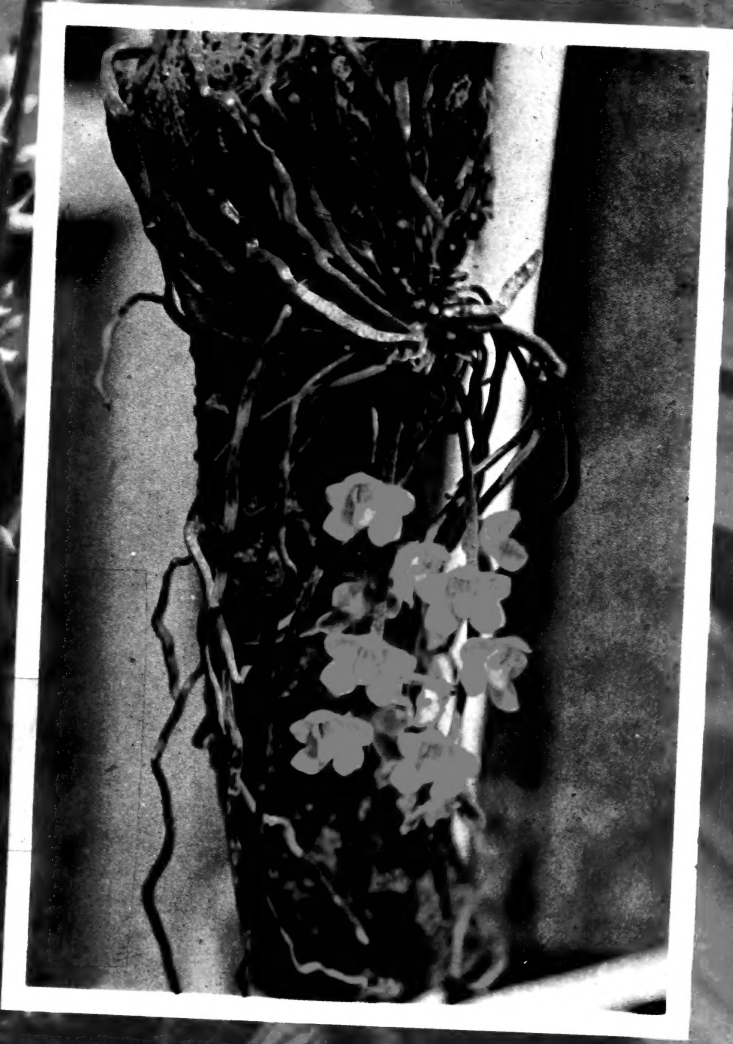


ILLUSTRATIONS OF PLANTS OF TAIWAN, PART
COLOURED ILLUSTRATIONS OF INDIGEOUS
ORCHIDS OF TAIWAN VOLUME ONE

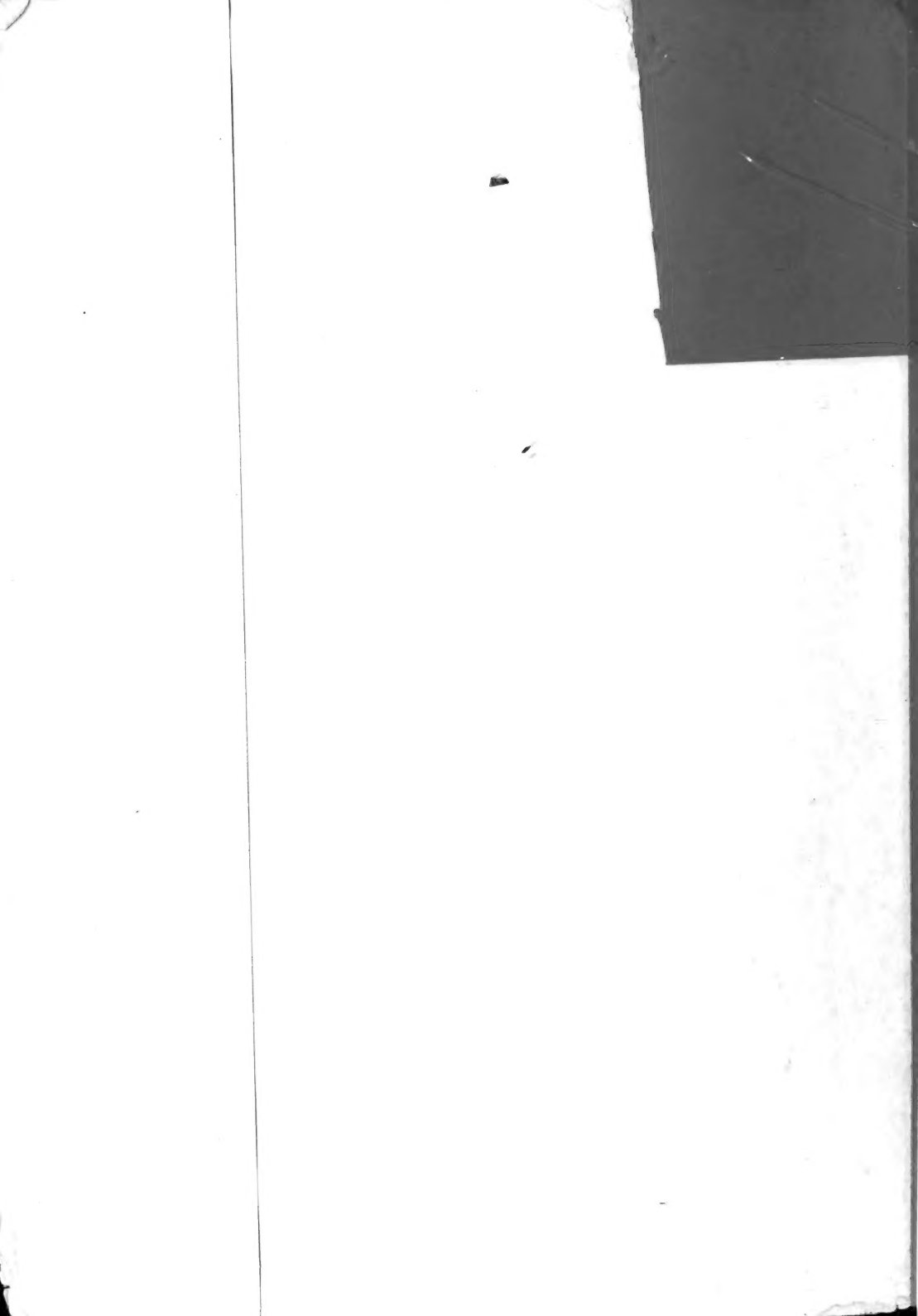
BY: SHAO-SHUN YING



台灣蘭科植物彩色圖鑑

台灣植物彩色圖鑑之二 應紹舜著

(第壹卷)

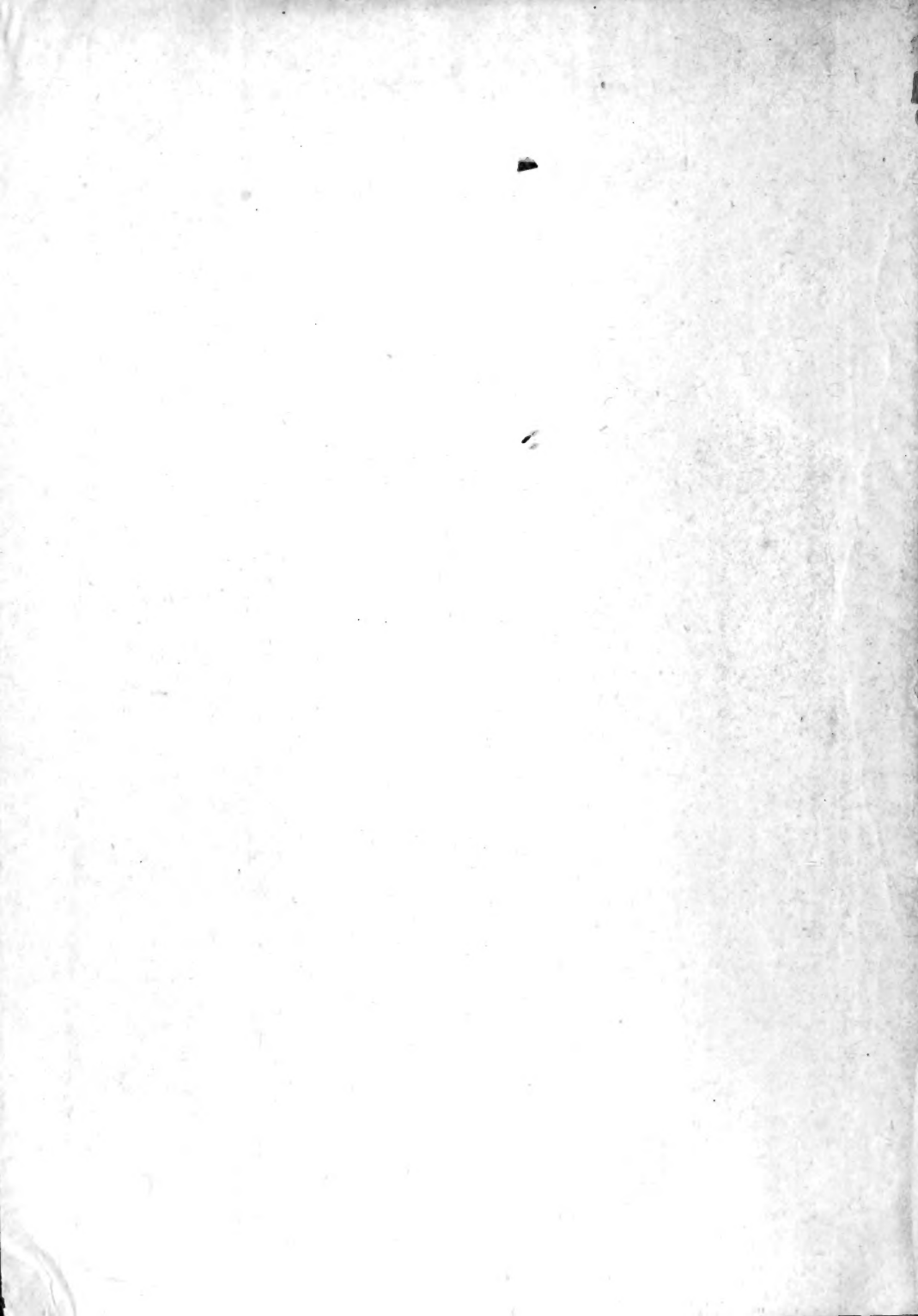


台灣植物彩色圖鑑之

台灣蘭科植物彩色圖鑑

第一卷

廖紹舜



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台灣植物彩色圖鑑之二

COLOURED ILLUSTRATIONS OF PLANTS OF TAIWAN: PART II

台灣蘭科植物彩色圖鑑

第一卷

COLOURED ILLUSTRATIONS OF
INDIGEOUS ORCHIDS OF
TAIWAN VOLOME ONE

應紹舜

Shao-Shun Ying

中科院植物所图书馆



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JULY 1977

DEPARTMENT OF FORESTRY
NATIONAL TAIWAN UNIVERSITY
TAIPEI TAIWAN
REPUBLIC OF CHINA



民國六十六年七月
國立台灣大學森林系

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略報生育養育及教育之恩

DEDICATE TO MY MOTHER

自序

台灣蘭科植物彩色圖鑑第一卷，係根據筆者講授着生植物及高山植物的心得，與多年來足跡遍及全島各山地採集標本的經驗而得到的結晶，僅寫作言，就耗時將近二年，而標本採集及彩色的燈片的拍攝則早在七、八年前即已開始，花費時間不可不謂多矣。

台灣蘭科植物彩色圖鑑第一卷的出版，係廣續台灣高山植物彩色圖鑑之後，為筆者擬將台灣植物寫作成一列彩色圖鑑的一部分，故在本書之卷首有「台灣植物彩色圖鑑之二」的字樣，以區別之一的「台灣高山植物彩色圖鑑」。爾後，假以時日，筆者當有「台灣植物彩色圖鑑之三及之四」的出版。

由於台灣係位於亞熱帶地區，氣溫高、濕度大、森林鬱密，很適合蘭科植物的生長，因此，在台灣維管植物中，蘭科植物幾乎是種類最多的一類，據筆者在台灣野生名錄中統計，約有三百餘種，廣泛地分佈各地區、從海邊、亞熱帶林、溫帶林及高山地區都可見到，尤其是在亞熱帶林中，生長得甚為普遍。

過去研究台灣蘭科植物比較有名的如英國的 Rolfe 及 Hance 兩氏，德國的 Schlechtalia 氏及日本的早田文藏、福山泊明、山本由松及正宗嚴敬等對台灣蘭科植物都有相當的貢獻；他們研究的時間大都在西元 1890 至 1944 年間，當時，限於交通的不方便，資料交流緩慢，與鄰近地區蘭科植物常無法做對比，因此，大部份處理台灣蘭科植物的方式多以發表新種行之；其中尤以早田文藏及福山泊明兩氏所發表的新種為多。

自西元 1944 年迄今，約有三十餘年已過去，在這些歲月裏，對台灣蘭科植物的研究可說是在停滯狀態，甚少有人加以研究的，即使有少數人之行，也大多沿襲前人的路跡，少有作為。

近年來，由於交通日益繁便，地區與地區間資料的交流也很容易能得到，對鄰近地區蘭科植物的比較已不是很難的事。對於台灣蘭科植物的研究，已不應侷促於台灣一隅，而應視東南亞或日本、琉球及台灣島弧的一環，多研究鄰近地區蘭科植物的標本及原文記載，自有利於台灣蘭科植物的研究。再加上近年來台灣山地的開發，來往於高山密林間採集標本已不是很難的事，一些以前很少有人攀登採集的地區，現在也能很方便地到達。因此在多年採集蘭科植物標本的經驗中，也不難發現一些新種蘭花，在本書中便有 13

種新種蘭花列入。

本書中，跟過去一些書籍最大不同點，是學名更改得很多，此固為參考隣近地區的標本及文獻所得的結果，但可能也是會受到一些保守人士攻擊的地方，不過任何風雨名山之業，最要緊的是能接受時代的考驗，筆者願能靜觀其成。

本書自頭至尾，可說係筆者一人埋頭苦幹的結果；從採集標本、拍攝幻灯片、寫稿、抄稿、校對等均一人包辦，從未假手他人，幻灯片中除了三、四張係洪丁興先生所贈與外，其他多為筆者在採集標本途中所拍攝；俗語說「一份耕耘，一份收穫」，筆者，對此書的出版，不敢說有什麼成就，只是覺得沒有浪費光陰而已。在此，筆者也願正告嫉惡心強，好造謠滋事，而不做研究工作的人，有造謠滋事，暗計傷人的時間，不如用心於書本上，不浪費時間，日子久了，自然有所成。

筆者早年失怙，完全靠母親含辛茹苦從困苦中撫養長大，時至今日，母親仍在各方面幫助筆者，對母親的恩惠真不知要如何報答；特將筆者所寫的第一本（台灣高山植物彩色圖鑑）第一卷及第二本書（即此書）獻給母親，以報答母親生育、養育及教育之恩於萬一。

應紹舜

民國六十六年四月於台灣大學森林系

PREFACE

The island of Taiwan, generally known also Formosa, is situated along the fringe of the continental shelf of Asia, on the western border of the Pacific; almost exactly bisected by the Tropic of Cancer, and lying between two branches of the warm Japanese current; therefore, Taiwan, has a distinctly tropical-subtropical climate. It is also oceanic in nature as it is tempered by winds from the sea and by frequent rains and typhoons; humidity is very high throughout the year. Because of the favorable climate and plentiful moisture, the vegetation of Taiwan, especially wild orchids are exceedingly luxuriant. As I indicate in this book, more than three hundred orchids are found from coast extend up to over 3,500m high mountains; among that, they are abundant and plentiful in subtropical and warm temperate mixed forests.

The study of the flora of Taiwan began in 1854, when Robert Fortune briefly visited Tanshui and made a few collections along the coast. In the period of 1854 to 1895, many European botanists and sailors explored this splendid island, and collected rich specimens. In 1890 to 1910, Drs. Rolfe and Hance described many indigenous orchids from the collected specimens of this island. From 1895 to 1945, during the Japanese occupation, many Japanese botanists actively explored the island and published extensively in the study of orchids; B. Hayata, N. Fukuyama, G. Masamune and Y. Yamamoto are notable; they described numerous new orchid, nearly all orchids they found are new, they did not compare materials with neighbor areas.

Since 1946. Chinese botanists have continued botanical survey and studies. almost all botanists pay much attention to woody plants, and the course orchid study nearly stay and neglect for 30 or more years.

For eight-year study and numerous field collected, I publish

this volume of orchid illustrations, I wish it is a beginning of a series study and publish of colored illustrations of plants of Taiwan, all the photographs, except three or four sheets, of this book are taken by myself during field collections.

Firstly two books I write (Alpine Plants of Taiwan in Color vol. one and this one). I dedicate to my mother. My father died when I was nine, my mother brought me up educated me and help me in many ways; I think, this is the best way to express my hearty thanks to her.

Shao - shun Ying

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誌 謝

1. 本圖鑑得以完成，承台灣大學農學院長劉棠瑞博士鼓勵及指導，衷心至深銘感，劉博士係著者受業恩師，從大學、研究所及至於今日皆在其指導下，獲益良多。
2. 本圖鑑寫作時，蒙台灣大學森林系主任吳順昭博士的鼓勵及協助甚多，敬致謝悃。
3. 本圖鑑寫作時，承蒙荷蘭 Rijksherbarium 標本館 Steenis 博士及該標本館圖書館人員協助，因而能獲得一些西元 1890-1910 年（1910 年）英國人所發表台灣自生蘭原文記載的影印本，對台灣蘭科植物的研究有莫大的幫助，特此致謝。
4. 哈佛大學植物館的 H. R. Sweet 博士，曾在寫作時，提供一些有關該館中所出版的琉球及台灣野生蘭的資料，尤其是絨蘭屬；特表謝忱。
5. 琉球中島邦雄先生，在筆者寫作期間也曾寄來有關琉球蘭科植物的論文及書籍，以供參考，敬致謝忱。
6. 特別致謝家兄，澳州阿德里大學副教授應紹堯博士，提供許多有價值的協助，並郵寄許多有價值國外蘭科植物資料，此等資料對本研究有無比的裨益。
7. 筆者最應致謝的是森林系學生，筆者外出採集標本，除了利用寒暑假的林場實習外，大部份都自行組隊前往，不論是林場實習或自行組隊，都由森林系學生陪同前往，同心協力，艱苦地完成採集標本的行程；由於年代已經歷七、八年，學生衆多，已無法一一臚列，其中比較常在一起採集標本者有高毓斌、趙大衛、林則桐、呂志廣及陳燕章等諸同學；不論怎樣，筆者都願對曾與筆者一同實習及採集標本的同學致最深的謝意。
8. 最後要致謝的是，台南縣立塩水國中教師洪丁興先生，他惠贈四張台灣野生蘭幻燈片供本研究之用，使本書生色不少。

ACKNOWLEDGEMENTS

1 In this course of study, I wish to express my hearty thanks to Dr. Tang-shui Liu, Dean of the college of Agriculture, National Taiwan University, for his constant encouragement and valuable suggestions. It is a long time for me work under Dr. Liu's direction, and I learn many things about plant taxonomy from him.

2 An expression of graditude is due to Dr. Shun-Chao Wu, Head of Department of Forestry, National Taiwan University, for his always encouragements and helpness.

3 The writer is also grateful to Dr. C. G. G. J. Van Steenis, Professor of Rijksherbarium, and Librarian of same institute, Holland, for their so kindly sent some copies of orginial descriptions of indigeous orchids of this island, which described by European orchidologists in the periods of 1890 to 1910; the information are very useful in this study.

4 The writer is deeply obliged to Dr. H. R. Sweet, Botanical Museum, Harvard University, U.S.A. for his generously sent some publications about orchids of Lyukyu and Taiwan, which were published by Harvard press.

5 Thanks also to C. Nackejima, Department of Biology, University of the Ryukyu for his valuable help in this course of study.

6 Special thanks to Dr. Shao-yao Ying, my elder brother and associate professor of Adelaide University, Australia, for his generous and continuous helpness.

7 Most of all, I should thanks to students of Department of Forestry, Nationa Taiwan University. From a eight-year long of field collected and photograph, they usually comapied with me and helped me in many ways. I cannot list them all here for students so much, but among them, Messrs Y.P. Kao, T.T. Lin, T.Y. Chao, C. K. Lu and Y.C. Chen are frequently.

8 Thanks also given to Mr. T.H. Hung for his generously granted 4 sheets of color photographs for this study.

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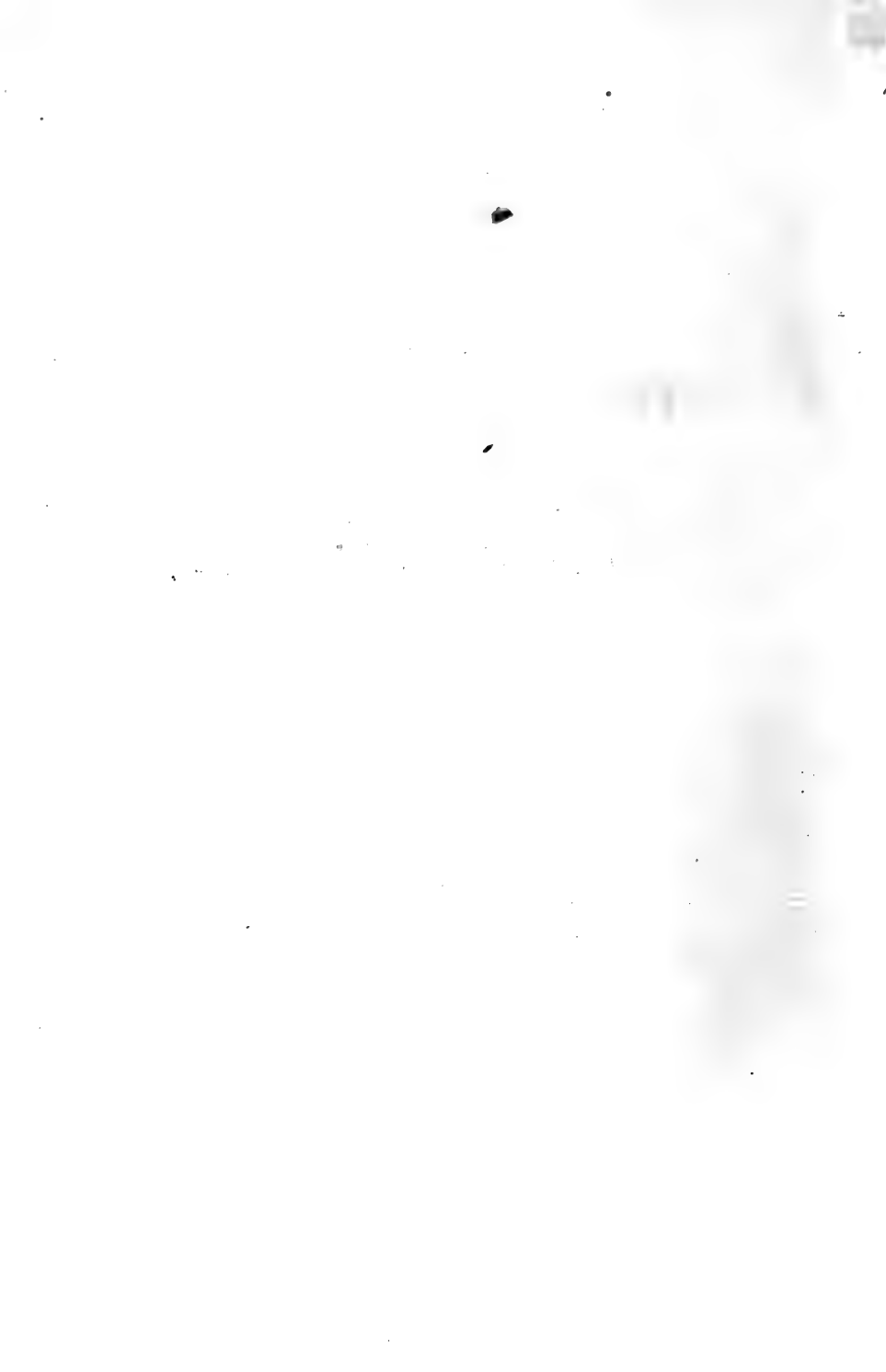
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僅列正名，異名請見第三部份

(No Synonym listed. The Synonym
please see part 3.)





1. 台灣厚唇蘭
(*Acampe taiwaniana*)



2. 縹花蘭
(*Acanthephippium striatum*)



3. 金線蓮
(*Anoectochilus roxburghii*)



4. 竹節蘭
(*Appendicula cornuta*)



5. 假腎藥蘭
(*Armodorum labrosum*)



6. 禾葉蘭 (*Arundina
graminifolia var chinensis*)



7. 假囊距蘭
(*Ascolabium pumillum*)



8. 台灣白及
(*Bletilla formosana*)



9. 恒春石豆蘭
(*Bulbophyllum affine*)



10. 日本石豆蘭
(*Bulbophyllum japonicum*)



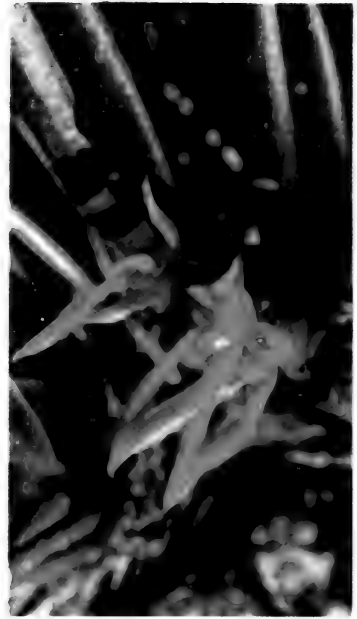
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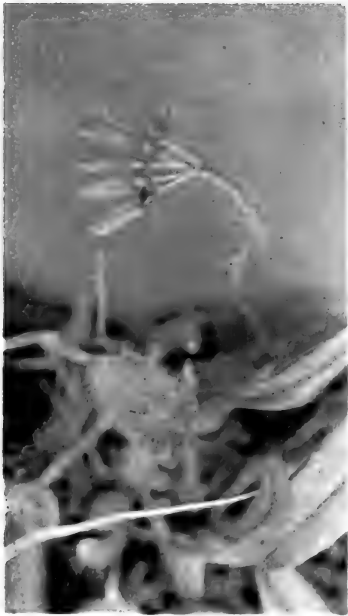
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16. 黃萼石豆蘭
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20. 白花長距根節蘭
(*Calanthe albo-longicalcarata*)



21. 阿里山根節蘭
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22. 垂花根節蘭
(*Calanthe aristulifera*)



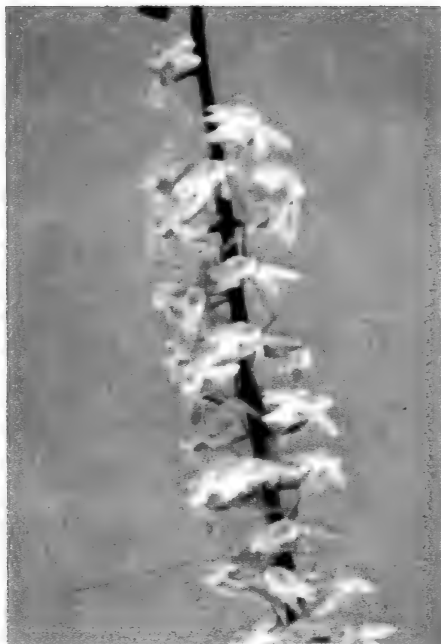
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25. 長距根節蘭
(*Calanthe masuca*)



26. 禾葉根節蘭
(*Calanthe matsudai*)



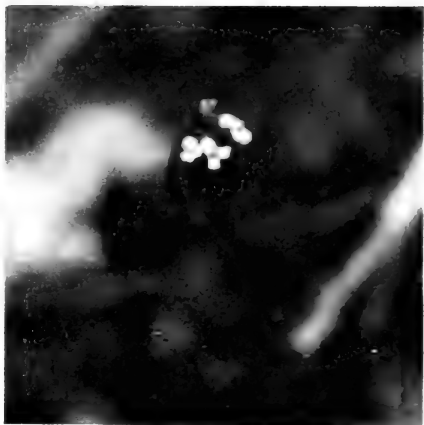
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32. 梅蘭
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33. 綠花梅蘭 (*Chiloschista segawai* var. *taiwaniana*)



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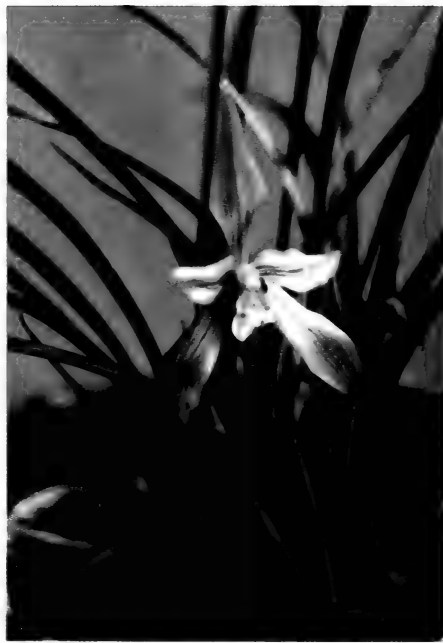
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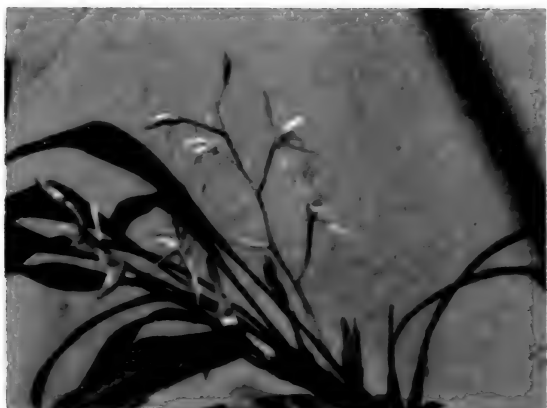
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48. 報歲蘭
(*Cymbidium sinense*)



47. 小蕙蘭
(*Cymbidium pumillum*)



49. 白花報歲蘭 (*Cymbidium sinense* var. *albo-juncundissimum*) (*Cymbidium tortisepalum*)



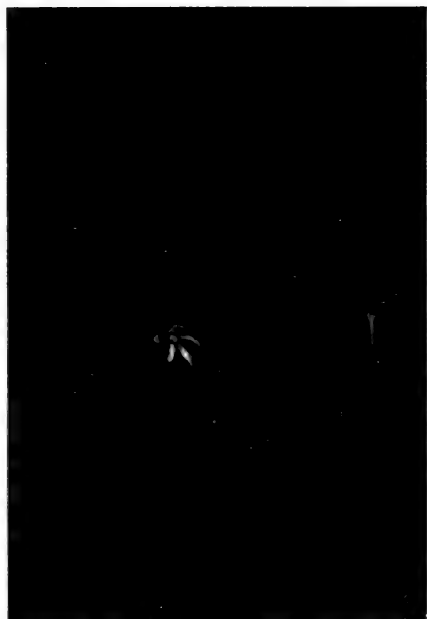
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(*Cypripedium debile*)



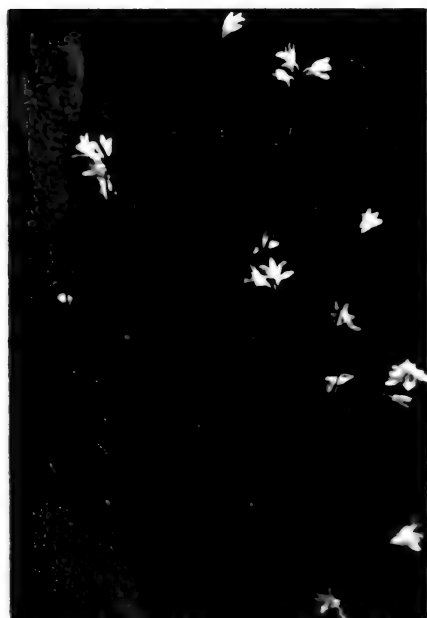
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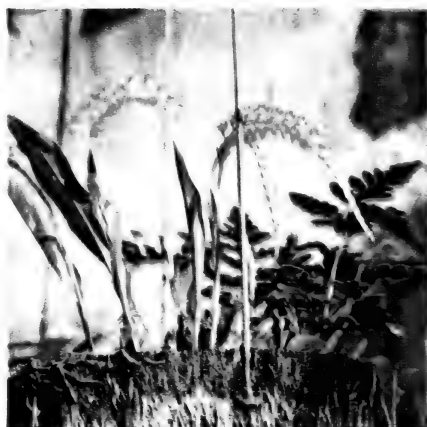
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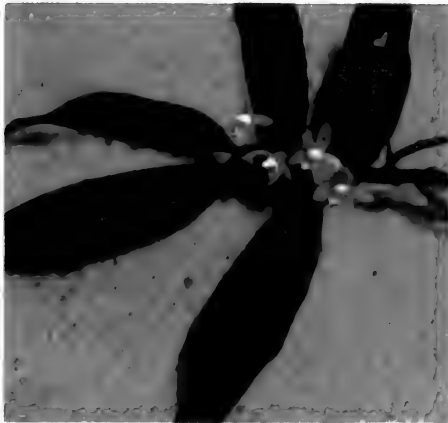
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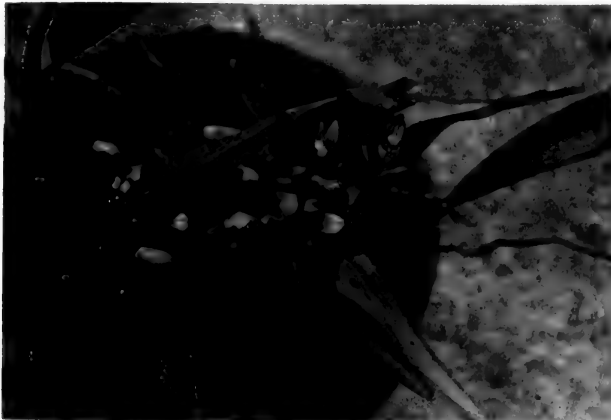
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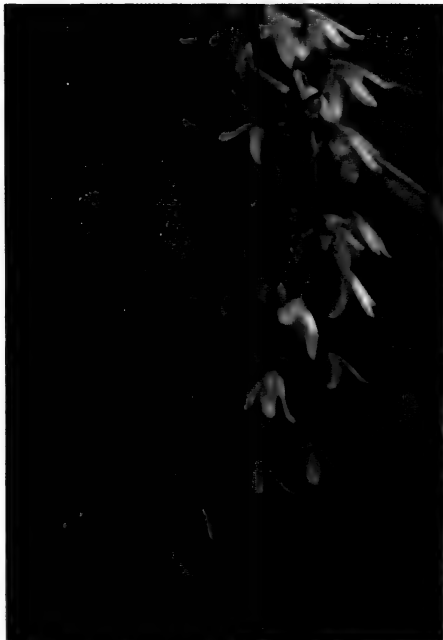
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64. 小筒脚蘭 (*Eria amica*)



65. 絨蘭 (*Eria corneri*)



66. 垂花絨蘭 (*Eria formosana*)



67. 長莖絨蘭 (*Eria ovata* var. *retroflexa*)



68. 阿里山絨蘭 (*Eria reptans*)



69. 台灣小羅蘭
(*Erythroides formosana*)



70. 禾葉芋蘭
(*Eulophia graminea*)



71. 山珊瑚
(*Galeola altissima*)



72. 密花地寶蘭
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73. 大武斑葉蘭
(*Goodyera daibuzanensis*)



74. 紅花斑葉蘭
(*Goodyera grandis*)



75. 翠玉斑葉蘭
(*Goodyera maximowiziana*)



76. 玉山斑葉蘭
(*Goodyera morrisonicola*)



77. 小斑葉蘭 (*Goodyera ogatai*)



78. 厚唇斑葉蘭
(*Goodyera pachyglossa*)



79. 斑葉蘭 (*Goodyera procera*)





80. 白花斑葉蘭
(*Goodyera schlechtendaliana*)



81. 白肋斑葉蘭
(*Goodyera velutina*)



82. 新港山斑葉蘭 (*Goodyera viridiflora* var. *seikoomontana*)



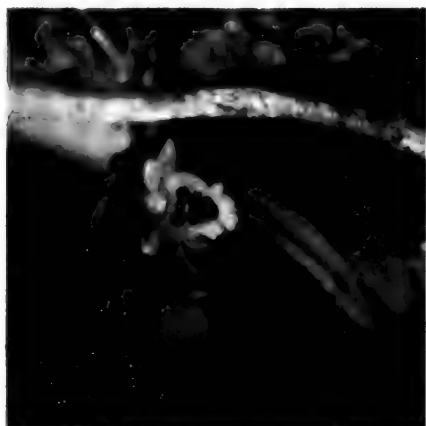
83. 玉鳳蘭
(*Habenaria ciliolaris*)



84. 白緣邊玉鳳蘭
(*Habenaria goodyeroides*)



85. 台灣鵝毛玉鳳蘭
(*Habenaria lacerifera*)



86. 香蘭 (*Haraella odorata*)



87. 角盤蘭
(*Herminium lanceum*)



88. 台灣伴蘭
(*Hetaeria taiwaniana*)



89. 槽舌蘭
(*Holcoglossum quasipinifolium*)



90. 台灣莖蘭 (*Ione sasakii*)



91. 台灣羊耳蒜
(*Liparis bicallosa*)



92. 黃綠花羊耳蒜
(*Liparis chlorxantha*)



93. 圓葉羊耳蒜
(*Liparis cordifolia*)



94. 紅花羊耳蒜
(*Liparis macrantha*)



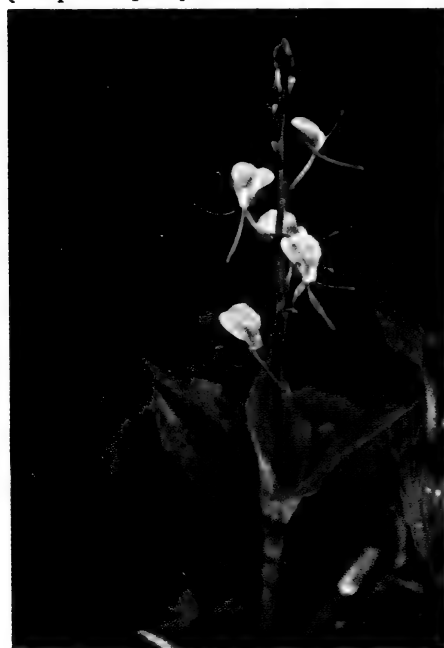
95. 插天山羊耳蒜 (*Liparis*
macrantha var. *sootenzanensis*)



96. 扁球羊耳蒜
(*Liparis platybolba*)



97. 羊耳蒜 (*Liparis plicata*)



98. 綠唇羊耳蒜
(*Liparis shaoshunia*)



99. 相馬氏羊耳蒜
(*Liparis somai*)



100. 小雙葉蘭
(*Listera deltoidea*)



101. 邵氏雙葉蘭
(*Listera shaoii*)



102. 台灣雙葉蘭
(*Listera taiwaniana*)



103. 烏來雙葉蘭
(*Listera uraiensis*)



104. 小柱蘭
(*Malaxis latifolia*)



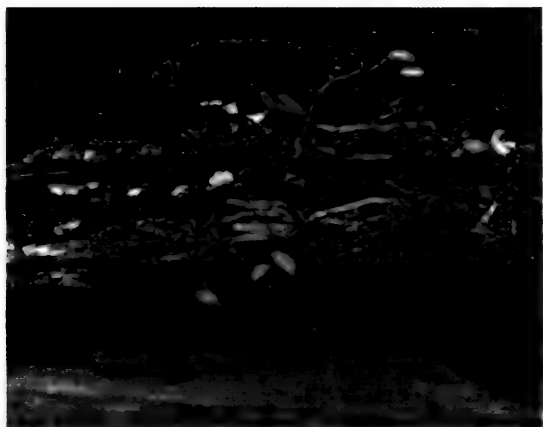
105. 松田氏小柱蘭
(*Malaxis matsudai*)



106. 單葉小柱蘭
(*Malaxis monophylla*)



107. 台灣小柱蘭
(*Malaxis faiwaniana*)



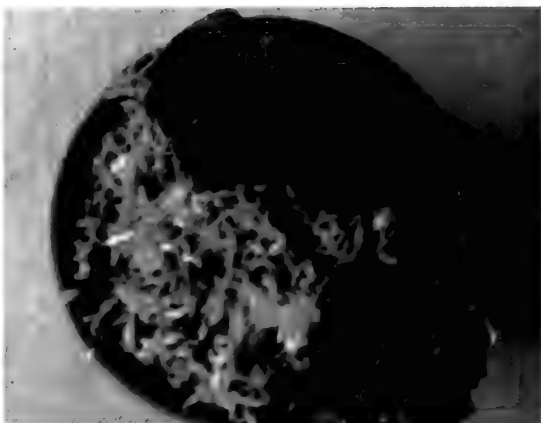
108. 卵葉假蜘蛛蘭
(*Microtatorchis taiwaniana*)



109. 葵蘭
(*Mischobulbum cordifolium*)



111. 二裂唇莖苔蘭
(*Oberonia caulescens*)



110. 紫背一點癩
(*Nervillia discolor* var. *purpurea*)



112. 日本莪苳蘭
(*Oberonia japonica*)



113. 恒春莪苳蘭
(*Oberonia kusukusensis*)



114. 黃花齒唇蘭
(*Odontochilus basacatus*)



115. 台灣齒唇蘭
(*Odontochilus inabae*)



115. 台灣齒唇蘭 (*Odontochilus inabae*)



16. 小黃斑蘭 (*Orchis alpestris*)



118. 奇萊蘭 (*Orchis kiraishiensis*)



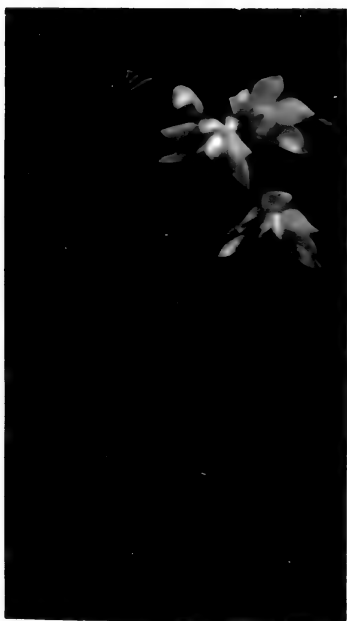
117. 合歡山蘭 (*Orchis formosensis*)



119. 白花蘭 (*Orchis kunihikoana*)



121. 細葉山蘭
(*Oreorchis gracillima*)



122. 黃鶴蘭
(*Phaius flavus*)



120. 紅斑蘭 (*Orchis tailoii*)



123. 細莖黃鶴蘭
(*Phaius gracilis*)



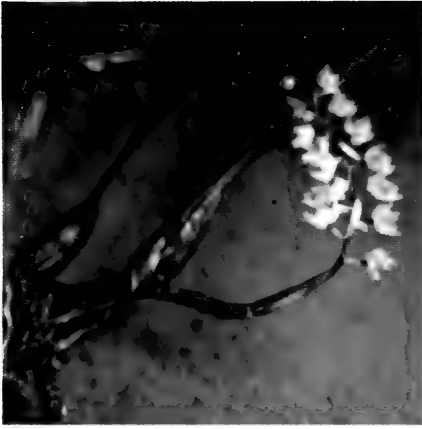
124. 細距鶴頂蘭
(*Phaius mishensis*)



125. 鶴頂蘭
(*Phaius tancarvilleae*)



126. 蝴蝶蘭
(*Phalaenopsis aphrodite*)



127. 石山桃
(*Pholidota cantoensis*)



128. 短距粉蝶蘭
(*Platanthera brevicarata*)



129. 長苞粉蝶蘭
(*Platanthera longibracteata*)



130. 厚唇粉蝶蘭
(*Platanthera pachyglossa*)



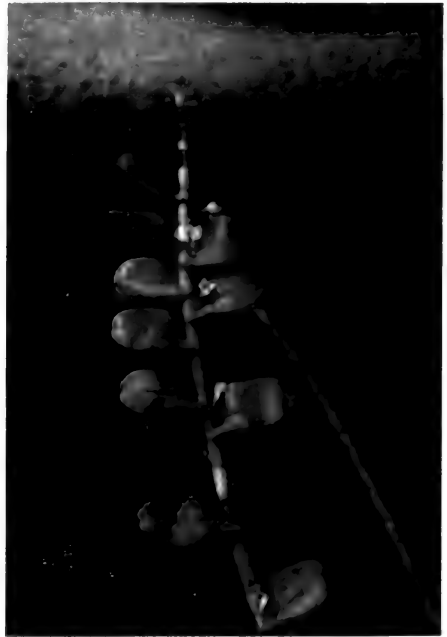
131. 薄萼粉蝶蘭
(*Platanthera stenosepala*)



132. 台灣舌唇蘭
(*Platanthera taiwaniana*)



133. 山慈姑
(*Pleione bulbocoidoides*)



134. 台灣柄唇蘭
(*Podochilus taiwanianus*)



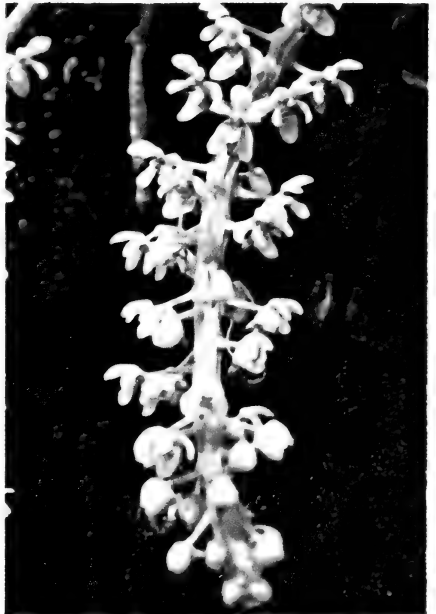
135. 台灣囊唇蘭
(*Saccolabium formosanum*)



136. 紅斑囊唇蘭
(*Saccolabium fuscopunctatum*)



137. 日本囊唇蘭
(*Saccolabium japonicum*)



138. 蘭嶼囊唇蘭
(*Saccolabium kotoense*)



139. 小花囊唇蘭 (*Saccolabium rupestris*)



140. 應氏囊唇蘭
(*Saccolabium shaoyaoii*)



141. 球花囊唇蘭
(*Saccolabium taiwanianum*)



142. 隔距蘭 (*Sarcanthus paniculatus*)



143. 綬草
(*Spiranthes Sinensis*)



144. 扁根蜘蛛蘭
(*Taeniophyllum complanatum*)



145. 蜘蛛蘭
(*Taeniophyllum glandulosum*)



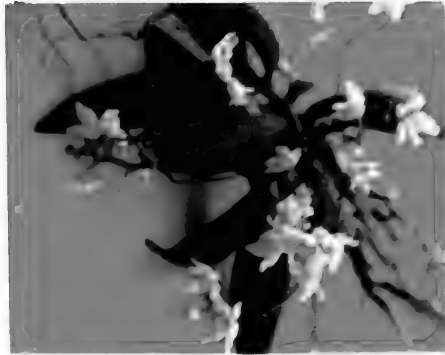
146. 黃花小杜鵑蘭
(*Tainia hualienia*)



147. 島田氏小杜鵑蘭
(*Tainia shimadai*)



148. 台灣白蛾蘭
(*Thrixspermum formosanum*)



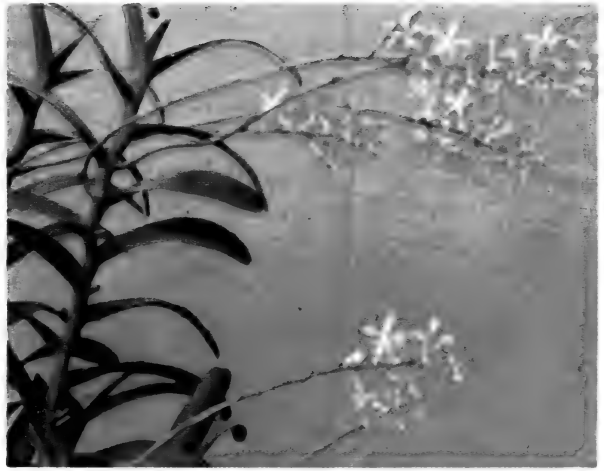
149. 溪頭白蛾蘭
(*Thrixspermum saruwatarii*)



150. 垂枝白蛾蘭
(*Thrixspermum subulatum*)



151. 香筒距蘭
(*Tipularia odorater*)



152. 毛舌蘭
(*Trichoglottis ionosma*)



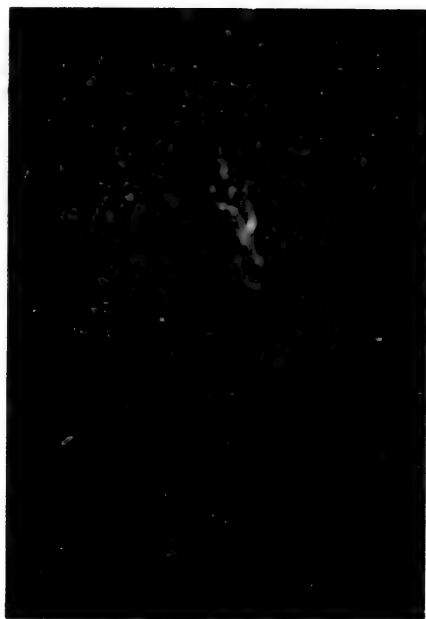
153. 穗花毛舌蘭
(*Trichoglottis rosea*)



154. 竹莖蘭
(*Tropidia angulata*)



155. 台灣香草蘭 (*Vanilla griffithii* var *formosana*)



156. 台灣二尾蘭 (*Vrydayzynea formosana*)



157. 恒春絲柱蘭 (*Zeuxine hengchuanense*)



158. 絲柱蘭 (*Zeuxine strateumatica*)

1. 台灣厚唇蘭 (*Acampe taiwaniana* Ying)

Epiphytes; roots produced from the stem, elongate, grayish white or grayish green, 15-30 cm long, 4-6 mm in diameter; pseudobulb absent; stem simple, erect, 50-80 cm long, robust, 2-2.5 cm across, glabrous.

Leaves distichous, linear-lanceolate, 25-35 cm long, 3-4 cm wide, coriaceous, emarginate or shallowly 2-fids at apex, sheathing at base, entire, lustrous green surface, pale green beneath, midrib raised on back, the lateral veins inconspicuous; sheaths yellow, coriaceous, 2-3 cm long, glabrous.

Flowers 10-20, rather large or medium size, 1.2-1.6 cm in diameter, lightly yellow with brown spots, racemose; the scape axillary, produced from the axil of the leaves, 25-40 cm long, erect, glabrous, pale green; bracts minute, triangular, about 3 mm long, acute at apex; the pedicels with ovaries 1.5-2 cm long, lightly yellow, glabrous; sepals subequal, somewhat fleshy, the dorsal one ovate, 1-1.5 cm long, 5-7 mm wide, acuminate or obtuse at apex, the lateral ones obovate, 1-1.5 cm long, 5-6 mm wide; petals linear-lanceolate, somewhat falcate-like, 1-1.5 cm long, 4-5 mm wide; lip oblong, 8-11 mm long, shortly spurred at base, obscurely 3-lobed; column short.

Endemic, known from the central mountains at the elevations of 600-1000m in evergreen forests, not common.

着生蘭，氣生根抽自於莖中部以下，甚長，灰白色或灰綠色，長15~30 cm，直徑4~6 mm；無假球莖；莖單生、直立，長50~80 cm，粗壯，徑1~1.5 cm，無分枝、光滑。

葉二列狀排列，線狀披針形，長25~35 cm，寬3~4 cm，革質，先端凹或淺2裂，基部有鞘，全緣，表面有光澤綠色，背面白綠色，中肋於背面隆起，側脈不顯著，葉鞘黃綠色，革質，長2~3 cm，光滑。

花10~20枚，大或中型，徑1.2~1.6 cm，淡黃色而有褐色斑點、

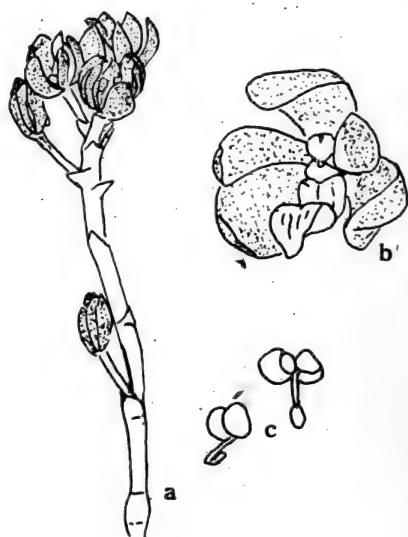


圖 (Fig) 1. 台灣厚唇蘭 (*Acampe taiwaniana*)
 a 花序 (Inflorescence) , b 花 (Flower)
 c 花粉塊 (Pollinia)

總狀花序；花莖腋生、抽自於葉鞘，長 25~40cm，直立、光滑、淡綠色；苞片甚小，三角形，長約 3mm，先端銳尖；花柄連同子房長 1.5~2 cm，淡黃色，光滑；萼片略不整齊，多少呈肉質，後萼片卵形，長 1~1.5 cm，寬 5~7 mm，先端漸尖或銳；側裂片倒卵形，長 1~1.5 cm，寬 5~6 mm，花瓣線狀披針形，略呈鐮刀狀，長 1~1.5 cm，寬 4~5 mm；唇瓣長橢圓形，長 8~11 mm，基部具有短距，不明顯 3 裂，蕊柱短。

固有，生長於台灣中，南部約 600~1000 公尺間山地，見於常綠闊葉林樹冠層，較少。

2. 縵花蘭 (*Acanthe phippium striatum* Lindley)

Terrestrials; pseudobulba closely approximate, oblong or somewhat cylindric, 5-8 cm long, 1.2-2.1 cm in diameter, whitish green; sheathes many, subhyaline, ovate, membranous, acute at apex; stemless.

Leaf solitary, very rarely 2, terminal on the pseudobulb, elliptic, 22-27 cm long, 8-10 cm wide, membranous, acute, narrowed to the petioles at base, 5-nerved raised on back; the petioles 5-9 cm long, glabrous.

Flowers solitary, sometimes 2 or 3, somewhat patent, obconical-sac, 4-4.5 cm long, 2-2.5 cm across, white with 4-6 purplish longitudinal streaks; scape produced from the base of pseudobulb, erect, 10-12 cm long, glabrous; bracts ovate, 2-3 cm long, acuminate at apex, concave, membranous; the pedicels with ovaries slender, 3-3.5 cm long; sepals subfleshy, cohering into a oblique obconical urceole, free at top, the dorsal one oblong; rounded obtuse at apex, 2.5-3 cm long, 1-1.5 cm wide, the lateral ones oblique triangular, 2-2.5 cm long, acute at apex, decurrent along the column-foot and forming a 6-8 mm long mentum; petals hidden inside the sepals, elliptic, acute at apex, decurrent at base, 2-2.2 cm long, 8-10 mm wide, lip hidden inside the sepals, with long claw or stipite; the stipite linear, 1-1.2 cm long, 4-5 mm wide; the lamina 3-lobed, 1.2-1.5 cm long, the median lobe triangular-ovate, purple, 5-7 mm long, about 5 mm wide, acute, contracted at base; the lateral lobes ear-like; column short, 1-1.2 cm long, 3-3.5 mm wide.

Endemic, at low to medium altitudes of 400-1700 m throughout the island, under the forests, very common.



圖 (Fig) 2. 罈花蘭 (*Acanthephippium striatum*) a 花
(Flower)

地生蘭、假球莖緊密排列，長橢圓形或略呈圓柱形，長5~8cm，徑1.2~2.1cm，白綠色；鞘多數，近似透明、卵形、膜質、先端銳尖、無莖。

葉1枚，少數2枚，着生於假球莖先端，橢圓形，長22-27cm，寬8-10cm，膜質，先端銳尖，基部漸狹而延伸至葉柄、脈5條隆起於背面；葉柄長5-9cm，光滑。

花單一，有時亦有2或3枚，顯著、鐘形，長4-4.5cm，徑2-2.5cm，白色有6條縱條紋，花莖抽自於假球莖基部，直立，長10-12cm，光滑；苞片卵形，長2-3cm，先端漸尖形，槽狀，膜質，花梗連同子房細長，長3-3.5cm，萼片近似肉質，癒合而成一歪鐘形，僅先端離生，後萼片長橢圓形，先端圓鈍，長2.5-3cm，寬1-1.5cm，側萼片歪三角形，長2-2.5cm，先端銳尖，基部狹而延伸而與蕊柱形成一長6-8mm的頰，花瓣隱藏於花萼內，橢圓形，先端銳尖，長2-2.2cm，寬8-10mm，唇瓣隱藏於花萼內，有長爪或柄，柄線形，長1-1.2cm，寬4-5mm，唇瓣片3裂，長1.2-1.5cm，中裂片三角狀卵形，紅紫色，長5-7mm，寬5mm，側裂片耳形，蕊柱短。

固有，生長於全島400-1700m山地，生長於森林下，甚為常見。

3. 金線蘭 (*Anoectochilus roxburgii* (Wall) Lindley)

Terrestrials; rhizomes short; stem 15-25 cm long, glabrous.

Leaves 2-4, herbaceous, ovate or round-ovate, 4-5 cm long, 2-3.5 cm wide, acuminate, rounded at base, 5-7-nerved, silver-white on veins surface and slightly wine red beneath.

Flowers 3-5 in terminal spike; scape 15-20 cm long, pubescent; bracts ovate-lanceolate or lanceolate, 1 cm long, dorsal sepal broadly ovate, 5-7 mm long, 5-6 mm wide, lateral sepals ovate or round, 7-9 mm long, 4-5 mm wide; petals semi-ovate, oblique, 6-8 mm long, 2-3 mm wide, cuspidate at apex, with dorsal sepal forming a hood; lip Y-shaped, 1.3-1.8 cm long, long clawed; claw along the incurved margins with filiform unequal segments, terminal 2-lobed, the lobes 6-7 mm long, 2.5-3.5 mm wide; spur bag-like, 3-4 mm long, about 3 mm wide; column short, 1 mm long; anther oblong, 4 mm long.

Himalayas, s. China and LYukyu. Taiwan, under the thickets at medium altitudes of 600-1800 m, often occurred at mountain ridges.

Firstly, Hayata treated this species as *A. roxburgii*, several years later, he propose a new species, *A. formosanus* in stead of *A. roxburgii* in Taiwan only based on cream-yellow flowers with more fimbriate mesochilus. compare the specimens of *A. roxburgii* which from the southern China deposited in herbarium of Department of Botany, National Taiwan University with *A. formosanus*, doubtless they are conspecific.

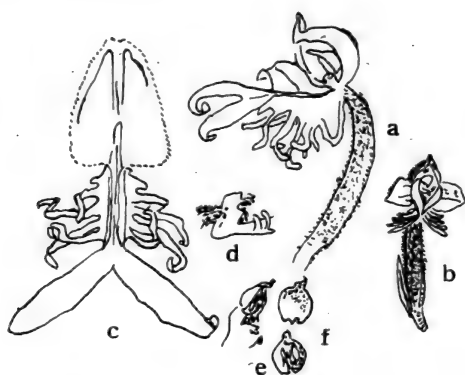


圖 (Fig) 3. 金線蓮. (*Anoectochilus roxburgii*)

a. b. 花 (Flower) c. 唇瓣 (Lip)

d. e. 蕊柱 (Column) f. 花粉塊 (Pollinia)

地生蘭、根莖短。莖長 15 - 25 公分，基部匍匐，先端直立。

葉 2~4 枚，草質、卵形或圓狀卵形，長 4 - 5 cm，寬 2 - 3.5 cm，先端漸尖，基部圓形，5 - 7 脈，表面在葉脈處呈銀白色，背面則略呈酒紅色。

花 3~5 枚呈頂生的穗狀花序；花莖長 15 - 20 cm，有毛茸；苞片卵狀披針形，長 1 cm；後萼片橢圓形，長 5 - 7 mm，寬 5 - 6 mm，側萼片卵形或圓形，長 7 - 9 mm，寬 4 - 5 mm；花瓣近似卵形，基部略歪，長 6 - 8 mm，寬 2 - 3 mm，先端短尾狀，與後萼片形成花兜，唇瓣 Y 一形，長

1.3 - 1.8 cm, 具有長爪, 爪的邊緣略呈反捲且有細長絲狀物, 先端二裂, 裂片長 6 - 7 mm, 寬 2.5 - 3.5 mm; 距呈袋形, 長 3 - 4 mm, 寬 3 mm; 蕊柱短, 長 1 mm; 花藥長橢圓形, 長 4 mm。

喜馬拉雅山麓, 中國南部及琉球, 台灣, 生長於中海拔的叢林內, 約 600 ~ 1800 公尺的山地。

初, 早田文藏氏將台灣此種命名為 *A. roxburghii*, 數年後, 他又提出 *A. formosanus* 來替代原先的 *A. roxburghii* 僅根據花呈乳黃色及唇瓣的爪邊緣的細絲長而細。惟比較存放於台大植物系標本館採自於中國南部 *A. roxburghii* 的標本, 竟與台灣所產者一樣, 故台灣所產者其學名亦應為 *A. roxburghii*。

4. 竹節蘭 (*Appendicula cornuta* Blume)

Epiphytes; rhizomes short, creeping, 1-2 cm long; roots many, filiform, slender, 3-4 cm long; stem simple, clustered, 15-20 cm long, about 3 mm in diameter, erect or ascending, green or yellowish green, usually enclosed by the leaf-sheathed.

