖毛，葉面微凸或圓形，綠色，光滑無毛，葉背暗綠色，具少數單生曲毛，中脈在葉面或溝狀，在葉背突起並常被暗紫色之軟毛及淡紫色剛毛，側脈每個十五至十八，在葉面稍下凹，在葉背不顯；葉柄長約一公分，被淡黃色分枝軟毛及淡紫色尖端常具腺體之剛毛。花八至十二朵成一總狀繖形花序，花軸長約八公厘，被毛甚少；花梗長十至十五公厘，被濃密淡紅色尖端具腺體之剛毛，苞片倒卵形，長二至五公厘，闊八公厘，外側通體被灰毛，內側僅上部略具有之；花萼小，深裂成五片，裂片三角形，長三公厘，被尖端有腺體之刺毛；花冠鐘形，長四十五至五十五公厘，深紅色，五裂，裂片卵形或圓形，長十至十五公分，闊二十至二十五公分，先端具一缺刻，略微平行外射；小蕊不等長，長十五至二十五公分，花絲淡紫色，纖細，無毛，花藥長扁圓形，暗紫色；大蕊長四十五至五十公厘，子房卵圓形，長約四公厘，七至八室，被有濃密之淡棕色或帶紅色之上向剛毛剛毛，尖端具腺體，花柱淡紫色，纖細，無毛，柱頭頭狀，暗紅色。蒴果圓柱長方形，長二十至二十五公厘，有縱溝形條紋，被濃密帶紅色或淡棕色剛毛，花柱宿存其上。

產峨眉山大乘寺至關王坡一帶海拔二千三四百公尺處，五月開花。

本種為一極有觀賞價值之灌木，惟分佈不廣，除峨眉山外，僅川西峨邊縣之瓦山及西康東部之寶興縣有之。

圖解：1. 着花之枝（原大）；2. 小蕊（放大二倍）；3. 大蕊（放大二倍）；4. 蒴果（原大）。



23. *Rhododendron strigillosum* Franchet

Plate 24.

RHODODENDRON FABERI Hemsley.

Ericaceae.

Rhododendron Faberi, Hemsley in Journ. Linn. Soc. Bot. Ser. XXVI (1889), 22.

Small shrub or bush 1-2 rarely to 3 metres high; bark yellowish grey or brownish grey; branchlets slender, short, grey- or ferruginous-tomentose. Leaves evergreen, coriaceous, usually 4-7 closely setting near the apex of the branchlets, ovate-oblong or obovate-oblong, rarely oblong-lanceolate or obovate-lanceolate, 7-12 cm. long, 2.5-4 cm. broad, acute on the apex with short and slightly curved acumens, subrotund, broadly cuneate or obscurely auriculate at base, upper surface bright green, slightly rugulose, at first yellowish-tomentose, then glabrous, lower surface clothed with a bistratate woolly indumentum, the upper indumentum ferruginous or yellow in colour, usually scraped off while the leaves matured, the under indumentum very thin, grey in colour, persistent, midrib grooved above, prominent below, primary veins 13-15 on each side slightly impressed above and obscure below; petioles 1-1.5 cm. long, flattened and slightly grooved above, rounded below, grey-tomentose. Flowers 6-10 in a racemose-umbel; rachis about 5 mm. long, grey-pubescent and sparsely glandular; pedicels stout, 1.5-2.5 cm. long, densely grey-tomentose and glandular; winter-buds conical, scales numerous, imbricate, outer ones triangular-acute with caudate acumens, densely grey-pubescent outside, inner ones acute, puberulous; calyx large, foliaceous, 12 mm. long, greenish-yellow, deeply 5-lobed, lobes obovate-oblong or oblong, ciliate-glandular, outer surface glandular and densely grey tomentose near the base; corolla white, campanulate, 4 cm. long, 5-lobed, lobes rounded, 1-5 cm. long, 2 cm. broad, emarginate; stamens 10, unequal, 1.5-3 cm. long, filaments slender, puberulous at base, anthers purple, oblong; pistil 3.5 cm. long, ovary ellipsoid, densely ferruginous setose-glandular, style glabrous, stigma small. Capsules cylindrical-oblong, 1-1.5 cm. long, 7-8-furrowed, densely glandular, with persistent style and calyx.

MOUNT OMEI: Tien-men-szu, alt. 2850 m., in thickets, shrub 1-2 metres high, bark dark grey, leaves green above, tomentose below, flowers white, *C. L. Sun*, No. 436, June 10, 1939; same locality, shrub 2 metres high, fruits green and glandular, *T. C. Lee*, No. 3882, October 12, 1940; Hsi-wa-tien, alt. 3130 m., in thickets, shrub 2-3 metres high, bark grey, leaves green and glabrous above, yellow pubescent beneath, flowers white, rarely pinkish tinged, *C. L. Sun*, Nos. 441 & 443, June 10, 1939; Chin-ting, alt. 3135 m., small shrub 1 metre high, lower surface of leaves brownish pubescent, flowers white, *W. P. Fang*, No. 14619, June 27, 1940; Chien-fu-ting, alt. 3150 m., on grassy slopes, shrub 1-2 metres high, fruits glandular, common, *T. C. Lee*, No. 2837, July 16, 1940; without precise locality, *T. H. Tu*, Nos. 137, 309, 635 & 644; without precise locality, *C. W. Yao*, No. 4190; west of Mount Omei, Opian-hsien, *C. L. Sun*, No. 1042, August 24, 1939.

This species was discovered by Faber at the summit of Mount Omei and is confined to the type-locality of this mountain. It differs from its near allies in its small capsules and small thinner leaves.

W. P. Fang

- Fig. 1. a flowering branch (natural size);
 2. a stamen (2 times enlarged);
 3. a pistil (2 times enlarged);
 4. a fruit (natural size);
 5. a portion of leaf to show the hairs at the under surface (10 times enlarged).

1941

圖版二十四

費伯杜鵑

石南科

小灌木或小叢樹，高一至二公尺，罕達三公尺，樹皮黃灰色或棕灰色；幼枝纖細而短，被灰色或褐色
 密生短毛，葉常綠，革質，通常四至七枚，密集於幼枝頂端，卵狀長方形或倒卵長方形，罕為長方披針形
 或倒卵披針形，長七至十二公分，闊二十五至四十公厘，先端銳形，具有短小微彎之尖頭，基部近於圓形
 闊楔形或略成耳狀，葉面亮綠色，微絨，初時被淡黃色短毛，後變光滑，葉背被二層毛被，在上一層紅褐色
 或黃色，在葉長成時常多脫落，內層毛被極薄，灰色，永存，中脈上面微凹，下面凸起，側脈每個十三
 至十五，上面微凹，下面隱蔽；葉柄長十至十五公厘，上面扁平而有淺溝，下面圓形，被灰色短毛。花
 六至十成總狀繖形花序，花軸長約五公厘，被灰色毛及少數腺毛，花梗粗壯，長十五至二十公厘，密生灰
 色短毛及腺點；萼芽圓錐形，芽鱗多數，覆瓦狀，在外者銳三角形，先端有尾狀尖頭，外側被灰色毛，在
 內者銳形，被少數小毛；花萼大，綠色葉狀，長十二公厘，黃綠色，五裂甚深，裂片倒卵長方形或長方形
 ，邊緣具有腺體之纖毛，外側近基部處具腺體并有密生灰色短毛；花冠白色，鐘形，長四公分，五裂，裂
 片圓形長十五公厘，闊十二公厘，先端內凹；小蕊十本，不等長，長十五至三十公厘，花絲細長，基部有
 少數小毛，花藥紫色，長方形；大蕊長三十五公厘，子房橢圓形，密生紅褐色具腺體之硬毛，花柱光滑，
 柱頭小。蒴果圓柱長方形，長十至十五公厘，具七至八溝狀條紋，密生腺點，花柱花萼宿存於外。

產峨眉山天門石、錫瓦殿、金頂及千佛頂等處，海拔二千八百至三千二百公尺處，六月開花。

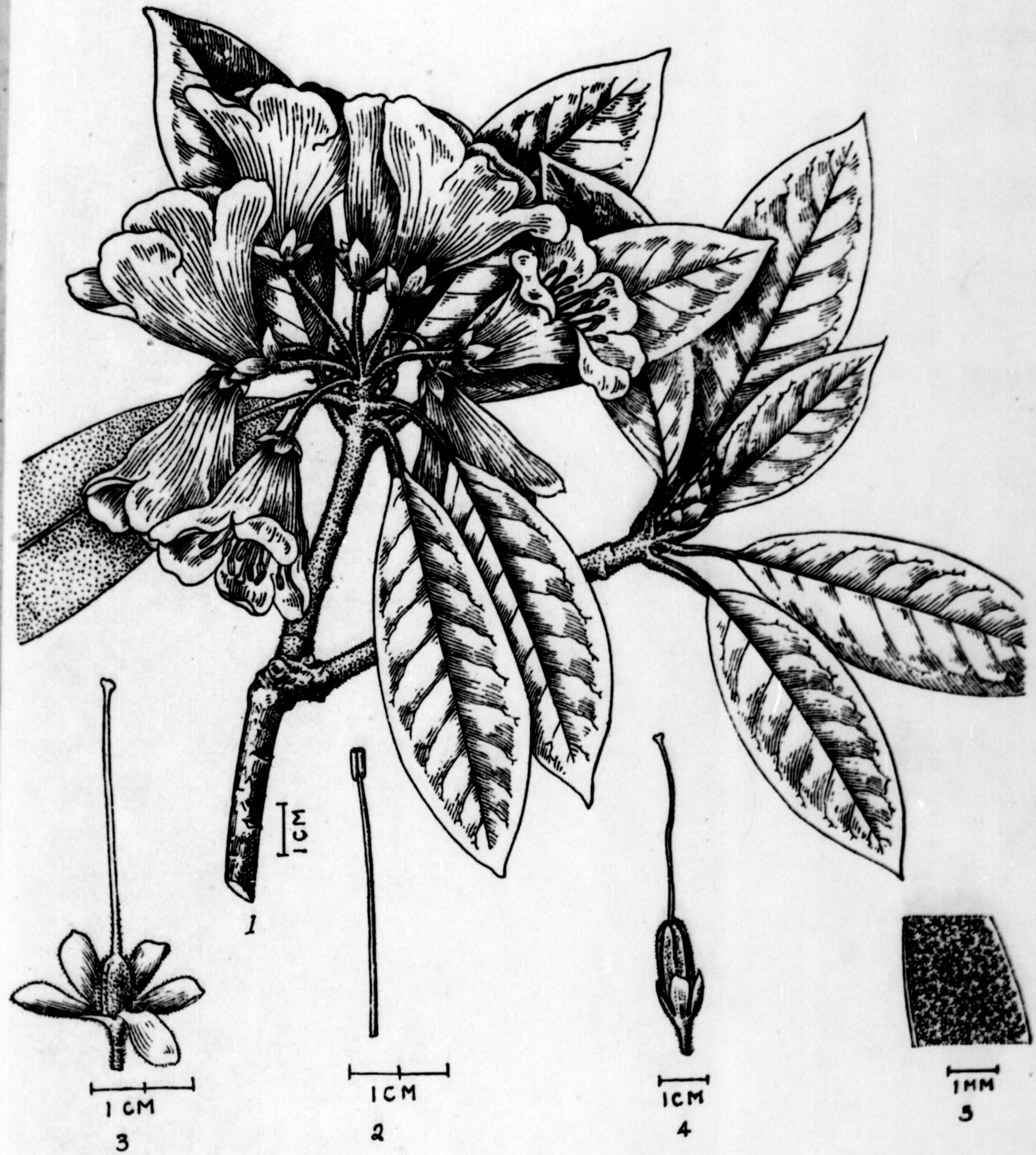
費伯氏首次由峨眉山探得此樹，其分佈僅限於上述之本山各地。本種之特點在具有十字形蒴果及小而
 之葉。

圖解：1. 着花之枝（原大）；2. 小蕊（放大二倍）；3. 大蕊（放大二倍）；4. 果實（原大）；
 5. 葉背之一部示被毛（放大五倍）。

The species was discovered by Faber at the summit of Mount Omei and is confined to the
 locality of this mountain. It differs from its near allies in its small capsules and small thinner
 leaves.
 W. P. Fang

1. A flowering branch (natural size).
 2. An anther (2 times enlarged).
 3. A pistil (2 times enlarged).
 4. A fruit (natural size).
 5. A portion of leaf to show the under surface (10 times enlarged).

峨眉植物圖志



24. *Rhododendron Faberi* Hemsley

Plate 25.

(翻出說明書) RHODODENDRON WILTONII Hemsley et Wilson.

Ericaceae.

本：色... **Rhododendron Wiltonii**, Hemsley et Wilson in Kew Bull. Misc. Inform. (1910), 107.

Bush or shrub usually 2-3 rarely up to 5 metres high; bark grey or yellowish grey; branchlets stout, purplish green or yellowish grey, those of one year old clothed with greenish white or yellowish-grey belt of pubescence, those of more than one year old glabrous; terminal leaf-buds ellipsoid, scales numerous, ovate, outer scales much longer than the inner ones, white pubescent outside. Leaves evergreen, thick-coriaceous, usually 4-6 closely setting near the apex of branchlets, obovate-oblong to oblanceolate, 5-9 cm. long, 2-3.5 cm. broad, obtuse to acute on the apex, cuneate or broadly cuneate at base, slightly reflexed on the margin, upper surface with midrib as well as primary and secondary veins deeply impressed making the surface bullately rugose, at first yellowish-floccose and occasionally glandular, but glabrous while matured in the second year, lower surface with prominent midrib and at each side with 10 lateral veins more or less prominent, densely covered with greyish or brownish scurfy hairs; petioles 1.5-2 cm. long, slightly grooved above, densely yellowish tomentose while young, glabrescent when leaves matured. Flowers 8-10 in a racemose umbel; rhachis about 8 cm. long, yellowish-pubescent; pedioles 1.5-2 cm. long, densely yellowish tomentose; bracts obovate, 1.5-2 cm. long, densely yellowish-pubescent outside, sparsely pubescent within; calyx small, 2 mm. long, deeply 5-lobed, lobes triangular-acute, densely yellowish tomentose; corolla funnel-campanulate, 2.5-3 cm. long, whitish or flesh-pink, with red spots or red blotch on the inner surface of the corolla which usually 5-lobed, lobes rounded, emarginate, 1 cm. long, 1.8 cm. broad; stamens 10, uncecal, 1-2 cm. long, filaments slender, pubescent at base, anthers oblong, purple, ovary cylindrical-oblong, 5 mm. long, densely brownish pubescent, style glabrous, stigma small. Capsules cylindrical, slightly curved, 1.5-2 cm. long, 4 mm. in diameter, densely reddish-pubescent, on pubescent stout pedicels 2.5-3.5 cm. long.

MOUNT OMEI: Lei-tung-ping, alt. 2500 m., *T. H. Tu*, No. 131, June 1935; same locality, in thickets, shrubs 2-3 metres high, leaves green above and yellowish hairy below, *T. C. Lee*, Nos. 3783 & 3920, October 10-14, 1940; same locality, *C. W. Yao*, Nos. 2349, 3997 & 3998; same locality, *H. Ya*, No. 1315, July 1941; Chieh-yin-tien, alt. 2339 m., small shrub 2 metres high, *W. P. Fang*, No. 13745, July 14, 1941.

The small reddish pubescent capsules and the rugose cuneate leaves with compact scurfy brownish hairs at the lower surface are quite sufficient to distinguish this species from its near allies....*W. P. Fang*.

- Fig. 1, a flowering branch (natural size);
 2, outer surface of a bract (2 times enlarged);
 3, inner surface of a bract (2 times enlarged);
 4, an ovary (2 times enlarged);
 5, a stamen (2 times enlarged);
 6, a fruit (natural size).
 7, a portion of the leaf under-surface to show the hairs (10 times enlarged);

圖版二十五

縐葉杜鵑

(別名：韋爾敏杜鵑)

石南科

叢莽或灌木，通常高二至三公尺，罕達五公尺；樹皮灰色或黃灰色；幼枝粗壯，紫綠色或黃灰色。本
 年生者被青白色或黃灰色之毛，一年以上者無毛；頂生葉芽橢圓形，芽鱗甚多，卵形。在外芽鱗較在內者
 為長，外側被有白毛。葉常綠，厚革質，通常四至六葉密集於小枝端頂，倒卵長方形或倒披針形，長五
 至九公分，闊二十至三十五公厘，先端鈍形或銳形，基部楔形或闊楔形，葉緣略向外屈，葉因中脈及側脈
 支脈之深凹而成囊綫，幼時被淡黃色毛，具腺體，及第二年葉已長成則變為光滑，葉背脈中脈突出，側脈每
 側十枝亦突出，被厚而密淡灰或淡棕色毛；葉柄長十五至二十公厘，上面稍凹，幼時被濃厚深黃色短毛，
 至葉長成時則近於光滑。花八至十朵或總狀繖形花序，花軸長約八公分，被淡黃色毛，花梗長十五至二
 十分，被淡黃色短毛；苞片倒卵形，長十五至二十公厘，外側被濃厚淡黃色毛，內側毛稀少；花萼小，
 長二公厘，深裂為五，裂片銳三角形，被濃厚黃色短毛；花冠漏斗鐘形，長二十五至三十公厘，白色或淺
 肉紅色，花冠內側具紅點或紅塊，五裂，裂片圓形，先端內缺，長十公厘，闊八公厘；小蕊十本，不等
 長，長一至三公分，花絲纖細，基部被毛，花藥長方形，紫色；子房圓柱長方形，長五公厘，被濃厚淺棕
 色毛，花柱無毛，柱頭細小。蒴果圓柱形，微彎，長十五至二十公分，直徑四公厘，被濃厚帶紅色毛，
 着生於粗壯被毛長二十五至三十五公厘之果柄上。

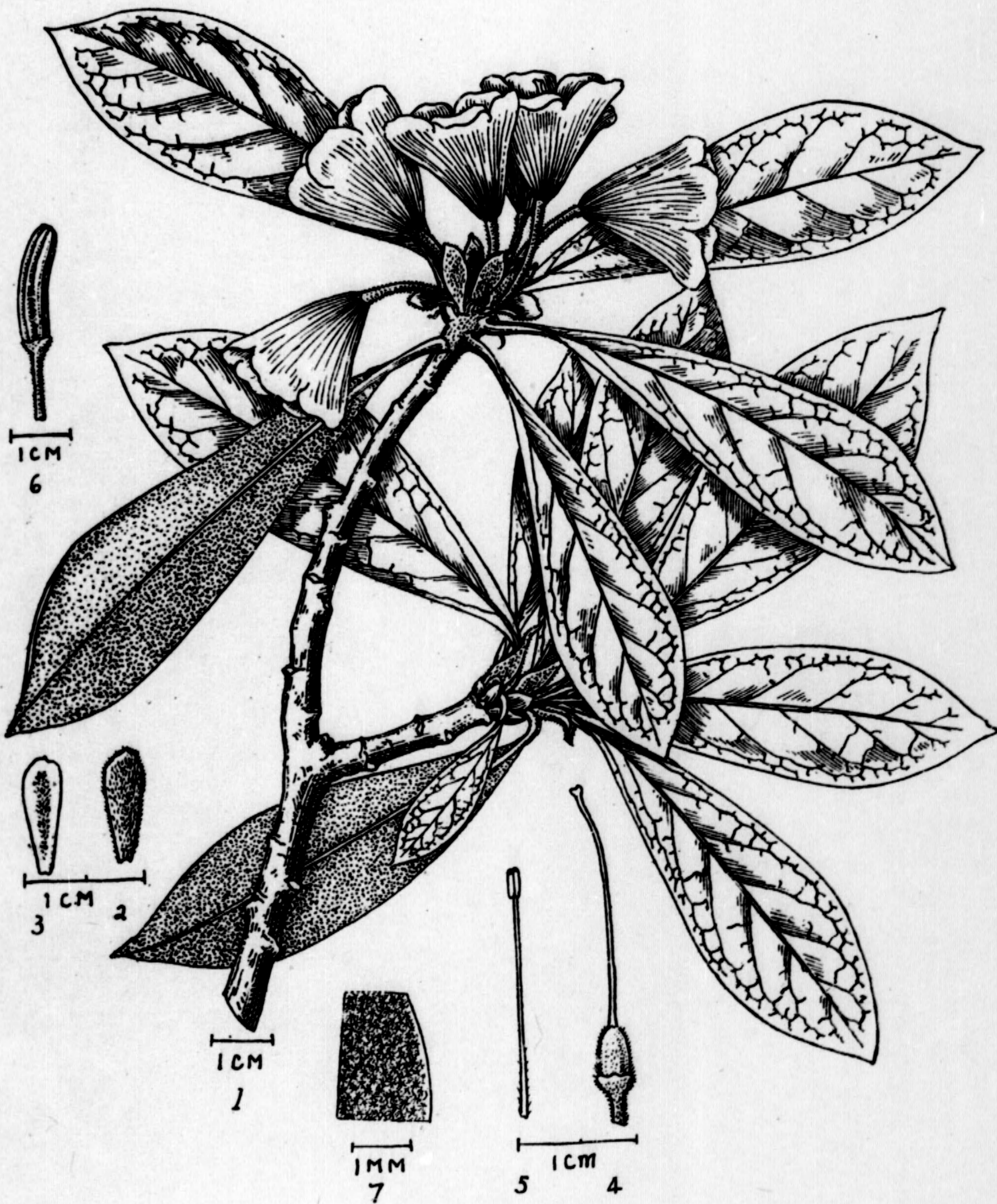
產峨眉山雷洞坪附近，海拔二千五百公尺處，六月開花。
 本種之果形小帶紅色毛，葉楔形，多綫，葉背有堆積之淡灰色毛，凡此特性均足以使其別於其相近諸
 種也。

圖解：1. 着花之枝（原大）；2. 苞片之外側觀（放大二倍）；3. 苞片之內側觀（放大二倍）；4. 大蕊（放大二倍）；5. 小蕊（放大二倍）；6. 果實（原大）；7. 葉背之一部示被毛（放大十倍）。

The small reddish pubescent capsules and the rugose cuneate leaves with compact scurfy brownish hairs at the lower surface are quite sufficient to distinguish this species from its near allies..... W. P. Fang.

Fig. 1. a flowering branch (natural size);
 2. outer surface of a bract (2 times enlarged);
 3. inner surface of a bract (2 times enlarged);
 4. an ovary (2 times enlarged);
 5. a stamen (2 times enlarged);
 6. a fruit (natural size);
 7. a portion of the leaf under-surface to show the hairs (10 times enlarged);

峨眉植物圖志



25. *Rhododendron Wiltonii* Hemsley & Wilson.

六十二號圖

Plate 26.

RHODODENDRON GHALOPYTUM Franchet.

Ericaceae

Rhododendron calophytum, Franchet in Bull. Soc. Bot. France, XXXIII (1886), 230; in Nouv. Arch. Mus. Paris, Sér. 2, X (1888), 45 (Pl. David. II. 83).

Small tree or rarely shrub usually about 5 metres high rarely up to 8 metres high; bark grey or yellowish grey, smooth; branchlets stout, green or purplish green, at first whitish floccose; winter-buds axillary, oblong-ellipsoid, scales numerous, imbricate, obtuse or subrotund, glabrous. Leaves evergreen, thick-coriaceous, oblong-oblongate or oblong-ovate, 20-30 cm. long, 5-7 cm. broad, acute or subrotund, cuspidate on the apex, gradually narrowed to cuneate at base which being usually prolonged to the petioles, upper surface bright green, glabrous, under surface pale green, sparsely tomentose while young and soon glabrous, midrib grooved above, prominent below, primary veins 18-22 on each side, impressed above, conspicuous below; petioles 2-2.5 cm. long, upper side broadly flattened and usually united with the decurrent blade, slightly grooved near the blade, lower side rounded, sparsely with a white vestigial tomentum. Flowers 15-20 rarely to 30 in a racemose umbel; rhachis 1.5-2 cm. long, with tufts of yellow hairs; pedicels stout, 3-7 cm. long, purplish green, at first sparsely floccose, then glabrous; bracts obovate, 4-6 cm. long, densely grey tomentose outside, less pubescent on the upper part inside; calyx small, sparsely pubescent or glabrous, 5-lobed, lobes triangular-acute; corolla broadly campanulate, ventricose below, 5.5-6.5 cm. long, white or rosy-white rarely whitish-lilac, with a dark blotch at the inner base, and usually dark spotted on the inner surface of posterior side, 5-7-lobed, lobes unequal, rounded, emarginate, 1.5-2 cm. long, 2.5-3.8 cm. broad, the posterior lobe the largest; stamens 15-20, unequal, 2-4 cm. long, filaments slender and glabrous except widened and puberulous at the base, anthers purple, oblong-ellipsoid; pistil 4-4.5 cm. long, ovary dome-shaped, 8 mm. long, green, glabrous, 14-chambered, style stout, glabrous, stigma disc-like, 8 mm. in diameter. Capsules oblong-cylindrical or oblong-ellipsoid, 1.5-2.5 cm. long, 1.5 cm. across, slightly furrowed, with persistent style and stigma.

MOUNT OMEI: Tacheng-ssu, alt. 2386 m., in forests, small tree about 8 metres high, flowers rose-white, common, *W. P. Fang*, No. 16582, May 10, 1941; Yen-wang-po, alt. 2400 m., in forests, small tree 3 metres high, bark grey, leaves green, flowers white, *C. L. Sun*, No. 249, May 14, 1939; Kung-pei-shan, alt. 2500 m., in forests, tree 8 metres high, leaves green on both sides, fruits oblong-ellipsoid, *T. C. Lee*, No. 3290, August 12, 1940; same locality, tree 7 metres high, fruits ellipsoid, green, *T. C. Lee*, No. 3912, October 14, 1940; Pai-yün-ssu, alt. 2550 m., in woods, small tree 5 metres high, bark grey, flowers white, *C. L. Sun*, No. 1866, May 5, 1940; same locality, small tree 5 metres high, flowers rose-white, *W. P. Fang* Nos. 16050a & 16448, May 6, 1941; Lei-tung-ping, alt. 2500 m., in woods, small tree 4 metres high, bark grey, flowers white or pinkish, *C. L. Sun*, Nos. 1866, 1867 & 1868, May 5, 1940; same locality, in forests, small tree 7 metres high, flowers white or purplish white, common, *W. P. Fang*, No. 14762, May 20, 1940; same locality, in forests, small tree 5 metres high, flowers rose, common, *W. P. Fang*, No. 16555, May 10, 1941; west of Mount Omei, Opien-hsien, *T. S. Chao*, Nos. 43 & 78, in 1938; without precise locality, *C. W. Yao*, No. 4001, in 1939; without precise locality, *W. C. Cheng*, No. 10220, May 8, 1940.

This is the only species of *Rhododendron* of the *Eruhododron* group growing to tree-form on Mount Omei. The broadly campanulate flowers with numerous stamens, stout style and disk-like stigma and the exceptional large leaves differ this species from its allies.....*W. P. Fang*.

- Fig. 1, a flowering branch (natural size);
 2, a stamen (natural size);
 3, a pistil (natural size);
 4, a fruit (natural size);
 5, the inner surface of corolla (natural size).