Leaves alternate, distichous, oblong, 1.7 - 2.2 cm long, 7-9 mm wide, coriaceous, obtuse and slightly 2-lobed at apex, rounded at base, connected sheathes with articulate, entire, lustrous green surface, pale green and midrib elevated beneath, lateral veins inconspicuous; sheathes 8-11 mm long, enclosed the stem.

Flowers 5-10, small, 2-4 mm in diameter, racemose, lightly yellow or yellowish green; scape axillary, produced from the terminal leaf-axil, 1-2 cm long, pendulous, green, glabrous; bracts minute, 2-2.5 mm long, the pedicels with ovaries 1-2 mm long, glabrous, green; sepals unequal, the dorsal one free, sometimes slightly adnate to the lateral sepals at the base oblong triangular, 1-1.5 mm long, about 1 mm wide, obtuse at apex, the lateral one linear 1-1.4 mm long, about 0.6 mm wide obtuse at apex connected with column and form a 0.6 mm long mentum: petal linear or linear-lanceolate, 2-2.2 mm long, 0.6 mm wide, obtuse at apex, narrowed at the base; lip adnate the column with articulate, rounded at apex, contracted at the base, recurved from the middle, irregular serrulate on margin; column short, 0.2-0.3

mm long.

Capsules cylindric, 2-3 mm long, 4-5-ridged.

Endemic, known from the islet of Lanyu only at the elevations of 200-500 m, under the tropical rain forests, commonly.

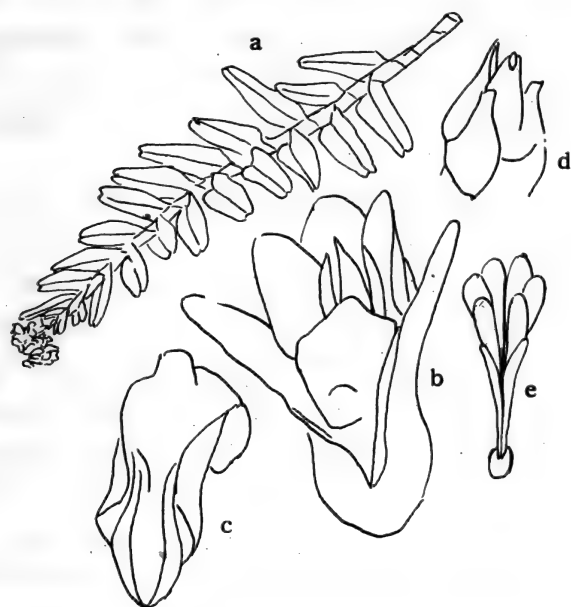


圖 (Fig) 4. 竹節蘭 (*Appendicula cornuta*)

- a. 花枝 (Stem) b. 花 (Flower)
c. 唇瓣 (Lip) d. 蕊柱 (Column)
e. 花粉塊 (Pollinia)

着生蘭、根莖短，匍匐，長1-2cm；根多數，線形，細長，長3-10cm；莖單立叢生，長15-20cm，莖約3mm，直立，綠色或黃綠色，常包有葉鞘。

葉互生，兩列狀排列，長橢圓形，長1.7-2.2cm，寬7-9mm，革質，先端鈍且略淺2裂，基部圓形，與葉鞘以關節相連，全緣，表面有光澤綠色，背面淡綠色，中肋背面隆起，側脈不顯著；葉鞘8-11mm，包圍着莖部。

花5~10枚，甚小，徑約2-4mm，總狀花序，淡黃色或黃綠色，花

莖腋生，着生於莖先端的葉腋，長1-2 cm，下垂、綠色、光滑。苞片小，長2-2.5 mm；花梗連同子房長1-2 mm；萼片不整齊，後萼片離生，有時在基部略與側萼片相連，長橢圓狀三角形，長1-1.5 mm，寬約1 mm，先端鈍；側萼片線形，長1-1.4 mm，寬約0.6 mm先端鈍、基部狹，與蕊柱相連而形成一長0.6 mm的頰，花瓣線形或線狀披針形，長2-2.2 mm，寬0.6 mm，先端鈍；唇瓣與蕊柱以關節相連，先端圓，基部緊縮，自中部以上皆向後反捲，有不規則鋸齒緣，蕊柱短，長0.2-0.3 mm。

固有，僅生長於蘭嶼約200-500 m的熱帶常綠雨林中，較為常見。

5. 假腎藥蘭 (*Armadorum labrosum* (Lindley Schltr.))

Epiphytes; stem clambering elongate, robust, 40-70 cm long, Leaves produced at rather distinct intervals or distichous and close together, linear to linear-ligulate, 18-25 cm long, 1.5-2.5 cm wide, obtuse and unequally 2-lobed at apex, amplexicaul and sheathed at base, coriaceous, lustrous green surface, pale green and keeled beneath.

Flowers 4-7, long-lasting, widely spreading, waxy fragrant, 3.5-4.5 cm diameter; sepals and petals yellow blotched and margined with brown and red brown; sepals oblong, 1.4-1.8 cm long, 3-3.5 mm wide, obtuse at apex; petals narrowly oblong, 1.2-1.5 cm long, about 3 mm wide, obtuse at apex; lip 3-lobed, the lateral lobe minute, erect, the median lobe oblong, white or yellow with 3 brownish raised keeled near the base; spur cylindrical, curved toward the front, somewhat shorter the lip.

Assam, Burma and Java. Taiwan, known from southern part of the island at the elevations of 300-750 m, in forests, rather rare.

着生蘭，莖甚長，粗壯，長40-70 cm；葉多抽自於略有距離的節處或呈兩列狀排列，線形或線狀舌形，長18-25 cm，寬1.5-2.5 cm，先端鈍且為不等的二裂，基部有鞘而抱莖，革質，表面呈有光澤綠色，背面有龍骨突起且呈淡綠色。

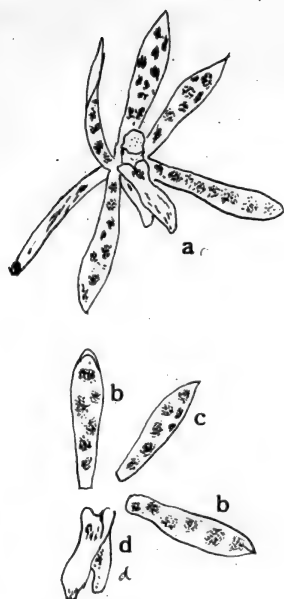


圖 (Fig) 5 假腎藥蘭 (*Armodorum labrosum*)

- a. 花 (Flower) b. 花萼 (Sepal)
c. 花瓣 (Petal) d. 唇瓣及距 (Lip and spur)

花 4~7 枚，花期較久，甚開張、臘質、有香味，徑 3.5-4.5 cm，花萼及花瓣有黃色斑點邊緣呈褐色或紅褐色；萼片長橢圓形，長 1.4-1.8 cm，寬 3-3.5 mm，先端鈍，花瓣狹長橢圓形，長 1.2-1.5 cm，寬約 3 mm，先端鈍；唇瓣三裂，側裂片小，直立；中裂片長橢圓形，白色或黃色，近基部處有三條褐色的龍骨突起，距圓柱形，先端略反捲，較唇瓣略短。

阿薩姆、緬甸及爪哇。台灣，生長於南部低海拔約 300-850 m 山地，常綠森林內，甚為稀少。

6. 禾葉蘭 (*Arundina graminifolia* var *chinensis* (Blume) Ying, **Comb nov.**)

Arundina chinensis Blume, Bijdr. 402 (1825); Henry, List Pl. Form. 92 (1896)

Terrestrials; rhizomes short; stem simple, pseudobulb-like

at the base, 30-50 cm tall, leafy from middle to top.

Leaves alternate, many, articulate, lanceolate, chartaceous or subcoriaceous 10-18 cm long, 1-1.5 cm wide, acute, sheath at base.

Flowers rather large, 3-4 cm in diameter, pink, sometimes white, in terminal raceme; the pedicels with ovaries 3-5 cm long; bracts triangular, purplish red, 3-6 mm long, dorsal sepal lanceolate, pink or white, 3-3.5 cm long, 7-8 mm wide, lateral sepals somewhat broader; petals obovate, as long as the sepals; lip obovate, 3-3.5 cm long, 2-2.5 cm wide, 3-lobed, the median lobe 2-fid, usually 3-keeled inside; column subcylindric, about 2 cm long; pollinia 8.

Capsules oblong, 6-ribbed, 4-6 cm long.

S. China and Lyukyu. Taiwan, at low altitudes up to 900 m, usually on grassland.

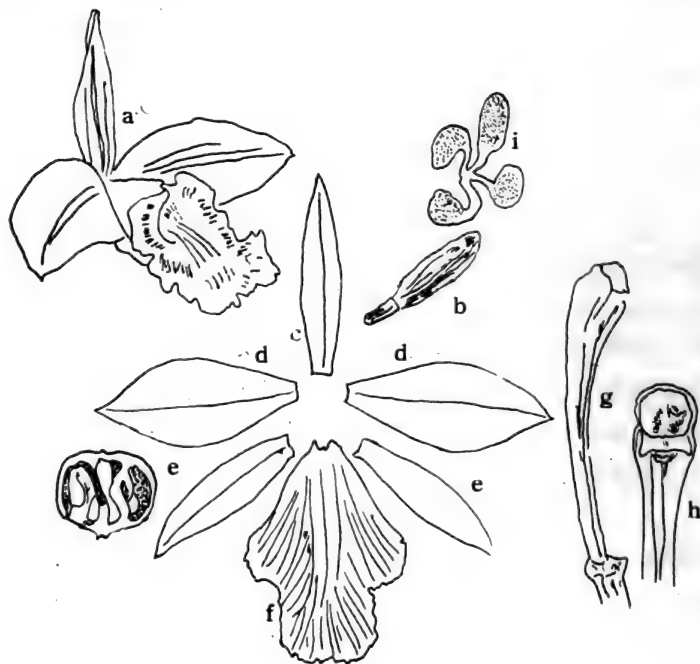


圖 (Fig) 6 禾葉蘭 (*Arundina graminifolia* var *chinensis*)

- a. 花 (Flower)
- b. 未開放的花 (Unopened flower)
- c. 後萼片 (Dorsal sepal) d. 花瓣 (Petal)
- e. 側萼片 (Lateral sepal) f. 唇瓣 (Lip)
- g.h. 蕊柱 (Column) i. 花粉塊 (Pollinarium)

地生蘭、根莖短、莖單立叢生，基部呈假球莖狀，長30-50 cm，中部以上有葉。

葉互生，多數，具有關節、披針形、紙質或薄革質，長10-18 cm，寬1-1.5 cm，先端銳尖，基部有鞘。

花較大，徑3-4 cm，粉紅色或白色，呈頂生的總狀花序，花梗連同子房長3-5 cm，苞片三角形，紫紅色，長3-6 mm；後萼片披針形，粉紅色或白色，長3-3.5 cm，寬7-8 mm，側萼片較寬；花瓣倒卵形，與萼片同長，唇瓣倒卵形，長3-3.5 cm，寬2-2.5 cm，3裂，中裂片又二裂，唇瓣內面具有龍骨突起三條，蕊柱近似圓柱，長2 cm，花粉塊8枚。

蒴果長橢圓形，具有稜線6條，長4-6 cm。

中國南部及琉球、台灣，生長於900 m以下山地，常見於草生地。

ASCOLABIUM Ying, **gen. nov.**

Epiphyta; rhizoma repens brevis; caulis simplicis brevis. Folia disticha, alterna, acerosa, extrorse leviter recurvata subteretis intus (supra) profunde sulcata, extus (subtus) rotundata, apice obtusa vel acuta, basi cum vaginis articulata, extus basi plus minus costata.

Flora 4-8, minuta; in breviter racemo densinsculo dispositi, bracteati; sepala subaequalia, oblonga, libera; petala subsimilia; calcar brevis; lamina 3-lobata, lobis lateralibus as latera calcaris erectis parvissimis; lobis medio patent, concavo; columna brevis apoda; pollinia 2, subglobosa, integra, inappendiculata.

A monotypical genus, endemic to Taiwan.

The new genus more or less related to *Holcoglossum* in general appearance, but different from it by flower characters; also near to *Ascozentrum*, but different from it by general appearance and lip and spur characters.

7. 假囊距蘭 (*Ascolabium pumilum* (Hayata) Ying.

Ascolabium pumilum (Hayata) Ying, comb. nov.

Saccolabium pumilum Hayata in Bot. Mag. Tokyo 20:76 (1906).

Ascocentrum pumilum (Hayata) Schltr. in Fedde. Repert. Beih 4:285 (1919); (Orch. Sino-Jap. Prodr.); Hayata, Icon Pl. Form. 10:34 (1921); Ying in Chinese Flow. (6):32, pl. 2 (1974).

Epiphytes; roots elongate, 5-10 cm long; stem simple, short, 1.5-2 cm long, 2-3 mm across.

Leaves 4-6, alternate, distichous, needle-like, coriaceous, 3-5 cm long, 1.5-2.5 mm wide, green, sometimes brownish green; veins inconspicuous, obtuse, rounded and sheathing at base; sheathes 1-1.5 cm long, 3-4 mm wide.

Flowers 4-8, small, pink, 6-10 mm across; scape from the base of stem, slender, erect, glabrous; bracts lanceolate or ovate-lanceolate, membranous, 4-5 mm long, 1.5-2 mm wide, acute at apex; pedicels with ovaries 6-9 mm long; sepals equal, elongate oblong, 4-6 mm long, 2-3 mm wide, 1-nerved; petals same as the sepals in shape, but somewhat narrower, about 2.5 mm wide; lip ovate or elliptic ovate, 4-5 mm long, 3-4 mm wide, adnate to the base of column, spurred, 3-lobed, the lateral lobe minute, erect, median lobe ovate, concave; spur 6-9 mm long; column red, 2-3 mm long; pollinia 2, globose.

Capsules cylindrical ovoid, 1.5-1.8 cm long, 4-5 mm in diameter, truncate, attenuate at base, 2-3-ridged.

Endemic, epiphytic on the tree trunks at the medium altitudes of 1000-2100 m throughout the island, common.

着生蘭，根甚長，長5-10 cm；莖單生無分枝，甚短，長1.5-2 cm，徑2-3 mm。

葉4~6枚，互生，二列排列，針狀，革質，長3-5 cm，寬1.5-2.5 mm，綠色或有時呈褐綠色，脈不顯著，先端鈍，基部圓而以關節與葉鞘相連，葉鞘長1-1.5 cm，寬3-4 mm。

花4~9枚，小，粉紅色或紫紅色，徑6-10公厘；花莖抽自於葉鞘，細長，直立，光滑；苞片披針形或卵狀披針形，膜質，長4-5 mm，寬



圖 (Fig) 7. 假囊距蘭 (*Ascolabium pumilum*)

a. 植物體 (Flowering plant) b. 花 (Flower)
c. 距及花梗 (Spur and pedicel)

1.5-2 mm，先端銳尖；花梗連同子房長 6-9 公厘；萼片整齊，長橢圓形，長 4-6 mm，寬 2-3 mm，脈一條；花瓣與萼片同形，但較窄，寬僅 2.5 mm；唇瓣卵形或橢圓狀卵形，長 4-5 mm，寬 3-4 mm，基部與蕊柱相連，有距、三裂、側裂片甚小，直立，中裂片卵形，凸出；距長 6-9 mm，蕊柱紅色，長 2-3 mm，花粉塊 2 枚，球形。

蒴果圓柱狀卵形，長 1.5-1.8 cm，徑 4-5 mm，先端截斷狀，基部漸窄，有突起稜線 2-3 條。

固有，着生於樹幹上，多見於中海拔約 1000-2000 m 山地的森林內，全島皆有，甚為普遍。

8. 台灣白及 (*Bletilla formosana* (Hay.) Schltr.)

Terrestrials, sometimes epiphytic on the mossy rocks; pseudobulbs ovoid, 1-1.5 cm long, 6-8 mm across; stem simple, 15-20 cm long, erect, usually enclosed by the long leaf-sheath.

Leaves 2-4, elongate linear, 18-25 cm long, 7-10 mm wide, membranous, plicate, acuminate, glabrous, gradually narrowed to

the sheathing base, many-nerved raised on back; sheathes 6-15 cm long, green, glabrous.

Flowers 4-7; white or pink, rather large, 1-1.5 cm in diameter, scentless, racemose; scape terminal, slender, yellowish white, 8-10 cm long; sheathes 1-2, lightly brown, enclosed the scape, 1-1.5 cm long, acute at apex; bracts lanceolate, 6-8 mm long, membranous; pedicels with ovaries 8-12 mm long, glabrous; sepals subequal, free, lanceolate, 1.5-1.8 cm long, 4-5 mm wide, multinerved, acute at apex; petals same as the sepals in shape and length, but somewhat narrower, about 3 mm wide; lip oblong, 16-18 mm long, 6-8 mm wide, emarginate and mucronate at apex, obscurely 3-lobed, the lateral lobes column embracing entire, the median lobe patent, undulate on margin, with 5-yellowish elevated lines within, column elongate, 10-12 mm long, suberect.

Capsules oblong-linear, 1-1.2 cm long, 6-7 mm in diameter, truncate, attenuate at base.

Endemic, at medium altitudes of 600-2300 m throughout the island.

地生蘭，有時着生於多苔蘚類的岩石上，假球莖卵形，長1-1.5 cm，寬6-8 mm；莖單立，長15-20 cm，直立，莖上常包有長葉鞘。

葉2~4枚，長線形，長18-25 cm，寬7-10 mm，膜質或革質，褶狀，先端漸尖形，光滑，基部漸窄而與葉鞘相連，脈多數於背面隆起，葉鞘長6-15 cm，綠色，光滑。

花4~7枚，白色或粉紅色，較大，徑1-1.5 cm，無香味，總狀花序；花莖頂生，細長，黃白色，長8-10 cm；鞘1-2枚，淡褐色，基部與莖相連，長1-1.5 cm，先端銳尖；苞片披針形，長6-8 mm，膜質；花梗連同子房長8-12 mm；光滑；萼片近似整齊、離生、披針形，長1.5-1.8 cm，寬4-5 mm，先端銳尖；花瓣的形狀及大小與萼片相同但較窄，寬約3 mm；唇瓣長橢圓形，長16-18 mm，寬6-8 mm，凹頭而先端尖突，不明顯3裂，側裂片與蕊柱相擁，全緣，中裂片顯著，波狀緣，內面有黃色隆起線5條，蕊柱長10-12 mm，拱形。

蒴果長橢圓狀線形，長1-1.2 cm，寬6-7 mm，先端截斷狀，基部漸

尖。

固有，生長於全省中海拔約600-2300 m山地，見於路旁，公路坡地及鬼芒下。

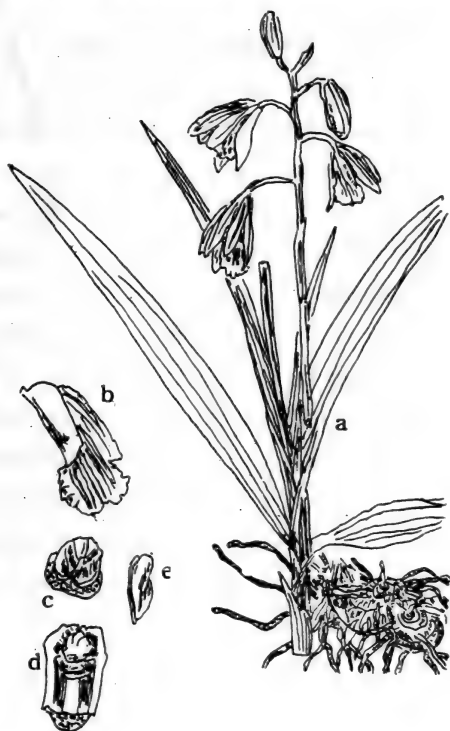


圖 (Fig) 8 台灣白及 (*Bletilla formosana*)

a. 着花之植物體 (Flowering plant)

b. 唇瓣 (Lip) c. d. 蕊柱 (Column)

e. 花粉塊 (Pollinarium)

9. 恒春石豆蘭 (*Bulbophyllum affine* Lindley)

Epiphytes; rhizomes creeping, stiff, about 2-2.5 mm across; roots short, gray, less than 5 cm long, pseudobulbs cylindric, 2-4 cm long, 3-5 mm in diameter, glabrous, fibrous at base; stemless.

Leaf solitary, terminal on the pseudobulb, oblong or linear oblong, 10-15 cm long, 1.5-2.5 cm wide, coriaceous or nearly

so, obtuse and shortly 2-lobed at apex, attached to the petiole at base, midrib raised on back, shining and green, green beneath; the petioles 1-1.5 cm long.

Flower solitary, yellowish white with purple streaks, 1.7-2.2 cm. in diameter, scentless; scape from the base of pseudobulb, 4-6 cm long, glabrous, erect or nearly so; bracts lanceolate, 4-8 mm long, acute at apex, membranous; the pedicels with ovaries 1.5-2 cm long, glabrous; sepals unequal, yellowish white, with 5 purple streaks, usually connate with the column at base, the dorsal one ovate-oblong, 1.5-1.8 cm long, 5-6 mm wide, acute at apex, the lateral ones oblique oblong, same as the dorsal one in length; petals lanceolate, 16-18 mm long, 4-5 mm wide, acute at apex, 5-purplish nerved; lip thickened, triangular linear, 9-10 mm long, 1-2 mm wide, subplicate, yellow with red spots on margin; column about 3 mm long.

Himalaya. Taiwan, known from the low to medium altitudes of 400-1400 m throughout the island, epiphytic on tree trunks, rather common.

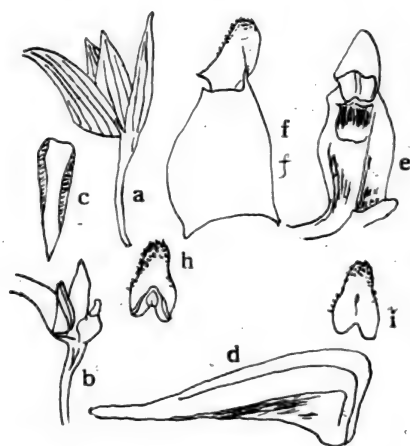


圖 (Fig) 9 恒春石豆蘭 (*Bulbophyllum affine*)

- a. 花 (Flower) b. 蕊柱 (Column) 蕊柱足, (Columnal foot) 及唇瓣 (Lip) c. d. 唇瓣 (Lip)
e. f. 蕊柱 (Column) h. i. 花藥 (Anther)

着生蘭、根莖匍匐、粗硬、木質，徑2-2.5 mm；根甚短，灰色，少有長5 cm者；假球莖圓柱形，長2-4 cm，徑約3-5 mm，光滑，基部有纖維細絲。

葉單生，着生於假球莖的先端，長橢圓形或線狀長橢圓形，長10-15 cm，寬1.5-2.5 cm，革質或近似革質，先端鈍或淺2裂，基部漸窄而延伸至葉柄，中肋於背面隆起，表面有光澤綠色，背面呈淡綠色；葉柄長1-1.5 cm。

花單生、黃白色而有暗紅色條紋，徑1.7-2.2 cm，無香味；花莖抽自於假球莖的基部，長4-6 cm，光滑或近似如此；苞片披針形，長4-8 mm，先端銳尖，膜質；花梗連同子房長1.5-2 cm，光滑；萼片不整齊，黃白色而有暗紅色條紋5條，基部常與蕊柱相連，後萼片卵狀長橢圓形，長1.5-1.8 cm，寬5-6 mm，先端銳尖；側萼片歪長橢圓形，與後萼片同長；花瓣披針形，長16-18 mm，寬4-5 mm，先端銳尖，具暗紅色條紋5條；唇瓣厚，三角狀線形，長9-10 mm，寬1-2 mm，黃色而在邊緣有紅色斑點，蕊柱長約3 mm。

喜馬拉雅山麓，台灣，生長於低至中海拔約400-1400 m山地，常見於山稜的樹幹上，較為常見。

10. 日本石豆蘭 (*Bulbophyllum japonicum* (Makino) Makino)

Epiphytes; rhizomes creeping, terete, about 1 mm in diameter; pseudobulbs ovoid, 1-1.2 cm long, 5-6 mm across, green or pale green, shallowly groove; roots elongate, filiform 5-7 cm long.

Leaves solitary, terminal, oblanceolate or elongate oblong, 5-7 cm long, 7-8 mm wide, acuminate and mucronate at apex, attenuate at base, thickened chartaceous or subcoriaceous, midrib impressed surface and strongly elevated beneath, lateral veins inconspicuous, lustrous green surface, pale green beneath short-petioled; the petioles 2-3 mm long, glabrous, green.

Flowers 5-10, small, 2.5-3.5 mm in diameter, umbellate-racemose, scentless; scape produced from the base of bulb, 3-4 cm long, erect, slender; sheathes 1 or 2, basal, lanceolate, membranous 5-6 mm long, acute at apex, bracts lanceolate;

1-2 mm long, acute at apex, membranous; the pedicels with ovaries 5-7 mm long, glabrous; sepals unequal, pink with 3-5 dark red veined, the dorsal one elliptic-ovate, 3-4 mm long, 2-2.5 mm wide, acuminate at apex, the lateral ones ovate-lanceolate, 6-7 mm long, 2-2.5 mm wide, attenuate on both ends, contiguous on margin; petals obovate, 3-3.5 mm long, 1-1.4 mm wide, rounded or slightly retuse at apex, slightly cuneate at base; lip linear or narrowly spatulate, purple red with a pale yellow rounded tip, 2.5-3 mm long, about 1.5-2 mm wide, reflexed, thickened; column 1-1.5 mm long, white, with 2 horn-like arms at tip.

Japan and s. China. Taiwan, known from lower altitudes of 400-900 m in northern part of the island, epiphytic on the trunks.

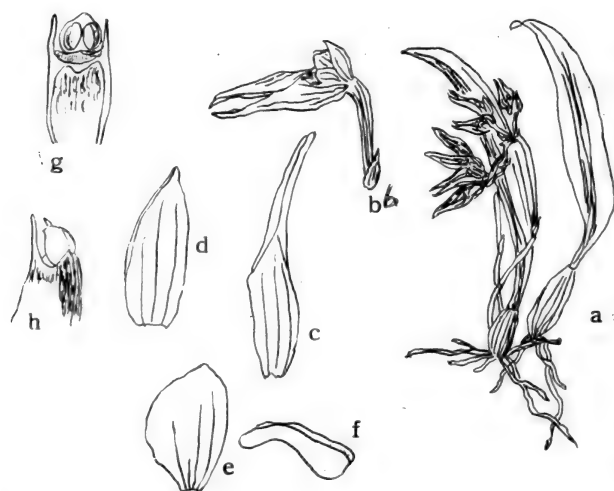


圖 (Fig) 10 日本石豆蘭 (*Bulbophyllum japonicum*)

- a. 開花的植物體 (Flowering plant body)
 b. 花 (Flower) c. 側萼片 (Lateral sepals)
 d. 後萼片 (Dorsal sepal) e. 花瓣 (Petal)
 f. 唇瓣 (Lip) g. h. 蕊柱 (Column)

着生蘭、根莖匍匐，圓柱形，徑約 1 mm，木質；假球莖卵形，長 1 -

1.2 cm，徑5-6 mm，綠色或淡綠色，上具有淺溝紋，根多數，甚長，線形，長5-7 cm。

葉單一，頂生，倒披針形或長橢圓形，長5-7 cm，寬7-8 mm，先端漸尖而有尖突，基部漸窄而延伸至葉柄，厚紙質或近似革質，中肋於表面凹下，背面隆起，側脈不顯著，表面呈有光澤綠色，背面淡綠色，具有短葉柄，葉柄長2-3 mm，光滑。

花5-10枚，較小，徑2.5-3.5 mm，總狀花序狀繖形花序，無香味；花莖抽自於假球莖基部，長3-4 cm，直立、細長，鞘1或2枚，基生，披針形，長5-6 mm，膜質，先端銳尖，苞片披針形，長1-2 mm，先端銳尖，膜質；花梗連同子房長5-7 mm，光滑；萼片不整齊，粉紅色而有3-5條暗紅或紫紅色的脈，後萼片橢圓狀卵形，長3-4 mm，寬2-2.5 mm，先端漸尖形，側萼片卵狀披針形，長6-7 mm，寬2-2.5 mm，兩端均漸尖，邊緣緊接；花瓣倒卵形，長3-3.5 mm，寬1-1.4 mm，與萼片同色，先端圓或鈍，基部呈楔形；唇瓣線形或窄舌形，紫紅色而有黃色圓頭，長2.5-3 mm，寬1.5-2 mm，反捲，厚，蕊柱長1-1.5 mm，白色，先端有2角狀之分歧。

中國南部及日本、台灣，生長北部低海拔約400-900 m山地，着生於林幹上。

11. 邵氏石豆蘭 (*Bulbophyllum linchianum* Ying)

Bulbophyllum linchianum Ying. sp. nov.

Cirrhopetalum linchianum Ying, MMS

Epiphytes; rhizoma repena, teres, ca 1 mm in diametro, lignoso; pseudobulbi ovoidi, 1-1.5 cm longi, 5-7 mm lati, apice attenuati, reliquis, fibrosis vaginarum obtecti.

Folia solitaria, linearo-oblonga vel oblongo-lanceolata, 4-8 cm longa, 1-1.5 cm lata, apice obtusa vel rarius brevissime 2-lobata, basi subito attenuata, ad petiolos 3-5 mm longos, abuntia margine integra, coriacea, utrinque glabra et virida.

Flores 4-6, rubri, in apice scapi umbellatim dispositi; scapi 8-10 cm longi, basi vaginis scariosis instructi vaginis 3-5 mm longis; pedicellis cum ovariis subrectis rubri 9-12 mm longi; bracteis minutis, flavis glabris, 2-3.5 mm longis, apice acutis; sepalum intermedium concavum, ovatum, 4-5 mm longum, ca

2.5 mm latum, apice acuminatissimum, basi paullo contractum, margine cilio, sepala lateralialia lanceolato-linear, 1.5 - 1.8 cm longa, 2-3 mm lata, apice acuminata, ad basin oblique contracta sursum gradatin attenuata, margine integra, glabra, membranacea; petala oblonga vel ovato-oblonga, 2.5-3.5 mm longa, 2-2.5 mm lata, apice obtusa, basi truncati, margine cilia, glabra; labellum cum pede columnae 4-5 mm longo pullo incurvo articulatum, crassum, valde curvatum, ligulliforme, 3-5 mm longum, 1 - 1.5 mm latum, ad summum obtusum ad basi ampliatum, supra unisulcatum, utrinque glabrum; columna recta 2-3 mm longa.

Habit. : **Hualien county**, Tapalung, Leg. : *S.S. Ying 3510* (NTUF).

Epiphytes; rhizome creeping, terete, about 1 mm in diameter, lignous; pseudobulb ovoid, 1-1.5 cm long, 5-7 mm wide, attenuate at apex, filiform-like fibers persistent at base.

Leaf solitary, terminal on the pseudobulb, linear-oblong or oblong-lanceolate, 4-8 cm long, 1-1.5 cm wide, obtuse at apex, usually shallowly 2-lobed at tip, attenuate at base, coriaceous, entire, glabrous on both sides; the petioles 3-5 mm long.

Flowers 4-6, red, terminal on the scape, umbellate; scape produced from base of pseudobulb, 8-10 cm long, glabrous; sheaths basal, membranous, 3-5 mm long; pedicels with ovaries 9-12 mm long, red, suberect; bracts minute, light yellow, glabrous, 2-3.5 mm long, acute at apex; the dorsal sepal concave, ovate, 4-5 mm long, about 2.5 mm wide, acuminate at apex, contracted at base, ciliate on margin; lateral sepals linear-lanceolate, 1.5-1.8 cm long, 2-3 mm wide, acuminate at apex, oblique and contracted at base, entire, glabrous, membranous; petals oblong or ovate-oblong, 2.5-3.5 mm long, 2-2.5 mm wide, obtuse at apex, truncate at base, ciliate on margin, glabrous; lip tongue-like, 4-5 mm long, thickened, recurved at

apex, 3-5 mm long, 1-1.5 mm wide, glabrous, one longitudinal sulcate in the middle; column suberect, 2-3 mm long.

Endemic, known from eastern part of the island at the elevations of 400-1200 m, rather rare.

The specific name dedicate to my mother Mrs. Lin-chi shao Ying (應邵令淇女士) who brought me up, educacted me and help me in many ways.

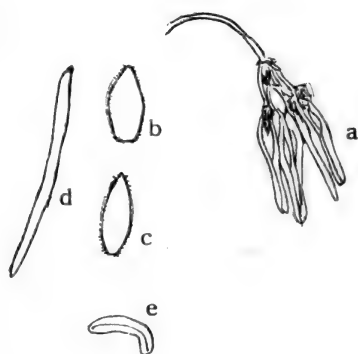


圖 (Fig) 11 邵氏石豆蘭 (*Bulbophyllum linchianum*)

- a. 花 (Flower) b. 後萼片 (Dorsal sepal)
 c. 花瓣 (Petal) d. 側萼片 (Lateral sepal)
 e. 唇瓣 (Lip)

着生蘭，根莖匍匐，圓柱形，徑約 1mm，木質；假球莖卵形，長 1 - 1.5 cm，徑 5 - 7 mm，先端漸狹；基部有殘存的鬚狀纖維。

葉一枚，着生於假球莖先端，線狀長橢圓形或長橢圓狀披針形，長 4 - 8 cm，寬 1 - 1.5 cm，先端鈍且呈淺 2 裂，基部漸狹；革質，全緣，光滑，綠色；葉柄長 3 - 5 mm。

花 4 - 6 枚，紅色、着生於花莖先端，繖形花序；花莖抽自於假球莖基部，長 8 - 10 cm，基部有鞘，鞘長 3 - 5 mm，膜質、淡褐色；花梗連同子房長 9 - 12 mm，紅色，近似直立；苞片甚小，淡黃色、光滑，長 2 - 3.5 mm，先端銳尖；後萼片凸出，卵狀，長 4 - 5 mm，寬 2.5 - 3 mm，先端銳尖，基部緊縮，毛緣；側萼片線狀披針形，長 1.5 - 1.8 cm，寬 2 - 3 mm，先

端漸尖，基部歪、緊縮狀、漸窄、全緣、光滑、膜質；花瓣長橢圓形或卵狀長橢圓形，長2.5-3.5 mm，寬2-2.5 mm，先端鈍，基部截斷狀，毛緣，光滑；唇瓣與蕊柱以關節相連，厚，先端反捲，厚、舌狀，長3-5 mm，寬1-1.5 mm，先端鈍，基部略寬，中部有縱溝，光滑；蕊柱近似直立，長2-3 cm。

固有，生長於東部中海拔約600-1100 m山地，着生於樹幹上，較少。本新種的命名，獻給母親，以聊報母親生育，養育及教育的恩惠。

12. 烏來石豆蘭 (*Bulbophyllum macraei* (Lindley) Reichb.f)

Epiphytes; rhizomes short, creeping; pseudobulbs closely approximate, narrowly ovoid conical, 2-3.5 cm long, 8-12 mm in diameter, green, fibrous at base.

Leaf solitary, terminal on the pseudobulb, oblong-obovate or oblong, 10-20 cm long, 4-8 cm wide, obtuse, attenuate to the petioles at base, coriaceous, green and shining surface, pale green beneath; the petioles 2-2.5 cm long, glabrous.

Flowers 4-10, medium-sized, 6-8 mm in diameter, umbellate, scentless; scape produced from the base of the pseudobulb, 12-16 cm long, erect or nearly so, slender, glabrous; sheaths 2-3, brown, membranous, 1-1.5 cm long, somewhat enclosing the scape; bracts lanceolate, 5-7 mm long, acute at apex; sepals unequal, yellowish white, the dorsal one ovate-lanceolate, 2-2.4 cm long, 4-6 mm wide, concave, acuminate at apex, 5-nerved, the lateral ones linear-lanceolate, 5-6 cm long, about 3 mm wide; petals purple red, oblique oblong, 5-7 mm long, 2.5-3.5 mm wide, obtuse at apex; lip tongue-like, 4-5 mm long, about 2 mm wide, recurved at apex; column short, about 1 mm long.

Japan, Lyukyu, India and Ceylon. Taiwan, known from low to medium altitudes of 500-1200 m throughout the island, epiphytic on the mossy tree trunks in evergreen forests.

着生蘭、根莖短、匍匐、木質；假球莖緊密排列，狹卵狀圓錐形，長2-3.5 cm，徑8-12 mm，綠色，基部具有鬚狀纖維。



圖 (Fig) 12 烏來石豆蘭 (*Bulbophyllum macraei*)

a. 植物體 (The plant)

- b. 花的中心部 (Central portion of a flower)
- c. 後萼片 (Dorsal sepal)
- d. 側萼片 (Lateral sepal)
- e. 花瓣 (Petal)
- f. 蕊柱，頰及唇瓣 (Column, mentum and lip)

葉一枚，着生於假球莖先端，長橢圓狀倒卵形或長橢圓形，長10 - 20 cm，寬4 - 8 cm，先端鈍圓，基部漸狹而延伸葉柄，革質，表面呈有光澤綠色，背面淡綠色；葉柄長2 - 2.5 cm，光滑。

花4 - 10枚，中型、徑6 - 8 mm，繖形花序，無香味；花莖抽自於假球莖基部，長12 - 16 cm，直立或近似如此，細長、光滑；鞘2 - 3枚，褐色，膜質，長1 - 1.5 cm，基部略抱莖；苞片披針形，長5 - 7 mm，先端銳尖；萼片不整齊，黃白色，後萼片卵狀披針形，長2 - 2.4 cm，寬4 - 6 mm，槽狀，先端漸尖，脈5條；側萼片線狀披針形，長5 - 6 cm，寬約3 mm；花瓣紫紅色，歪長橢圓形，長5 - 7 mm，寬2.5 - 3.5 mm，先端鈍；唇瓣舌形，長4 - 5 mm，寬約2 mm，先端反捲；蕊柱短，長約1 mm。

琉球、日本、印度及錫蘭。台灣，生長於全島500 - 1200 m的山地，着生於樹幹上，較為常見。

13. 紫紋石豆蘭 (*Bulbophyllum melanoglossum* Hayata)

Epiphytes; rhizomes creeping, terete, 1 - 1.5 mm in diameter; roots linear, creeping, produced from the base of pseudobulb; pseudobulb ovoid, 1 - 1.4 cm long, 5 - 6 mm in diameter, green, glabrous, very shallowly groove.

Leaves oblong-elliptic, 3 - 4 cm long, 6 - 8 mm wide, rounded and emarginate at apex, attenuate to the petioles at base, lustrous green above, pale green beneath; midrib elevated beneath, lateral veins inconspicuous, entire, glabrous; the petioles 2 - 3 mm long, glabrous, shallowly grooved inside.

Flowers 8 - 12, rather small, 5 - 7 mm in diameter, 1 - 1.5 cm long, umbellate, the scape produced from the base of pseudobulb, 8 - 10 cm long, slender, erect, sheathed; the sheaths 2 or 3, basal, lanceolate, acute at apex, amplexical at base,

membranous; bracts lanceolate, minute, about 2 mm long, acute at apex, sepals unequal, the dorsal one ovate, concave, pink with 5-7 dark red streaks, 4-4.5 mm long, 2-2.5 mm wide, acuminate at apex, long-ciliate on margin, the lateral ones linear-lanceolate 1.5-1.7 cm long, 2-3 mm wide, purple with 5-7 dark red streaks, entire; petals oblique oblong, pink with 5-dark red streaks, 3-3.5 mm long, about 1.5 mm wide, acuminate and a black spot at apex, truncate at base, ciliate on margin; lip horn-like, yellow or greenish yellow, 2-2.5 mm long, ear-like at base, deeply sulcate in the middle; column suberect, more or less recurved, 1-1.5 mm long.

Endemic, at the elevations of 700-1800 m in the northern and eastern parts of the island, not common.

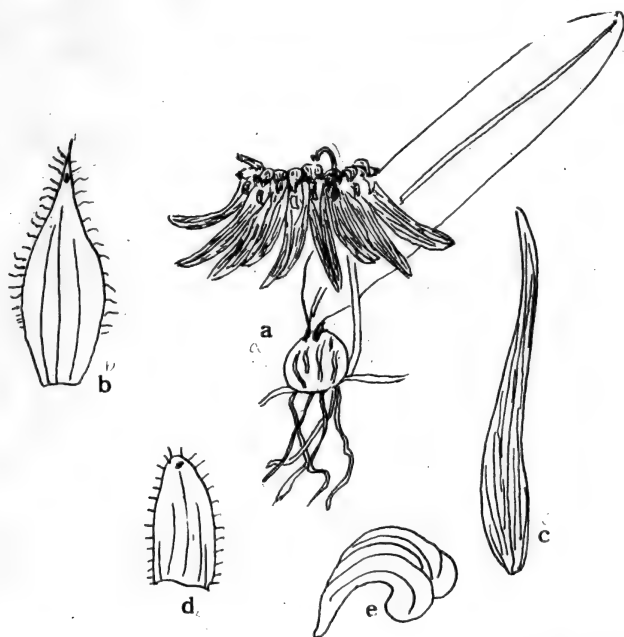


圖 (Fig) 13 紫紋石豆蘭 (*Bulbophyllum melanoglossum*)
 a. 植物體 (Plant body) b. 後萼片 (Dorsal sepal)
 c. 側萼片 (Lateral sepal) d. 花瓣 (Petal)
 e. 唇瓣 (Lip)

着生蘭、根莖匍匐、圓柱形，徑1-1.5 mm；根線形、匍匐，生自於假球莖基部；假球莖卵形，長1-1.4 cm，徑5-6 mm，綠色，光滑，具有較淺的溝紋。

葉長橢圓狀橢圓形，長3-4 cm，寬6-8 mm，先端圓而略呈凹入，基部漸狹延伸至葉柄，表面呈有光澤綠色，背面呈淡綠色，中肋隆起於背面，側脈不顯著，全緣，光滑；葉柄長2-3 mm，光滑，內面有淺溝紋。

花8-12枚，較小，徑5-7 mm，長1-1.5 cm，繖形花序；花莖抽自於假球莖基部，長8-10 cm，細長、直立、有鞘；鞘2-3枚，基生，披針形、先端銳尖、基部抱莖、膜質；苞片披針形，微小，長約2 mm，先端銳尖；萼片不整齊，後萼片卵形，槽狀，粉紅色，有5-7條深紅色的條紋，長4-4.5 mm，寬2-2.5 mm，先端漸尖形，邊緣呈長毛緣；側萼片線狀披針形，長1.5-1.7 cm，寬2-3 mm，粉紅色，有深紅色條紋5-7條，全緣；花瓣歪長橢圓形，粉紅色有深紅色條紋5-7條，長3-3.5 mm，寬1.5 mm，先端漸尖形且有一黑色斑點，基部截斷狀，邊緣有毛；唇瓣舌形，黃色或青黃色，長2-2.5 mm，基部耳狀，中部有縱的溝紋1條；蕊柱近似直立，多少反捲，長1-1.5 mm。

固有生長於台灣北部及東部山地約700-1800公尺的森林內，多着生於樹幹上，較少。

14. 黃唇石豆蘭 (*Bulbophyllum omerandrum* (Hayata) Hayata)

Epiphytes; rhizomes creeping, terete, 1-1.5 mm in diameter; sheaths basal, lanceolate, membranous, acute, amplexicaul at base; pseudobulb elongate ovoid, 12-15 mm long, 6-7 mm across, green, more or less attenuate at apex, fibrous.

Leaves linear-oblong, oblong-lanceolate 10-15 cm long, 3-4 cm wide, obtuse and emarginata at apex, attenuate to the petioles at base, coriaceous, midrib slightly elevated on both sides, lateral veins inconspicuous; the petioles 6-7 mm long, deeply groove inside, glabrous.

Flowers 3-5, yellow or yellowish white umbellate-racemose; scape 8-10 cm long, erect, slender, glabrous, sheathed; the sheaths basal, membranous, 10-12 mm long, acute at apex; bracts lanceolate, 7-12 mm long, acuminate at apex, glabrous;

the pedicels with ovaries 1-1.5 cm long, slender, yellowish green, glabrous; the dorsal sepal concave, ovate-lanceolate, 8-11 mm long, 6-7 mm wide, acuminate and somewhat tinged with red at apex, slightly contracted at base, entire, glabrous; the lateral sepals yellow, lanceolate-linear, 2-2.8 cm long, 4-6 mm wide, acuminate at apex, contracted at base, entire petals oblong or oblong-lanceolate, 7-10 mm long, 5-7 mm wide, yellow with a red tip, acute or acuminate at apex, contracted at base, ciliate on margin, membranous; lip ligulate-like, 8-12 mm long, 3.5-4.5 mm wide, yellow and tinged with red at base, glabrous; column semiterete, erect, 3-4 mm long.

Endemic, at the elevations of 700-1800 m in central part of island, epiphytic on tree trunks or mossy rocks.

着生蘭、根莖細長、木質、圓柱形，徑1-1.5 mm；假球莖倒圓錐狀卵形，長1.5-2 cm，徑2-2.5 cm，先端漸尖，截斷狀，上有多數皺折。

葉長橢圓狀披針形或長披針形，長10-15 cm，寬3-4 cm，先端鈍且淺2裂，基部漸窄而延伸至葉柄，表面呈有光澤綠色，背面白綠面，中肋於葉背隆起，全緣，近似革質；葉柄長6-9 mm。

花3-5枚，鮮黃色，長2.5-3 cm；花莖抽自於假球莖基部，長8-10 cm；細長，光滑；苞片2-3，披針形，長7-12 mm，先端漸尖，全緣，光滑；花梗連同子房長1-1.5 cm，細長，黃綠色，光滑；後萼片槽狀，卵狀披針形，長8-11 mm，寬6-7 mm，先端漸尖，略呈紅色，基部緊縮狀，全緣，光滑；側萼片鮮黃色披針狀線形，長2-2.8 cm，寬4-6 mm，先端漸尖，基部緊縮，全緣；花瓣長橢圓形或長橢圓狀披針形，長7-10 mm，寬5-7 mm，黃色先端呈紅色，先端銳尖或漸尖，基部緊縮、毛緣、膜質；唇瓣與蕊柱以關節相連、舌形，長8-12 mm，基部寬3.5-4.5 mm，黃色，基部呈紅色、光滑；蕊柱長3-4 mm。

固有，生長於本省中部海拔約700-1800 m的山地，着生於樹幹上，較為少見。

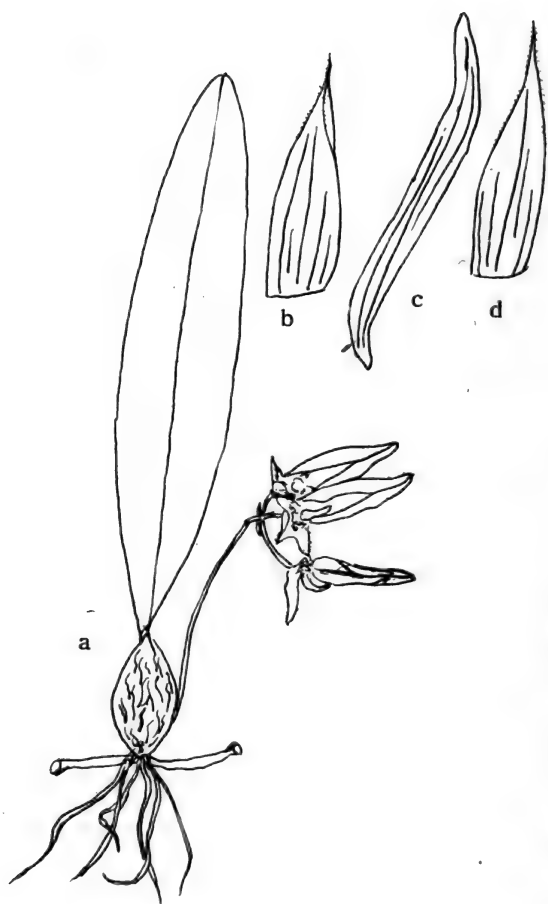


圖 (Fig) 14 黃唇石豆蘭 (*Bulbophyllum omerandrum*)

- a. 植物體 (Plant body) b. 後萼片 (Dorsal sepal)
 c. 側萼片 (Lateral sepal) d. 花瓣 (petal)

15. 紅毛綠石豆蘭 (*Bulbophyllum remotifolium* (Fukuyama) Ying)

Epiphytes; rhizomes elongate, slender, 0.4-0.6 mm in diameter, ligneous; roots filiform, glabrous; pseudobulbs ovoid-cylindrical, 7-10 mm long, 5-7 mm in diameter, glabrous,

fleshy, green.

Leaf solitary, terminal on the pseudobulb, linear-oblong, 3-5 cm long, 7-8 mm wide, erect, sessile, obtuse or acute and emarginate at apex, acuminate or narrowed acute at base, entire, coriaceous, glabrous, midrib elevated beneath, lateral veins inconspicuous.

Flowers 5-7, subumbel, orange or orange-red in colour; scape erect, produced from the base of pseudobulb, 4-5 cm long, slender, scattered with black spots; sheaths 1 or 2, membranous; bracts ovate-lanceolate, 3-4 mm long, acute, slightly contracted at base, entire, membranous; the pedicels with ovaries 6-7 mm long, glabrous; sepals unequal, the dorsal one ligulate, 4-4.5 mm long, about 2.5 mm wide, concave, acute at apex, elongate ciliate on margin, membranous, glabrous; the lateral ones linear, adnate with column at base, 2-2.5 cm long, 2-3 mm wide, obtuse, attenuate at base, entire, glabrous, membranous, 5-nerved. the veins dark violet; petals falcate-oblong, 2.5-3 mm long, about 1 mm wide, obtuse at apex, long ciliate on margin, membranous, glabrous, 3-nerved; lip horn-shape, thickened, 2-3 mm long, glabrous, obtuse at apex; column semiterete, 1-2 mm long, slightly 2-lobed at apex.

Endemic, epiphytic on the tree trunks at the elevations of 1000-1800 m in northern and central parts of the island.

着生蘭，根莖甚長，細長，徑0.4-0.6 mm，木質；根線形、光滑；假球莖卵狀圓柱形，長7-10 mm，徑5-7 mm，光滑、肉質、綠色。

葉單一，頂生於假球莖上線狀長橢圓形，長3-5 cm，寬7-8 mm，直立，無柄，先端鈍或銳尖呈凹頭狀，基部漸尖或狹銳尖，全緣，革質，光滑，中肋於背面隆起，側脈不顯著。

花5-7枚，近似呈繖形花序、橘黃色或橘紅色，花莖直立，抽自於假球莖基部，長4-5 cm，細長，散生有黑色斑點；鞘1或2枚，膜質；苞片卵狀披針形，長3-4 mm，先端銳尖，基部略呈緊縮狀，全緣，膜質；花梗連同子房長6-7 mm，光滑；萼片不整齊；後萼片舌形，長4-4.5 mm，寬約2.5 mm，槽狀、先端銳尖，邊緣長有長毛、膜質、光滑，側萼片線形，

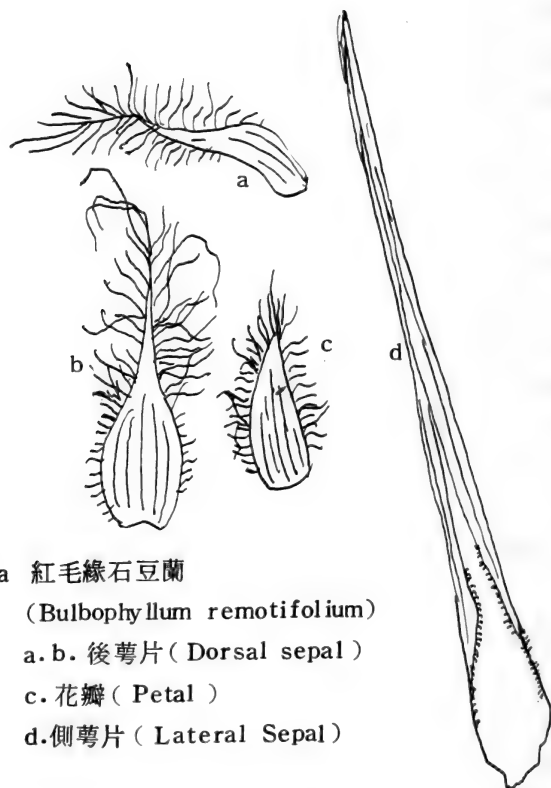


圖 (Fig) 15a 紅毛緣石豆蘭
(Bulbophyllum remotifolium)
 a. b. 後萼片 (Dorsal sepal)
 c. 花瓣 (Petal)
 d. 側萼片 (Lateral Sepal)

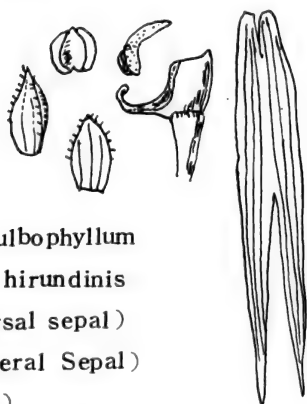


圖 (Fig) 15 b. *Bulbophyllum*
hirundinis
 a. 後萼片 (Dorsal sepal)
 b. 側萼片 (Lateral Sepal)
 c. 花瓣 (Petal)
 d. 蕊柱及唇瓣 (Column and Lip)
 e. 花藥 (Anther)

基部與蕊柱相連，長2-2.5 cm，寬2-3 mm，先端鈍、基部漸狹、全緣、光滑、膜質、脈5條，脈呈暗紫色；花瓣鐮刀狀長橢圓形，長2.5-3 mm，寬約1 mm，先端鈍，邊緣有長毛，膜質、光滑，脈3條；唇瓣角狀，厚，長2-3 mm，光滑，先端鈍；蕊柱近似呈圓柱形，長1-2 mm，先端略呈2裂。

固有，生長於北部及中部中海拔約1000-1800 m山地，着生於樹幹上。

林氏（台灣野生蘭 第一卷44頁中）將本種視為與產自越南的 *Bulbophyllum hirundinis* (Gagnep) Seidenf 視為同種；惟經筆者檢視 *Bulbophyllum hirundinis* (Gagnep) Seidenf 的原文記載及圖，覺得有甚大的差異，故列為獨立的種，茲將原載於 *Flore Generale de L'Indo-chine* 中 *Bulbophyllum hirundinis* 的圖附於前頁以供參考。

16. 黃萼石豆蘭 (*Bulbophyllum retusiusculum* Reichb. f.)

Epiphytes; rhizomes creeping, terete, about 2 mm in diameter; pseudobulbs ovoid, 2-2.2 cm long, about 1 cm in diameter, pale green, more or less fleshy, obtuse and truncate at apex.

Leaf solitary, terminal on pseudobulb, elongate narrowly oblong, 6-8 cm long, 1.5-2 cm wide, rounded and emarginate at apex, attenuate at the base, slightly recurved on margin, shining green surface, pale green beneath; midrib raised beneath.

Flowers 5-10, rather small, 7-9 mm in diameter, lax-umbellate; scape produced from the base of pseudobulb, 4-6 cm long, erect, slender; sheathes 2-3, lanceolate, light brown, membranous, acuminate, embracing the scape at base; bracts lanceolate, dark purple, 3-4 mm long, thin; the pedicels with ovaries 9-12 mm long glabrous; sepal unequal spreading the dorsal one ovate, reddish purple, 3-4 mm long, 2-3 mm wide, 3-nerved, the lateral ones linear, yellow, 1.2-1.7 cm long, 2.5-3.5 mm wide, 3-5-nerved, obtuse, oblique and adnate to the column forming a 2 mm long mentum at the base; petals oblong, reddish purple, 3-3.3 mm long, 1.4-1.8 mm wide, rounded at apex, slightly reflexed or concave; lip short, somewhat tongue

-like, 2-3.5 mm long, recurved at apex, erect and purple at the base, 2 longitudinal groove in the middle; column short, 1-2 mm long.

Capsules cylindrical-fusiform, 1.8-2 cm long, 4-5 mm across.

Endemic, a common epiphytic orchid at medium altitudes of 800-1600 m in northern and central parts of the island.

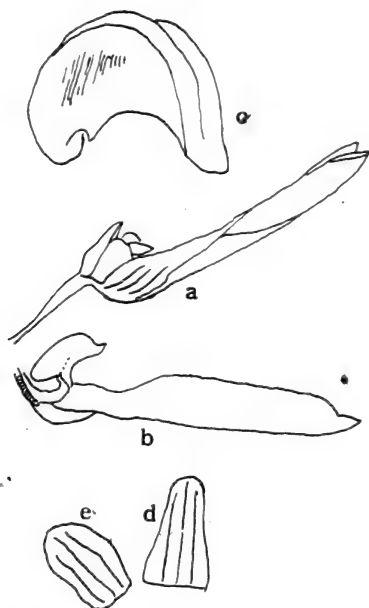


圖 (Fig) 16 黃萼石豆蘭 (*Bulbophyllum retusiusculum*)
 a. 花 (Flower)
 b. 側萼片唇瓣 (Lateral sepal and lip)
 c. 唇瓣 (Lip) d. 後萼片 (Dorsal sepal)
 e. 花瓣 (Petal)

着生蘭，根莖匍匐，圓柱形，徑約 2 mm；假球莖卵形，長 2-2.2 cm，徑約 1 cm，淡綠色，肉質，先端鈍且呈截斷狀。

葉單一，着生於假球莖先端，狹長橢圓形，長 6-8 cm，寬 1.5-2 cm，先端圓且凹頭，基部漸窄，邊緣略反捲，表面有綠色光澤，背面淡綠色，中肋於背面隆起。

花5-10枚，較小，徑7-9 mm，疏繖形花序、花莖抽自於假球莖基部，長4-6 cm，直立，細長；苞片披針形，暗紅色，長3-4 mm，薄；花梗連同子房長9-12 mm，光滑；萼片不整齊，擴張，後萼片卵形，暗紅色或紅紫色，長3-4 mm，寬2-3 mm，脈3條，側萼片線形，黃色，長1.2-1.7 cm，寬2.5-3.5 mm，脈3-5條，先端鈍，基部歪，且與蕊柱相連而形成一長2 mm的頰；花瓣長橢圓形，暗紅色，長3-3.3 mm，寬1.4-1.8 mm，先端圓，略反捲或凸出；唇瓣短，略呈舌形，長2-3.5 mm，先端反捲，直立，基部紫紅色，中部有縱溝紋2條，蕊柱短，長1-2 mm。

蒴果圓柱狀紡錘形，長1.8-2 cm，徑4-5 mm。

固有，生長於北部及中部約800-1600 m之山地，着生於樹幹上，較為常見。

17. 紅斑石豆蘭 (*Bulbophyllum rubropunctatum* Ying)

Bulbophyllum rubropunctatum Ying, sp. nov.

Cirrhopetalum rubropunctatum Ying MMS.

Epiphytes; rhizoma repens, teres, 1-1.5 mm in diametro, lignoso ruguloso; pseudobulbi elongato-ovati, 1.2-1.7 cm longi, 7-9 mm lati, apice attenuati reliquis fibrosis vaginalibus obtecti.

Folia solitaria, linearo-oblonga vel linearo-lanceolata, 5-8 cm longa, 1.2-1.7 cm lata, apice obtusa vel rarius brevissime 2-lobata, basi ad petiolum 2-4 mm longum, abeuntia.

Flores 8-12, umbellatim; scapi circ. 7-8 cm longi, basi vaginis scariosis instructi; vaginis 4-6 mm longis; pedicellis cum ovariis 7-9 mm long, alboflavi, fusco-rubro punctati; sepalum posticum ovatum, concavum, subflavescentum cum 5-fusco-rubro-nerveum, 4-5 mm longum, 2-3 mm latum, apice acutum, basi contractum, margine cilio; sepalum lateralia lanceolato-linearis, 1.5-1.7 cm longa, ca 2 mm lata, apice obtusa, fusco-rubro punctata; petala oblonga, 2.5-3.5 mm longa, 2-2.5 mm lata, apice obtusa cum melano-glandibus, margine ciliata; labellum liguliforme, 3-4 mm longum, 1-1.5 mm latum; column ca. 2 mm longa.

Hab.: Tai-pa-lung, Hua-lien Hsien, 1100 m alt. leg. S.S.

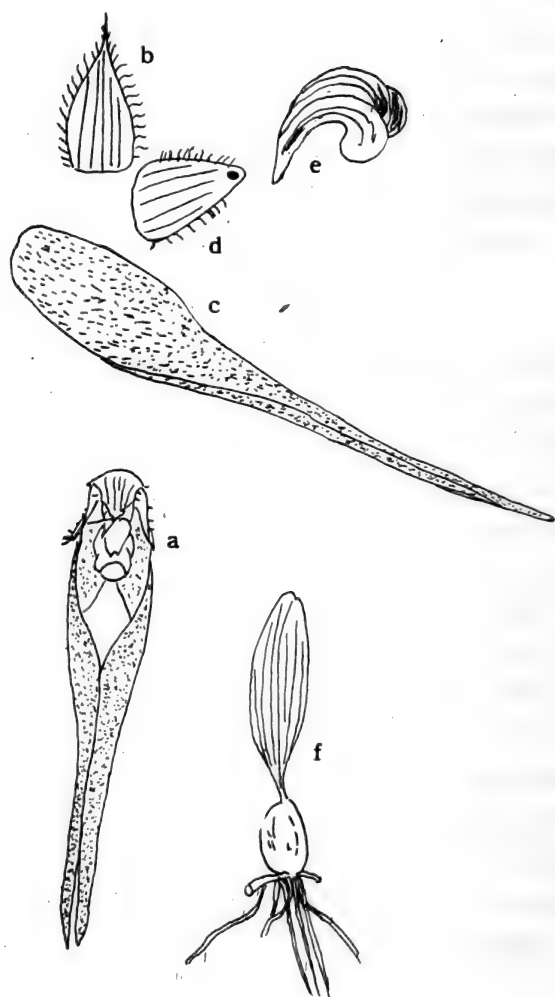


圖 (Fig) 17 紅斑石豆蘭 (*Bulbophyllum rubropunctatum*)
a. 花 (Flower) b. 後萼片 (Dorsal sepal)
c. 側萼片 (Lateral sepal) d. 花瓣 (petal)
e. 唇瓣 (Lip) f. 植物體 (plant)

着生蘭，根莖匍匐，甚長、灰白色，木質，徑1-1.5 mm；假球莖長卵形，長1.2-1.7 cm，徑7-9 mm，光滑，淡綠色，有溝紋4-6條；鞘2枚，膜質，幼時存在，老時僅殘存鬚狀之維管束。

葉單生，着生於假球莖先端，線狀長橢圓形或線狀披針形，長5-8 cm，寬1.2-1.7 cm，革質，先端鈍且淺2裂，基部漸窄而延伸於葉柄，中肋於背面隆起，葉柄長2-4 mm。

花8-12枚，繖形花序，徑5-9 mm，略有香味；花莖抽自於假球莖基部，長7-8 cm，直立、細長、光滑、綠色；鞘1-2枚，披針形，褐色，膜質，先端銳尖；苞片線形，膜質、黃白色而有暗紅色斑點，長2-3 mm；花梗連同子房長7-9 mm，有暗紅色斑點；萼片不整齊，後萼片卵形，內面有5條暗紅色條紋，長4-5 mm，寬2-3 mm，先端銳尖，基部緊縮，毛緣；側萼片披針狀線形，長1.5-1.7 cm，寬約2 mm，先端鈍，有暗紅色的斑點及短條紋；花瓣長橢圓形，長2.5-3.5 mm，寬2-2.5 mm，先端鈍且有一顯著黑色斑點，略呈毛緣；唇瓣舌形，長3-4 mm，寬1-1.5 mm，黃色，先端呈綠色，中部有一縱溝，蕊柱短，長約2 mm。

固有着生於樹幹或多苔蘚類岩石生長於800-1400 m山地見於東部，較少。

18. 小石豆蘭 (*Bulbophyllum somai* Hay.)

Epiphytes; stem slender, creeping, about 1 mm across, glabrous; pseudobulb absent.

Leaves remote, coriaceous or fleshy, thick, oblong, 13-15 mm long, 6-8 mm wide, obtuse at apex, obtuse or acute at base, petiolated; the petioles about 2 mm long.

Flowers solitary, medium-sized or rather small, scentless, yellowish white; scape axillary, 3-4 cm long, glabrous; bracts 2-3, green or yellowish white, membranous, hyaline, acute at apex; sepals equal, linear-lanceolate, 2-2.5 cm long, 3-4 mm wide, glabrous, acuminate, somewhat swelling at base; the lateral ones often connate to the base of the column and forming a 2-3 mm long mentum; petals ovate-oblong, 4-8 mm long, 2-3 mm wide, acute at apex; lip adnate to the column-foot with a articulation, ovate-oblong, 4-6 mm long, 2-3 mm wide, entire, obtuse, somewhat undulate at base, 3-

ridged lines within; column 1-2 mm long, broad at base; column-foot 1.5-2.2 mm long.

Capsules ovoid or oblong, 6-8 mm long, with 4-5 ridged lines.

Endemic. in forests at low altitudes of 500-1200 m in northern part, epiphytic on tree trunks, especially common on tree which growing in mountainous ridges.

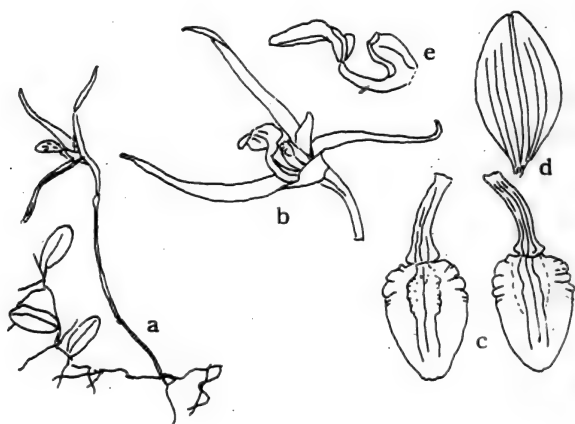


圖 (Fig) 18 小石豆蘭 (*Bulbophyllum somai*)

a. 植物體 (Plant body) b. 花 (Flower)

c. 蕊柱與唇瓣 (Column and lip)

d. 花瓣 (Petal)

着生蘭、莖細長、匍匐、徑約1 mm，光滑；無假球莖。

葉疏生，革質或肉質，厚，長橢圓形，長13-15 mm，寬6-8 mm，先端鈍，基部鈍或銳尖，有極短的葉柄；葉柄長約2 mm。

花單生，中型或較小，無香味，黃白色；花莖腋生，長3-4 cm，光滑；苞片2-3枚，綠或黃白色、膜質、透明，先端銳尖；萼片整齊，線狀披針形，長2-2.5 cm，寬3-4 mm，光滑，先端漸尖形，基部略膨大；側萼片基部常與蕊柱相連而形成一長2-3 mm的頰；花瓣卵狀長橢圓形，長4-8 mm，寬2-3 mm，先端銳尖；唇瓣與蕊柱足以關節相連，卵狀長橢圓形，

長4-6 mm，寬2-3 mm，淡黃色而有紫紅色條紋，全緣，先端鈍，基部邊緣略成波狀，內面具有隆起線3條；蕊柱長1-2 mm，基部較寬，蕊柱足長1.5-2.2 mm。

蒴果卵形或長橢圓形，長6-8 mm，具有突起稜線4-5條。

固有，生長於北部500-1200公尺的山地，着生於樹幹上，多見於山稜線上的樹幹上。

19. 阿里山石豆蘭 (*Bulbophyllum transarisanense* Hay)

Epiphytes; pseudobulb ovoid or broad ovoid, closely approximate, 1.5-2 cm long, 1 cm across, 1-foliate.

Leaf 1, at the apex of pseudobulb, elongate-oblong, coriaceous, 3-7 cm long, 1-1.5 cm wide, obtuse and emarginate, contracted or cuneate at base, midrib impressed above and raised beneath, petioled; petioles 5-8 mm long.

Flowers solitary, yellowish white, rather large, terminal; scape from the base of pseudobulb, 6-8 cm long, 2-3 white tubular sheathes at middle and base; sepals subequal, spreading, dorsal one oblong-ovate, 2.5-3 cm long, about 1.5 cm wide, obtuse, slightly contracted at base, 7-nerved, lateral ones oblique ovate, 2-2.5 cm long, 1.5-2 cm wide, obtuse, adnate to column, mentum-forming at base; petals oblong-ovate, 1.5-2 cm long, 1-1.3 cm wide, subacute or obtuse, contracted at base, 5-nerved; lip patent, erect, membranous, irregular fine teeth at base, recurved, spongy, wrinkle, groove from middle to upward, subacute or obtuse at apex; column short; pollinia 4, sessile; ovary short, about 6 mm long.

Endemic. In forests at medium altitudes of 1000-2100 m throughout the island, epiphytic on tree trunks.

着生蘭、假球莖卵形或潤卵形，緊密一個連一個排列，長1.5-2 cm，徑1 cm，葉1枚。

葉一枚，着生於假球莖的先端，長橢圓形，革質，長3-7 cm，寬1-1.5 cm，先端鈍且凹頭，基部緊縮或呈楔形，中肋於表面凹下而背面隆起，有柄，葉柄長5-8 mm。

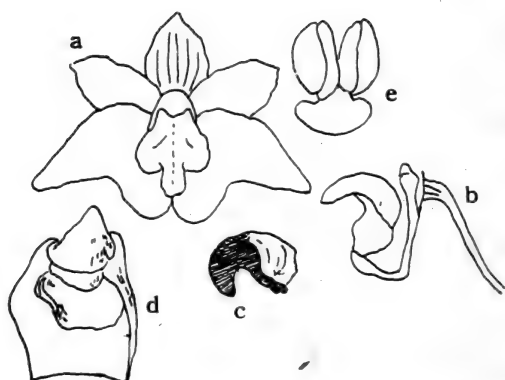


圖 (Fig) 19 阿里山石豆蘭 (*Bulbophyllum transarisanense*)

a. 花 (Flower)

b. 除去萼片及花瓣的花 (Flower taken off sepal and petal)

c. 唇瓣 (Lip) d. 蕊柱 (Column)

e. 藥蓋 (Operculum)

花單生、黃白色，較大，生長於花莖的頂端；花莖抽自於假球莖基部，長6-8 cm；在花莖的中部及基部具有管狀的鞘各一枚；萼片擴展，後萼片長橢圓狀卵形，長2.5-3 cm，寬1.5 cm，先端鈍，基部略緊縮，脈7條；側萼片歪卵形，長2-2.5 cm，寬1.5-2 cm，先端鈍，基部潤且與蕊柱相連而形成頰；花瓣長橢圓狀卵形，長1.5-2 cm，寬1-1.3 cm，先端鈍或近似銳尖，基部緊縮狀，5脈；唇瓣顯著，直立、膜質，基部有不規則細鋸齒，反捲，海綿質，扭曲，從中部至先端具有溝紋，先端鈍或銳尖；蕊柱短；花粉塊4枚，無柄，子房短，長6 mm。

固有，生長於中海拔1000-2100公尺，全島都有分佈，着生於樹幹上。

20. 白花長距根節蘭 (*Calanthe albo-longicalcarata* Ying)

Terrestrials; roots elongate, 20-35 cm long, 0.5-1 mm across; pseudobulb inconspicuous, usually hidden by leaf-sheathes; stemless.

Leaves 5-8, radical, oblong or elliptic, 15-20 cm long, 6-8 cm wide, chartaceous, acute or acuminate, gradually attenuate to petiole at the base, wavy on margin, green and shining surface, pale green beneath, 3-5-nerved, elevated on back, glabrous, sometimes pubescent on veins beneath; petioles 3-9 cm long.

Flowers 10-20, white, large, 1-1.5 cm in diameter, scentless, racemose; scape arising from the fascicled leaves, 35-45 cm long, 3-4 mm in diameter, pubescent upward, leafless; sheathes 2, membranous, acute, 1.5-2.5 cm long; bracts lanceolate, glabrous, acuminate at apex, 1.2-1.8 cm long; pedicels with ovaries 2-2.5 cm long; sepals equal, elliptic, 1-1.5 cm long, 7-8 mm wide, acute and cuspidate at apex, glabrous; petals obovate or obovate-lanceolate, 1-1.3 cm long, 4-6 mm wide, acute at apex, entire on margin; lip adnate to the column base, 12-18 mm long, 10-15 mm wide, 3-lobed, the lateral lobes oblong, 4-7 mm long, 4-5 mm wide, obtuse at apex, median lobe broadly rounded, 8-10 mm long, 7-9 mm wide, 2-lobed at apex; spur 2-3 cm long, 1-1.5 mm in diameter; column short, 2 mm long.

Endemic, known from the low altitudes of 600-1000 m in northern part of island, on moist places, somewhat rarely.

地生蘭、根甚長，長20-35 cm，徑0.5-1 mm；假球莖不顯著，常隱藏於葉鞘內，無莖。

葉5-8枚，根生、長橢圓形，長15-20 cm，寬6-8 cm，厚紙質，先端銳尖或漸尖形，基部漸窄而延伸至葉柄，葉緣呈波狀，表面綠色而有光澤，背面淡綠色，脈3-5條，隆起於背面，光滑，有時在葉背面葉脈處有毛茸；葉柄長3-9 cm。

花10-20枚，白色，大，徑1-1.5 cm，無香味，總狀花序；花莖抽自於叢生葉叢，長35-45 cm，徑3-4 mm，上部有毛茸、無葉；葉鞘2枚，膜質，先端銳尖，長1.5-2.5 cm；苞片披針形、光滑，先端漸尖形，長1.2-1.8 cm；花梗連同子房長2-2.5 cm；萼片整齊，橢圓形，長1-1.5 cm，寬7-8 mm，先端銳尖且呈短尾狀，光滑。花瓣倒卵形或倒卵狀

披針形，長1-1.3 cm，寬4-6 mm，先端銳尖，全緣；唇瓣與蕊柱基部相連，長12-18 mm，寬10-15 mm，3裂，側裂片長橢圓形，長4-7 mm，寬4-5 mm，先端鈍，中裂片闊圓形，長8-10 mm，寬7-9 mm，先端2裂；距長2-3 cm，徑1-1.5 mm；蕊柱短，長2 mm。

固有，生長於台灣北部低海拔約600-1000 m，多見於潮濕處，較為稀少。

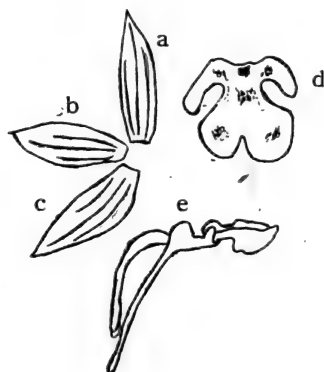


圖 (Fig) 20 白花長距根節蘭 (*Calanthe albo-longicalcarata*)

- a. 後萼片 (Dorsal sepal) b. 花瓣 (Petal)
 c. 側萼片 (Lateral sepal) d. 唇瓣 (Lip)
 e. 蕊柱、距、唇瓣 (Column, spur and lip)

21. 阿里山根節蘭 (*Calanthe arisanense* Hay.)

Terrestrials; rhizome short; roots elongate; pseudobulb ovoid, 2.5-3 cm long, 2-2.5 cm across; stemless.

Leaves 2-5, radical, lanceolate, 30-45 cm long, 4.5-5.5 cm wide, acuminate and shortly caudated at apex, narrowed at the base, herbaceous, 5-7-nerved, glabrous, petiolate; the petioles 10-15 cm long, glabrous.

Flower 5-10, white, sometimes pink tinged, large, 2-3 cm in diameter, racemose; scape erect, produced from the base of clustered leaves, 45-60 cm long, glabrous; bracts lanceo-

late, 1-1.5 cm long, 3-4 mm wide, acute, amplexicaul at the base; pedicels with ovaries 3-3.5 cm long, glabrous, slightly purple; sepals subequal, free, ovate-lanceolate, spreading, patent, 2-2.5 cm long, 6-8 mm wide, acuminate and with a 2-3 mm long tail at apex, rounded and contracted at the base, 1-3-nerved; petals linear, spreading, 2-2.2 cm long, 4-5 mm wide, acuminate, narrowed at the base; lip clawed, spurred, 3-lobed, wavy on margin, the claw usually adnate to the column and forming a 5 mm long tube; spur 1.5-2.2 cm long, obtuse at apex, the lateral lobes auriculate, 8-10 mm long, 5-6 mm wide, median lobe rounded, 7-9 mm long, 10-12 mm wide, obtuse and with a shortly tip, 3 light yellow gills inside; column short, erect or nearly so, 7-9 mm long, hairy within; pollinia 8, yellowish white; caudicles 1-1.5 mm long.

Endemic, under the forests at low to medium altitudes of 800-2200 m throughout the island, very common.

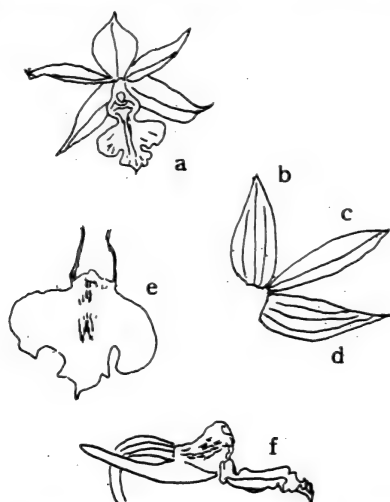


圖 (Fig) 21 阿里山根節蘭 (*Calantle arisanense*)

- a. 花 (Flower) b. 後萼片 (Dorsal sepal)
 c. 花瓣 (Petal) d. 側萼片 (Lateral sepal)
 e. 唇瓣 (Lip) f. 花除去花萼及花瓣 (Flower
 taken off sepals and petals)

地生蘭、根莖短、根甚長；假球莖卵形，長2.5-3 cm，徑2-2.5 cm，無莖。

葉2-5枚，根生，披針形，長30-45 cm，寬4.5-5.5 cm，先端漸尖且呈短尾狀，基部窄而延伸至葉柄，草質，脈5-7條，光滑，有柄；葉柄長10-15 cm，光滑。

花5-10枚，白色，而有粉紅色暈，大，徑2-3 cm，總狀花序；花莖直立，抽自於葉叢，長45-60 cm，光滑；苞片披針形，長1-1.5 cm，寬3-4 mm，先端銳尖，基部抱莖，花梗連同子房長3-3.5 cm，光滑，略帶粉紅色或淡紫色；萼片整齊、離生、卵狀披針形，擴展，顯著，長2-2.5 cm，寬6-8 mm，先端漸尖而有長2-3 mm的短尾，基部圓而緊縮狀，1-3脈；花瓣線形，擴展，長2-2.2 cm，寬4-5 mm，先端漸尖形，基部較窄；唇瓣有爪，有距，3-裂，波狀緣，爪常與蕊柱相連而形成長5 mm的管狀物，距長1.5-2.2 cm，先端鈍；側裂片耳狀，長8-10 mm，寬5-6 mm，中裂片圓形，長7-9 mm，寬10-12 mm，先端鈍而有一短尖突，內面有3條黃色隆起線；蕊柱短、直立或近似如此，長7-9 mm，內面有毛茸；花粉塊8、黃白色；花粉柄長1-1.5 mm。

固有，生長於低至中海拔約800-2200 m處，全島皆有，甚普遍，見於森林下。

22. 垂花根節蘭 (*Calanthe aristulifera* Reichb. f)

Terrestrials; pseudobulbs globose, tufted, 5-6 mm long, inconspicuous; rhizome short, creeping; roots elongate, filiform, 10-20 cm long.

Leaves 1-2, oblong, 15-20 cm long, 6-7 cm wide, shortly acute at apex, abruptly narrowed at the base, glabrous, chartaceous; the petioles 8-10 cm long, slender, glabrous.

Flowers 6-12, white or lightly purple, nodding, 2-2.2 cm in diameter, racemose; scape produced from the base of pseudobulb, 30-40 cm long, erect, slender; bracts lanceolate, minute, 4-5 mm long; the pedicels with ovaries 1.5-1.7 cm long, glabrous; sepals oblong, free, 12-16 mm long, 5.5-6.5 mm wide, acuminate at apex, contracted at the base; petals oblong-lanceolate, 1-1.4 cm long, about 4 mm wide, acute

at apex, narrowed truncate at the base, hirsute without; lip widely rounded, 9-15 mm long, about 10 mm wide, 3-lobed, spurred, the lateral lobes rounded, 8-9 mm long, 4-5 mm wide, slightly recurved, the median lobe 6-7 mm long, about 7 mm wide, cuspidate-crispate-plicate upward; disc with many keels, hirsute without, pilose within; spur 1.5-2 cm long, hairy within; column 1-1.5 cm long.

Japan, Taiwan known from the northern part of the island at the elevations of 900-1500 m, under the evergreen forests.

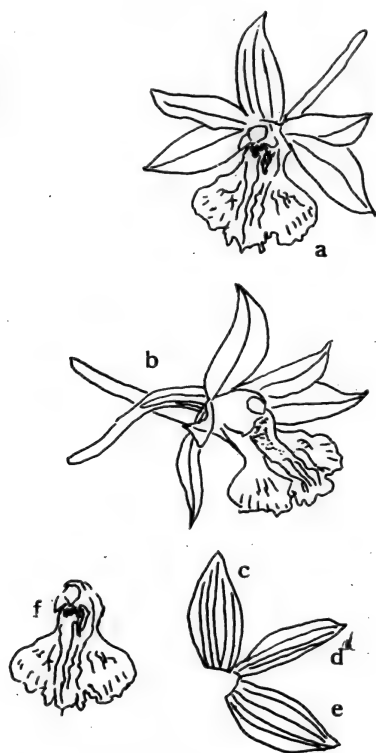


圖 (Fig) 22 垂花根節蘭 (*Calanthe aristulifera*)

- a. b. 花 (Flower) c. 後萼片 (Dorsal sepal)
 d. 花瓣 (Petal) e. 側萼片 (Lateral sepal)
 f. 唇瓣 (lip)

地生蘭，假球莖球形，叢生，長 5-6 mm，不顯着；根莖短、匍匐；根甚長，線形，長 10-20 cm。

葉 1-2 枚，長橢圓形，長 15-20 cm，寬 6-7 cm，先端短銳尖，基部突狹，光滑，紙質；葉柄長 8-10 cm，細長，光滑。

花 6-12 枚，白色或淡紫色，徑 2-2.2 cm，點頭，總狀花序；花莖抽自於假球莖基部，長 30-40 cm，直立、細長；苞片披針形，較小，長 4-5 mm；花梗連同子房長 1.5-1.7 cm，光滑；萼片長橢圓形，離生，長 12-16 mm，寬 5.5-6.5 mm，先端漸尖形，基部緊縮狀，花瓣長橢圓狀披針形，長 1-1.4 cm，寬約 4 mm，先端銳尖，基部狹截斷狀，外面有毛茸；唇瓣圓形，長 9-15 mm，寬約 10 mm，3 裂，有距；側裂片圓形，長 8-9 mm，寬 4-5 mm，略反捲；中裂片長 6-7 mm，寬約 7 mm，先端尖突，前緣皺曲褶折狀，花盤有多數的突起稜，外面有毛茸，內面有柔毛；距長 1.5-2 cm，內面有毛茸；蕊柱長 1-1.5 cm。

日本，台灣生長於北部約海拔 900-1500 m 的山地，常見於常綠闊葉林下。

23. 細花根節蘭 (*Calanthe graciliflora* Hay.)

Terrestrials; rhizomes short; pseudobulbs closely approximate, green, 0.8-1.2 cm across; roots many, elongate, 15-25 cm long; sheaths 2, firstly enclosed the unopened leaves, laterly left the vascular bundle fibers at base; stemless.

Leaves 2-3, oblong-spathulate, 25-32 cm long, 6-8 cm wide, acuminate, attenuate to the petioles at the base, chartaceous, plicate, entire, glabrous, 3-5-nerved elevated on the back, shining green surface, pale green beneath; petioles 6-10 cm long, glabrous, groove.

Flowers 5-15, rather large, 2-3 cm in diameter racemose; scape from the unopened fascicled leaves, 25-55 cm long, slender, erect, green; bracts lanceolate, 6-7 mm long, 2-3 mm wide, membranous, acute at apex; pedicels with ovaries 2.8-3.2 cm long, glabrous, yellowish green; sepals subequal, oblong-lanceolate, reddish brown without, lightly yellow or greenish yellow within, spreading, 2-2.5 cm long, 5-7 mm

wide, aristate acuminate, contracted at the base, 5-nerved; petals oblong-lanceolate or linear-lanceolate, same as the sepals in color, acute, attenuate at the base, 17-19 mm long, about 4 mm wide, 3-nerved; lip yellowish white, clawed, spurred and 3-lobed, the claw connate to the column and forming a 4-6 mm long tube; spur 8-12 mm long, somewhat pubescent, obtuse at apex, the lateral lobes quadrangular rounded, 4-5 mm long, 2-3 mm wide, truncate at apex, the median lobe oblong-rounded, 4-6 mm long 2-2.5 mm wide aristate and emarginate at apex, 3-ridges lines on disc; column short, 5-6 mm long.

Endemic, under the humus forests at medium altitudes of 700-1600 m in northern part of the island, somewhat rare.

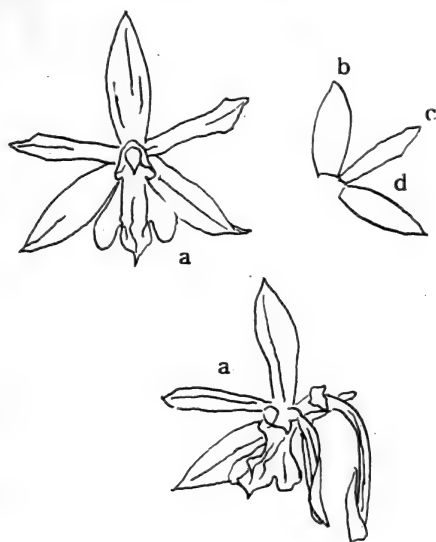


圖 (Fig) 23 細花根節蘭 (*Calanthe graciliflora*)

- | | |
|-----------------|--------------------------|
| a. 花 (Flower) | b. 後萼片 (Dorsal sepal) |
| c. 花瓣 (petal) | d. 側萼片 (Lateral sepal) |

地生蘭，根莖短；假球莖緊密排列，綠色，徑 0.8-1.2 cm；根多數，甚長，長 15-25 cm；鞘 2 枚，初包於未開放葉之外，後僅留存鬚狀的維管

束於基部，無莖。

葉2-3枚，長橢圓狀舌形，長25-32 cm，寬6-8 cm，先端漸尖形，基部漸窄而延伸至葉柄、紙質、皺褶，全緣，光滑，脈3-5條隆起於葉背；表面呈有光澤綠色，背面呈灰綠色；葉柄長6-10 cm，光滑，有溝紋。

花5-15枚，較大，徑2-3 cm，總狀花序；花莖抽自於未十分開放叢生的葉中，長25-55 cm，細長，直立，綠色；苞片披針形，長6-7 mm，寬2-3 mm，膜質，先端銳尖；花柄連同子房長2.8-3.2 cm，光滑，黃綠色；萼片整齊，長橢圓狀披針形，外面紅褐色，內面淡黃色或黃綠色，擴展，長2-2.5 cm，寬5-7 mm，先端漸尖且有尖突，基部緊縮，脈5條；花瓣長橢圓狀披針形或線狀披針形，與萼片同顏色，先端銳尖，基部漸窄，長17-19 mm，寬4 mm，脈3條；唇瓣黃白色，有爪，有距，三裂，爪與蕊柱相連而形成一長4-6 mm的管狀物，距長8-12 mm，略有毛茸、先端鈍；側裂片四方狀圓形，長4-5 mm，寬2-3 mm，先端截斷狀，中裂片長橢圓狀圓形，長4-6 mm，寬2-2.5 mm，先端凹頭且尖突有3隆起脊；蕊柱短，長5-6 mm。固有生長於北部中海拔約700-1600 m山地，常見於多腐植質林下。

24. 黃花根節蘭 (*Calanthe lyroglossum* var. *forsythiiflora* (Hayata) Ying)

Calanthe lyroglossum var. *forsythiiflora* (Hayata) Ying, **com. nov.**

Calanthe forsythiiflora Hayata, Icon. Pl. Form. 4:67, t.14 (1914).

Calanthe liukiensis Schltr. in Fedde Repert. Beih. 4:67 (1919), (Sino-Jap. Orch. Prodr.)

Terrestrials; rhizome short, creeping; pseudobulbs inconspicuous, somewhat closely approximate; stemless.

Leaves 3-4, fascicled from the lateral side of pseudobulb, oblanceolate, 25-65 cm long, 4-6 cm wide, thinly chartaceous or membranous, acuminate, acute or gradually attenuate at the base, entire, petioled, 5-nerved, elevated on the back; the petioles 15-20 cm long, glabrous.

Flowers yellow, numerous, rather small, 8-12 mm in dia-

meter, racemose, horizontal; scape from the base of fascicled opened leaves, 40-50 cm long, glabrous, erect, rather robust; sheathes membranous, 3-4 cm long, about 6 mm wide, acute at apex; bracts oblong, 3-4 cm long, 1-1.5 cm wide, deciduous, membranous; the pedicels with ovaries 6-9 mm long, glabrous; sepals subequal, the dorsal one ovate, 8-9 mm long, 4-5 mm wide, acute or aristate-acute at apex, the lateral ones oblique ovate or obovate, same as the dorsal sepal in length; petals broadly ovate, somewhat oblique, abruptly acute or mucronate acute at apex, contracted at base, 3-nerved; lip broadly rounded reniform, 3-4 cm long, 5-6 mm wide, broadly rounded at apex, emarginate in the middle, adnate to the column and forming a 1-1.5 mm long tube, 1 broadly auricle at each side of the base; spur more or less recurved, 1-1.5 cm long; column about 2 mm long.

Lyukyu, Taiwan, at low to medium altitudes of 400-1200 m throughout the island, under the evergreen forests or artificial *cryptomeria* stands, very common. Some botanists reduced *C. forsythiiflora* to the synonym of *C. lyroglossum* but I examined the specimens and read the original description of both species carefully I realize that the lip of both species are different see fig- 24a and b; here I propose a new name of combination *C. lyroglossum* var *forsythiiflora* in stead of *C. lyroglossum* or *C. forsythiiflora*

地生蘭，根莖短，匍匐；假球莖不明顯，略呈緊密排列；無莖。

葉3-4，叢生於假球莖的側方，倒披針形，長25-65 cm，寬4-6 cm，薄紙質或膜質，先端漸尖形，基部銳尖或漸窄，全緣，有柄，脈5條，隆起於葉背；葉柄長15-20 cm，光滑。

花多數，黃色，較小，徑8-11 mm，總狀花序，水平生長；花莖抽自於叢生葉基部，長40-50 cm，光滑，直立，較粗壯；葉鞘膜質，長3-4 cm，寬約6 mm，先端銳尖；苞片長橢圓形，長3-4 cm，寬1-1.5 cm，早落，膜質；花梗連同子房長6-9 mm，光滑；萼片近似整齊，後萼片卵形，長8-9 mm，寬4-5 mm，先端銳尖或星狀銳尖，側萼片歪卵形或倒卵形

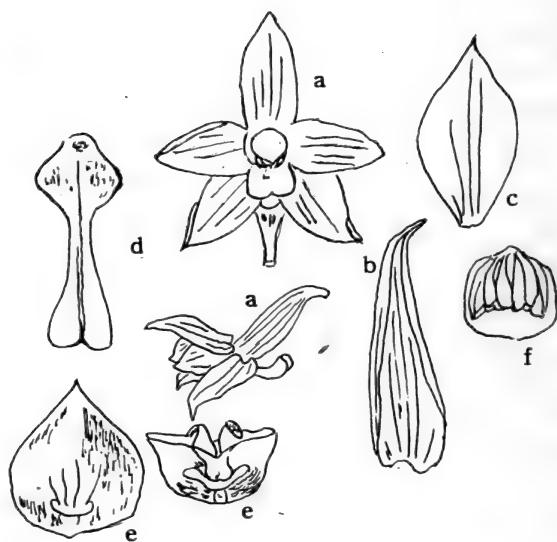


圖 (Fig) 24a. 黃花根節蘭 (*Calanthe lyroglossum* var *forsythii flora*)

- | | |
|------------------|--------------------------|
| a. 花 (Flower) | b. 側萼片 (Lateral sepal) |
| c. 花瓣 (Petal) | d. 唇瓣 (Lip) |
| e. 花藥 (Anther) | f. 花粉粒 (pollinarium) |

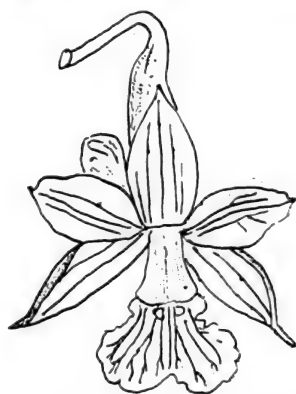


圖 (Fig) 24 b. *Calanthe lyroglossa* Reichb from Ames

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與後萼片同長；花瓣橢圓形，略歪，先端銳尖且呈尖突，基部緊縮，脈3條；唇瓣橢圓狀腎形，長3-4 cm，寬5-6 mm，先端橢圓形且在中部呈凹頭，基部與蕊柱相連而形成一長1-1.5 mm之管狀物，基部兩邊且各呈寬耳狀；距多少呈反曲，長1-1.5 cm；蕊柱長約2 mm。

琉球、台灣，生長於低至中海拔約400-1200 m，全島皆有分佈，常見於常綠林下或人工柳杉林內，甚為普遍。

25. 長距根節蘭 (*Calanthe masuca* (D. Don) Lindley)

Terrestrials; pseudobulb inconspicuous; roots elongate, 20-30 cm long, stemless.

Leaves 4-6, oblong, 25-30 cm long, 8-10 cm wide, chartaceous, acute or acuminate, gradually attenuate at base, petiolated, glabrous, wavy on margin, shining green surface, somewhat pale green beneath, 5-nerved elevated on back; petioles 10-17 cm long, glabrous.

Flowers 4-10, rather large, 1.5-2.5 cm in diameter, lightly purple, racemose; scape producing from the base of clustered leaves, erect, 40-60 cm long, short pilose, sheathed; sheathes at the base of scape, membranous, 2-4 cm long, acute at apex; bracts lanceolate, 1.5-2.5 cm long, about 1 cm wide, glabrous within, pubescent without; the pedicels with ovaries 2-4 cm long; sepals equal or nearly so, elliptic or oblong, 2-2.3 cm long, 8-10 mm wide, cuspidate-acute, obtuse at base, 2 or 5-nerved, slightly recurved on margin, glabrous; petals obovate or oblong 1.4-1.8 cm long, 6-8 mm wide, obtuse on both ends, entire or slightly wavy on margin, 3-nerved lip adnate to the column at base 13-18 mm long, 12-16 mm wide 3-lobed, spurred; spur 3-3.5 cm long, about 2 mm across, flexuose, the lateral lobes oblong, 3-5 mm long, 2-3 mm wide, obtuse at apex, the median lobe broadly rounded, 8-10 mm long, 12-14 mm wide, emarginate at apex, slightly recurved on margin; column short, 2-3 mm long column short, 2-3 mm long and wide; pollinia elliptic.

Endemic, known from the lower to medium altitudes of 700-1500 m throughout the island. under humus forests, commonly.

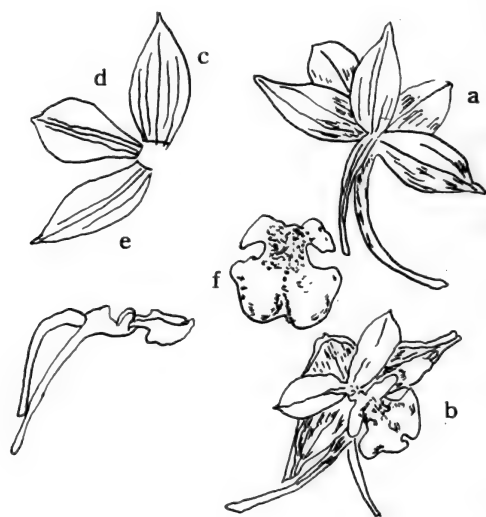


圖 (Fig) 25 長距根節蘭 (*Calanthe masuca*)

a. 花背面 (Flower back side)

b. 花正面 (Flower surface side)

c. 後萼片 (Dorsal sepal)

d. 花瓣 (Petal)

e. 側萼片 (Lateral sepal) f. 唇瓣 (Lip)

g. 蕊柱距唇瓣 (Column spur and lip)

地生蘭，假球莖不顯著；根甚長，長20-30 cm，無莖。

葉4-6枚，長橢圓形，長25-30 cm，寬8-10 cm，紙質；先端銳或漸尖形，基部漸窄，有柄，光滑，邊緣波狀，表面有光澤、綠色、背面略帶有粉白色，葉脈五條，於葉背隆起，葉柄長10-17 cm，光滑。

花4-10枚，較大，徑1.5-2.5 cm，淡紫色，總狀花序，花莖抽自於葉叢，直立，長40-60 cm，有短柔毛，有鞘；鞘着生於花莖基部，膜質，長2-4 cm，先端銳尖；苞片披針形，長1.5-2.5 cm，寬約1 cm，內面

光滑，外面有毛茸；花柄連同子房長2-4 cm；萼片整齊或近似如此，橢圓形或長橢圓形，長2-2.3 cm，寬8-10 mm，先端尾狀銳尖，基部鈍，脈2或5條，邊緣略反捲，光滑；花瓣倒卵形或長橢圓形，長1.4-1.8 cm，寬6-8 mm，兩端均鈍，全緣或波狀緣，脈3條，唇瓣基部與蕊柱相連，長13-18 mm，寬12-16 mm，3裂，有距，距長3-3.5 cm，徑約2 mm，彎曲，側裂片長橢圓形，長3-5 mm，寬2-3 mm，先端鈍，中裂片橢圓形，長8-10 mm，寬12-14 mm，先端凹頭，邊緣略反捲；蕊柱短，長2-3 mm，花粉塊橢圓形。

固有，見於全島低海拔至中海拔700-1800 m的山地，常見於有腐植質的森林，較為常見。

26. 禾葉根節蘭 (*Calanthe matsudai* Hayata)

Terrestrials; rhizome short; roots elongate; pseudobulb ovoid, inconspicuous, usually enclosed by the leaf-sheathes; stemless.

Leaves radical, linear, 50-65 cm long, 1-1.5 cm wide, acuminate, glabrous, chartaceous or thickened membranous, 5-7-nerved elevated beneath, lustrous green surface, pale green beneath, entire or nearly so; sheathes short, 1-1.5 cm long, enclosed the pseudobulb.

-Flowers numerous, yellowish green or white, 7-12 mm in diameter, racemose; scape erect, 70-100 cm long, terete, slightly pubescent; sheathes 2-3, basal, lanceolate, 1.5-3 cm long, acute, amplexicual at base; bracts linear, 1-2.5 cm long, acuminate; pedicels with ovaries 1.2-1.5 cm long; sepals oblong-obovate, 8-9 mm long, about 3.5 mm wide, reflexed, acute, more or less contracted at base, 3-nerved, glabrous; petals spatulate-linear, 8-9 mm long, about 1.5 mm wide, obtuse, attenuate at base, 3-nerved, glabrous; lip widely triangular in outline, 3-lobed, spurred, 8-9 mm long, 12-15 mm wide, the lateral lobes oblong, 5-6 mm long, 3-4 mm wide, obtuse at apex, the median lobe 4-6 mm long, 2-lobed at apex, the lobes linear, 3-4 mm long, about 1 mm wide,

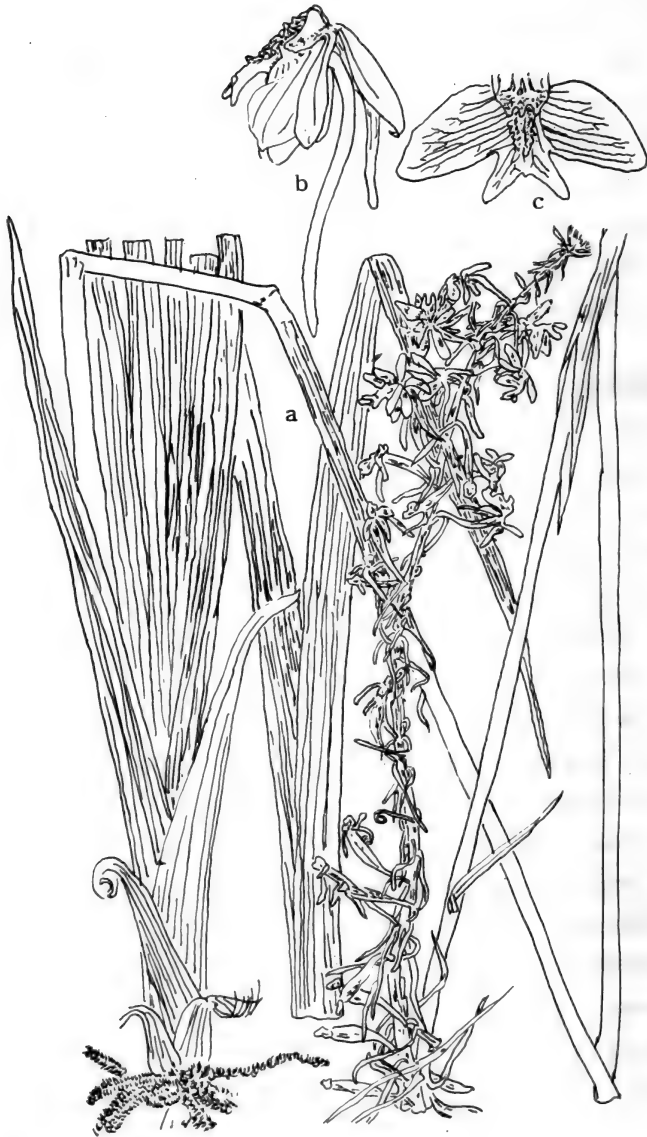


圖 (Fig) 26 禾葉根節蘭 (*Calanthe matsudai*)

a. 開花植物體 (Flowering plant)

b. 花 (Flower)

c. 唇瓣 (Lip)

obtuse at apex, 3-keeled in the middle; spur 1-1.2 cm long, about 1 mm across; column short, 2-3 mm long.

Endemic, known from the northern and central parts of the island at the elevations of 900-1,800 m, under the evergreen forests, not common.

地生蘭，根莖短，根甚長，假球莖卵形，不顯着，常隱藏於葉鞘中，無莖。

葉根生，線形，長50-65 cm，寬1-1.5 cm，先端漸尖，光滑，紙質或厚膜質，脈5-7條隆起於背面，表面呈有光澤綠色，背面淡綠色，全緣或近似如此：鞘甚短，長1-1.5 cm，包被着假球莖。

花多數，白色或黃綠色，徑7-12 mm，總狀花序；花莖直立，長70-100 cm，圓柱形，略有毛茸；鞘2-3枚，基生，披針形，長1.5-3 cm，先端銳尖，基部抱莖；苞片線形，長1-2.5 cm，先端漸尖形；花柄連同子房長1.2-1.5 cm；萼片長橢圓狀倒卵形，長8-9 mm，寬約3.5 mm，反捲，先端銳尖，基部多少呈緊縮狀，脈3條，光滑；花瓣舌狀線形，長8-9 mm，寬約1.5 mm，先端鈍，基部漸狹，脈3條，光滑；唇瓣外形呈闊三角形，3裂，有距，長8-9 mm，寬12-15 mm，側裂片長橢圓形，長5-6 mm，寬3-4 mm，先端鈍，中裂片長4-6 mm，先端又2裂，裂片線形，長3-4 mm，寬約1 mm，先端鈍，中部有隆起線3條；距長1-1.2 cm，徑約1 mm；蕊柱短，長2-3 mm。

固有，生長於北部及中部中海拔山地約900-1800 m處，常見於常綠林下，不常見。

27. 反捲根節蘭 (*Calanthe reflexa* (O.K.) Maxim.)

Terrestrials; rhizome short; roots many, rather long; pseudobulbs ovoid, inconspicuous, hidden by the fascicled leaves.

Leaves 3-5, obovate-elliptic or narrowly oblong, 15-35 cm long, 4-8 cm wide, chartaceous, acuminate, narrowed toward the base, green and shining surface, pale green and pubescent beneath, 5-7-nerved, raised on back.

Flowers many, racemose, pale purple or violet, rather large, 3-4 cm in diameter; scape produced from the fascicled open leaves, 30-40 cm long, erect, slender, puberulent above,

with a solitary green scale; bracts lanceolate, green, acuminate at apex, 1-1.5 cm long, pubescent; the pedicels with ovaries about 1 cm long, pale purple; sepals spreading, reflexed, the dorsal one ovate, 1.5-1.6 cm long, about 7 mm wide, the lateral ones oblique ovate, 1.7-1.8 cm long, 5-6 mm wide, petals broadly linear or linear lanceolate 10-12 mm about 2 mm wide acuminate at apex; lip ovate, flat, 15-17 mm long, 9-11 mm wide, 3-lobed, the median lobe obovate, relatively large, rounded and mucronate at apex, with undulate margin, lateral lobes falcate ovate, small; column short, adnate to the base of lip and forming a hollow tube; spur absent or inconspicuous.

Capsules obovoid, lightly brown, pendulous; seeds minute, enclosed by thin membranes.

Korea and Japan. Taiwan, known from the medium altitudes of 1200-2100 m in northern part of the island, under the temperate forests, common.

地生蘭、根莖短，根多數，甚長；假球莖卵形，不顯著，隱藏於葉叢中。

葉3-5枚，倒卵狀橢圓形或狹長橢圓形，長15-35 cm，寬4-8 cm，紙質，先端漸尖形，基部漸狹，表面有光澤綠色，背面淡綠色而略有毛茸，5-7脈隆起於背面。

花多數，總狀花序，淡紫色或紫羅蘭色，較大，徑3-4 cm，花莖抽自於張開之葉叢，長30-40 cm，直立、細長、上面有毛茸，具有一綠色鱗片；苞片披針形，綠色，先端漸尖形，長1-1.5 cm，有毛茸；花梗連同子房長約1 cm，萼片擴張，反捲，後萼片卵形，長1.5-1.6 cm，寬約7 mm，側裂片歪卵形，長1.7-1.8 cm，寬5-6 mm；花瓣潤線形或線狀披針形，長10-12 mm，寬2 mm，先端漸尖形；唇瓣卵形，扁平，長15-17 mm，寬9-11 mm，3裂，中裂片倒卵形，相對地大，先端圓而尖突，波狀緣；側裂片鐮刀狀卵形，小；蕊柱短，與唇瓣基部相連而呈一空洞；距甚短或無。

韓國及日本、台灣，生長於中海拔約1200-2100 m，生長於溫帶森林下，常見。

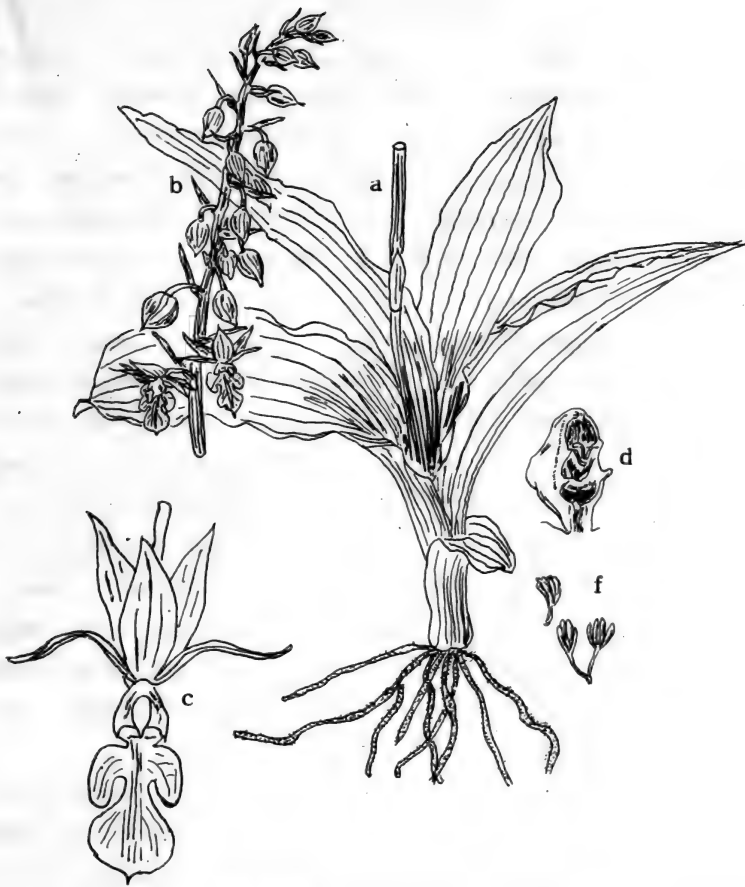


圖 (Fig) 27 反捲根節蘭 (*Calanthe reflexa*)

- a. 植物體 (Plant body) b. 花序 (Inflorescence)
 c. 花 (Flower) d. 蕊柱 (Column)
 e. 花粉塊 (Pollinia)

28. 紅唇根節蘭 (*Calanthe tricarinata* Lindley)

Terrestrials; rhizomes short; pseudobulbs closely approximate, compressed ovoid, 2-3 cm across; roots many, elongate; stemless.

Leaves 3-6, radical, oblong-lanceolate or obovate-oblong,

25-40 cm long, 5-15 cm wide, glabrous or slightly pubescent, chartaceous, many veins raised on back, acuminate, narrowed to the petiole at base; the petioles 10-15 cm long; sheaths 2-3, enclosed the unopened leaves and scape, caudous laterly.

Flowers 12-18, large, about 3-3.5 cm in diameter, racemose; scape produced from the coming unopened clustered leaves, erect, 25-45 cm long, 7-9 mm across, glabrous or slightly hairy; bracts ovate or ovate-lanceolate, 7-12 mm long, 2-3 mm wide, acute at apex, embracing the scape at base, chartaceous; the pedicels with ovaries 1.5-2 cm long, slightly hairy; sepals yellowish green, spreading, ovate or ovate-oblong, the dorsal one largest, 2.2-2.8 cm long, 8-12 mm wide, the lateral ones somewhat oblique at base, 2-2.4 cm long, 7-10 mm wide, acute at apex; petals yellowish green too, lanceolate, 15-20 mm long, 4-5 mm wide, acute at apex; lip 3-lobed, reddish brown, the lateral lobes somewhat small, 5-6 mm long, 2.5-3.5 mm wide, truncate at apex, the median lobe larger, rounded, 12-15 mm long, 9-11 mm wide, wavy on margin, with 3 longitudinal elevated ridges in middle surface; column short, lightly yellow.

Himalaya, W. China and Japan, Taiwan, known from the rather high altitudes of 2200-2800 m in northern part of the island, under the evergreen forests, somewhat rarely.

地生蘭，根莖短，假球莖緊密排列，扁平卵形，徑2-3 cm；根多數，甚長；無莖。

葉3-6枚，根生，長橢圓狀披針形或倒卵狀長橢圓形，長25-40 cm，寬5-15 cm，光滑或略有毛茸、紙質，脈多數隆起於背面，紙質，脈多數隆起於背面，漸尖形，基部漸狹而延伸葉柄；葉柄長10-15 cm，葉鞘2-3枚，包於未開放的葉上，後早落。

花12-18枚，大，徑3-3.5 cm，總狀花序；花莖抽自於未開張的葉叢，直立，長25-45 cm，徑7-9 mm，光滑或略有毛茸；苞片卵形或卵狀披針形，長7-12 mm，寬2-3 mm，先端銳尖，基部抱莖，紙質；花梗連同子房長1.5-2 cm，略有毛茸；萼片黃綠色，擴展，卵形或卵狀長橢

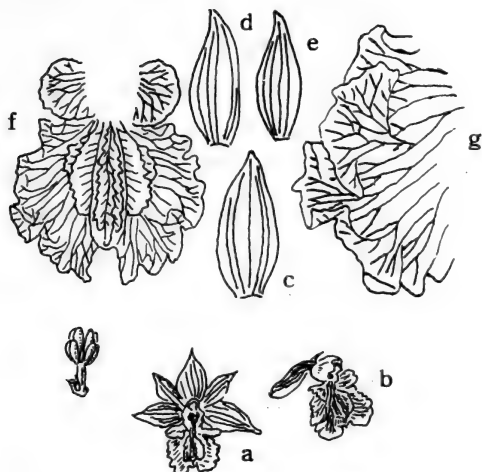


圖 (Fig) 28 紅唇根節蘭 (*Calanthe tricarinata*)

- a. 花 (Flower)
- b. 除去花萼及花瓣的花 (Flower taken off sepals and petals)
- c. 後萼片 (Dorsal sepal)
- d. 側萼片 (Lateral sepal)
- e. 花瓣 (Petal)
- f. 唇瓣 (Lip)
- g. 唇瓣的邊緣 (Margin of lip)

圓形；後萼片最大，長2.2-2.8 cm，寬8-12 mm，側萼片基部略歪，長2-2.4 cm，寬7-10 mm，先端銳尖；花瓣黃綠色，披針形，長15-20 mm，寬4-5 mm，先端銳尖；唇瓣3裂，紅褐色，側裂片略小，長5-6 mm，寬2.5-3.5 mm，先端截斷狀，中裂片較大，圓頭，長12-15 mm，寬9-11 mm，波狀緣，內面中部具有多數隆起脊；蕊柱短，淡黃色。

喜馬拉雅山麓，中國西部及日本，台灣，生長於北部及中部較高海拔約2200-2800 m山地多見於森林下。

29. 白花根節蘭 (*Calanthe triplicata* [(Rumph) Willem] Ames)

Terrestrials; rhizomes short; pseudobulbs closely approxi

mate.

Leaves 3-7, narrowly oblong, obovate-oblong to elliptic-oblong, 30-60 cm long, 10-15 cm wide, chartaceous, acuminate at both ends, puberulent beneath, long petiolated; the petioles with sheathes 10-15 cm long.

Flowers white with green tip, large or rather larger, many, widely expanded, racemose; scape arising from the fascicled of fully grown leaves, 40-80 cm long, pubescent; bracts spreading, ovate-lanceolate, 1-2.5 cm long, recurved, acute at apex, persistent; pedicels with ovaries 3-4 cm long; sepals elliptic or obovate-elliptic, 1.2-2 cm long, 5-7 mm wide, spreading, obtuse, and mucronate at apex; petals obovate-elliptic, 1.2-2 cm long, 4-6 mm wide, obtuse at apex; lip with a basal thickening, 3-lobed, 3-3.5 cm long, about 2 cm wide, lateral lobes obliquely oblong-obovate, median lobe cuneate, deeply 2-lobed, spur recurved or decurved, thin, terete or clavate, 1.5-3 cm long, hairy; column 5-6 mm long.

South China, India throughout Malaya and Indoesia to Australia, New Guinea, the Philippines, Japan and Pacific island. Taiwan, at lower to medium altitudes of 500-1800 m throughout the island, under the evergreen forests, very commonly.

地生蘭、根莖短，假球莖緊密排列。

葉3-7枚，狹長橢圓形，倒卵狀長橢圓形或橢圓狀長橢圓形，長30-60 cm，寬10-15 cm，紙質，兩端均漸尖形，背面略有毛茸，具有長柄；葉柄連同葉鞘長10-15 cm。

花白色，先端帶有綠色，大或較大，多數，瀾開張型，總狀花序；花序抽自於叢生開放葉中，長40-80 cm，有毛茸；苞片展開，卵狀披針形，長1-2.5 cm，反捲，先端銳尖，殘存；花梗連同子房長3-4 cm；萼片橢圓形或倒卵狀橢圓形，長1.2-2 cm，寬5-7 mm，展開，先端鈍且有尖突。花瓣倒卵狀長橢圓形，長1.2-2 cm，寬4-6 mm，先端鈍；唇瓣基部具有附屬物，3裂，長3-3.5 cm，寬約2 cm，側裂片歪長橢圓狀倒卵形，中裂片楔形，深2裂，距反捲，薄，圓柱形或棍棒狀，

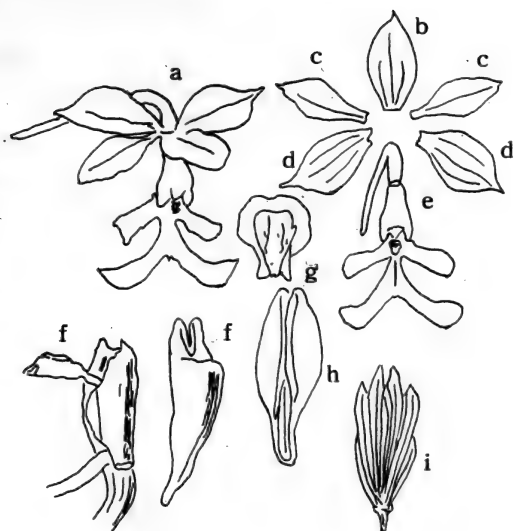


圖 (Fig) 29 白花根節蘭 (*Calanthe triplicata*)

- | | |
|----------------|------------------------|
| a. 花 (Flower) | b. 後萼片 (Dorsal sepal) |
| c. 花瓣 (Petal) | d. 側萼片 (Lateral sepal) |
| e. 唇瓣 (Lip) | f. 蕊柱 (Column) |
| g. 花藥 (Anther) | h. 花粉塊 (Pollinia) |

長1.5-3 cm，有毛茸，蕊柱長5-6 mm。

中國南部、印度、馬來西亞、印尼而至澳洲、新幾內亞、菲律賓、日本及太平洋諸島。台灣，生長於低至中海拔約500-1800 m，全島均有，生長於森林內，甚為常見。

30. 立花蘭 (*Cephalanthera alpicola* Fukuyama)

Terrestrials; roots elongate; rhizomes short; pseudobulb none; stem simple, erect, 20-40 cm long, glabrous; sheathes 2-3, at the base of stem, membranous, 1.5-3 cm long.

Leaves 4-8, alternate, elliptic-lanceolate or lanceolate, 4-8 cm long, 1-2 cm wide, acute or acuminate, contracted at base, thickened membranous, glabrous, entire and minutely ciliate on margin, many-veined raised on back.

Flowers 3-10, white, erect, not widely opened, 8-12 mm in diameter, racemose; scape terminal, 10-20 cm long, erect, slender, glabrous; bracts linear-lanceolate, 3-12 mm long, about 3 mm wide, acute at apex; the pedicels with ovaries 5-10 mm long, erect, glabrous, sepals subequal, 1-1.5 cm long, about 4 mm wide, membranous, glabrous 5-nerved, the dorsal one narrowly ovate cymbiform, the lateral ones oblique ovate; petals elliptic or ovate, acute, contracted at base, 8-9 mm long, 3 mm wide, membranous glabrous 5-nerved lip broadly ovate, 6-9 mm long 3-lobed, somewhat sac-like at base, the lateral lobes widely or oblique triangular ovate, obtuse and recurved at apex, 3-5-keeled within; column erect, glabrous, with anther 6-7 mm long.

Capsules erect, elongate cylindrical, 1-1.5 cm long.

Endemic, at high altitudes of 2500-3000 m in central and northern parts of the island, under the coniferous forests or on grassland, rather common.

地生蘭，根莖短，根甚長，無假球莖；莖單立、直立，長20-40 cm，鞘2-3枚，生長於莖基部，膜質，長1.5-3 cm。

葉4-8枚，互生，橢圓狀披針形或披針形，長4-8 cm，寬1-2 cm，先端銳或漸尖形，基部緊縮狀，厚膜質、光滑、全緣且呈細毛緣，脈多數隆起於背面。

花3-10枚，白色，直立，不十分張開，徑8-12 mm，總狀花序；花莖頂生，長10-20 cm，直立、細長、光滑；苞片線狀披針形，長3-12 mm，寬約3 mm，先端銳尖，花梗連同子房長5-10 mm，直立、光滑；萼片近似整齊，長1-1.5 cm，寬約4 mm，膜質、光滑，5脈，後萼片狹卵狀舟形，側萼片歪卵形；花瓣橢圓形或卵形，先端銳尖，基部緊縮，長8-9 mm，寬3-4 mm，膜質、光滑，5脈；唇瓣瀾卵形，長6-9 mm，3裂，基部略呈囊狀，側裂片瀾或歪三角狀卵形，先端鈍而反捲，內面有3-5條隆起線，蕊柱直立、光滑，長6-7 mm。

固有，生長於中部及北部高海拔約2500-3000公尺山地，見於針葉林內或草原上。

正宗嚴敬在「日本の植物」第8卷中認為本種與日本所產者 *C. shi zwoi*

Maekawa 同種。惟根據筆者觀察，台灣所產的花姿及形態上均不同，應為不同種。



圖 (Fig) 30 立花蘭 (*Cephalanthera alpicola*)

- a. 着花之植物體 (Flowering plant)
- b. 着果之植物體 (Fruiting plant body)
- c. 後萼片 (Dorsal sepal)
- d. 花瓣 (petal)
- e. 側萼片 (Lateral sepal)
- f. 唇瓣 (Lip)
- g. 蕊柱 (Column)

31. 指柱蘭 (*Cheirostylis chinensis* Rolfe)

Terrestrials; tubers elongate, noded, fleshy, dark green, somewhat compressed, 1.5-2 cm long, 5-7 mm wide; roots few, inconspicuous.

Leaves 2-4, ovate or broadly ovate, 2-3.5 cm long, 1.5-2.5 cm wide, obtuse and mucronate at apex, cordate at base, dark green surface, pale green beneath, entire or slightly wavy on margin, fleshy, subcoriaceous, midrib and lateral veins inconspicuous.

Flowers 3-5, small, white, 6-7 mm in diameter, racemose; scape terminal, 8-14 cm long, erect, pubescent, dark red; sheathes 1-2, basal or medium, lanceolate, membranous, grayish white, 2.5-3 cm long, acute at apex, amplexical and tubular-like at base; bracts minute, oblong, 4-5 mm long, obtuse at apex; the pedicels with ovaries cylindrical, 7-9 mm long, dark red, densely pubescent; sepals slightly rounded, 4-6 mm long, rounded at apex, connated with each other and formed tubular-like; petals oblong, 3-5 mm long, obtuse at apex; lip with short claw, fan-shaped, 2-lobed, the lobes rectangular, denticulate on margin; column short, about 2 mm long.