圖版二十六

美麗杜鵑

石南科

小喬木罕為灌木，高約五公尺，罕達八公尺；樹皮灰色或黃灰色，平滑；幼枝粗壯，綠色或紫綠色，嫩時被白色長毛；冬芽腋生，長方橢圓形，芽鱗多數，覆瓦狀，鈍形或近於圓形，無毛。葉常綠，厚革質，長方倒披針形或長方卵形，長二十至三十公分，闊五至七公分，先端銳形或近於圓形，具尖頭，基部漸狹成楔形，通常延長至葉柄部分，葉面亮綠色，無毛，葉背淡白綠色，幼時有少數白色短毛，隨後毛落光滑，中脈上面溝狀，下面突起，側脈每側十八至二十二支，在葉上面下凹，在葉下面顯著；葉柄長二十至二十五公厘，上面扁闊，常與葉片合生，於近葉片處成淺溝狀，下面圓形，被有白色短毛之殘跡。花十五至二十罕多至三十朵成一總狀繖形花序；花長十五至二十公厘，被黃色毛簇；花梗粗壯，長三至七公分，紫綠色，幼時被少數長毛，漸長則光滑無毛；苞片倒卵形，長四至六公分，外側密生灰色短毛，內側之上部毛漸少；花萼小，有少數毛或完全無毛，五裂，裂片銳三角形；花冠闊鐘形；基部膨大，長五十五至六十五公厘，白色或淡白玫瑰色，罕為淡白丁香紫色，內側於近基部處有一深色之塊，並常於內側尾端有深色斑點，五至七裂，裂片不等長，圓形，先端內凹分為二部，長十五至二十公厘，闊二十五至三十八公厘，後側一片最大；小蕊十五至二十本，不等長，長二至四公分，花絲纖細，無毛，僅基部擴大之處被少數小毛，花藥紫色，長5公厘，橢圓形；大蕊長四十至四十五公厘，子房圓穹狀，長八公厘，綠色，無毛，十四室，花柱粗壯，無毛，柱頭盤狀，直徑八公厘。蒴果長方圓柱形或長方橢圓形，長十五至二十五公厘，直徑十五公厘，具極淺之溝，花柱及柱頭均宿存果上。

產峨嵋山國王坡，弓背山，白雲寺及雷洞坪等處，海拔二千四百至二千五百公尺間，五月開花。

此種杜鵑為峨嵋山常綠杜鵑中之惟一或喬木者，其闊鐘形之花具有多數小蕊，花柱粗壯上具盤狀柱頭及特大之葉，均使本種與其相近諸種易於辨識。

圖解：1. 着花之枝（原大）；2. 小蕊（原大）；3. 大蕊（原大）；4. 果實（原大）；5. 花冠之內側（原大）

MOUNT OMEI: Tachang-san, alt. 2386 m., in forests, white common. W. P. Fang, No. 10382, May 10, 1941; Yen-wang-po, alt. 2400 m., in forests, small tree. C. L. Su, No. 1866, May 3, 1940; same locality, small tree 5 metres high, flowers rose-white, W. P. Fang, No. 10050 & 10448, May 6, 1941; Lei-tung-ping, alt. 2500 m., in woods, small tree 4 metres high, bark grey, flowers white or pinkish, C. L. Su, Nos. 1866, 1867 & 1868, May 5, 1940; same locality, in forests, small tree 7 metres high, flowers white or purplish white, common, W. P. Fang, No. 14762, May 20, 1940; same locality, in forests, small tree 8 metres high, flowers rose, common, W. P. Fang, No. 10355, May 10, 1941; west of Mount Omei, Qian-hsien, T. S. Chao, Nos. 47 & 78, in 1938; without precise locality. C. W. Yao, No. 2001, in 1930; without precise locality, W. C. Cheng, No. 10220, May 8, 1940.

This is the only species of *Rhododendron* group growing to tree-form on Mount Omei. The broadly campanulate flowers with numerous stamens, stout style and disk-like stigma and the exceptional large leaves differ this species from its allies..... W. P. Fang.

Fig. 1. a flowering branch (natural size);
 2. a stamen (natural size);
 3. a pistil (natural size);
 4. a fruit (natural size);
 5. the inner surface of corolla (natural size).



26. *Rhododendron calaphyllum* Franchet

Plate 27.

RHODODENDRON OPENSHAWIANUM Rehder et Wilson.

Ericaceae.

Rhododendron Openshawianum, Rehder et Wilson in Sargent, Pl. Wilson. I (1913), 543.

Tree 12 metres high; branchlets of one or two years old green, glabrous, stout, those of the more than 2 years old brown or yellowish brown. Leaves coriaceous, setting closely near the apex of branchlets, oblanceolate or oblong-ob lanceolate 9-15 cm. long, 3-5 cm. broad, abruptly acuminate on the apex, gradually narrowed to cuneate or broadly cuneate at base; upper surface bright green, glabrous, midrib grooved, primary nerves 15-17 on each side slightly impressed; under surface pale green, glabrous, midrib prominent, primary nerves conspicuous; petioles 1.5-2 cm. long, flat and grooved above, rounded below, slightly floccose at first, then glabrous. Flowers 9-12 in a racemose umbel, rhachis 1-1.5 cm. long, glabrous; calyx disc-like, glabrous, 5-lobed, lobes ovate; corolla campanulate, 4.5-5 cm. long, 3 cm. in diameter, purplish white, usually purple or purplish outside and with purple spotted inside on the posterior side, lobes 5-6, subequal, rounded, deeply emarginate; stamens 20-22, unequal, 1.5-2.5 cm. long, filaments slender, puberulous at base; ovary dome-shaped, 7 mm. long, glabrous, style 2.5-3 cm. long, glabrous, stigma disc-like, 4 mm. across, pedicels 1.5-4 cm. long, stout, green or purplish, glabrescent, with an obovate bract and two linear bracts 3.5 cm. long, densely greyish tomentose on both sides. Fruit an oblong ovoid capsule, 1.5 cm. long, glabrous.

MOUNT OMEI: at the vicinity of Chiu-lao-tung, alt. 1876 m., in woods, shrub 5 metres high, flowers purplish white, C. L. Sun, No. 1591, April 18, 1940; at the left side of Yu-hsien-ssu, alt. 1800 m., in woods, tree 12 metres high, leaves oblanceolate, flowers purplish white, rare, W. P. Fang, No. 16009, April 1, 1941.

The type-specimen of this species is in fruit and was collected by the late Dr. E.H. Wilson in 1908 from Mount Wa-wu, about 50 miles west of Mount Omei. The specimens collected by the writer from the type-locality in 1930 is also in fruit only. The vegetative and fruiting characters of the specimens of Mount Omei is identical with the type. The discovering of the flowering specimens at Mount Omei in 1941 is not only a proof that this species is a very distinct one but also to show that it has a wider region in distribution.

W. P. Fang.

- Fig. 1, a flowering branch (natural size);
- 2, a flower with its corolla removed to show the stamens and pistil (natural size);
- 3, a longitudinal section of the ovary (20 times enlarged);
- 4, a cross section of the ovary (20 times enlarged).

圖版二十七

歐本孝杜鵑

石南科

喬木高十二公尺；一年或二年之幼枝肥大綠色，光滑，兩年以上之老枝褐色或黃褐色。葉革質常
 五至七枚密生於枝之頂端，倒卵形或長倒卵形，長九至十五公分，寬三至五公分，先端短尖，基部窄小成
 楔形或闊楔形，表面亮綠色，光滑，中肋成溝狀，兩旁各具十五至十七側脈，略向下凸；背面淡綠色，光
 滑，中肋凸出，側脈顯著；葉柄長十五至二十公厘，上面扁平，中成溝狀，下面圓形，嫩時具細毛，稍長
 即脫落。花九至十二枚着生於總狀之繖形花序上，花軸長十至十五公厘，光滑，花萼盤狀，光滑，先
 端成五卵狀之萼片，花冠鐘形，長四十五至五十公厘，直徑三公分，白色略帶淡紫色，花冠基部之後側外
 面紫色，內面亦具紫色點紋，花瓣五至六枚，圓形，頂端微下凹；小蕊二十至二十二本，長短不等，其長
 約十五至二十五公厘，花絲纖細，基部具細毛；子房長圓筒形，長七公厘，光滑，花柱長二十五至三十公
 厘，光滑，柱頭盤狀，直徑四公厘；花梗長十五至四十公厘，綠色或淡紫色，下端具倒卵形之苞片，其
 兩旁並具兩線形之苞片，長三十五公厘，兩面密被淡灰色之細毛。蒴果長卵形，長十五公厘，光滑。

此為極美觀之杜鵑，三月底至四月初間，花已盛開，在焚徑驛之瓦屋山頂極普遍，常為高三公尺左右
 之灌木，在峨嵋山則僅長老坪遇仙寺九老洞附近，海拔一千八百公尺處岩畔森林中產之，係高十二公尺之
 喬木，甚稀少。

圖解：1. 着花之枝（原大）；2. 大蕊及小蕊（原大）；3. 子房之縱切面（放大二十倍）；4. 子房之橫
 切面（放大二十倍）。

The type specimen of this species is in fruit and was collected by the late Dr. W. P. Fang in
 1908 from Mount Wu-wu, about 50 miles west of Mount Omei. The specimens collected by the writer from
 the type locality in 1930 is also in fruit only. The vegetative and fruiting characters of the specimens of
 Mount Omei is identical with the type. The discovering of the flowering specimens at Mount Omei in
 1941 is not only a proof that this species is a very distinct one but also to show that it has a wider region
 in distribution.

W. P. Fang.

Fig. 1. a flowering branch (natural size);
 2. a flower with its corolla removed to show the stamens and pistil (natural size);
 3. a longitudinal section of the ovary (20 times enlarged);
 4. a cross section of the ovary (20 times enlarged).

峨眉植物圖志



27. *Rhododendron openhauianum* R. & W.

Plate 28.

RHODODENDRON DAVIDII Franchet.

Ericaceae.

Rhododendron Davidii Franchet in Bull. Soc. Bot. France, XXXIII (1886), 230.

Shrub or small tree 5 to 8 metres high; branchlets of 1 or 2 years old yellowish or yellowish brown, glabrous, those of more than 2 years old usually grey. Leaves coriaceous, oblanceolate or oblong-oblanceolate, 10-15 cm. long, 2.5-3 cm. broad; apex acute or cuspidate; base cuneate or broadly cuneate; upper surface green, glabrous or glabrescent, midrib grooved, primary veins 15-17 on each side, slightly impressed; under surface pale green, usually yellowish tinged, glabrous, midrib prominent, primary veins evident; petioles 1.5-2 cm. long, glabrous, flat or grooved above, rounded below. Flowers 6-9 in a short raceme, rhachis 2.5-3 cm. long, stout, floccose near the base while young, soon glabrescent; calyx small, disc-like, glandular and floccose outside, 6-lobed, lobes obtuse; corolla funnel-campanulate, 3.5-4.5 cm. long, 3 cm. in diameter, rose-red, purplish or purple, glabrous on both sides, 7-8-lobed, lobes rounded, slightly emarginate; stamens 13-15, unequal, 2.5-3 cm. long, anthers purplish, oblong, filaments slender, glabrous; ovary conoid, yellowish or greyish glandular with short-stalked glands; style slender, 3.5-4 cm. long, with a few glands near the base, stigma small; pedicels about 1 cm. long, glandular. Capsule glabrous, cylindric, about 3 cm. long.

MOUNT OMEI: Yu-hsien-ssu, alt. 1800 m., in forests, near the temple, small tree 8 metres high, flowers purple or purplish-blue, *W. P. Fang*, No. 16004 & 16011, April 2, 1941; at roadside from Yu-hsien-ssu to Chiu-lao-tung, alt. 1800 m., shrub 4 metres high, flowers light purple, *C. L. Sun*, No. 1585, April 18, 1940; near Chiu-lao-tung, alt. 1800 m., shrub 6 metres high, flowers light purple, *C. L. Sun*, No. 1599, April 18, 1940; Hwa-yen-ding, alt. 1950 m., among woods, shrub 5 metres high, flowers purple, *C. L. Sun*, No. 1572, April 18, 1940; Ta-cheng-ssu, alt. 2300 m., in forests, small tree 5 metres high, flowers purplish-blue, *W. P. Fang*, Nos. 14720 & 14721, May 20, 1940; Yen-wang-po, alt. 2400 m., in forests, shrub 3 metres high, flowers rose, *S. L. Sun*, No. 246, May 14, 1939; Without precise locality, *W. C. Cheng*, No. 10222, May 8, 1940.

The rhachis of the species is usually 5 to 10 centimetres long, but that of the Omei specimens is only 3 centimetres long. The writer believes that they represent a geographical form of the species. On Mount Omei it grows side by side with *Rhododendron Openshawianum* Rehder et Wilson and *Lithocarpus viridis* Rehder et Wilson.W. P. Fang.

- Fig. 1. a flowering branch (natural size);
 2. a flower dissected to show the stamens and pistil (natural size);
 3. a pistil (5 times enlarged);
 4. a stamen (10 times enlarged);
 5. an ovary crossly dissected to show the chambers and ovules (5 times enlarged);
 6. an ovary longitudinally dissected (10 times enlarged).

圖版二十八

大衛杜鵑

石南科

灌木或小喬木，高五至八公尺；一年至二年生之幼枝，帶黃色或黃棕色，光滑無毛，二年以上之老枝通常灰色。葉革質，倒披針形或長方倒披針形，長十至十五公分，闊二十五至三十公厘；先端尖銳或成小尖頭，基部楔形或闊楔形；葉面綠色，平滑，中脈下凹，枝脈每側十五至十七，微向內凹；葉背淡白綠色，常帶黃色滲染，光滑，中脈凸出，支脈顯明；葉柄長十五至二十公厘，光滑無毛，扁平，上面內凹，下面圓形。花六至九朵成一短總狀花序，花梗長二十五至三十公厘，粗壯，幼時基部具黃色柔毛，稍長脫落；萼片小，盤狀，外面具腺體及黃色毛，六裂，萼片鈍圓；花冠漏斗狀鐘形，長三十五至四十五公厘，直徑三十公厘，玫瑰紅色，淡紫色或紫色，兩面光滑，七至八裂，裂片圓形，先端稍內缺；小蕊十三至十五本，長二十五至三十公厘，不等長，花藥淡紫色，長方形，花絲細長，光滑無毛；子房錐形，帶黃色或帶灰色，上有短柄腺體；花柱細小，長三十五至四十公厘，基部具少數腺體，柱頭小；小花梗長約一公分，具腺體。蒴果光滑，長約五公分。

產峨嵋山華嚴頂遇仙寺大乘寺及闍王坡等處，四五月開花。

本種之原種標本具長五至十公分之花軸，但峨嵋山所採得之標本，均具長僅三公分之花軸，作者意為此係代表本種之一地域變形，在峨嵋山本種與歐本孝杜鵑及常綠石櫟混和生長。

圖解：1. 着花之枝（原大）；2. 一花之剖面示大蕊及小蕊（原大）；3. 大蕊（放大五倍）；4. 小蕊（放大十倍）；5. 子房之橫剖面（放大五倍）；6. 子房之縱剖面（放大十倍）。

The floras of the species is usually 5 to 10 centimeters long, but that of the Omei specimens is only 3 centimeters long. The writer believes that they represent a geographical form of the species. On Mount Omei it grows side by side with *Rhododendron Qianshanianum* Rehd. et Wilson and *Lithocarpus viridis* Rehd. et Wilson.

Fig. 1. a flowering branch (natural size);
 2. a flower dissected to show the stamens and pistil (natural size);
 3. a pistil (5 times enlarged);
 4. a stamen (10 times enlarged);
 5. an ovary cross-section to show the chambers and ovules (5 times enlarged);
 6. an ovary longitudinally dissected (10 times enlarged).

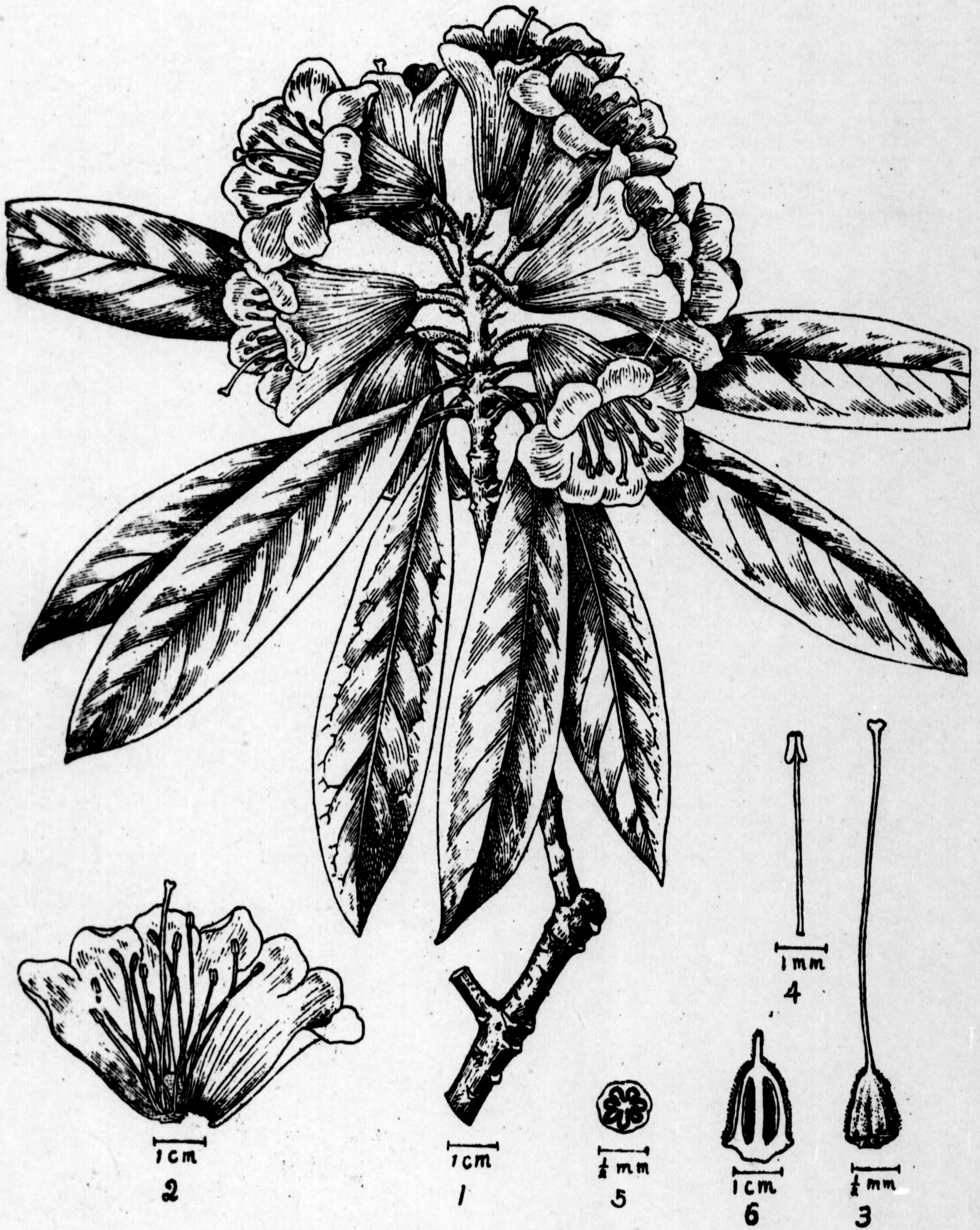


Plate 29.

RHODODENDRON DISCOLOR Franchet.

Ericaceae.

Rhododendron discolor Franchet in Journ. de Bot. IX (1895), 391.*Rhododendron mandarinorum* Diels in Engler, Bot. Jahrb. XXIX (1900), 510.*Rhododendron Kirkii* Hort. ex Millais, Rhododendrons (1917), 169.

Shrub or small tree with stout branchlets; old branchlets glabrous, grey or brownish grey, those of the current year brown, glabrous or sparsely with long-stalked glands. Leaves coriaceous, oblanceolate, 13-16 cm. long, 4-5.5 cm. broad, apex obtuse or broadly obtuse, base broadly cuneate or obtuse, margin slightly revolute, upper surface green, glabrous, midrib grooved, primary veins 13-15 on each side, slightly impressed, under surface pale green, glabrous, midrib very prominent, primary veins slightly raised; petioles glabrous, stout, 2-3 cm. long. Inflorescence a racemose umbel of 7 flowers; rhachis 1.5 cm. long, pubescent and sparsely glandular; pedicels 2-3.5 cm. long, pubescent and glandular; calyx 3 mm. long, lobes ovate or rounded, glandular and fringed with grey hairs; corolla funnel-shaped or funnel-campanulate, 6-8 cm. long, at first pink, then becoming white, fragrant, inside glabrous, outside sparsely glandular with long-stalked glands, lobes 7, rounded or emarginate, 2-2.5 cm. long, 2.5-2.8 cm. broad; stamens 12-14, unequal, 3.5-6 long, filaments very slender, glabrous; pistil 6-7 cm. long, ovary conoid, about 7 mm. long, densely glandular with short-stalked glands, style stout, glandular, stigma small, knob-like. Capsule oblong, 4-5 cm. long, with withered glands.

MOUNT OMEI: Chang-lao-ping, alt. 1600 m., in forests, small tree 6-7 metres high, leaves green above, greyish green below, flowers white, fragrant, *T. C. Lee*, No. 2937, July 22, 1940; near Chang-shou-chiao, alt. 1600 m., on cliffs, small tree 6 metres high, flowers white, fragrant, *W. K. Hu*, No. 2963, & 2964 July 22, 1940.

This species was only known from Western Hupeh and Eastern Szechuan. This is the first discovery of it on Mount Omei. The late coming of the flowering period in July, and the beautiful flowers with funnel-campanulate corolla pink at first which changing white later and its lobed glandular calyx usually fringed with hairs render this species differing from the near species.....*W. P. Fang*.

- Fig. 1, a flowering branch (natural size);
 2, a pistil (2 times enlarged);
 3, a stamen (2 times enlarged).

圖版二十九 兩色杜鵑

石南科

灌木或小喬木，具粗壯小枝；老枝光滑無毛，灰色或灰棕色，本年生者棕色，無毛或具稀少長柄腺毛。

葉革質，倒披針形，長十三至十六公分，闊四十至五十五公厘，先端鈍圓形或闊鈍圓形，葉緣稍向外捲，葉面綠色，光滑無毛，中脈溝狀，側脈每側十三至十五，微凹，葉背蒼白綠色，無毛，中脈凸起極高，側脈稍凸；葉柄光滑，粗壯，長二至三公分。

花每七朵成一總狀繖形花序；花軸長十五公厘，被毛及少數腺體；花梗長二十至三十五公厘，被毛及腺體；花萼長三公厘，裂片卵形或圓形，被腺體，邊緣具有灰色毛；花冠漏斗狀或漏斗鐘形，長六至八公分，初為淡紅色後變白色，芳香，內側光滑，外側有稀少長柄腺體，裂片七枚，圓形或頂端內缺成二片，長二十至二十五公厘，闊二十五至二十八公厘；小蕊十二至十四本，不等長，長三十五至六十公厘，花絲極細，光滑無毛；大蕊長六至七公分，子房圓錐形，長約七公厘，密被短柄腺體，花柱粗壯，被腺體，柱頭細小，結狀。蒴果長方形，長四至五公分，被枯萎腺體。

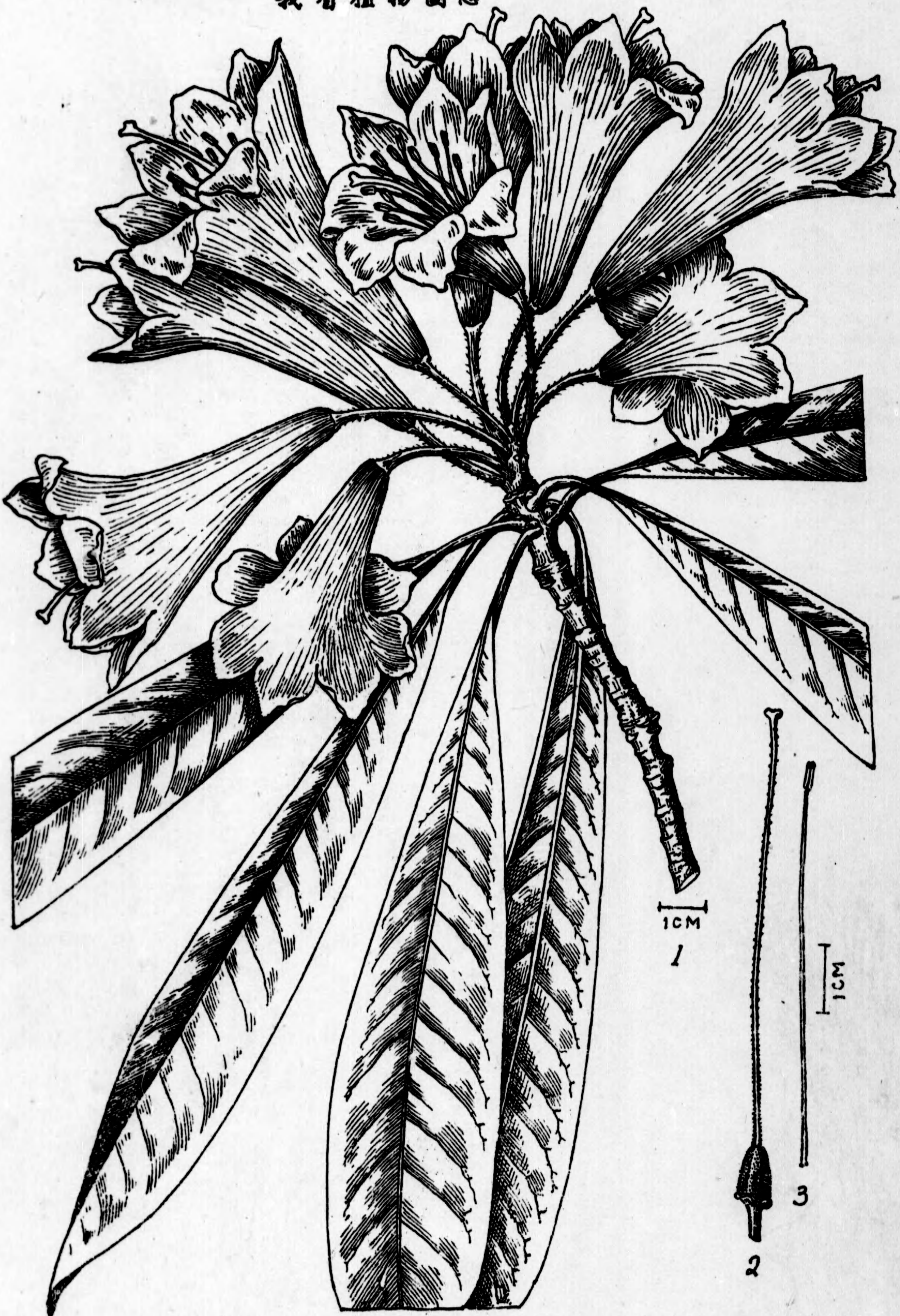
產峨嵋山長老坪長壽橋一帶，海拔一千六百公尺處，七月開花。

本種前知僅限於鄂西及川東一帶，在峨嵋此尚為首次見到。此花花期遲，七月始開，花美麗，花冠漏斗狀鐘形，初為淡紅色，後色漸淡褪或白色，萼片被腺體，邊緣被毛，易於自他種辨識。

圖解：1. 花之枝（原大）；2. 大蕊（放大二倍）；3. 小蕊（放大二倍）。

This species was only known from Western Hubei and Eastern Szechuan. This is the first discovery of it on Mount Omei. The late coming of the flowering period in July, and the beautiful flowers with funnel-campulate corolla pink at first which changing white later and its lobed glandular calyx usually tinged with hairs render this species differing from the near species..... W. P. Fang.

Fig. 1. a flowering branch (natural size);
2. a pistil (2 times enlarged);
3. a stamen (2 times enlarged).



29. *Rhododendron discolor* Franchet

Plate 30.

RHODODENDRON HEMSLEYANUM Wilson.

Ericaceae.

Rhododendron Hemsleyanum Willson in Kew. Bull. Misc. Inform. (1910), 109.