China and Lyukyu. Taiwan, known from northern part of the island at the elevations of 500-1200 m, under forests, not common.

地生蘭、塊根甚長，有節，肉質，略呈扁平，長1.5-2 cm，寬5-7 mm；根很少且不顯著。

葉2-4枚，卵形或瀾卵形，長2-3.5 cm，寬1.5-2.5 cm，先端鈍而有尖突，基部心形，表面暗綠色，背面淡綠色。全緣或略呈波狀緣，肉質，近似革質，中肋及側脈都不顯著。

花3-5枚，甚小，白色，徑6-7 mm，總狀花序；花莖頂生，長8-14 cm，直立，有毛茸，暗紅色；鞘1-2枚，基生或生長於花莖中部，披針形，膜質，灰白色，長2.5-3 cm，先端銳尖，基部抱莖且呈筒形；苞片小，長橢圓形，長4-5 mm，先端鈍；花梗連同子房長7-9 mm，圓柱形

，暗紅色，密生毛茸；萼片略呈圓形，長4-6 mm，先端圓，各萼片互相連生而呈筒狀；花瓣長橢圓形，長3-5 mm，先端鈍；唇瓣具有短爪，扇形，2裂，裂片四方形，邊緣有鋸齒，蕊柱短，長約2 mm。

中國及琉球。台灣，生長於北部海拔約500-1200 m 山地，見於森林下，惟不甚常見。

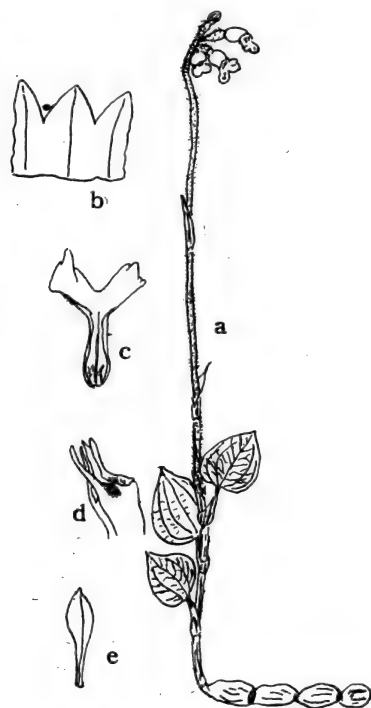


圖 (Fig) 31 中國指柱蘭 (*Cheirostylis chinensis*)

- a. 開花之植物 (Flowering plant body)
 b. 萼片 (Sepals) c. 唇瓣 (Lip)
 d. 蕊柱 (Column) e. 花瓣 (petal)

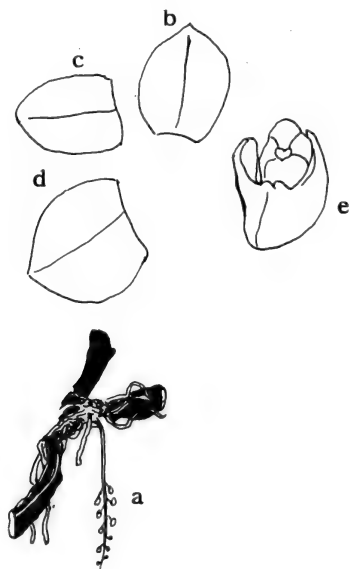
32. 梅蘭 (*Chiloschista segawai* (Masamune) Ying)

Epiphytes; roots elongate, 30-40 cm long, 0.8-1.1 mm across, glabrous; pseudobulbs absent; stemless.

Leaf none.

Flowers 8-14, small, 4-6 mm in diameter, bright yellow racemose; scentless; scape produced from the roots, pendulous, 5-10 cm long, pubescent, green; bracts minute, membranous, triangular, cauduous, 1-2 mm long, acute at apex; the pedicels with ovaries 2-2.5 mm long, glabrous or slightly hirsute: sepals oblong, 3-3.5 mm long, about 2.5 mm wide, obtuse at apex, the lateral ones strongly oblique at base; petals oblong, 3-4 mm long, 2.5-3 mm wide, obtuse at apex; lip 3-lobed, concave, spurred; spur conical, 4-5 mm long, the lateral lobes oblong-rounded, obtuse at apex, median lobe short; obtuse at apex; column narrowed at base, about 1.5 mm long.

Endemic, known from the central part of the island at the elevations of 700-1000 m in evergreen broad-leaved forests, not common.



圖(Fig)32 梅蘭 (*Chiloschista segawai*)

- a. 植物體 (Plant body) b. 後萼片 (Dorsal sepal)
 c. 花瓣 (Petal) d. 側萼片 (Lateral sepal)
 e. 唇瓣 (Lip)

着生蘭，根甚長，長30-40 cm，徑0.8-1.1 mm，光滑，無假球莖，無莖。

無葉。

花8-14枚，較小，徑4-6 mm，黃白色或呈鮮黃色，總狀花序，無香味；花莖抽自於根叢，下垂，長5-10 cm，有毛茸，綠色；苞片小，膜質，三角形，早落，長1-2 mm，先端銳尖，花梗連同子房長2-2.5 mm，光滑或略有毛茸；萼片長橢圓形，長3-3.5 mm，寬約2.5 mm，先端鈍，側裂片基部甚歪；花瓣長橢圓形，長3-4 mm，寬2.5-3 mm，先端鈍，唇瓣3裂，凸出，有距，距長4-5 mm，圓柱形，側裂片長橢圓狀圓形，先端鈍，中裂片短，先端鈍；蕊柱基部窄，長約1.5 mm。

固有，生長於本省中海拔約700-1000公尺的山地，僅見於中部，多生長於常綠闊葉林內，不常見。

33. 綠花梅蘭 (*Chiloschista segawai* (Masamune) Ying var. *taiwaniana* Ying)

Chiloschista segawai (Masamune) Ying var. *taiwaniana* Ying, var. nov.

A typo flores minoribus, viridi-ablus differt.

The variety differs from the typical phase by having small and pale flowers and concave lateral lobe of lip.

Habitat. : Nantou Hsien, Hosheh; Leg. S. S. Ying 2430 (Type, NTUF.).

本變種跟種的不同點在於花較小，而且是花是淡綠色，唇瓣的側萼片較凸出。

固有，生長於本省中部中海拔約700-900 m山地，常着生於愛玉子的藤上，甚稀少。

34. 台灣金唇蘭 (*Chrysoglossum formosanum* Blume)

Chrysoglossum formosanum Hayata in Journ. Col. Sci. Univ. Tokyo 30(1); 318 (1911), (Mat. Fl. Form.); Ying in Chinese Flow. (8); 58, pl. 1 (1974).

Terrestrials; rhizomes creeping; pseudobulbs somewhat closely approximate, cylindrical, 4-6 cm long, 1.5-2.5 cm across,

whitish green, fleshy.

Leaf solitary, on the top of the pseudobulb, oblong, 20-30 cm long, 6-7 cm wide, acute, acute or attenuate at base, petiolate, chartaceous, plicate, glabrous; petioles slender, 15-20 cm long, glabrous.

Flowers many, medium-sized, 7-12 mm in diameter, scentless, racemose; scape produced from the base of pseudobulb, 40-50 cm long, glabrous, 2-3 sheathes at base; the pedicels with ovaries 1-1.5 cm long; bracts ovate-lanceolate 1-2 cm long, membranous, cauduous; sepals subequal, narrowly lanceolate, yellowish green, with purple spots or short streaks, suberect and curved inward, 1-1.5 cm long, 3-4 mm wide, obtuse at apex, the dorsal one free; petals same as the sepals in shape and length, but somewhat narrower; lip cross-shaped, claw, with claw 7-9 mm long, about 7 mm wide, yellowish white with purple spots, the claw about 2 mm long, the lamina 3-lobed, the median lobe rounded, 2.5-3.6 mm long, curved inward, the lateral one oblong, 3-4 mm long, erect, obtuse at apex; column erect, slightly arched, 6-7 mm long.

Endemic at the elevations of 800-2100 m throughout the island, under the humid forests, commonly.

地生蘭、根莖匍匐，假球莖呈緊密排列，圓柱形，長4-6 cm，徑1.5-2.5 cm，淡綠色，肉質，光滑。

葉1枚，着生於假球莖先端，長橢圓形，長20-30 cm，寬6-7 cm，先端銳尖，基部漸狹或銳尖，有柄，紙質，有皺褶，光滑；葉柄細長，長15-20 cm，光滑。

花多數，中型，徑7-12 mm，無香味，總狀花序；花莖抽自於假球莖基部，長40-50 cm，光滑，基部有鞘2-3枚；花梗連同子房長1-1.5 cm；苞片卵狀披針形，長1-2 cm，膜質，早落；萼片近似整齊，狹披針形，黃綠色而有紫色條紋或斑點，近似直立或略向內彎曲，長1-1.5 cm，寬3-4 mm，先端鈍，後萼片離生；花瓣與萼片同形同長，惟略狹；唇瓣十字形，有爪，連同爪長7-9 mm，寬約7 mm，黃白色而有紫色斑點，爪長約

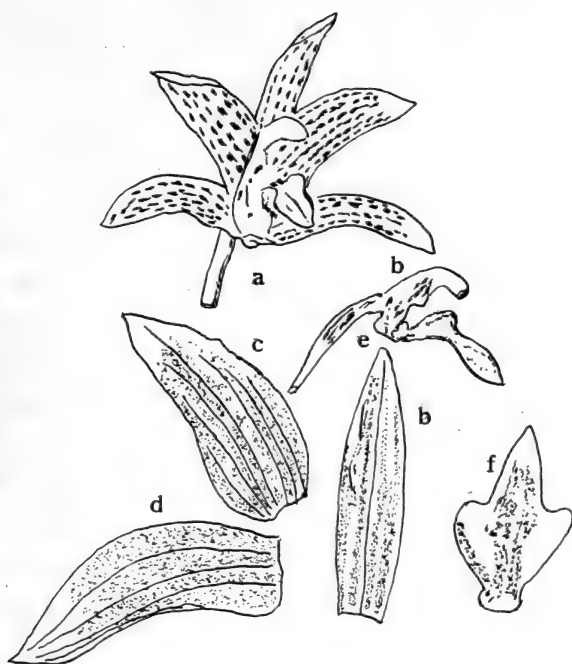


圖 (Fig) 33 金唇蘭 (*Chrysoglossum formosanum*)
 a. 花 (Flower) b. 後萼片 (Dorsal sepal)
 c. 花瓣 (Petal) d. 側萼片 (Lateral sepal)
 e. 蕊柱及唇瓣 (Column and lip)
 f. 唇瓣 (Lip)

2 mm, 唇瓣片 3 裂, 中裂片圓, 長 2.5-3.5 mm, 邊緣向內反捲, 側裂片長橢圓形, 長 3-4 mm, 直立, 先端鈍; 蕊柱直立、略呈拱形, 長 6-7 mm。

固有, 生長於全省中海拔約 800 - 2100 m 的山地, 見於森林下, 甚為普遍。

35. 台灣裂唇蘭 (*Coeloglossum nankotaizanensis* (Masamune) Ying)

Terrestrials; roots thickened, elongate; stem simple, erect.

15-30 cm long, glabrous, terete; sheathes 1-2, membranous, glabrous, amplexical, acuminate at apex.

Leaves 2-3, linear or linear-lanceolate, 7-10 cm long, 0.8-1.5 cm wide, shortly acute at apex, long decurrent and amplexical at base, entire, chartaceous, glabrous on both sides, lustrous green surface, midrib elevated beneath.

Flowers 10-15, small, 6-8 mm in diameter, racemose, purplish red, the scape 7-9 cm long, somewhat purplish red, erect, glabrous; bracts leaf-like, lanceolate, 2-2.5 cm long, 2-3 mm wide, acuminate at apex, contracted at base, glabrous on both sides; the pedicels with ovaries 7-8 mm long, glabrous; sepals equal, ovate-lanceolate, 6-7 mm long, 2-3 mm wide, acute at apex, contracted at base, entire, glabrous, membranous, 4-nerved; petals linear, 4-5 mm long, 0.6-1 mm wide, 1-nerved; lip purplish red but with a white streak in the middle, glabrous, membranous, 6-7 mm long, 2-3 mm wide, cuneate in outline, 3-lobed at apex, the median lobe minute, the lateral lobes triangular 2-2.5 mm long; spur cylindrical, 2-2.5 mm long.

Endemic, known from northern and central parts of the island at the elevations of 3700-3800 m, moist places, not common.

地生蘭、根粗厚、甚長。莖單生、直立，長15-30 cm，光滑、圓柱形。鞘1-2枚，膜質，抱莖，先端銳尖。

葉2-3枚，線形或線狀披針形，長7-10 cm，寬0.8-1.5 cm，先端短銳尖，基部漸窄延伸而抱莖，全緣，紙質，兩面均光澤，表面有光澤綠色，中肋於背面隆起。

花10-15枚，較小，徑6-8 mm，總狀花序，紫紅色；花莖長7-9 cm，綠色或略帶暗紅色，直立、光滑；苞片葉狀，披針形，長2-2.5 cm，寬2-3 mm，先端漸尖，基部緊縮，表裏兩面均光滑；花梗連同子房長7-8 mm，光滑；萼片整齊，卵狀披針形，長6-7 mm，寬2-3 mm，先端銳尖，基部緊縮、全緣、光滑、膜質，脈4條；花瓣線形，長4-5 mm，寬0.6-1 mm，脈1條；唇瓣暗紅色而在中間有白色條紋，光滑，膜質



圖 (Fig) 34 台灣裂唇蘭 (*Coeloglossum nankotaizanensis*)

a. 植物體 (Flowering plant) b. 花 (Flower)

c. 後萼片 (Dorsal sepal) d. 花瓣 (Petal)

e. 側萼片 (Lateral sepal) f. 唇瓣 (Lip)

，長 6-7 mm，寬 2-3 mm，外形略呈楔形，先端 3 裂，中裂片甚小，側裂片三角形，長 2-2.5 mm，距圓柱形，長 2-2.5 mm。

固有，生長於北部及中部區高海拔約 3700 - 3800 m，見於土壤深厚潮濕的林緣，較爲少見。

COLLABIOPSIS Ying, **gen. nov.**

Terrestris; rhizomate longe repente, non pseudobulb. Folia secus rhizomata solitaria, ovata vel elliptica. Scapus e apice rhizomatis assurgens gracilis simplex, glaber, basi vaginatus. Flores subpatentes in apice scapo laxe racemosi; sepalum subaequalia, liberum; petala sepalis postico similia, libera, labellum 3-lobatum, clacaratum, basi unguiculatum, lobis lateralibus auriculatis, lobis intermedio lateralibus multo majore antice truncate rotundato apice obscure mucronato; columna erecta, anthera rotundata apice obscure mucronato columna erecta, anthera rotunda, breviora; pollinia 2.

Endemic, two or more species in Taiwan.

Typus: *Coallabiopsis formosanum* (Hayata) Ying.

Collabiopsis formosanum is combined from *Collabium formosanum* Hayata, the genus *Collabium* is listed as a synonym of *Chrysoglossum* now, for these two genera so much similar. On the study of orchids of Taiwan, I realize that *Collabium formosanum* is so characterize, I cannot list under any genera of the orchids. Here I propose a new name of genus in stead of the old name.

36. 台灣假兜蘭 (*Collabiopsis formosanum*(Hayata) Ying, **comb. nov.)**

Collabium formosanum Hayates in Mat. Fl. Form. 319 (1911).

Terrestrials; rhizomes elongate, 9-20 cm long, internodes about 4 cm long, creeping; roots filiform, short, 2-3 cm long.

Leaf solitary, produced from the rhizome, ovate, 8-11 cm long, 4-5 cm wide, acute at apex, abruptly contracted and slightly cordate at base petiolated, chartaceous, subentire or

wavy on margin, many-nerved; the petioles about 1.5-2 cm long, sheathing at base.

Flowers several, yellowish green with purplish red tinged, 1.8-2 cm long, racemose; the scape produced from the rhizome, erect, 20-28 cm long, slender, simple, sheathing at base; bracts linear, 5-6 mm long, membranous; the pedicels with ovaries 5-7 mm long, glabrous; sepals equal, linear-spathulate, 15-20 mm long, 2-3 mm wide, acute at apex, the lateral ones adnate to the column and forming a 5-6 mm long mentum, spurred; the spur about 5-7 mm long; petals same as the sepals in shape and size; lip obovate, 1.5-1.8 cm long, short clawed at base, minutely serrulate at apex, 3-lobed, the lateral lobes oblong, 4-4.5 mm long, about 3 mm wide; the median lobe rounded, 5-6 mm long, lacerate-serrulate on margin; column erect, about 1 cm long, 1 mm wide.

Endemic, known from the northern and central parts of the island at the elevations of 1000-1800 m, under evergreen forests.

地生蘭，根莖甚長，長9-20 cm，肉質，節與節的距離約4 cm，匍匐，根線形，甚短，長2-3公分。

葉單一，抽自於根莖，卵形，長8-11 cm，寬4-5 cm，先端銳尖，基部緊縮而略呈心形，具有葉柄、紙質，近似全緣或略呈波狀緣，脈多數；葉柄長1.5-2 cm，基部有鞘。

花數枚，黃白色，先端有紫紅色暈，長1.8-2 cm，總狀花序，花莖抽自於根莖，直立，長20-28 cm，細長、單立、基部有鞘；苞片線形，長5-6 mm，膜質，花梗連同子房長5-7 mm，光滑；萼片整齊，線狀匙形，長15-20 mm，寬2-3 mm，先端銳尖，側萼片與蕊柱相連且形成一長5-6 mm的頰，有距，距長5-7 mm；花瓣與萼片同形狀與大小；唇瓣倒卵形，長1.5-1.8 cm，基部有短爪，先端微鋸齒，3裂，側裂片長橢圓形，長4-4.5 mm，寬約3 mm，中裂片圓形，長5-6 mm，邊緣有細裂狀鋸齒；蕊柱長約1 cm，寬1 mm。

固有，生長於台灣北部及中部的山地，常於1000-1800 m山地的常綠林下。

37. 台灣馬鞭蘭 (*Cremastra appendiculata* var. *triloba*

(Hayata) Ying)

Terrestrials; pseudobulbs ovoid, somewhat closely approximate, 1.5-2.5 cm in diameter, purple or purplish green; sheathes 2, membranous; stemless.

Leaf solitary, very rarely two, long petiolate, terminal on the pseudobulb, lanceolate-oblong or elliptic-lanceolate, 25-35 cm long, 5-6 cm wide, chartaceous, long-acuminate, narrowed to the petiole at base, entire or slightly wavy on margin, dark green with white or pale yellowish maculate surface, pale green beneath, 3-5-nerved raised on back; the petioles 10-15 cm long, glabrous.

Flowers 15-30, rose to pink or white with pink tinged, nodding, racemose, not much opened, tubular-like; scape from the base of pseudobulb, erect, 25-45 cm long, terete; sheathes 2-3, lax, membranous; bracts lanceolate, 7-8 mm long, acute at apex, the pedicels with ovaries 1.3-1.7 cm long, glabrous; sepals linear-lanceolate, 3-3.5 cm long, about 4 mm wide, lax brightly red spots within, acute at apex; petals oblanceolate, 3-3.2 cm long, about 3 mm wide, acute; lip linear, 3-3.5 cm long, somewhat broadened at base, 3-lobed, the median lobe elliptic or oblong, 8-9 mm long, 3-4 mm wide, brightly red spots within, acuminate and slightly recurved at tip, the lateral lobes linear, with short red streaks within, small, erect; column linear, 2.5-3 cm long.

The species in India, Nepal, Sikkim, Bhutan, w.&s. China. the variety endemic to Taiwan, at elevations of 1000-2100 m in the whole island, under the evergreen forests, common.

The variety differs from the species mainly the pink or white with pink tinged flowers and the petals and median lobe of lip with brightly red spots within.

地生蘭，假球莖卵形，略呈緊密狀排列或單立，徑1.5-2.5 cm，紫紅色或紫紅綠色，鞘2枚，膜質；無莖。

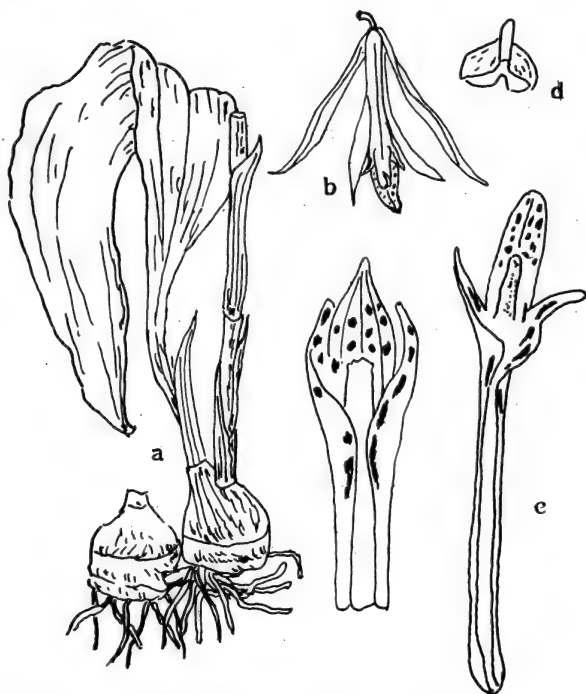


圖 (Fig) 35 台灣馬鞭蘭 (*Cremastra appendiculata* var *triloba*)

- a. 植物體 (Plant body) b. 花 (Flower)
c. 唇瓣 (Lip) d. 花藥 (Pollinia)

葉一枚，極少數為兩枚者，有長葉柄，着生於假球莖的先端，披針狀長橢圓形或橢圓狀披針形，長 25-35 cm，寬 5-6 cm，紙質，先端長漸尖形，基部漸窄而延伸至葉柄，全緣或略呈波狀緣，表面暗綠色而有白色或淡黃色斑點，背面淡綠色，脈 3-5 條隆起於葉背；葉柄長 10-15 cm，光滑。

花 15-30 枚，薔薇色或白色帶有粉紅色暈，下垂，總狀花序，不十分開張，略呈管狀；花莖抽自假球莖基部，直立，長 25-45 cm，圓柱形；鞘 2-3，疏生、膜質；苞片披針形，長 7-8 mm，先端銳尖，花梗連同子房長 1.2-1.7 cm，光滑；萼片線狀披針形，長 3-3.5 cm，寬 4 mm，先端銳尖，基部漸窄；側萼片基部略歪，開張；花瓣倒披針形，長 3-3.5 cm，寬約 3 mm，先端銳尖，內面具有稀疏鮮紅色斑點；唇瓣線狀披針形，白色

長 3-8.5 cm，基部略寬，3 裂，中裂片橢圓形或長橢圓形，長 8-9 mm，寬 3-4 mm，有鮮紅色斑點，先端漸尖，微反捲，側裂片線形，細長，有鮮紅色條紋、直立、較小；蕊柱線形，長 2.5-3 cm，白色而有紅色暈。

種見於印度、尼泊爾、錫金、不丹及中國大陸，變種僅見於台灣，生長於海拔 1000 - 2100 m 的山地，見於常綠闊葉林下，較普遍。

長久以來，台灣馬鞭蘭屬的植物，都認定為早田文藏氏所發表的 *C. triloba* Hayata。近年來，則被認為台灣這一種，與印度、中國大陸及喜馬拉雅山所產者為同一種。惟筆者認這兩種是有區別的，如花的顏色，花瓣及唇瓣的中裂片具有鮮紅色斑點，因此，筆者認為應列為印度、中國大陸及喜馬拉雅山麓的變種較為適合。

38. 紅唇隱柱蘭 (*Cryptostylis arachnites* (Blume) Hassk.)

Terrestrials; roots thickened, 4-6 cm long, 5-7 mm in diameter, fleshy, lightly yellow or yellowish brown; pseudobulb absent or inconspicuous; stemless.

Leaf solitary or two, long-petiolated, elliptic-ovate or elliptic, 8-12 cm long, 4-6 cm wide, subcoriaceous or thickened chartaceous, acuminate, rounded at base, midrib impressed surface and raised on back, lustrous green surface, entire, glabrous; the petioles 4-6 cm long, glabrous, green, scattered with brown spots.

Flowers 8-16, medium-sized, 1.5-2 cm in diameter, racemose; scape produced from the base of the leaves, erect, 7-9 cm long, slender, green; bracts lanceolate, 8-10 mm long, acuminate at apex, membranous, glabrous, green; the pedicels with ovaries 7-9 mm long, glabrous; sepals equal, linear, yellowish green or pale green, 12-15 mm long, 1.5-2 mm wide, acuminate at apex, slightly plicate on margin; petals linear, same as the sepals in color, 8-10 mm long, about 1 mm wide, acute at apex, somewhat plicate; lip yellowish green without, orange red with brightly red spots within, oblong ovate or lanceolate ovate, 1.3-1.8 cm long, 5-7 mm wide, acuminate at apex, rounded and shortly sac-

like at base, densely pubescent upward; column short, 1 - 1.5 mm long.

India, Ceylan, Malaya peninsula, Java and Borneo. Taiwan, known from the northern part of Taiwan, under the evergreen forests at the elevations of 600-1300 m. rather common.

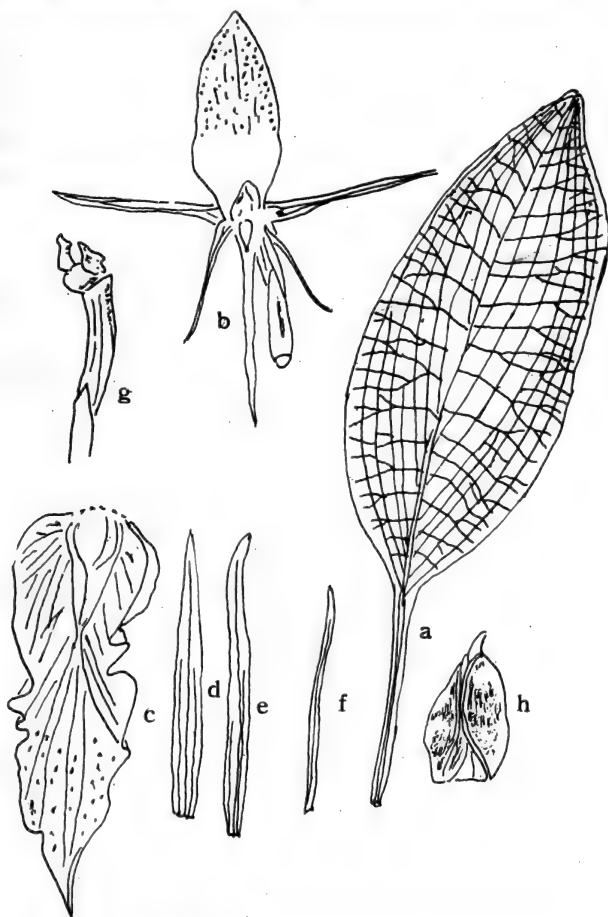


圖 (Fig) 36 紅唇隱柱蘭 (*Cryptostylis arachnites*)

- a. 葉 (Leaf) b. 花 (Flower)
 c. 唇瓣 (Lip) d. 後萼片 (Dorsal sepal)
 e. 側萼片 (Lateral sepal) f. 花瓣 (Petal)
 g. 蕊柱 (Column) h. 花藥 (Anther)

地生蘭、根粗厚，長4-6 cm，徑5-7 mm，肉質，淡黃色或黃褐色；無假球莖或不顯著，無莖。

葉單一或兩枚，具有長柄，橢圓狀卵形或橢圓形，長8-12 cm，寬4-6 cm，近似革質或厚紙質，先端漸尖，基部圓或鈍，中肋於表面凹下而在背面隆起，表面有光澤綠色，有時亦有為暗綠色者，背面淡綠色，全緣、光滑；葉柄長4-5 cm，光滑，綠色，散生有褐色斑點。

花8-16枚，中型，徑1.5-2 cm，總狀花序；花莖抽自於葉基，直立，長7-9 cm，細長、綠色而有褐色斑點；苞片披針形，長8-10 mm，先端漸尖形、膜質、光滑；花梗連同子房長7-9 mm，光滑；萼片整齊，線形，黃綠色或淡綠色，長12-15 mm，寬1.5-2 mm，先端漸尖，邊緣略反捲；花瓣線形，與萼片同色，長8-10 mm，寬約1 mm，先端銳尖，略反捲，唇瓣外面黃綠色，內面橘紅色而有鮮紅色斑點，長橢圓狀卵形或披針狀卵形，長1.3-1.8 cm，寬5-7 mm，先端漸尖，基部圓且呈短囊狀，上面密生毛茸，蕊柱長1-1.5 mm。

印度、錫蘭，馬來半島、印尼及婆羅州；台灣，生長於海拔600-1500 m之山地，常見於常綠林下，較為常見。

39. 綠斑隱柱蘭 (*Cryptostylis arachnites* var. *philippinensis* (Schltr.) Ying

Cryptostylis arachnites (Blume) Hassk. var. *philippinensis* (Schltr.) Ying, **comb. nov.**

Cryptostylis philippinensis Schltr. in Engl. Bot. Jahrb. **58**: 54 (1922).

Cryptostylis taiwaniana Masamune in Trans. Nat. Hist. Soc. Form. **23**: 208 (1933).

Terrestrials; rhizome fleshy, creeping under the surface, with several very hairy thickened roots; pseudobulb absent.

Leaves solitary or two, from the rhizome, ovate-elliptic, 7-16 cm long, 4-6 cm wide, acuminate at apex, obtuse and somewhat oblique at base, chartaceous, slightly wavy on margin, lustrous green with irregular dark green spots surface, pale green beneath; the petioles 7-9 cm long, usually with many small purplish brown spots.

Flowers 6-9, medium-sized, 1.5-2 cm in diameter, racemose; scape produced from base of leaves, erect, 15-20 cm long, scattered with purple brown spots; sheathes 2-3, lanceolate, 2-2.5 cm long, acute at apex, amplexical at base, lightly brown; bracts ovate, 1.2-1.6 cm long, about 5 mm wide, acute at apex; sepals equal, linear, lightly red, 1.5-2 cm long, about 1 mm wide, obtuse at apex lip orange red, with brightly red spots within, 1.7-1.9 cm long, 5-7 mm wide, acuminate at apex, rounded and shortly sac-like at base, densely brownish red hirsute within; column short, about 1 mm long.

The Philippines. Taiwan, known from southern tip and southeastern parts of the island, under the forests.

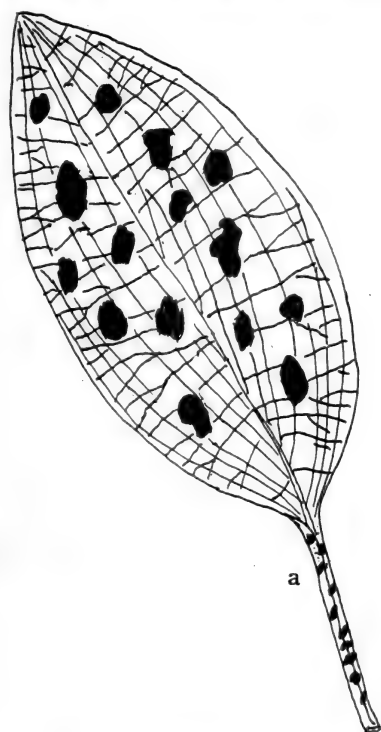


圖 (Fig) 37 綠斑隱柱蘭 (*Cryptostylis arachnites* var *philippinensis*) a. 葉 (Leaf)

地生蘭，根莖肉質；根粗厚，有毛茸，無假球莖。

葉單一或二枚，從根莖長出，卵狀橢圓形，長7-16 cm，寬4-6 cm，先端漸尖，基部鈍而略歪，紙質，邊緣略呈波浪狀，表面呈有光澤綠色，散生有大塊深綠色的斑點，背面淡綠色；葉柄長7-9 cm，常散生有許多小而紫褐色的斑點。

花6-9枚，中型，徑1.5-2 cm，總狀花序；花莖抽自於葉基，直立，長15-20 cm，散生有紫褐色斑點；鞘2-3枚，披針形，長2-2.5 cm，先端銳尖，基部抱莖，淡褐色；苞片卵形，長1.2-1.6 cm，寬約5 mm，先端銳尖；萼片整齊，線形，淡紅色，長1.5-2 cm，寬約1 mm，先端鈍；唇瓣橘紅色，內面散生有鮮紅色斑點，長1.7-1.9 cm，寬5-7 mm，先端漸尖，基部圓而呈短囊狀，內面密生有紅褐色毛茸，蕊柱短，長約1 mm。

菲律賓。台灣，生長於最南端的恒春半島及東南部山區，森林下。

40. 鳳蘭 (*Cymbidium dayanum* Reichb. f.)

Epiphytes; pseudobulb inconspicuous, enclosed by the leaf-sheath.

Leaves narrowly linear, 40-60 cm long, 6-9 mm wide, articulate, acuminate, attenuate at base, coriaceous or nearly so.

Flowers large, scentless, 6-13, racemose; scape produced from the lateral of pseudobulb, pendulous, 10-25 cm long; the pedicels with ovaries 2-2.5 cm long; bracts lanceolate, 5-6 mm long; sepals and petals narrowly lanceolate, acute, white, with a dark violet, more or less effluent median streak; sepals 2.5-3 cm long; petals curved forward, slightly shorter than the sepals; lip obovate, about 1 cm long, 3-lobed, basally golden yellow, on the inner sides with 2 longitudinal, white, very short-hairy keels, lateral lobes shortly triangular, pale yellow with dark violet veins and margins; median lobe much longer, recurved, acuminate, with a yellowish field; column blackish red-purple, glabrous, about 1 cm long, with a sulphur-yellow anther.

Fruit obovate-elliptic, large, 4-6-angled, 3-6 cm long, 3-4 cm in diameter.

India, Sikkim, Malay peninsula, Sumatra, Celebes, the Philippines and southern Japan. Taiwan, at lower and medium altitudes up to 1500 m throughout the island, commonly.

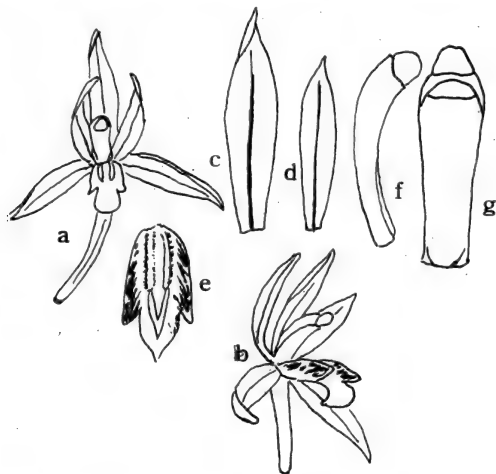


圖 (Fig) 38 鳳蘭 (*Cymbidium cayanum*)

- | | |
|------------------|------------------|
| a. 花 (Flower) | b. 花 (Flower) |
| c. 萼片 (Sepal) | d. 花瓣 (Petal) |
| e. 唇瓣 (Lip) | f. 蕊柱 (Column) |
| g. 花柱 (Column) | |

着生蘭，假球莖不顯著，隱藏於葉鞘中。

葉狹線形，長40-60 cm，寬6-9 mm，具有關節，先端漸尖形，基部漸窄而延伸至葉鞘，革質或近似革質。

花較大，無香味，6-13枚，總狀花序；花莖抽自於假球莖之側，下垂，長10-25 cm；花梗連同子房長2-2.5 cm；苞片披針形，長5-6 mm，萼片及花瓣均為狹披針形，先端銳尖，白色而在中間有一條深紅色的條紋；萼片長2.5-3 cm，花瓣先端捲曲，較萼片略短；唇瓣倒卵形，長約1 cm，3裂，基部呈金黃色，內面有2縱條白色有短毛的龍骨突起；側裂片短三角形，淡黃色，具有暗紅色條紋及邊緣，中裂片甚長，反捲，暗紅色而中間

呈黃色；蕊柱黑紫紅色，光滑，長約1 cm，花藥猩黃色。

果呈倒卵狀橢圓形，較大，4-6稜，長3-5 cm，徑3-4 cm。

印度、錫金、馬來半島、蘇門答臘、西里伯斯、菲律賓及日本南部。台灣，生長於全島1500 m以下常綠闊葉林中，着生於樹幹上，較為常見。

41. 台灣春蘭 (*Cymbidium formosanum* Hayata)

Terrestrials; pseudobulb inconspicuous, usually hidden by the leaf-sheathes; stemless.

Leaves 4-5, fascicled, linear, 35-45 cm long, 2-6 mm wide, glabrous, acuminate, gradually attenuate at the base, coriaceous or nearly so, nerves 3, raised on back.

Flowers solitary, fragrant, large, showy, 5-6 cm in diameter; scape produced from the base, slender, 6-15 cm long, erect, glabrous; sheathes lax alternate on the scape; lanceolate, 5-6 cm long, 5-7 mm wide, acuminate at apex, glabrous; bracts same as the sheathes but somewhat smaller; the pedicels with ovaries 2-3 cm long, glabrous; sepals free, white, with 7-purple nerves within, subequal, lanceolate, 3.5-4.5 cm long, 8-10 mm wide, acute to acuminate, narrowly cuneate at base; petals free, oblong or oblong-elliptic, white, with 5-8 purple nerves, 2-3 cm long, about 1 cm wide, obtuse on both ends; lip oblong, obscurely 3-lobed, white, purple spots scattered within, 2-2.5 cm long, 5-7 mm wide, recurved in front, faintly undulate on margin, 2-keeled; column elongate, erect or nearly so, yellowish white with linear purple streaks within, 1-2 cm long, 3-4 mm wide.

Capsules clavate-cylindrical, 5-6 cm long, 2-2.5 cm across, 6-ribbed.

Endemic, under the forests from the elevations of 800-2000 m throughout the island.

地生蘭、假球莖不顯著，常隱藏於葉鞘中，無莖。

葉4-5枚，叢生，細線形，長35-45 cm，寬2-6 mm，光滑，先

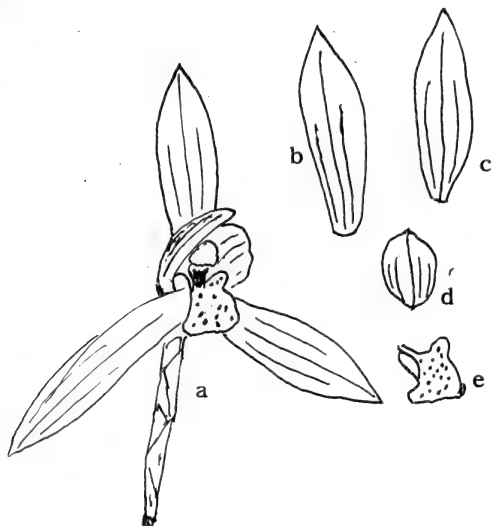


圖 (Fig) 39 台灣春蘭 (*Cymbidium formosanum*)
 a. 花姿 (Flower) b. 後萼片 (Dorsal sepal)
 c. 側萼片 (Lateral Sepal) d. 花瓣 (Petal)
 e. 唇瓣 (Lip)

端漸尖，基部漸窄延伸至葉鞘，革質或近似如此，葉脈3條，隆起於葉背，葉鞘較短。

花單生、有香味、較大、艷麗，徑5-6 cm；花莖抽自於葉叢基部、細長，長6-15 cm，直立、光滑；鞘稀疏地着生於花莖上，披針形，長5-6 cm，寬5-7 mm，先端漸尖，光滑；苞片與鞘同型但較小，花梗連同子房長2-3 cm，光滑；萼片離生，白色，內面具有7條暗紅色條紋（脈），近似整齊，披針形，長3.5-4.5 cm，寬8-10 mm，先端銳尖至漸尖，基部狹楔形；花瓣離生，長橢圓形或長橢圓狀橢圓形，白色，具有5-8條暗紅色脈，長2-3 cm，寬約1 cm，兩端均鈍；唇瓣長橢圓形，不明顯三裂，白色，內面散生有暗紅色斑點，長2-2.5 cm，寬5-7 mm，先端反捲，邊緣略呈反捲，波狀緣，具龍骨突起二條；蕊柱甚長，直立或略呈拱形，黃白色而有暗紅色條紋，長1-2 cm，寬3-4 mm。

蒴果棍棒狀圓柱形，長5-6 cm，徑2-2.5 cm，有6條稜線突起。固有，生長於全島800-2000 m的山地，常見於常綠闊葉林床上。

42. 細葉蕙蘭 (*Cymbidium gracillimum* Fukuyama)

Terrestrials; rhizome short; roots elongate, terete, glabrous, somewhat wrinkled, 20-30 cm long, 4-6 mm across; stemless.

Leaves 4-5, radical, narrowed linear, 40-60 cm long; 5-8 mm wide, acuminate at apex, rigid, chartaceous, fine serrulate, 3-nerved, raised on back.

Flower(s) one, very rarely two, large, fragrant, 5-6 cm in diameter; scape produced from the base, erect or ascending, 10-18 cm long, glabrous; sheathes 4-5, lanceolate, 5-6 cm long, 2-2.5 cm wide, acute, amplexical at base; bracts hyaline or nearly so, elongate-ob lanceolate, membranous, 4-5 cm long, 1-1.5 cm wide, acuminate at apex, the pedicels with ovaries 3.5-4.5 cm long, glabrous; sepals free, spreading, narrowly oblong-ligulate or lanceolate, greenish yellow, 5-7-purplish nerved without, 4.5-6 cm long, 1.1-1.5 cm wide, somewhat recurved on margin, acuminate, narrowed at base; petals free, erect, elliptic-ligulate, yellowish white, 3-5-purplish nerved within, 3.5-4 cm long, 1-1.3 cm wide, obtuse and maculated at apex; lip recurved and rounded ligulate in front, triangular backward, glabrous, undulate, 2.5-3.5 cm long, 7-9 mm wide, yellowish white with 3 purplish streaks in front; column elongate, suberect, glabrous, 1.4-1.6 cm long, 4-5 mm wide; anther terminal, rounded; pollinia. 4.

Endemic, known from the medium altitudes of 1200-2400 m throughout the island, under the thickets along the mountain ridges.

地生蘭；根莖短；根甚長，圓柱形，光滑，略帶有扭曲，長20-30 cm，徑4-6 mm，無莖。

葉4-5枚，根生，狹線形，長40-60 cm，寬5-8 mm，先端漸尖，硬，紙質，細鋸齒緣，脈3條隆起於背面。

花單生，少數亦有2枚呈總狀花序狀，大，有香味，徑5-6 cm；花莖

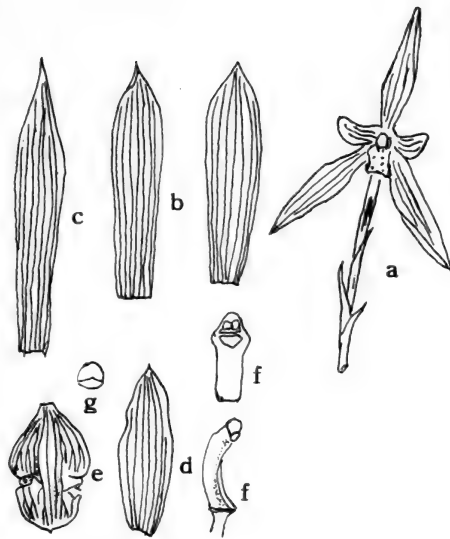


圖 (Fig) 40 細葉蕙蘭 (*Cymbidium gracillimum*)
 a. 花 (Flower) b. 側萼片 (Lateral sepal)
 c. 後萼片 (Dorsal sepal) d. 花瓣 (Petal)
 e. 唇瓣 (Lip) f. 蕊柱 (Column)
 g. 花粉塊 (Pollinia)

抽自於葉叢，直立，長 10-18 cm，光滑。鞘 4-5 枚，披針形，長 5-6 cm，寬 2-2.5 cm，先端銳尖，基部抱莖；苞片透明或近似如此，長倒披針形，膜質，長 4-5 cm，寬 1-1.5 cm，先端漸尖；花梗連同子房長 3.5-4.5 cm，光滑；萼片離生，擴展，狹長橢圓狀舌形或披針形、黃綠色，外面有紫紅色條紋 5-7 條，長 4.5-6 cm，寬 1-1.5 cm，邊緣略反捲，先端漸尖，基部漸窄；花瓣離生，直立，橢圓狀舌形，淡黃色，內面有暗紅色條紋 3-5 條，長 3.5-4 cm，寬 1-1.3 cm；先端鈍且呈尖突狀，唇瓣先端圓舌形，且呈反捲，基部略呈三角形，光滑、波狀緣，長 2.5-3.5 cm，寬 7-9 mm，黃色，先端有暗紅色條紋 3 條；蕊柱伸長，拱形，光滑，長 1.4-1.6 cm，寬 4-5 mm；花藥頂生，圓形，花粉塊 4 枚。

固有，常見於中海拔約 1200-2400 m 的山地，生長於常綠闊葉林下，尤以山稜線上附近林地為多。

43. 大屯素心蘭 (*Cymbidium gyokuchin* Makino var. *arrogans* (Hayata) Ying.)

Cymbidium gyokuchin Makino var. *arrogans* (Hayata) Ying, **comb. nov.**

Cymbidium arrogans Hayata, Icon. Pl. Form. 4:76 (1914) et 6:79, f. 12 (1917).

Terrestrials; roots elongate, 20-40 cm long, 2-2.5 mm in diameter, grayish white, flexuous; pseudobulbs closely approximate, usually hidden by leaf-sheath, inconspicuous; stemless.

Leaves 3-5, usually enclosed the pseudobulb, linear or linear-lanceolate, 30-45 cm long, 1-1.5 cm wide, acuminate at apex, attenuate at base, 3-nerved, prominently elevated beneath and slightly impressed surface.

Flowers 5-7, rather larger, pale yellow or whitish yellow, 3-4.5 cm in diameter, fragrant; scape produced from leaf-fascicle, erect, 20-35 cm long, sheathed; the sheaths basal, 2-3 cm long, light brown, membranous; bracts ovate-lanceolate, 1-1.5 cm long, about 2 mm wide, acute at apex; the pedicels with ovaries 1.5-2 cm long; sepals oblong, 3.5-4 cm long, about 8 mm wide, obtuse-acute at apex, more or less contracted at base, 5-nerved, the lateral ones somewhat narrower; petals ovate-oblong, 2-2.5 cm long, about 8 mm wide, obtuse at apex, cuneate-contracted at base, 5-nerved; lip ovate-oblong, 1.8-2 cm long, 1-1.2 cm wide, yellow, ovate-rounded, obscurely 3-lobed, villose, recurved in front, obtuse at apex; column semiterete, 1-1.5 cm long.

The variety endemic, known from northern and southern parts of the island at the elevations of 500-1000 m under the

forests, rather rare.

地生蘭、根甚長，長20-40 cm，徑2-2.5 mm，灰白色，彎曲；假球莖緊密排列，常隱藏於葉鞘內，不顯著；無莖。

葉3-5枚，常包被着假球莖、線形或線狀披針形，長30-45 cm，寬1-1.5 cm，先端漸尖，基部漸狹，脈3條於背面強列隆起，而於表面略凹入。

花5-7枚，較大，淡黃色或黃白色，徑3-4.5 cm，有香味；花莖抽自於葉叢、直立，長20-35 cm，細長，有鞘；鞘基生，長2-3 cm，淡褐色、膜質；苞片卵狀披針形，長1-1.5 cm，寬2 mm，先端銳尖；花梗連同子房長1.5-2 cm。萼片長橢圓形，長3.5-4 cm，寬約8 mm，先端鈍或銳尖，基部多少緊縮狀，脈5條，側萼片略狹；花瓣卵狀長橢圓形，長2-2.5 cm，寬約8 mm，先端鈍，基部楔形緊縮狀，脈5條；唇瓣卵狀長橢圓形，長1.8-2 cm，寬1-1.2 cm，黃色、卵狀圓形，不明顯3裂，有柔毛，前端反捲，先端鈍。蕊柱近似圓柱形，長1-1.5 cm。

固有變種，生長於北部（觀音山、金山及大屯山一帶）及南部（浸水營）海拔約500-1000 m處山地森林下，多已被人採擷栽培，現已極少能發現。

44. 寒蘭 (*Cymbidium kanran* Makino)

Terrestrials; rhizome short; stemless.

Leaves 4-5, tufted, linear or linear-lanceolate, 40-50 cm long, 6-18 mm wide, coriaceous, acuminate at apex, scabridulous on margin, shining and dark green surface, pale green beneath; midrib raised on back.

Flowers 5-20, rather large, 5-6 cm in diameter, racemose, fragrant, yellowish green with various color of lip; scape produced from the base of pseudobulb, 25-60 cm long, erect, slender, lax-sheathed; bracts lanceolate, membranous, 1.5-2 cm long, 2-3 mm wide, glabrous, green, acute at apex; the pedicels with ovaries 2-3 cm long, glabrous; sepals spreading, the dorsal one linear-lanceolate, lightly yellow or green, 3-4 cm long, 3-5 mm wide, more or less fleshy, acuminate at apex, somewhat recurved on margin, the lateral

ones falcate-lanceolate, same as the dorsal one in length; petals oblique ovate-lanceolate, 2.2-2.7 cm long, 5-7 mm wide, dark purple spots or streaks scattered on the inner side at base; lip tongue-like, fleshy, recurved at apex, 1.2-1.7 cm long, about 1 cm wide, yellowish white with reddish purple or other color spots, obscurely 3-lobed, glabrous, smooth, the lateral lobes small; column somewhat recurved, 10-14 mm long.

S. Korea, Japan and LYUKYU. Taiwan, at low to medium altitudes of 500-1700 m, under the evergreen forests.



圖 (Fig) 41 寒蘭 (*Cymbidium kanran*)

- | | |
|--------------------------|-----------------|
| a. 花序 (Inflorescence) | b. 花 (Flower) |
| c. 後萼片 (Dorsal sepal) | d. 花瓣 (Petal) |
| e. 側萼片 (Lateral sepal) | f. 唇瓣 (Lip) |
| g. 蕊柱 (Column) | |

地生蘭、根莖短，無莖、假球莖不顯著，隱藏於葉鞘內。

葉4-5枚，叢生，線形或線狀披針形，長40-50 cm，寬6-18 mm，革質，先端漸尖，表面具有光澤，略帶暗綠色，背面淡綠色，中肋於背面隆起。

花5-20枚，較大，徑5-6 cm，總狀花序，具有香味，黃綠色而有不同顏色的唇瓣；花莖抽自於假球莖基部，長25-60 cm，直立，細長，疏鞘；苞片披針形，長1.5-2 cm，寬2-3 mm，膜質、光滑、綠色、先端銳尖；花梗連同子房長2-3 cm，光滑；萼片擴展，後萼片線狀披針形，淡黃色或綠色，長3-4 cm，寬3-5 mm，多少呈肉質，先端銳尖，邊緣略反捲，側萼片鐮刀狀披針形，與後萼片同長；花瓣歪卵狀披針形，長2.2-2.7 cm，寬5-7 mm，內面基部有暗紅色的斑點或條紋；唇瓣舌形、肉質，先端反捲，長1.2-1.7 cm，寬約1 cm，淡黃色而有暗紅色或其他顏色斑點，不明顯三裂，光滑，側裂片甚小；蕊柱略反捲，長10-14 mm。

韓國南部、日本及琉球。台灣，生長於低至中海拔約500-1700公尺山地，常見於常綠闊葉林的林床。

45. 竹葉蘭 (*Cymbidium lancifolium* Hook. f.)

Terrestrials; rhizomes short, sparsely scaly; roots elongate, rather thick, puberulent.

Leaves 2-4, obovate-lanceolate, articulate, 15-25 cm long, 2-3 cm wide, coriaceous, acuminate, narrowed and decurrent to the petiole at the base, petiolated, dark green surface, glaucous beneath, scabridulous on the upper margins.

Flowers 3-5, rather large, fragrant, 3-4.5 cm in diameter, loose racemose; scāpe produced from the base of stem, 10-15 cm long, glabrous; bracts linear-lanceolate, 8-12 mm long, acuminate, membranaceous; the pedicels with ovaries 3-4 mm long; sepals equal, lanceolate, 2-3 cm long, 3-4 mm wide, greenish white, lateral sepals slightly reflexed; petals oblanceolate-oblong, 2.5-3 cm long, 7-8 mm wide, subacute, white with a brownish purple band; lip elliptic ovate, 1.2-2 cm long, about 1 cm wide, white, bro-

wnish purple spotted within, reflexed at top; column 1-1.5 cm long; pollinia triangular ovate.

Capsules erect, obovate-cylindric, 4-6 cm long, inclusive of short pedicels.

Java and Japan. Taiwan, known from low to medium altitudes of 700-1800 m under the forests, rather common.

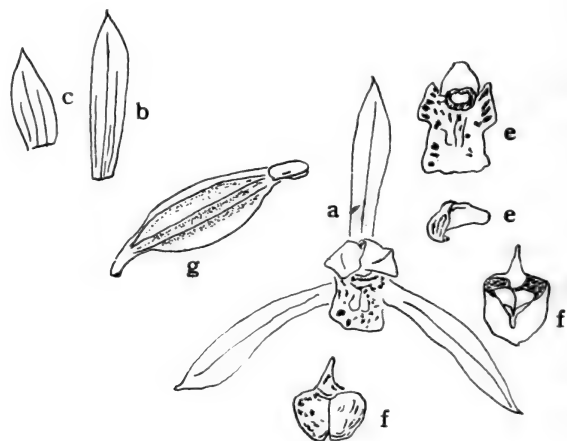


圖 (Fig) 42 竹葉蘭 (*Cymbidium lancifolium* Hook. f.)

- | | |
|------------------|-------------------|
| a. 花 (Flower) | b. 萼片 (Sepal) |
| c. 花瓣 (Petal) | d. 唇瓣 (Lip) |
| e. 花藥 (Anther) | f. 蒴果 (Capsule) |

地生蘭、根莖短、散生有鱗片；根甚長、粗厚、黃色，略有軟毛。

葉 2-3 枚，倒卵狀披針形，具有關節、革質、有葉柄，長 15-25 cm，寬 2-3 cm，先端漸尖，基部楔形或漸窄延伸至葉柄，表面暗綠色，背面淡綠色，葉緣上部略有稀疏鋸齒。

花 3-5 枚，較大，徑 3-4.5 cm，有濃郁香味，呈稀疏的總狀花序。花莖着生於基部，長 10-15 cm，光滑；苞片膜質，線狀披針形，長 8-12 mm，先端漸尖，花梗連同子房長 3-4 mm；萼片整齊，披針形，長 2-3

cm，寬3-4 mm，淡綠色，側萼片略反捲；花瓣倒披針狀長橢圓形，長2.5-3 cm，寬7-8 mm，先端近似銳尖，白色而具有一條暗紅色條紋；唇瓣橢圓狀卵形，長1.2-2 cm，寬約1 cm，白色而內面具有暗紅色斑點，先端反捲；蕊柱長1-1.5 cm；花粉塊三角狀卵形。

蒴果直立，倒卵狀圓柱形，長4-6 cm，具有較短的果柄。

爪哇及日本、台灣，生長於低至中海拔約700-1800 m山地，常見於常綠潤葉林床上，較為常見。

46. 四季蘭 (*Cymbidium oreophilum* Hayata)

Terrestrials; rhizome short; pseudobulbs inconspicuous, usually hidden by the leaf-sheathes, 1-1.5 cm in diameter; roots elongate, thickened, 8-20 cm long, 5-6 mm in diameter.

Leaves 3-5, linear or linear-lanceolate, 30-40 cm long, 7-8 mm wide, coriaceous or thickened chartaceous, acuminate at apex, gradually attenuate at the base, entire or minutely serrulate upward, 3-nerved elevated on back.

Flowers 5-9, medium-sized, 3-3.5 cm in diameter, light orange in color, racemose; the scape produced from the base of pseudobulb, 20-30 cm long, erect, glabrous; sheathed at the base; the sheathes 3-4, 5-6 cm long, acuminate at apex; bracts lanceolate, 3-3.5 cm long, about 4 mm wide, purple; the pedicels with ovaries 2-2.2 cm long, glabrous, slender; sepals linear or linear-lanceolate, 3-4 cm long, 4-5 mm wide, acuminate at apex, strongly contracted at the base, 5-nerved; petals lanceolate or ovate-lanceolate, 2.5-3 cm long, 6-8 mm wide, acuminate at apex, 5-nerved, entire; lip oblong-ovate, 2-2.5 cm long, 1-1.5 cm wide, scattered with purple spots, reflexed at apex, 2-lamellate entire or wavy on margin; column suberect, 1-1.5 cm long.

Endemic, known from the elevations of 500-1600 m throughout the island, under the evergreen forests, rather common.

地生蘭、根莖短；假球莖不顯著，常隱藏於葉鞘，徑1-1.5 cm；根甚長，厚，長8-20 cm，徑5-6 mm。

葉3-5枚，線形或線狀披針形，長30-40 cm，寬7-8 mm，革質或厚紙質，先端漸尖，基部漸窄而延伸至葉柄，全緣或葉上部有細鋸齒，脈3條隆起於背面。

花5-9枚、中型、徑3-3.5 cm，淡橘黃色，總狀花序；花莖長20-30 cm，直立，抽自於假球莖基部，光滑，基部有鞘；鞘3-4枚，長5-6 cm，先端漸尖形；苞片披針形，長3-3.5 cm，寬約4 mm，紫紅色；花梗連同子房長2-2.2 cm，光滑，細長；萼片線形或線狀披針形，長3-4 cm，寬4-5 mm，先端漸尖，基部呈緊縮狀，脈5條，深紅色；花瓣披針形或卵狀披針形，長2.5-3 cm，寬6-8 mm，先端漸尖，脈5條，全緣；唇瓣長橢圓狀卵形，長2-2.5 cm，寬1-1.5 cm，散佈有鮮紅色的斑點，先端反捲，內面有2條隆起脊，全緣或波狀緣；蕊柱近似直立，長1-1.5 cm。

固有，生長於全島中海拔約500-1600 m的山地，生長於常綠潤葉林床上，較為常見。

47. 小蕙蘭、金稜邊蘭 (*Cymbidium pumillum* Rolfe)

Epiphytes; roots elongate, 20-30 cm long; pseudobulbs ovoid, closely approximate, 2-2.5 cm in diameter, usually hidden by leaf-sheaths.

Leaves linear or linear-lanceolate, 30-45 cm long, 1-1.2 cm wide, acuminate at apex, attenuate at base, articulate, coriaceous, lustrous green surface, pale green beneath.

Flowers 6-10, light brownish or reddish brown, widely opened, 3-4 cm in diameter, racemose; scape produced from leaf-fascicled, erect, suberect or arch-like; bracts lanceolate, 4-5 mm long, acute at apex; the pedicels with ovaries 1.5-1.8 cm long, glabrous; sepals, linear-lanceolate, 1.6-1.8 cm long, about 3.5 mm wide, obtuse at apex, strongly contracted at base, 3-5-nerved; petals linear-oblong, 1.5-2 cm long, 4-5 mm wide, obtuse at apex, narrowed at base, 7-nerved, slightly recurved on margin; lip broadly obovate,

white, with bright red spots, 1.2-1.5 cm long, about 11 mm wide, slightly villose on surface, obtuse and slightly curved at tip, 3-lobed; the lateral lobes semi-oblong, about 1 cm long, 5 mm wide, rounded at apex; the median lobe slightly recurved, rounded, about 6 mm in diameter; column about 1.5 cm long, suberect, shortly villose on inner side.

China. Taiwan, known from medium altitudes of 1000-2100 m throughout the island, usually epiphytic on lumber or tree-trunks.

着生蘭，根甚長，長20-30 cm；假球莖卵形，緊密排列，徑2-2.5 cm，常隱藏葉鞘叢中。

葉線形或線狀披針形，長30-45 cm，寬1-1.2 cm，先端漸尖，基部漸窄，有關節、革質，表面呈有光澤綠色，背面淡綠色。

花6-10枚，淡褐色或紅褐色，開張，徑3-4 cm，總狀花序；花莖抽自於葉叢、直立、近似直立或拱形；苞片披針形，長4-5 mm，先端銳尖；花梗連同子房長1.5-1.8 cm，光滑；萼片線狀披針形，長1.6-1.8 cm，寬約3.5 mm，先端鈍，基部緊縮，脈3-5條；花瓣線狀長橢圓形，長1.5-2 cm，寬4-5 mm，先端鈍，基部窄，脈7條，邊緣略反捲；唇瓣闊倒卵形，白色而有鮮紅色的斑塊，長1.2-1.5 cm，寬約11 mm，表面有柔毛、先端鈍而略反捲，3裂，側裂片半長橢圓形，長約1 cm，寬5 mm，先端圓；中裂片先端反捲、圓形，徑約6 mm，蕊柱長約1.5 cm，近似直立，內面有短柔毛。

中國、台灣，生長於全島中海拔約1000-2100 m的山地，着生於腐木或樹幹上，較常見。

48. 報歲蘭 (*Cymbidium sinense* Willd.)

Terrestrials; pseudobulbs clustered, broadly ovoid, more or less compressed, obscure and usually hidden by the long persistent leaf-sheathes, 3-4 cm long, 2-2.5 cm across; stemless.

Leaves 2-4, basal, clustered, lanceolate or linear-lanceolate, 35-60 cm long, 1.5-2.8 cm wide, acuminate, cucinate at base, shining and dark green surface, pale green

beneath, coriaceous, 1-3-nerved, elevated beneath, entire and slightly reflexed on margin.

Flowers rather large, 4-8, 2-3 cm in diameter, fragrant, racemose; scape produced from the base of pseudobulb, 40-70 cm long, glabrous, green; sheathes 2-4, basal, brown, lanceolate, 4-5 cm long, acuminate at apex; bracts lanceolate, 1.2-1.8 cm long, glabrous; pedicels with ovaries 2.5 - 3.5 cm long, sepals spreading, linear-lanceolate, 2.5 - 3.5 mm long, 4-6 mm wide, acuminate, contracted at base, yellowish or brownish green with 7 brownish streaks; petals ovate-lanceolate, 2-2.5 cm long, 5-7 mm wide, yellowish green with 5-brownish streaks; lip fleshy, ligulate, 1.5-2 cm long, obscured 3-lobed, yellowish white with brightly red spots, reflexed in front, some cross dark streaks at base, 2-keeled; column 1.5-1.8 cm long, 3-3.5 mm wide; pollinia 2, yellow.

China. Taiwan, under the thickets, common on the humus soils from the elevations of 500-1000 m throughout the island.

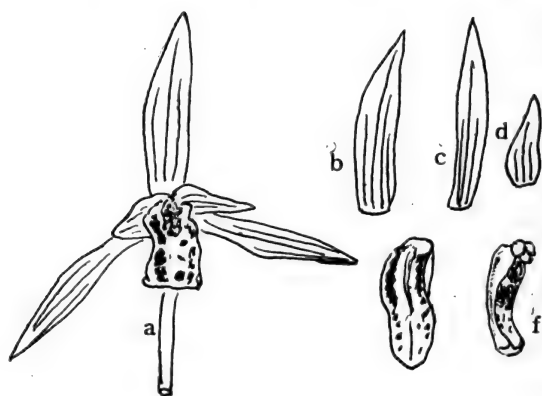


圖 (Fig) 43 報歲蘭 (*Cymbidium sinense*)

- a. 花 (Flower) b. 後萼片 (Dorsal sepal)
c. 側萼片 (Lateral sepal) d. 花瓣 (Petal)
e. 唇瓣 (Lip) f. 蕊柱 (Column)

地生蘭、假球莖叢生、橢圓形，多少呈扁球形，不顯著且常隱藏於殘存的葉鞘中，長3-4 cm，寬2-2.5 cm，無莖。

葉2-4枚，基生、叢生、披針形或線狀披針形，長35-60 cm，寬1.5-2.8 cm，先端漸尖，基部楔形，表面呈有光澤的暗綠色，背面淡綠色，革質，脈1-3條，隆起於背面，全緣或邊緣略反捲。

花略大，4-8枚，徑2-3 cm，有香味，總狀花序；花莖長40-70 cm，抽自於假球莖基部光滑，綠色；鞘2-4枚，基生、褐色、披針形，長1.2-1.8 cm，光滑；花梗連同子房長2.5-3.5 cm；萼片擴展，線狀披針形，長2.5-3.5 cm，寬4-6 mm，先端漸尖，基部緊縮狀，黃褐綠色而帶有褐色細條紋7條；花瓣卵狀披針形，長2-2.5 cm，寬5-7 mm，黃綠色而有褐色細條紋5條；唇瓣肉質、舌形，長1.5-2 cm，不明顯3裂，淡黃色而有鮮紅色斑點，先端反捲，基部有若干十字形短條紋，有2龍骨隆起；蕊柱長1.5-1.8 cm，寬3-3.5 mm；花粉塊2枚，黃色。

中國、台灣，常見於叢林下，通常生長於海拔500-1000 m 多腐植質的土壤內。

49. 白花報歲蘭 (*Cymbidium sinense* Willd var. *albo-juncundissimum* (Hayata) Masamune)

The variety differ from the typical phase by small yellowish green or green flowers and lip pale yellow not with red spots.

Endemic, known from northern and central parts of the island, not common.

與種不同點是花較小，呈綠白色。唇瓣呈淡黃色，無紅色斑點。

分佈：固有種。生長於台灣北部及中部山地，較為稀少，甚為名貴。

50. 菅草蘭 (*Cymbidium tortisepalum* Fukuyama)

Terrestrials; roots elongate, 20-30 cm long, 2-4 mm in diameter; pseudobulbs inconspicuous, ovoid, 1-1.5 cm in diameter, hidden by the leaf-sheaths; stemless.

Leaves 4-7, narrowly linear, 60-80 cm long, 8-12 mm wide, acuminate, gradually attenuate at base, thinly coriaceous, erect or suberect, minutely serrulate on margin, lu-

strous green surface, 3-nerved, elevated on beneath.

Flowers 3-5, brownish green, about 5 cm in diameter, fragrant, racemose; scape produced from the base of pseudobulb, 30-60 cm long, erect, glabrous, sheathed at base, the sheaths 4-5 cm long, membranous, acuminate, tubular from medium to the base; bracts linear-oblong, 3-4 cm long, 6-6.5 mm wide, membranous, glabrous, acuminate at apex; the pedicles with ovaries 3-3.5 cm long, glabrous; sepals oblong, 4-4.5 cm long, about 8-10 mm wide, membranous, acuminate and slightly twist at apex, narrowed at the base, 7-nerved; petals elliptic, 3-3.2 cm long, 1-1.1 cm wide, acute, contracted at base, red spots or streaks within at the base, slightly wavy on margin, 7-9-nerved; lip obovate, 2-2.5 cm long, about 1 cm wide, glabrous, fleshy, 3-lobed, the lateral lobes rounded, the median lobe rounded cuneate, acute at apex; column elongate, suberect, 1-1.5 cm long, about 3 mm wide.

Endemic, known from the northern and central parts of the island at the elevations of 1600-3000 m under the forests of *pinus* and grasslands.

地生蘭、根甚長，長 20-30 cm，徑 2-4 mm；假球莖不顯著，卵形，徑 1-1.5 cm，常隱藏於葉叢中；無莖。

葉 4-7 枚，狹線形，長 60-80 cm，寬 8-12 mm，先端漸尖形，基部漸窄，薄革質，直立或半直立，邊緣有細鋸齒，表面為有光澤綠色，葉脈 3 條隆起於背面。

花 3-5 枚，淡褐綠色，大，徑約 5 cm，有香味，總狀花序；花莖抽自於假球莖基部，長 30-60 cm，直立、光滑、基部有鞘；鞘長 3-5 cm，膜質，先端漸尖，基部及中部者呈筒狀；苞片線狀長橢圓形，長 3-4 cm，寬 6-6.5 mm，膜質、光滑，先端漸尖；花梗連同子房長 3-3.5 cm，光滑；萼片長橢圓形，長 4-4.5 cm，寬約 8-10 mm，膜質，先端漸尖且略捲曲，基部窄，有脈 7 條；花瓣橢圓形，長 3-3.2 cm，寬 1-1.1 cm，先端銳尖，基部緊縮，基部內面有紅色斑點及條紋，略呈波浪線，脈 7-9 條；唇瓣倒卵形，長 2-2.5 cm，寬 1 cm，光滑，肉質，3 裂，有紅色斑點，

側裂片圓形，中裂片圓狀楔形，先端銳尖；蕊柱長，近似直立，長1-1.5 cm，寬約3 mm。

固有，生長於本省北部及中部山地約1600 - 3000 m，多見於草生地或松林下。

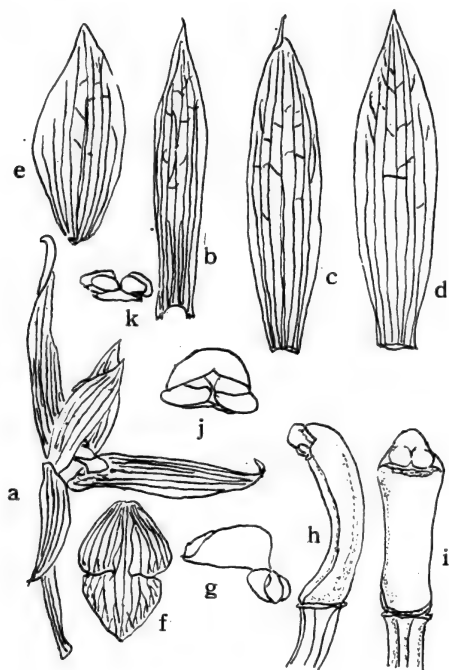


圖 (Fig) 44 菅草蘭 (*Cymbidium tortisepalum*)

- a. 花 (Flower) b. 苞片 (Bract)
 c. 側萼片 (Lateral sepal)
 d. 後萼片 (Dorsal sepal) e. 花瓣 (Petal)
 f.g. 唇瓣 (Lip) h.i. 蕊柱 (Column)
 j. 花藥 (Anther) k. 花粉塊 (Pollinia)

51. 小袋唇蘭 (*Cypripedium debile* Reichb. f.)

Terrestrials; rhizomes short, creeping; roots slender, elongate, densely with root hairs; stem simple, erect, gla-

brous, 10-20 cm long; sheathes 2-3, at the base of stem, membranous.

Leaves 2, opposite, terminal on stem, cordate-rounded, 3-4 cm long, 2.5-3.5 cm wide, acute or acuminate at apex, rounded to slightly cordate at the base, sessile, entire, chartaceous, glabrous except on the margin, 2- to 7-nerved.

Flowers solitary, pendulous, 1.8-2.5 cm in diameter, yellowish green with purple hue; scape terminal strongly declined, glabrous, 3-5 cm long; bracts linear-lanceolate, 1.5-2 cm long; pedicels with ovaries 2-2.5 cm long, the dorsal sepal ovate-lanceolate, 10-15 mm long, 6-7 mm wide, lightly green, the lateral ones elliptic lanceolate, usually wholly united to the tip; petals narrowly lanceolate, slightly shorter than or same as the dorsal sepal; lip pouch-shaped, 0.8-1.1 cm in diameter, slightly purplish red; column short; stigma terminal.

Japan. Taiwan, known from the high altitudes of 1800-2700 m in northern part of the island, under the forests.

地生蘭、根莖短、匍匐；根細長、密生有根毛；莖單生，無分枝、直立、光滑，長10-20 cm；鞘2-3枚，着生於莖基部、褐色、膜質。

葉2枚，對生，着生於莖先端，圓心形，長3-4 cm，寬2.5-3.5 cm，無柄、全緣、紙質、光滑，僅葉緣部份略有柔毛，2至7脈，先端銳尖或漸尖，基部圓或略呈心形。

花單立、下垂，徑1.8-2.5 cm，黃綠色而有紫色暈；花莖頂生，略呈下垂，光滑，長3-5 cm；苞片線狀披針形，長1.5-2 cm；花梗連同子房長2-2.5 cm；後萼片卵狀披針形，長10-15 mm，寬6-7 mm，淡綠色，側萼片橢圓狀披針形，先端完全連生；花瓣狹披針形，與後萼片同長或略短；唇瓣袋形，徑0.8-1.1 cm，略帶有紫紅色；蕊柱短，柱頭頂生。

日本。台灣，生長於北部高海拔山地約1800-2700 m山地，生長於森林下。

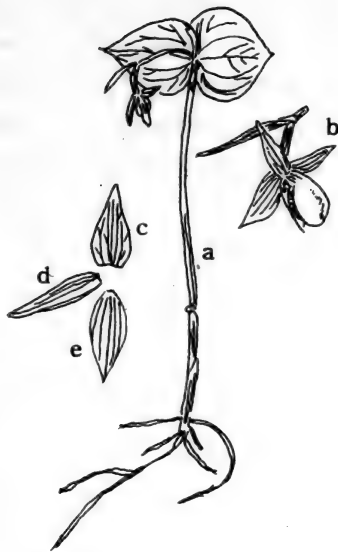


圖 (Fig) 45 小袋唇蘭 (*Cypripedium debile*)
 a. 植物體 (Plant body) b. 花 (Flower)
 c. 後萼片 (Dorsal sepal) d. 花瓣 (Petal)
 e. 側萼片 (Lateral sepal)

52. 台灣袋唇蘭 (*Cypripedium japonicum* var. *formosanum* (Hay.) Ying)

Terrestrials; rhizomes creeping, elongate, sometimes branched; roots short; stem simple, ascending or erect, glabrous, 5-12 cm long; sheathes 2-3, at the base of stem, pale green, pubescent, 3-7 cm long, membranous.

Leaves 2, nearly opposite, rounded ovate, 12-20 cm long, 7-12 cm wide, rounded or broadly triangular, cuneate at base, chartaceous, many-nerved, plicate, glabrous surface and scattered shortly hirsute beneath, subentire or shortly ciliate on margin; sheathes cylindrical tubular, 6-8 cm long, glabrous or nearly so.

Flowers solitary, flowering when the leaves not quite expanded, white or pale yellow, slightly purple after anthesis, scentless; scape terminal 10-12 cm long, subglabrous or scattered pubescent; bracts ovate-lanceolate, 2-2.5 cm long, 8-12 mm wide, subglabrous; pedicels with ovaries 1.5-2 cm long, scattered pubescent; dorsal sepal ovate-lanceolate, white or nearly so, 4-5 cm long, 2-2.5 cm wide, acute or obtuse at apex, the lateral ones connate each other and forming a small boat in shape, 4-5 cm long, about 2.5 cm wide, shortly acuminate at apex, petals obliquely ovate-lanceolate 5-6 mm long, 1.5-2 cm wide, shortly acuminate, obtuse and purple spots at the base, glabrous without, pubescent within; lip sessile, patent, large pouch, 5-6 cm long, 4-4.5 cm across, white or yellowish white with purple spots; column 1-1.5 cm long.

The species in China and Japan, the variety endemic to Taiwan, known from the high altitudes of 2200-2900 m in northern and central parts of Taiwan, under the humus forests.

The variety differ to the species by nearly glabrous peduncles, less hairy ovary and flowers with purple spots.

地生蘭、根莖匍匐，甚長，有時具有分枝；根甚短；莖單立，無分枝，直立或近似如此，光滑，長5-12 cm 鞘2-3枚，着生於莖基部，淡綠色，有毛茸，長3-7 cm，膜質。

葉2枚，近似對生，圓卵形，長12-20 cm，寬7-12 cm，先端圓或潤三角形，基部楔形，紙質，脈多數，皺褶，表面光滑，背面有短毛茸，波狀緣或短毛緣；鞘圓柱筒狀，長6-8 cm，光滑或近似如此。

花單一，葉末十分開張時開放，白色或淡黃色，授粉後略帶有紫色，無香味；花莖頂生，長10-12 cm，近似光滑或散生有毛茸；苞片1，卵狀披針形，長2-2.5 cm，寬8-12 mm，光滑；花梗連同子房長1.5-2 cm，散生毛茸；後萼片卵狀披針形，白色或近似如此，長4-5 cm，寬2-2.5 cm，先端銳或鈍；側萼片兩枚互相連合而形成一小舟形，長4-5 cm，寬約2.5 cm，先端短漸尖形；花瓣歪卵狀披針形，長5-6 cm，寬1.5-2

cm，先端短漸尖形，基部鈍而有紫紅色斑點，外面光滑，內面有毛茸；唇瓣無柄，顯着，大袋形，徑約4-4.5 cm，淡黃或白色，有鮮紅或紫色的斑點或短條紋；蕊柱長1-1.5 cm。

種產於中國大陸及日本。變種為台灣所固有，生長於高海拔約 2200 - 2900 m 的山地，常見於台灣北部及中部多腐植質的森林內。

變種與種的區別點在於花梗近似光滑無毛，花有紅色或紫色斑點。

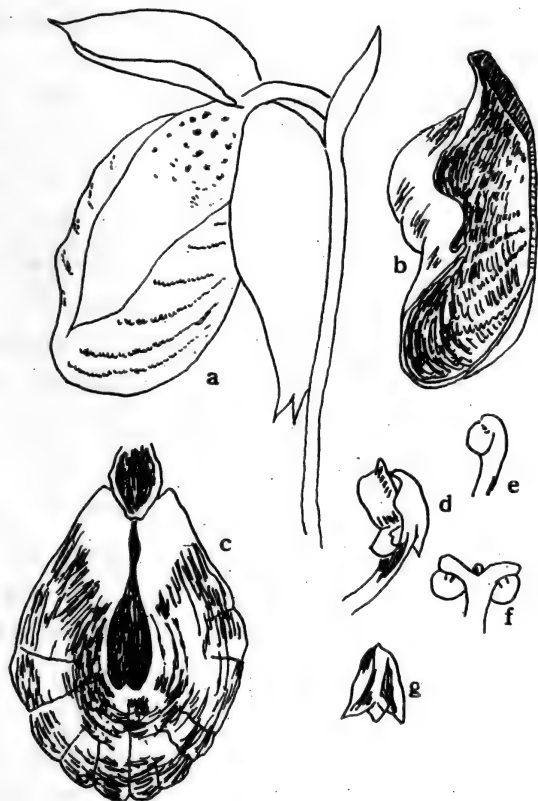


圖 (Fig) 46 台灣袋唇蘭 (*Cypripedium japonicum* var *formosanum*)

a. 花 (Flower)

b.c. 唇瓣從不同角度看 (Lip seen from different sides)

d. 蕊柱 (Column)

e.f. 雄蕊 (Stamen)

g. (Staminode)

53. 樹大石斛 (*Dendrobium chameleon* Ames)

Epiphytes; roots elongate; stem much-branched, pendulous, 15-30 cm long, 5-8 mm in diameter; the internodes 1-1.5 cm long; sheaths obconical-cylindric, hyaline, membranous, persistent the fibers on the old stem.

Leaves alternate, distichous or nearly so, oblong or lanceolate, 3-4 cm long, 5-6 mm wide, acute, contracted at base, chartaceous, shining green surface, entire, glabrous, 3-nerved raised on back.

Flowers 2-4, very rarely solitary, rather large, 2.5-3 cm in diameter, racemose, scentless; scape axillary, 3-4 cm long, purple, glabrous; bracts triangular, 5-6 mm long, about 5 mm wide, acute at apex; the pedicels with ovary 1-1.5 cm long; sepals subequal; oblong, slightly purple without, greenish white within, 1.4-1.6 cm long, 6-8 mm wide, acute to obtuse at apex, 5-purple nerved, slightly recurved on margin, the lateral ones strongly oblique, adnate to the base of column and forming a 8-11 mm long mentum; petals white, lanceolate obovate, 14-16 mm long, about 4-6 mm wide, 5-nerved, obtuse, narrowed at base; lip elongate, spathulate, somewhat connated with the mentum at base, long clawed, the claw 1.8-2 cm long, about 3 mm wide, the lamina somewhat ovate, 9-10 mm long, 5-6 mm wide, rounded-obtuse at apex, column short, 2 mm long; column foot 1.2-2 cm long.

The Philippines, Taiwan, epiphytic on the tree trunks and branches of the evergreen forests at the elevations of 800-1800 m throughout the island, rather common.

着生蘭、根多數，細長，莖具多數分枝，下垂，長15-30 cm，徑5-8 mm，節間長1-1.5 cm；鞘倒圓錐狀圓柱形，透明，膜質，在老莖上僅殘存有鬚。

葉互生，兩列狀排列或近似如此，長橢圓形或披針形，長3-4 cm，寬5-6 mm，先端銳尖，基部緊縮狀，紙質、表面呈有光澤綠色，全緣，光



圖 (Fig) 47 變大石斛 (*Dendrobium chameleon*)

a. 植物體 (Flowering plant body)

b. 花 (Flower)

c. 後萼片 (Dorsal sepal)

d. 側萼片 (Lateral Sepal)

e. 花瓣 (Petal)

f. 唇瓣 (Lip)

g. 蕊柱 (Column)

滑，脈3條隆起於背面。

花2-4枚，少數呈單生者，較大，徑2.5-3 cm，穗狀花序，無香味，花莖腋生，長3-4 cm，

紫色、光滑；苞片三角形，長5-6 mm，寬約5 mm，先端銳尖；花梗連同子房長1-1.5 cm，萼片近似整齊，長橢圓形，外面略呈淡紫色，內面淡綠色，長1.4-1.6 cm，寬6-8 mm，先端銳尖至鈍，有五條紫色條紋，邊緣略反捲，側裂片甚歪，與蕊柱基部相連而形成一長8-11 mm的頰；花瓣白色，披針狀倒卵形，長14-16 mm，寬約5 mm，脈5條，先端鈍，基部略窄，唇瓣甚長，舌形，在基部略與頰連生，有長爪，爪長1.8-2 cm，寬約3 mm，唇瓣片略呈卵形，長9-10 mm，寬5-6 mm，先端圓鈍，蕊柱短，長2 mm，蕊柱足長1.2-2 cm。

菲律賓、台灣，着生於樹幹或樹枝上，生長於全島常綠林約800-1800 m山地，較常見。

54. 黃花石斛 (*Dendrobium clavatum* Var. *aurantiacum*)

(Reichb.f. want et Tang)

Dendrobium flaviflorum Hayata in Journ. Coll. Sci. Univ. Tokyo 30(1); 312 (1911) (Mat. Fl. Form.); Ying in Chinese Flow. (10): 50, p 1.4 (1974)

Epiphytes; stems clustered from the same base, simple, slender, terete, 40-60 cm long, 2-2.5 mm across; the internodes 3-6 cm long; sheathes membranous, at the node base.

Leaves many, alternate, distichous, lanceolate or linear-lanceolate, 9-11 cm long, 8-9 mm wide, obtuse and emarginate, narrowed and sheathed at the base; sheathes short, 4-5 mm long.

Flowers 2-4, bright yellow, 2-3.5 cm in diameter, axillary, racemose; scape 3-4 cm long, glabrous; bracts oblong, imbricate, yellowish green, 2-3 cm long, 7-9 mm wide, acute, narrowed at the base; pedicels with ovaries 1-1.5 cm long; sepals subequal, oblong, 2-2.5 cm long, 7-8 mm wide, obtuse and apiculate at apex, rounded at the base; the

lateral ones usually oblique at the base, adnate to the column-foot and forming a 4-6 mm long mentum; petals oblong-ovate, 2-2.5 cm long, 1-1.5 cm wide, obtuse, contracted at the base; lip widely rounded, 1.5-2 cm long, 2-2.5 cm wide, slightly wavy and ciliate on margin, rounded at apex, clawed at the base, villose surface, glabrous beneath; the claw 5-7 mm long, 2-3 mm wide; column 4-5 mm long, 2-3 mm wide, 2-dentated at apex, about 4 mm long.

Capsules spindle-like, 3-4 cm long, 2-2.5 cm across.

China, Taiwan, epiphytic on the branched and trunks of the trees, throughout the island from the elevations of 800-1700 m, very common.

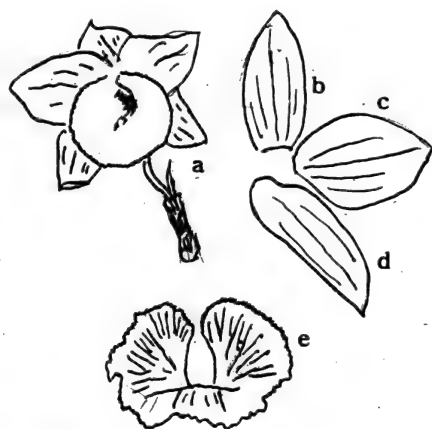


圖 (Fig) 48 黄花石斛 (*Dendrobium clavatum* var *aurantiacum*)

- a. 花 (Flower) b. 後萼片 (Dorsal sepal)
 c. 花瓣 (petal) d. 側萼片 (Lateral sepal)
 e. 唇瓣 (Lip)

着生蘭；莖多數在基部叢生，單立無分枝，細長、圓柱形，長 40-60 cm，徑 2-2.5 mm，節間長 3-6 cm；節基部具有膜質的鞘。

葉多數，互生，二列狀排列，披針形或線狀披針形，長 9-11 cm，寬

8-9 mm,先端鈍且凹頭,基部狹而有鞘;鞘短,長僅4-5 mm。

花2-4枚,鮮黃色,徑2-3.5 cm,腋生於莖上部,總狀花序;花莖長3-4 cm,光滑;苞片長橢圓形、黃綠色,覆瓦狀排列,長2-3 cm,寬7-9 mm,先端銳尖,基部狹;花梗細長,長1-1.5 cm;萼片近似整齊,長橢圓形,長2-2.5 cm,寬7-8 mm,先端鈍且有尖突,基部圓,側萼片基部歪,與蕊柱足相連而形成一長4-6 mm的頰;花瓣長橢圓狀倒卵形,長2-2.5 cm,寬1-1.5 cm,先端鈍,基部緊縮;唇瓣橢圓形,長1.5-2 cm,寬2-2.5 cm,邊緣波狀且有微細毛茸,先端圓,基部有長爪,表面有柔毛,背面光滑,爪長5-7 mm,寬2-3 mm;蕊柱長4-5 mm,寬2-3 mm,先端2齒牙,長約4 mm。

蒴果紡錘形,長3-4 cm,徑2-2.5 cm。

中國大陸,台灣,生長於全島中海拔約800-1700 m的山地,着生於樹枝或樹冠層上,甚為常見。

55. 蘭嶼石斛 (*Dendrobium equitans* Kraenzl.)

Epiphytes; rhizomes short, creeping; roots many; stems many, clustered, simple, glabrous, 30-60 cm long, 2-3 mm wide, compressively flat, fleshy; internodes 3-4 cm long, the basal 1 or 2 usually bulb-like, yellow or light brown in color, ribbed.

Leaves many, distichous, falcate-linear, compressively flat, fleshy, 5-7 cm long, 4-5 mm wide, acute or acuminate, broad at the base, glabrous, entire; sheathes absent or inconspicuous.

Flowers solitary, rather small, terminal, white, scentless, 1-1.5 cm in diameter; scape 3-4 cm long, gray, glabrous; bract one, membranous, 4-5 mm long; the pedicels with ovaries 7-9 mm long, glabrous; sepals subequal, oblong, 1-1.5 cm long, 4-5 mm wide, obtuse at apex, the lateral ones adnate to the column-foot and forming a 7-8 mm long mentum; petals linear-oblong, 8-12 mm long, 3-4 mm wide, rounded, cuneate at the base; lip obovate, 1.5-2 cm long, 8-12 mm wide, rounded, cuneate at the base, 3-4 yellow.

linear streaks within, 3-lobed, the lateral lobes erect, entire downward and denticulate upward, the median lobe fimbriate on margin, rounded at apex, 5-6 mm long, 2-2.5 mm wide; column short, 2-2.5 mm long; column-foot 5-6 mm long, 2-2.5 mm wide; pollinia 4, oblong, about 1 mm long.

Capsules oblong-obovoid, truncate, attenuate at the base, 1.5-2 cm long, 6-8 mm in diameter, 6-7-ribs.

Endemic, known from the islet of Lanyu only; epiphytic on tree trunks from the elevations of 300-600 m, rather common.

着生蘭、根莖短、匍匐；根多數；莖多數，叢生、無分枝，光滑，長30-60 cm，寬2-3 mm，扁平、肉質、節相距3-4 cm，基部的1或二節膨大呈假球莖狀，黃色或淡褐色，有稜角。

葉多數，呈兩列狀排列，鐮刀狀線形，扁平、肉質，長5-7 cm，寬4-5 mm，先端銳尖或漸尖，基部寬，光滑，全緣；鞘無或不顯著。

花單生，較小，頂生，白色，無香味，徑1-1.5 cm；花莖長3-4 cm，灰色、光滑；苞片1枚，膜質，長4-5 mm；花梗連同子房長7-9 mm，光滑；萼片近似整齊，長橢圓形，長1-1.5 cm，寬4-5 mm，先端鈍；側萼片與蕊柱足相連而形成7-8 mm 頰；花瓣線狀長橢圓形，長8-12 mm，寬3-4 mm，先端圓、基部楔形，唇瓣倒卵形，內面有3-4條黃色線狀條紋，長1.5-2 cm，寬8-12 mm，先端圓，基部楔形，3裂；側裂片直立，基部全緣，上部有鋸齒，中裂片邊緣絲狀，先端圓，長5-6 mm，寬2-2.5 mm；蕊柱短，長2-2.5 mm；蕊柱足長5-6 mm，寬2-2.5 mm；花粉塊4枚，長橢圓形，長約1 mm。

蒴果長橢圓狀倒卵形，先端截斷狀，基部漸狹，長1.5-2 cm，徑6-8 mm，有稜6-7條。

固有，生長於台灣離島蘭嶼上，着生於樹幹上，生長於300-600 m，較為常見。

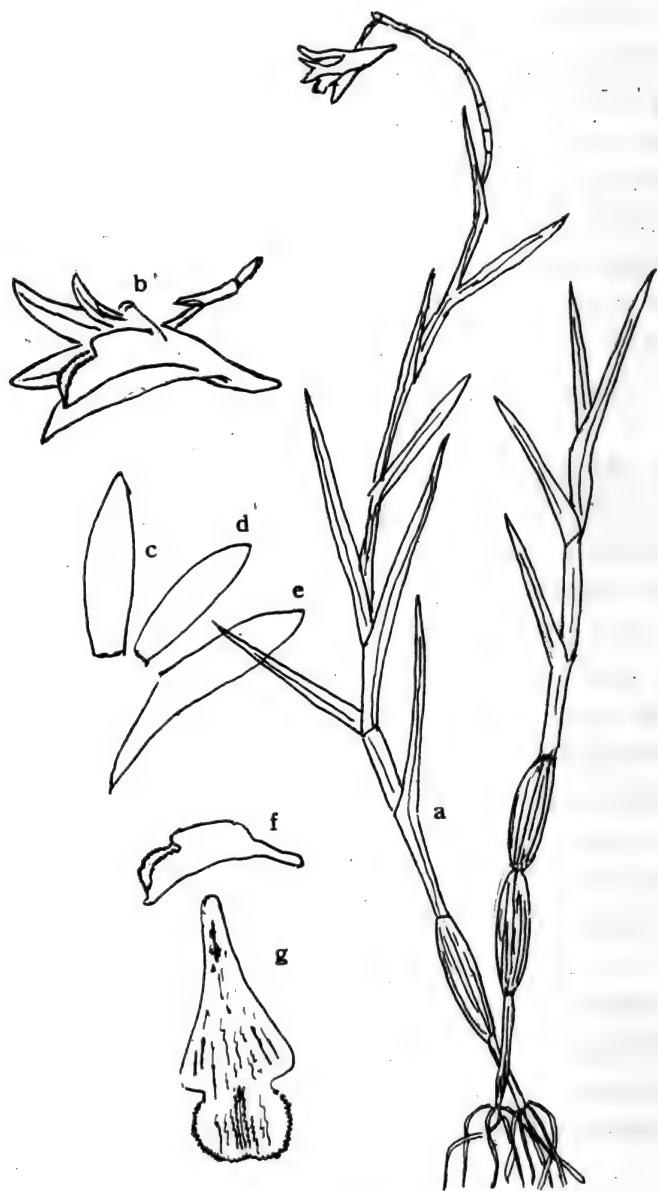


圖 (Fig) 49 蘭嶼石斛 (*Dendrobium equitans*)
 a. 植物體 (plant body) b. 花 (Flower)
 c. 後萼片 (Dorsal sepal) d. 花瓣 (petal)
 e. 側萼片 (Lateral sepal) f.g. 唇瓣 (Lip)

56. 紅唇石斛 (*Dendrobium falconeri* Hook. f.)

Epiphytes; rhizomes short; stem terete, slender, pendulous, 30-45 cm long, about 1-1.5 mm across, much branched; internodes 2-3.5 cm long, linear fibers persistent on the node base, 6-8 mm long.

Leaves alternate, distichous or nearly so, usually at the upper part of the stem, linear, 4.5-5.5 cm long, 3-4 mm wide, obtuse, contracted at base; sheathes 1-2 cm long.

Flowers 1-3, large, showy, 3-4 cm in diameter, racemose; scape axillary, 2-4 cm long, glabrous, 1-2 cylindrical 5-6 mm long sheathes at base; the pedicels with ovaries 1.5-2 cm long, glabrous; bracts ovate, hyaline, 4-6 mm long, sepals white, spreading, linear-lanceolate, 3-4 cm long, 7-8 mm wide, acuminate, slightly contracted at base, somewhat recurved on margin, 7-nerved, the lateral ones somewhat oblique at the base, adnate to column-foot and forming a 4-6 mm long mentum; petals white, ovate rhombic, 3-3.5 cm long, 1.2-1.8 cm wide, acuminate, cuneate at the base, 5-nerved, entire; lip white with pink tip and yellowish black base, ovate-rhombic, 3-4 cm long, 1.5-2 cm wide, cuspidate acute at apex, cuneate at the base, slightly wavy or fine serrulate on margin, slightly hairy, 3-lobed, the lateral ones minute, semi-rounded, suberect, the median lobe large, ovate-triangular, 1.5-2 cm long, 1.5-1.8 cm wide; column minute, 2-3 mm long; column-foot about 6 mm long; anthers oblong, 3-4 mm long, hairy.

Endemic, epiphytic on the tree trunks or branches at medium altitudes of 800-2000 m in northern and central parts of the island, rather rare.

着生蘭、根莖短；莖圓柱形，細長，下垂，長30-45 cm，徑1-1.5 mm，有多數分枝，節間長2-3.5 cm，略呈棍棒狀，基部殘存有線狀的纖維質，長6-8 mm。

葉互生，二列狀排列或近似如此，常着生於莖的上部，線形，長4-5.5



圖 (Fig) 50 紅唇石斛 (*Dendrobium falconeri*)

- a. 植物體 (plant body) b. 花 (Flower)
 c. 後萼片 (Dorsal sepal) g. 唇瓣 (Lip)
 d. 側萼片 (Lateral Sepal)
 e. 花瓣 (Petal) f. 蕊柱 (Column)

cm，寬 3-4 mm，先端鈍，基部緊縮狀，鞘長 1-2 cm。

花 1-3 枚，大而艷麗，徑 3-4 cm，總狀花序；花莖腋生，長 2-4 cm，光滑，基部有 1-2 枚圓柱狀長 5-6 mm 的鞘；花梗連同子房長 1.5-2 cm，光滑；苞片卵形，透明，長 4-6 mm；萼片白色，擴展，線狀披針形，長 3-4 cm，寬 7-8 mm，先端漸尖形，基部略呈緊縮狀，邊緣略呈反捲脈 7 條；側萼片基部略歪，與蕊柱足相連而形成一長 4-6 mm 的頰，花瓣白色卵狀菱形，長 3-3.5 cm，寬 1.2-1.8 cm，先端漸尖形 基部楔形，脈 5 條，全緣；唇瓣白色，先端粉紅色，基部黃黑色，卵狀菱形，長 3-4 cm

，寬 1.5-2 cm，先端尾狀銳尖，基部楔形，邊緣略呈波狀或細鋸齒，略有毛茸，3 裂，側裂片微小，半圓形，近似直立；中裂片大，卵狀三角形，長 1.5-2 cm，寬 1.5-1.8 cm；蕊柱甚小，長 2-3 mm；蕊柱足長 6 mm；花藥長橢圓形，長 3-4 mm，有毛茸。

固有，生長於本島北部及中部中海拔山地約 800-2000 m 山地，着生於樹幹及樹枝上，較為稀少。

57. 金石斛 (*Dendrobium linawianum* Reichb.f.)

Epiphytes; rhizomes creeping, short; roots numerous; stems tufted, 25-42 cm long, somewhat compressed; the internodes 3-4 cm long, 1-1.5 cm in diameter; the upward ones clavate-thickened, furrowed; the lower ones terete, much shorter.

Leaves oblong, 6-7.5 cm long, 2.4-2.7 cm wide, obliquely emarginate at apex, obtuse and sheathing at the base, lustrous green surface, pale green beneath, 3-5-nerved, raised on back; the sheathes 2-3 cm long, persistent.

Flowers 3-4, pink or white with pink tip, large, showy, 4-5 cm in diameter, racemose; the scape produced from the upper nodes of the leafless stems, slender, 2-4 cm long; bracts minute, triangular, 3-6 mm long, acute at apex; the pedicels with ovaries 4-5 cm long; sepals oblong, 2.5-3 cm long, 8-10 mm wide, shortly acute at apex, the dorsal one free, the lateral ones somewhat narrowed, oblique at base, adnate to the column-foot and forming a 1-1.2 cm long mentum; petals elliptic, 3-3.2 cm long, 16-18 mm wide, obtuse at apex, contracted at the base; lip oblong, clawed, 2.5-3 cm long, 1.5-1.8 cm wide, rounded at apex, with 2 purple blotches on the central disc; basal disc shortly hirsute; column about 5 mm long.

China. Taiwan, known from the northern part of the island at the elevations of 900-1200 m, epiphytic on tree trunks.



圖 (Fig) 51 金石斛 (*Dendrobium linawianum*)

- a. 着花之植物體 (Flowering plant body)
 b. 後萼片 (Dorsal Sepal) c. 花瓣 (Petal)
 d. 側萼片 (Lateral Sepal) e. 唇瓣 (Lip)

着生蘭，根莖匍匐，短；根多數；莖叢生，長25-42 cm，多少呈扁平圓柱狀，節長3-4 cm，徑1-1.5 cm，上部莖粗厚，略呈棍棒狀，有溝紋；下部者呈圓柱形，較短。

葉長橢圓形，長6-7.5 cm，寬2.3-2.7 cm，先端歪凹頭，基部鈍而有鞘，表面呈有光澤綠色，背面呈粉白綠色，脈3-5條，隆起於背面；

鞘長2-3 cm，殘存。

花3-4枚，粉紅色或白色而先端呈粉紅色，大而艷麗，徑4-5 cm，總狀花序，花莖抽自於無葉老莖上部的節處，細長，長2-4 cm；苞片小，三角形，長3-6 mm，先端銳尖；花梗連同子房長4-5 cm；萼片長橢圓形，長2.5-3 cm，寬8-10 mm，先端短銳尖；後萼片離生，側萼片略狹，基部歪，與蕊柱足相連而形成一長1-1.2 cm的頰；花瓣橢圓形，長3-3.2 cm，寬16-18 mm，先端鈍，基部緊縮；唇瓣長橢圓形，有爪，長2.5-3 cm，寬1.5-1.8 cm，先端圓，基部有2紫黑色斑塊，基部略有毛茸；蕊柱長約5 mm。

中國、台灣，生長於北部烏來，南庄一帶海拔高約900-1200 m的山地，着生於樹幹上，較為稀少。

58. 紅花石斛 (*Dendrobium miyakei* Schltr.)

Epiphytes; pseudobulbs ovoid, inconspicuous, 6-8 mm across, green; stems simple, tufted, ascending, 30-50 cm long, 4-15 mm across, usually the base nodes somewhat slender, the upward nodes thickened; internodes 8-16 mm long; sheathes membranaceous, usually linear fibers persistent on old nodes base.

Leaves many, alternate, distichous, lanceolate or broadly lanceolate, 5-10 cm long, 1.5-2 cm wide, chartaceous, acuminate, rounded and sheathing at base, midrib raised beneath.

Flowers many, brightly red, clustered or subracemose, axillary, nodding; scapes 1-4, produced from the old leafless stem, 1-1.5 cm long; bracts minute, triangular, 4-4.5 mm long, 2-3 mm wide, membranaceous, acute at apex; the pedicels with ovaries 1.5-2 cm long; sepals ovate or ovate-oblong, 5-nerved, the dorsal one 8-12 mm long, 5-6 mm wide, acuminate and maculate at apex, the lateral ones adnate to the column-foot and forming a 7-10 mm long mentum; petals elliptic, 5-nerved, 7-9 mm long, 4-6 mm wide, obtuse and maculated at apex; lip rounded spathu-

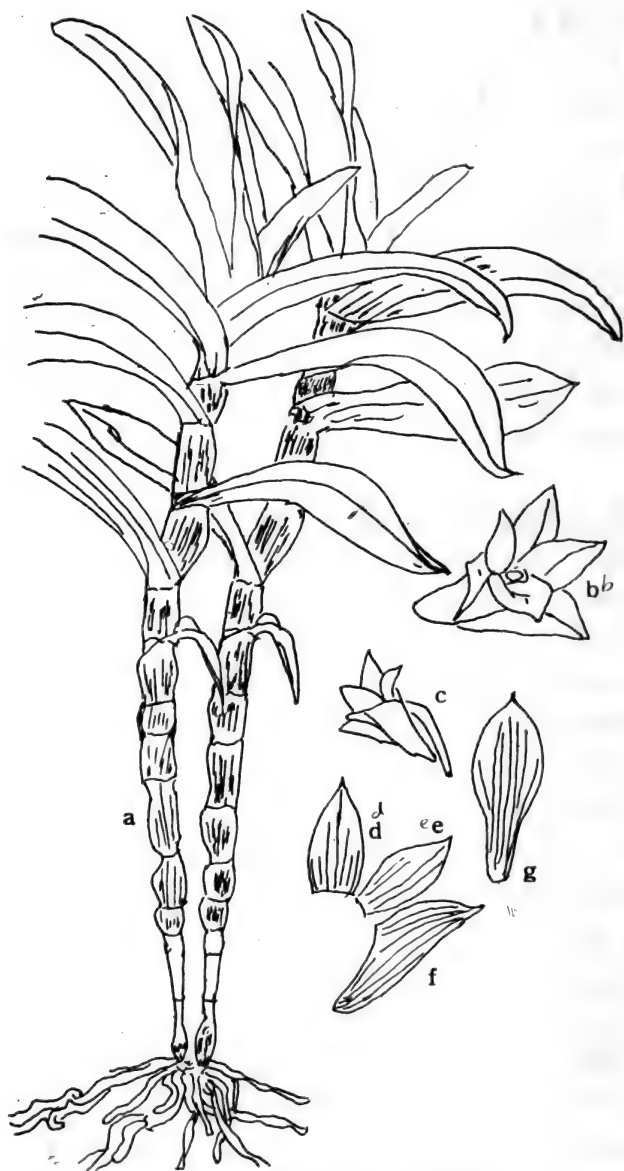


圖 (Fig) 52 紅花石斛 (*Denbrobium miyakei*)

- a. 植物體 (Plant body) b. c. 花 (Flower)
 d. 後萼片 (Dorsal sepal) e. 花瓣 (Petal)
 f. 側萼片 (Lateral sepal) g. 唇瓣 (Lip)

late, clawed, entire, 5-7-nerved, 1.5-1.8 cm long, 5-6 mm wide, obtuse at apex, claw 3-5 mm long; column short, 2-3 mm long; column-foot slender, greenish yellow, 5-8 mm long; anthers yellow, cup-like.

Endemic, known from the island of Lan-yu, at the elevations of 300-500 m only, epiphytic on tree trunks, common.

着生蘭，假球莖卵形，位於莖基部，不顯著，徑6-8 mm，綠色；莖單立，叢生，無分枝，直立或近似如此，長30-50 cm，徑5-15 mm，通常基部較細，先端部份較粗，節間長8-16 mm；鞘膜質，常有絲狀纖維殘存於老莖節的基部。

葉多數，互生，二列狀排列，披針形或闊披針形，長5-10 cm，寬1.5-2 cm，紙質，先端漸尖，基部圓而有鞘，中肋於背面隆起。

花多數，鮮紅色，叢生或近似於總狀花序，腋生，下垂；花莖1-4枚抽自於無葉老莖節處，長1-1.5 cm；苞片小，三角形，長4-4.5 mm，寬2-3 mm，膜質，先端銳尖；花梗連同子房長1.5-2 cm；萼片卵形或卵狀長橢圓形，脈5條，後萼片長8-12 mm，寬5-6 mm，先端漸尖且具有尖突，側萼片與蕊柱足相連而形成一長7-10 mm頰；花瓣橢圓形，脈5條，長7-9 mm，寬4-6 mm，先端鈍而尖突；唇瓣圓狀舌形，有爪，全緣，脈5-7條，長1.5-1.8 cm，寬5-6 mm，先端鈍；爪長3-5 mm；蕊柱短，長2-3 mm；蕊柱足細長，黃綠色，長5-8 mm；花藥黃色，杯形。

固有，僅生長於蘭嶼島上，見於海拔約300-500公尺的熱帶常綠降雨林中，着生於樹幹上，甚為常見。

59. 石斛 (*Dendrobium moniliforme* (Linn.) Sw.)

Epiphytes; rhizomes shorter; roots many from the base of rhizome; stems tufted, erect, 10-30 cm long, internodes 2-4 cm long, 3-7 mm in diameter, usually with a tight membranaceous sheathes at node bases.

Leaves alternate, lanceolate or elliptic-lanceolate, 4-8 cm long, 7-12 mm wide, coriaceous or thickened chartaceous, obtuse, rounded at base.

Flowers 1 to 3 in the upper nodes of 3 year old stems, fascicled, white or pale pink; pedicels with ovaries 2-4 cm long; bracts minute, brownish, basal; dorsal sepal linear-lanceolate, 2-2.5 cm long, 5-8 mm wide, acute; lateral ones obliquely broadened at the base; petals similar to dorsal sepal, slightly shorter; lip ovate-lanceolate, erect or ascending, the limb slightly recurved at tip, 2-2.5 cm long, 4-6 mm wide; column very short, 2-3 mm long; pollinia 4, elliptic, yellowish.

Capsules oblong, 2-3 cm long, about 1.5 cm across.

China, s. Korea and Japan. Taiwan, at the elevations of 800-2200 m, rather common, usually on rock and tree trunks or branches.

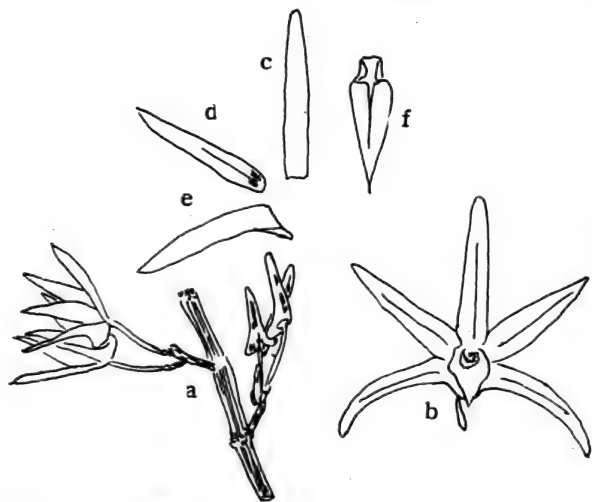


圖 (Fig) 52 石斛 (*Dendrobium moniliforme*)

a. 着花之莖 (Flowering stem)

b. 花 (Flower) c. 後萼片 (Dorsal sepal)

d. 花瓣 (Petal) e. 側萼片 (Lateral sepal)

f. 唇瓣 (Lip)

着生蘭，根莖短，根多數，抽自於根莖的基部；莖叢生，直立，長10-30 cm；節間長2-4 cm，徑3-7 mm，在節的基部常有鬚狀絲線狀的

纖維。

葉互生，披針形或橢圓狀披針形，長4-8 cm，寬7-12 mm，革質或厚紙質，先端鈍，基部圓。

花1至3枚，着生於第三年生老莖上部的節處，叢生，白色或淡粉紅色；花梗連同子房長2-4 cm；苞片甚小，褐色，基生；後萼片線狀披針形，長2-2.5 cm，寬5-8 mm，先端銳尖，側萼片基部略歪且較潤；花瓣與後萼片相似，惟略短；唇瓣卵狀披針形，直立或近似如此，先端略反捲，長2-2.5 cm，寬4-6 mm；蕊柱甚短，長2-3 mm，花粉塊4枚，橢圓形，黃色，蒴果長橢圓形，長2-3 cm，徑1.5 cm。

中國、韓國南部及日本，台灣，生長於海拔800-2200 m 山地，着於樹幹、樹枝及岩石上，最為常見的石斛。

60. 穗花一葉蘭 (*Dendrochilum microchilum* (Schltr)

Ames)

Epiphytes; roots creeping; pseudobulbs closely approximate, fusiform, 2-3 cm long, 8-11 mm in diameter, pale green, fleshy; stemless.

Leaf solitary, terminal on the pseudobulb, linear-lanceolate, 7-10 cm long, 8-12 mm wide, acuminate, cuneate and narrowed to the petiole at base, chartaceous or nearly so, entire, midrib raised on back, shining green surface, pale green beneath; the petioles 5-10 mm long, slender, glabrous.

Flowers small, yellow or dull yellow, 5-5.5 mm in diameter, in two rows, racemose, scentless; scape from the terminal of pseudobulb, 10-14 cm long, ascending or dropping, flexuose; sheaths several, imbricate; bracts ovate, glaucous, 2.2-2.7 mm long, obtuse at apex; the pedicels with ovaries 2-2.5 mm long, glabrous; sepals spreading, 3-3.5 mm long, 1-1.5 mm wide, the dorsal one lanceolate, acute at apex, the lateral ones broadly ovate, 1-nerved; petals linear-lanceolate, somewhat falcate-like, 3 mm long, about 1 mm wide, acute at apex; lip minute, sac-like, 3-lobed, about

1 mm long, about 2 mm wide; the median lobe deeply emarginate, mucronate, the lateral lobes broadly ovate, obtuse at apex, with a thickened partly free callus at the base; column minute, about 1 mm long, with a protuberance in front.

The Philippines. Taiwan, known from the islet Lanyu only at the elevations of 300-600 m in whole islet, a common epiphytic orchid.

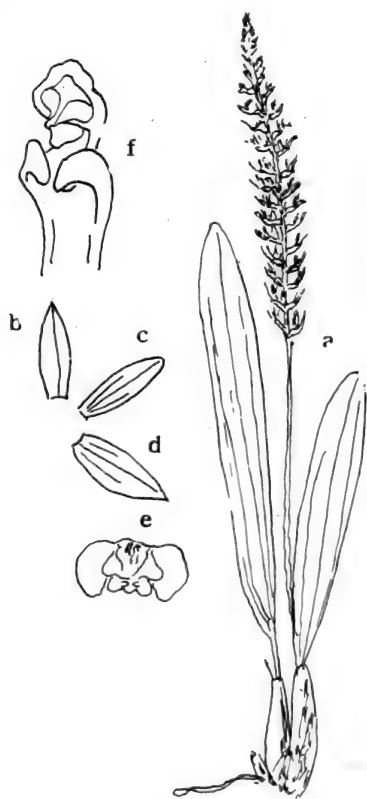


圖 (Fig) 54 穗花一葉蘭 (*Dendrochilum microchilum*)
 a. 開花之植物體 (Flowering plant)
 b. 後萼片 (Dorsal sepal) c. 花瓣 (Petal)
 d. 側萼片 (Lateral sepal) e. 唇瓣 (Lip)
 f. 蕊柱 (Column)

着生蘭，根匍匐；假球莖緊密排列，紡錘形，長2-3 cm，徑8-11 mm，淡綠色，肉質，無莖。

葉單一，生長於假球莖的先端，線狀披針形，長7-10 cm，寬8-12 mm，先端漸尖，基部楔形而且漸狹延伸至葉柄，紙質或近似如此，全緣，中肋於背面隆起，表面呈有光澤綠色，背面淡綠色；葉柄長5-10 mm，細長，光滑。

花小，黃色或暗黃色，徑5-5.5 mm，排成二列，總狀花序，無香味；花莖生長於假球莖先端，長10-14 cm，拱形或下垂、彎曲；鞘數枚，覆瓦狀排列；苞片卵形，長2.2-2.7 mm，先端鈍；花梗連同子房長2-2.5 mm，光滑；萼片擴展，長3-3.5 mm，寬1-1.5 mm，後萼片披針形，先端銳尖，側萼片潤卵形，脈1條；花瓣線狀披針形，略呈鐮刀狀，長3 mm，寬1 mm，先端銳尖；唇瓣小，略呈囊狀，3裂，長1 mm，寬約2 mm，中裂片深凹頭，中有尖突；側裂片潤卵形，先端鈍，基部有一厚而部份離生的硬塊。蕊柱小，長約1 mm。

菲律賓。台灣，生長於蘭嶼，低海拔約300-600 m山地，着生於樹幹上，甚為常見。

61. 倒垂蘭 (*Diplorprora championi* (Lindley) Hook.f.)

Epiphytes; stem slender, pendulous or rarely slightly ascending, 8-16 cm long, glabrous, green. Leaves alternate, falcately oblong or falcately lanceolate, 7-8 cm long, 1.5-2.5 cm wide, acute to acuminate, obtuse and sheathed at the base, rather thin-texture, entire, midrib impressed surface; sheathes 2-4 mm long.

Flowers 5-9, small, fleshy, 8-12 mm across, slightly fragrant, in axillary racemose; scape produced from upperward leaf-axils, pendulous or ascending, 10-15 cm long; the pedicels with ovaries 5-7 mm long, glabrous; bracts yellowish white, widely triangular, 3-4 mm long, amplexical at the base; sepals yellowish white or pale yellow, spreading, obovate-oblong, 8-10 mm long, 3-4 mm wide, keeled without, rounded, more or less narrowed at the base; petals yellow, spreading, linear obovate, 7-9 mm long,

3-3.5 mm wide, obtuse at apex; lip yellow or yellowish white without, spotted or streaks with dull red or pink within, widely sampan-shaped, 4-8 mm long, about 3 mm wide, linear-caudate at apex, and tapering to a 1-2 mm long 2-tailed tip; column about 2 mm long.

Himalayas, Burma and s. China. Taiwan, known at medium altitudes of 800-1700 m, confined to the central and southern parts of the island, epiphytic on tree branches, not common.

Hayata enumerated this species in his work of *Enumeratio Plantarum Formosanarum*, but eight years later, he described a new species *D. kusukusensis* in stead of the former chiefly based on the characters of longer threads at apex of the lip. Compare with the morphological characters of two species and geographical consideration, *D. kusukusensis* should most probably be treated as conspecific with *D. championii*.

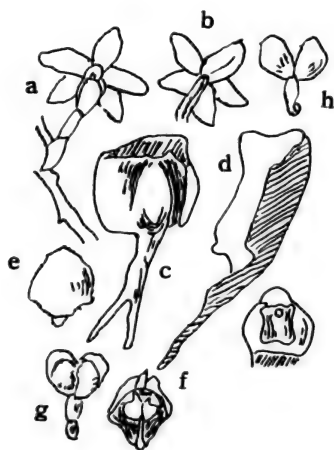


圖 (Fig) 55 恒春倒垂蘭 (*Diplorprora championii*)

a. 花序的一部份 (Part of inflorescence)

b. 花 (Flower)

c.d. 唇瓣 (Lip)

e.f. 花藥 (An anther) g.h. 花粉塊 (Pollinarium)

着生蘭，莖細長，下垂，長8-16 cm，光滑，綠色。葉互生，鐮刀狀長橢圓形或鐮刀狀披針形，長7-8 cm，寬1.5-2.5 cm，先端銳尖至漸尖，基部鈍而有鞘，厚紙質，全緣，中肋於表面凹下；鞘長2-4 mm。

花5-9枚，小，肉質，徑8-12 mm，略帶有香味，呈腋生的總狀花序，花莖抽自於先端的葉腋，下垂，長10-15 cm；花梗連同子房長5-7 mm，光滑；苞片黃白色，潤三角形，長3-4 mm，基部抱莖；萼片黃白色或淡黃色，擴展，倒卵狀長橢圓形，長8-10 mm，寬3-4 mm，外面具龍骨突起，先端圓，基部略狹；花瓣黃色或淡黃色，擴展，線狀倒卵形，長7-9 mm，寬3-3.5 mm，先端鈍；唇瓣外面黃色或淡黃色，內面具有暗紅色或粉紅的斑點或條紋，呈潤舢舨形，長4-8 mm，潤約3 mm，先端呈線狀短尾狀，其最先端並有2長1-2 mm的尾狀物，蕊柱長2 mm。

喜馬拉雅山、緬甸及中國南部，台灣，生長於中部及南部中海拔約800-1700 m的山地，着生於樹冠層的先端，較為稀少。

62. 烏來倒垂蘭 (*Diplorprora uraiensis* Hayata)

Epiphytes; roots elongate; stem slender, pendulous, 15-30 cm long, green, sometimes branched in upper part, leafy.

Leaves alternate, nearly distichous, oblong-lanceolate or falcate-lanceolate, 8-12 cm long, 2-3 cm wide, coriaceous, fleshy, entire, emarginate or slightly 2-lobed at apex, contracted at the base, midrib elevated beneath; veins inconspicuous; sheathes 2-3 mm long.

Flowers 2-4, medium-sized, yellow, scentless, in axillary racemose; scape 5-6 cm long, glabrous; bracts lanceolate, 2-3 mm long, cauduous; the pedicels with ovaries 4-6 mm long; sepals oblong-lanceolate, 7-9 mm long, 3-4 mm wide, obtuse-rounded, narrowed at the base, the lateral ones usually broader than the dorsal; petals oblique linear-oblong, 7-9 mm long, 2.5-3.5 cm wide, obtuse at apex, 5-nerved; lip white, yellowish spots within, very broadly sampan (small boat)-shaped, 8-10 mm long, 4-5 mm wide, linear-caudate at apex and tapering to a 1-2 mm long 2-tailed

tip; thickening 1, at the base of the lip, obtriangular-oblong, 3-3.5 mm long, 1.5 mm across; column 2-3 mm long, white.

Capsules cylindric, acute on both ends, 3-4 cm long, about 1 cm across.

Endemic, epiphytic on mossy rocks under forests, confined to northern part at the elevations of 700-1400 m, rather common, especially on Urai area.

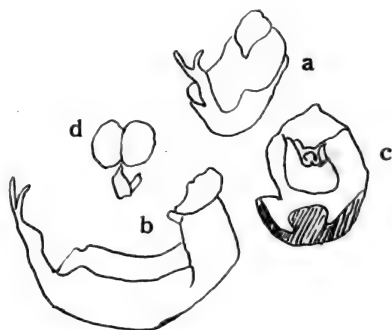


圖 (Fig) 56 烏來倒垂蘭 (*Diplorprora uraiensis*)

a. b. 唇瓣 (Lip) c. 蕊柱 (Column)

d. 花粉塊 (Pollarium)

着生蘭，根甚長，莖細長，下垂，長 15-30 cm，綠色，先端具有分枝。

葉互生，幾呈二列狀排列，長橢圓狀披針形或鐮刀狀披針形，長 8-12 cm，寬 2-3 cm，革質，略呈肉質，全緣，先端凹或淺 2 裂，基部緊縮狀，中肋於背面隆起，側脈不明顯；葉鞘長 2-3 mm。

花 2-4 枚，中型，黃色，無香味，呈腋生的總狀花序，花莖長 5-6 cm，光滑；苞片披針形，長 2-3 mm，早落；花梗連同子房長 4-6 mm；萼片長橢圓狀披針形，長 7-9 mm；寬 3-4 mm，先端鈍且圓，基部漸狹，側萼片常較後萼片為寬；花瓣歪線狀長橢圓形，長 7-9 mm，寬 2.5-3.5 cm，先端鈍，脈 5 條，唇瓣白色，內面有黃色的斑點，呈潤舢舨狀，長 8-10 mm，寬 4-5 mm，先端線尾狀，且在最先端延伸分枝出長 1-2 mm 的分枝，附屬物

1枚，位於唇瓣的基部，倒三角狀長橢圓形，長3-3.5 mm，徑1.5 mm；蕊柱長2-3 mm，白色。

蒴果圓柱形，兩端均銳尖，長3-4 cm，徑約1 cm。

固有，着生於多苔蘚類的岩石上或樹幹上，僅見於台灣北部，約海拔700-1400 m的山地，尤多見於烏來山區。

63. 着類蘭 (*Epigeneium nakaharai* (Schltr) Summer)

Epiphytes; pseudobulbs thickened, closely approximated one by one, elongate ovate or oblong, green, 1.5-25 cm long, 7-8 mm across, 4-6-ridged; sheathes 2-3, widely triangular, light brown, membranous, 1-2.5 cm long, 7-8 mm wide, closely covered the pseudobulb firstly and then cauduous.

Leaf one, at the top of the pseudobulb, oblong or obovate-oblong, 2.5-4 cm long, 1-2 cm wide, coriaceous, short-petiolated, obtuse and emarginate, rounded at the base, midrib impressed surface and elevated beneath; petioles 2-3 mm long.

Flower solitary or rarely 2, rather large; scape or pedicels produced from the top of pseudobulb, 1-1.5 cm long; bracts lanceolate or linear-lanceolate, membranaceous, brown, 4-6 mm long, 1-2 mm wide; sepals light yellowish white, subequal, triangular, 10-15 mm long, 5-8 mm wide, acute at apex; the lateral ones adnate to the column-foot and forming a 1-2 mm long mentum; petals linear-lanceolate, pale white, 8-12 mm long, 3-4 mm wide, obtuse at apex; lip violin-shaped, 7-15 mm long, 7-10 mm wide, dark red and emarginate at apex, yellowish white at the base; keels 2; column 2-3 mm long; column-foot 3-5 mm long. Vietnam, Taiwan, epiphytic on tree trunks from low to medium altitudes of 700-2200 m throughout the island, very common.