Shrub or small tree usually 3 rarely to 6 metres high; branchlets stout, just below the inflorescence about 5 mm. in diameter, with conspicuous leaf-scar, those of 1 or 2 years old purple or purplish green, sparsely puberulous, those of more than 2 years old grey or blackish grey; winter-buds axillary, conoid, with numerous imbricate ovate or shortly acuminate scales, pubescent and occasionally glandular on the outer surface and on the margin. Leaves evergreen, thick-coriaceous, oblong or oblong-ovate, 15-20 cm. long, 6-8 cm. broad, rounded on the apex, deeply auricled-cordate at the base, upper surface deep green, glabrous, lower surface pale green or yellowish green, rarely papillate, midrib grooved above, prominent below, primary veins 13-15 on each side, slightly depressed above and slightly raised below; petioles stout, cylindric, 3.5-4.5 cm. long, sparsely glandular with long-stalked glands. Flowers 10-12 in a racemose corymb; rhachis about 5 cm. long, purple, sparsely tomentose, glandular with long and short-stalked glands; bracts obovate, 25-30 mm. long, densely greyish or yellowish tomentose without, puberulous within; pedicels stout, 2-3.5 cm. long, sparsely tomentose and densely glandular with long and short-stalked purple glands; calyx small, unequal and shallowly 5-10-lobed, densely glandular; corolla campanulate, 5.5-6.5 cm. long, white, glabrous on both surfaces, 7-lobed, lobes ovate or obovate, 2.5-3 cm. long, 2 cm. broad; stamens 14, unequal, 2.5-3.5 cm. long, filaments slender, glabrous, anthers oblong, yellow; pistil 4.5 cm. long, ovary conoid, 6-8 mm. long, 10-11-chambered, densely glandular with long and short-stalked glands, style purple or purplish, glandular throughout, with stalked glands towards the base and sessile glands towards the apex, stigma subdiscoid, 4 mm. in diameter. Capsules oblong-ellipsoid, 2-2.5 cm. long, 1 cm. across, furrowed, with persistent style and calyx, on stout pedicels 3-4 cm. long, clothed with densely persistent long stalked glands.

MOUNT OMEI: Hou-tzu-po, alt. 1100 m., in woods, shoub 3-4 metres high, bark light grey, flowers white, *C. L. Sun*, No. 2004, May 19, 1940; Hung-chun-ping, alt. 1200 m., *H. C. Chow*, No. 7797, July 3, 1938; near Hung-chun-ping, Pao-chang-feng, alt. 1400 m., in forests, small tree 4-5 metres high, fruits light green, occasionally, *T. C. Lee*, No. 3165, August 3, 1940; Ta-ping, alt. 1400 m., small tree 5 metres high, flowers white, *W. P. Fang*, Nos. 16346 & 16654, April to May, 1941; same locality, small tree, capsules oblong-cylindric, *W. P. Fang*, No. 17921, October 20, 1941; near Ta-ping, alt. 1300 m., in forests or thickets, small tree 3 metres high, leaves oblong, *W. P. Fang*, No. 14360, May 15, 1940; Kuan-hsin-po, alt. 1200 m., small tree 12 metres high, flowers white, *W. P. Fang*, No. 16806, May 28, 1941.

This species was discovered by Wilson on Mount Omei and is confined to the type locality. It is fairly common in the forests near Ta-ping. The beautiful flowers and shining leaves confirm its high value in horticulture.

.....W. P. Fang.

- Fig. 1. a flowering branch (2/3 of the natural size);
 2. a stamen (2 times enlarged);
 3. a pistil (2 times enlarged);
 4. an ovary crossly dissected (10 times enlarged);
 5. a capsule (natural size).

圖版三十

赫斯黎杜鵑

石南科

灌木或小喬木通常高三公尺，罕達六公尺；小枝粗壯，生於花序之下者直徑約五公厘，上具顯著葉痕。一年或二年生者紫色或紫綠色，被稀疏小毛，二年以上者灰色或灰褐色；冬芽腋生，圓錐形，芽鱗多數，覆瓦狀，卵形或短尖尾狀，外側及邊緣被毛并常具腺體。葉常綠，厚革質，長方形，或長方卵形，長十五至二十公分，闊六至八公分，先端圓形，基部深凹成耳狀心臟形，葉面深綠色，光滑無毛，葉背蒼白綠色或黃綠色，罕具小突起，中脈在葉表面成溝狀，在葉背面凸出，側脈每側十三至十五，在上稍凹，在下略凸；葉柄粗壯，圓柱形，長三十五至四十五公厘，被稀少長柄腺體。花十至十二朵成一總狀繖房花序；花軸長約五公分，紫色，被稀疏短毛及長柄或短柄腺體，苞片倒卵形，長二十五至三十公厘，外側被淡灰色或淡黃色濃密短毛，內側被短毛；花梗粗壯，長二十至三十五公厘，被稀疏短毛及濃密長柄或短柄紫色腺體；花萼小，不等大，淺裂成五至十裂片，被濃密腺體；花冠鐘形，長五十五至六十五公厘，白色，兩面光滑無毛無腺體，七裂，裂片卵形或倒卵形，長二十五至三十公厘，闊二十公厘；小蕊十四本，不等長，長二十五至三十五公厘，花絲細長，無毛，花藥長方形，黃色；大蕊長四十五公厘，子房圓錐形，長六至八公厘，十至十一室，被密集長柄及短柄腺體，花柱紫色或淡紫色，通體被腺體，近基者有柄，近頂端者無柄，柱頭略似盤狀，直徑四公厘。蒴果長橢圓形，長二十至二十五公厘，直徑十公厘，具縱溝，花萼花柱宿存，果梗長三至四公分，被密集宿存長柄腺體。

產峨眉山猴子坡，洪椿坪，寶掌峯，大坪及觀心坡一帶，海拔一千一百至一千五百公尺處，四五月開花。

威爾遜氏首次在峨山發現本種，其產地即限於本山，在大坪一帶頗多，具有美麗之花及光彩之葉，為園庭珍品也。

圖解：1. 着花之枝（原大三分之二）；2. 小蕊（放大二倍）；3. 大蕊（放大二倍）；4. 子房之橫切面（放大十倍）；5. 蒴果（原大）。

Fig. 1. a flowering branch (2/3 of the natural size);
 2. a stamen (2 times enlarged);
 3. a pistil (2 times enlarged);
 4. an ovary cross-section (10 times enlarged);
 5. a capsule (natural size).

峨眉植物圖志



30. *Rhododendron Hemsleyanum* Wilson

RHODODENDRON CHENGIANUM Fang.

Ericaceae.

Rhododendron Chengianum Fang, sp. nov.

Frutex vel arbor parva, 5-8 m. alta; ramuli crassi, glabri, hornotini viridescentes vel viridi-purpurei, annotini cinerei vel flavido-cinerei; cortice cinereo; gemmae conoideae, perulis obtusis, exterioribus glabris, interioribus intus pubescentis. Folia sempervirentia, coriacea, oblonga vel oblongo-ovata, 10-20 cm. longa, 4-9 cm. lata, apice rotundata, profunde cordata, supra viridia, glabra, costa media canaliculata, nervis utrinsecus leviter impressis, subtus pallide viridia vel flavido-viridia, glabra vel raro papillata, costa media prominente, nervis utrinsecus leviter prominentibus. Flowers 8 racemoso-corymbosi, rhachis 3 cm. longa, sparsissime tomentosa; pedicelli cylindrici, 2 cm. longi, glabri; calyx parvus, 7-lobatus; corolla campanulata 5 cm. longa, alba, intus sparse puberula, extra glabra, lobis 7, obovatis, 2.5 cm. longis, 2.5 cm. latis; stamina 10, inequalia, 2.5-3.5 cm. longa, filamentis tenuibus, glabris, antheris oblongis, purpureis; pistillum 5 cm. longum, ovarium conoideum 6 mm. longum, glandulosum, stylus glandulosus, stigmatate capitato. Capsula oblongo-cylindrica, 2.5-4 cm. longa, 1 cm. lata, subglabra.

Shrub or small tree 5-8 metres high; branchlets stout, glabrous, those of the current year green or greenish purple, those of more than one year old grey or yellowish grey; bark grey; winter-buds conoid with obtuse scales, outer ones glabrous, inner ones pubescent outside. Leaves evergreen, coriaceous, oblong or oblong-ovate, 10-20 cm. long, 4-9 cm. broad, rounded on the apex, deeply cordate at the base, upper surface green, glabrous, midrib grooved, lateral nerves 17-19 on each side, slightly depressed, lower surface pale green or yellowish green, glabrous or rarely papillate, midrib prominent, lateral nerves slightly prominent; petioles stout, cylindric, 3-4 cm. long, glabrous. Flowers 8 in a racemose corymb; rhachis 3 cm. long, sparsely tomentose; pedicels cylindric, 2 cm. long, glabrous; calyx small, 7-lobed; corolla campanulate, 5 cm. long, white, glabrous without, sparsely puberulous within, lobes 7, obovate, 2.5 cm. long, 2.5 cm. broad; stamens 10, unequal, 2.5-3.5 cm. long, filaments slender, glabrous, anthers oblong, purple; pistil 5 cm. long, ovary conoid, 6 mm. long, glandular, style glandular, stigma capitate. capsules oblong-cylindric, 2.5-4 cm. long, 1 cm. broad, subglabrous.

MOUNT OMEI: Hung-chun-ping, alt. 1200 m., *T. H. Tu*, Nos. 120 & 950, in 1935; same locality, tree 6-7 metres high, leaves green above, light green below, fruits light green, common, *T. C. Lee*, No. 3702, October 7, 1940.

This new species is near *Rhodo. Hemsleyanum*, from which it differs by its glabrous pedicels and petioles. The leaves are usually broader than those of *Rhodo. Hemsleyanum*.

This very beautiful new *Rhododendron* is named in honour of Dr. T. F. Cheng, Chancellor of the National Szechuan University at Chengtu for his special interesting in science research and advancement of the Chinese educational work.

.....W. P. Fang.

- Fig. 1. a flowering branch (natural size);
 2. a stamen (2 times enlarged);
 3. a pistil (2 times enlarged);
 4. a fruit (natural size).

圖版三十一 程氏杜鵑 新種

石南科

灌木或小喬木，高五至八公尺；小枝粗壯，光滑無毛，本年生者綠色或青紫色，一年以上者灰色或黃灰色；樹皮灰色；冬芽圓錐形，被鈍圓形芽鱗，外層者無毛，內層者外側被毛。葉常綠，革質，長方形或長方卵形，長十二至二十公分，闊四至九公分，先端圓形，基部深心臟形，葉面綠色，無毛，中脈溝狀，側脈每側十七至十九，微凹，葉背蒼白綠色或黃綠色，光滑，罕具突起，中脈凸起，側脈微凸；葉柄粗壯，圓柱形，長三至四公分，無毛。花每八朵成一總狀繖房花序；花軸長三公分，被稀疏短毛；花梗圓柱形，長二公分，無毛；花萼小，七裂；花冠鐘形，長五公分，白色，外側光滑，內側被稀疏小毛，裂片七枚，倒卵形，長二十五公厘，闊如之，小蕊十本，等不長，長二十五至三十五公厘，花絲纖細，無毛，花藥長方形，紫色；大蕊長五公分，子房圓錐形，長六公厘，被腺體，花柱被腺體，柱頭圓狀。蒴果長方圓錐形，長二十五至四十公厘，闊十公厘，近於光滑無毛。

產峨山洪椿坪，海拔一千二百公尺處。

此新種與赫斯黎杜鵑相近，以其花梗及葉柄無毛無腺體而易與該種辨別，又此種之葉常較赫斯黎杜鵑為闊。

此新種杜鵑係以國立四川大學校長程天放先生之姓名命名，以紀念其辦理教育事業提倡科學研究之功。

圖解：1. 着花之枝（原大）；2. 小蕊（放大二倍）；3. 大蕊（放大二倍）；4. 果實（原大）。

Fig. 1. Flowering branch (natural size);
2. A stamen (2 times enlarged);
3. A pistil (2 times enlarged);
4. A fruit (natural size).

峨眉植物圖志



31. *Rhododendron Chengianum* Fang

Plate 32.

RHODODENDRON WILLIAMSIANUM Rehder et Wilson.

Ericaceae.

Rhododendron Williamsianum Rehder et Wilson in Sargent, Pl. Wilson, I (1913), 538.

Shrub 1-2 metres high; branchlets horizontal, slender, those of the current year green or purplish green, at first sparsely glandular, later glabrous, those of more than one year old, brown or yellowish grey, glabrous; bark grey, rough; winter-buds axillary, ellipsoid, with numerous imbricate scales, slightly ciliate on the margin. Leaves evergreen, coriaceous, broadly elliptical to rounded, 2.5-5 cm. long, 2.5-4 cm. broad, rounded or slightly emarginate and with a short acumen on the apex, cordate, subcordate or rarely truncate at the base, slightly reflexed on the margin, upper surface bright green, glabrous, lower surface whitish or yellowish glaucous, papillate, punctate with small glands and hairs, midrib slightly grooved above, prominent below, lateral nerves obscure above, slightly conspicuous below and with reticulation of veinlets; petioles cylindrical, 8-12 mm. long, green or reddish green, at first sparsely clothed with stalked glands, later glabrous. Flowers 2-5 in a racemose umbel; rhachis 3-5 mm. long, sparsely glandular while young; bracts oblong-obovate, 2 cm. long, 8 mm. broad, grey-tomentose without, glabrous within; pedicels 1.5-2 cm. long, at first sparsely glandular, later glabrous; calyx minute, 1.5-2 mm. long, sparsely glandular with long-stalked glands, 6-lobed, lobes obtuse; corolla campanulate, 3.5-4 cm. long, 3.5 cm. in diameter, pale rose or rose, 6-lobed, lobes rounded or suborbicular, 1.5 cm. long, 2 cm. broad, slightly emarginate; stamens 11-14, unequal, 18-32 mm. long, filaments slender, glabrous, anthers oblong-ellipsoid, purple; pistil 4-5 cm. long, ovary oblong-conoid, 6 mm. long, 6-chambered, green, densely glandular with greenish stalked glands, style slightly curved, on its lower half part glandular with yellowish long-stalked glands and on its upper half part sparsely glandular with yellowish sessile glands, stigma capitate. Capsule oblong-cylindric, about 1.5 cm. long, glandular while young, usually glabrous or sparsely glandular when matured.

MOUNT OMEI: Chiu-lao-tung, alt. 1800 m., on cliffs, shrub 3 metres high, bark grey, flowers red, C. L. Sun, No. 1810, May 1, 1940; Yen-wang-po, alt. 2400 m., on cliffs, shrub 40 cm. high, flowers pale rose, common, W. P. Fang, No. 14753, May 20, 1940; same locality, in woods, shrub 1-2 metres high, bark grey, flowers red, C. L. Sun, No. 2239, May 29, 1940; Lei-tung-ping, alt. 2500 m., on cliffs, shrub 1 metre high, flowers rose, C. L. Sun, No. 265, May 15, 1939; same locality, on cliffs or on trees, bush 30 cm. high, W. P. Fang, No. 14752, May 20, 1940; same locality, on cliffs, bush 10-40 cm. high, flowers rose, common, W. P. Fang, No. 16556, May 10, 1941; same locality, H. C. Chow, No. 9810, May 1938; same locality, W. C. Cheng, No. 10333, May 13, 1940.

This pretty *Rhododendron* was first discovered by Wilson from Wa-shan of Opien-hsien and we have found that it is fairly common at the vicinity of Lei-tung-ping. The flowers of the Omei plants have 11 to 14 stamens and the leaves are slightly larger than those of the type from Wa-shan. W. P. Fang.

- Fig. 1. a flowering branch (natural size);
 2. a pistil (3 times enlarged);
 3. a stamen (3 times enlarged);
 4. a fruit (natural size).

圖版三十二

惟麗杜鵑

石南科

灌木高一至二公尺；小枝平生，纖細，本年生者綠色或紫綠色，幼時具少數腺體，後變光滑，一年以上者棕色或黃灰色，光滑無腺體；樹皮灰色，粗糙；多芽腋生，橢圓形，芽鱗多數，覆瓦排列，邊緣具稀少纖毛。葉常綠，革質，闊橢圓形或圓形，長二十五至五十公厘，闊二十五至四十公厘，先端圓形或微缺成二裂片具短尖頭，基部心臟形或亞心臟形，罕為截平，邊緣微向外捲，葉面亮綠色，光滑無毛，葉背有白色或淡黃色粉狀物，具囊狀突起小腺體及毛，中脈在上成淺溝狀，在下突起，側脈在葉面隱入，在葉背略顯，小脈網狀；葉柄圓柱形，長八至十二公厘，綠色或紅綠色，幼具稀疏帶柄腺體，後則脫落。花二至五朵成一總狀繖形花序；花軸長三至五公厘，幼時有腺體，苞片長方倒卵形，長二公分，闊八公厘，外側被灰色短密絨毛，內側無毛；花梗長十五至二十公厘，初被少數腺體，後則脫落；花萼極小，長一公厘半至二公厘，被稀少長柄腺體，六裂，裂片鈍形；花冠鐘形，長三十五至四十公厘，直徑三十五公厘，淡玫瑰色或玫瑰色，六裂，裂片圓形或近於圓形，長十五公厘，闊二十公厘，先端微向內凹；小蕊十一至十四本，不等長，長十八至三十二公厘，花絲細長，光滑無毛，花藥長方橢圓形，紫色；大蕊長四至五公分，子房長方圓錐形，長六公厘，六室，綠色，被淡綠色之具柄腺體甚多，花柱略曲，下半部具淡黃色有柄腺體，上半部有少數淡黃無柄腺體，柱頭頭狀，蒴果長方圓柱形，長約十五公厘，幼時具腺體，及長常不具腺體或僅有少數腺體。

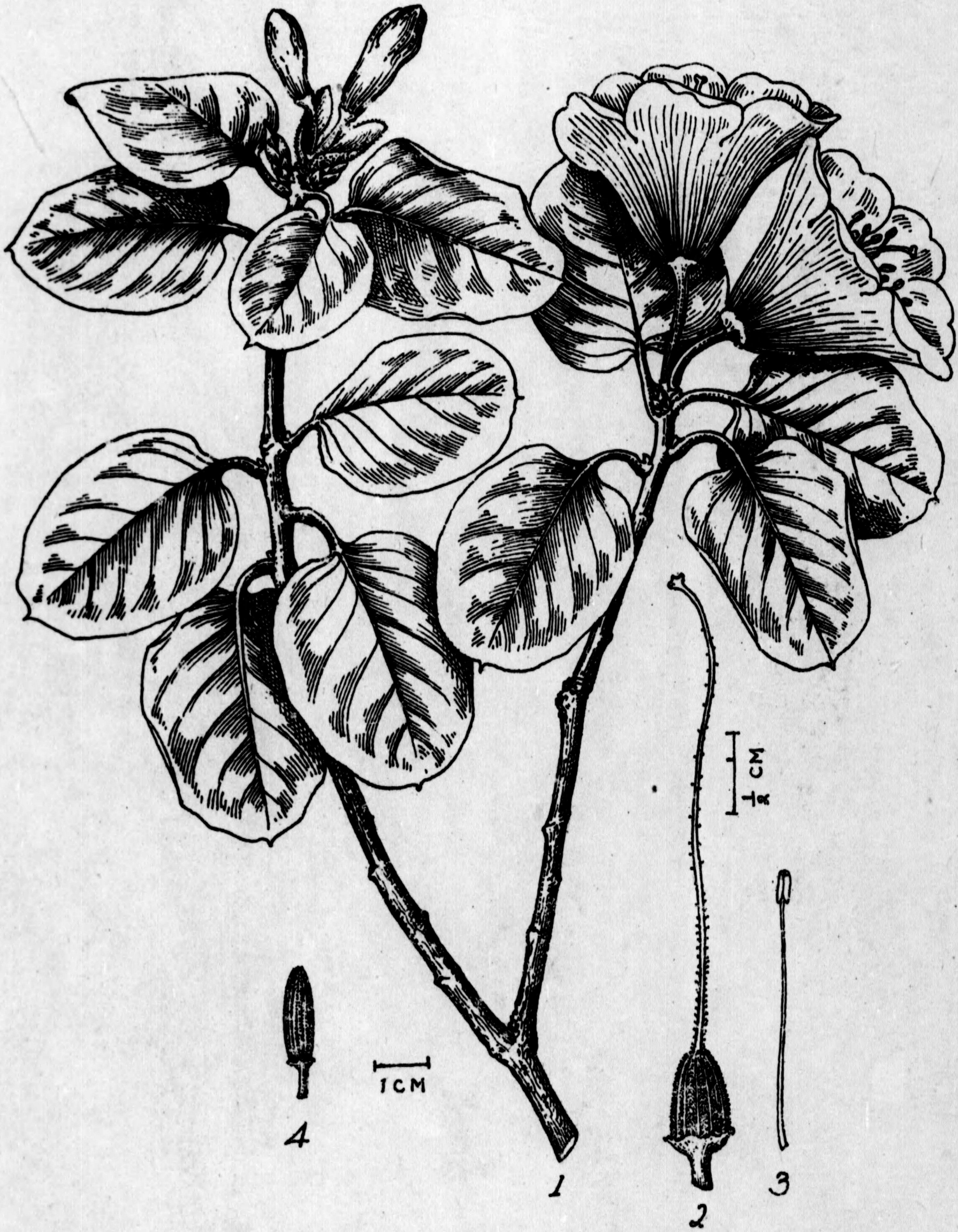
產峨眉山九老洞，闕王坡及雷洞坪一帶，尤以雷洞坪附近為多，在海拔一千八百至二千五百公尺處，生於岩石上或樹上，五月開花。

威爾遜氏首次於峨邊縣之瓦山發現此種惟麗杜鵑，峨山所產者具小蕊十一至十四本，其葉較瓦山原產者略大。

號解：1. 着花之枝（原大）；2. 大蕊（放大三倍）；4. 小蕊（放大三倍）；5. 果實（原大）。

Fig. 1. a flowering branch (natural size);
 2. a petal (3 times enlarged);
 3. a stamen (3 times enlarged);
 4. a fruit (natural size).

峨眉植物圖志



32. *Rhododendron Williamsianum* Rehder et Wilson

三十三號圖
Plate 33.

RHODODENDRON DENDROCHARIS Franchet.

Ericaceae.

Rhododendron dendrocharis Franchet in Bull. Soc. Bot. France, XXXIII (1886), 233; in Nouv. Arch. Mus. Paris, sér. 2, X (1887), 51, t. 13a (Pl. David. II, 89, t. 13a).

Small epiphytic shrub usually about 50 cm. rarely up to 1 metre high; branchlets short, slender, those of 1 or 2 years old green or purplish green, clothed with reddish bristles, those of more than 2 years old grey or yellowish grey, glabrous or rarely bristly with persistent bristles; bark brown or greyish brown usually falling in very thin flakes; winter-buds conoid, with 8-10 imbricate ovate scales ciliate on the margin, scaly outside. Leaves evergreen, thick-coriaceous, elliptical, 1-1.8 cm. long, 5-7 mm. broad, acute or obtuse, mucronate on the apex, broadly cuneate, obtuse or subrotund at the base, reflexed on the margin and fringed with hairs while young, upper surface deep green, glabrous, lower surface glaucous and yellow scaly with fine scales about their own diameter apart or nearly contiguous; petioles 3-6 mm. long, clothed with reddish bristles. Flowers solitary, terminal; pedicels 5-8 mm. long, clothed with yellowish or reddish bristles; bracts oblong or lanceolate, 8 mm. long, puberulous without; calyx deeply 5-lobed, lobes broadly elliptical, rarely scaly outside, fringed with bristles on the margin; corolla rose-red and darker spotted on the posterior inner surface of corolla, glabrous without, puberulous on the lower corolla within, broadly funnel-shaped, 1.5-2 cm. long, 5-lobed, lobes rounded or obovate; stamens 10, unequal, 12-16 mm. long, filaments pubescent on the lower half, anthers purple, oblong; pistil 1.5 cm. long, ovary conoid, densely scaly, covered with yellowish green fine scales, style stout, slightly curved, purple, glabrous except puberulous near the base, stigma minute. Capsules ellipsoid or oblong-ellipsoid, 10-12 mm. long, 5-7 mm. broad, 5-furrowed, densely scaly, with persistent calyx and incurved style.

MOUNT OMEI: Ta-cheng-ssu, alt. 2200 m., epiphytic on trees, small shrub 70 cm. high, flowers reddish, rare, C. L. Sun, No. 243, May 14, 1939; same locality, epiphytic on *Acer Franchetii* Pax, bush 30-60 cm. high, flowers small, purple, occasionally, W. P. Fang, No. 16581, May 10, 1941; Pai-yun-ssu, alt. 2450 m., a small shrub epiphytic on *Abies Delavayi* Franchet, flowers pink, solitary, W. P. Fang, No. 16455, May 6, 1941; Lei-tung-ping, alt. 2500 m., epiphytic on tree, bush 50 cm. high, flowers rose, occasionally, W. P. Fang, No. 14783, May 20, 1940; Chi-li-po, alt. 2540 m., on cliffs, shrub 1 metre high, flowers red, C. L. Sun, no. 2245, May 29, 1940; without precise locality, H. C. Chow, No. 9775, May, 1938; Without precise locality, W. C. Cheng, No. 10232, May 8, 1940.

This species was discovered by David in Pao-hsing-hsien of Eastern Sikang and is fairly common on Mount Omei. It is usually epiphytic on *Abies*, *Tsuga*, *Acer* and other species of broad leaf trees. The Purple flowers and bristly pedicels are the chief characters which distinguish this species from its near ally, *Rhododendron moupinense* Franchet, which has also been reported from Mount Omei. The latter is very rare.

.....W. P. Fang

- Fig. 1, a flowering branch (natural size);
 2, a pistil ($1\frac{1}{2}$ times enlarged);
 3, a stamen ($1\frac{1}{2}$ times enlarged);
 4, a fruit with persistent calyx and style (natural size);
 5, the inner surface of corolla (natural size);
 6, The scales on the lower surface of leaf and the bristles on the petiols (10 times enlarged).