着生蘭，假球莖厚，緊密排列，長卵形或長橢圓形，綠色，長1.5-2.5 cm，徑7-8 mm，上有4-6條稜狀突起，鞘2-3枚，闊三角形，淡褐色，膜質，長1-2.5 cm，寬7-8 mm，初緊密覆蓋於假球莖上，後逐脫落。

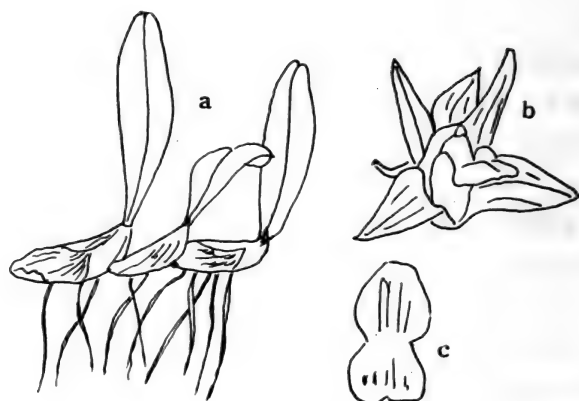


圖 (Fig) 57 着類蘭 (*Epigeneium nakaharai*)
 a. 植物體 (Plant body) b. 花 (Flower)
 c. 唇瓣 (Lip)

葉一枚，着生於假球莖的先端，長橢圓形或倒卵狀長橢圓形，長 2.5-4 cm，寬 1-2 cm，革質，具有短葉柄，先端鈍且凹頭，基部圓，中肋於表面凹下而於背面隆起；葉柄長 2-3 mm。

花一枚，少數亦有 2 枚者，較大，抽自於假球莖先端，花莖或花梗長 1-1.5 cm，苞片披針形或線狀披針形，膜質、褐色，長 4-6 mm，寬 1-2 mm；萼片淡黃白色，近似整齊，三角形，長 10-15 mm，寬 5-8 mm，先端銳尖；側萼片基部與蕊柱足相連而形成一長 1-2 mm 的類；花瓣線狀披針形，淡黃白色，長 8-12 mm，寬 3-4 mm，先端略鈍；唇瓣略呈提琴形，長 8-16 mm，寬 7-10 mm，棕紅色，先端圓或截斷狀且略凹頭，基部淡黃色，花盤有隆起稜線 2 條，蕊柱長 2-3 mm；蕊柱足長 3-5 mm。

越南、台灣，着生於樹幹上，生長於低至中海拔約 700-2200 m 處，全島皆有，甚為普遍。

64. 小筒脚蘭 (*Eria amica* Reichb. f)

Epiphytes; pseudobulbs closely approximate, cylindrical, 3-5 cm long, 4-5 mm in diameter, fleshy; roots filiform, slender, 3-5 cm long, somewhat creeping.

Leaves 3-5, terminal on the pseudobulb, oblanceolate or

lanceolate, 6-8 cm long, 8-11 mm wide, acuminate, attenuate at base, coriaceous, green or lightly yellowish green surface, pale green beneath.

Flowers 3-4, remotely racemose, medium-sized, 8-10 mm in diameter, yellowish green with brownish streaks; scape produced from leaf-axil, 4-6 cm long, pubescent, ascending; pedicels with ovaries 8-12 mm long, tomentose; bracts ovate, 8-10 mm long, about 5 mm wide, acute at apex; the dorsal sepal oblong, 10-12 mm long, about 4 mm wide, obtuse at apex, slightly contracted at base; with 5 brownish streaks; the lateral ones oblique oblong-triangular, 8-10 mm long, 5-6 mm wide, obtuse, broad and somewhat adnate to the column at base; petals oblong-lanceolate, 9-10 mm long, about 3 mm wide, obtuse, contracted at base, 3-brownish streaked; lip obovate in outline, 9-10 mm long, 6-7 mm wide, truncate and emarginate at tip at apex, cuneate and contracted at base, 3-lobed; the lateral lobes semi-oblong, 5-5.5 mm long, about 2 mm wide, the median lobe widely reniform or nearly square, 3-3.5 mm long, 4 mm wide, truncate and emarginate at tip at apex, 2-keeled in disc. column about 6 mm long.

Himalaya and Taiwan, known from central and southern parts of the island at the elevations of 700-1500 m on trunks.

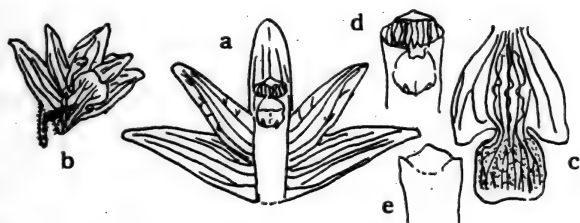


圖 (Fig) 58 小筒脚蘭 (*Eria amica*)

a. b. 花 (Flower) c. 唇瓣 (Lip)

e. 蕊柱 (Column)

着生蘭，假球莖緊密排列，圓柱形，長3-5 cm，徑4-5 mm，肉質；根線形，細長，長3-5 cm，略呈匍匐狀。

葉3-5枚，頂生於假球莖先端，倒披針形或披針形，長6-8 cm，寬8-11 mm，先端漸尖，基部漸狹，革質，表面綠色或淡黃綠色，背面淡綠色。

花3-4枚，呈疏生的總狀花序，中型，花開時徑為8-10 mm，黃綠色而有褐色的條紋；花莖頂生，抽自於莖先端的葉腋，長4-6 cm，有毛茸，斜上升；花梗連同子房長8-12 mm，有柔毛；苞片卵形，長8-10 mm，寬約5 mm，先端銳尖；後萼片長橢圓形，長10-12 mm，寬約4 mm，先端鈍，基部略緊縮，有五條褐色條紋；側萼片歪長橢圓形三角形，長8-10 mm，寬5-6 mm，先端鈍，基部闊而略與蕊柱相連；花瓣長橢圓狀披針形，長9-10 mm，寬約3 mm，先端鈍，基部緊縮狀，有褐色條紋3條；唇瓣外形呈倒卵狀，長9-10 mm，寬6-7 mm，先端截斷狀，最先端則略凹入，基部楔形而呈緊縮狀，3裂，側裂片半長橢圓形，長5-5.5 mm，寬約2 mm；中裂片闊腎形或略呈四方形，長3-3.5 mm，寬約4 mm，先端截斷狀，最先端略凹入，2隆起線於花盤；蕊柱長約6 mm。

喜馬拉雅山-台灣，產於中部及南部的山地，生長於海拔約700-1500 m處，着生於樹幹上。

65. 絨蘭 (*Eria corneri* Reichb.)

Epiphytes; pseudobulbs closely approximate, elliptic, 2-4.5 cm long, 5-15 mm across, compressed and angular, 2-3-bract-like sheathes at the base, cauduous, spatulate.

Leaves 2 at the top of the pseudobulb, oblong-lanceolate or obovate-lanceolate, 20-30 cm long, 3-5 cm wide, chartaceous or thickened membranaceous, acuminate, attenuate at the base, lustrous above, veins 3-5, elevated on back.

Flowers 15-30, medium-sized, in axillary raceme; scape produced from the base of pseudobulb, 10-20 cm long, glabrous, with few scales at the base; bracts minute or absent; the pedicels with ovaries 5-6 mm long; sepals equal, the dorsal one ovate-lanceolate, 6-8 mm long, 3-4 mm wide, white, the lateral ones auriculate at the base, somewhat co-

nate at base in front; petals linear-oblong, 5-6 mm long, 2-3 mm wide; lip spathulate, red or pink at apex, 3-lobed, recurved at apex. lateral lobes obtuse, the median lobe with 3-5 keels, shortly spur-like at the base; column short, about 3 mm long; pollinia ovoid.

Capsules cylindrical ovoid, 1-2 cm long.

S. China and Liukiu. Taiwan, at lower altitudes up to 1000 m, on tree trunks or occurring on mossy rocks.

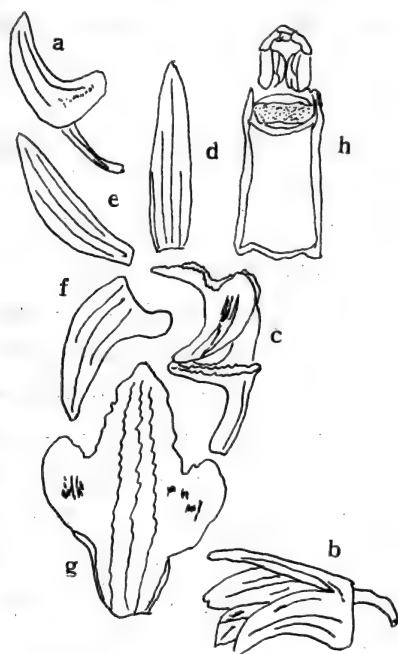


圖 (Fig) 59 絨蘭 (*Eria corneri*)

- a. 花芽 (Flowering bud) b. 花 (Flower)
 c. 花除去花萼及花瓣 (Flower taken off sepal and petal) d. 後萼片 (Dorsal sepal)
 e. 花瓣 (Petal) f. 側萼片 (Lateral sepal)
 g. 唇瓣 (Lip) h. 蕊柱 (Column)

着生蘭，假球莖橢圓形，長2-4.5 cm，徑5-15 mm，緊密排列，略早扁平且具有稜角，基部具有2-3枚苞片狀的鞘，早落，舌形。

葉二枚，着生於假球莖的先端，倒卵狀披針形或長橢圓狀披針形，長20-30 cm，寬3-5 cm，紙質或厚膜質，先端銳尖，基部漸狹，脈3-5條，隆起於背面；表面呈有光澤綠色，背面淡綠色。

花15-30枚，中型，呈腋生的總狀花序；花莖抽自於假球莖基部，長10-20 cm，光滑，基部具有幾枚鱗片狀鞘；苞片微小或無；花梗連同子房長5-6 mm，萼片整齊，後萼片卵狀披針形，長6-8 mm，寬3-4 mm，白色；側萼片基部呈耳狀；花瓣線狀長橢圓形，長5-6 mm，寬2-3 mm；唇瓣舌形，先端紅色或粉紅色，長度與花瓣同長，3裂，先端反捲，側裂片鈍，中裂片有3-5條隆起線（突起），基部具有短距狀。蕊柱短，長約3 mm；花粉塊卵形。

蒴果圓柱狀卵形，長1-2 cm。

中國南部及琉球。台灣，生長於低海拔至1000公尺的山地，着生於樹幹上或多苔蘚類的岩石上，較為常見。

66. 垂花絨蘭 (*Eria formosana* Rolfe)

Epiphytes; rhizome short; roots many, slender, reddish brown; stems fleshy, terete, clustered, branched on upper part, 20-60 cm long, 5-10 mm across, internodes 1.5-3 cm long; sheathes many, alternate, triangular, membranaceous, embracing the stem at the node bases, acute at apex.

Leaves 4-6, on the top of the stem, lanceolate or linear-lanceolate; 8-12 cm long, 1.5-2.5 cm wide, acuminate or acute, attenuate at the base, glabrous, subsessile, shining green surface, pale green beneath, 3-5-nerved, elevated on beneath; sheathes 5-10 mm long, green.

Flowers small, many, scentless, red, racemose, 3-5 mm in diameter; scape axillaris, produced from the terminal node base, 9-11 cm long, densely with red hairy; bracts ovate, yellowish white, 5-6 mm long, 2-2.5 mm wide, pubescent at first, and then glabrous; pedicels with ovaries 4-6 mm long, reddish hairy; sepals subequal, hairy without firstly, at last glabrous, glabrous within, the dorsal one oblong-lanceolate, 6-7 mm long, 2-2.5 mm wide, acuminate

at apex, the lateral one oblique oblong or ovate, 7-7.5 mm long, about 2 mm wide, adnate to the column and forming a 2 mm long mentum; petals linear-lanceolate, 6-7 mm long, 2-3 mm wide, glabrous, 3-nerved; lip ovate-oblong, 2-3.5 mm long, 1.5-2 mm wide, cuspidate-acute and recurved at apex, glabrous, minute ciliate on margin, entire, 4-linear ridges; column 2-2.5 mm long, curved.

The Philippines. Taiwan, epiphytic on tree trunks or tree branches at the elevations of 500-1200 m throughout the island, very common.

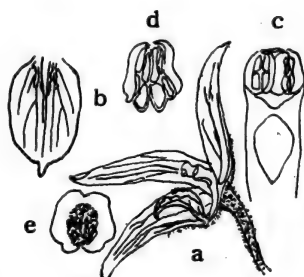


圖 (Fig) 60 垂花絨蘭 (*Eria formosana*)

- a. 花 (Flower) b. 唇瓣 (Lip)
c. 蕊柱 (Column) d.e. 藥蓋 (Operculum)

着生蘭，根莖短，根多數，細長，紅褐色；莖肉質，圓柱形，叢生，先端具有分枝，長 20-60 cm，徑 5-10 mm，節間長 1.5-3 cm；鞘多數，互生，三角形，膜質，基部在節處抱莖，先端銳尖。

葉 4-6 枚，着生於莖的先端，披針形或線狀披針形，長 8-12 cm，寬 1.5-2.5 cm，先端漸尖或銳尖，基部漸狹，光滑，近似無柄，表面有光澤綠色，背面白綠色，脈 3-5 條，隆起於葉背；鞘長 5-10 mm，綠色。

花較小，多數，無香味，紅色，總狀花序，徑 3-5 mm；花莖腋生，抽自於莖先端的節處，長 9-11 cm，密生有毛茸；苞片卵形，黃白色，長 5-6 mm，寬 2-2.5 mm，初有毛茸，後則光滑，花梗連同子房長 4-6 mm，有紅色毛茸；萼片近似整齊，初外面有毛茸，後逐光滑，內面光滑，後萼片長橢圓狀披針形，長 6-7 mm，寬 2-2.5 mm，先端漸尖形；側萼片歪

長橢圓形或卵形，長7-7.5 mm，寬約2 mm，與蕊柱相連而形成長2 mm的頰；花瓣線狀披針形，長6-7 mm，寬2-3 mm 光滑，脈3條，唇瓣卵狀長橢圓形，長2-3.5 mm，寬1.5-2 mm，先端短尾狀銳尖而略反捲，光滑，邊緣略有毛緣，全緣，有4條隆起線；蕊柱長2-2.5 mm，先端反捲。

菲律賓。台灣，生長於低至中海拔約500-1200 m的山地，着生於樹幹的先端，全島均有分佈，甚為普遍。

67. 長莖絨蘭 (*Eria ovata* var *retroflexa* (Lindley)

Garay & Sweet)

Epiphytes; stems clustered, simple, erect, elongate, cylindrical, 20-25 cm long, 1-1.5 cm in diameter, fleshy; sheathes 2-3, basal, membranous, brownish red, hyaline, broadly ovate, about 1 cm long. Leaves 4-5, at the top of the stem, linear-oblong to oblong-lanceolate or elongate-oblong, 14-16 cm long, 3-4 cm wide, obtuse at apex, attenuate at the base, coriaceous, entire or slightly wavy on margin; veins 5-7 elevated beneath.

Flowers rather small, numerous, creamy yellow, scentless, 5-7 mm in diameter; scape produced from the terminate leaf-nodes, axillary, 10-15 cm long, greenish yellow, glabrous; bracts ovate, pale yellow, 4-5 mm long, about 2.5 mm wide, obtuse at apex, the pedicel with ovaries 4.5-5.5 mm long, pale yellow; sepals subequal, lanceolate, 6.5-7.5 mm long, about 2.5 mm wide, glabrous, the lateral ones usually adnate to the column at the base and forming a 2-2.5 mm long mentum, obtuse at apex, slightly contracted at the base; petals lanceolate, 3-nerved, 5.5-6 mm long, about 1.8-2.2 mm wide; lip spatulate-ovate, purple red, 3.5-4.5 mm long, about 2.5 mm wide, acute at apex, abruptly contracted at the base, with 3 keels on upper surface; column short, obovate, about 1.5 mm long.

The Philippines, Borneo, Celebes, New Guinea and Ryu-

kyu. Taiwan, at low to medium altitudes of 300-900 m throughout the island, epiphytic on tree trunks or tree crown, very common.



圖 (Fig)61 長莖絨蘭 (*Eria ovata* var *retroflexa*)

- a. 植物體 (Flowering plant)
 b. 花 (Flower) c. 唇瓣 (Lip)
 d. 卵葉絨蘭的花 (*Eria ovata*, Flower)
 e. 卵葉絨蘭的唇瓣 (*Eria ovata*, Lip)

着生蘭，莖叢生，單立、直立、甚長，圓柱形，長20-25 cm，徑1 - 1.5 cm，肉質，鞘2-3枚，基生，膜質，紅褐色，透明，瀾卵形，長約

1 cm; 葉4-5枚，着生於莖的先端，線狀披針形至長橢圓狀披針形或長橢圓形，長14-16 cm，寬3-4 cm，先端鈍，基部漸窄，革質，全緣或略呈波狀緣，脈5-7條，隆起於背面。

花較小，多數，淡黃色或乳黃色，無香味，徑5-7 mm；花莖抽自於莖先端的葉鞘節處，腋生，長10-15 cm，綠黃色、光滑；苞片卵形，淡黃色，長4-5 mm，寬約2.5 mm，先端鈍，花梗連同子房長4.5-5.5 mm，淡黃色；萼片近似整齊，披針形，長6.5-7.5 mm，寬約2.5 mm，光滑；側萼片常與蕊柱相連而形成一長2-2.5 mm的頰，先端鈍，基部略呈緊縮狀；花瓣披針形，脈3條，長5.5-6 mm，寬約1.8-2.2 mm；唇瓣舌狀卵形，紅紫色，長3.5-4.5 mm，寬約2.5 mm，先端銳尖，基部突緊縮狀，上面有隆起線3條；蕊柱短，倒卵形，長約1.5 mm。

菲律賓、婆羅州，西里伯斯，新幾內亞及琉球。台灣，生長於全島低至中海拔約300-900 m的山地，着生於樹幹或樹冠層上，較為常見。

68. 阿里山絨蘭 (*Eria reptans* (Fr. & Sav.) Makino)

Epiphytes; pseudobulbs narrowly oblong-cylindrical to oblong, densely arranged, slightly flattened, 15-25 cm long, 6-9 mm across, reddish brown when winter; sheathed while young.

Leaves 2, rarely 3, at the top of pseudobulb, elliptic-lanceolate, 3-5 cm long, 1-2 cm wide, acuminate, narrowed to the base and jointed with the short sheathes, deciduous in autum.

Flowers 1 or 2, white; scape produced from the top of pseudobulb, 2-6 cm long, pubescent; bracts narrowly ovate, 3-5 mm long; pedicels with ovaries about 5 mm long; dorsal sepal elliptic-lanceolate, free, 8-11 mm long, 3-5 mm wide; lateral sepals somewhat oblique ovate, united at the base and forming a 3-4 mm long mentum; petals free, broadly lanceolate, 8-10 mm long; lip rather short, obovate, fleshy, 3-ribbed within, pale reddish brown in center, 3-lobed, short spur at the base; column terete, 3-5 mm long, pollinia 8.

Capsules elliptic, 2-3 mm long.

China, s. Japan and Ryukiu. Taiwan, at medium altitudes of 1000-1800 m in central mountain regions, usually on rocks or tree trunks.

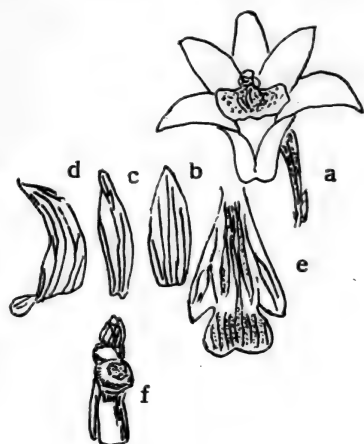


圖 (Fig) 62 阿里山絨蘭 (*Eria reptans*)

- | | |
|---------------|------------------------|
| a. 花 (Flower) | b. 後萼片 (Dorsal sepal) |
| c. 花瓣 (Petal) | d. 側萼片 (Lateral sepal) |
| e. 唇瓣 (Lip) | f. 蕊柱 (Column) |

着生蘭、假球莖緊密排列，長橢圓狀圓柱形至長橢圓形，略呈扁平，長 15-25 cm，徑 6-9 mm，冬時呈紅褐色，幼時具有葉鞘。

葉 2 或 3 枚，着生於假球莖的先端，橢圓狀披針形，長 3-5 cm，寬 1-2 cm，先端漸尖形，基部狹而以關節與短葉鞘相連，秋時葉即脫落。

花 1 或 2 枚，白色；花莖長 2-6 cm，抽自於假球莖的先端，有毛茸；苞片狹卵形，長 3-5 mm，花梗連同子房長約 5 mm，後萼片橢圓狀披針形，離生，長 8-11 mm，寬 3-5 mm，側萼片基部略歪、卵形、基部相連而形成一長 3-4 mm 的頰；花瓣離生，潤披針形，長 8-10 mm；唇瓣略短，倒卵形，肉質，內面有隆起線 3 條，中部略呈淡紅褐色，3 裂，基部具有短距，蕊柱圓柱形，長 3-5 mm；花粉塊 8 枚。

蒴果橢圓形，長 2-3 mm。

中國南部、日本及琉球。台灣，生長於中海拔約 1000-1800 m 山地，全島均有分佈，常着生於岩石及樹幹上，較為常見。

69. 台灣小繡蘭 (*Erythrodes formosana* Schltr)

Terrestrials; roots elongate; stem simple, erect or ascending, 50-60 cm long, 3-4 mm in diameter, green, subglabrous; internodes 4-8 cm long, leafy at the base.

Leaves 4-5, alternate, oblong or elliptic, 7-8.5 cm long, 4-4.5 cm wide, acute, attenuate to the petioles at the base, glabrous, chartaceous, dark green surface, pale green beneath, 3-5-nerved, elevated beneath, entire or more or less wavy on margin; the petioles 2.5-3 cm long, glabrous, sheathing and amplexicaul at the base.

Flowers numerous, small, not widely opened, 4-6 mm in diameter; scape terminal, 30-40 cm long, erect or ascending, pubescent; bracts lanceolate, 1-2 cm long, 4-8 mm wide, 3-nerved, acute, amplexicaul at the base; the pedicels with ovaries 7-10 mm long, 2 mm in diameter, glandular pubescent, brown; sepals oblong, subfleshy, hirsute without, pale brownish green, 3-nerved, 4-6 mm long, 1.5-2 mm wide, obtuse at apex, the lateral ones usually oblique at the base; petals oblanceolate, membranous, 5-5.5 mm long, about 1.5 mm wide, obtuse at apex, 3-nerved, pilose without, concave and glabrous within; lip adnate to the column at the base, spurred, 3-lobed, the lateral lobe minute, erect, the median lobe white, ovate, rounded and emarginate at apex, slightly reflexed; spur subconical, brownish red, 3-4 mm long, about 2 mm across; column short, erect, cylindrical, 1-1.5 mm long.

Endemic, under the evergreen forests at the lower altitudes below 1000 m in northern and central part of the island.

地生蘭、根甚長；莖單生，直立或近似如此，長 50-60 cm，徑 2-3

mm，綠色，近似光滑，節間長4-8 cm，基部有葉。

葉4-5枚，互生，長橢圓形或橢圓形，長7-8.5 cm，寬4-4.5 cm，先端銳尖，基部漸狹而延伸至葉柄，光滑，紙質、表面暗綠色，背面淡綠色，脈3-5條隆起於背面，全緣或多少呈波狀緣；葉柄長2.5-3 cm，光滑，基部有鞘且抱莖。

花多數，較小，不十分張開，徑4-6 mm，花莖頂生，長30-40 cm，直立，有毛茸；苞片披針形，長1-2 cm，寬4-8 mm，脈3條；先端銳尖，基部抱莖；花梗連同子房長7-10 mm，徑約2 mm，有腺毛、褐色；萼片長橢圓形，近似肉質，外面有毛茸，淡褐綠色，脈3條，長4-6 mm，寬1.5-2 mm，先端鈍，側萼片基部略歪；花瓣倒披針線，膜質，長5-5.5 mm，寬約1.5 mm，先端鈍，脈3條，外面有柔毛，內面凸出而光滑；唇瓣基部與蕊柱相連，有距，3裂，側裂片微小，直立，中裂片白色，卵形，先端圓且略凹頭，微反捲；距近似圓柱形，紅褐色，長3-4 mm，徑約2 mm；蕊柱短，直立，圓柱形，長1-1.5 mm。

固有，生長於北部及中部約1000公尺以下的山地，常見於叢林下，較為常見。

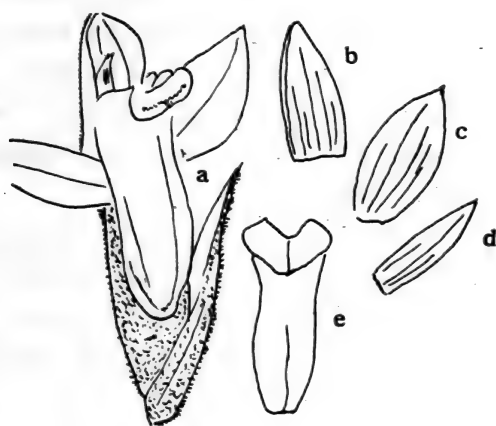


圖 (Fig)63 台灣小蠅蘭 (*Erythrodendron formosana*)

- a. 花 (Flower)
- b. 後萼片 (Dorsal sepal)
- c. 側萼片 (Lateral sepal)
- d. 花瓣 (Petal)
- e. 唇瓣及距 (Lip and spur)

70. 禾葉芋蘭 (*Eulophia graminea* Lindley)

Terrestrials; pseudobulbs ovoid, 3-5 cm in diameter; stem simple, erect, glabrous, 40-60 cm long, narrowly striated, sheathed at the base.

Leaves 3-5, grammifolia-like, linear, 15-25 cm long, 5-6 mm wide, acute at apex, amplexical at base, chartaceous, entire, plicate.

Flowers numerous, grayish brown or light brown, 1.2-1.7 cm long, about 1.5 cm in diameter; scape terminal, 20-40 cm long, pubescent, erect, slender; bracts ovate, 6-7 mm long, 1-1.5 mm wide, acute at apex, the pedicels with ovaries 9-12 mm long; sepals narrowly lanceolate, 12-15 mm long, about 2.5 mm wide, acute at apex, slightly narrow at base; petals lanceolate or obovate-lanceolate, 10-11 mm long, 3-3.5 mm wide, acute at apex, erect, lip obovate, 11-12 mm long, about 8 mm wide, obtuse at apex, contracted at base, 3-lobed, spurred, the lateral lobes erect, entire, eroso-denticulate, and obtuse at apex, the median lobe patent, globose-obovate, 4-5 mm long, about 5 mm wide, rounded, truncate at apex, slightly contracted at base; disc 3-lamellated, scattered with fimbriate-cristis in the middle; column short.

Assam, Ceylon, Burma, Andaman island, Malay-peninsula, Singapore, Vietnam, And s. China. Taiwan, known from sea side up to 1200 m under the forests, not common.

地生蘭、假球莖卵形，徑3-5 cm；莖單立，無分枝、直立、光滑，長40-60 cm，有狹稜角，基部有鞘。

葉3-5枚，禾葉狀，線形，長15-25 cm，寬5-6 mm，先端銳尖，基部抱莖，紙質，全緣，有皺折。

花多數，灰褐色或淡褐色，長1.2-1.7 cm，徑約1.5 cm；花莖頂生，長20-40 cm，有毛茸，直立、細長；苞片卵形，長6-7 mm，寬1-1.5 mm，先端銳尖；花梗連同子房長9-12 mm；萼片狹披針形，長12-15 mm，寬約2.5 mm，先端銳尖，基部略狹；花瓣披針形或倒卵狀披針



圖 (Fig) 64 禾葉芋蘭 (*Eulophia graminea*)
 a. 植物體 (Plant body)
 b. 花序 (Inflorescence)
 c. 花 (Flower) d. 後萼片 (Dorsal sepal)
 e. 側萼片 (Lateral sepal)
 f. 花瓣 (Petal) g. 唇瓣 (Lip)

形，長10-11 mm，寬3-3.5 mm，先端銳尖，直立；唇瓣倒卵形，長11-12 mm，寬約8 mm，先端鈍，基部緊縮狀，3裂，有距；側裂片直立、全緣，先端鈍且有粗鋸齒，中裂片顯著，球狀倒卵形，長4-5 mm，寬約5 mm，圓，先端截斷狀，基部略呈緊縮狀，花盤有3條隆起線。中部散生

有細絲狀雞冠狀突起，莖短。

印度阿薩密省、錫蘭、緬甸、馬來半島、新加坡、越南及中國南部。台灣，生長於海邊至 1200 公尺的山地，常見於森林下，惟不甚常見。

71. 山珊瑚 (*Galeola altissima* (Blume) Reichb.f)

Saprophytes; roots elongate, well-developed; stem erect or somewhat scandent, 1 to 5 m long; brownish yellow, much branched, lustrous, flexuous, glabrous; the nodes slightly thickened; sheathes few, scale-like.

Leafless.

Flowers numerous, medium-sized, 9-15 mm in diameter, 1-2 cm long, racemose; scape 40-60 cm long, terminal, ascending, yellow, glabrous, much branched; bracts minute, 4-5 mm long, lanceolate, acute at apex; the pedicels with ovaries 5-7 mm long, glabrous; sepals equal, linear-oblong, 1-2 cm long, 4-5 mm wide, obtuse at apex, 5-nerved; petals narrower than the sepals, 3-nerved, rounded at apex, somewhat connated at the base; lip navicular, . erose and undulate on upper margins, with a bilobed woolly mass above it, 3-lobed, lateral lobes short, rounded; the median lobe shortly bifid at apex, fleshy, keeled at the base; column rather long, about 7 mm long, curved.

Capsules linear, 15-16 mm long, about 1 mm across.

India, Malaysia, Java and Ryukyu. Taiwan, at medium altitudes of 1300-2400 m throughout the island, on exposed field and grassland, rather common.

寄生蘭、根甚長，發育良好；莖直立或有些匍匐狀，長 1-5 公尺，黃褐色，具有多數分枝，有光澤、彎曲、光滑。節處略厚而膨大；鞘少數，鱗片狀。

無葉。

花多數，中型，徑 9-15 mm，長 1-2 cm，總狀花序；花莖長 40-60 cm，頂生，近似直立，黃色、光滑，具有多數分枝；苞片小，長 4-5 mm，披針形，先端銳尖，花梗連同子房長 5-7 mm，光滑；萼片整齊、線狀長

橢圓形，長1-2 cm，寬4-5 mm，先端鈍，脈5條；花瓣較花萼為狹，脈3條，先端圓，基部略相連，唇瓣上部皺折而略呈波狀，上端有一二裂繡毛狀硬塊，3裂，側裂片短，先端圓，中裂片先端短二裂，肉質，基部有隆起線；蕊柱較長，長約7 mm，彎曲。

蒴果線形，長15-16 mm，徑約1 mm。

印度、馬來西亞、爪哇及琉球、台灣，生長於中海拔約1300-2400 m，全島均有分佈，着生於開潤地或草地，較為常見。

72. 密花地寶蘭 (*Geodorum densiflorum* (Lam) Schltr.)

Terrestrials; pseudobulbs closely approximate, ovoid, 2-2.5 cm across, fleshy, white or green; roots many, produced from pseudobulb, white, rather robust; stem erect, enclosed by the leaf-sheathes, 10-25 cm long, glabrous.

Leaves 2, rarely 3, alternate, nearly opposite, oblong-lanceolate, 25-35 cm long, 4-8 cm wide, acute or acuminate at apex, attenuate to the petioles and sheathes at base, fleshy chartaceous, lustrous green surface, pale beneath, many-veined elevated beneath.

Flowers many, pink, rarely white, not widely opened, racemose; scape produced from the base of pseudobulb, robust, arching, 30-50 cm long, glabrous, green; bracts lanceolate, 8-10 mm long, 3-3.5 mm wide, acute at apex; the pedicels with ovaries 7-9 mm long, glabrous, green; sepals oblong, 11-12 mm long, 4-4.5 mm wide, acute at apex, contracted at base; petals elliptic-ovate, 12-13 mm long, 5-6 mm wide, obtuse at apex, 1-nerved; lip elliptic, 12-15 mm long, 7-9 mm wide, spurred, obscurely 3-lobed, the lateral lobes minute, erect, with many purple veinlets inside, the median lobe flat, concave, with yellow notched and purple-brown veinlets; column about 5 mm long.

Lyukyu and the Philippines. Taiwan, known from central and southern parts of the island at lower altitudes of 100-500 m, on exposed field or grass-land, rarely under the fo-



圖 (Fig) 65 密花地寶蘭 (*Geodorum densiflorum*)

- a. 着花之植物體 (Flowering plant)
 b. 後萼片 (Dorsal sepal) c. 花瓣 (Petal)
 d. 側萼片 (Lateral sepal) e. 唇瓣 (Lip)
 f. 花縱切 (Transvetical cut of flower)
 g. 蕊柱 (Column) h. 果實 (Fruit)

rests.

地生蘭、假球莖緊密排列，卵圓形，徑 2-2.5 cm，肉質、白色或淡綠色；根多數，抽自於假球莖，白色，較粗。莖直立，包被於葉鞘內，長 10-25 cm，光滑。

葉 2 枚，少數亦有 3 枚者，互生略近似於對生，長橢圓狀披針形，長 25-35 cm，寬 4-8 mm，先端銳尖或漸尖，基部漸窄延伸至葉柄及葉鞘

，肉質狀紙質，表面呈有光澤綠色，裏面淡綠色，脈多數，隆起於背面。

花多數，粉紅色，少數亦有白色者，不十分張開，總狀花序；花莖抽自於假球莖基部，粗壯，先端下垂而呈拱形，長30-50 cm，光滑，綠色；苞片披針形，長8-10 mm，寬3-3.5 mm，先端銳尖；花梗連同子房長7-9 mm，光滑，綠色；萼片長橢圓形，長11-12 mm，寬4-4.5 mm，先端銳尖，基部緊縮；花瓣橢圓狀卵形，長12-13 mm，寬5-6 mm，先端鈍，脈1條；唇瓣橢圓形，長12-15 mm，寬7-9 mm，有距，不明顯3裂，側裂片微小，直立，內面有多數紫色脈紋，中裂片扁平、凸出，有黃色斑點及紫褐色脈紋；蕊柱長約5 mm。

琉球及菲律賓。台灣，生長於中部及南部低海拔約100-500 m山地，多見於開濶地或草生地，亦有生長於樹蔭下者。

73. 大武斑葉蘭 (*Goodyera daibuzanensis* Yamamoto)

Terrestrials; rhizomes elongate, creeping; roots filiform, 5-7 cm long, pubescent; stem simple, creeping at base, erect or ascending upward, 10-20 cm long, glabrous.

Leaves oblong-lanceolate, 4.5-6.5 cm long, 2-2.5 cm wide, acuminate, acute at the base, entire, midrib impressed surface and elevated beneath, glabrous, usually with white spots surface, lateral veins 5-6; petioles 1.5-2.5 cm long, sheathing at the base; sheaths 1-1.2 cm long, about 1-1.5 mm in diameter, glabrous, completely amplexical the stem at the base.

Flowers 5-12, white, medium-sized, 1-1.2 cm in diameter, racemose; the scape terminal, erect or ascending, 10-15 cm long, pubescent; bracts lanceolate, 1-1.5 cm long, about 4 mm wide, membranous, amplexical at the base, pubescent without, the pedicels with ovaries 1-1.5 cm long, about 3 mm in diameter, pubescent, 3-striated, the dorsal sepal strongly concave, boat-shaped, 10-12 mm long, about 4 mm wide, acute at apex, pilose without, glabrous within. 1-nerved, usually with petals and forming a hood; the lateral sepals ovate-lanceolate, more or less oblique, 10-12 mm

long, about 5 mm wide, 1-nerved, obtuse or acuminate at apex
pubescent without, glabrous within, petal spatulate, oblique
10-12 mm long about 5 mm wide obtuse at apex, attenuate



圖 (Fig) 66 大武斑葉蘭 (*Goodyera daibuzanensis*)

a. 植物體 (Flowering plant)

b. 後萼片 (Dorsal sepal)

c. 花瓣 (Petal)

d. 側萼片 (Lateral sepal)

e. 蕊柱 (Column)

at the base, 1-nerved; lip lanceolate, 9-10 mm long, 5-6 mm wide, acuminate at apex, wavy on margin, rounded-convex at the base, concave within, 5-7-nerved, glabrous without, hirsute within; column short, anthers cordate, attenuate at apex, 4-4.6 mm long, about 2.5 mm wide.

Endemic, known from the island at the elevations of 700-1600 m, under forests, common.

地生蘭，根莖甚長，匍匐；根線形，長5-7 cm，有毛茸；莖單立、基部呈匍匐狀，先端直立或近似如此，長10-20 cm，光滑。

葉長橢圓狀披針形，長4.5-6.5 cm，寬2-2.5 cm，先端漸尖形，基部銳尖，全緣，中肋於表面凹下背面隆起，光滑，常具有白色斑點；側脈5-6；葉柄長1.5-2.5 cm，基部有鞘，鞘長1-1.2 cm，徑1-1.5 mm，光滑，基部完全抱莖。

花5-12枚，白色、中型，徑1-1.2 cm，總狀花序；花莖頂生，直立或近似如此，長10-15 cm，有毛茸；苞片披針形，長1-1.5 cm，寬約4 mm，膜質，基部抱莖，外面有毛茸；花梗連同子房長1-1.5 cm，徑約3 mm，有毛茸，有稜線3條；後萼片甚槽狀，舟形，長10-12 mm，寬約4 mm，先端銳尖，外面有毛茸，內面光滑，脈1條，常與花瓣形成花兜；側萼片卵狀披針形，基部略歪，長10-12 mm，寬約5 mm，脈1條，先端漸尖或鈍，外面有毛茸，內面光滑；花瓣舌形，基部歪，長10-12 mm，寬約5 mm，先端鈍，基部漸狹，脈1條；唇瓣披針形，長9-10 mm，寬5-6 mm，先端漸尖形，波狀緣，基部圓略呈凸出，內面槽狀，脈5-7條，外面光滑，內面有毛茸；蕊柱短；花藥心形，先端漸狹，長4-4.5 mm，寬約2.5 mm。

固有，生長於全島海拔約700-1600 m的山地，常見於常綠闊葉樹林中。

74. 紅花斑葉蘭 (*Goodyera grandis* (Blume) Blume)

Terrestrials; stem simple, terete, 30-50 cm long, 4-6 mm in diameter, usually creeping at base.

Leaves 7-9, alternate, oblong, elliptic or ovate-oblong, 9-10 cm long, 4-5 cm wide, acuminate or short-cuspidate at apex, obtuse, sometimes cuneate at base, lustrous green

surface, glaucous beneath; the petioles 4-5 cm long, groove, glabrous, sheathed and amplexical at base.

Flowers 15-20, pink or lightly redish brown, 6-7 mm in diameter, spicate; scape terminal, 10-15 cm long, whitish hairy; bracts lanceolate, hirsute, ciliate on margin, about 1.5 cm long, acuminate at apex, ascending; ovaries 6-7 mm long, shortly hirsute; sepals hirsute without, the dorsal one oblong-lanceolate, 7-9 mm long, about 3 mm wide, obtuse at apex, strongly contracted at base, lateral sepals spreading oblong, rather broader and slightly oblique at base; same as the dorsal sepal in length; petals oblanceolate-spathulate, 7.5-8mm long, about 2 mm wide, obtuse at apex, gradually attenuate at base, 1-nerved; lip white within, yellow outside, caudate - rounded, reflexed, at apex, saccate at base, hairy inside; column 4-4.6 mm long, white; rostellum about 1.5 mm long; anthers ovoid, about 3 mm long, acuminate at apex.

Malay peninsula, Sumatra, Java, New Guinea, Australia and Lyukyu. Taiwan, at lower altiudes of 300-900 m throughout the island, under the forests or moist shade places.

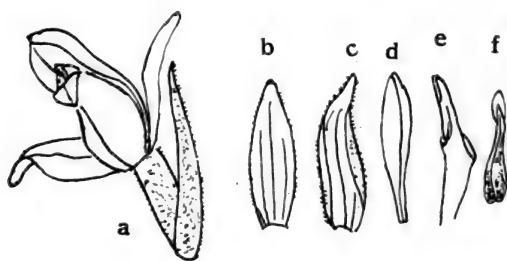


圖 (Fig) 67 紅花斑葉蘭 (*Goodyera grandis*)

- a. 花 (Flower) b. 後萼片 (Dorsal sepal)
c. 側萼片 (Lateral sepal) d. 花瓣 (Petal)
e. 蕊柱 (Column) f. 花粉塊 (Pollinia)

地生蘭，莖單立無分枝，圓柱形，長30-50 cm，徑4-6 mm，基部

常呈匍匐狀。

葉7-9枚，互生，長橢圓形，橢圓形或卵狀長橢圓形，長9-10 cm，寬4-5 cm，先端漸尖或短尾狀，基部鈍或有時呈楔形，厚紙質，光滑，有葉柄，全緣，表面呈有光澤綠色，背面粉白綠色，葉柄長4-5 cm，有溝紋、光滑，基部有鞘且抱莖。

花15-20枚，粉紅色或淡紅褐色，徑6-7 mm，穗狀花序；花莖頂生，長10-15 cm，有白色柔毛；苞片披針形，有毛茸，毛緣，長約1.5 cm，先端漸尖形；子房長6-7 mm；有短毛茸；萼片外面有毛茸，後萼片長橢圓狀披針形，長7-9 mm，寬約3 mm，先端鈍，基部緊縮狀；側萼片擴展，長橢圓形，基部較寬且略歪，與後萼片同長；花瓣倒披針狀舌形，長7.5-8 mm，寬約2 mm，先端鈍，基部漸窄，脈1條；唇瓣內面白色，外面黃色，尾狀圓形，先端反捲，基部囊狀，內面有毛茸；蕊柱長4-4.5 mm，白色；喙長約1.5 mm；花藥卵形，長約3 mm，先端漸尖。

馬來半島，蘇門答臘，爪哇、新幾內亞、澳大利亞及琉球。台灣，生長於低海拔約300-900 m，全島皆有分佈，常見於森林下或較蔭濕地，較為常見。花期4-5月，惟本種不易開花。

75. 翠玉斑葉蘭 (*Goodyera maximowiziana* Makino)

Terrestrials; stem simple, 7-10 cm long, erect or from a creeping base.

Leaves 4-5, alternate, oblong-ovate or elongate ovate, 3-4 cm long, 1.5-2.5 cm wide, acute at apex, acute to rounded at base, lustrous dark green surface, entire or slightly wavy on margin, thinly chartaceous; the petioles 8-10 mm long, broader and amplexicaul at base.

Flowers 4-7, pink or lightly reddish purple, spicate, 6-8 mm in diameter; scape terminal, 8-10 cm long, glabrescent or sparingly papillose-pilose; bracts lanceolate, lightly brown, 1-1.5 cm long, membranous, 1.2-1.6 cm long, 3-4 mm wide, nearly erect; dorsal sepal elongate ovate, 10-11 mm long, about 9 mm wide, lateral sepals obliquely ovate, 9-10 mm long, about 9 mm wide, obtuse at apex; petals broadly oblanceolate, about 10 mm long, 4 mm wide, closely appressed to the dorsal sepals; lip nearly as long as the sepals,

saccate-inflated at base, pilose within, the limb ovate, 6.5-7.5 mm long, about 4 mm wide, obtuse; column erect, about 5 mm long.

S. Korea, Japan and Ryukyu. Taiwan, at the elevations of 900-1500 m in northern part of the island, under the forests.

地生蘭、莖單生無分枝，長7-10 cm，直立或起自於匍匐的基部。

葉4-5枚互生，長橢圓狀卵形或長卵形，長3-4 cm，寬1.5-2.5 cm，先端銳尖，基部銳尖至圓，表面有光澤暗綠色，全緣或略呈波狀緣，薄紙質。葉柄長8-10 mm，基部潤且抱莖。

花4-7枚，粉紅色或淡紅褐色，穗狀花序，徑6-8 mm；花莖頂生，長8-10 mm，光滑或散生有毛茸；苞片披針形，淡褐色，長1-1.5 cm，膜質，長1.2-1.6 cm，寬3-4 mm，近似直立；後萼片長卵形，長10-11 mm，寬約9 mm；側萼片歪卵形，長9-10 mm，寬約9 mm，先端銳，花瓣潤倒披針形，長約10 mm，寬約4 mm，與後萼片緊密連合；唇瓣近似與萼片同長，基部囊狀，內面有毛茸，唇瓣片卵形，長6.5-7.5 mm，寬約4 mm，先端鈍；蕊柱直立，長約5 mm。 韓國南部、日本及琉球。台灣，生長於北部中海拔約900-1500 m 山地，叢林下。

76. 玉山斑葉蘭 (*Goodyera morrisonicola* Hayata)

Terrestrials; stems rooting and creeping at the base, ascending upward, 8-14 cm long, leafy.

Leaves alternate, ovate-oblong or ovate, 2.5-4 cm long 1.2-1.7 cm wide, acute, rounded at the base, minute crisped on margin, midrib white and elevated surface, 3-5-obscurely veins; petioles 1-2 cm long, swelling and embracing the stem at the base.

Flowers 6-15, white, in terminal spike; scape pubescent, erect; bracts lanceolate, acute or acuminate, sheathed at the base, 8-11 mm long, 3-4 mm wide; sepals subequal, free, dorsal one erect, concave, narrowly oblong, 8-12 mm long, 3-4 mm wide, obtuse, forming a hood with the petals, lateral ones free, erect; petals oblong, 10-12 mm long, 2.5-3 mm wide, obtuse, attenuate at the base; lip sessile,

on the base of the column, pleated, curved inward and ascending, 8-11 mm long, subsaccate at the base, villose within, entire; column short, 1-1.5 mm long, with 2 3-4 mm long horns at apex; anthers erect, ovate-lanceolate, 3-4 mm long, narrowly acuminate at apex.

Capsules oblong, beakless, 1-1.5 cm long, 3-4 mm across.

Endemic, at high altitudes of 2600-3000 m under the forests of *tsuga* and *Abies* forests throughout the island, rather common.

地生蘭、莖基部匍匐且有根，先端近似直立，長8-14 cm，有葉。

葉互生，卵狀長橢圓形或卵形，長2.5-4 cm，寬1.2-1.7 cm，先端銳尖，基部圓，邊緣略呈波狀緣，中肋白色，於表面隆起，不明顯的3-5脈；葉柄長1-2 cm，基部略膨大且完全抱莖。

花6-15枚，白色，呈頂生的穗狀花序，花莖有毛茸，直立；苞片披針形，先端漸尖或銳尖，基部有鞘，長8-11 mm，寬3-4 mm；萼片近似整齊、離生，後萼片直立、槽狀、狹長橢圓形，長8-12 mm，寬3-4 mm，先端鈍，與花瓣形成一花兜，側萼片離生，直立；花瓣長橢圓形，長10-12 mm，寬2.5-3 mm，先端鈍，基部漸狹，唇瓣無柄，位於蕊柱基部，舌狀，略向內側反捲，長8-11 mm，直立或水平生長，先端漸尖，基部膨大近似呈囊狀，內面有毛茸，外面光滑，全緣；蕊柱短，長1-1.5 mm，先端有2長3-4 mm的角；花藥直立，卵狀披針形，長3-4 mm，先端狹漸尖形。

蒴果長橢圓形，長1-1.5 cm，徑3-4 mm。

固有，生長於全島高山地區約2600-3100 m的山地，多生長於台灣鐵杉林及台灣冷杉林下，較為常見。

近有將本種列為 *Goodyera velutina* Maxim. 的異名者。惟筆者仔細對照早田文藏氏的 *Icones Plantarum Formosarum* 第4卷圖版17的玉山斑葉蘭圖所示，跟 *Goodyera velutina* Maxim. 並不相同，似應可成一獨立的種。倒是福山泊明所發表的 *Goodyera nankoensis* Fukuyama 跟本種似屬於同一種。



圖 (Fig) 68 玉山斑葉蘭 (*Goodyera morrisonicola*)

- a. 植物體 (Plant body)
- b. 花 (Flower)
- c. 後萼片 (Dorsal sepal)
- d. 花瓣 (Petal)
- e. 側萼片 (Lateral sepal)
- f. 唇瓣 (Lip)
- g. 蕊柱 (Column)

77. 小斑葉蘭 (*Goodyera ogatai* yamamoto)

Terrestrials; roots rather short, 3-5 cm long; stem simple, terete, glabrous, 2-5 cm long, creeping from base and erect or ascending upward.

Leaves 2-4, alternate, ovate or oblong-ovate, 1.5-2.5 cm long, 1.5-2 cm wide acute at apex, rounded or slightly broadly cuneate at base, entire or more or less wavy on margin, 3-5-nerved elevated beneath, light green or dark green surface, pale green beneath, glabrous; the petioles 1.5-2 cm long, sheathed and amplexical at base.

Flowers 2-3, pinkish brown or brownish, widely opened, 1-1.2 cm in diameter, spicate; scape terminal, light brown, erect, 3-6 cm long, white hirsute; bracts linear-lanceolate, 1-1.5 cm long, about 5 mm wide, acuminate at apex, ciliate on margin; ovaries cylindrical, 7-8 mm long, about 2.5 mm in diameter; dorsal sepal cymbiform, 1.2-1.4 cm long, about 4 mm wide; the lateral sepals oblique cymbiform, spreading, pink, same as the dorsal one in length; petals rhombic-ovate, 12-13 mm long, usually connated with the dorsal sepal and forming a hood; lip ovate, 7-8 mm long, 4-4.5 mm wide, acute and recurved at apex, saccate at base, slight brownish pink and with some greenish striations, villose within the sac; column short.

Ryukyu. Taiwan, known from low altitudes of 300-700 m throughout the island, under the forests, rather rare.

地生蘭，根甚短，長3-5 cm；莖無分枝，圓柱形，光滑，長2-5 cm，基部呈匍匐狀，先端直立或斜上昇。

葉2-4枚，互生，卵形或長橢圓狀卵形，長1.5-2.5 cm，寬1.5-2 cm，先端銳尖，基部圓或略呈瀾楔形，邊緣全緣或略呈波狀緣，脈3-5條於葉背隆起，表面淡綠色或暗綠色，背面淡綠色，光滑；葉柄長1.5-2 cm，基部有鞘且抱莖。

花2-3枚，粉紅褐色或淡褐色，張開，徑1-1.2 cm，穗狀花序；花莖頂生，淡褐色，直立，長3-6 cm，有白色毛茸；苞片線狀披針形，長1-

1.5 cm，寬約5 mm，先端漸尖，邊緣有毛茸；子房圓柱形，長7-8 mm，徑約2.5 mm；後萼片舟形，長1.2-1.4 cm，寬約4 mm，側萼片歪舟形，擴展，粉紅色，與後萼片同長；花瓣菱狀卵形，長12-13 mm，常與後萼片相連而形成花兜；唇瓣卵形，長7-8 mm，寬4-4.5 mm，先端銳尖且向後反捲，基部呈囊狀，淡粉紅褐色而有一些綠色的條紋，囊內有毛茸，蕊根短。

琉球、台灣，生長於低海拔約300-700 m山地，全島森林下均有分佈，惟數量甚少。

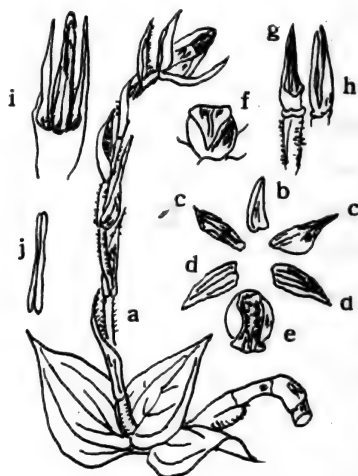


圖 (Fig) 69 小斑葉蘭 (*Goodyera ogatai*)

a. 着花之植物體 (Flowering plant)

b. 後萼片 (Dorsal sepal) c. 花瓣 (Petal)

d. 側萼片 (Lateral sepal) e.f. 唇瓣 (Lip)

g.h.i. 蕊柱 (Column)

j. 花粉塊 (Pollinia)

78. 厚唇斑葉蘭 (*Goodyera pachyglossa* Hay)

Terrestrials; roots elongate, 7-10 cm long, 1-1.5 mm in diameter, villose; stem simple, 20-30 cm long, creeping at base, erect upward, glabrous in lower part and short hirsute upward.

Leaves 4-7, alternate, oblique ovate or ovate-oblong, 4.5-5 cm long, 2-2.5 cm wide, acuminate at apex, rounded or obtuse and petioled at base, subentire or obscurely minutely crisped on margin, chartaceous, somewhat fleshy, 3-nerved, lightly elevated beneath; the petioles 1.5-2 cm long, sheathed at base; the sheaths about 1-1.5 cm long.

Flowers 4-7, white, not widely opened, spicate; the scape terminal, 4-5.5 cm long, erect, short hirsute; bracts lanceolate, 1-1.5 cm long, 3-3.5 mm wide, acuminate at apex, glabrous; the ovaries 8-10 mm long, hirsute; the dorsal sepal ovate-oblong, 8-9 mm long, 3-4 mm wide, acute or acuminate at apex, more or less contracted at base, concave, 3-nerved, more or less hirsute without and glabrous within; the lateral ones obliquely ovate, 7-8 mm long, about 4 mm wide, obtuse at apex, 3-nerved, hirsute without, glabrous within; petals rhombic-obovate cuneate, 7-8 mm long, about 3.5 mm wide, acute at apex, cuneate-attenuate at base, slightly crisped on margin; lip ovate, 7-7.5 mm long, 3-3.5 mm wide, somewhat saccate at base, densely hirsute within; column about 1 cm long; rostellum 2-lobed, the lobes about 3 mm long; anthers elongate-ovate, 3-4 mm long.

Endemic, known from lower to medium altitudes of 600-1300 m throughout the island, under the forests, rather common.

地生蘭、根甚長，長7-10 cm，徑1-1.5 mm，有柔毛；莖無分枝，長20-30 cm，基部匍匐，先端直立，下部光滑，上端有毛茸。

葉4-7枚，互生，歪卵形或卵狀長橢圓形，長4.5-5 cm，寬2-2.5 cm，先端漸尖，基部圓或鈍，有柄，全緣或有不明顯的皺折，紙質，而略呈肉質，脈3條略於背面隆起；葉柄長1.5-2 cm，基部有鞘；鞘長1-1.5 cm。

花4-7枚，白色，不十分張開，穗狀花序；花莖頂生，長4-5.5 cm，直立，有短毛茸；苞片披針形，長1-1.5 cm，寬3-3.5 mm，先端漸尖，

光滑；子房長8-10 mm，有毛茸。後萼片卵狀橢圓形，長8-9 mm，寬3-4 mm，先端銳尖或漸尖，基部多少呈緊縮狀，槽狀，脈3條，外面有毛茸，內面光滑；側萼片歪卵形，長7-8 mm，寬4 mm，先端鈍，脈3條，外面有毛茸，內面光滑；花瓣菱狀倒卵狀楔形，長7-8 mm，寬3.5 mm，先端銳尖，基部楔狀漸尖，邊緣略有皺縮；唇瓣卵形，長7-7.5 mm，寬3-3.5 mm，基部略呈囊狀，內面有密毛茸，蕊柱長約1 mm，喙2裂，裂片長3 mm；花藥長卵形，長3-4 mm。

固有，生長於全島低或中海拔約600-1300 m 山地，森林下，較常見。

79. 斑葉蘭 (*Goodyera procera* (Ker-Gawl) Hook. f.)

Terrestrials; rhizomes short; roots many, elongate, 20-40 cm long; stems simple, erect from a short-creeping base, 30-70 cm long, fleshy.

Leaves many, clustered on the lower part of stem, ovate-lanceolate or oblong, 10-15 cm long, 3.5-4.5 cm wide, acuminate, acute to nearly rounded at the base, 5-7-nerved, shining green surface, pale green beneath; petioles 3-7 cm long, broadened into a short sheath at the base.

Flowers many, small, white or greenish white, a little opened, spicate; scape terminal, 8-30 cm long, pubescent; bracts ovate-lanceolate, 0.5-0.8 cm long, acute at apex, pubescent; pedicels with ovaries 5-7 mm long, glabrous, terete; sepals 3-4 mm long, about 2 mm wide, the dorsal one ovate-cymbiform, obtuse at apex, the lateral ones oblique ovate; petals narrowly obovate, 3-3.5 mm long, about 1.5 mm wide; lip broadly ovate, recurved and obtuse at apex, slightly recurved on margin at the base, pilose, with 2 callose protuberances inner sides; column about 1 mm long; pollinia yellow.

China, Malaysia, India, Japan and Ryukyu. Taiwan, at lower altitudes below to 800 m throughout the island, along small streams and moist shade places.

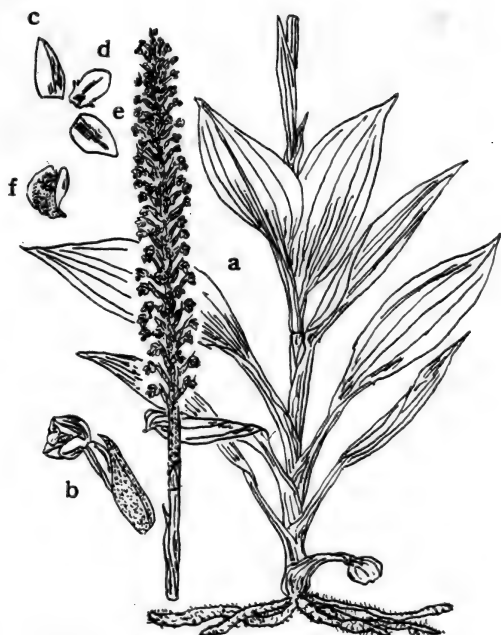


圖 (Fig) 70 斑葉蘭 (*Goodyera procera*)

- a. 開花之植物體 (Flowering plant)
 b. 花 (Flower) c. 後萼片 (Dorsal sepal)
 d. 花瓣 (Petal) e. 側萼片 (Lateral sepal)
 f. 唇瓣 (Lip)

地生蘭、根莖短；根多數，甚長，長 20-40 cm；莖單生，基部略呈短匍匐狀，中部以上直立，長 30-75 cm，肉質。

葉多數，叢生於莖的下部，卵狀披針形或長橢圓形，長 10-15 cm，寬 3.5-4.5 cm，先端漸尖，基部銳尖至近似圓，脈 5-7 條，表面呈有光澤綠色，背面淡綠色；葉柄長 3-7 cm，基部寬而成一短鞘狀。

花多數，小，白色或綠白色，略微開張，穗狀花序排列；花莖頂生，長 8-30 cm，有毛茸；苞片卵狀披針形，長 0.5-0.8 cm，先端銳尖，有毛茸；花梗連同子房長 5-7 mm，光滑，圓柱形；萼片長 3-4 mm，寬約 2 mm，後萼片卵狀舟形，先端鈍，側萼片歪卵形；花瓣狹倒卵形長 3-3.5 mm，寬約 1.5 mm；唇瓣潤卵形，先端鈍且反捲，邊緣基部略向後反捲，

有毛茸，內面基部具有2硬塊，蕊柱長約1 mm，花粉塊黃色。

中國，馬來西亞、印度、日本及琉球。台灣，生長於全島低海拔山麓地區，最高可達800公尺的山地，多生長於小溪谷之旁或蔭濕的森林內。

80. 白花斑葉蘭 (*Goodyera schlechtendaliana* Reich.f.)

Terrestrials; stem 10-20 cm long, from a creeping base.

Leaves 2-5, in a basal rosette, ovate to ovate-lanceolate, more or less fleshy, 2-4 cm long, 1.5-2.5 cm wide, acute or obtuse, rounded or subcordate at the base, entire, green with white spots or reticulate surface, pale green beneath; petioles 1.5-2 cm long, usually embracing the stem.

Flowers 6-12, smaller, half-opened, white, sometimes tinged pink, in terminal spike; scape elongate, 8-14 cm long, densely soft crisped pubescent; scale-like bracts 2-3, basal, erect, linear, often short-sheathing, pubescent; bracts lanceolate, 1-1.3 cm long, pubescent; ovary about 1 cm long, soft-hairy, dorsal sepal broadly lanceolate, 9-11 mm long, 2.5-3.5 mm wide, pubescent without, lateral ones oblique ovate, 11-12 mm long, 3.5-4.5 mm wide, hairy outside; petals white, obovate-lanceolate, appressed to the dorsal sepal, 10-11 mm long, 3-3.5 mm wide, small, yellowish brown spots at apex; lip white, long ovate, 9-11 mm long, about 4 mm wide, saccate at the base, and with spatulate termination, pilose within; column slightly curved, 5-6 mm long; anthers ovate; pollinia obovate, yellow.

China, Korea and Japan. Taiwan, at medium to high altitudes of 1800-2800 m under the forests of *Tsugs* and *Pinus*, sometimes also occurred warm-temperate broadened forests.

地生蘭、莖高10-20 cm，基部呈匍匐狀，先端直立。

葉2-5枚，着生於莖基部，近似叢生，卵形至卵狀披針形，多少呈肉質，長2-4 cm，寬1.5-2.5 cm，先端銳尖或鈍，基部圓或近似心形，



圖 (Fig) 71 白花斑葉蘭 (*Goodyera schlechtendaliana*)

- a. 着花之植物體 (Flowering plant)
 b. 後萼片 (Dorsal sepal) c. 花瓣 (Petal)
 d. 側萼片 (Lateral sepal) e. 唇瓣 (Lip)
 f. 未熟之蒴果 (Young capsule)
 g. 蕊柱 (Column) h. 花粉塊 (Pollinia)

全緣，表面綠色而散生有白色斑點，背面灰白色；葉柄長1.5-2 cm，基部常抱莖。

花6-12枚，較小，半開放，白色，有時帶有粉紅色暈，呈頂生的穗狀花序，花莖甚長，長8-14 cm，密佈有白色毛茸、鱗片狀苞片2-3枚，直立，線形，具有短鞘，有毛茸；苞片披針形，長1-1.2 cm，有毛茸；子房連同花梗長約1 cm，有柔毛；後萼片闊披針形，長9-11 mm，寬2.5-3.5 mm，外面有毛茸；側萼片歪卵形，長11-12 mm，寬3.5-4.5 mm，外面有毛茸；花瓣白色，倒卵狀披針形，與後萼片連生而形成花兜，長10-11 mm，寬3-3.5 mm，較小；先端具有黃褐色斑點；唇瓣白色，長卵形，長9-11 mm，寬約4 mm，基部呈囊狀，先端呈舌形，內面有毛茸；蕊柱略彎曲，長5-6 mm；花藥卵形；花粉塊倒卵形，黃色。

中國、韓國及日本、台灣，生長於中至高海拔約1800-2800公尺山地

，多生長於台灣鐵杉及松類林的林床；有時亦常生長於溫帶潤葉林下。

81. 白肋斑葉蘭 (*Goodyera velutina* Maxim.)

Terrestrials; stem simple, 10-20 cm long, from an elongate creeping base and ascending above.

Leaves 2-5 at lower part of stem, ovate or obovate, 2.5-4 cm long, 1-2 cm wide, more or less fleshy, dark green and white midrib surface, light wine red or pale green beneath, acute, attenuate to the petioles; the petioles sheathing below.

Flowers 8-16, lightly pink brown, medium sized, in terminal spike; scape 10-15 cm long, pubescent; bracts ascending, linear or linear-lanceolate, 5-10 mm long, long-acuminate; dorsal sepal ovate, 5-6 mm long, 2.5-3.5 mm wide, the lateral ones narrowly ovate, 6-7 mm long, about 3 mm wide, subobtusate; petals closely appressed to the dorsal sepal, broadly oblanceolate, 6-7 mm long, 2-2.5 mm wide; lip ovate, elliptic at base and with spatulate termination, white, 7-8 mm long, saccate at base, pubescent within; column short, 2 slender beak-like-lobed at apex; pollinia oblanceolate, yellow.

Capsules ovoid, 8-10 mm long.

Korea and Japan. Taiwan, at medium to high altitudes of 1200-2800 m in northern part of the island under the forests, somewhat common under the *Pinus taiwanensis* pure stands.

地生蘭、莖單生無分枝，長10-20 cm，基部匍匐狀，先端直立或近似如此。

葉2-5枚，着生於莖的基部，卵形或倒卵形，長2.5-4 cm，寬1-2 cm，多少呈肉質，表面暗綠色，中肋呈白色，背面粉白綠色或略帶酒紅色，先端銳尖，基部漸狹而延伸至葉柄，葉柄淡酒紅色，基部有鞘。

花8-16枚，淡粉紅褐色，中型，呈頂生的穗狀花序；花莖長10-15 cm，有毛茸；苞片直立，線形或線狀披針形，長5-10 mm，先端長漸尖

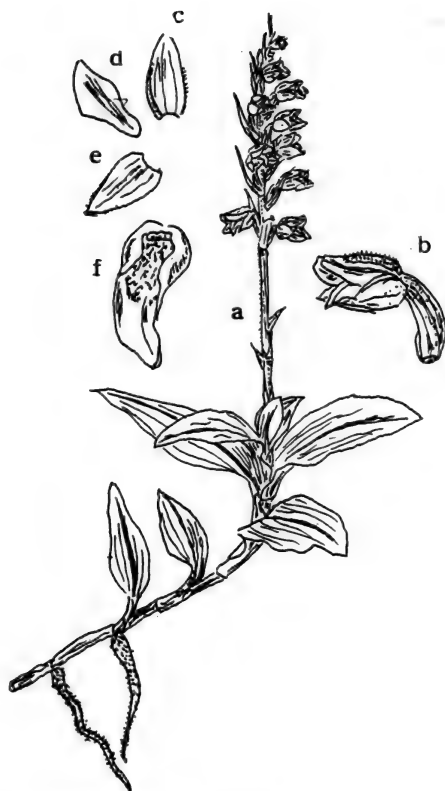


圖 (Fig) 72 白肋斑葉蘭 (*Goodyera velutina*)

- a. 着花植物體 (Flowering plant) b. 花 (Flower)
 c. 後萼片 (Dorsal sepal) d. 花瓣 (Petal)
 e. 側萼片 (Lateral sepal) f. 唇瓣 (Lip)

形；後萼片卵形，長 5-6 mm，寬 2.5-3.5 mm；側萼片狹卵形，長 6-7 mm，寬約 3 mm，先端略呈鈍形；花瓣與後萼片緊密連合，瀾倒披針形，長 6-7 mm，寬 2-2.5 mm；唇瓣卵形，基部橢圓形，先端略呈舌形，白色，長 7-8 mm，基部有囊，內面有毛茸；蕊柱短，先端有 2 細長鳥嘴尖喙狀裂片；花粉塊倒披針形，黃色。

蒴果卵形，長 8-10 mm。

韓國及日本、台灣，生長於中海拔至高海拔約 1200-2800 m 山地，多見於本島北部的山地，生長於森林下，尤多見於台灣二葉松純林下。

82. 新港山斑葉蘭 (*Goodyera viridiflora* var. *seikoomontana* (Yamamoto) Ying)

Goodyera viridiflora var. *seikoomontana* (Yamamoto) Ying, *comb. nov.*

Goodyera seikoomontana Yamamoto in Journ. Soc. Trop. Agric. Taiwan 4:187 (1932).

Terrestrials; stem simple, glabrous, pale green, 7-10 cm long.

Leaves 3-5, alternate, elliptic or oblong-ovate, 4.5-6 cm long, 2-2.5 cm wide, acuminate, rounded and sheathing at the base, 3-nerved raised beneath, entire, glabrous, shining and dark green surface, pale green beneath; petiolate; petioles with sheathes 2.5-3.5 cm long.

Flowers 1-3, rather large, terminal, spicate, 2-2.5 cm across: scape usually with hairy, 3-4 cm long; bracts lanceolate, usually with pink tip, 2-2.5 cm long, acute at apex, membranous; the pedicels with ovaries about 1 cm long, pubescent; dorsal sepal elliptic, 1-1.5 cm long, 5-6 mm wide, green with pink tip, acuminate at apex, the lateral ones lanceolate, widely spreading, white or whitish green with pink tip, 1.2-1.7 cm long, 5-6 mm wide, 3-nerved, glabrous; petals obovate, thinly membranous, grayish white, 1-1.5 cm long, 4-5 mm wide; lip thickened sca-like, with a reflexed tip, 6-7 mm long, white and glandular hairy within, green without, 5-7-nerved; column erect, short, about 3 mm long; rostellum 2-lobed, 5-6 mm long; pollinia 7-8 mm long.

Endemic, known under the thickets on Hungcheng peninsula and eastern coast mountain ranges at medium altitudes of 800-1300 m, somewhat rarely.

地生蘭、莖單生，無分枝，光滑，淡綠色，長7-10 cm。

葉3-5枚，互生，橢圓形或長橢圓狀卵形，長4.5-6 cm，寬2-2.5

cm，先端漸尖形，基部圓而有鞘，脈3條隆起於背面，有柄；柄連同鞘長2.5-3.5 cm。

花1-3枚，較大，頂生，穗狀花序，徑2-2.5 cm；花莖頂生，常具有白色毛茸，長3-4 cm；苞片披針形，先端常呈淺紅色，長2-2.5 cm，先端銳尖，膜質；子房連同花梗長約1 cm，有毛茸；後萼片橢圓形，長

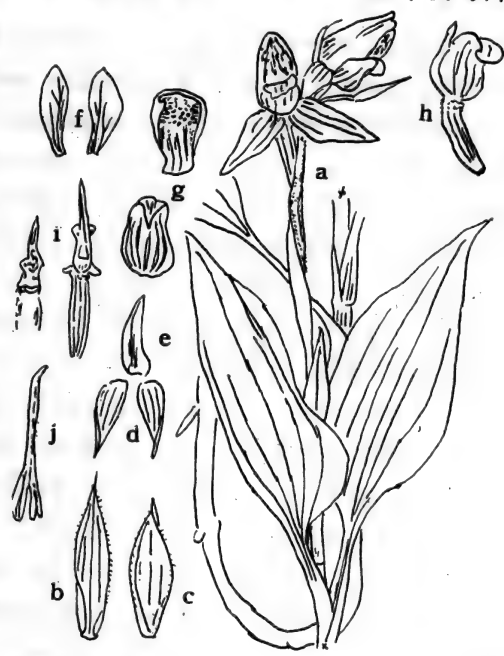


圖 (Fig) 73 新港山斑葉蘭 (*Goodyera viridiflora* var *seikoomontana*)

- a. 開花之植物體 (Flowering plant)
- b. 鞘 (Sheath) c. 苞片 (Bract)
- d. 側萼片 (Lateral sepals)
- e. 後萼片 (Dorsal sepal) f. 花瓣 (Petal)
- g. 唇瓣 (Lip) h. 除去花萼及花瓣的花
(Flower taken off sepal and petal)
- i. 蕊柱 (Column) j. 花粉塊 (Pollinia)

1-1.5 cm，寬5-6 mm，綠色而有粉紅色的先端，先端漸尖形，側萼片披針形，擴展，白色或白綠色，先端呈粉紅色，長1.2-1.7 cm，寬5-6 mm

，脈3條，光滑；花瓣倒卵形，薄膜質，灰白色，長1-1.5 cm，寬4-5 mm；唇瓣厚囊狀，先端反捲，長6-7 mm，內面白色而具有腺毛，外面綠色，脈5-7條；蕊柱直立，短，長約3 mm，喙2裂，長5-6 mm；花粉塊長7-8 mm。

固有，生長於恆春半島及台東海岸山脈的中海拔約800-1300 m 的山地，見於叢林下。

83. 玉鳳蘭 (*Habenaria ciliolaris* Kranzl.)

Terrestrials; tubers oblong or elongate ovoid, 2.5-4 cm long, about 2.5 cm in diameter, with pilose, fleshy; stem simple, 40-60 cm long, grayish green, smooth, sheathed at base; sheaths cylindrical, 5-6 cm long; the scales ovate-lanceolate, 2-3 cm long, acuminate or caudate-acuminate at apex, glabrous.

Leaves 7-9 in the middle of stem, obovate-lanceolate or elliptic-oblong to ovate-lanceolate, 14-16 cm long, 3-4 cm wide, acuminate at apex, narrowly attenuate at base, slightly fleshy, subcoriaceous, entire, shining green surface, pale green beneath, midrib impressed surface and elevated beneath, the lateral veins inconspicuous.

Flowers 10-15, patent, nodding, rather large, about 2 cm in diameter, grayish green, racemose; scape terminal, 18-24 cm long, erect, stricted, green, glabrous; bracts ovate, 1.5-1.8 cm long, about 7 mm wide, 3-nerved, linear-acuminate at apex; the pedicels with ovaries 2-2.5 cm long, green, glabrous; sepals ovate or broadly ovate, 8-10 mm long, 4-5 mm wide, acute and slightly tail-like at apex, contracted at base; the dorsal one concave; petals linear, somewhat narrowly falcate-like, 10-13 mm long, about 1-1.5 mm wide, pilose upward, obtuse at apex, reflexed; lip deeply 3-lobed, spurred, the lobes linear, 1.2-1.8 cm long, 2-2.5 mm wide, obtuse at apex; the spurs 1.5-2 cm long, dilate at apex, about 3 mm in diameter; column short.

China. Taiwan, known from medium altitudes of 700-

1800 m in central part of the island, under the forests or on roadside.

地生蘭，塊根長橢圓形或長卵形，長2.5-4 cm，徑約2.5 cm，有毛茸，肉質；莖無分枝，長40-60 cm，灰綠色，光滑，基部有鞘；鞘圓柱形，長5-6 cm；鱗片卵狀披針形，長2-3 cm，先端漸尖或尾狀漸尖，光滑。

葉7-9枚着生於莖的中間，倒卵狀披針形或橢圓狀長橢圓形至卵狀披針形，長14-16 cm，寬3-4 cm，先端漸尖，基部狹漸窄，略呈肉質，亞革質，全緣，表面呈有光澤綠色，背面淡綠色，中肋於表面凹下背面隆起，側脈不顯著。

花10-15，顯著，下垂，較大，徑約2 cm，灰綠色，總狀花序，花莖頂生，長18-24 cm，直立，有稜角，綠色，光滑；苞片卵形，長1.5-1.8 cm，寬約7 mm，脈3條，先端線狀漸尖；花梗連同子房長2-2.5 cm，綠色，光滑；萼片卵形或橢圓形，長8-10 mm，寬4-5 mm，先端銳尖且略呈尾狀，基部緊縮狀，後萼片槽狀；花瓣線形，略呈狹鐮刀狀，長10-13 cm，寬約1-1.5 mm，先端有毛茸，先端鈍，反捲；唇瓣深3裂，有距，裂片線形，長1.2-1.8 cm，寬2-2.5 mm，先端鈍；距長1.5-2 cm，先端寬大，徑約3 mm；蕊柱短。

中國、台灣，生長於中海拔約700-1800 m山地，僅見於中部山地，常見於森林下或路旁。

84. 白綠邊玉鳳蘭 (*Habenaria goodyerioides* D. Don)

Terrestrails, tubers ovoid-oblong or oblong, 1.5-2 cm long, about 1 cm across, fleshy, white; stem simple, erect, included scape 55-65 cm long, glabrous, smooth, green, leafy in the middle; sheathed in the lower part of stem; the sheathes 3-4, remote, 3-4 cm long, deciduous.

Leaves 5-6, oblong, ovate-oblong or oblong-lanceolate, 10-15 cm long, 5-7 cm wide, acuminate or acute at apex, obtuse and contracted decurrent to the sheathes at base, slightly fleshy, thickly chartaceous, entire and white on margin, shining green surface, pale beneath, many-veined elevated beneath; the sheathes 2-2.5 cm long, amplexical the stem at base.

Flowers many, rather small, yellowish white or yellowish green, 5-6 mm in diameter, spicate; scape terminal, 15-20 cm long, glabrous, green; bracts ovate-lanceolate, 1-1.5 mm long, acuminate-aristate at apex; the pedicels with ovaries 1.5-3 mm long, green, glabrous; sepals subequal, subpatent, the dorsal one ovate, 4-5 mm long, about 3 mm wide, obtuse at apex, the lateral ones narrower, shortly apiculate at apex, oblique and slightly connate with petals at base; petals broadly oblong, 4-5 mm long, 3.5-4 mm wide, obtuse at apex, strongly oblique at base; lip tongue-like, 5-5.5 mm long, 4-4.5 mm wide, 3-lobed, spurred, the median lobe broadly triangular, about 3 mm wide, obtuse at apex, the lateral lobes narrower, obtuse at apex, spur 2-2.5 mm long, 2-lamellate at base of disc; column short, about 2 mm long.

Endemic, known from central part of the island at the elevations of 200-1500 m, under the forests, rather rare.

地生蘭，塊根卵狀長橢圓形，長1.5-2 cm，徑約1 cm，肉質，白色；莖單立直立，連同花莖長55-65 cm，光滑無毛，綠色，中部有葉，基部有鞘，鞘3-4枚，疏生，長3-4 cm，早落。

葉5-6枚，長橢圓形，卵狀長橢圓形或長橢圓狀披針形，長10-15 cm，寬5-7 cm，先端銳尖或漸尖，基部鈍緊縮而延伸至葉鞘，略呈肉質，厚紙質，邊緣全緣且呈白色，表面呈有光澤綠色，背面淡綠色，脈多數隆起於背面；葉鞘長2-2.5 cm，基部抱莖。

花多數，較小，黃白色或黃綠色，徑5-6 mm，穗狀花序；花莖頂生，15-20 cm，光滑，綠色；苞片卵狀披針形，長1-1.5 mm long，先端漸尖狀尖突；花梗連同子房長1.5-3 mm，綠色，光滑；萼片近似整齊，後萼片卵形，長4-5 mm，寬約3 mm，先端鈍；側萼片較狹，先端短尖突，基部歪且略與花瓣相連；花瓣闊長橢圓形，長4-5 mm，寬3.5-4 mm，先端鈍，基部歪；唇瓣舌形，長5-5.5 cm，寬4-4.5 mm，3裂，有距，中裂片闊三角形，長約3 mm，先端鈍，側裂片較狹，距長2-2.5 mm，花盤基部有2條隆起線，蕊柱短，長約2 mm。

固有，生長於台灣中部低及中海拔約200-1500 m 山地，常綠闊葉林

床上，較少。

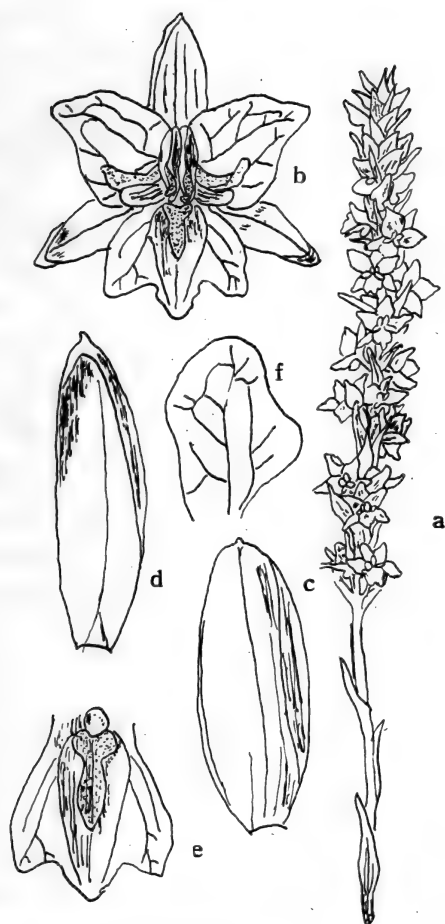


圖 (Fig) 74 白緣邊玉鳳蘭 (*Habenaria goodyerioides*)

- a. 花序 (Inflorescence)
- b. 花 (Flower)
- c. 後萼片 (Dorsal sepal)
- d. 側萼片 (Lateral sepal)
- e. 唇瓣 (Lip)
- f. 花瓣 (petal)

85. 台灣鵝毛玉鳳蘭 (*Habenaria lacerifera* (Lindley)
Benth)

Terrestrials; rhizome short, thickened, sometimes tuberous; stem simple, 20-40 cm long, erect, glabrous.

Leaves 4-7, basal or nearly so, oblong, elliptic ovate or broadly lanceolate, 5-8 cm long, 1.5-2.5 cm wide, acuminate at apex, narrowed decurrent to sheaths at base; sheaths 1-1.5 cm long, amplexicaul at base, entire, thickened membranous.

Flowers numerous, small, white or yellowish green, spicate; scape terminal, 7-15 cm long, erect, green, glabrous; bracts ovate-lanceolate or lanceolate, 8-12 mm long, acute at apex; the pedicels with ovaries 8-10 mm long; sepals ovate or oblong, concave, 3-3.5 mm long, 1.8-2 mm wide, rounded at apex, 1-nerved; petals narrowly ovate, 3-3.5 mm long, about 1.6 mm wide, acute or obtuse at apex; lip 3-lobed, spurred; the spur elliptic, 2-2.5 mm long, obtuse at apex, the median lobe tongue-like, 2-4 mm long, about 1.5 mm wide, obtuse at apex, the lateral lobes linear, filiform-like, slender, 5-7 mm long, about 0.7-0.9 mm wide, column short.

-Japan and Ryukyu. Taiwan, known from the lower altitudes of 300-700 m throughout the island, on exposed grassland or fields.

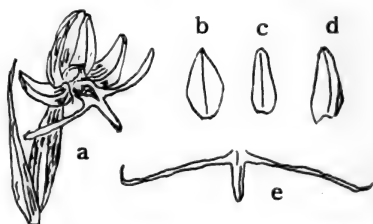


圖 (Fig) 75 鵝毛玉鳳蘭 (*Habenaria lacerifera*)

- a. 花 (Flower) b. 後萼片 (Dorsal sepal)
c. 花瓣 (Petal) d. 側萼片 (Lateral sepal)
e. 唇瓣 (Lip)

地生蘭，根莖短，粗厚，有時呈塊根狀；莖單生無分枝，長 20-40 cm，直立，光滑。

葉 4-7 枚，基生或近似如此，長橢圓形，橢圓形或闊披針形，長 5-8 cm，寬 1.5-2.5 cm，先端漸尖形，基部延伸而至葉鞘；葉鞘長 1-1.5 cm，基部抱莖，全緣，厚膜質。

花多數，較小，白色或黃綠色，穗狀花序；花莖頂生，長 7-15 cm，直立，綠色，光滑；苞片卵狀披針形或披針形，長 8-12 mm，先端銳尖，花梗連同子房長 8-10 mm，萼片卵形或長橢圓形，槽狀，長 3-3.5 mm，寬 1.8-2 mm，先端圓，脈 1 條；花瓣狹卵形，長 3-3.5 mm，寬 1.6 mm，先端銳或鈍，唇瓣 3 裂，有距，距橢圓形，長 2-2.5 mm，先端鈍；中裂片舌形，長 2-4 mm，寬約 1.5 mm，先端鈍；側裂片線形，細長，長 5-7 mm，寬約 0.7-0.9 mm。蕊柱短。

日本及琉球。台灣，生長於低海拔 300-700 m 全島皆有，生長於開闊草地或原野。

86. 香蘭 (*Haraella odorata* Kudo)

Epiphytes; roots elongate, 10-20 cm long, about 1 mm in diameter, grayish white; pseudobulb absent; stem short, 1.5-2 cm long, slender, enclosed by leaf-sheaths.

Leaves 3-5, distichous, elliptica-oblong, 3-5 cm long, 0.8-1.2 cm wide, obtuse at apex, contracted and decurrent to the petioles at base, articulate, coriaceous, slightly recurved on margin, entire, lustrous green surface, pale green beneath, lateral veins inconspicuous; the sheaths persistent, 3-5 mm long, persistent.

Flowers 2-3, rarely 4, rather large, 1-1.5 cm in diameter, racemose; scape axillary, produced from leaf-axile, 3-6 cm long, slender, glabrous, green; bracts tubular, 2-4 mm long, the upper ones widely triangular, about 1.5 mm long; the pedicels with ovaries 3-5 mm long, sepals whitish yellow, spreading, patent, ovate-oblong, 6-8 mm long, 3-3.5 mm wide, obtuse at apex, slightly cuneate-contracted at base, the lateral ones narrower; petals narrowly oblong, 7-9 mm long, about 2.5 mm wide, obtuse at apex, narrow

at base; lip brightly yellow, adnate with column at base, oblong, spurless, 14-18 mm long, 8-9 mm wide, concave, 3-lobed, callused, the callus purple, triangular, retrorse, the lateral lobes 2-2.5 mm long, 5.5-6 mm wide, minutely ciliate, the median lobe rounded, 7-9 mm long, about 8 mm wide, emarginate at apex, shortly fimbriate on margin, glabrous within and hirsute without; column short, about 1 mm long.

Endemic, known from central part of the island at medium altitudes of 800-1700 m, in evergreen forests.

着生蘭，根甚長，長10-20 cm，徑約1 mm，灰白色，無假球莖；莖甚短，長1.5-2 cm，包被有葉鞘。

葉3-5枚，兩列狀排列，橢圓狀長橢圓形，長3-5 cm，寬0.8-1.2 cm，先端鈍，基部緊縮而延伸至葉鞘，有關節，革質，邊緣略反捲，全緣，表面呈有光澤綠色，背面淡綠色，中肋於表面凹下背面隆起，側脈不顯着，葉鞘殘存，長3-5 mm。

花2-3枚，少數亦有4枚者，較大，徑1.5 cm，總狀花序，花莖腋生，抽自於葉腋，長3-5 cm，光滑，綠色；苞片管狀，長2-3 mm，上苞片闊三角形，長1.5 mm；花梗連同子房長3-5 mm，萼片淡黃色，擴展，顯著，卵狀長橢圓形，長6-8 mm，寬3-3.5 mm，先端鈍，基部短楔狀緊縮狀，側萼片較窄；花瓣狹長橢圓形，長7-9 mm，寬約2.5 mm；先端鈍，基部漸窄；唇瓣鮮黃色，基部與蕊柱連生，長橢圓形，無距，長14-18 mm，寬8-9 mm，凸出，3裂，有硬塊，硬塊紫紅色，三角形，逆向，側裂片長2-2.5 mm，寬5.5-6 mm，微毛緣，中裂片圓形，長7-9 mm，寬約8 mm，先端凹，邊緣呈短絲狀，內面光滑，外面有毛茸，蕊柱短，長約1 mm。

固有，生長於中部山地約中海拔約800-1700 m處山地，常綠森林內，較為少見。

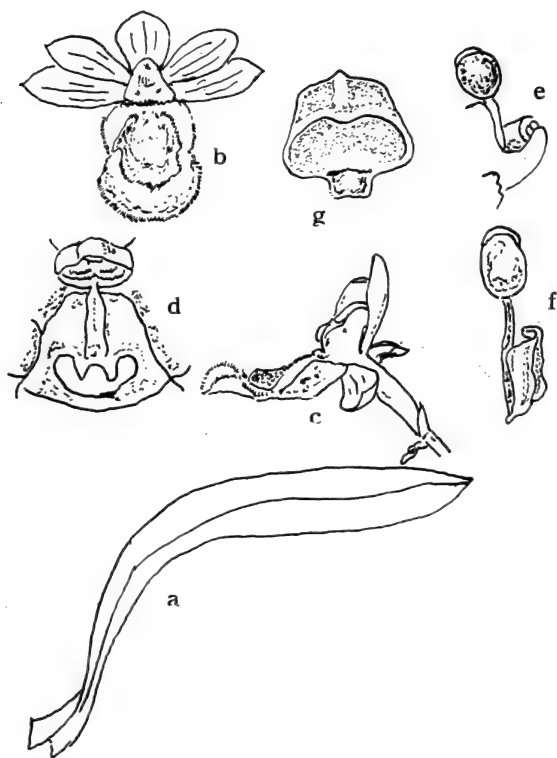


圖 (Fig) 76 香蘭 (*Haraella odorata*)

- a. 葉 (Leaf) b. 花 (Flower)
 c. 花側看 (Flower side view)
 d. e. 蕊柱及雄蕊 (Column and stamen different view)
 f. 雄蕊 (Stamen) g. 藥帽 (Anther-cap)

87. 角盤蘭餘零糧草 (*Herminium lanceum* (Thunb. ex Sw.)

J. (Vuijk)

Terrestrials; roots tuberous, ovoid, 9-12 mm long; stem simple, 20-40 cm long, rather slender, glabrous, loosely 3-

to 5-leaved.

Leaves lanceolate, linear or linear-lanceolate, 8-15 cm long, 5-9 mm wide, acuminate, narrowed and amplexical at base, chartaceous, glabrous, shining green surface, pale green beneath, entire, 3-nerved.

Flowers small, numerous, yellowish green, not widely opened, spicate; the scape terminal, 10-15 cm long, slender, glabrous; bracts ovate-lanceolate or ovate-triangular, 1-nerved, long-acuminate, shorter or slightly longer than the flowers; sepals oblong or ovate-oblong, 2.5-3 mm long, about 1.5 mm wide, obtuse at apex, 1-nerved; petals linear-lanceolate, 2-2.5 mm long, about 1 mm wide, acuminate at apex; lip linear, 7-11 mm long, 3-4 mm wide, pendulous, slightly broadened at base, 3-lobed from middle, the lateral lobes linear, 3-4 mm long, obtuse, ascending; the median lobe very short, about 0.3-0.4 mm long; column 0.5 mm long.

Korea, Japan and Ryukyu, and China including Manchuria. Taiwan, at high altitudes of 2000-3000 m throughout the island, on grassland or exposed field.

地生蘭，根塊狀，卵形，長9-12 mm；莖單立，無分枝，長20-40 cm，細長，光滑，疏生有葉3-5枚。

葉披針形，線形或線狀披針形，長8-15 cm，寬5-9 mm，先端漸尖，基部狹而抱莖，紙質，光滑，表面呈光滑綠色，背面淡綠色，全緣，脈3條隆起於背面。

花甚小，多數，黃綠色，不十分張開，穗狀花序；花莖頂生，長10-15 cm，細長，光滑，苞片卵狀披針形或卵狀三角形，脈1條，先端長漸尖，較花為短或略長；萼片長橢圓形或卵狀長橢圓形，長2.5-3 mm，寬約1.5 mm，先端鈍，脈1條；花瓣線狀披針形，長2-2.5 mm，寬約1 mm，先端漸尖；唇瓣線形，長7-11 mm，寬3-4 mm，下垂，基部略寬，從中部開始3裂，側裂片線形，長3-4 mm，先端鈍，中裂片長0.3-0.4 mm，蕊柱長0.5 mm。

韓國、日本、中國（包括東北）及琉球。台灣，生長於高海拔約2000-

3000 m 的山地，多見於草生地或開濶地。



圖 (Fig) 77 角盤蘭，餘零糧草 (*Herminium lanceum*)
 a. 着花之植物體 (Flowering plants)
 b. 花 (Flower) c. 花除去花萼及花瓣
 (Flowers taken off sepal and petal)
 d. 唇瓣 (Lip) e. 後萼片 (Dorsal sepal)
 f. 花瓣 (Petal)
 g. 側萼片 (Lateral sepal)

88. 台灣伴蘭 (*Hetaeria taiwaniana* Ying)

Hetaeria taiwaniana Ying, sp. nov.

Terrestris, erecta, 35-45 cm alta; rhizomata decumbente cauliformi ad nodosi; radicibus brevibus vermiformibus moliter; caulis erectus teres glabra.

Folia oblonga, 5-8 cm longa, infra medium 2.5-3 cm lata, apice obtusa basi obtusa vel acuminata, margine integra vel leviter undulata utrinque glabra, supra virida subtus pallidiora; petiolis 2.5-4 cm longis, amplectentibus vaginiformibusque partibus vaginiformibus 7-8 mm longis, 5 mm diametentibus.

Scapus gracilis, terete cum racemo ca 30-40 cm longus, pubcentus remote 2-3-squamatus racemo florifero 10 cm longo sublux 10-15 florato; bracteis membranaceis lanceolatis apice acutis, basi non contractis 5-6 mm longis.

Flores subapertientes, viridis, pedicellis bracteis longioribus, 7-9 mm longioribus, glaberrimis sursum sensim angustioribus; sepalis membranacea exteriore vix pilosa interiora glabra; sepalis intermedio concavo, erecto cum petalis in galeam connivente ca. 3-3.5 mm longo, 1.5-2 mm lata, apice acuminata, basi non contracta, lateralibus patentibus, oblongibus, 5-6 mm longis, 2.5-3 mm latis, obliquis, apice obtusa basi contractis; petala ovata, 2.5-3 mm longa, 1.5-2 mm lata, apice obtusa, basi contracta, utrinque glabra. Labellum sessile, oblongo-ovatum vel ovatum, 3.5-4.5 mm longum, apice obtusa, basi sensim ventricosum, ecalcaratum, utrinque glabrum, intus medio bilamellatum, column brevis crassa, 1.5-2 mm longa.

Habitat: Nantou Hsien: Shou-chen-ta-shan (守城大山); leg. S.S. Ying 1203 July 16 1972. (NTUF).

地生蘭、直立，長 35 - 45 cm；根莖匍匐，莖上有節處有根，根甚短、線形、有毛茸；莖直立、圓柱形、光滑。

葉長橢圓形，長 5-8 cm，寬 2.5-3 cm，先端鈍，基部鈍或漸尖，

邊緣全緣或略呈波狀緣，光滑，表面鮮綠色，背面淡綠色；葉柄長 2.5-4 cm，基部抱莖有鞘，鞘長 7-8 mm，徑約 5 mm。

花莖細長，圓柱形，連同總狀花序長 30-40 cm，有毛茸，有疏生的鞘 2-3 枚；總狀花序長約 10 cm，疏生花朵 10-15 枚；苞片膜質，披針形，先端銳尖，基部不緊縮，長 5-6 mm。

花不十分顯著，綠色，花梗連同子房比苞片長，長 7-9 mm，光滑；萼片膜質，外面有毛茸，內面光滑，後萼片直立，槽狀，與花瓣相連而形成花兜，長 3-3.5 mm，寬 1.5-2 mm，先端漸尖，基部緊縮狀；側萼片長橢圓形，離生，擴展，顯着，長 5-6 mm，寬 2.5-3 mm，歪，先端鈍，基部緊縮；花瓣卵形，長 2.5-3 mm，寬 1.5-2 mm，先端鈍，基部緊縮，光滑；唇瓣無爪，長橢圓狀卵形或卵形，長 3.5-4.5 mm；先端鈍，基部略凸出而成短囊狀，無距，光滑，內面中心處有 2 條隆起線；蕊柱短，厚，長 1.5-2 mm。

固有種，生長於台灣中部中海拔約 700-1000 公尺處，森林下或路旁。

89. 槽舌蘭 (*Holcoglossum quasipinifolium* (Hayata)

Schltr.)

Epiphytes; roots elongate, 10-30 cm long, about 1 mm in diameter, gray or grayish white; stem simple, short, 3-7 cm long, usually enclosed by the leaf-sheathes.

Leaves numerous, linear or needle-like, distichous, 9-11 cm long, 2-2.5 mm wide, coriaceous, obtuse or acute at apex, obtuse, truncate and articulate at base, sulcate; the sheathes 7-8 mm long, yellowish brown.

Flowers solitary, 2 or 3, large, 2-2.5 cm in diameter, racemose; scape produced from the leaf-axile, 8-10 cm long, with dark dots; the bracts triangular, 6-8 mm long, about 7 mm wide, lightly brown, acute at apex; the pedicels with ovaries 2-3 cm long, glabrous; sepals white, spreading, the dorsal one obovate, 12-14 mm long, 5-6 mm wide, obtuse at apex, 3-nerved pink on midrib; the lateral ones somewhat oblique at base, somewhat longer than the dorsal one; petals oblong or obovate, 1.2-1.6 cm long, 5-6 mm wide,

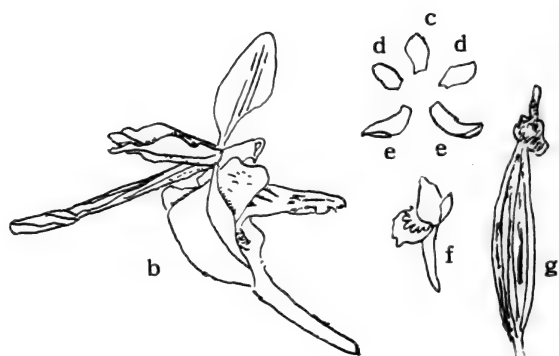


圖 (Fig) 78 搖唇蘭 (*Holcoglossum quasipinifolium*)

- a. 植物體 (Plant body)
- b. 花 (Flower)
- c. 後萼片 (Dorsal sepal)
- d. 花瓣 (Petal)
- e. 側萼片 (Lateral sepal)
- f. 唇瓣及距 (Lip and spur)
- g. 蒴果 (Capsule)

3-nerved, pink on veins; lip 1-1.2 cm long, 3-lobed, spurred, the lateral lobes erect, oblique, triangular, 4-5 mm long, about 6 mm wide, obtuse at apex, tawny at base, the median lobe rectangular, 8-10 mm long, 6-7 mm wide, truncate at apex, undulate at apex, 7-thickened keels at base; spur 1-1.5 cm long, obtuse at apex; column 6-7 mm long.

Endemic, at the elevations of 1500-2400 m in central part of the island, not common.

着生蘭，根甚長，長10-30 cm，徑約1 mm，灰色或灰白色；莖單生，短，長3-7 cm，常包被有殘存的葉鞘。

葉多數，線形或針狀，兩列狀排列，長9-11 cm，寬2-2.5 mm，革質，先端鈍或銳尖，基部鈍，截斷狀及有關節，具有溝紋，葉鞘長7-8 mm，黃褐色。

花單生，少數亦有2-3枚者，徑2-2.5 cm，總狀花序；花莖抽自於葉腋，長8-10 cm，有暗色斑點；苞片三角形，長6-8 mm，寬約7 mm，淡褐色，先端銳尖；花梗連同子房長2-3 cm，光滑；萼片白色，擴展，後萼片倒卵形，長12-14 mm，寬約5-6 mm，先端鈍，脈3條，中肋脈呈粉紅色，側萼片基部略歪，較後萼片略長；花瓣長橢圓形或倒卵形，長1.2-1.6 cm，寬5-6 mm，脈3條，脈呈粉紅色，唇瓣長1-1.2 cm，3裂，有距，側裂片直立，歪，三角形，長4-5 mm，寬約6 mm，先端鈍，基部淡褐色，中裂片四方形，長8-10 mm，寬6-7 mm，先端截斷狀且邊緣呈波浪狀，基部有7條厚的隆起線；距長1-1.5 cm，先端鈍；蕊柱長6-7 mm。

固有，生長於中海拔約1500-2400 m的山地，着生於潤葉林樹幹的上部，較不常見。

90. 台灣堇蘭 (*Ione sasakii* Hayata)

Epiphytes; rhizome creeping, terete, 1-1.5 mm in diameter; pseudobulbs ovoid, remote, 1-1.2 cm long, fleshy, light green, smooth, not grooved.

Leaf 1, terminal at the apex of pseudobulb, oblong-linear, 5-6 cm long, 7-9 mm wide, rounded and emarginate or slightly 2-lobed at apex.

Flowers 2, patent, rather large, 1.5-2 cm in diameter, widely opened, light brown or green, racemose; scape short, produced from the base of pseudobulb 2.5-3 cm long; sheaths basal, tubular; bracts ovate, 7-10 mm long, 5-7 mm wide, acuminate or acute at apex, slightly contracted at base; the pedicels with ovaries about 1 cm long; sepals subequal, elongate-triangular or elongate-ovate, lightly green, tinged with light brown at apex, 9-11 mm long, 4-5 mm wide, acute or acuminate at apex, 5-nerved, adnate to the column-foot at the base; petals elongate-cuspidate-triangular, 7-8 mm long, about 3 mm wide, linear-cuspidate at apex, ciliate from middle to base on margin; lip cuspidate-rounded, 5-6 mm long, 3-3.5 mm wide, yellow, elongate cuspidate at apex, saccate at base, 3-nerved, strongly concave, 2-keeled appendages at the base of lip; column foot 4.5-5 mm long.

Epiphytic on tree trunks at the medium altitudes of 800-1600 m in central and southern parts of the island, endemic.

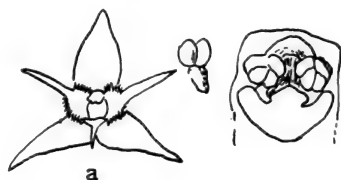


圖 (Fig) 79 台灣莖蘭 (*Ione sasakii*)
 a. 花 (Flower) b. 蕊柱 (Column)
 c. 花粉塊 (Pollinia)

着生蘭，根莖匍匐，圓柱形，徑 1-1.5 mm，假球莖疏生，卵形長 1-1.2 cm，肉質，淡綠色，光滑而無溝紋。

葉一枚，着生於假球莖的先端，長橢圓狀線形，長 5-6 cm，寬 7-9 mm，先端圓而凹或淺二裂。

花二枚，顯著，略大，徑 1.5-2 cm，擴展淡棕或淡綠色，總狀花序；花莖短，抽自於假球莖基部，長 2.5-3 cm；鞘基生，管狀；苞片卵形，長

7-10 mm, 寬 5-7 mm, 先端漸尖或銳尖, 基部略呈緊縮狀; 花梗連同子房長約 1 cm; 萼片近似整齊, 長三角形或長卵形, 淡綠色, 先端略帶有淡褐色, 長 9-11 mm, 寬 4-5 mm, 先端漸尖或銳尖, 脈 5 條, 基部與蕊柱足相連; 花瓣長尾狀三角形, 長 7-8 mm, 寬約 3 mm, 先端線狀尾形, 從中部至基部呈毛緣; 唇瓣尾狀圓形, 長 5-6 mm, 寬 3-3.5 mm, 黃色, 先端長尾端, 基部有囊, 脈 3 條, 凸出, 基部有 2 隆起的附屬物; 蕊柱長 1-1.5 mm, 蕊柱足長 4.5-5 mm。

固有, 生長於中海拔 800-1600 m 處的山地, 常見於中部及南部地區, 着生於樹幹上。

與石豆蘭很相似, 但本種的假球莖光滑肉質, 無溝紋; 且花瓣上有毛緣。

91. 台灣羊耳蒜 (*Liparis bicallosa* (D. Don) Schltr.)

Terrestrials; pseudobulb closely approximate, elongate, cylindric, terete, usually forming in next year, leafless, the internodes to 5 cm long, fibrous-sheathes persistent on nodes, filiform.

Leaves 3, producing from the base of last-year pseudobulb, ovate to elliptic, glabrous, 5-20 cm long, 3-6 cm wide, thin-chartaceous, acuminate, short-sheathed at base, 3-5-nerved elevated surface; sheathes 3-4, 3-5 cm long, enclosed the unformed pseudobulb, green, glabrous.

Flowers 15-20, brownish purple, rather large, 1.5-2 cm in diameter, scentless, racemose; scape terminal, 20-30 cm long, glabrous, purple, erect, 4-ribs; bracts narrowly ovate, 1-nerved, membranous, reflexed, 2-3 cm long, acuminate at apex; the pedicels with ovaries 1.2-1.7 cm long; sepals linear-oblong, 8-12 mm long, 1-2 mm wide, acuminate at apex, the lateral ones usually spreading; petals linear, recurved, 8-10 mm long, about 1 mm wide; lip cuneate-obovate, 10-12 mm long, 5-7 mm wide, rounded and somewhat emarginate at apex, gradually recurved in upper part, shallowly groove at tip, entire, 2 appendages at base,

obtuse, about 1 mm long; column light green, 5-6 mm long, about 2.5 mm across, narrowly winged at apex; anthers dark purple; pollinia elliptic.

Capsules oblong, brown; seeds lanceolate, thin membranous enclosed.

Himalaya, s. China, Japan and Ryukyu. Taiwan, at lower altitudes of 600-1200 m throughout the island, under the humus forests.

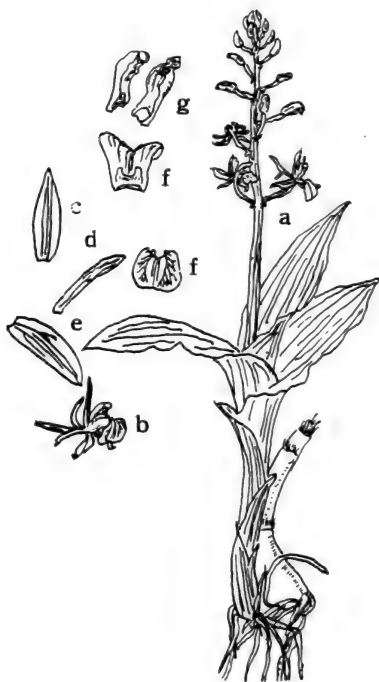


圖 (Fig) 80 台灣羊耳蒜 (*Liparis bicallosa*)

- a. 着花之植物體 (Flowering plant)
- b. 花 (Flower)
- c. 後萼片 (Dorsal sepal)
- d. 花瓣 (Petal)
- e. 側萼片 (Lateral sepal)
- f. 唇瓣 (Lip)
- g. 蕊柱 (Column)

地生蘭，假球莖緊密排列，甚長，圓柱形，莖狀，常於來年形成，無葉，節長5 cm，節的基部殘存有鬚狀葉鞘，線形。

葉3枚，抽自於去年生假球莖基部，卵形至橢圓形，光滑，長5-20 cm，寬3-6 cm，薄紙質，先端漸尖，基部具有短鞘，脈3-5條隆起於葉面；鞘3-4枚，長3-5 cm，包被於未形成的假球莖、綠色、光滑。

花15-20枚，褐紫紅色，較大，徑1.5-2 cm，無香味，總狀花序；花莖頂生，長20-30 cm，光滑，紫紅色，直立，4稜形；苞片狹卵形，脈1條，膜質，反捲，長2-3 cm，先端漸尖形；花梗連同子房長1.2-1.7 cm；萼片線狀長橢圓形，長8-12 mm，寬1-2 mm，先端漸尖形；側萼片擴展；花瓣線形，反捲，長8-10 mm，寬約1 mm；唇瓣倒卵狀楔形，長10-12 mm，寬5-7 mm，先端圓且略凹頭，先端漸向後反捲，有溝紋，全緣，基部有2附屬體；先端鈍，長約1 mm；蕊柱淡綠色，長5-6 mm，徑約2.5 mm，先端有狹翼；花藥暗紫紅色；花粉塊橢圓形。

蒴果長橢圓形，褐色；種子披針形，包被有薄膜質。

喜馬拉雅山麓，中國南部、日本及琉球。台灣，生長於低海拔600-1200 m，全島皆有分佈，生長於多腐植質的林床上。

92. 黃綠花羊耳蒜 (*Liparis chloroxantha* Hance)

Epiphytes; rhizomes short; pseudobulb closely approximate, ovoid or nearly so, 1-1.2 cm across, pale green, fleshy, stemless.

Leaves two, on the top of pseudobulb, oblanceolate, 15-20 cm long, 1.5-1.8 cm wide, acuminate, attenuate at base, thickened chartaceous, entire, glabrous, sessile, 3-5-nerved elevated beneath.

Flowers 10-30, yellowish green, medium-sized, about 8-10 mm in diameter, racemose; scape produced from the end of pseudobulb, 18-26 cm long, glabrous, somewhat fleshy; bracts lanceolate, 6-8 mm long, 1-2 mm wide, acute at apex, membranous; the pedicels with ovaries 1-1.2 cm long, glabrous; sepals equal, oblong-linear, 1-1.2 cm long, 1-2 mm wide, obtuse at apex, recurved and reflexed; petals narrowly linear, 1-1.5 cm long, 0.5 mm wide, spreading,



圖 (Fig) 81 黃綠花羊耳蒜 (*Liparis chloroxantha*)
 a. 着花之植物體 (Flowering plant)
 b. 花 (Flower)
 c.d. 萼片 (Sepal)
 e. 花瓣 (Petal)
 f. 唇瓣 (Lip)
 g. 蕊柱 (Column)

obtuse at apex, twist on upperward; lip obovate-cuneate, 8-9 mm long, about 7 mm wide, entire, truncate and wavy at apex, smooth, recurved at tip, with 2 tubercles at base inside; column subterete, erect, 6-7 mm long.

China, Taiwan, a common epiphytic orchid, at the elevations of 500-1800 m throughout the island, on mossy rocks or tree trunks.

着生蘭，根莖短，假球莖緊密排列，卵形或近似如此，徑1-1.2 cm，淡綠色，肉質，無莖。

葉2枚，着生於假球莖先端，倒披針形，長15-20 cm，寬1.5-1.8 cm，先端漸尖形，基部漸狹，厚紙質，全緣，光滑，無柄，脈3-5條隆起於葉背。

花10-30枚，黃綠色，中型，徑約8-10 mm，總狀花序；花莖抽自於假球莖的先端，長18-25 cm，光滑，略呈肉質；苞片披針形，長6-8 mm，寬1-2 mm，先端銳尖，膜質；花梗連同子房長1-1.2 cm，光滑；花萼整齊，長橢圓狀線形，長1-1.2 cm，寬1-2 mm，先端鈍，彎曲且反捲；花瓣狹線形，長1-1.5 cm，寬0.5 mm，擴展，先端鈍，光滑，先端略扭曲；唇瓣倒卵狀楔形，長8-9 mm，寬約7 mm，全緣，先端截斷狀且呈波狀，平滑，先端反捲，基部內面有2硬塊，蕊柱近似圓柱形，直立，長6-7 mm。

中國，台灣，為一很常見的着生蘭，生長於500-1800公尺的山地，全島皆有，着生於樹幹或樹枝上或多苔蘚類的岩石上。

93. 圓葉羊耳蒜 (*Liparis cordifolia* Hook. f.)

Terrestrials; pseudobulbs ovoid, somewhat compressed, 2-4 cm long, 1.2-2.5 cm across, green, usually formed at next year, leafless; stemless.

Leaf solitary, produced from the base of last-year leafless pseudobulb, petiolate, cordate, 8-11 cm long, 8-10 cm wide, acute or obtuse, cordate at base, glabrous on both sides, entire, green and shining surface, sometimes scattered with white reticulations: petioles 5-7 cm long, groove inside, green; sheathes 2-3, 1-3 cm long, enclosed

the base of petioles, glabrous.

Flowers many, small, 5-6 mm in diameter, green or yellowish green, scentless, racemose; scape produced from the terminal of unformed pseudobulb, glabrous, erect, 8-15 cm long; bracts minute, triangular, 1-2 mm long, 2-3 mm wide, acute at apex; the pedicels with ovaries 8-10 mm long; sepals linear, 1-1.5 cm long, 1-1.5 mm wide, entire and recurved, obtuse, somewhat broadly cordate at base, the lateral ones oblique at base; petals narrowly linear, 1-1.2 cm long, about 1 mm wide, truncate at apex; lip obovate-obtriangular, 8-9 mm long and wide, truncate and somewhat short-cuspidate at apex, wavy or denticulate on margin, 3-nerved, callus 2 at base; column 3-4 mm long, recurved upward, glabrous, broadly auriculate at base.

Endemic, known from the low to medium altitudes of 500-1600 m in northern and central parts of Taiwan, under the humid forests, sometimes epiphytic on mossy rocks.

地生蘭，假球莖卵形，略呈扁平狀，長2-4 cm，徑1.2-2.5 cm，常於來年形成，其上多無葉，無莖。

葉單生，抽自於去年無葉假球莖的基部，有葉柄，心形，長8-11 cm，寬8-10 cm，先端銳尖或鈍，基部心形，表裏兩面皆光滑，全緣，表面有光澤綠色，且散布有白色網紋；葉柄長5-7 cm，內面有溝紋；鞘2-3枚，長1-3 cm，包被於葉柄基部，光滑。

花多數，較小，徑5-6 mm，綠色或黃綠色，無香味，總狀花序；花莖抽自於未成形的假球莖先端，光滑，直立，長8-15 cm；苞片微小，三角形，長1-2 mm，寬2-3 mm，先端銳尖；花梗連同子房長8-10 mm；萼片線形，長1-1.5 cm，寬1-1.5 mm，全緣，先端略反捲且鈍，基部潤心形，側萼片基部略歪；花瓣狹線形，長1-1.2 cm，寬約1 mm，先端截斷狀；唇瓣倒卵狀倒三角形，長及寬均8-9 mm，先端截斷狀且略呈短尾狀，波狀或略呈鋸齒緣，脈3條，基部有附屬體2枚；蕊柱長3-4 mm，上部反捲，光滑，基部潤耳形。

固有，生長於低至中海拔約500-1600 m山地，多見於北部及中部多腐質植的森林內，有時亦着生於多苔蘚類的岩石上。



圖 (Fig) 82 圓葉羊耳蒜 (*Liparis cordifolia*)

- a. 着花之植物體 (Flowering plant)
 b. 花 (Flower) c. 後萼片 (Dorsal sepal)
 d. 花瓣 (Petal) e. 側萼片 (Lateral sepal)
 f. 唇瓣 (Lip) g. 蕊柱 (Column)

94. 紅花羊耳蒜 (*Liparis macrantha* Rolfe)

Terrestrials; rhizomes short; pseudobulbs cylindrical, 10-20 cm long, fleshy, pale green, usually enclosed by sheaths when young; sheaths 3-4, ovate-oblong, acuminate at apex, membranous, persistent.

Leaves 3-5, elliptic or oblong-elliptic, 12-18 cm long, 5-8 cm wide, plicate, acuminate or acute at apex, rounded and sheathed at base, sessile, wavy on margin, glabrous, many-veined elevated beneath; sheaths 3-5 cm long, usually enclosed the stem.

Flowers 10-15, dark red, rather larger, 1-1.5 cm in diameter, racemose, glabrous, erect; scape terminal, 18-24 cm long, terete, 4-angled, purplish red, glabrous; bracts minute, linear, 3-4 mm long, acute at apex; the pedicels with ovaries 2.5-3 cm long, erect, purplish red, slender, glabrous; sepals lanceolate or linear-lanceolate, spreading, 1.5-2 cm long, 2.5-3.5 mm wide, recurved on margin, somewhat reflexed upward tip; petals narrowly linear, 2-2.5 cm long, about 0.5 mm wide, spreading; lip obcordate-cuneate, 1.2-1.8 cm long, 9-12 mm wide, rounded, somewhat cordate at base, 1 longitudinal groove in the middle, denticulate on margin, clawed, 2 indistinct callosities at base inside; the claw 3-4 mm long; column suberect or erect, 6-8 mm long, pale green.

Endemic, known from lower to medium altitudes of 500-1600 m throughout the island, under the forest, rather common.

Dr. Seidenf proposed a new name of *Liparis nigra* in stead of *Liparis macrantha* Rolfe for its same name of *Liparis macrantha* Hook f. Indeed, *L. macrantha* Hook.f was published before *L. macrantha* Rolfe. in 1989, But *L. macrantha* Hook.f was a Synonym of *Liparis distans* CB Clarke It was out of available for a long time. and *L. macrantha*

Rolfe is available here I list *L. nigra* Seidenf as a synonym of *L. macratha* Rolfe, Please see. part III an Enumeration of Indigenous orchids of Taiwan.

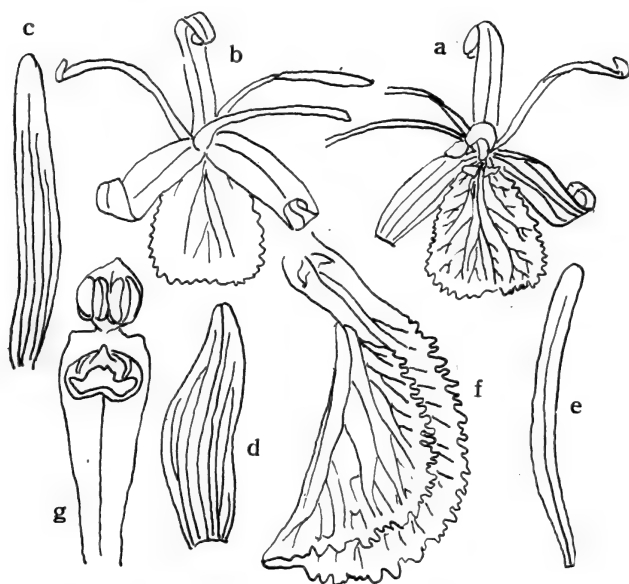


圖 (Fig) 83 紅花羊耳蒜 (*Liparis macrantha*)
 a. 花正面 (Flower front side)
 b. 花背面 (Flower back side)
 c. 後萼片 (Dorsal sepal)
 d. 側萼片 (Lateral sepal)
 e. 花瓣 (Petal) f. 唇瓣 (Lip)
 g. 蕊柱 (Column)

地生蘭，根莖短，假球莖圓柱形，長10-20 cm，肉質，淡綠色，幼時常包被有鞘，鞘3-4枚，卵狀長橢圓形，先端漸尖，膜質，殘存。

葉3-5枚，橢圓形或長橢圓狀橢圓形，12-18 cm，寬5-8 cm，皺折，先端漸尖或銳尖，基部圓而有鞘，無柄，波狀緣，光滑，脈多數隆起於背面；鞘長3-5 cm，通常包被於莖上。

花10-15枚，暗紅色，較大，徑1-1.5 cm，總狀花序，光滑，直立；花莖頂生，長18-24 cm，圓柱形，有稜角，紫紅色，光滑；苞片較小，線形，長3-4 mm，先端銳尖；花梗連同子房長2.5-3 cm，直立，紫紅色，細長，光滑；萼片披針形或線狀披針形，擴展，長1.5-2 cm，寬2.5-3.5 mm，邊緣反捲，先端略呈捲曲；花瓣狹線形，長2-2.5 cm，寬約0.5 mm，擴展；唇瓣倒心狀楔形，先端圓，基部略帶有心形，長1.2-1.8 cm，寬9-12 mm 縱溝，細鋸齒緣，有爪，內面基部具有2硬塊，爪長3-4 mm；蕊柱近似直立或直立，長6-8 mm，淡綠色。

固有，生長於全島低至中海拔約500-1600公尺的山地，多生長於森林下，較為常見。

本種由 Seidenf 博士提出一新名稱 *L. nigra* 來代替 *L. macrantha* Rolfe. Seidenf 博士以為 *L. macrantha* Rolfe 及 *L. macrantha* Hook f 是同名，而 *L. macrantha* Hook. f 發表的年代比較早（1889年），故 *L. macrantha* Rolfe 應更改新名。其實 *L. macrantha* Hook. f 是 *L. distans* C.B. Clarke 的異名，早已失效。而 *L. macrantha* Rolfe 學名仍應有效應用。請見第三部份，台灣野生蘭名錄。

95. 插天山羊耳蒜 (*Liparis macrantha* var. *sootenzanensis* (Fukuyama) Ying)

Liparis macrantha Rolfe var. *sootenzanensis* (Fukuyama) Ying, **comb. nov.**

Liparis sootenzanensis Fukuyama in Ann. Rep. Taihoku Imper. Univ. 3:84 (1933).

Terrestrials; rhizomes short; pseudobulbs closely approximate, cylindrical, 8-15 cm long, fleshy, pale green, 8-11 mm across; stemless; sheathes 2-3, membranous, lanceolate, acuminate at apex.

Leaves 2-4, elliptic or elliptic lanceolate, 15-25 cm long, 5-8 cm wide, thin chartaceous or membranous, acuminate, narrowed to the petioles at base, glabrous, many-nerved elevated beneath, entire or slightly wavy on margin; the petioles 2-4 cm long, glabrous, pale green; sheathes 2-3 cm long.

Flowers 8-12, yellowish green, medium-sized, 1.2-1.6 cm in diameter, racemose, glabrous, erect; scape terminal on the pseudobulb, producing from unopened leaves, 20-30 cm long, erect, green, angled; bracts minute, triangular, hyaline, 2-3 mm long, acute at apex; the pedicels with ovaries 2-2.5 cm long, pale green; sepals equal, spreading, linear, 1.5-1.8 cm long, about 3 mm wide, 3-nerved, recurved on margin, the lateral ones somewhat shorter; petals narrowly linear or filiform, 1.5-1.6 cm long, 0.5 mm wide; lip obovate cuneate, 1-1.3 cm long, 8-10 mm wide, recurved and rounded at tip, denticulated upward, entire to the lower part, emarginate at apex, cuneate-clawed and with 2 keeled tubercles at base; column 6-7 mm long, recurved.

Endemic, under the evergreen forests of the northern part of the island at the elevations of 800-1400 m, common on the areas of Urai and Chiatianshan.

The variety different from the typical species mainly by the yellowish green flowers and denticulated upward and entire in the lower part of the margin of the lip.

地生蘭、根莖短；假球莖緊密排列，圓柱形，長8-15 cm，肉質，淡綠色，徑8-11 mm，無莖；鞘2-3枚，膜質，披針形，先端漸尖。

葉2-4枚，橢圓形或橢圓狀披針形，長15-25 cm，寬5-8 cm，薄紙質或膜質，先端漸尖形，基部狹而延伸至葉柄，光滑，脈多數於葉背隆起，全緣或略呈波狀緣；葉柄長2-4 cm，光滑；鞘2-3枚，長2-3 cm。

花8-13枚黃綠色，中型，徑1.2-1.6 cm，總狀花序，光滑，直立；花莖頂生於假球莖先端，抽自於不十分開張的葉叢，長20-30 cm，直立，綠色，有稜角；苞片小，三角形，透明，長2-3 mm，先端銳尖；花梗連同子房長2-2.5 cm，淡綠色；萼片整齊，擴展，線形，長1.5-1.8 cm，寬約3 mm，脈3條，邊緣反捲，側萼片較短；花瓣狹線形或絲線狀，長1.5-1.6 cm，寬0.5 mm；唇瓣倒卵狀楔形，長1-1.3 cm，寬8-10 mm，先端圓且反捲，上部有細鋸齒，基部全緣，先端凹頭，基部呈楔狀爪狀，且有二隆起塊狀物，蕊柱長6-7 mm，反捲。

固有，生長於台灣北部中海拔約 800-1400 公尺的山地，常見於常綠闊葉林下，尤多見於烏來及插天山區內。

96. 扁球羊耳蒜 (*Liparis platybolba* Hayata)

Epiphytes; pseudobulbs closely approximate, compressed oblong, ovate-oblong or elliptic, 2.5-3 cm long, 1.5-2 cm wide, 2-6 mm thick, glabrous, yellowish green.

Leaves 2, very rarely 3, terminal on the pseudobulb, articulate, oblanceolate, thickened chartaceous, 10-15 cm long, 2-2.5 cm wide, acute, gradually narrowed base, sessile or subsessile, entire, 3-4-nerved elevated beneath, green surface, pale green beneath.

Flowers many, small, grayish white, scentless, racemose; scape terminal on the pseudobulb, 20-25 cm long, pendulous, glabrous; sheathes few, at the base of scape, lanceolate, 2-3 cm long, 4-5 mm wide; bracts lanceolate, 4-6 mm long, membranous, acute; the pedicels with ovary 4-6 mm long glabrous, green; sepals erect, linear oblong, 4-6 mm long, 1.5-2.5 mm wide, obtuse at apex, 1-nerved; petals narrowly linear, 5-5.5 mm long, about 0.5 mm wide, erect, acute at apex; lip subspreading, rounded or nearly so, 4-5 mm long, 3-4 mm wide, cuspidate at apex, clawed at base, the claw 3-3.5 mm long, glabrous, fleshy, the lamina wavy-plicate on margin; column 2-2.5 mm long, suberect.

Capsules obovoid-fusiform, clavate-rounded at apex, 3-ribs.