圖版三十三

樹生杜鵑

石南科

樹生小灌木通常高五十公分，罕達一公尺；幼枝細短，一年生者或二年生者綠色或紫綠色，被紅色剛毛，二年以上者灰色或黃灰色，光滑。罕被永存剛毛；樹皮棕色或灰棕色，常成薄塊脫落；冬芽圓錐形，芽鱗八至十枚，覆瓦排列，卵形，邊緣有纖毛，外側被鱗斑，葉常綠，厚革質，橢圓形，長十至十八公厘，闊五至七公厘，先端銳形或鈍圓形，具尖頭，基部闊楔形，鈍圓或近於圓形，邊緣外屈，幼時具毛，葉面深綠，光滑，葉背被白粉狀物，具黃色細小鱗斑，鱗斑間距離等於其直徑之長或幾於相連，葉柄長三至六公厘，被淡紅色剛毛。花單獨頂生；花梗長五至八公厘，被淡黃色或淡紅色剛毛；苞片長方形或披針形，長八公厘，外側被細毛；花萼深裂為五，裂片闊橢圓形，外側偶被鱗斑，邊緣嵌有剛毛，花冠玫瑰紅色，內側近基部處具深色斑點及細毛，外側光滑無毛，闊漏斗形，長十五至二十公厘，五裂，裂片圓形或倒卵形；小蕊十本，不等長，長十二至十六公厘，花絲近基部之一半被毛，花藥紫色，長方形；大蕊長十五公厘，子房圓錐形，密被鱗斑，鱗斑細小黃綠色，花柱粗短，微彎，紫色，除基部略具小毛外，餘均光滑無毛，柱頭細小。蒴果橢圓形或長方橢圓形，長十至十二公厘，闊五至七公厘，具五溝，被鱗斑甚多。花萼及彎曲花柱宿存果上。

產峨眉山大乘寺、白雲寺、雷洞坪、七里坡等處，五月開花。
本種為大衛氏初次發現西康東部之寶興縣，峨山亦頗普遍，通常寄生於冷杉、鐵樹及其他闊葉樹上。

與本種相近之寶興杜鵑，亦產於峨山，惟甚稀少，二者之主要區別在於本種具有紫花及被剛毛之花梗。

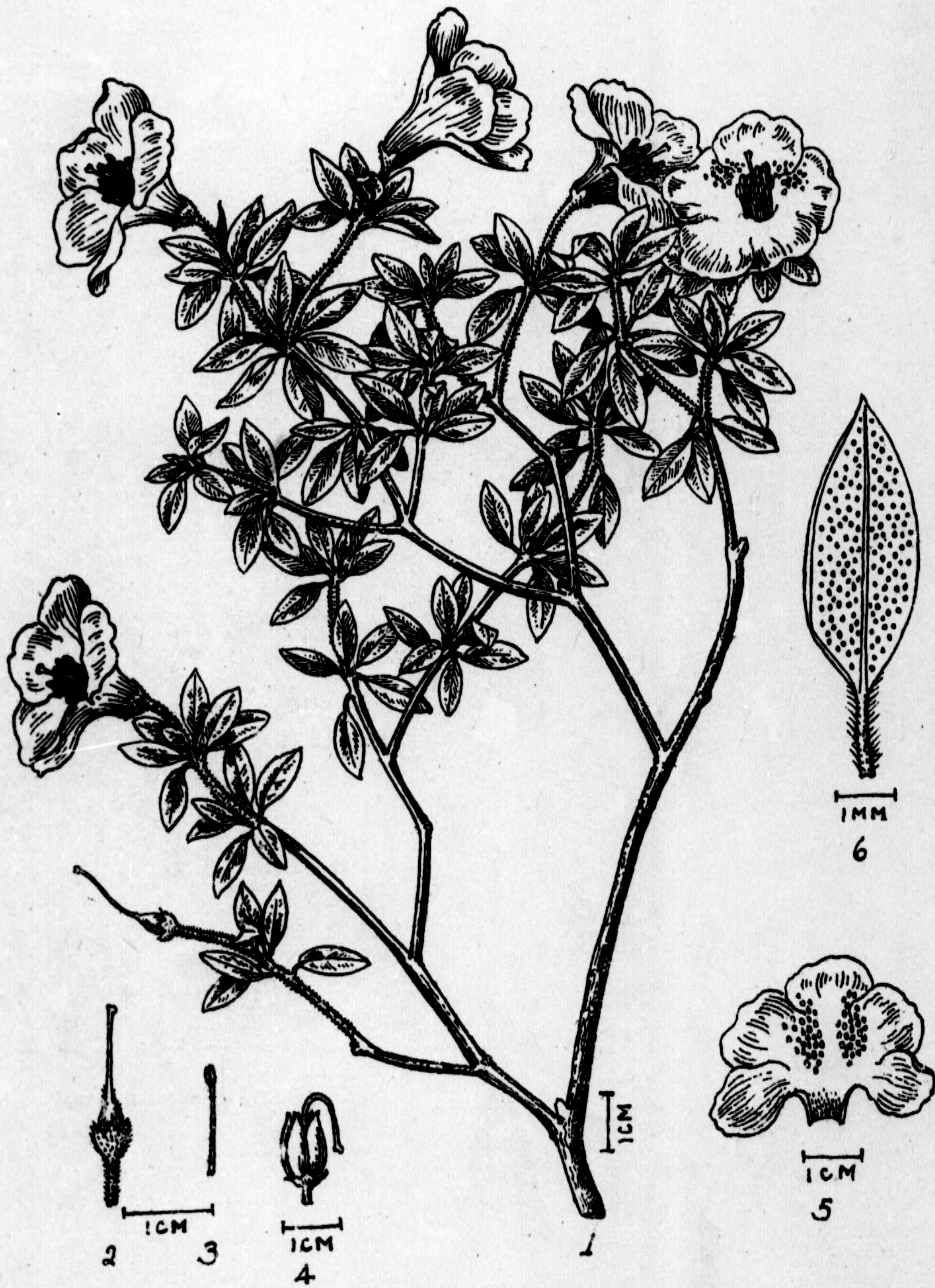
圖解：1. 着花之枝（原大）；2. 大蕊（放大一倍半）；3. 小蕊（放大一倍半）；4. 果實及宿存之花萼與花柱（原大）；5. 花冠之內側（原大）；6. 葉背之鱗斑及葉柄之剛毛（放大十倍）。

This species was discovered by David in Bao-hsing-hsien of Eastern Szechwan and is fairly common on Mount Omei. It is usually epiphytic on Abies, Tsuga, Acer and other species of broad leaf trees. The Purple flowers and bristly pedicels are the chief characters which distinguish this species from its ally, *Rhododendron moupinense* Franchet, which has also been reported from Mount Omei. The latter is flowers red, C. A. Suen, no. 2225, May 29, 1940; without precise locality, H. C. Chow, No. 3775, May 1938; Without precise locality, W. C. Cheng, No. 10232, May 8, 1940.

alt. 2450 m., a small shrub epiphytic on Abies Delavayi Franchet, flowers pink, solitary, W. P. Fang, No. 10455, May 6, 1941; Lei-tung-ping, alt. 2500 m., epiphytic on tree, bush 50 cm. high, flowers rose, occasionally, W. P. Fang, No. 14783, May 20, 1940; Chi-li-po, alt. 2340 m., on cliffs, shrub 1 metre high, flowers red, C. A. Suen, no. 2225, May 29, 1940; without precise locality, H. C. Chow, No. 3775, May 1938; Without precise locality, W. C. Cheng, No. 10232, May 8, 1940.

Fig. 1. A flowering branch (natural size);
2. A pistil (1 1/2 times enlarged);
3. A stamen (1 1/2 times enlarged);
4. A fruit with persistent calyx and style (natural size);
5. The inner surface of corolla (natural size);
6. The scales on the lower surface of leaf and the bristles on the petioles (10 times enlarged).

峨眉植物圖志



33. *Rhododendron dendrocharis* Franchet

四十二號圖
Plate 34.

RHODODENDRON HANCEANUM Hemsley.

Ericaceae.

Rhododendron Hanceanum Hemsley in Journ. Linn. Soc. XXVI (1889), 24.

Shrub 1-2 rarely to 3 metres high; bark grey or blackish-grey, rough; branchlets slender, those of the current year green, scaly, those of more than one year old brown or deep brown rarely reddish brown, glabrous, sparsely scaly; winter-buds conical, scales numerous, imbricate, acute or broadly acute, puberulous and densely scaly outside, ciliate on the margin. Leaves evergreen, thick-coriaceous, 2 or 3 closely setting near the apex or at the node of branchlets, obovate or ovate rarely ovate-lanceolate, 5-10 cm. long, 2-4.5 cm. broad, acute or shortly acuminate on the apex, rounded or obtuse, rarely broadly cuneate at the base, upper surface shining green and glabrous, lower surface whitish green, rarely yellowish green and finely scaly with yellow scales 3-4 times of their own diameter apart, midrib grooved above, prominent below, primary veins 10-13 on each side, impressed above, obscure below; petioles 4-6 mm. long, grooved above, rounded below, covered with scales 1-2 times of their own diameter apart. Flowers 7-9 in a raceme; rhachis 1-1.5 cm. long, sparsely glandular and floccose; pedicels 1-1.2 cm. long, slender, scaly and sparsely floccose; bracts obovate, 8 mm. long, white-tomentose without, especially on the upper part, puberulous within; calyx large, at first greenish-white, then whitish-yellow, deeply 5-lobed, lobes oblong, 8 mm. long, 2-3 mm. broad, yellow-scaly without, glabrous within; corolla white, funnel-form, 2.5 cm. long, sparsely scaly without, sparsely puberulous within, 5-lobed, lobes ovate, 1 cm. long, 6 mm. broad; stamens 10, unequal, exserted, 2-3 cm. long, filaments slender, densely whitish-pilose in the lower part, anthers yellow; pistil 3.5 cm. long, ovary ellipsoid, 2 mm. long, 10-chambered, densely scaly, style purple, stout, glabrous, stigma small. Capsules oblong-ellipsoid, 8-10 mm. long, densely scaly, furrowed, with persistent calyx and style.

MOUNT OMEI: Hou-tzu-po, alt. 1200 m., in thickets, shrub 2-3 metres high, bark dark grey, young fruits greenish, *C. L. Sun*, No. 595, June 24, 1939; same locality, shrub 1-2 metres high, flowers white, *C. L. Sun*, Nos. 1725 & 1733, April 26, 1940; same locality, in forests, shrub 3 metres high, bark light grey, flowers white, young fruits green, *C. L. Sun*, No. 2003, May 17, 1940; same locality, on slopes, shrub 2-3 metres high, fruits light green, common, *T. C. Lee*, No. 2798, July 12, 1940; Hung-chuan-ping, alt. 1200 m., shrub 3 metres high, bark grey, flowers white, *C. L. Sun*, No. 1737, April 25, 1940; same locality, in forests, shrub 2 metres high, fruits oblong, brownish scaly, *W. P. Fang*, No. 14996, October 7, 1940; Ta-ping, alt. 1400 m., in forests, shrub 1 metre high, *W. P. Fang*, Nos. 14344 & 14361, May 15, 1940; Pao-chang-feng, shrub 2-3 metres high, fruits green, common, *T. C. Lee*, No. 3166, August 3, 1940; Chiu-shih-chiu-tao-kwai, alt. 1600 m., shrub 3 metres high, leaves coriaceous, fruits oblong-ellipsoid, *W. P. Fang*, No. 17948, October 20, 1941; without precise locality, *W. P. Cheng*, No. 10071, April 15, 1940.

This species was discovered by Faber on Mount Omei and is very common at the vicinity of Ta-ping. It is also distributed in Hung-ya-hsien of Western Szechuan and in Pao-hsing-hsien and Hang-yuan-hsien of Eastern Sikang. By its thick-coriaceous leaves with fine scales at the lower surface, by the persistent big calyx and by the bud-scales present at the flowering time it is well distinguished from its allied species.

.....W. P. Fang.

- Fig. 1. a flowering branch (natural size),
 2. a fruit (2 times enlarged);
 3. a stamen (4 times enlarged);
 4. a pistil (4 times enlarged);
 5. a portion of the under surface of leaf to show the scales (4 times enlarged).

圖版三十四

漢士杜鵑

石南科

灌木高一至二公尺，罕達三公尺；樹皮灰色或灰黑色，粗糙不平；幼枝纖細，本年生者綠色，被鱗斑，一年以上者棕色或深棕色，罕為紅棕色，無毛而有少數鱗斑，冬芽圓錐形，芽鱗多數，覆瓦排列，銳形或闊銳形，外側被短毛及濃密鱗斑，邊緣具纖毛。葉常綠，厚革質，二或三枚密集於小枝頂端或節上，倒卵形或卵形，罕為卵狀披針形，長五至十公分，闊二十至四十五公厘，先端銳形或短尖尾形，基部圓形或鈍形，罕為闊楔形，葉面光澤綠色，無毛無斑，葉背白綠色，罕為黃綠色，被細小黃色鱗斑，鱗斑間之距離等於其本身大之三四倍，中脈在上凹入成溝狀，在下突起，側脈每側十至十三，上面下凹，下面隱蔽；葉柄長四至六公厘，上面溝狀，下面圓形，被鱗斑，鱗斑間之距離等於其自身直徑之一至二倍。花七朵至九朵成一總狀花序；花軸長十至十五公厘，被稀疏腺體及細毛；花梗長十至十二公厘，纖細，被鱗斑及稀疏細毛；苞片倒卵形，長八公厘，外側被白色短毛，尤以上部為多，內側被少數短毛；花萼大，初為綠白色，後轉黃白色，深裂為五，裂片長方形，長八公厘，闊二至三公厘，外側被黃色鱗斑，內側無斑；花冠白色，漏斗形，長二十五公厘，外側斑稀少，內側有稀少短毛，五裂，裂片卵形，長十公厘，闊六公厘，小蕊十本，不等長，長出花冠之外長二至三公分，花絲纖細，基部具密生白色長毛，花藥黃色；大蕊長三十五公厘，子房橢圓形，十室，多被密生鱗斑，花柱紫色，粗壯無毛，柱頭甚小。蒴果長方橢圓形，長八至十公厘，被密生鱗斑，有溝狀條紋，花萼花柱均宿存果上。

產峨眉山洪椿坪，猴子坡，大坪，寶掌峯及九十九道拐等處，海拔一千二百至一千六百公尺處，四月開花，十月果始成熟。

本種最初由費伯氏發現於峨眉山，在大坪一帶極多，其分佈西經洪雅（四川境），迄西康之寶興及漢源等縣。與其他種之區別在其厚革質葉，背面被紅鱗斑，大萼宿存果上，開花時芽鱗猶在。

圖解：1. 實花之枝（原大）；2. 果實（放大二倍）；3. 小蕊（放大四倍）；4. 大蕊（放大四倍）；5. 葉之一部示鱗斑（放大四倍）。

This species was discovered by Faber on Mount Omei and is very common at the vicinity of Taping. It is also distributed in Huang-shan of Western Szechuan and in Pa-hsing-paien and Hang-yuan-paien of Eastern Szechuan. By its thick-coriaceous leaves with fine scales at the lower surface, by the persistent big calyx and by the bud-scales present at the flowering time it is well distinguished from its allied species.

W. P. Fang

Fig. 1. a flowering branch (natural size);
 2. a fruit (2 times enlarged);
 3. a stamen (4 times enlarged);
 4. a pistil (4 times enlarged);
 5. a portion of the under surface of leaf to show the scales (4 times enlarged).



34. *Rhododendron Hanceanum* Hemsley

正 十 三 期 圖
Plate 35.

RHODODENDRON LUTESCENS Franchet.

Ericaceae.

Rhododendron lutescens Franchet in Bull. Soc. Bot. France, XXXIII (1886), 235; in Nouv. Arch. Mus. Paris, sér. 2, X (1888), 52 (Pl. David. II. 90).

Rhododendron costulatum Franchet in Morot. Journ. de Bot., IX (1895), 399.

Rhododendron Lemeei Léveillé in Fedde Repert., XIII (1914), 339.

Rhododendron Binii Léveillé in Bull. Géogr. Bot., XXV (1915), 21.

Shrub 2-3 rarely up to 5 metres high; bark grey or yellowish grey, rough; branchlets slender, elongated, green or purplish green, sparsely scaly, usually with light yellow scales; winter-buds axillary, small, conical or elongated, scales numerous, sparsely scaly outside, of which the lower ones being acute and the upper ones acuminate. Leaves chartaceous, scattered, lanceolate rarely oblong-lanceolate, 6-12 cm. long, 2.5-3.5 cm. broad, long-acuminate or acuminate rarely acute, and occasionally slightly curved on the apex, subrotund or broadly cuneate at the base, upper surface deep green, lower surface pale green or rarely yellowish green, both surfaces finely scaly with yellow scales 4-6 times of their own diameter apart, midrib slightly grooved above, prominent below, primary veins 13-15 on each side, just showing on both surfaces or obscure below; petioles 8-10 mm. long, slightly grooved above, rounded below, covered with scales 1-2 time of their own diameter apart. Flowers solitary and terminal or axillary near the apex of branchlets or rarely 2 or 3 in a fascicle from a terminal bud; bracts obovate, 6 mm. long, scaly outside, ciliate on the margin; pedicels slender, 6-8 mm. long, scaly outside, ciliate on the margin; pedicels slender, 6-8 mm. long, loosely scaly and sparingly floccose; calyx small, greenish, floccose and scaly outside, 5-lobed, lobes obtusely triangular; corolla yellow, widely funnel-shaped, 2 cm. long, 2.5 cm. in diameter, sparsely scaly and white-pubescent without, glabrous within, 5-lobed, lobes oblong or obovate-oblong, 15 mm. long, 8 mm. broad, widely spreading, rarely with green spots; stamens 10, exserted, unequal, 2.3-4 cm. long, the 5 longer ones slightly pubescent at the base of filaments, and the 5 shorter ones densely pubescent at the base of filaments, anthers yellow; pistil 1.4 cm. long, ovary oblong-ellipsoid, 5-celled, covered with whitish overlapping scales, style slender, glabrous, the upper part slightly curved, stigma small. Capsules cylindrical 1 cm. long, oblique at the base, 5-furrowed, densely yellow scaly.

MOUNT OMEI: Chiu-lao-tung, alt. 1800 m., in woods, shrub 1-2 metres high, flowers light yellow, C. L. Sun, Nos. 1588 & 1594, April 18, 1940; same locality, in forests, shrub 2-3 metres high, fruits light green, T. C. Lee, No. 3801, October 29, 1940; at the roadside from Chiu-lao-tung to Yü-hsien-ssu, in woods, shrub 3 metres high, flowers light yellow, C. L. Sun, No. 1584, April 18, 1940; same locality, W. C. Cheng, Nos. 10169 & 10352, May 1940; from Chu-tien to Hwa-yen-ding, in woods, shrub 3 metres high, flowers light yellow, C. L. Sun, No. 1575, April 18, 1940; without precise locality, C. W. Yao, Nos. 2153 & 3604, in 1939.

This species is fairly common in western Szechuan. It is characterised in the yellow flowers pubescent on the outer surface of corolla and in the lanceolate leaves loosely scaly on both surfaces.

.....W. P. Fang.

- Fig. 1, a flowering branch (natural size);
 2, the pubescence on the outer surface of corolla (2 times enlarged);
 3, a longer and a shorter stamens (2 times enlarged);
 4, a pistil (5 times enlarged);
 5, a fruit (2½ time enlarged);
 6, the scales on the lower surface of leaf (10 times enlarged).

圖版三十五

黃花杜鵑

石南科

灌木高二至三公尺，罕達五公尺；樹皮灰色或黃灰色，粗糙；幼枝纖細而長，綠色或紫色，被少數鱗斑，鱗斑通常淡黃色；冬芽腋生，形小，圓錐形或甚長，芽鱗多數，上有少數鱗斑，在基部者銳形，在上部者尖尾形。葉紙質，散生枝上，披針形，罕為長方披針形，長六至十二公分，闊二十五至三十五公厘，先端長尖尾形或尖尾形，罕為銳形，偶或彎曲，基部近於圓形或闊楔形，葉面深綠，葉背蒼白淡綠，罕為黃綠色，兩面均有黃色細小鱗斑，鱗斑間距離約為其本身直徑之四至六倍，中脈在葉面成淺溝狀，在葉背凸起，側脈每側十三至十五，兩面均可見到或在下面不顯明；葉柄長八至十公厘，上面淺溝狀，下面圓形，被鱗斑，鱗斑間距離為其本身直徑之一至二倍。花單獨頂生，或於近小枝頂端處腋生，罕為二至三枚由一頂芽發出而成叢生；苞片倒卵形，長六公厘，外側被鱗斑，邊緣被纖毛，花梗纖細，長六至八公厘，被稀疏鱗斑及少數柔毛，花萼小，淡綠色，外側被柔毛及鱗斑，五裂，裂片鈍三角形；花冠黃色，闊漏斗形，長二公分，直徑二十五公厘，外側被白色毛，有少數鱗斑，內側光滑，五裂，裂片長方形或倒卵長方形，長十五公厘，闊八公厘，向外擴張，罕具綠色斑點；小蕊十本，伸出花冠之外，不等長，長二十五至四十公厘，其較長五枚之花絲基部被毛甚少，較短五枚則基部被毛甚多，花藥黃色，大蕊長四公厘，子房長方橢圓形，五室，被重疊白色鱗斑，花柱纖細，無毛無鱗斑，上部微彎，柱頭小，蒴果圓柱形，長一公分，基部斜，具五縱溝，密生黃色鱗斑。

產峨眉山九老洞，遇仙寺華嚴頂一帶，海拔高度一千八百至一千九百公尺左右，四月間開花，峨眉之外，天全，榮經，峨邊等縣俱產之。

本種之特徵為花冠黃色外側被毛，葉披針形兩面均有稀疏鱗斑。

圖解： 1. 着花之枝（原大）； 2. 花冠分側示毛（放大二倍）； 3. 小蕊（放大二倍）； 4. 大蕊（放大二倍半）； 5. 果實（放大兩倍半）； 6. 葉背之鱗斑（放大十倍）。

MOUNT OMEI: Chin-lao-tung, alt. 1800 m., in woods, shrub 1-2 metres high, flowers light yellow. C. L. Su, Nos. 1582 & 1584, April 18, 1940; same locality, in forests, shrub 2-3 metres high, fruits light green. T. C. Lee, No. 3801, October 29, 1940; at the roadside from Chin-lao-tung to Ya-hsien-sau, in woods, shrub 3 metres high, flowers light yellow. C. L. Su, No. 1584, April 18, 1940; same locality. W. C. Cheng, Nos. 10189 & 10352, May 1940; from Chin-tien to Hwa-yan-ding, in woods, shrub 3 metres high, flowers light yellow. C. L. Su, No. 1575, April 18, 1940; without precise locality. C. W. Yao, Nos. 2153 & 2004, in 1939.

This species is fairly common in western Szechuan. It is characterized in the yellow flowers pubescent on the outer surface of corolla and in the lanolate leaves loosely scaly on both surfaces.

.....W. P. Fang.

Fig. 1. a flowering branch (natural size);
 2. the pubescence on the outer surface of corolla (2 times enlarged);
 3. a longer and a shorter stamens (2 times enlarged);
 4. a pistil (2 times enlarged);
 5. a fruit (2½ times enlarged);
 6. the scales on the lower surface of leaf (10 times enlarged).

峨眉植物圖志



35. *Rhododendron lutescens* Franchet

Plate 36.

RHODODENDRON CHENGSHIENIANUM Fang.

Ericaceae.

Rhododendron Chengshienianum Fang, sp. nov.*Rhododendron Wongii* Fang (non Hemsley et Wilson) in Contrib. Biol. Lab. Sci. Soc. China. Bot. Ser. XII, No. 1 (1939), 83.

Frutex 2-3 metralis altus; ramuli graciles, glabri, cinerei vel fusco-cinerei, juniores profunde fusei vel nigro-fusei dense lepidoti et nigro-glandulosi. Folia coriacea, oblongo-elliptica vel anguste obovata, 4-5.5 cm. longa, 1.8-2.2 cm. lata; apice acuta vel acuminata; basi cuneata vel obtusa; supra profunde viridia, maturitate glabra, costa media leviter impressa, nervis utrinsecus obsolete; subtus glauca, lepidoti fulva vel nigro-fulva, costa media prominente; petioli 6-10 mm. longi, lepidoti. Flores 3-vel 4-umbellati; bracteae fulvo-flavae, oblongo-obovatae vel obovatae, imbricatae, extra lepidotae, intus glabrae; pedicelli 6-10 mm. long, dense lepidoti; calyx parvus 1-2 mm. longus; lobi 5 minuti, late obtusi, extra lepidoti; corolla infundibuliformis, 3-3.5 cm. longa, 2 cm. diametro, flava vel flavida, basi tubi intra puberula, extra sparsissime lepidota, lobis 5, rotundatis vel obovatis, 1.5 cm. longis, 1.2 cm. latis; stamina 10, inaequalia, longiora 5 exserta, paullo breviora 5 inclusa; pistillum 3.5-4 cm. longum, ovarium conoideum, stylus glaber, leviter curvatus, stigmatibus capitatis. Fructus cylindricus lepidotus.

Shrub 2-3 metres high, branchlets slender, glabrous, grey or brownish grey, those below the florescence deep brown or blackish brown, densely scaly and with black glands. Leaves coriaceous, oblong-elliptical or narrowly obovate, 4-5.5 cm. long, 1.8-2.5 cm. broad; apex acute or acutely acuminate; base cuneate or obtuse; upper surface deep green, glabrous at maturity, midrib slightly impressed, primary veins inconspicuous; lower surface glaucous, scales brown or blackish brown, about their own diameter apart, midrib prominent; petioles 6-10 mm. long, scaly. Flowers 3 or rarely 4 in a terminal umbel, bracts brownish yellow, oblong-ovate or obovate, imbricate, scaly outside, glabrous inside; pedicels 6-10 mm. long, densely scaly; calyx small, 1-2 mm. long, 5-lobed, lobes broadly obtuse, scaly outside; corolla funnel-form, 3-3.5 cm. long, 2 cm. in diameter, yellow or light yellow, puberulous within near the base, sparsely scaly outside, lobes 5, rounded or obovate, 1.5 cm. long, 1.2 cm. broad; stamens 10, unequal, 5 longer ones exserted, 5 shorter ones included, filaments puberulous towards the base; pistil 3.5-4 cm. long, ovary conoid, scaly, style glabrous, slightly curved, stigma capitate. Fruit cylindrical, scaly.

MOUNT OMEI: Near the summit, in thickets, shrub 1 or 2 metres high, *W. P. Fang*, Nos. 2982 & 2983, August 14, 1928; same locality, in woods, shrub 1 or 2 metres high, flowers yellow, *Ching & Shun*, Nos. 216 & 219, June 14, 1931; Tien-men-shih, alt. 2900 m., in thickets, shrub 2-3 metres high, flowers light yellow, *C. L. Sun*, No. 2229, (type), May 27, 1940.

I had temporarily named the dry specimens collected from Mount Omei as *Rhodo Wongii*. After a careful field observation made in this region I find that it is really a new species differing from *Rhodo Wongii* by its flowers with corolla scaly outside and by its large leaves usually glaucous on the under surface. It is also related to *Rhodo triflorum* Hooker, f. et Thomson of the Himalayas, but the scales on the undersurface of its leaves are more scattered and larger than the scales of *Rhodo triflorum*. The scales on the outside of corolla are much larger in size and much fewer than in *Rhodo triflorum*.

This new species of *Rhododendron* is named in memory of my affectionate father, Mr. Chengshien Fang who died on the 1st of August, 1937 in our home, Chung-hsien, Szechuan, while I was in my way back to China from Europe.

.....W. P. Fang.

- Eig. 1, a flowering branch (natural size);
 2, the scales on the corolla (2 times enlarged);
 3, 2 stamens (5 times enlarged);
 4, a pistil (5 times enlarged);
 5, the scales on the undersurface of the leaf (10 times enlarged);
 6, a fruit (2 times enlarged);
 7, The inner surface of corolla (2 times enlarged).

圖版三十六

承先杜鵑

新種

石南科

灌木。高二至三公尺；小枝纖細，光滑無毛，灰色或棕灰色，生於花序下者深棕色或黑棕色，具濃密鱗斑及黑色腺點。葉革質，長方橢圓形或窄倒卵形，長四十至五十五公厘，闊十八至二十二公厘。先端銳形或銳形尖尾狀，基部楔形或鈍圓形，葉面深綠，長成之葉光滑無毛，中脈略凹，側脈不顯明，葉背藍綠色附有粉狀物，被棕色或棕褐色鱗斑。鱗斑間之距離等於其直徑之長，中脈突出；葉柄長六至十公厘。花三朵或四朵成一頂生繖形花序，苞片棕黃色，長方卵形或倒卵形，覆瓦排列，外側被鱗斑。內側光滑；花梗長六至十公厘，密生鱗斑；花萼小，長一至二公厘，具五裂片，寬闊鈍圓形。外側有鱗斑；花冠漏斗形，長三十至三十五公厘。直徑二十公厘，黃色或淡黃色，內側基部具細小柔毛，外側被鱗斑。具裂片五枚，圓形或倒卵形，長十五公厘，闊十二公厘；小蕊十本，不等長，較長五本伸於花冠之外。較短五本包於花冠之內。花絲基部具細小柔毛；大蕊長三十五至四十公厘，子房圓錐形，被鱗斑。花柱光滑無毛，微曲，柱頭頭狀。果實圓柱形，被鱗斑。

產峨眉山天門石海拔三千公尺之地，五月開花。

峨眉所採之臘葉標本，余曾暫名為王氏杜鵑（原產康定縣），但經在峨眉山詳細實地觀察後，知其實為一新種，此新種之特徵為具有外側被鱗斑之花冠及背面附有白粉之葉。又本種與喜馬拉亞山之三花杜鵑亦極相近，但其葉背及花冠外側之鱗斑較大且較稀少，與後者不同也。

此新種之命名，係紀念先父方承先先生。先父於二十六年八月一日逝世於四川忠縣，時余適在由歐歸國途中，特以先父之名名此新種，以誌哀悼。……文培

圖解：1. 着花之枝（原大）；2. 花冠外側之鱗斑（放大二倍）；3. 小蕊（放大五倍）；4. 大蕊（放大五倍）；5. 葉背之鱗斑（放大十倍）；6. 果實（放大二倍）；7. 花冠之裏面（放大二倍）。

Fig. 1. a flowering branch (natural size);
 2. the scales on the corolla (2 times enlarged);
 3. 2 stamens (5 times enlarged);
 4. a pistil (5 times enlarged);
 5. the scales on the undersurface of the leaf (10 times enlarged);
 6. a fruit (2 times enlarged);
 7. The inner surface of corolla (2 times enlarged).

MOUNT OMEI: Near the summit, in thickets, shrub 1 or 2 metres high, W. P. Fang, Nos. 2322 & 2323, August 14, 1937; same locality, in woods, shrub 1 or 2 metres high, flowers yellow, China & Japan, Nos. 216 & 218, June 14, 1931; Ten-men-shih, alt. 2900 m., in thickets, shrub 2-3 metres high, flowers light yellow, C. L. Su, No. 2322, (type), May 27, 1940.

I had temporarily named the dry specimens collected from Mount Omei as *Rhododendron*. After a careful field observation made in this region I find that it is really a new species differing from *Rhododendron* by its flowers with corolla scaly outside and by its large leaves usually glaucous on the under surface. It is also related to *Rhododendron* Hooker f. et Thomson of the Himalayas, but the scales on the undersurface of its leaves are more scattered and larger than the scales of *Rhododendron*. The scales on the outside of corolla are much larger in size and much fewer than in *Rhododendron*.

This new species of *Rhododendron* is named in memory of my affectionate father, Mr. Chengshien Fang who died on the 1st of August, 1937 in our home, Chung-shien, Szechuan, while I was in my way back to China from Europe.

.....W. P. Fang.

Fig. 1. a flowering branch (natural size);
 2. the scales on the corolla (2 times enlarged);
 3. 2 stamens (5 times enlarged);
 4. a pistil (5 times enlarged);
 5. the scales on the undersurface of the leaf (10 times enlarged);
 6. a fruit (2 times enlarged);
 7. The inner surface of corolla (2 times enlarged).

長尾植物圖志



36. *Rhododendron Chengshienianum* Fang.

Plate 37.

GAULTHERIA YUNNANENSIS (Franchet) Rehder.

Ericaceae.

Caultheria yunnanensis (Franchet) Rehder in Journ. Arn. Arb. XV (1934), 282.• 蕨草 • 半五葉 *Vaccinium yunnanensis* Franchet in Journ. de Bot. IX (1895), 369.• 蕨草 • 半五葉 *Gaultheria laxiflora* Diels in Engler, Bot. Jahrb. XXIX (1900), 515.

Shrub 3 rarely to 5 metres high, erect or sometimes prostrate; branches slender, glabrous, reddish or reddish green. Leave alternate, coriaceous, ovate-oblong or rarely ovate, 7-8 cm. long, 2.5-3.5 cm. broad, acuminate on the apex, cordate or rounded at the base, appressed crenate and slightly revolute on the margin, deep green and glabrous above, whitish green and puberulous beneath, primary nerves 6 to 8 pairs conspicuous above, prominent below; petioles 5 mm. long, stout, glabrous. Flowers greenish white, in axillary racemes or panicles 5 to 7 cm. long, calyx-lobes 5, acute or obtuse, 4 mm. long, 3 mm. broad, glabrous on both sides, ciliate on the margin; corolla urceolate, 6 mm. long, 4 mm. in diameter, lobes 5, 2 mm. long, 2 mm. broad; stamens 10, inserted at the base of corolla, anthers on short filaments, purple, with 2 awns; disk 10-lobed; ovary globose, pubescent, style glabrous, shorter than and included in the corolla, stigma capitate; pedicels 1 cm. long, slender, glabrous. Fruit a globose 5-valved capsule, with persistent style and enclosed by the fleshy calyx making the fruit berry-like; seeds minute, numerous.

MOUNT OMEI: Fu-hu-ssu, alt. 600 m., on grassy slopes; small tree 3 metres high, flowers white, sometimes purplish tinged, fruits black, *W. P. Fang*, No. 13707, November 15, 1939; same locality, on grassy slopes, small tree 3 to 5 metres high, branches reddish, leaves coriaceous, fruits black, occasionally, *W. P. Fang*, No. 13750, December 20, 1939; same locality, *W. P. Fang*, No. 13769, January 6, 1940; without precise locality, *C. W. Yao*, Nos. 2905 & 4499, in 1939.

A very ornamental shrub grows at the foot of Mt. Omei usually on grassy slopes or at the side of thickets.W. P. Fang.

- Fig. 1, a flowering branch (natural size);
 2, a flower dissected to show the calyx and pistil (5 times enlarged);
 3, a corolla dissected to show the stamens (5 times enlarged).

圖版三十七

滇白珠樹

石南科

灌木高三公尺，罕達五公尺，直立間或匍匐；枝細長，無毛，帶紅色或帶紅綠色。葉互生，革質，卵狀長方形或罕成卵形，長七至八公分，闊二十五至三十五公厘，先端尖尾狀，基部心臟形或圓形，葉緣鈍齒形，略向外捲，葉面深綠色，無毛，葉背青白色，被細小柔毛，側脈六至八對，在葉面清晰可見。在葉背突起，葉柄長五公厘，粗短，無毛。花青白色，成腋生總狀花序或圓錐花序，長五至七公分；萼片五枚，銳利或鈍圓，長四公厘，闊三公厘，兩面光滑無毛，惟邊緣有纖毛；花冠壺形，長六公厘，直徑四公厘，裂片五枚，長闊各二公厘；小蕊十本，着生花冠基部，花藥生於短花絲上，紫色，具二距；花盤分裂成十裂片；子房圓球形，被毛。花柱光滑，短於花冠，且包於其內，柱頭頭狀；花梗長一公分，纖細，光滑無毛。果實為球狀五瓣縱裂蒴果，花柱宿存其上，宿存花萼變為肉質，包圍果外而使果實似漿果狀；種子細小，多數。

產峨眉山伏虎寺附近山坡上，海拔高度約六百公尺處，習見於草坡叢林之邊，花期在九月間，為峨眉山脚之極有觀賞價值之灌木。

圖解：1. 着花之枝（原大），2. 花萼及大蕊（放大五倍），3. 花冠解剖以示小蕊（放大五倍）

A very ornamental shrub grows at the foot of Mt. Omei usually on grassy slopes or at the side of thickets. W. P. Fang. January 6, 1940; without precise locality, C. W. Yao, Nos. 2902 & 4499, in 1939. occasionally, W. P. Fang, No. 12750, December 20, 1939; same locality, W. P. Fang, No. 12763, on grassy slopes, small tree 2 to 3 metres high, branches reddish, leaves coriaceous, fruits black, white, sometimes purplish tinged, fruits black, W. P. Fang, No. 12707, November 15, 1939; same locality.

Fig. 1. a flowering branch (natural size);
2. a flower dissected to show the calyx and pistil (5 times enlarged);
3. a corolla dissected to show the stamens (5 times enlarged).

峨眉植物圖志



37. *Gaultheria yunnanensis* (Franchet) Rehder.

Plate 38.

VACCINIUM OMEIENSE Fang.

Ericaceae.

Vaccinium omeiense Fang, sp. nov.

Frutex circiter 50 cm. altus; ramuli hornotini purpureo-virides vel subflavo-virides, cinereo-pubescentes, annotini cinerei vel fusco-cinerei, pubescentes. Folia alternata, coriacea, elliptica, elliptico-oblonga vel obovato-oblonga, 2.5-3.2 cm. longa, 1.2-1.6 cm. lata, apice acuta, basi late cuneata vel cuneata, margine integra et revoluta, costa media supra leviter depressa subtus leviter elevata, nervia utrinsecus plerumque supra inconspicuis (sensim) et subtus leviter elevatis glabris utrinque, costa media supra et subtus sparse villosa excepta; petioli 3 mm. longi, pubescentes. Flores in racemosi axillaribus solitariis, 2.5-3 cm. longi; rhachi viridi vel rubro-viridi, glabri; bractee 6, imbricatae, rubescens vel rubro-flavae glabrae, margine ciliatae excepta, ovatae vel ellipticae, 5-7 mm. longae, 2-3 mm. latae, caducae; calyx campanulatus, glaber, profunde, rubrus, 2 mm. longus, 2-3 mm. latus, lobis 5, triangularibus 1 mm. longis, 1-1.5 mm. latis, glabris; corolla rubra vel purpureo-rubra, glabra, urceolata, 4-5 mm. longa, 4 mm. diametro, extra glabra, intra sparse pubescentes, calyx-lobis acutis, 1 mm. longis; stamina 10, calice inserta, antheris extrorsis, flavis, 3 mm. longis, 2-locularibus attenuatis in 2-tubos cylindricos et 2-aristatis, filamentis 1-1.5 cm. longis leviter flexis, pubescentibus, ovarium inferum 10-loculare, ovulis plures in 1-loculari; stylus gracilis glaber leviter flexus ab apice, stigmatibus minutis: pedicelli 3-4 mm. longi. Fructus globosus baccaus.

Shrub about 50 cm. high; branchlets of one year old purplish-green or yellowish green, greyish pubescent, those of more than one year old grey or brownish grey, pubescent. Leaves alternate, coriaceous, elliptical, elliptical-oblong or obovate-oblong, 2.5-3.2 cm. long, 1.2-1.6 cm. broad, acute on the apex, broadly cuneate or cuneate at the base, entire and revolute on the margin, main-rib slightly depressed above and slightly raised below, lateral nerves usually inconspicuous above and slightly raised below, glabrous on both sides except sparsely villous on the main-rib of both surfaces; petioles 3 mm. long, pubescent, on a decurrent base. Flowers in axillary solitary racemes 2.5-3 cm. long, rhachis green or reddish green, glabrous, bracts 6, imbricate, reddish or reddish yellow, glabrous except ciliate on the margin, ovate or elliptical, 5-7 mm. long, 2-3 mm. broad, caducous, calyx campanulate, glabrous, deep red, 2 mm. long, 2-3 mm. broad, with 5 triangular lobes, 1 mm. long, 1-1.5 mm. broad, glabrous, corolla red or purplish red, glabrous, urceolate, 4-5 mm. long, 4 mm. in diameter, glabrous outside, sparsely pubescent inside, corolla-lobes acute, 1 mm. long, stamens 10, inserted on the calyx near the base of and included in corolla, anthers extrorse yellow, 3 mm. long, 2-celled, tapering into 2 cylindrical tubes, and with 2 aristae, filaments 1-1.5 mm. long, slightly curved, pubescent, ovary inferior, 10-celled, ovules several in each cell, styles slender, glabrous, slightly curved near the apex, slightly longer or as long as the corolla, stigma minute, pedicels 3-4 mm. long. Fruit a small globose berry.

MOUNT OMEI: Near Hsi-hsiang-ch'ih, shrub 50 cm. high, young branchlets greenish or yellowish brown, pubescent, flowers red, urceolate, calyx purplish, *W. P. Fang*, No. 16895, June 13, 1941.

This new species is near *Vaccinium pumilum* Kurz of Burma. It, however, differs from that species by its glabrous racemous inflorescence and glabrous calyx as well as the entire leaves.

.....W. P. Fang.

- Fig. 1. a flowering branch (natural size);
 2. a flower (enlarged 10 times);
 3. a flower having corolla removed to show the stamens (enlarged 10 times);
 4. a stamen (enlarged 10 times);
 5. an ovary crossly dissected (enlarged 20 times);
 6. an ovary longitudinally dissected (enlarged 20 times);
 7. a leaf with its petiole (enlarged 10 times).

圖版三十八

峨眉珍珠樹新種

石南科

灌木，高約五十公分。一年生幼枝綠色帶紫或黃綠色，被淡灰色毛，一年以上之幼枝灰色或棕灰色，被毛。葉互生，革質，橢圓長方形，或倒卵長方形，長二十五至三十二公厘，闊十二至十六公厘，先端尖銳，基部闊楔形或楔形，邊緣完整外捲，主脈在葉面微凹，在葉背微凸，側脈通常在葉面不顯明，在葉背稍微突起，兩面光滑，僅主脈被稀疏絨毛；葉柄長三公厘，被毛，基部向下生長貼於莖上。花成單獨之總狀花序，生於葉腋，長二十五至三十公厘，花軸綠色或紅綠色光滑無毛，苞片六枚，覆瓦狀，紅色或紅黃色，除邊緣具纖毛外全部光滑無毛，卵形或橢圓形，長五至七公分，闊二至三公厘，早落，花萼鐘形，光滑無毛，紅色，長二公厘，闊二至三公厘，裂片五枚，三角形，長一公厘，闊一至一公厘半，光滑無毛，花冠紅色或紫紅色，光滑無毛，壺形，長四至五公厘，直徑四公厘，外部光滑，裏面被毛甚少，裂片尖銳，長一公厘，小蕊十本，插生於近花冠基部之萼片處，包圍於花冠裏面，花藥外向，黃色，長三公厘，二室，漸窄成二圓柱狀管，並具二芒於其側，花絲長一至一公厘半，微曲，被毛，子房下位，十室，胚珠每室數個，花柱細長，光滑無毛，近尖端處稍曲，與花冠等長或稍長，柱頭細小，小花梗長三至四公厘，果實圓球形小漿果。

產於峨眉山洗象池附近森林中。

此新種近於 *Vaccinium Pumilum* Kurz (原產緬甸)，而有別於該種者為其光滑無毛之總狀花序，光滑無毛之萼片及全緣之葉。

圖解：1. 着花之枝（原大）；2. 花（放大十倍）；3. 移去花冠之花以示小蕊（放大十倍）4. 小蕊（放大十倍）；5. 子房之橫切面（放大二十倍）；6. 子房之縱切面（放大二十倍）；7. 葉及其柄（放大十倍）。



峨眉植物圖志



38. *Vaccinium omeiense* Fang

Plate 39.

VACCINIUM CHENGAE Fang.

Ericaceae.

Vaccinium Chengae Fang, sp. nov.

Frutex sempervirens 50 ad 150 cm. altus, plerumque semiprostratus. Ramuli hornotini angulati, purpureo-virides vel brunneo-virides, raro cinerei, pilosi, annotini cinerei vel fusco-cinerei, glabri. Folia alternata, crasse coriacea, glabra, elliptica vel elliptico-oblonga, 1.7-2.2 cm. longa, 1-1.4 cm. lata, apice et basi obtusa vel subrotundata, margine integra et revoluta, supra profunde viridia et rugosa, subtus pallide viridia et plerumque concava, glabra utrinque, costa media leviter elevata utrinque, nervis utrinsecus obsoletis; petiolo 2 mm. longo, piloso. Flores 2-4 plerumque 3 corymbosa axillaria; bracteae 2 ad 3 parvae, acutae vel ellipticae, 1 mm. longae, margine sparse ciliatae; calyx subglobosus 2 mm. longus, 2 mm. diametro, purpureo-viridis, glaber; calyx-lobis 5, triangularis, 1.5-2 mm. longis, margine ciliatis; corolla urceolata, 5-7 mm. longa, 4 mm. diametro, alba vel flavo-alba, lineis saturatis puncea, glabrescenta utrinque; corolla lobis 5, triangulato-ovatis, 2 mm. longis; stamina 10, calice inserta, inclusa in corolla, filamentis sparse pubescentibus, antheris flavis, 2-aristatis; ovarium inferum leviter albo-pubescentibus, falso 10-loculare stylus gracilis glaber, stigmate minute; pedicelli 5-8 mm. longi, graciles glabrescentes. Fructus purpureus globosus, baccae 6-8 mm. diametro, calyx-lobis persistentibus.

Shrub evergreen 50 to 150 cm. high, usually semiprostrate; branchlets of one year old angulate, purplish-green or brownish green, rarely greyish, pilose, those of more than one year old grey or brownish grey, glabrous. Leaves alternate, thick, coriaceous, glabrous, elliptical or elliptical-oblong, 1.7-2.2 cm. long, 1-1.4 cm. broad, obtuse or subrotund on both ends, entire and revolute on the margin, deep green and rugose above, pale green below, glabrous on both sides, main-rib slightly raised on both surfaces, lateral nerves obsolete; petioles 2 mm. long, pilose. Flowers 2-4 usually 3 in an axillary corymbose inflorescence, bracts 2 to 3 pairs, acute or elliptical, 1 mm. long, sparsely ciliate on the margin; calyx subglobose, 2 mm. long, 2 mm. in diameter, purplish-green, glabrous, calyx-lobes 5, triangular, 1.5-2 mm. long, ciliate on the margin; corolla urceolate, 5-7 mm. long, 4 mm. in diameter, white or yellowish white, pinkish striped, glabrescent on both sides, corolla-lobes 5, triangular-ovate, 2 mm. long, stamens 10, inserted on the calyx, included in the corolla, filaments sparsely pubescent, anthers yellow, with 2 awns; ovary inferior, slightly white-pubescent, falsely 10-celled, style slender, glabrous, stigma minute; pedicels 5-8 mm. long, slender, glabrescent. Fruit a purplish, globose berry 6-8 mm. in diameter, with persistent calyx-lobes near the summit.

MOUNT OMEI: Fang-fang-ti, alt. 1200 m., small tree 1.5 metres high, fruits red, globose, *W. P. Fang*, no. 15602, November 30, 1930; Su-kang, shrub 60 cm. high, leaves thick coriaceous, punctate beneath, flowers white and pinkish striped, bell-shaped, *W. P. Fang*, no. 16682, May 20, 1941; without precise locality, *C. W. Yao*, no. 3901, in 1939; without precise locality, *W. C. Cheng* no. 10561, June 10, 1940.

This new species is closely related to *Vaccinium conchophyllum* Rehder, from which it differs apparently by the much larger leaves and by the corymbose inflorescence.

This new species is named after Miss C. Y. Cheng, curator of the herbarium of the Biological Department of the National Szechuan University for her assiduous attention and skillful treatment the herbarium has been favourably improved.W. P. Fang.

- Fig. 1, a flowering branch (natural size);
 2, a flower (10 times enlarged);
 3, the pistil and calyx (10 times enlarged);
 4, The stamens and the inner surface of the corolla (10 times enlarged);
 5, the stamen and awns (10 times enlarged);
 6, an ovary crossly dissected (20 times enlarged);
 7, a fruit (natural size).

圖版三十九 誠君珍珠樹 種新

石南科

常綠灌木，高五十至一百五十公分，常呈半匍匐狀；一年生小枝方形，紫綠色或棕綠色，罕為淡灰色，被散生長毛，一年以上者灰色或棕灰色，光滑無毛。葉互生，厚革質，光滑無毛，橢圓形或橢圓長方形，長十七至二十二公厘，闊十至十四公厘，兩端均呈鈍圓形，葉緣完整，向外捲曲，葉面深綠色有裂紋，葉背蒼白綠色，兩面光滑無毛，中脈在兩面均稍凸起，側脈退化不明；葉柄長二公厘，被散生長毛。花二至四枚通常為三枚成腋生繖房花序，苞片二至三對，銳形或橢圓形，長一公厘，邊緣被稀少纖毛；花萼近於圓球形，長二公厘，直徑二公厘，紫綠色，裂片五枚，三角形，長一公厘半至二公厘，邊緣圍以纖毛；花冠壺形，長五至七公厘，直徑四公厘，白色或黃白色，鑲以淡紅色條紋，兩面均近於光滑無毛，裂片五枚，三角卵形，長二公厘；小蕊十本，插生花萼上，短於花冠，花絲略被毛，花藥黃色，具錐鬚二枚；子房下位，略被白色毛，十室，隔分不全，花柱纖細，光滑無毛，柱頭細小；花梗長五至八公厘，纖細，近於無毛，果為淡紫色球形漿果，直徑六至八公厘，花萼宿存於近頂端處。

產峨眉山方方地，蘇崗等處。海拔一千二百公尺左右，五月開花。

此新種與貝葉珍珠樹有極近之親緣，所以別於該種者，為其具有較大之葉及繖房花序。

圖解：1. 着花之枝（原大）；2. 花（放大十倍）；3. 大蕊及花萼（放大十倍）4. 小蕊及花冠之內側（放大十倍）；5. 小蕊及其錐鬚（放大二十倍）；6. 子房橫切面（放大二十倍）；7. 果實（原大）。

MOUNT OMEI, Fang-lang-shi, alt. 1200 m., small tree 1.5 metres high, fruit red, globose, W. F. Fang, no. 15502, November 30, 1938; Su-lan-shi, alt. 80 cm. high, leaves black coriaceous punctate beneath, flowers white and pinkish striped, bell-shaped, W. F. Fang, no. 15522, May 20, 1941; without precise locality, C. H. Yao, no. 2801, in 1938; without precise locality, W. C. Cheng, no. 10267, June 10, 1940.

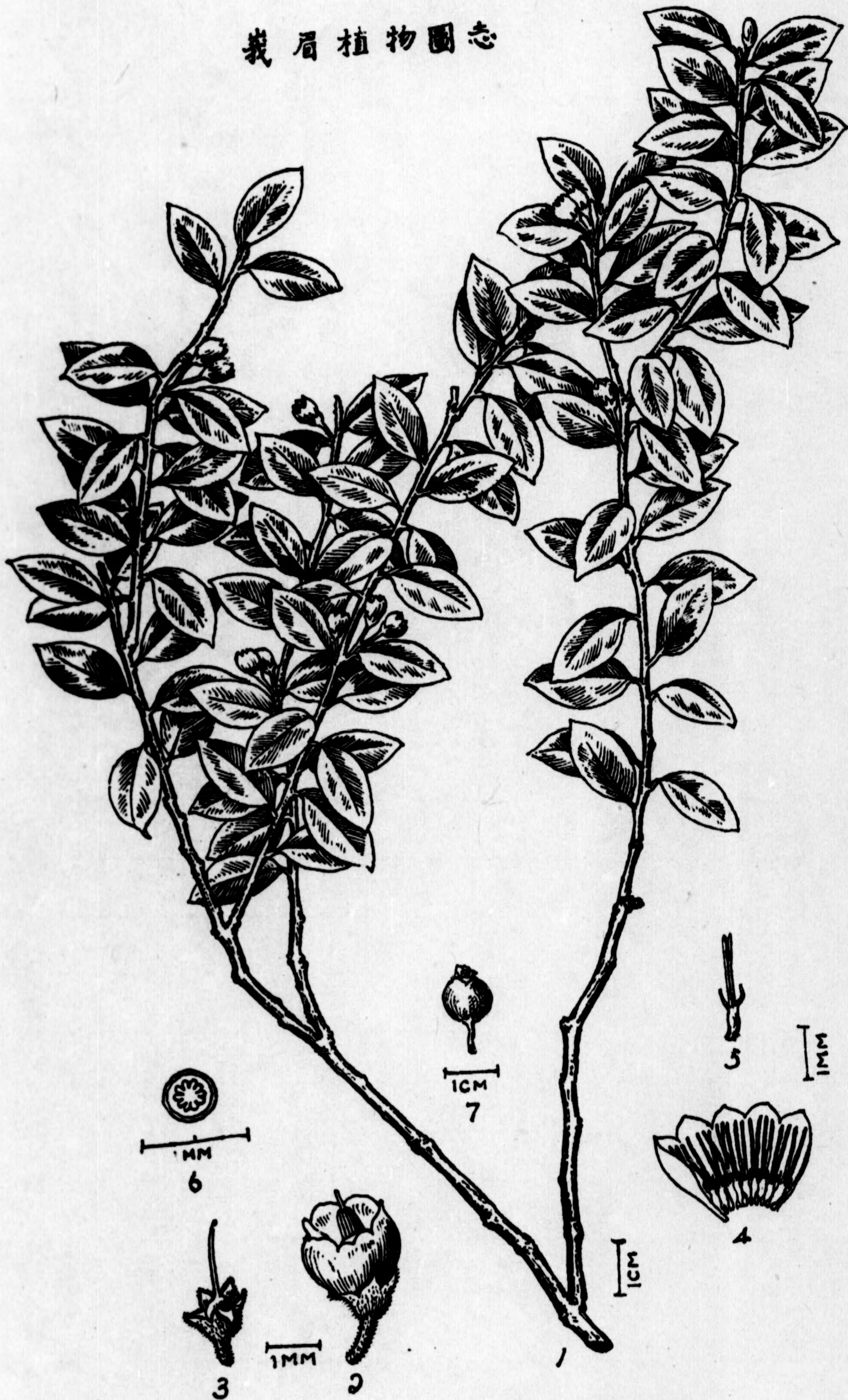
This new species is closely related to *Vaccinium conchophilum* Rehd., from which it differs apparently by the much larger leaves and by the corymbose inflorescence.

This new species is named after Miss G. Y. Cheng, curator of the herbarium of the Biological Department of the National Szechuan University for her assiduous attention and skillful treatment the herbarium has been favourably improved.

W. F. Fang

- Fig. 1. a flowering branch (natural size);
 2. a flower (10 times enlarged);
 3. the pistil and calyx (10 times enlarged);
 4. The stamens and the inner surface of the corolla (10 times enlarged);
 5. the stamen and awns (10 times enlarged);
 6. an ovary cross-section (20 times enlarged);
 7. a fruit (natural size).

峨眉植物圖志



39. *Vaccinium Chengae* Fang

Plate 40.

PRIMULA CALCIPHILA, Hutchinson,

Primulaceae.

Section Sinensis, Pax.

Primula calciphila Hutchinson in Kew Bull. Misc. Inform. (1923), 97.

Plant about 25-30 cm. high, covered with hirsute hairs all over. Rootstock 1-2 cm. long, rather thick with long fibrous roots. Leaves all basal: petioles 8-18 cm. long, densely covered with long hirsute hairs; lamina 5-8 cm. across, rounded to cordate, deeply lobed, lobes rounded obtuse, margin coarsely serrate, deep green, sparsely hirsute above, pale green, hirsute along the nerves below. Scapes several, usually 3-6, 20-30 cm. long, above or under the leaves; peduncle densely hirsute with a single many-flowered umbel. Flowers purplish pink, about 2.5-3 cm. across, with bright yellow eyes. Bracts 1 cm. long, linear-lanceolate. Pedicels 2-3 cm. long, densely hirsute. Calyx inflated, truncate at base, 1-1.5 cm. long with 5 acute-triangular lobes, sparsely covered with hirsute hairs. Petals 1 cm. long, obovate or cordate, deeply emarginate, tube exerted about 3-5 mm long, white or pale pinkish white. Capsule rounded ovate. Seeds dark chocolate coloured, angular in shape.

MOUNT OMEI: Ching-yin-ko, alt. 900 m., on cliffs, herb 30-50 cm. high, flowers pinkish white, rare, T.C.Lee, No. 4513, April 2, 1940; Hei-lung-kiang, alt. 950 m., herb 30 cm. high, flowers violet, W.P.Fang, No. 15744, January 4, 1941; Wan-nien-ssu, alt. 1041 m., herb about 20 cm. high, flower pinkish-purple or rosy-violet, W.P.Fang, No. 18161, March 16, 1942; Niu-hsin-ssu, alt. 1200 m., on cliffs, herb 10-40 cm. high, leaves green above, purple below, hairy on both surfaces, flowers purplish, occasionally, W.P.Fang, No. 18100, January 28, 1942.

It is very interesting to see that this pretty charming plant has been hitherto found in the famous mountain of Omei. This plant was discovered by Henry and later by Wilson in West Hupeh. The material of these specimens collected by both Henry and Wilson were studied by Mr. Hutchinson, from which he described the plant as a new species which is closely related to the old species *P. sinensis* Sabine et Lindley.

Considering *P. sinensis* Sabine et Lindley, the species described, was based on the cultivated plant which was brought from Hongkong to Scotland in 1820. From what part of China the plant was brought to Hongkong and then to British Isles is unknown. Undoubtedly, this plant had long been cultivated in China. But what date the plant was introduced into cultivation is very vague. In the early Chinese botanical book, *Chi wu ming shih tu kao*, written by Wu Chi-chun in 1848, in which a plant called "*Tsang-pao-chuan*" or the Tibetan Spring Flower is recorded and illustrated with a vivid drawing which refers to *P. sinensis* without demur. Herewith a brief description of this plant written by Wu Chi-chun is rendered into English as follows: "The leaves of this plant are very much like that the leaves of *Malva* and all basal in nature with several deep lobes; the petioles are long and slender. The flowers come out in early spring from the scapes which are similar to that of 'Pao chuan' or **P. malacoides* Franchet. The scapes usually bear several whorls of flowers, each of which consists of 4-5 flowers".

The character of superimposed umbels is not often found in normal *P. sinensis*, except in *P. Balf.f. et Farrer* and a few garden forms, in which superimposed umbels are sometimes found. The other part of Wu Chi-chun's description quite agrees to *P. sinensis*.

P. rupestris Balf.f. et Farrer, a species from Kansu collected by Reginald Farrer, is another plant related to *P. sinensis*, differing from which in smaller leaves and longer pedicels. It is a puzzle whether *P. sinensis* is derived from the wild plants of *P. calciphila* or *P. rupestris*. According to the general structure of these three species, they are quite alike to each other. The difference so far I can find out only the size of the leaves and flowers and the length of petioles, pedicels, etc. Apparently, the cultivated form of *P. sinensis* has much larger leaves and flowers and shorter pedicels than its allies.

According to Wu Chi-chun, *P. sinensis* is found in South Yunnan. So far we know that there is no record as yet of the occurrence of this species in Yunnan nor in Tibet.

Feng-hwai chen,

Yunnan Botanical Institute,
Kunming, Yunnan, 1941

Fig. 1, a flowering plant (natural size):

2, a corolla dissected to show the stamens (5 times enlarged);

3, a flower dissected to show the pistil (5 times enlarged).

* Feng-hwai Chen: Primulas recorded in *Chi wu Ming shih tu kao*, in *Chinese Botanical Magazine*, Vol III, No.4 (1936), 1264.

圖版四十

鄂報春

報春科

Plant about 25-30 cm. high, covered with fine hairs all over. Rootstock 1-2 cm. long, rather thick with fibrous roots. Leaves all basal, densely covered with fine hairs. Leaves 5-8 cm. long, rounded to cordate, deeply lobed, lobes rounded obtuse, margin coarsely serrate. Petiole 2-3 cm. long, rounded to cordate, lobes rounded obtuse, margin coarsely serrate. Surface dark green, with sparse hairs, underneath pale green, with sparse hairs. Inflorescence terminal, branched, with several flowers. Flowers 2-3 cm. long, purple-pink, with yellow center. Calyx 1 cm. long, linear-lanceolate, with sparse hairs. Petal 1 cm. long, ovate or cordate, with shallow notch at apex, tube 3-5 cm. long, white or pinkish. Ovary rounded, seeds blackish-brown, angular in shape.

原產鄂西。近始發現於峨眉山之清音閣黑龍江牛心寺萬年寺等處。早春一至三月開花，甚美麗。按此種報春花前在鄂西發現多次，亨利及威爾遜二氏先後皆採得之，哈欽松氏根據此項材料認為一新發現，乃命名為 *P. calciphila*，其形態則與藏報春 *P. sinensis* 甚近也。

考藏報春一種係根據栽培之植物而命名。蓋遠在西曆一八二十年，英人自香港將此植物帶歸於英之蘇格蘭栽培之，但在我國由何處引歸栽培，而帶至香港則無從稽攷。然植物在我國栽培有悠久之歷史，無疑問矣。根據較詳之記載為吳其濬之植物名實圖考，其中所載藏報春，并附一圖與余所指為 *P. sinensis* 絕無絲毫錯誤，但其簡單說明亦甚符合。不過僅謂「花出苞上，一萼數層，一層四五苞」與 *P. sinensis* 略有出入，但與此種相近之種 *P. rupestris* 及栽培之品種亦有此現象。

按 *P. rupestris* 採自甘肅，為一與藏報春相近之植物，但其萼小，花梗較長，此三種植物，按其形態大致彷彿，無甚出入，其不同者，僅花葉大小長短而已。在形態上既無特殊之區別，則栽培之藏報或係由野生之鄂報春或甘肅報春，引歸栽培，亦屬可能。吳其濬謂藏報春來自雲南南部及西藏，但根據植物之調查此二處皆未嘗發現此種植物，故藏報春來自何處尚無從探悉也。

圖解：1. 着花植物之全形（原大）； 2. 花冠之裏面及小蕊（放大五倍）； 3. 大蕊及花萼（放大五倍）。

The character of superposed umbels is not often found in normal *P. sinensis*, except in *P. rupestris* Ball. et Farner and a few garden forms in which superposed umbels are sometimes found. The other part of Wu Chi-chun's description quite agrees to *P. sinensis*. *P. rupestris* Ball. et Farner, a species from Kansu collected by Reginald Farner, is another plant related to *P. sinensis*, differing from which in smaller leaves and longer pedicels. It is a puzzle whether *P. sinensis* derived from the wild plants of *P. calciphila* or *P. rupestris*. According to the general structure of these three species, they are quite alike to each other. The difference so far I can find out only the size of the leaves and flowers and the length of pedicels, etc. Apparently, the cultivated form of *P. sinensis* has much larger leaves and flowers and shorter pedicels than its allies. According to Wu Chi-chun, *P. sinensis* is found in South Yunnan. So far we know that there is no record as yet of the occurrence of this species in Yunnan nor in Tibet.

Feng-hwai chen,
Yunnan Botanical Institute,
Kunming, Yunnan, 1941

Fig. 1. A flowering plant (natural size);
2. A corolla dissected to show the stamens (5 times enlarged);
3. A flower dissected to show the pistil (5 times enlarged).

* Feng-hwai Chen: Primulas recorded in Gih-wu Ming-shih tu kao, in Chinese Botanical Magazine, Vol. III, No. 4 (1935), 1941.

我國植物圖志



40. *Primula calciphila* Hutchinson

Plate 41.

PRIMULA FABERI Oliver

Primulaceae.

Sect. Amethystina Balf. f.

Primula Faberi Oliver in Hooker f. Icon. Pl. XVIII (1888), t. 1789

Glabrous efarinose perennial herb, with thick and harsh fibrous roots. Leaves subcoriaceous to chartaceous, shining dark green above, pale green below, 5-10 cm. long, 1.5-2 cm. wide, oblong-ovate or obovate, acute, cuneate or attenuate at base, margin sharply mucronulate; petioles winged, about 1 cm. long. Scape up to 24 cm. high, with 2-10-flowered head-like umbel. Bracts large, foliaceous, about 15-18 mm. long, 4 mm. wide, lanceolate oblong-obtuse; pedicels very short or nearly sessile. Calyx 8-10 mm. long, campanulate, lobes about the length of the tube, lobes oblong-lanceolate. Corolla yellow, narrow campanulate, about 1.5-2 cm. across, 2.5 cm. long, lobes 1 cm. long, oblong-obtuse, entire.

MOUNT OMEI: Chien-fu-ting, alt. 3139 m., at roadside, herb 20 to 30 cm. high, flowers light yellow, common, *C. L. Sun*, No. 2841, July 18, 1940; same locality, herb 20-30 cm. high, flowers yellowish, *W. P. Fang*, No. 17356, July 14, 1941.

Type comes from Mount Omei, extending as far as to Da-liang-shan Mountains and Pao-hsing-hsien, further west to I'-ma-shan and Ta-hai in North-western Yunnan.

The character of the short pedicels in this species is related to *Primula argutidens* Franchet, but differs from which by the larger leaves, longer scape and larger bracts, by the long cylindrical flower tube and by the bright yellow corolla.

Feng-hwai Chen,

Yunnan Botanical Institute,

Kunming,

July, 1941.

- Fig. 1, a flowering plant (natural size);
 2, a corolla dissected to show the stamens (2½ times enlarged);
 3, the pistil and calyx (2½ times enlarged);
 4 & 5, an ovary dissected (20 times enlarged).

圖版四十一 費伯報春

報春科紫花組

光滑無粉之多年生草本。鬚根粗糙。葉質或呈紙質，表面甚光澤，深綠色，下面暗淺綠色。五至十分長。一公分半至二公分寬，長橢圓形或倒卵形，基部楔形或漸尖狹成葉翼，邊緣鋸齒突尖，葉柄翼狀，約一公分長。花總梗達二十四公分高，具二至十個花朵之繖形花序，花苞大，呈葉狀，約十六至十八公厘長，四公厘寬，披針形或長圓形，花梗極短幾呈無柄，花萼八至十公厘長，鐘形，形萼片長度與萼筒相等，長披針形。花冠黃色，直徑約一至二公分半，圓筒形，花瓣長圓形，一公分長，前端全緣。

產峨山千佛頂一帶，在海拔三千餘公尺之上，按此種首次在峨山發現，以後在大梁山，寶興先後採得之，雲南西北部亦多有分佈。

此種與缺葉報春甚相近，但其異點為葉較大，花總梗較長，花苞較大，花冠長呈圓筒形，而花呈鵝黃色，此為此組中較少見者，蓋大多數種類皆具紫色之花冠。

圖解：1. 着花植物之全形（原大）；2. 花冠解剖後以小蕊（放大二倍半）；3. 大蕊及花萼（放大二倍半）；4及5. 子房解剖後以示胎座（放大二十倍）。

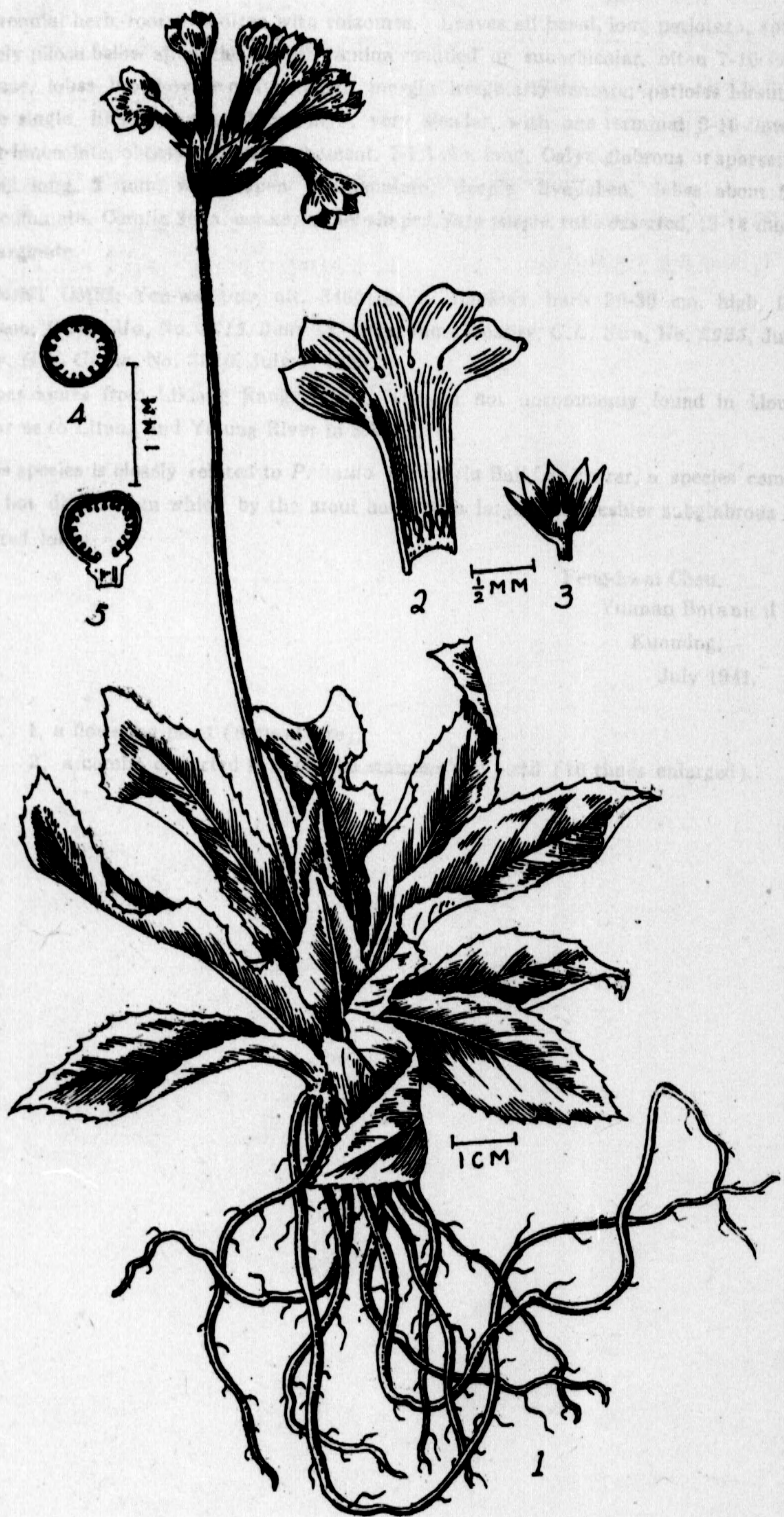
The character of the short pedicels in this species is related to *Primula arvensis* Franchet but differs from which by the larger leaves, longer scape and larger bracts, by the long cylindrical flower tube and by the bright yellow corolla.

Feng-hwei Chen,
Yunnan Botanical Institute,
Kunming,
July, 1941.

Fig. 1. a flowering plant (natural size);
2. a corolla dissected to show the stamens (2 1/2 times enlarged);
3. the pistil and calyx (2 1/2 times enlarged);
4 & 5. an ovary dissected (20 times enlarged).

PRIMULA SETTEMLOBA Prunell.

峨眉植物圖志



41. *Primula Faberi* Oliver

二十四號圖
Plate 42,
PRIMULA SEPTEMLOBA Franchet.

Primulaceae.

Sect. Cortusoides Balf.f.

Subsect. Geranioides W.W. Smith.

Primula septemloba Franchet in Bull. Soc. Bot. France, XXXII (1888), 265.

Perennial herb, rootstock often with rhizomes. Leaves all basal, long petiolate, sparsely pilose above, densely pilose below along the nerves; lamina rounded or suborbicular, often 7-10 lobed, deeply cordate at base, lobes broad-ovate or triangular, margin irregularly dentate; petioles hirsute, 9-15 cm. long. Scape single, hirsute, up to 30 cm. high, very slender, with one terminal 5-10-flowered umbel. Bracts linear-lanceolate, obtuse, pedicels pubescent. 1-1.5 cm. long. Calyx glabrous or sparsely pubescent, about 8 mm. long, 8 mm. wide, open campanulate, deeply five-lobed, lobes about 5 mm. long, lanceolate, acuminate. Corolla 2 cm. across, funnel-shaped, rose-purple, tube exserted, 12-14 mm. long, lobes obovate, emarginate.

MOUNT OMEI: Yen-wang-po, alt. 2400 m., in thickets, herb 20-30 cm. high, flowers dark purple, common, *W.W. Ma*, No. 2615, June 24, 1940; same locality, *C.L. Sun*, No. 2925, July 21, 1940; same locality, *H.C. Chow*, No. 7710, July 1, 1938.

Types comes from Likiang Range, N.W. Yunnan, not uncommonly found in Mount Omei; it extends as far as to Litang and Yulong River in Sikang.

This species is closely related to *Primula alsophila* Balf.f. et Farrer, a species comes from Tao River Basin, but differs from which by the stout habit with larger and fleshier subglabrous leaves with sharply pointed lobes.

Feng-hwai Chen,
Yunnan Botanical Institute,
Kunming,
July 1941.

Fig. 1, a flowering plant (natural size);

2, a corolla dissected to show the stamens and pistil (10 times enlarged).

圖版四十二 七缺葉報春

報春科，柯氏報春組，攏牛兒葉亞組。

多年生草本，根部常具地蔓莖，葉基生，柄長，上面具剛毛，下面剛毛沿葉脈較稠密，葉片圓形或近圓形，常具七至十缺刻，基部心臟形，缺刻闊卵形或三角形，邊緣具不整齊之鋸齒，葉柄多剛毛，九至十五公分長，花總梗單獨，多剛毛，達三十公分高，甚柔軟，頂端具五至十花朵之繖形花序，花苞線狀披針形，圓禿，花梗具纖毛，一至一公分半長，花萼光滑或具稀疏纖毛，約八公厘長，八公厘寬，闊鐘形，萼片深缺約五公厘長，披針形，前端漸尖狹，花冠二公分之直徑，紫紅色，花筒露出約十二至十四公厘長，花瓣倒卵形，前端凹缺。

產峨山關王坡一帶。此種係在雲南麗江山脈中發現，但峨山與西康之理化及雅龍江區域亦多有分佈。此種與甘肅洮河之蔓莖報春相近，但其異點為較高之花，較大之葉而不甚多毛。

圖解：1. 着花及葉之植物全形，（原大）；2. 花冠解剖以其小蕊及大蕊（放大十倍）。

MOUNT OMEI: Yen-wang-po, alt. 2400 m., in thickets, herb 20-30 cm. high, flowers dark purple, common. W. W. Ma, No. 2815, June 24, 1948; same locality, C. C. Shui, No. 2822, July 21, 1948; same locality, H. C. Gao, No. 2810, July 1, 1938. Types come from Likiang Range, N.W. Yunnan, not uncommonly found in Mount Omei; it extends as far as to Likiang and Yuhang River in Szechuan. This species is closely related to *Primula alaphila* Ball. et Ferrer, a species comes from Tso River basin, but differs from which by the stout habit with larger and lessier subglabrous leaves with sharply pointed lobes.

Feng-hwei Chen,
Yunnan Botanical Institute,
Kunming,
July 1941.

Fig. 1. A flowering plant (natural size);
2. A corolla dissected to show the stamens and pistil (10 times enlarged).

峨眉植物圖志



42. *Primula septemloba* Franchet

三十四號圖
Plate 43.
PRIMULA OBCONICA Hance.

Primulaceae. 报春科

Sect. Obconica Balf. f.

Subsect. Euobconica Chen, subsect. nov.

Folia longe petiolata margine irregulariter dentata, lobata vel integrae. Scapus robusta usque supernus foliosus. Calyce late obconica cum reticulato-hirsuta.

Primula obconica Hance in Journ. Bot. XXIII (1880), 236.

Perennial herb often covered with flat transparent or brown articulate hirsute hairs all over. Leaves long petiolate; lamina about 5-11 cm. long, 4-9 cm. wide, ovate to suborbicular, rounded or cordate at base, membranaceous to chartaceous, sparsely hirsute above, sparsely or densely hirsute along the nerves, margin wavy or lobulate-dentate; lobes dentate or mucronulate-serrulate, ciliate, rarely entire; petioles densely covered with dark brown flat articulate hirsute hairs, about 5-10 cm. long. Scape 1-8, slender, 15-30 cm high, sparsely or densely hirsute, with 10-15-flowered umbel; pedicels 1.5-3 cm. long, sparsely hirsute. Calyx 7 mm. long, 1 cm. wide, obconical, densely covered with short transparent articulate hirsute hairs all over, rarely glabrous; deeply five lobed, lobes 3-5 mm. long, triangular, mucronulate at apex, margin ciliate. Corolla funnel-shaped, rose-purple to light purple, about 2 cm. across, tube exerted 1.5-10 mm. long, lobes obcordate, emarginate. Ovary globose.

MOUNT OMEI: Lung-men-tung, alt. 600 m., at the side of the stream, herb 20-30 cm. high, flowers white or purplish, occasionally. W. P. Fang, Nos. 14051 & 14249, April 1940; same locality, herb 50 cm. high, flowers white, W. P. Fang, No. 16277, April 19, 1941; Hui-fu-ssu, alt. 700 m., in thickets, herb 25 cm. high, flowers red, C. L. Sun, No. 2035, May 17, 1940; Pei-lung-tung, alt. 950 m., on cliffs, herbs 15 cm. high, flowers purple, C. L. Sun, No. 1972, May 14, 1940; Hung-chuan-ping, alt. 1200 m., under forests, herb 20 cm. high, flowers purplish-red, C. L. Sun, No. 2075, May 19, 1940.

This is a low-land form *Primula* widely distributed in West and South China. Type from Ichang, Hupeh, the specimens of this species were collected again from Mount Omei, Nanchuan-hsien and Kuan-hsien in Szechuan, from Kangting-hsien (Ta-t sien-lu), Mountain of Alulaka-Balong and Salwin Dayon Longba Valley in Sikang, from Moting-shan Mountain, Likiang-Hoching Divide, Sun-kwei Pass, Tchen-fong-shan and region around Kunming in Yunnan, from Kweiyang and Pin-fa in Kweichow and from Yu-yuan district, Dai-ling Guek and Dai-kiu, Kei-tou in North Kwangtung. Recently the species was reported from South Hunan, on the border between Kwangtung and Kwangsi, a nice perfect specimen collected by Mr. T. S. Chow who went there for forest-survey under auspice of the Agricultural Products Committee of Central Government.

The plant has been greatly improved into large-flowered and showy coloured forms, since its introduction in 1882.

Feng-hwai Chen,
Yunnan Botanical Institute,
Kunming,
July 1941.

- Fig. 1. a flowering plant (natural size);
- 2. the pistil and calyx (10 times enlarged);
- 3. a corolla dissected to show the stamens (10 times enlarged);
- 4. a portion of leaf to show the hairs (10 times enlarged).

圖版四十三 鮮荷蓮報春

報春科，鮮荷蓮報春組。

多年生草本，具柔細之鬚根，散生於主根之周圍。葉柄，葉片五至十一公分長，四至九公分寬，卵形至近圓形或心臟形，葉質薄如紙或如膜，表面稀疏之纖毛，下面具稠密之剛毛，邊緣波狀或帶圓缺刻，缺刻多帶突出之尖鋸齒，常具縫狀之纖毛，邊緣稀全緣，花總梗一至四個，甚柔輭，常達十五至三十公分高，具深褐色之偏節長毛。頂端具十至十五個花朵之繖形花序，花梗一公分半至三公分長，多毛，花萼七公厘長，一公分寬，倒錐形，常具短白色偏節毛，稀光滑，萼片三至五厘長，三角形，直徑約二公分，花筒露出一公厘半至十公厘長，花瓣倒心臟形，前端凹缺，子房圓形。

產峨眉山洪椿坪，白龍洞，廣福寺，龍門洞一帶，常生長於六百至一千公尺海拔之上。此種生長較低之處，常在海拔五六百公尺山丘中可以採得之，故較他種高山種分佈為廣，且在各處不同環境生存，其變異亦甚複雜。此種初次發現於湖北宜昌，嗣後在四川之峨眉山，南川，灌縣，西康之康定一帶，南之麗江鶴慶，松桂山脈一帶，貴州之貴陽，廣東之大領先後發現，最近在湖南南部又復發現，是證此種為分佈最

一種也。此種報春引歸栽培，遠在西歷一八八二年，故經過花卉園藝家之努力改良，結果始有各種不同美麗品種出現，其花冠不但改大，而顏色亦臻美觀矣。

圖解：1. 首花植物之全形（原大）；2. 大蕊及花萼（放大十倍）；3. 花冠解剖後以示小蕊（放大十倍）；4. 葉之一部分放大以示其毛（放大十倍）。

This is a lowland form of *Primula* widely distributed in West and South China. Type from Ichang, Hubei, the specimens of this species were collected again from Mount Omei, Nanchuan-hsien and Kuan-hsien in Szechuan from Kan-ting-hsien (Te-tien-tu), Mountain of Alaka-Balong and Salwin Dayan Longpa Valley in Sikkim, from Moting-shan Mountains, Likiang-Hoching Divide, Sun-kwei Pass, Tchen-long-shan and region around Kuan-ling in Yunnan, from Kweichow and Pinda in Kweichow and from Yu-yuan district, Daling Guek and Bai-tai, Ke-tou in North Kwangtung. Recently the species was reported from South Hunan, on the border between Kwangtung and Kwangsi, a nice perfect specimen collected by Mr. T. S. Chow who went there for forest survey under auspices of the Agricultural Products Committee, Central Government. The plant has been greatly improved into large-flowered and showy coloured forms, since its introduction in 1882.

Feng-hwei Chen,
Yunnan Botanical Institute,
Kunming,
July 1941.

Fig. 1. a flowering plant (natural size);
2. the pistil and calyx (10 times enlarged);
3. a corolla dissected to show the stamens (10 times enlarged);
4. a portion of leaf to show the hairs (10 times enlarged).

我眉植物圖志



43. *Primula obconica* Hance

四十四圖
Plate 44.

PRIMULA OREODOXA Franchet.

Primulaceae.

Sect. *Obconica* Balf.f.

Subsect. *Euobconica* Chen.

Primula oreodoxa Franchet in Bull. Soc. Bot. France, XXXIII (1886), 66.

Rootstock thick with slender fibrous roots all around. Leaves Petiolate, lamina 2-6 cm. long 3-3.5 cm. wide, hispid-pilose above, sparsely hispid below, densely hispid along midrib, ovate-oblong, rounded or cordate at base, margin irregularly dentate; petioles 2-4 cm. long, hispid. Scape 3-8 or more cm. long, hispid-pilose, with 4-8-flowered umbel. Bracts linear, about 5-12 mm. long. Pedicels hispid 10-14 mm. long. Calyx about 12 mm. long, 15 mm. wide, broad campanulate, densely hispid outside, lobes ovate rounded at apex, margin denticulate. Corolla rose-purple, 15 mm. across, funnel-shaped, tube about 4 mm. long, exserted, lobes obcordate, deeply emarginate.

MOUNT OMEI. Hung-chun-ping, alt. 1200 m., on cliffs, herbs 8-12 cm. high, flowers red. *C.L. Sun*, No. 1652, April 22, 1940; Ta-chen-ssu, alt. 2300 m., under forests, flowers purplish, occasionally. *W.P. Fang*, No. 14730, May 20, 1940; Che-in-tien, alt. 2539 m., at roadside, herb 5-6 cm. high, flower red. *C.L. Sun*, No. 2242, May 29, 1940.

Type comes from Pao-hsing-hsien (Moupin), commonly found in Kuan-hsien at altitude about 1200 meters, not previously reported from Mount Omei.

The leaves of this species have the aspect of *Primula cortusoides* and the toothed sepals are near that of the members in section *Malvaceae* but not pointed. Its winged-petiole is a characteristic feature which marks the difference neither from *Obconica* nor from *Cortusoides* and *Malvaceae*. So that the position of this species, to which section it belongs, is still uncertain.

Feng-hwai Chen,

Yunnan Botanical Institute,

Kunming,

July, 1941.

- Fig. 1, a flowering plant (natural size);
2, the pistil and calyx (10 times enlarged);
3, a corolla dissected to show the stamens (10 times enlarged).

圖版四十四 迎陽報春

報春科，鮮荷蓮組。

根部壯碩，鬚根柔細，散生四週。葉具葉柄。葉片二至六公分長，二至三公半寬，上面具剛毛，下面具稀疏剛毛，沿葉脈剛毛愈趨稠密，長橢圓形，基部心臟形，邊緣具不整齊之鋸齒，葉柄二至四公分長，具剛毛。花總柄達三至八公分長，具剛毛或纖毛，具四至八個花朵之繖形花序。花苞線形，約五至十二公厘長，花柄多毛，十至十四公厘長，花萼約十二公厘長，十五公厘寬，闊鐘形，表面滿被纖毛，萼片橢圓，前端圓形，邊緣具鋸齒，花冠紫紅色，直徑十五公厘，花筒露出，約長四公厘餘，花瓣倒心臟形，前端凹缺。

產峨眉山接引殿，洪椿坪，大乘寺等處，生長於海拔一千公尺以上。此種初次發現於寶興，但灌縣一帶亦常發現，在峨山則首次採得是種。

此種與柯氏蓮報春相近，但其鋸齒邊緣之萼片則近錦葵組中種類，不過萼片前端圓形，不突尖，此大異也。其有翼之葉柄既不似鮮荷蓮組中之種類，又不似柯氏蓮組中之一種類，故目前此種確屬何組中之一種，尚待研究也。

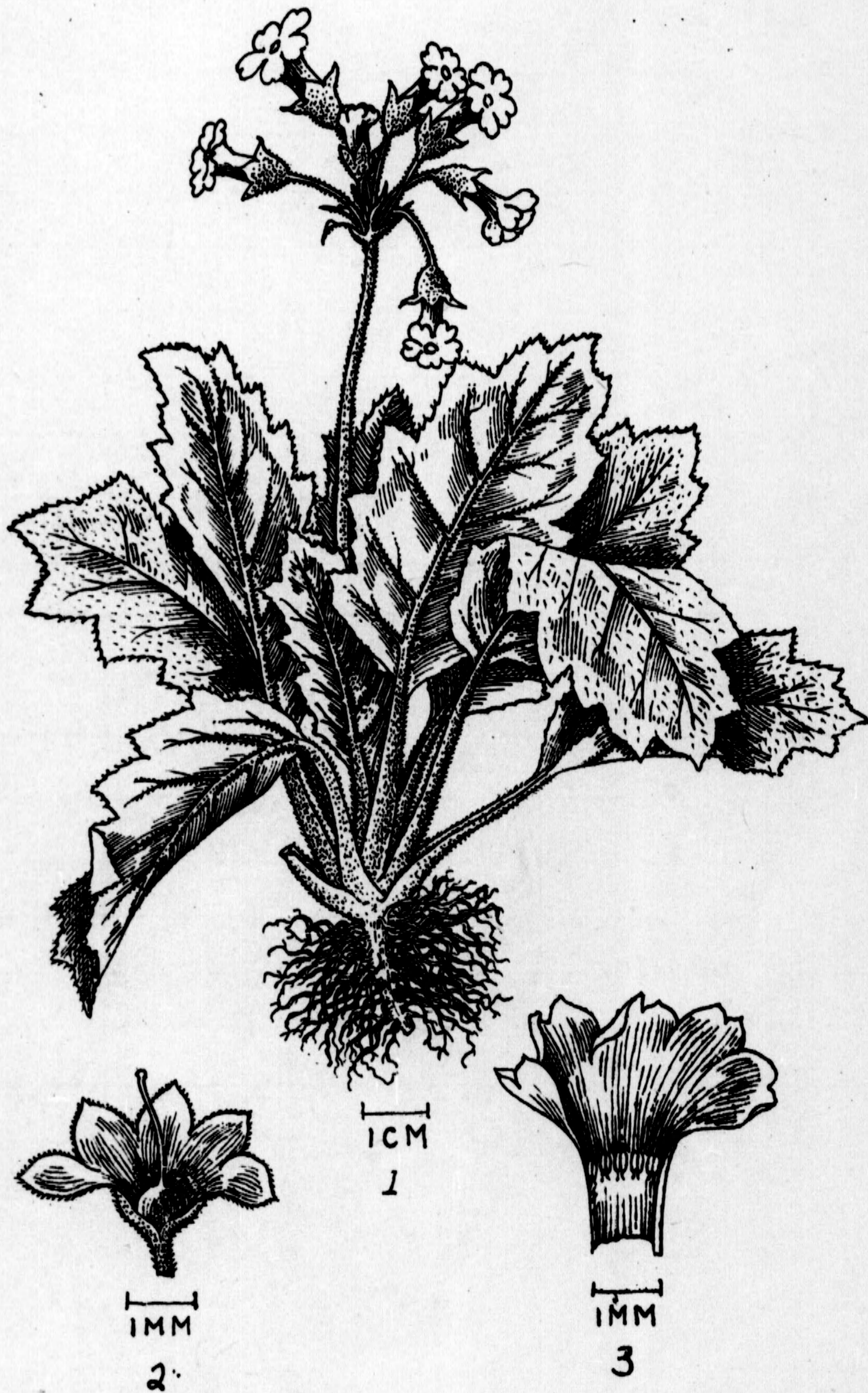
圖解：1. 着花植物之全形，（原大）；2. 大蕊及花萼（放大十倍）；3. 花冠解剖後以示小蕊（放大十倍）。

The leaves of this species have the aspect of *P. ...* ...
near that of the members in section *Malacodes* but not pointed, its winged-petiole is a characteristic
feature which marks the difference neither from *C. ...* nor from *C. ...* and *Malacodes*. So that
the position of this species, to which section it belongs, is still uncertain.

Feng-hwei Chen,
Yunnan Botanical Institute,
Kunming,
July, 1941.

Fig. 1. A flowering plant (natural size);
2. The pistil and calyx (10 times enlarged);
3. A corolla dissected to show the stamens (10 times enlarged).

峨眉植物圖志



44. *Primula orcodoxa* Franchet

Plate 43.

PRIMULA SONCHIFOLIA Franchet.

Primulaceae.

Sect. Petiolares Pax.

Subsect. Sonchifolia Craib.

Primula sonchifolia Franchet in Bull. Soc. Bot. France, XXXII (1885), 266.- Chen in Bull. Fan Mem. Inst. Biology, Bot. Ser. IX, No. 5 (1939), 296.

Primula taraxacoides Balf. f. in Notes Roy. Bot. Gard. Edinb., IX (1915), 49.

Primula drymorphila Craib in Notes Roy. Bot. Gard. Edinb., LIX (1919), 170.

Primula sonchifolia Franchet var. *atrocoerulea* Forrest in Notes Roy. Bot. Gard. Edinb., XV (1927), 225.

Rootstock usually imbricated with farinose or efarinose, glabrous, transparent or brownish membranaceous leafy bracts which being ovate, oblong-ovate or oblong-lanceolate. Leaves chartaceous quite glabrous above or sometimes puncticulose on both sides, often farinose, 4-20 cm. long, 1.5-5 cm. wide, oblong-lanceolate, oblanceolate-ovate or oblong-ovate, rounded or acute at apex, cuneate or attenuate at base, margin argute-dentate or irregularly dentate rarely crenulate-dentate, often becoming runcinate-dentate or triangularly lobed toward maturity, lobes irregularly dentate, dentate mucronulate at apex. Scape 4-12 cm. long, pubescent or hirsute, densely farinose when young, with 4-10-flowered single umbel. Bracts glabrous, farinose or efarinose, 5-10 mm. long, lanceolate or ovate-lanceolate. Pedicels pubescent farinose or efarinose, 1-2 cm. long. Calyx densely farinose when young densely or sparsely puncticulose throughout, 1 cm. long, 8 mm. wide, campanulate, lobes triangular. Corolla purple-rose, funnel-shaped, 1.5-2 cm. across, tube exerted about 12-15 mm. long, lobes obovate, emarginate sometimes toothed or fimbriate. Ovary globose.

MOUNT OMEI: Lei-tung-ping, alt. 2559 m., on rock, herbs 80 cm. high, rare, W. P. Fang, No. 14734, May 20, 1940.

This species is closely related to *Primula chamaethauma* W. W. Smith but differs from which by the distinct scape, the flowers are above the leaves and by the non-clump formation of rootstock.

Type comes from Tsang-shan, Tali, commonly found in Tali and Likiang Range; it extends northwest to Chungtien, northeast to Muli and Ta-t sien-lu in Sikang, further north to Tongolo in Kansu and southeast to Patung in Hupeh.

As I have mentioned before*: "This species is perhaps the most variable and widespread plant in the section. It varies not only in the size of the leaves and inflorescence, but also in the shape of the leaves and corolla-lobes." The leaves of young stage, when flower-buds just coming out, differs entirely from the mature stage, when flowers going to fade away. The plant in these two stages are easily to be confused up into two different species. Balfour's *Primula taraxacoides* described from N. Yunnan, the leaves resembles that of the dandelion being much elongated and runcinate of the margin and Craib's *Primula drymorphila* from Ta-t sien-lu with lobed leaves, both of which are apparently a mature stage.

This is one of the charming and dainty *Primulas* in *Petiolares* section, though the plant has not yet been introduced into cultivation. For the past experience of *Primula*-cultivation achieved by European gardeners, especially in the Royal Botanic Garden, Edinburgh, the members in Section *Petiolares* are considered to be the most difficult in cultivation and *Primula sonchifolia* is, perhaps, not an exceptional one.

Feng-hwai Chen,

Yunnan Botanical Institute,

Kunming,

July, 1941.

Plate, a flowering plant (natural size).

* F.H. Chen: Enumeration of *Primula* collected by Mr. T.T. Yu from Northwestern yunnan, in Bull. Fan Mem Inst. Biology, Bot. Ser. IX, No. 5 (1939), 296.

圖版四十五 苦苣葉報春

報春科，長葉柄組，苦苣葉亞組。

根部常被有粉或無粉，光滑透明，或褐色薄膜葉狀鱗片所包圍，鱗片通常卵形或長橢圓形，葉紙質，上面光滑，兩面具腺狀小粒子，通常有白粉，四至二十公分長，一公分半至五公分寬，長披針形，或倒披針形或長橢圓形，前端圓形或銳尖，基部楔形或漸狹，邊緣具不整齊之闊鋸齒，成熟時期漸成深缺刻，缺刻呈三角形，具突出銳尖之鋸齒，花總柄四至十二公分高，具纖毛，并滿佈白粉，頂端具四至十餘個花朵之繖形花序，花苞光滑，具白粉或無粉，五至十公厘長，披針形或橢圓披針形，花柄具纖毛，具或不具白粉，一至二公分長，花萼在初開花時期具稠密之白粉，多具腺狀小粒子，一公分長，八公厘寬，鐘形，萼片三角形，花冠呈紫紅色，直徑一公分半至二公分，花筒露出十二至十五公厘長，花瓣倒卵形，前端凹缺或具鋸齒，甚至有時縫狀分裂，子房圓形。

產峨嵋山雷洞坪，在海拔二千五百餘公尺之上，此種與鳶尾報春相近，但不同之處，為有顯著之花萼露出於葉片之外，根基部不生莖莖，反是鳶尾報春花萼不顯著，花朵常被葉所遮蓋，根莖部生莖莖或塊片。

此種首次發現於雲南大壩蒼山，蓋大理麗江山脈中為最普通之一種，其分佈西至中甸，東北至西康木里康定，北達甘肅南部，東南達湖北之巴東。

據余所見，此植物為最易變異之一種，其莖葉花序花朵之大小長短形態，常因本身成熟與否，或環境乾燥汗溼等等原因，隨之變異，故曾有人將上述不同之情形分別發表不同之新種，經余在愛丁堡植物園標本室及國內各方材料對正，證明前人所發表之新種及變種皆為同種。

此種極美觀，堪稱庭園岩石中之佳品，昔乎至今尚未有人能引歸栽培耳，英國愛丁堡植物園雖努力於栽培報春工作達數十年之久，但對此種亦無適當安全辦法能使之點綴庭園岩石，不無遺憾也。

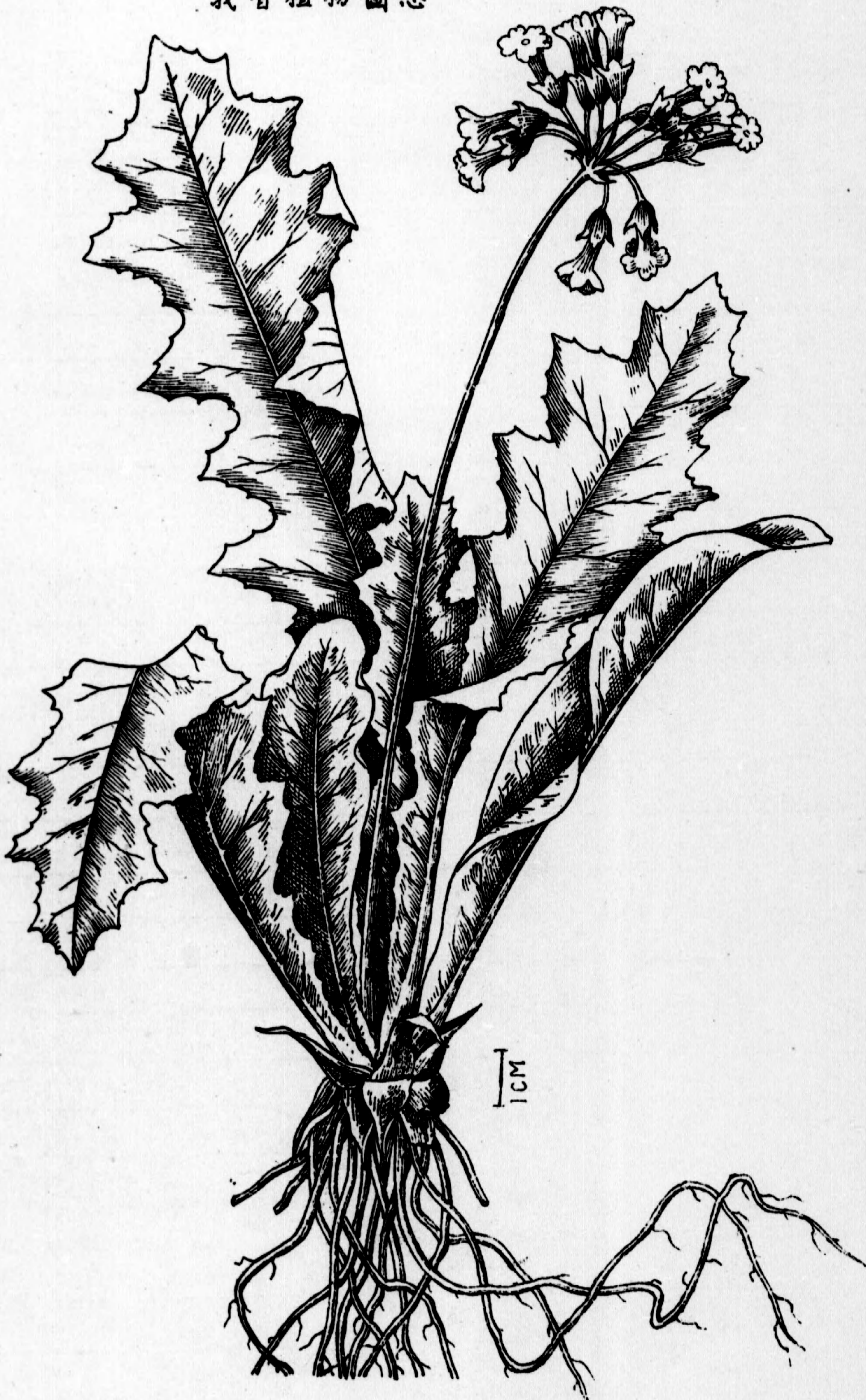
圖解：着花植物之全形（原大）。

Feng-hwai Chen,
Yunnan Botanical Institute,
Kunming,
July, 1941.

Plate, a flowering plant (natural size).

* F.H. Chen: Enumeration of Primula collected by Mr. T.T. Yu from Northwestern Yunnan in Fall, Fan Mem Inst. Biology, Bot. Ser. IX, No. 3 (1939), 296.

峨眉植物圖志



45. *Primula sonchifolia* Franchet

Plate 46.

PRIMULA OVALIFOLIA Franchet

Primulaceae.

Sect. *Petiolares* Pax.Subsect. *Davidii* Craib.*Primula ovalifolia* Franchet in Bull. Soc. Bot. France, XXXIII (1886), 67.*Primula aequiphila* Craib in Notes Roy. Bot. Gard. Edinb., XI (1919), 167. Syn. Nov.*Primula polia* Craib in notes Roy. Bot. Gard. Edinb., XI (1919), 177. Syn. Nov.*Primula Limprichtii* Pax et Poffmann in Fedde Report. XVII (1921), 94. Syn. Nov.

Perennial herb with tuft of harsh strong roots. Leaves chartaceous to coriaceous, sparsely hirsute above, densely covered with flat-articulate hirsute hairs, reticulately nerved below, 6-10 cm. long, 4-6 cm. wide, ovate, obtuse, rounded or cuneate at base, margin wavy, crenulate, rarely subentire, ciliate; petioles often shorter than the lamina, sometimes in equal length, densely covered with dark brown hirsute hairs all over. Scape single, covered with red brown hirsute hairs throughout, 3-20 cm. high, with 3-8 flowered umbel. Bracts about 1 cm. long, triangular, acuminate, glabrous or sparsely hirsute. Pedicels 1-2 cm. long, covered with light brown hirsute hairs. Calyx hirsute, 1 cm. long, broad campanulate, lobe oliaceous rather spreading, 6 mm. long, oblong-ovate, acute. corolla purple, or rose-purple, about 2.5 cm. across, funnel-shaped, tube exerted about 2-6 mm. long, lobes 1 cm. long, or more, obovate, emarginate, Ovary globose.

MOUNT OMEI: near Chiu-lao-tung, alt. 1400 m., on cliffs, herb 20 cm. high, flowers light purple, C.L. Sun, No. 1790, April 30, 1940; Ta-chen-ssu, under thickets, herb 10-16 cm. high, flowers purplish blue, occasionally, W.P. Fang, No 14729. May 20, 1940.

Type comes from Pao-hsing-hsien (Moupin), commonly found in Nanchuan-hsien and Kuan-hsien at altitude about 1200 meters in shady moist place, and also in Ya-an-hsien (Ya-chow) of Eastern Sikang. For the first time, the plant is recorded in Mount Omei. This species extends eastward to Patung-hsien and Chang-yang-hsien in Hupeh and westward to Ou-tchai and Lo-ha-ling in Western Yunnan.

This plant is one of the wide spread species found in the alpine region of West China and is also one of the variable species in Section *Petiolares*. It is closely related to *Primula leptophylla* Craib, but differs from which by the thick smaller and coriaceous leaves and by the dwarf habit with shorter scape.

Feng-hwai Chen,

Yunnan Botanical Institute,

Kunming,

July, 1941.

- Fig. 1, a flowering plant (natural size);
 2, the pistil and calyx (10 times enlarged);
 3, a corolla dissected to show the stamens (10 times enlarged).
 4, a portion of leaf to show the hairs (10 times enlarged).

圖版四十六 卵葉報春

報春科，長葉柄組，大衛報春亞組。

多年生草本，根粗糙，葉韌質或呈紙質，表面具稀疏之堅硬剛毛，下面密佈扁管纖毛，葉脈網狀隆起，六至十公分長，四至六公分寬，橢圓形或卵形，基部圓形或楔形，邊緣波狀或具圓缺刻，稀全緣。四周具纖毛，葉柄通常較葉片短，或等長，密佈深褐色之纖毛，花總柄全部具紅褐色堅硬之剛毛，三至二十公分高，上端具三至八個花朵之繖形花序。花苞一公分長，呈三角形，尖頭漸狹，光滑或具纖毛，花柄一至二公分長，具淡褐色之纖毛。花萼一至二公分長，呈闊鐘形，無毛，萼片葉綠色，常向外展開，六公厘長，橢圓形，尖頭銳尖，花冠紫色或紅紫色，直徑約二公分半，花筒露出二至六公厘長，花瓣一公分長，前

端凹缺，子房圓形。
產峨山大乘寺，海拔二千餘公尺之上。此種首次發現於寶興，但南川及灌縣等處高山汀沮陰濕之所均常產之。以及川西南之雅安與雷馬屏峨等縣亦常發現。此次在峨山探得亦為首次，此種分佈東至巴東，西至雲南西部。
此種在此組中為較多變異者，分佈亦較廣之一種，按其形態與薄葉報春最相近，但其葉較厚而小，花序較短矮與葉相等。

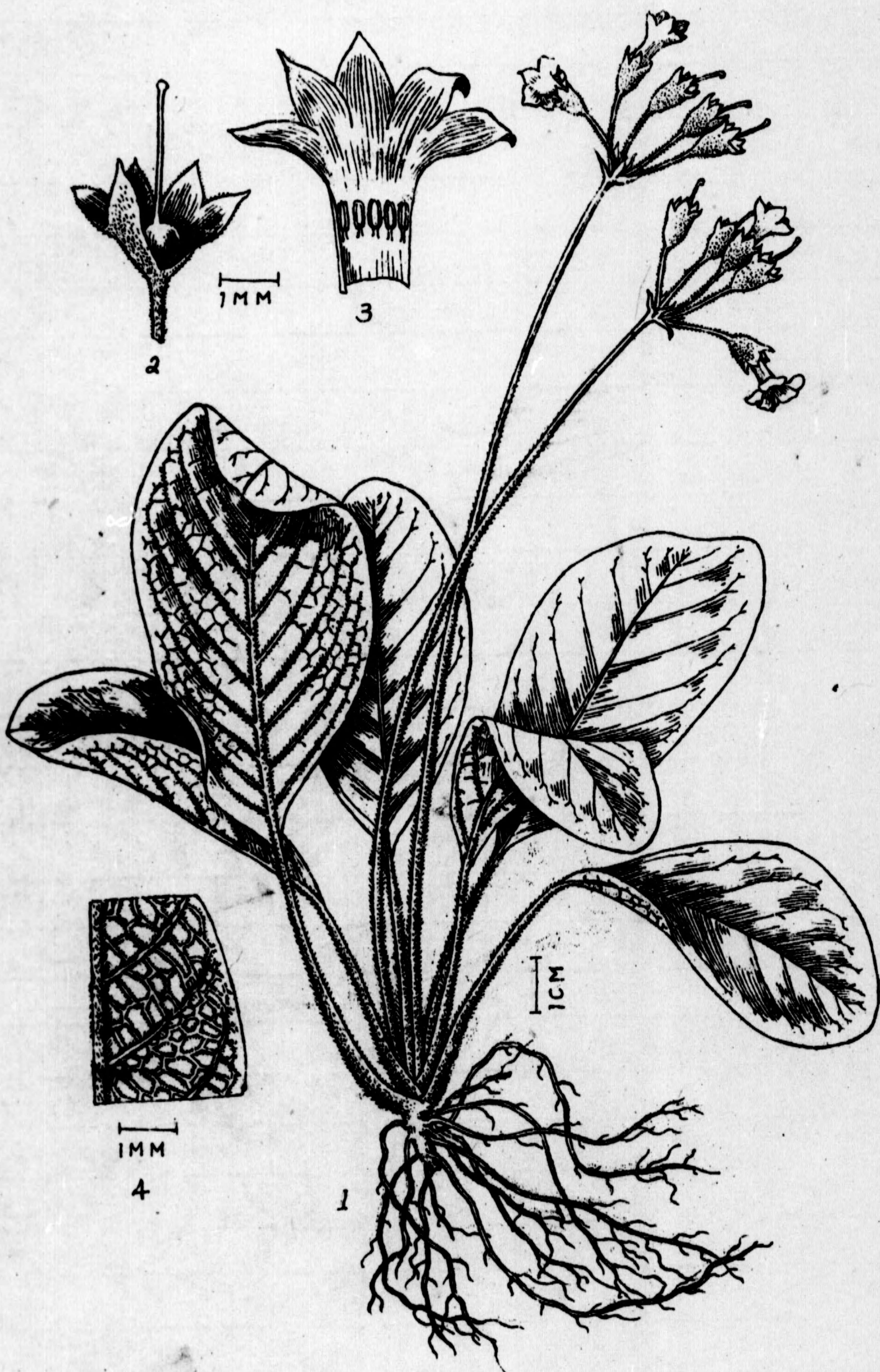
圖解：1. 着花之植物之全形（原大）；2. 大蕊及花萼（放大十倍）；3. 花冠解剖以示小蕊（放大十倍）；4. 葉之一部分放大以其毛（放大十倍）。

MOUNT OMEI: near Chia-lan-tung, alt. 1400 m. C. S. Lee, No. 1790, April 30, 1940; T. Chen, ssp. under thickets, herb 10-16 cm. high, flowers purplish blue, occasionally, W. P. Fung, No. 11729, May 20, 1940.
Type comes from Pao-hsing-hsien (Moupin), commonly found in Nanchuan-hsien and Kuan-hsien at altitude about 1200 meters in shady moist place, and also in Ya-an-hsien (Ya-chow) of Eastern Szechwan. For the first time, the plant is recorded in Mount Omei. This species extends eastward to Patung-hsien and Chang-yang-hsien; in latter and westward to Ou-tchai and Lo-haling in Western Yunnan.
This plant is one of the wide spread species found in the alpine region of West China and is also one of the variable species in Section *Pteridifera*. It is closely related to *Primula leptophylla* Craib, but differs from which by the thick smaller and coriaceous leaves and by the dwarf habit with shorter scape.

Feng-hwai Chen,
Yunnan Botanical Institute,
Kunming,
July, 1941.

Fig. 1. A flowering plant (natural size);
2. The pistil and calyx (10 times enlarged);
3. A corolla dissected to show the stamens (10 times enlarged);
4. A portion of leaf to show the hairs (10 times enlarged).

峨眉植物圖志



46. *Primula ovalifolia* Franchet

Plate 47.

STYRAX HEMSLEYANUS Diels.

Styracaceae.

Styrax Hemsleyanus, Diels in Engler, Bot. Jahrb. XXIX (1900), 530 (Fl. Centralchina).

Small tree usually 6-9 rarely up to 12 metres high, winter-buds conical, with outer scales stellate-pubescent outside; branchlets of the current year slender, purple or purplish-brown, sparingly stellate-pubescent at first, then glabrescent, those of more than one year old dark brown, glabrous. Leaves opposite or subopposite, chartaceous, ovate-oblong, ovate, rarely obliquely obovate, 7-11 cm. long, 3-8 cm. broad, acuminate rarely acute or obtuse on the apex, cuneate or broadly cuneate, rarely rounded at the base, remotely serrulate with appressed minute teeth, upper surface brightly green, sparingly pubescent on the nerves, main nerve and the 7-10 pairs of lateral nerves slightly depressed, lower surface pale green, sparingly pubescent and with tufts of hairs at the axils of nerves, main nerve prominent, lateral nerves slightly raised; petioles 5-15 mm. long, grooved above, sparingly stellate-pubescent. Flowers snowy white, in erect, axillary or terminal densely stellate-pubescent racemes 6-10 cm. long, rarely up to 15 cm. long, occasionally rounded at the base; calyx campanulate, densely yellowish-grey, stellate-pubescent outside, greyish pubescent inside, with 5-7 acute or shortly acuminate teeth; corolla tubular at base, about 4 mm. long, petals 5, imbricate in buds, ovate-oblong or obovate-oblong, rarely obovate, acute on the apex, 15-18 cm. long, 5-7 cm. broad, densely white stellate-pubescent outside, sparingly yellowish pubescent inside; stamens 10, inserted at the tubular base of the corolla and slightly shorter than the corolla, filaments slender, greyish stellate-pubescent, anthers yellow, introrse, 2-celled; ovary superior, adnate at the base to the calyx, ribbed and densely greyish pilose, 3-celled below and 1-celled above, style as long as the stamens, slender, glabrescent, ovules 1 to several in each cell; pedicels 5 mm. long, densely stellate-pubescent. Fruit dry, obovoid, 1.5-2 cm. long.

MOUNT OMEI: from Hsi-hsin-so to Kuan-hsin-po, among woods, small tree 6-9 metres high, bark brown, flowers white, *C.L. Sun*, No. 2255, may 31, 1940; Chang-lau-ping, in forests, tree 12 metres high, flowers in buds, rare, *W.P. Fang*, No. 14826, may 21, 1940.

This is a very beautiful tree characterized by the short racemes and large flowers with petals imbricate in the buds.W. P. Fang.

Fig. 1, a flowering branch (natural size);

2, a portion of flower with calyx and style, but petal removed (enlarged 2 times);

3, a corolla with stamens inserted at the base (enlarged 2 times).

圖版四十七

赫斯黎野茉莉

安息香科

小喬木或灌木，高六至九公尺，稀至十二公尺；冬芽圓錐形，具大鱗片一枚，密被星狀細毛；當年生之枝細小，紫色或紫褐色，幼時疎被星狀細毛，漸長即脫落而近於光滑；多年生之枝黑褐色，光滑。葉對生或近於對生，紙質，長卵形或卵形，抑或斜倒卵形，長七至十一公分，寬三至八公分，先端漸尖或鈍形，基部楔形或闊楔形，邊緣疎具細鋸齒，表面深綠色，葉脈上疎被細毛，主脈及七至十對側脈均略向下凹，背面淡綠色，疎被細毛，脈穴具細毛甚多，主脈顯著，側脈亦略凸出；葉柄長十至十五公厘，上面成溝狀，疎被細毛。花雪白色，着生於疎被星狀細毛而直立腋生或頂生之總狀花序，偶有自其基部分枝者；花萼鐘形，外面密被黃灰色之星狀細毛，裏面被淡灰色細毛，具短尖齒狀之萼片五至七枚；花冠基部成管狀，長約四公厘，其上部分成花瓣五片，在花芽中成覆瓦狀，長大後成鑷合狀，長卵形或倒長卵形，稀成倒卵形，長十五至十八公分，寬五至七公分。表面密被白色星狀細毛，裏面被疎稀淡黃色細毛，小蕊十本，着生於花冠之基部，較花冠略短，花絲纖小，疎被灰色星狀細毛，花藥黃色，內向，二室，子房上位，基部與花萼合生，稜狀，被灰色剛毛，基部三室，上部一室，每室具胚珠一至數枚，花柱纖細，與小蕊等長，略近於光滑，花梗長五公厘，密被黃色星狀細毛。乾果倒卵圓形，長十五至二十五公厘。

產峨眉山長老坪息心所及觀心坡等處路旁森林中，常成高十公尺左右之小樹，五月開雪白之花，美麗異常，誠極有價值之觀賞植物也。河南西南部及湖北西部亦產之。

圖解：1. 開花之枝（原大）；2. 一花之花萼及大蕊，但花瓣已拆去（放大二倍）；3. 花冠及小蕊（放大二倍）。

MOUNT OMEI: from Hsi-pai-so to Kuan-shan-po, among woods, small tree 6-9 m. high, flowers in buds, rare, W.P. Fang, No. 14820, May 21, 1940. This is a very beautiful tree characterized by the short racemes and large flowers with petals imbricate in the buds. W. P. Fang.

Fig. 1. a flowering branch (natural size);
 2. a portion of flower with calyx and style, but petals removed (enlarged 2 times);
 3. a corolla with stamens inserted at the base (enlarged 2 times).

我百植物圖志



47. *Styrax Hemslayanus* Diels

Plate 48.

STYRAX JAPONICUS Siebold et Zuccarini.

Styracaceae.

Styrax japonicus Siebold et Zuccarini, Fl. Jap. I (1835), 53, t. 23.

Shrub or small tree usually 6 metres rarely up to 10 metres high; branchlets of the current year very slender, purple or dark purple, yellowish stellate-pubescent at first, soon glabrescent; those of more than one year old slender, yellowish-brown or dark brown, glabrous, usually widely spreading. Leaves chartaceous, alternate rarely subopposite, elliptical or obovate, 2.5-4 cm. long, 1.5-2.5 cm. broad, shortly acute on the apex, cuneate or broadly cuneate at the base, remotely denticulate with appressed minute teeth on the margin, upper surface bright green, glabrous, the main nerve and lateral nerves slightly depressed, lower surface pale green, glabrous except with tufts of hairs at the axils of nerves, main nerve prominent, lateral nerves slightly raised; petioles 5 mm. long, sparingly pubescent while young, soon glabrescent. Flowers white, 5-7 in a very loose panicle from lateral leafy branchlets; calyx bell-shaped, 5 mm. long, 4 mm. in diameter, truncate or obsolete 5-toothed; corolla tubular at the base, three-fourth of the upper part of the corolla divided into 5 petals, usually obovate, rarely ovate, acute, 1 cm. long, 5 mm. broad, widely spreading; stamens 10, inserted at and shorter than the corolla, filaments villous at the base, anthers linear or linear-oblong, 2-celled; ovary pubescent, superior, its base adnate to the calyx, 1-celled above, 3-celled below, ovules 1 to several in each cell, style slender, glabrous; pedicels 2.5-3 cm. long, slender, glabrous, pendulous. Fruit woody, ovoid, 1.2-1.5 cm. long.

OMEI-HSIEN: Pao-ning-sze, near the foot of Mount Omei, at the side of forests, small tree 6 metres high, flowers white, young fruit with persistent style, occasionally, *W. P. Fang*, No. 14328, May 10, 1940.

This is a very beautiful tree and is highly valued on account of its white flower in a pendulous inflorescence.W. P. Fang.

- Fig. 1. a flowering branch (natural size);
 2. a flower dissected to show its stamens and ovary (enlarged 1½ times);
 3. a fruit (natural size).

圖版四十八

野茉莉 (俗名：齊墩果)

安息香科

灌木或小喬木。通常高六公尺，稀高至十公尺；枝細小，橫向或略向下垂，當年生者紫色或暗紫色，初被淡黃色星狀細毛，稍長即脫落；多年生者黃褐色或暗褐色，光滑。葉紙質，互生，稀近於對生，卵形或倒卵形。長二十五至四十公厘，寬十五至二十五公厘。先端鈍形，基部楔形或闊楔形。邊緣疎具細鋸齒。表面深綠色，光滑。主脈及側脈均略向下凹，背面淡綠色。除脈穴具細毛外，餘均光滑，主脈顯著。側脈略凸出；葉柄長五公厘，幼時被細毛，旋即脫落。花白色，五至七枚，着生於葉側枝之稀疎圓錐花序。花萼鐘形。長五公厘，直徑四公厘。截形或具不發育之五齒狀萼片；花冠基部成管狀，上部分成花瓣五片。倒卵形或卵形，長一公分，寬五公厘。外拆，表面密被細毛，裏面稀被細毛；小蕊十本，稀十一本，着生於花冠之基部，且較花冠略短。花絲基部被絨毛，花藥絨形或長形。子房被細毛。上位，基部與花萼合生。上部一室，下部三至，每室具胚珠一至數粒。花柱細小，光滑，凸出於花冠之外。花梗細小，長二十五至三十公厘，下垂。果實木質，卵圓形，長十二至十五公厘。

在峨眉山麓之保寧寺附近，路旁林邊均甚普遍，四月或五月初開白色之花，花序下垂，美麗異常。八月卵圓形之果可成熟。長江流域各省及日本均產之，移植庭園當甚便也。

圖解：1. 着花之枝 (原大)；2. 花解剖後以示大小蕊 (放大一倍半)；3. 果實 (原大)。

我國植物圖志



48. *Styrex japonicus* S. & Z.

Plate 49.

REHDERODENDRON MACROCARPUM Hu.

Styracaceae

Rehderodendron macrocarpum Hu in Bull. Fan Mem. Inst. Biol. III, No. 5 (1932), 78, pl. 1.

Deciduous small tree usually about 7 to 10 metres high; branchlets of the current year slender, brownish-purple, scarcely stellate-pilose; those of more than one year old yellowish-grey or brownish-grey, glabrous; winter-buds axillary, ovoid, with two pairs of opposite scales, pilose outside. Leaves alternate, chartaceous, exstipulate, oblong-ovate, oblong-lanceolate or obovate-oblong, 7-13 cm. long, 3.5-5.5 cm. broad, acuminate or shortly acuminate at the apex, cuneate or broadly cuneate at the base, remotely serrulate with appressed teeth, upper surface green or purplish green, glabrous, with impressed midrib and inconspicuous lateral nerves, lower surface greyish-green, glabrous except the nerves stellate-pilose, main-rib prominent lateral nerves 9-11 pairs, slightly raised; petioles grooved, 10-15 mm. long, stellately pubescent while young then glabrous. Flowers 4-8 in a short cyme; sepals 5, white or yellowish white, triangular-ovate, 3 mm. long, 1 mm. broad, stellate-pilose outside, glabrous inside; petals 5, creamy-white and then changed to yellowish-white, obovate or oblong-obovate, rarely elliptical-oblong, 15-18 mm. long, 5-7 mm. broad, villous on both sides; stamens 8-10, unequal, longer ones slightly longer than the petals and exserted, shorter ones shorter than petals, anthers yellow, introrse, filaments glabrous; ovary inferior, many-celled, few ovules in each cell; pedicels 8-15 cm. long, pedicels and receptacle densely greyish stellate-pilose. Fruit woody, ellipsoid, 5-7 cm. long, 2.5-3 cm. in diameter, 7-10-ribbed, crowned on the apex with obsolete calyx-teeth and short style, exocarp woody, 1.5 mm. thick, endocarp fibrous-spongy, 1-1.5 cm. thick, seeds usually solitary, linear-oblong, 4-5 cm. long, 5 mm. thick.

MOUNT OMEI: Chiu-lao-tung, alt 1800 m., W. C. Cheng, No. 6650, October 1936; same locality, S.S. Chien, No. 6082, July 11, 1937; same locality, tree 10 metres high, C. L. Sun, No. 226, May 13, 1939; Hwa-yen-ding, small trees 5 metres high, C. L. Sun, No. 287, May 16, 1939; Chü-tien, small tree 5 metres high, C. L. Sun, no. 1915, May 8, 1940.

This is the type species of the genus which was discovered by the writer in 1928. It commonly occurs on Mount Omei at the altitude from 1800 to 2000 metres above the sea level. This ornamental tree is highly estimated not only for the beautiful white flowers but also for the red fruits which resemble a woody pepo. Therefore it has colloquially called as 'Mu-kua-hung' 木瓜紅 which means a red woody pepo. *Rehderodendron mapienense* Hu is probably a geographical form of this species.W. P. Fang.

Fig. 1, a flowering branch (natural size);

2, a flower (natural size);

3, a fruit ($\frac{1}{2}$ times reduced).

圖版四十九

木瓜紅

(別名：大果芮德木)

安息香科

落葉小喬木通常高七至十公尺；樹皮灰褐色，光滑；嫩枝細小，紫褐色，疏具星狀細毛，多年生之枝灰黃色或灰褐色，光滑；冬芽腋生，卵圓形或長卵圓形，具長卵形對生之鱗片兩對，外被細毛。葉紙質或薄革質，長卵形或長倒卵形，長七至十三公分，寬三至五公分，先端短尖，基部楔形，邊緣具細鋸齒，表面光滑，綠色或紫綠色，中脈凹下，側脈不顯著；背面灰綠色，除凸出之葉脈上具星狀細毛外，餘均光滑；葉柄長十至十五厘米，表面有溝，嫩時被細毛，漸長即脫落。花常四至七枚成短聚繖花序；萼片五枚，白色或黃白色，三角卵形，長三公分，寬一公分，先端銳尖，表面被星狀細毛，裏面光滑；花瓣五枚，初開時雪白色，繼變黃白色，倒卵形或長倒卵形，長十五至十八公分，寬五至七公分，兩面均被絨毛；小蕊十本，長短不等，長者較長於花瓣且伸出於其外，短者較短於花瓣，花藥黃色，內向，花絲光滑；子房下位；花梗長八至十五公分，密被灰色星狀細毛，果實木質，長卵圓形，長五至七公分，直徑二公分半至三公分，先端具不完全之萼齒及短花柱，種子細長。

極美觀之小樹，在峨眉山九老洞，華嚴頂，初殿等處路旁及森林中極普遍。五月初滿樹開雪白色之花，十月間果可成熟，色紅形似木瓜，誠極有價值之觀賞植物也。十七年夏，作者初次發現於九老洞附近森林中，越四年胡步曾博士鑒定為新屬，發表於靜生生物調查所彙報，此後十年間，在此屬發現之新種已近十種。分佈於東南諸省，在純粹植物學及園藝學上，均極有趣味之植物也。

圖解：1. 着花之枝（原大）；2. 花（原大）；3. 果實（縮小二分之一）。

峨眉植物圖志



49. *Rehderodendron macrocarpum* Hu.

Plate 50.

PTEROSTYRAX HISPIDUS Siebold et Zuccarini.

Styracaceae.

Pterostyrax hispidus Siebold et Zuccarini in Abh. Akad. Münch. IV. 3 (1846), 132 (Fl. Jap. Fam. Nat. II. 8).

Halesia hispida Masters in Gard. Chron. II (1844), 178, fig. 34.

Pterostyrax micranthum Siebold et Zuccarini in Abh. Akad. Münch. IV. 3 (1846), 132 (Fl. Jap. Fam. Nat. II. 8).

Deciduous tree usually 10 to 15 metres high; bark brown or greyish-brown, glabrous; branchlets of the current year purple or purplish-brown, slender, sparingly pubescent; those more than one year old slender, usually widely spreading, yellowish or purplish-brown, glabrescent; winter-buds ellipsoid with 2 outer-scales. Leaves chartaceous, obovate or obovate-oblong, rarely elliptical, 8-16 cm. long, 7-10 cm. broad, short-acuminate or acuminate rarely acute on the apex, broadly cuneate or nearly rounded at the base, minutely denticulate with appressed teeth, upper surface glabrous and bright green with grooved midrib and slightly depressed 7-9 pairs of lateral nerves, lower surface greyish-green with distinctly midrib and slightly raised lateral veins, sparingly pubescent while young, then glabrous; petioles 1-2 cm. long, grooved above, pubescent while young, then glabrous. Flowers small, creamy-white, fragrant, in long, pendulous panicles terminating on short lateral branchlets, usually densely pubescent with yellowish white or greyish-white pubescence; calyx 5-toothed, tooth ovate, shortly acuminate or acute, pubescent on both sides; petals 5, alternate with the calyx-teeth, oblong or ovate-oblong, 4-5 mm. long, 1-1.5 mm. broad, pubescent on both sides; stamens 10, inserted on the inner surface of the receptacle below the calyx, shorter than petals and included, filaments slender, sparingly pubescent, anthers yellow, introrse, 2-celled; ovary inferior or two-third inferior, densely pubescent, 3-4-celled, each with 4 ovules, style stout, nearly as long as stamens; pedicels 1-2 mm. long, densely pubescent. Fruit woody, cylindric, about 5 mm. long, 10-ribbed, densely bristly with greyish bristles.

MOUNT OMEI: Chü-tien, S. S. Chien, no. 6156, July 13, 1937; below Chü-tien, alt. 1700 metres, tree 12 metres high, C. L. Suu, no. 310, May, 22, 1939.

This species is near *Pterostyrax corymbosa* Siebold & Zuccarini. They are easily distinguished as this species has corymbose inflorescence and stamens connate below.W. P. Fang.

- Fig. 1, a flowering branch (natural size);
 2, a flower (10 times enlarged);
 3, a pistil and calyx but petals and stamens removed (10 times enlarged);
 4, outer view of a petal showing hairs (10 times enlarged);
 5, a fruit (natural size).

圖版五十 白 辛 樹 安 息 香 科

落葉喬木，高十至十五公尺；樹皮褐色或灰褐色，光滑；當年生之枝細小，紫色或紫褐色，疎被細毛；多年生之枝黃褐色或淡紫褐色，光滑；冬芽卵圓形，具對生之鱗片兩對。葉紙質，倒卵形或長倒卵形，稀為卵形，長八至十六公分，寬七至十公分。先端短而尖或漸尖，基部闊楔形或略近於圓形，邊緣具細鋸齒，表面淡綠色，中脈凹下，側脈七至九對，微向下凹，背面灰綠色，中脈顯著，側脈亦微凸出，嫩時具細毛，稍長即脫落；葉柄長一至三公分，上面具深溝，嫩時被細毛，稍長即脫落。圓錐花序着生於短側枝之頂端，下垂，密被淡黃色或淡灰色之細毛，花小，白色，具芬香，花萼具齒狀之萼片五枚，兩面均被細毛；花瓣五片，長形成長卵形，長四至五公厘，寬一至一公厘半，兩面均密被絨毛；小蕊十本，略短於花瓣，花絲細小，疎被細毛，花藥黃色，內向，二室；子房下位，或三分之二下位，密被細毛，三至四室，每室具四胚珠，花柱形粗，與小蕊略等長；花梗長一至二公厘，密被細毛。果實木質，圓柱形，長五公厘，具十稜，密被剛毛。

峨眉山初級以下之森林中產之，五月開花，七八月間而果成熟，極美觀之觀賞樹也。分布於湖北廣東兩省及日本。

圖解： 1. 着花之枝（原大）； 2. 花（放大十倍）； 3. 大蕊及花萼（放大十倍）； 4. 花瓣之外側面以示其毛（放大十倍）； 5. 果實（原大）。

MOUNT OMEI, China, S. Chen, no. 6156, July 13, 1937; below Chien-tien, Mt. 1700 metres.
tree 12 metres high, C. A. Szwed, no. 210, May 22, 1939.
This species is near *Pterocarya corymbosa* Siebold & Zuccarini. They are easily distinguished as this species has corymbose inflorescence and stamens connate below.

Fig. 1. a flowering branch (natural size);
2. a flower (10 times enlarged);
3. a petal and calyx but petals and stamens removed (10 times enlarged);
4. outer view of a petal showing hairs (10 times enlarged);
5. a fruit (natural size).

峨眉植物圖志



EMENDATIONS

| Plate | Line | Original Text | Emendation |
|--|------|---|---|
| 2 | 5 | Sieblido | Siebold. |
| 2 | 8 | yellowish | yellowish. |
| 2 | 19 | unmeroue | numerous. |
| 2 | 38 | gyanecium | gynoecium. |
| 3 | 15 | filiments | filaments. |
| 3 | 18 | rahchis | rhachis. |
| 3 | 22 | broader | bounding. |
| 5 | 10 | midribe | midrib. |
| 5 | 29 | May 50 | May 25. |
| 6 | 4 | Szechuanensis | szechuanensis. |
| 6 | 15 | constricta | constricta |
| 6 | 16 | locullasa | locullosa. |
| 6 | 32 | Fruits | fruit. |
| 6 | 40 | longtudfnal | longitudinal. |
| 7 | 17 | inferior | superior |
| 8 | 4 | Erythina | Erythrina. |
| 8 | 5 | smoth | smooth. |
| 8 | 14 | oral-red | coral-red. |
| 8 | 20 | flowers oral-red | flowers coral-red. |
| 8 | 24 | after and strike out as. | |
| 9 | 25 | april | April. |
| 9 | 37 | more | many. |
| 10 | 4 | kew | Kew. |
| 10 | 8 | foliolate | foliolate. |
| 10 | 10 | tacute | acute. |
| 10 | 11 | eeht | teeth |
| 10 | 22 | after tree strike out in. | |
| 11 | 10 | leaflests | leaflets |
| 11 | 22 | flesh | fleshy. |
| 12 | 4 | Hemslae | Hemslay. |
| 13 | 12 | polygamsus | polygamous. |
| 13 | 14 | ovate-elliptical | ovate-elliptical. |
| 13 | 25 | pots | dots. |
| 13 | 33 | Opien bsien | Opien-hsien. |
| 13 | 35 | after ornamental twining add shrub and. | |
| 14 | 7 | matnred | matured. |
| 15 | 11 | brod | broad. |
| 15 | 13 | surface | surface. |
| 15 | 14 | lessly | less. |
| 15 | 18 | Flowers | flowers. |
| 15 | 24 | smara | samara. |
| 16 | 6 | mertes | metres. |
| 16 | 17 | diameser | diameter. |
| 16 | 18 | chartaceous | chartaceous. |
| 16 | 26 | flesti | fleshy. |
| 16 | 32 | higb | high. |
| Third page after Plate 17, line 2, for Linnr | | | Linn. |
| 18 | 15 | Flowers fragrant, fragrant | Flowers fragrant, strike out the second fragrant. |

| | | | | | | | |
|-------------------------------------|--------------------|------|-----------------|--|--|--|--|
| Plate 18, line 18, for | with | read | white. | | | | |
| .. 18, line 45, | (Fig.), pistil | .. | pistil, | | | | |
| .. 19, line 12, " | aceous | .. | aceous. | | | | |
| .. 19, line 35, " | occasionally | .. | occasionally. | | | | |
| .. 20, line 4, " | Ohina | .. | China. | | | | |
| .. 20, line 15, " | pubescent | .. | pubescent, | | | | |
| .. 20, line 28, " | locality | .. | locality. | | | | |
| .. 21, line 34, " | Yu-lisen-ssu | .. | Yu-hsien-ssu. | | | | |
| .. 21, line 34, " | purplish | .. | purplish. | | | | |
| .. 22, line 11, | after acuminate to | .. | strike out to. | | | | |
| .. 22, line 16, " | racemose | read | a racemose. | | | | |
| .. 22, line 17, " | long | .. | long. | | | | |
| .. 22, line 19, " | usually | .. | usually. | | | | |
| .. 22, line 23, " | covered | .. | covered. | | | | |
| .. 22, line 24, " | at | .. | alt. | | | | |
| .. 22, line 24, " | shrub | .. | shrub. | | | | |
| .. 23, line 5, " | David | .. | David. | | | | |
| .. 22, line 32, " | Omei | .. | Omei. | | | | |
| .. 24, line 4, " | Hemsley | .. | Hemsley. | | | | |
| .. 24, line 7, " | ovate-oblong | .. | ovate-oblong. | | | | |
| .. 24, line 20, " | 1.5 cm. | .. | 1.5 cm. | | | | |
| .. 24, line 25, " | locality | .. | locality. | | | | |
| .. 25, line 2, from the bottom, for | size | .. | size. | | | | |
| .. 26, line 2, for | GHALOPYTUM | .. | CALOPHYTUM. | | | | |
| .. 26, line 39, " | Eurhododendron | .. | Eurhododendron. | | | | |
| .. 28, line 27, " | centimetres | .. | centimetres. | | | | |
| .. 28, line 28, " | centimetries | .. | centimetres. | | | | |
| .. 30, line 4, " | Willson | .. | Wilson. | | | | |
| .. 30, line 25, " | shroub | .. | shrub. | | | | |
| .. 31, line 32, " | usuall | .. | usually | | | | |
| .. 33, line 23, " | OME | .. | OMEI. | | | | |
| .. 34, line 26, " | whith | .. | white. | | | | |
| .. 34, line 34, " | W. P. Cheng | .. | W. C. Cheng. | | | | |
| .. 35, line 6, " | costulatvm | .. | costulatum. | | | | |
| .. 35, line 26, " | bese | .. | base. | | | | |
| .. 35, line 26, " | pistll | .. | pistil. | | | | |
| .. 35, line 28, " | capsulss | .. | capsules. | | | | |
| .. 35, line 1, from the bottom, for | leay | .. | leaf. | | | | |
| .. 36, line 2, for | RHODODNDROM | .. | RHODODENDRON | | | | |
| .. 36, line 29, " | scally | .. | scaly. | | | | |
| .. 36, line 7, from the bottom, for | Eig. | .. | Fig. | | | | |
| .. 36, line 7, from the bottom, for | naturan | .. | natural. | | | | |
| .. 36, line 7, from the bottom, for | notwran | read | natural. | | | | |
| .. 36, line 2, from the bottom, for | furit | read | fruit. | | | | |
| .. 37, line 8, for | leave | .. | leaves. | | | | |
| .. 37, line 8, " | 2.5-3.5 | .. | 2.5-3.5 | | | | |
| .. 38, line 8, " | nervia | .. | nervis. | | | | |
| .. 38, line 19, " | baccaus | .. | baccus. | | | | |
| .. 38, line 26, " | soliary | .. | solitary. | | | | |
| .. 39, line 9, from the bottom, for | of the National | read | of National. | | | | |

| Plate | Line | Original Text | Correction | Page | Page |
|-------|--|------------------------------------|---------------------|------|------|
| 40 | 18 | about | about. | | |
| 40 | 23 | materia | material. | | |
| 40 | 28 | british | British. | | |
| 40 | 37 | pestris | rupestris. | 0,3 | 1 |
| 40 | 44 | ther | the. | 0 | 1 |
| 41 | 9 | wtih | with. | 01 | 1 |
| 41 | 14 | yellowerh | yellowish. | 2 | 2 |
| 42 | 9 | irregulariy | irregularly. | 0,8 | 2 |
| 43 | 7 | foliousus | foliosus. | 0 | 2 |
| 44 | 6 | Primula | Primula. | 4 | 2 |
| 44 | 7 | Petiolate | petiolate. | 21 | 2 |
| 44 | 19 | recorted | recorded. | 01 | 2 |
| 44 | at the bottom of the plate, for Primula Orcodoxa read Primula oreodoxa | | | | |
| 45 | 8 | from the bottom, for cultivatiou | read cultivation. | 7 | 4 |
| 46 | 6 | for ovalifoiia | read ovalifolia. | 0 | 5 |
| 46 | 25 | entends | extends. | 21 | 5 |
| 46 | on the plate, for Primuls ovalifalia | | | 21 | 5 |
| 47 | 9 | for raraly | rarely. | 21 | 5 |
| 47 | 11 | furface | surface. | 4 | 6 |
| 47 | 6&7 from the bottom, for may | | | 4 | 6 |
| 47 | 5 | from the bottom, for characterized | read characterized. | 0 | 6 |
| 47 | 2 | from the bottom, for petale | read petals, | 2 | 8 |
| 48 | 11 | for serves | nerves. | 0 | 2 |
| 49 | 26 | after It strike out is. | | 01 | 2 |
| 50 | 7 | for Succarini | Zuccarini. | 21 | 8 |

正 誤 表

| 圖 版 | 行 數 | 誤 | 正 |
|--------|-----|--------|--------|
| 1 | 8,9 | 脈 | 脈 |
| 1 | 9 | 綠 | 綠 |
| 1 | 10 | 黃綠 | 黃綠 |
| 2 | 2 | 綠 | 綠 |
| 2 | 8,9 | 脈 | 脈 |
| 2 | 9 | 或 | 或 |
| 3 | 4 | 綠 | 綠 |
| 3 | 12 | 仗 | 枚 |
| 3 | 19 | 諸 | 諸種 |
| 3 | 20 | 惟種葉 | 惟葉 |
| 4 | 7 | 脈 | 脈 |
| 5 | 9 | 宜 | 體 |
| 5 | 13 | 紫 | 紫 |
| 5 | 13 | 直徑二 | 直徑二十五至 |
| 5 | 15 | 美十五至子枚 | 子一枚 |
| 6 | 4 | 包 | 色 |
| 6 | 4 | 預 | 頂 |
| 6 | 6 | 形,先端 | 色,先端 |
| 8 | 5 | 紐 | 粗 |
| 8 | 9 | 則後 | 後則 |
| 8 | 10 | 製 | 裂 |
| 8 | 12 | 公頂 | 公厘 |
| 8 | 13 | 相餘 | 其餘 |
| 9 | 2 | 蛾 | 蛾 |
| 9 | 5 | 錘 | 錐 |
| 9 | 7 | 脈 | 脈 |
| 9 | 16 | 關 | 關 |
| 10 | 4 | 緣 | 緣 |
| 10 | 5 | 邊緣 | 邊緣 |
| 11 | 6 | 脈 | 脈 |
| 11 | 7 | 細 | 細 |
| 11 | 12 | 圖 | 圖 |
| 13 | 16 | 至 | 至五 |
| 13 | 16 | 至 | 至五 |
| 15 | 8 | 綠 | 綠 |
| 15 | 17 | 閱 | 閱 |
| 16 | 10 | 珠 | 株 |
| 17 | 8 | 脈 | 脈 |
| 17 | 15 | 圍 | 圍 |
| 檢索表第一面 | 1 | 深 | 餘 |
| 檢索表第一面 | 1 | 世 | 世 |
| 檢索表第一面 | 2 | 蛾 | 蛾 |

正 誤 表

| 圖 版 | 行 數 | 誤 | 正 |
|--------|-----|---------------|----------------|
| 檢索表第一面 | 6 | 春初 | 初春 |
| 檢索表第一面 | 23 | 花體冠 | 花冠 |
| 檢索表第一面 | 27 | 花草萼 | 花萼 |
| 檢索表第一面 | 3 | 其 | 具 |
| 檢索表第一面 | 18 | 花 | 先 |
| 18 | 7 | 綠或邊緣 | 綠或邊緣 |
| 18 | 9 | 玖 | 玖 |
| 18 | 17 | 一千公尺 | 一千一百公尺 |
| 19 | 12 | 瑞 | 端 |
| 21 | 6 | 崎 | 略 |
| 22 | 7 | 銳形 | 銳形尖頭 |
| 23 | 14 | 紫 | 紫 |
| 23 | 15 | 剛毛剛先 尖端具腺體 | 剛毛,剛毛尖 端具腺體 |
| 23 | 16 | 桂 | 柱 |
| 27 | 6 | 綠 | 綠 |
| 27 | 12 | 綠 | 綠 |
| 28 | 6 | 綠 | 綠 |
| 31 | 10 | 等不 | 不等 |
| 32 | 9 | 厥 | 脈 |
| 33 | 13 | 綠 | 綠 |
| 33 | 17 | 發現 | 發現於 |
| 33 | 17 | 汁 | 葉 |
| 35 | 7 | 瑞 | 端 |
| 35 | 7 | 脈 | 脈 |
| 37 | 6 | 脈 | 脈 |
| 39 | 2 | 種新 | 新種 |
| 40 | 7 | 紫淡 | 淡紫 |
| 40 | 14 | 一八二十 | 一八二〇 |
| 41 | 4 | 贊 | 質 |
| 41 | 5 | 綠 | 綠 |
| 41 | 7 | 鐘,形 | 鐘形 |
| 42 | 3 | 攏 | 攏 |
| 43 | 7 | 鎮 | 鐘 |
| 43 | 8 | 五厘 | 五公厘 |
| 43 | 12 | 南之 | 雲南之 |
| 35 | 13 | 分佈最 | 分佈最廣 |
| 44 | 8 | 綠 | 綠 |
| 45 | 17 | 汗 | 汗 |
| 48 | 12 | 室 | 室 |
| 49 | 8 | 厘 | 公厘 |
| 50 | 9 | 芬 | 芳 |
| 50 | 11 | 蛾 | 蛾 |

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