Endemic, known from the low to medium altitudes of 600-1800 m throughout the island, epiphytic on tree trunks or branches, somewhat common.

着生蘭，假球莖緊密排列，扁長橢圓形，卵狀長橢圓形或橢圓形，長 2.5-3 cm，寬 1.5-2 cm，厚 2-6 mm，光滑，黃綠色。

葉 2 枚，少數亦有 3 枚者，着生於假球莖的基部，具有關節、倒披針形，厚紙質，長 10-15 cm，寬 2-2.5 cm，先端銳尖，基部漸狹，無柄或近

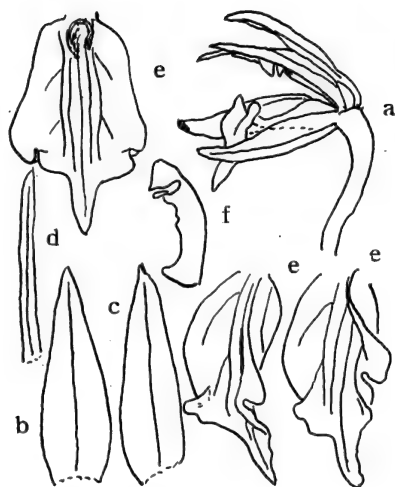


圖 (Fig) 84 扁球羊耳蒜 (*Liparis platybolba*)

- a. 花 (Flower)
 b. 後萼片 (Dorsal sepal)
 c. 側萼片 (Lateral sepal)
 d. 花瓣 (Petal) e. 唇瓣 (Lip)
 f. 蕊柱 (Column)

似無柄，全緣，脈3-4條隆起於背面，表面呈有光澤綠色，背面淡綠色。

花多數，較小，白色或灰白色，無香味，總狀花序；花莖頂生於假球莖的先端，長20-25 cm，下垂，光滑；鞘少數，着生於花莖基部，披針形，長2-3 cm，寬4-5 mm；苞片披針形，長4-6 mm，膜質，先端銳尖；花梗連同子房長4-6 mm，光滑，綠色；萼片直立，線狀長橢圓形，長4-6 mm，寬1.5-2.5 mm，先端鈍，脈1條；花瓣狹線形，長5-5.5 mm，寬約0.5 mm，直立，先端銳尖；唇瓣近似擴展，圓或近似如此，長4-5 mm，寬3-4 mm，先端尾狀，基部有爪，爪長3-3.5 mm，光滑，肉質，唇瓣片邊緣呈波狀綉折，蕊柱長2-2.5 mm，近似直立。

蒴果倒卵狀紡錘形，先端棍棒狀圓形，有稜狀突起3條。

固有，生長於全島低至中海拔約600-1800 m 山地，着生於樹幹或樹枝上，甚為普遍。

97. 羊耳蒜 (*Liparis plicata* Fr. et Sav.)

Epiphytes; pseudobulb compressed elongate-conical, green, glabrous, 1-2 cm long, few scales when young.

Leaf solitary, very rarely 2, at the top of pseudobulb, ovate-lanceolate or linear-oblong, 7-16 cm long, 1.5-3.5 cm wide, coriaceous, acuminate, near to round at base, distinctly jointed with the sheaths.

Flowers 5-15, yellowish green, scentless, 6-7 mm in diameter, one-side racemose; scape terminal on the pseudobulb, 10-18 cm long, glabrous, green, flat, narrowly wing-margined, arcuately recurved in upper part; bracts triangular lanceolate, 3-6 mm long, 1-2 mm wide; pedicels with ovaries 8-12 mm long, glabrous; sepals lanceolate-ovate, spreading, the dorsal one 6-7 mm long, about 2 mm wide, obtuse at apex, the lateral ones slightly shorter, arcuate in upper part; petals linear, glabrous, 6-7 mm long, 1-1.2 mm wide, obtuse at apex; lip cuneate-ovate, more or less fleshy, 5-5.5 mm long, about 5 mm wide, rounded-truncate and emarginate, smooth, gradually recurved at tip, with 2 indistinct callosities at base inside; column winged near the tip, about 4 mm long.

Capsules clavate-fusiform, 8-12 mm long, 5-6 mm in diameter; seeds minute, numerous, enclosed by thin membranes.

S. China, Japan and Ryukyu. Taiwan, at lower altitudes below 1000 m throughout the island, epiphytic on tree trunks and mossy rocks, very common.

着生蘭，假球莖扁長圓錐形，綠色，光滑，長1-2 cm，幼時基部具有數枚鞘。

葉單一，極少數亦有2枚者，着生於假球莖的先端，卵狀披針形或線狀長橢圓形，長7-16 cm，寬1.5-3.5 cm，革質，先端漸尖形，基部近似於圓形，以關節與鞘相連。

花5-15枚，黃綠色，無香味，徑6-7 mm，着生於一側，總狀花序；

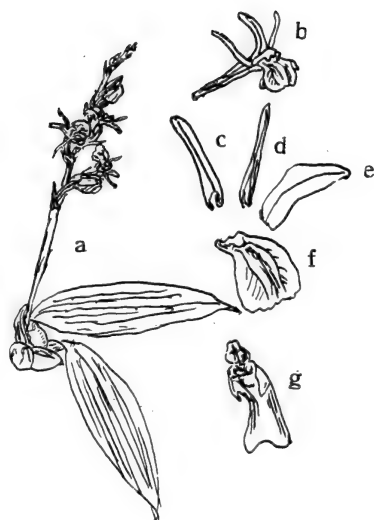


圖 (Fig) 85 羊耳蒜 (*Liparis plicata*)
 a. 着花之植物體 (Flowering plant)
 b. 花 (Flower) c. 後萼片 (Dorsal sepal)
 d. 花瓣 (Petal) e. 側萼片 (Lateral sepal)
 f. 唇瓣 (Lip) g. 蕊柱 (Column)

花莖着生於假球莖的先端，長 10-18 cm，光滑、綠色、扁平、邊緣具有膜狀的翼，先端略呈拱狀下垂；苞片三角狀披針形，長 3-6 mm，寬 1-2 mm；花梗連同子房長 8-12 mm，光滑；萼片披針狀卵形，擴展，後萼片長 6-7 mm，寬約 2 mm，先端鈍；側萼片略短，先端反捲；花瓣線形，光滑，長 6-7 mm，寬 1-1.2 mm，先端鈍；唇瓣楔狀倒卵形，多少呈肉質，長 5-5.5 mm，寬約 5 mm，先端圓而截斷狀，略凹頭，光滑，先端略向後反捲，基部內面有 2 顯著硬塊，蕊柱先端有翼，長約 4 mm。

蒴果棍棒狀紡錘形，長 8-12 mm，徑約 5-6 mm；種子甚小，多數，被有薄膜。

中國南部，日本及琉球。台灣，生長於低海拔約 1000 公尺以下的山地，全島皆有分佈，常着生於樹幹及多苔蘚類的岩石上，甚為常見。

98. 綠唇羊耳蒜 (*Liparis shaoshunia* Ying)

Liparis shaoshunia Ying, sp. nov.

Terrestris, erecta, 25-30 cm alta, glaberrima; pseudobulbis cylindris, 8-12 cm longis, 0.5-0.6 cm in diametro, apice 3-foliatis, basi 2-3 vaginatis; vaginis 4-6 cm longis, pseudobulbum complete amplectentibus, scariosis nervosis, apice acutiusculis.

Folia 3, petiolata, lamina patentia, ovate vel oblong, 7-12 cm longa, 4-4.5 cm lata, apice acuta vel acuminata, basi rotundato-cuneata, chartacea, utrinque glabra, vivo margine integra nervis 5-7; petiolis deorsum gradatim attenuatis, pseudobulbum amplectantibus 1-1.5 cm longis, 0.5-0.6 cm in diameteris.

Scapus gracilis erectus, esquamatus, glaber, angulatus ad angulos unguatissime alatus, elongatus, 12-18 cm longus, racemo florifero 8-10 cm longo, sublaxe 9-12-florato; bracteis triangulatis, minutis, puniceis, ca. 2 mm longis, apice acutis.

Flores 9-12, mediocres, ca. 2 cm in diametro, glabri; pedicellis erectis, 1.8-2.2 cm longis, glabris, puniceum; sepalum intermedium puniceum, lineare, post reflexum, 1.4-1.6 cm longum, 1.5-1.8 mm latum, apice obtusum, basi contractum, lateralia punicea, oblique, lanceolata vel oblanceolata, 1.2-1.3 cm longa, 3-3.5 mm lata, apice obtusa, basi contracta; petala anguste linearia, filiformia, 1.5-1.8 cm longa, ca. 0.5 mm lata, punicea.

Labellum cuneato-ovatum, viridianum antice truncato-rotundatum, apice emarginatum, margine minuta serrulata, basi 1-2 tuberculati; columna recurva, glabra, virida serus purpurata, 5-6 mm longa.

Habitat: Taiwan, Pingtung Hsien, Hang-chuan, Nanjenshan,
Leg.: S.S. Ying, Jan. 24, 1976.

The species is characterized by the dark purple sepals and petals; the green lip.



圖 (Fig) 86 綠唇羊耳蒜 (*Liparis shaoshunia*)

a. 着花之植物體 (Flowering plant)

b. 花萼 (Sepal) c. 花瓣 (Petal)

d. 唇瓣 (Lip)

地生蘭，直立，高 25-30 cm，光滑；假球莖圓柱形，長 8-12 cm，徑 0.5-0.6 cm，先端有葉 3 枚，基部有鞘 2-3 枚，鞘 4-6 cm，包住假球莖，有脈，先端銳尖。

葉 3 枚，着生於假球莖先端，卵形或長橢圓形，長 7-12 cm，寬 4-4.5 cm，先端銳尖或漸尖，基部圓狀楔形，紙質，兩面均光滑，全緣，脈 5-7 條；葉柄由葉片基部延伸，長 1-1.5 cm，抱莖，徑 0.5-0.6 cm。

花莖細長，直立，無鞘，抽自於初開張的葉叢中，光滑，有稜角，紫紅

色，長 12-18 cm，總狀花序部份約 8-10 cm，疏花；苞片三角形，小，暗紫紅色，長約 2 mm，先端銳尖。

花 9-12 枚，中型，徑約 2 cm，光滑，總狀花序，花梗連同子房直立，長 1.8-2.2 cm，光滑，暗紫紅色；後萼片暗紅紫色，線形，邊緣向後反捲，長 1.4-1.6 cm，寬 1.5-1.8 mm，先端鈍，基部緊縮；側萼片暗紫紅色，基部歪，披針形或倒披針形，長 1.2-1.3 cm，寬 3-3.5 mm，先端鈍，基部緊縮；花瓣狹線形，細絲狀，長 1.5-1.8 cm，寬約 0.5 mm，暗紅紫色。

唇瓣楔狀卵形，碧綠色，先端圓截斷狀，先端凹頭，細鋸齒緣，基部有 1-2 枚附屬體；蕊柱拱形，光滑，淡綠色，後轉變成淡紫色，長 5-6 mm。

固有，生長於恒春半島南仁山約 300-500 m 間，常綠闊葉林下。

本種為筆者在恒春南仁山所採集的新種，其特徵為花瓣及萼片呈暗紫紅色，唇瓣呈碧綠色。

99. 相馬氏羊耳蒜 (*Liparis somai* Hayata)

Epiphytes; pseudobulbs closely approximate, ovoid, 3.5-4 cm long, 2-2.5 cm in diameter, fleshy, green or yellowish green; roots numerous, filiform, slender.

Leaves 2, terminal on the pseudobulb, oblanceolate or spatulate-lanceolate, 12-15 cm long, 1.5-2 cm wide, acuminate, attenuate at base, thickened chartaceous, slightly fleshy, lustrous green surface, pale green beneath.

Flowers numerous, yellow or pale yellow, 5-7 mm in diameter, widely opened; scape terminal on the pseudobulb, 10-15 cm long, erect, stricted; the pedicels with ovaries 7-9 mm long, glabrous, green or greenish yellow, ascending; the bracts linear-lanceolate, 5-7 mm long, about 1 mm wide, acuminate at apex; the dorsal sepal lanceolate, 5-6 mm long, about 1 mm wide, obtuse at apex, strongly contracted at base; the lateral one oblique ovate, 3-3.5 mm long, 1.5 mm wide, obtuse at apex; petals linear, 2-2.6 mm long, 0.5 mm wide, acuminate at apex; lip ovate, 3-3.5 mm long, 2-2.2 mm wide, acute-triangular at apex, slightly cordate



圖 (Fig) 87 相馬氏羊耳蒜 (*Liparis somai*)

- a. 植物體 (Flowering plant) b. 花 (Flower)
 c. d. 萼片 (Sepal) e. 花瓣 (Petal)
 f. 唇瓣 (Lip) g. 蕊柱 (Column)

and contracted at base, plicate-recurved from middle to tip; column about 5-6 mm long.

Endemic, known from medium altitudes of 500-900 m in eastern and southern parts of the island, epiphytic on tree trunks.

着生蘭，假球莖緊密排列，卵形，長3.5-4 cm，徑2-2.5 cm，肉質，綠色或黃綠色；根多數，線形，細長。

葉2枚，着生於假球莖的先端，倒披針形或舌狀披針形，長12-15 cm，寬1.5-2 cm，先端漸尖，基部漸窄，厚紙質，略呈肉質，表面呈有光澤綠色，背面淡綠色。

花多數，黃色或淡黃色，徑5-7 mm，開張；花莖頂生於假球莖先端，長10-15 cm，直立，有稜狀突起；花柄連同子房長7-9 mm，光滑，綠色或黃綠色，斜上昇；苞片線狀披針形，長5-7 mm，寬約1 mm，先端漸尖；後萼片披針形，長5-6 mm，寬約1 mm，先端鈍，基部緊縮狀；側萼片歪卵形，長3-3.5 mm，寬1.5 mm，先端鈍；花瓣線形，長2-2.6 mm，寬0.5 mm，先端漸尖；唇瓣卵形，長3-3.5 mm，寬2-2.2 mm，先端銳尖狀三角形，基部略呈心形且略呈緊縮狀，從中部至先端向後反捲，蕊柱長5-6 mm。

固有種，生長於東部及南部中海拔約500-800 m山地，着生於樹幹上。

100. 小雙葉蘭 (*Listera deltoidea* Fukuyama)

Terrestrials; roots elongate, slender; stem simple erect, slender, green, included the scape 18-21 cm long, glabrous below the part of the leaves, pubescent upward, 2-3, at the base of stem, membranous, enclosed the stem completely.

Leaves 2, opposite, on the middle of the stem, sessile, deltoid or ovate-triangular, 2.5-3 cm long, 2-3 cm wide, shortly acute at apex, truncate at base, entire, chartaceous or thickened membranous, glabrous, green surfaces, pale green beneath.

Flowers 8-12, subclaxed, green, 7-9 mm in diameter,

racemose; scape terminal, 8-10 cm long, erect, slender, glandular pubescent; bracts minute, ovate, glabrous, acute at apex, 1-nerved; the pedicels with ovaries suberect, 2.5-3 mm long, glabrous; sepals ovate, 1.5-2 mm long, about 1 mm wide, obtuse or acute at apex, somewhat contracted at base, concave, glabrous, 1-nerved, membranous; petals oblong or oblanceolate-oblong, 1.5-1.8 mm long, 0.5-0.7 mm wide, acute at apex, more or less narrowed at base, glabrous, 1-nerved, membranous; lip long cuneate in outline, 4-4.5 mm long, thickened, glabrous, patent, suspended, more or less sagitate at base, 2-lobed from the middle to top, the lobes linear, 2-2.5 mm long, acuminate at apex; column suberect, 1-1.2 mm long.

Endemic, under the evergreen forests at the elevations of 900-1400 m in northern part of the island, somewhat common at northern Chia-tien-shan.

地生蘭，根甚長，細長；莖單生，無分枝，細長、綠色，連同花莖18-20 cm，葉部以下光滑，上部（花莖）有毛茸；鞘2-3枚，生長於莖基部，膜質，完全抱莖。

葉2枚，對生，生長於莖中部，無柄，三角形或卵狀三角形，長2.5-3 cm，寬2-3 cm，先端短銳尖，基部截斷狀，全緣，紙質或厚膜質，光滑，表面綠色，背面呈淡綠色。

花8-12枚，略呈疏生，綠色，徑7-9 mm，總狀花序；花莖頂生，長8-10 cm，直立，細長，有腺毛；苞片微小，卵形，光滑，先端銳尖，脈1條；花梗連同子房長2.5-3 mm，近似直立，光滑；萼片卵形，長1.5-2 mm，寬約1 mm，先端鈍或銳尖，基部略呈緊縮狀，凸出，光滑，脈1條，膜質；花瓣長橢圓形或倒披針狀長橢圓形，長1.5-1.8 cm，寬0.5-0.7 mm，先端銳尖，基部略狹，光滑，脈1條，膜質；唇瓣外形略呈長楔形，長4-4.5 mm，厚，光滑，顯著，下垂，基部略呈盾形，從中部至先端2裂，裂片線形，長2-2.5 mm，先端漸尖形；蕊柱近似直立，長1-1.2 mm。

固有，生長於台灣北部中海拔約900-1400 m山地，常見於常綠闊葉林下，尤多見於北插天山。

101. 邵氏雙葉蘭 (*Listera shaoii* Ying)

Listera shaoii Ying, sp. nov.

Terrestris, radicalis filiformis, 10-15 cm longis, villosis. Caulis erecta, simplex, 10-15 cm altus, stricta, gracillima, basi purpurea, glabra, supra puberula.

Folia 2, opposita, sessilia, ovato-triangulata, 1.5-2.6 cm longa, 1-1.5 cm lata, apice acuta vel acuminata, basi truncata, margine integra vel leviter undulata, charactea, utrinque glabra, 1-3-nervata, costa subtus rubra vel purpurea, supra viridia subtus pallidiora.

Scapus gracilis, terminalis, 7-40 cm longis, puberulis, erectis, rubra cum viridia.

Flores 10-15, bracteis lanceolato-triangulatis, 1.5-3 mm longis, ca 1mm latis apice acuta, pedicellis gracilis, filiformis, 9-12 mm longis, puberulis; ovariis elongato-rotundatis, 3.5-4 mm longis, ca 1.5 mm in diametro, glabris; sepala cum petala virida, minuta, reflexa; the sepalum posticum linearo-oblong, 3-4 mm longum, 0.8-0.9 mm latis, apice obtusa, haud constricta; sepalis lateralibus in termedio subsimilibus sed basi dilatatum; petala linearia, 2.8-3.5 mm longa, ca 0.1 mm latis, apice obtusa, labellum rubra vel purpuro-rubra, convexa; 2-6 mm longa, medio vel supra medium divaricato-bilobatum, lobi lineari, 2.5-3 mm longi, apice obtusa; columna breva, 0.2-0.3 mm longa, virida.

Habitat: Siyuenakou, alt. 1400-1600, leg. S.S. Ying 5910, 5925 April 2 1977.

Terrestrials; roots elongate, filiform, 10-15 cm long, villose; stem simple, included scape 12-20 cm long, erect, stricted, dark purplish red, glabrous in lower part and pubescent upward.

Leaves 2, opposite, on the middle of stem, sessile, ovate-triangular, 1.5-2.6 cm long, 1-1.5 cm wide, acuminate

or acute at apex, truncate at base, entire or slightly wavy on margin, chartaceous, 1-3-nerved; the midrib usually purplish red on the beneath, lustrous green surface, pale green beneath.

Scape terminal, 7-10 cm long, pubescent, erect, purplish red tinged with green or green tinged with purplish red, the inflorescence a raceme, 4.5-7.5 cm long.

Flowers 10-15, widely opened, racemose; the bracts lanceolate-triangular, 1.5-3 mm long, about 1 mm wide, acute at apex; the pedicels slender, filiform, 9-12 mm long, slightly pubescent; the ovary elongate rounded, 3.5-4 mm long, about 1.5 mm in diameter, glabrous; sepals and petals green, minute, sometimes tinged with purple, strongly reflexed to backward; the dorsal sepal linear-oblong, 3-4 mm long, 0.8-0.9 mm wide, obtuse at apex, no contracted at base, the lateral ones same as the dorsal in shape and size but somewhat broader at base; petals linear, 2.8-3.5 mm long, about 0.1 mm wide, obtuse at apex; lip dark red or purplish red, convex, 5-6 mm long, 2-lobed from middle to apex; the lobes linear, 2.5-3 mm long, obtuse at apex; the unlobed base usually with 1 purplish yellow longitudinal keel in the medium; column short, about 0.2-0.3 mm long, green in color.

Habitat: Sivuenakou (思源埡口), alt. 1400-1600 m, leg. S.S. Ying 5900, 5925 (Typus), April 2 1977.

地生蘭，根甚長，線形，長10-15 cm，有毛茸；莖無分枝，連同花莖長12-20 cm，直立，四稜形，暗紅紫色，基部光滑，葉以上部份有毛茸。

葉2枚，對生，生長於莖中部，無柄，卵狀三角形，長1.5-2.6 cm，寬1-1.5 cm，先端漸尖或銳尖，基部截斷狀，全緣或略呈波狀緣，紙質，脈1-3條，中脈在葉背面呈暗紫紅色，表面呈有光澤綠色，背面淡綠色。

花莖頂生，長7-10 cm，有毛茸，直立，紫紅色帶有綠色或綠色帶有紫紅色，花序呈總狀花序，長4.5-7.5 cm。

花10-15枚，甚張開，總狀花序；苞片披針狀三角形，長1.5-3 mm，

寬約1 mm，先端銳尖；花梗細長，線形，長9-12 mm，略有毛茸；子房長圓形，長3.5-4 mm long，寬約1.5 mm，光滑；萼片及花瓣綠色，小，有時帶有紅紫色，強列地向後反捲；後萼片線狀長橢圓形，長3-4 mm，寬0.8-0.9 mm，先端鈍，基部不緊縮，側萼片形狀及大小與後萼片相似，但基部較寬；花瓣線形，長2.8-3.5 mm，寬約0.1 mm，先端鈍；唇瓣暗紅色或紫紅色，凸出，長5-6 mm，中部至先端2裂，裂片線形，長2.5-3 mm，先端鈍，未分裂的基部在中間部份有1紫黃色的隆起線；蕊柱短，長0.2-0.3 mm，綠色。

固有，生長於思源埡口，約1400-1600 m處，生長於章傑橋附近公路的邊坡上，數量尚多。

種名獻給我的母親，以聊表對母親生育、養育及教育的恩惠。

102. 台灣雙葉蘭 (*Listera taiwaniana* Ying)

Terrestrials; roots elongate, slender; stem simple, erect, slender, 10-20 cm long, 1 mm in diameter, leafy in the middle of the stem, sheathing at base; sheaths ovate-triangular, membranous, completely amplexical, 5-7 mm long, 3-3.5 mm wide.

Leaves 2, opposite, patent, sessile, ovate or ovate-triangular, 1-1.5 cm long, 1-1.2 cm wide, obtuse at apex, truncate at base, midrib raised on back, lateral veins inconspicuous, entire, coriaceous or thickened chartaceous, glabrous, lustrous green surface, pale green beneath.

Flowers 2-6, small, 4-7 mm in diameter, pale green or yellowish green, racemose; scape terminal, 7-10 cm long, erect, glabrous, green; bracts ovate or rounded, 4-5 mm long, 1-1.5 mm wide, obtuse, contracted at base; the pedicels with ovaries suberect, glabrous, 2-3 mm long, green; sepals linear-lanceolate, 1-nerved, acute at apex, contracted at base, 6-8 mm long, 1-1.5 mm wide, concave; petals linear-lanceolate, same as the sepals in length, 1-nerved; lip rectangular, 1.2-1.7 cm long, 3-4 mm wide, truncate and wavy or slightly emarginate at apex, contracted at base,

glabrous; column suberect, about 1 mm long.

Endemic, known at the high altitudes of 3600-3800 m on the mountain of Ma-bou-la-se-shan only, under the forests of *Juniperus squamata* var. *morrisonicola*.

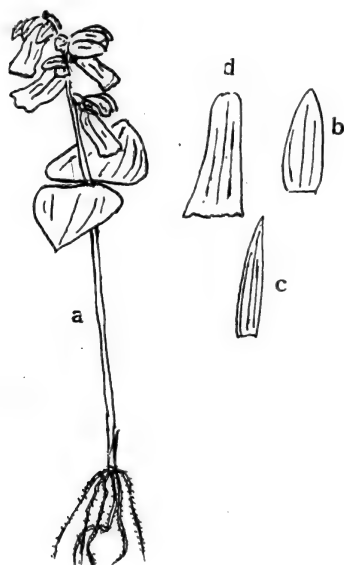


圖 (Fig) 88 台灣雙葉蘭 (*Listera taiwaniana*)
a. 着花植物體 (Flowering plant)
b. 後萼片 (Dorsal sepal)
c. 花瓣 (Petal) d. 唇瓣 (Lip)

地生蘭，根甚長，細長；莖單生無分枝，直立，細長，長 10-20 cm，徑約 1 mm，中部具有葉，基部有鞘，鞘卵狀三角形，膜質，完全抱莖，長 5-7 mm，寬 3-3.5 mm。

葉 2 枚，對生，顯著，無柄，卵形或卵狀三角形，長 1-1.5 cm，寬 1-1.2 cm，先端鈍，基部截斷狀，中肋於背面隆起，側脈不顯著，全緣，革質或厚紙質，光滑，表面呈有光澤綠色，背面淡綠色。

花 2-6 枚，較小，徑 4-7 mm，淡綠色或黃綠色，總狀花序；花莖頂生，長 7-10 cm，直立，光滑，綠色；苞片卵形或圓形，長 4-5 mm，

寬1-1.5 mm，先端鈍，基部緊縮狀；花梗連同子房長2-3 mm，近似直立，光滑，綠色；萼片線狀披針形，長6-8 mm，寬1-1.5 mm，槽狀，脈1條，先端銳尖，基部緊縮狀；花瓣線狀披針形，與萼片同長，脈1條；唇瓣四方形，長1.2-1.7 cm，寬3-4 mm，先端截斷狀且呈波狀緣，少數且有呈微凹頭者，基部緊縮狀，光滑；蕊柱近似直立，長約1 mm。

固有，生長於馬博拉斯山高海拔約3600-3800公尺的高山地區，多生長於玉山圓柏林底下，較為少見。

103. 烏來雙葉蘭 (*Listera uraiensis* Ying)

Listera uraiensis Ying, sp. nov.

Terrestris, erecta, gracillima, basi virens supra flavivirens cum purpuracens stricta, 18-25 cm alta, medio folifera, infra folia glabra, supra puberula, basi univaginata, radicibus fasciculatis pubescentibus.

Folia 2, opposita, patentia, ovato-deltoid, sessilis, 3-3.5 cm longa, ca 2 cm lata, apice acuminata, basi truncata, chartacea, margine integra vel undulata, utrinque glabra, supra viridia, costa alba subtus pallidiora, 3-nervata inter nervos laterales reticulato-venulosa.

Flores 12-20, pallo purpurea, scapi sublux racemosi, 1-2 mm in diametro; scapeus terminalis cum racemo 11-14 cm longus, simplex, flavi-albus cum purpuracens stricta, puberula; bracteis minutis, triangulus, apice acutis, 1-1.5 mm longis, ca 1 mm latis; pedicellum cum ovario ca 2 mm longis, erectis, glabris, flavi-albus cum stricta purpurea; sepalum minutum, ovato-triangulum, 1-2 mm longum, ca 1 mm latum, apice acuta, concavula, membranacea, glabra; petala linearia, ca 1.5 mm longa, 0.7-0.8 mm lata, apice obtusa, membranacea, utrinque glabra; labellum 5-6 mm longum, basi 0.6 mm latum, medio 0.8 mm latum, linearum, erectum, basi angustum, medio dilatatum, divaricato-bilobatum, inter apices loborum 2-3 mm longum; column suberecta, ca 1 mm longa.

Capsules obovoidea, 5-purpurea stricta, 3-4 mm longa, 1-1.5 mm in diametro.

Hab.: in Mt. Patouershan. 1000 m alt. leg. S.S. Ying 3582, April 13 1975.

Terrestrials; roots many, 6-10 cm long; stem simple, slender, with scape 18-25 cm long, yellowish green and glabrous below, the part of the leaves green with purple ridge and pubescent upward.

Leaves 2, opposite, on the middle of the stem, patent, ovate-triangular or triangular, sessile, 3-3.5 cm long, about 2 cm wide, acuminate, truncate at base, chartaceous, entire wavy on margin, glabrous on both sides, green and midrib white surface, pale green beneath, 3-nerved, the lateral veins reticulate.

Flowers small, 12-20, light purple, subax-racemose, 2-3 mm in diameter; scape terminal, 11-14 cm long, simple, yellowish white with purple ridges, pubescent; bracts minute, triangular, acute at apex, 1-1.5 mm long, about 1 mm wide; pedicels with ovaries about 2 mm long, erect, glabrous, yellowish with white with purple ridges; sepals minute, ovate-triangular, 1-2 mm long, about 1 mm wide, acute at apex, concave, membranous, glabrous; petals linear, about 1.5 mm long, 0.7-0.8 mm wide, obtuse at apex, membranous, glabrous; lip 5-6 mm long, 0.6-0.8 mm wide, linear, erect, narrow at base, 2-lobed from the middle, the lobes 2-3 mm long, linear; column suberect, about 1 mm long.

Capsules obovoid, 5-purple ridges, 3-4 mm long, 1-1.5 mm across.

Endemic, known from the medium altitudes of 900-1500 m in northern part of the island, somewhat rare.

地生蘭；根多數，長6-10 cm；莖細長，無分枝，連花莖長18-25 cm

，下面黃綠色且光滑，葉以上部份綠色而有紫色的稜線，上部有毛茸。

葉二枚，對生，在莖的中下部，顯著，三角狀卵形，無柄，長 3 - 3.5 cm，寬約 2 cm，先端漸尖，基部截斷狀，紙質，全緣或波狀緣，兩面均光滑，表面綠色，中肋呈白色，背面淡綠色，脈 3 條，側脈呈網狀。

花小，12-20 枚，淡紫色，疏總狀花序，徑 2-3 mm；花莖頂生，長 11-14 cm，黃白色而有紫色稜線，有毛茸。苞片小，三角形，長 1-1.5 mm，寬約 1 mm，先端銳尖；花梗連同子房長約 2 mm，直立，光滑，淡黃色而有紫色條紋；萼片小，卵狀三角形，長 1-2 mm，寬約 1 mm，先端銳尖，槽狀、膜質、光滑；花瓣線形，長約 1.5 mm，寬約 0.7-0.8 mm，先端鈍，膜質，光滑；唇瓣長 5-6 mm，寬 0.6-0.8 mm，直立，基部狹，從中部起 2 裂，裂片長 2-3 mm，線形；蕊柱近似直立，長約 1 mm。

蒴果倒卵形，長 3-4 mm，徑 1-1.5 mm，有 5 條紫色稜線。

固有，生長於北部中海拔約 900-1500 m 的山地，生長於森林下，較少。

104. 小柱蘭 (*Malaxis latifolia* J.E. Smith)

Terrestrials; rhizomes short; pseudobulb clustered, erect, 5-10 cm long, 1.5-2.5 cm across, green sometimes tinged with purple, succulent.

Leaves 4-6, obliquely oblong, 14-25 cm long, 4-10 cm wide, acuminate, cuneate or cordate at base, chartaceous, 6-10 nerved elevated beneath, green, more or less tinged with purple beneath; the petioles 3-4 cm long; sheaths 2-3 cm long, embracing the stem.

Flowers many, yellow in bud and red opened, racemose; scape 20-45 cm long, pubescent, erect or ascending; sepals oblong, 3-4 mm long, obtuse; petals 4-5 mm long, narrower, sublinear; lip 3-lobed, the lateral lobes shortly triangular, obtuse at apex; the median lobe narrow, without auricles, with a transversal basal, concave, papillose thickening within; stamens not exceeding the anther.

Fruits ellipsoid, 6-ribbed, transversally wrinkled.

S. China, Java, India, Nepal, Malaya and Queensland.

Taiwan, at medium altitudes of 600-1300 m under humid forests, somewhat common.

地生蘭，根莖短，假球莖叢生，直立，長5-10 cm，徑1.5-2.5 cm，肉質，綠色，有時帶有紫色。

葉4-6枚，歪橢圓形，長14-25 cm，寬4-10 cm，先端漸尖形，基部楔形或心形，紙質，脈6-10條隆起於背面，綠色，背面多少帶有紫紅色；葉柄長3-4 cm；鞘長2-3 cm，抱莖。

花多數，芽時呈黃色，開放後呈紅色，總狀花序；花莖長20-45 cm，有毛茸，直立或近似如此；萼片長橢圓形，長3-4 mm，先端鈍；花瓣近似線形，較狹，長4-5 mm，唇瓣3裂，側裂片短三角形，先端鈍，中裂片狹，無耳狀物，內面基部有一凸出有柔毛的附屬物。

蒴果橢圓形，有6條稜線，略呈扭曲。

中國南部、爪哇、印度、尼泊爾、馬來西亞及昆士蘭。台灣，生長於中海拔約600-1300 m山地，常見於多腐植質森林內，較為常見。

105. 松田氏小柱蘭 (*Malaxis matsudai* (Yamamoto)

Hatusima)

Terrestrials; roots elongate; stem simple, fleshy, 8-12 cm long, 6-7 mm across, green, with purple tinged, enclosed by the leaf-sheaths when young, smooth; sheaths 2-3, at the base of stem, membranous.

Leaves 4-6, ovate-elliptic or elliptic-lanceolate, 6-9 cm long, 2-3.5 cm wide, acute or minute acuminate, oblique cuneate to the petioles at base, thickened chartaceous, entire and wavy on margin, 5-7-nerved elevated beneath, lustrous green surface, pale green beneath; the petioles 1-1.5 cm long; sheaths 1-2 cm long, enclosed the stem, green tinged with light purple.

Flowers 8-12, small, green or yellowish green, 5-6 mm in diameter, racemose; scape terminal, 8-12 cm long, slender, erect, purple with green tip, glabrous; bracts linear-lanceolate, 3-3.5 mm long, about 1.5 mm wide, acute at apex, chartaceous; the pedicels with ovaries 2-3 mm long,

green; sepals equal, spreading, oblong or ovate, 2 - 3 mm long, about 1.5 mm wide, obtuse at apex, somewhat fleshy, concave; petals linear, 3-4 mm long, 0.2 mm wide, obtuse at apex, glabrous; lip sessile, ovate-spathulate, 4 - 5 mm long, about 3 mm wide, 2-lobed at base, the lobes acute triangular, obtuse and emarginate at apex; column short, subterete, with anthers about 1 mm long.

Endemic, under the evergreen broad-leaved forests at the elevations of 600-1500 m in central and southern parts of the island.

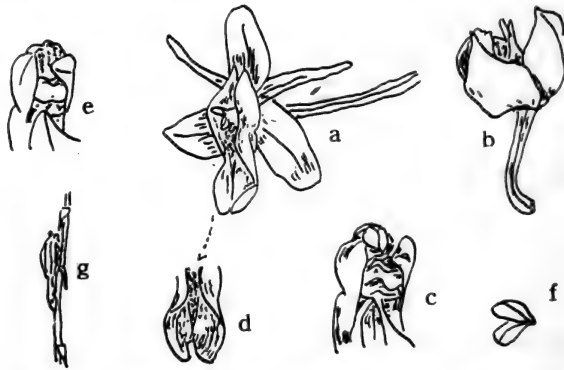


圖 (Fig) 89 松田氏小柱蘭 (*Malaxis matsudai*)
 a. 花 (Flower)
 b. 未開放的花 (Unopened flower)
 c. 蕊柱 (Column) d. 唇瓣 (Lip)
 e. 蕊柱 (Column) f. 花藥 (Anther)
 g. 果 (Fruit)

地生蘭；根甚長；莖單立無分枝，肉質，長8-12 cm，徑6-7 mm，綠色，略帶有紫紅色，幼時包被有葉鞘，光滑；鞘2-3枚，着生於莖基部，膜質。

葉4-6枚，卵狀橢圓形或橢圓狀披針形，長6-9 cm，寬2-3.5 cm，先端銳尖或微漸尖，基部歪楔形延伸至葉柄，厚紙質，全緣或略呈波狀緣，脈5-7條隆起於背面，表面呈有光澤綠色，背面淡綠色，葉柄長1-1.5

cm, 鞘長 1-2 cm, 包被於莖, 綠色而帶有紫紅色暈。

花 8-12 枚, 較小, 綠色或黃綠色, 徑 5-6 mm, 總狀花序; 花莖頂生, 長 8-12 cm, 細長, 直立、紫色、先端呈綠色, 光滑; 苞片線狀披針形, 長 3-3.5 mm, 寬約 1.5 mm, 先端銳尖, 紙質; 花梗連同子房長 2-3 mm, 綠色; 萼片整齊, 擴展, 長橢圓形或卵形, 長 2-3 mm, 寬 1.5 mm, 先端鈍, 略呈肉質, 槽狀; 花瓣線形, 長 3-4 mm, 寬約 0.2 mm, 先端鈍, 光滑; 唇瓣無柄, 卵狀舌形, 長 4-5 mm, 寬約 3 mm, 基部 2 裂, 裂片銳尖狀三角形, 先端鈍且凹頭; 蕊柱短, 近似圓柱形, 連同花藥長約 1 mm。

固有, 生長於台灣中部及南部中海拔約 600-1500 m, 常見於常綠闊葉林下。

106. 單葉小柱蘭 (*Malaxis monophylla* (Linn) Sw.)

Terrestrials; roots short; pseudobulb ovoid, 7-10 mm in diameter, rather fleshy, covered with greenish white sheaths.

Leaf solitary or rarely 2, on the top of the pseudobulb, broadly ovate or elliptic, 4-8 cm long, 3-5 cm wide, broadly rounded to narrowly acute at apex, rounded to abruptly narrowed at apex, narrower decurrent to the petioles at base, membranous or chartaceous, lustrous green surface, pale beneath, lateral veins inconspicuous.

Flowers numerous, small, 2.5-3 mm in diameter, non-resupinate, racemose, pale greenish white to greenish or yellowish green; scape terminal, 10-15 cm long, glabrous, green; bracts ovate-lanceolate, 1-2 mm long, acuminate at apex; the pedicels with ovaries 1-2 mm long, glabrous; sepals ovate or ovate-lanceolate, 2-2.5 mm long, the dorsal one erect, the lateral ones deflexed behind the lip; petals linear, 1.8-2.1 mm long, 1-nerved, spreading, horizontal; lip broadly cordate, the lower half reniform, abruptly narrowed at tip, 2-3 mm long, 3-nerved; column short.

Capsules obovoid, erect, 5-6 mm long, crowned with the

remnant of the decayed perianth.

Korea, Japan, China, Sibirera, Europe, Alaska, M. America and Aleutian island. Taiwan, known from the high altitudes of 2400-3200 m under the coniferous forests or shade places, rather rare.

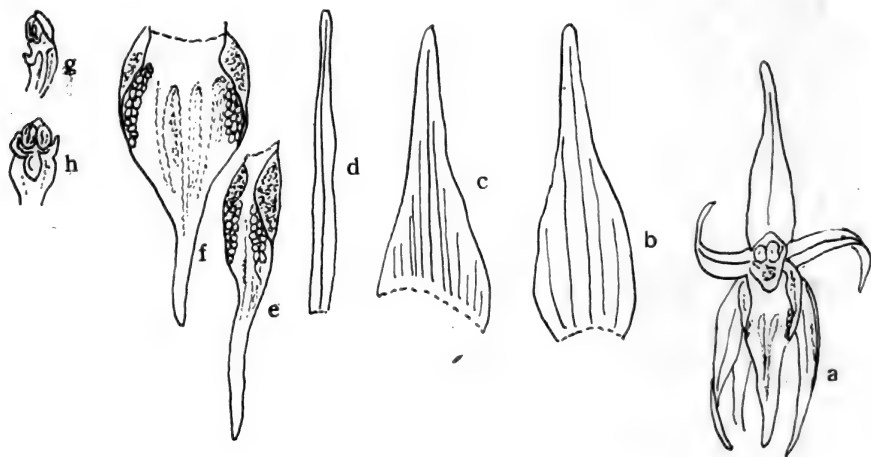


圖 (Fig) 90 單葉小柱蘭 (*Malaxis monophylla*)

- a. 花 (Flower) b. 後萼片 (Dorsal sepal)
c. 側萼片 (Lateral sepal) d. 花瓣 (Petal)
e. f. 唇瓣 (Lip) g. h. 蕊柱 (Column)

地生蘭，根甚短；假球莖卵形，徑7-10 mm，肉質，被覆有淡綠色的鞘，鞘基生，卵球形，先端離生，銳尖，膜質或薄紙質。

葉一枚或少數亦有2枚者，生長於假球莖的先端，潤卵形或橢圓形，長4-8 cm，寬3-5 cm，先端潤圓形至狹銳尖，基部漸窄延伸而至葉柄及葉鞘，表面呈有光澤的綠色，背面呈淡綠色，側脈不顯著；葉柄長2-4 cm，光滑，常包被花莖基部。

花多數，甚小，徑2.5-3 mm，不轉位，總狀花序，淡綠色，綠色或黃綠色，花莖頂生，長10-15 cm，直立，光滑，綠色；苞片卵狀披針形，長1-2 mm，先端漸尖形，花梗連同子房長1-2 mm，光滑，綠色；萼片卵形或卵狀披針形，長2-2.5 mm，後萼片直立，側萼片向後反捲，先端銳尖；花瓣線形，長1.8-2.1 mm，脈1條，先端漸尖，水平擴張；唇瓣潤卵

形或潤心形，長2-3 mm，寬2.5-3.5 mm，下部略呈腎形，先端尖而呈尾狀，脈3條，蕊柱甚短。

蒴果倒卵形，直立，長5-6 mm，先端殘存有凋謝的花被。

韓國、日本、中國、西伯利亞、歐州、阿拉斯加、北美及奧斯汀島。台灣，生長於高海拔約2400-3300 m處，森林下或蔭濕之地。

107. 台灣小柱蘭 (*Malaxis taiwaniana* Ying)

Terrestrials; roots tubular; stem simple, very short, 3-5 cm long, glabrous, pale green.

Leaves 2, nearly opposite, ovate-lanceolate or lanceolate, 12-17 cm long, 3.5-4.5 cm wide, acuminate at apex, cuneate at base, membranous or chartaceous, lustrous green surface, pale green beneath, entire, midrib impressed surface and elevated beneath, lateral veins inconspicuous; sheaths 3-4 cm long, basal, membranous.

Flowers small, numerous, green or light green, 2-3 mm in diameter; scape terminal, 25-35 cm long, terete, glabrous; bracts linear or linear-lanceolate, 3-4 mm long, about 1 mm wide, acute at apex, amplexical the stem at base; the pedicels with ovaries 2-2.5 mm long, glabrous; sepals free, equal, linear-lanceolate or linear, 2-3 mm long, about 0.5 mm wide, acuminate at apex, glabrous; petals linear, 2-2.5 mm long, about 0.5 mm wide, acuminate or acute at apex, slightly reflexed on margin, glabrous; lip linear-lanceolate or lanceolate, 2-3 mm long, about 1 mm wide, cuspidate-acuminate at apex, slightly cordate at base, recurved on margin; column short, about 2.5 mm long.

Endemic, known from at high altitudes of 2400-3000 m in central and southern parts of the island, under the pur stands of *Yushania niitakayamensis* (Hayata) Keng f... rather rare.

地生蘭，莖甚短，細長，長3-5 cm，光滑，淡綠色。

葉2枚，近似對生，卵狀披針形，長12-17 cm，寬3.5-4.5 cm，先端漸尖形，基部楔形，膜質或紙質，表面呈有光澤綠色，背面淡綠色，全緣，中肋表面凹下，背面隆起，側脈不顯著；鞘長3-4 cm，位於莖基部，膜質。

花甚小，多數，綠色或淡綠色，徑2-3 mm；花莖頂生，長25-35 cm，圓柱形，光滑；苞片線形或線狀披針形，長3-4 mm，寬約1 mm，先端漸尖形，基部抱莖；花梗連同子房長2-2.5 mm，光滑。萼片離生，整齊，線狀披針形或線形，長2-3 mm，寬0.5 mm，先端漸尖形，光滑；花瓣線形，長2-2.5 mm，寬約0.5 mm，先端漸尖或銳尖，邊緣略反捲，光滑；唇瓣線狀披針形或披針形，長2-3 mm，寬約1 mm，先端短尾狀漸尖，基部略呈心形，邊緣略反捲。蕊柱短，長約2.5 mm。

固有，生長於高海拔約2400-3000 m的山地僅見於中部或南部的高山，見於玉山箭竹林下，較為少見。

108. 卵葉假蜘蛛蘭 (*Microtatorchis taiwaniana* Ying)

Microtatorchis taiwanianum Ying, sp. nov.

Epiphyticum, rhabicibus, viridibus, teretibus, linearilongatis leviter flexuosis 1-2.5 cm longis, ca 1 mm latis, glabris.

Folia 2-3, decidua, oblonga vel oblongo-lanceolata, 7-9 mm longa, 2-2.5 mm lata, apice acuminata vel obtusa, basi anguste decurrentis petiolis, margine integra, chartacea, utraque glabra, nervis inconspicuis.

Racemi erecti, gracilis, virides 1-2 cm longi, racemo ipso subdense paucifloro, bracteis minutis, triangularis, 2-2.5 mm longis, ca 1 mm latis, apice acutis, glabris, viridis; pedicellis brevi, 3-4 mm longis.

Flores 1 vel 2, minuti, glabri, viridescentes; sepala oblonga, 3-4 mm longa, ca 1.5 mm lata, apice obtusa vel acuta, vivo leviter reflexa usque ad medium connata, glabra; petala sepalis paullo breviora dimidio inferiore cum sepalis connata, dimidio superiore in lobum ovatum obtusum abeuntia

glabra.

Labellum cum calcarē 2-2.5 mm longum, ovtum, margine integrum, sursum sensim angustatum, basi paullo contracti; calcarē cylindrio, obtuso, glabro, 1-1.5 mm longo; column breui ca. 1 mm longi.

Capsula rotunda, 4-5 mm longa, 2-2.5 mm in diametro, stricto.

Habit.: Nantou county: Chitou, Alt. 1260 m, leg. S.S. Ying 4970, July 30 1976.

Epiphytes; roots green, terete, linear or filiform, slightly bent, 1-2.5 cm long, about 1 mm wide, glabrous.

Leaves 2-3, usually deciduous after flowering, oblong or oblong-lanceolate, 7-9 mm long, 2-2.5 mm wide, acuminate or obtuse at apex, narrowed decurrent to the petioles at base, entire, chartaceous, glabrous on both surfaces, midrib and veins inconspicuous.

Flowers 1 or 2, minute, green, glabrous; not widely opened; scape erect, slender, green, 1-2 cm long, glabrous; bracts minute, triangular, 2-2.5 mm long, about 1 mm wide, acute at apex, glabrous, green; pedicels short, 3-4 mm long; sepals oblong, 3-4 mm long, about 1.5 mm wide, obtuse or acute at apex, slightly reflexed upward, connate with petals in the middle and base forming a tube-like; petals somewhat shorter, the free lobe ovate, obtuse at apex, glabrous; lip 2-2.5 mm long, ovate, spurred, entire, gradually narrow upward, slightly contracted at base; spur cylindric, obtuse at apex, 1-1.5 mm long; column short, about 1 mm long.

Capsules rounded, 4-5 mm long, 2-2.5 mm in diameter, stricted.

Endemic, know from central part of the island at the elevations of 1000-1600 m, epiphytic on *cryptomeria japonica* branches.

In this island, the only species of *Microtatorchis*, as

I know, the leaves present firstly and deciduous after flowering.

着生蘭，根綠色，圓柱形，線形，略彎曲，長1-2.5 cm，寬約1 mm，光滑。

葉2-3枚，花開後脫落，長橢圓形或長橢圓狀披針形，長7-9 mm，寬2-2.5 mm，先端漸尖或鈍，基部漸狹而延伸至葉柄，全緣，紙質，表裏兩面均光滑。葉脈不顯著。

花1枚或兩枚，甚小，綠色，基部連生成筒狀，先端分離且略反捲，總狀花序；花莖直立，細長，綠色，長1-2 cm；苞片小，三角形，長2-2.5 mm，寬約1 mm，先端銳尖，光滑，綠色；花柄連同子房短，長3-4 mm；萼片長橢圓形，長3-4 mm，寬約1.5 mm，先端鈍或銳尖，略反捲，中部及下部則連生而略呈筒狀，光滑；花瓣較萼片略短，中部以下與萼片相連，先端有裂片，裂片呈卵形，先端鈍，光滑。唇瓣有距，長2-2.5 mm，卵形，全緣，先端漸狹，基部略緊縮；距圓柱形，先端鈍，光滑無毛，長1-1.5 mm，蕊柱短，長1 mm。

蒴果圓形，長4-5 mm，徑2-2.5 mm，有稜角。

固有，生長於本島中部中海拔約1000-1800 m山地，尤多見於柳杉的枯枝上。

就筆者所知，在台灣，惟一的假蜘蛛蘭，初有葉花後無葉，如蜘蛛蘭。

109. 萼蘭 (*Mishobulbum cordifolium* (Hook. f.) Schltr.)

Terrestrials; rhizome short, creeping; roots elongate; pseudobulb none; stemless.

Leaves 2-3, produced from the creeping rhizome, long-petiolate, ovate or broadly ovate, 10-15 cm long, 6-8 cm wide, fleshy, acute, cordate at base, 3-5-nerved raised on back, green sometimes dark green spots surface, pale green beneath, entire or minute serrulate at lower part, the petioles 8-9 cm long, thickened, fleshy; sheaths 2, dark brown, enveloped the unopened leaf at young.

Flowers 5-12, medium sized or rather large, 2.5-3 cm in diameter, scentless, racemose; scape produced from the

rhizome, 15-35 cm long, erect, rather robust, glabrous, light green; sheaths 2-3, membranous, acute at apex, embracing the scape at base; bracts linear, 5-7 mm long, acute at apex; the pedicels with ovaries 1-1.3 cm long, glabrous; sepals equal, lanceolate, 1.8-2.2 cm long, 3-3.5 mm wide, light yellow with 5 purple streaks; the lateral ones adnate to the base of column-foot and forming a 7-9 mm long mentum; petals ovate-lanceolate, light yellow with 5 purple nerved, 1.8-2.2 cm long, 5-6 mm wide, acute at apex; lip white with light yellow tip, scattered with red spots within, triangular ovate, 2.2-2.8 cm long, 2-2.5 cm wide, acute at apex, 3-keeled ridges; column-foot elongate, 8-12 mm long, with short red streaks; column 6-9 mm long, red streaks scattered.

S. China (Kwangtung). Taiwan, under the evergreen forests at the elevations of 500-1600 m throughout the island, very common.

地生蘭，根莖短，匍匐；根甚長；無假球莖，無莖。

葉2-3枚，抽自於匍匐的根莖，具有長柄，卵形或闊卵形，長10-15 cm，寬6-8 cm，肉質，先端銳尖，基部心形，脈3-5條隆起於背面，表面綠色，有時具有暗綠色斑點，背面淡綠色，全緣或基部有微鋸齒；葉柄長8-9 cm，粗厚、肉質；鞘2枚，暗褐色，幼時包被於未開放的葉。

花5-12枚，中型或較大，徑2.5-3 cm，無香味，總狀花序；花莖抽自於根莖，長15-35 cm，直立，略粗壯，光滑，淡綠色；鞘2-3枚，膜質，先端銳尖，基部抱花莖；苞片線形，長5-7 mm，先端銳尖；花梗連同子房長1-1.3 cm，光滑；萼片整齊，披針形，長1.8-2.2 cm，寬3-3.5 mm，淡黃色而有5條紫紅色的條紋，側萼片基部與蕊柱相連而形成一長7-9 mm的頰；花瓣卵狀披針形，淡黃色而有紫紅色條紋5條，長1.8-2.2 cm，寬5-6 mm，先端銳尖；唇瓣白色，先端呈淡黃色，內面散生有紅色斑點，三角狀卵形，長2.2-2.8 cm，寬2-2.5 cm，先端銳尖，有3隆起脊線；蕊柱足甚長，長8-12 mm，有短的紅色斑點，蕊柱長6-9 mm，散生有紅色斑點。

中國南部、台灣，生長於全島低至中海拔約500-1600 m的山地，常

見於常綠闊葉林下，甚為常見。

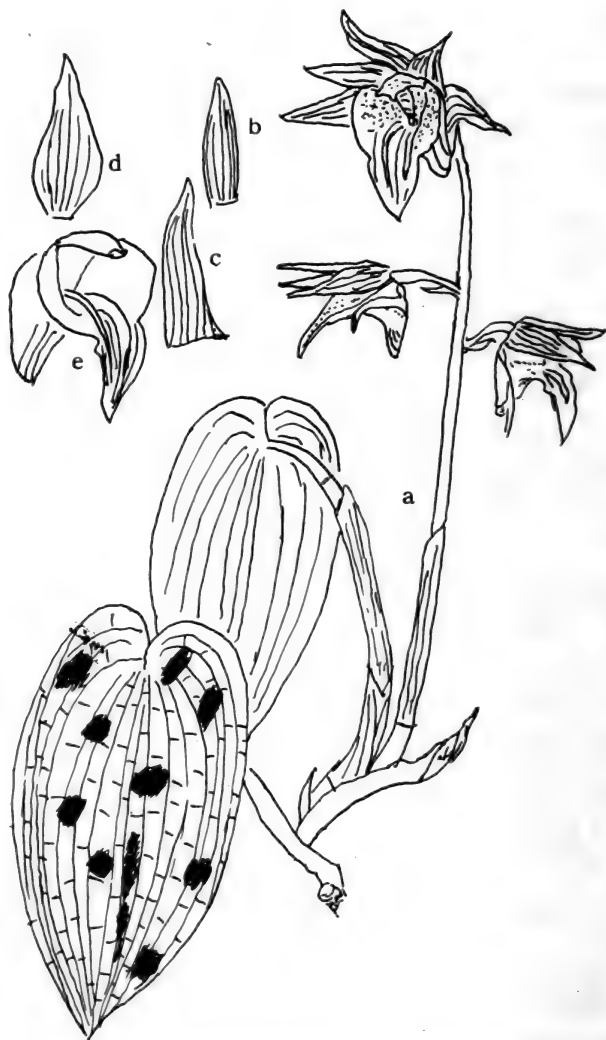


圖 (Fig) 91 葵蘭 (*Mischobulbum cordifolium*)
a. 着花之植物體 (Flowering plant)
b. 後萼片 (Dorsal sepal)
c. 側萼片 (Lateral sepal) d. 花瓣 (Petal)
e. 唇瓣及蕊柱 (Lip and Column)

110. 紫背一點癩 (*Nervillia discolor* (Blume) Schltr. var. *purpurea* (Hayata) Ying)

Nervillia discolor (Blume) Schltr. var. *purpurea* (Hayata) Ying, comb. nov.

Pogonia purpurea Hayata in Journ. Coll. Sci. Univ. Tokyo 30 (1): 345 (1911), (Mat. Fl. Form.).

Nervillia purpurea (Hayata) Schltr. in Fedde Repert. 10:6 (1911); Hayata, Icon. Pl. Form. 4:118, Pl. 19 (1914).

Terrestrials; pseudobulbs ovoid, 3-5 mm in diameter, white, fleshy; roots short, produced from leaf-sheaths and pseudobulbs, white, 2-4 cm long, filiform.

Leaf solitary, usually deciduous in winter, cordate, 5-5.5 cm in diameter, rounded and apiculate at apex, cordate at base, entire, slightly wavy on margin, chartaceous, setulose surface, glabrous beneath, dark green with slightly light green specks, purple or slightly purple beneath, 5-7-nerved, raised on both sides; the petioles 4-6 cm long, slender, groove, glabrous.

Flowers 2-3, usually opened before leaved, widely opened, racemose; the scape erect, terminal on pseudobulb, 4-6 cm long, leafless; sheathed, glabrous; sheaths lanceolate, 2.5-3 cm long, rounded and slightly apiculate at apex; bracts oblanceolate, 1-1.5 cm long, about 2 mm wide; the pedicels with ovaries 5-7 mm long, glabrous; sepals free, equal, erect, spatulate, 1.2-1.7 cm long, about 3 mm wide, shortly acute at apex, attenuate at base; petals narrower, linear-ob lanceolate, 1-1.3 cm long, about 2.5 mm wide, shortly acute at apex, attenuate at base; lip free, obovate, 1.1-1.3 cm long, about 1 cm wide, obscurely 3-lobed, wavy on margin, rounded at apex; column elongate, 7-8 mm long, clavate at apex, erect.

Endemic, known from southern part of the island at lower altitudes of 200-500 m under the forests, not common.

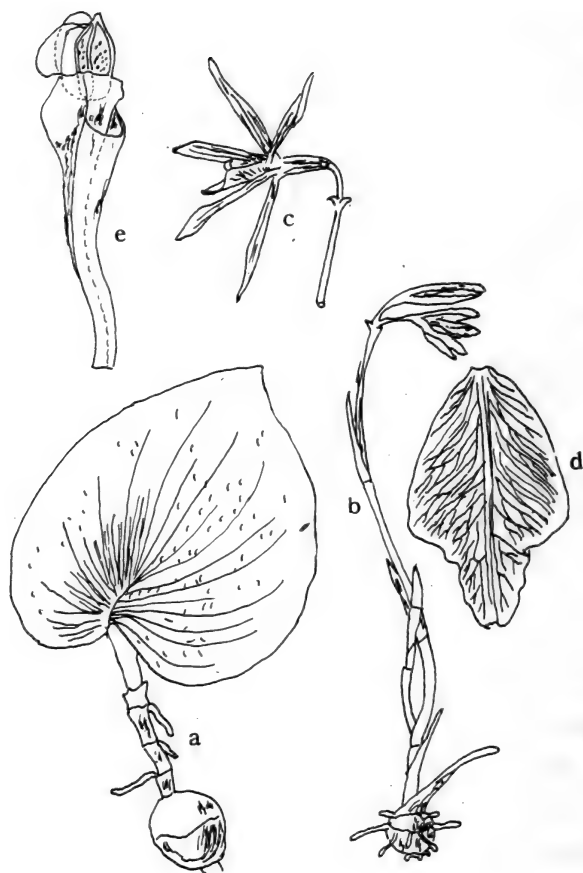


圖 (Fig) 92 紫背一點廣 (*Nervillia discolor* var *purpurea*)

- a. 着葉植物體 (Plant with leaf)
 b. 着花植物體 (Flowering plant)
 c. 花 (Flower) d. 唇瓣 (Lip)
 e. 蕊柱 (Column)

地生蘭，假球莖卵形，徑 3-5 mm，白色，肉質；根短，抽自於葉柄或假球莖，長 2-4 cm，線形。

葉 1 枚，常在冬季脫落，心形或圓形，徑 5-5.5 cm，先端圓而有尖突，基部心形，全緣或略呈波狀緣，紙質，表面有剛毛，背面光滑，表面暗綠

色而帶有淡綠色斑點，背面紫紅色或淡紫色，脈5-7，兩面均隆起；葉柄長4-6 cm，細長有溝紋，光滑。

花2-3，通常在葉末發出前開放，擴展，總狀花序；花莖直立，頂生，長4-6 cm，無葉，有鞘，光滑；鞘披針形，長2.5-3 cm，先端圓而略有尖突；苞片倒披針形，長1-1.5 cm，寬約2 mm，花梗連同子房長5-7 mm，光滑；萼片離生，整齊、直立、舌形，長1.2-1.7 cm，寬約3 mm，先端短銳尖，基部漸窄；花瓣窄，線狀倒披針形，長1-1.3 cm，寬約2.5 mm，先端短銳尖，基部漸窄；唇瓣離生，倒卵形，長1.1-1.3 cm，寬約1 cm，不明顯三裂，邊緣波狀，先端圓；蕊柱長，長7-8 mm，先端棍棒狀，直立。

固有，生長於台灣南部低海拔約200-500公尺處，森林下，較為少見。

111. 二裂唇莖苔蘭 (*Oberonia caulescens* Lindley)

Epiphytes; rhizomes much short; roots numerous, filiform, elongate, 3-10 cm long; pseudobulb absent; stem erect, fleshy, 3-5 cm long; sheaths 2-3, basal, lanceolate, about 1 cm long.

Leaves 5-7, distichous, lanceolate or oblong-linear, fleshy, green, 2.5-4 cm long, 3-3.5 mm wide, acuminate at apex, obtuse and articulate at base, entire, midrib and lateral veins inconspicuous, lustrous green on both sides; sheaths usually enclosed the stem, 5-8 mm long, fleshy.

Flowers small, numerous, about 2 mm in diameter, light yellow, racemose; the scape terminal, 5-8 cm long, ascending, yellowish white; sheaths 2-4, lanceolate, 2-3 mm long, acute at apex; bracts ovate-triangular, 1.5 mm long; the pedicels with ovaries 3-4 mm long, slender, glabrous, light yellow; sepals unequal, the dorsal one rounded ovate, minute, about 1 mm long, 0.6 mm wide, obtuse at apex, contracted at base, the lateral ones ovate-triangular, strongly concave, about 1 mm long, 0.8 mm wide; petals linear-oblong, 1-1.2 mm long, 0.5-0.6 mm wide, obtuse

at apex; lip rectangular in outline, 3-4 mm long, 1-1.5 mm wide, 2-nerved, broadly auricled at base, 2-lobed at apex, the lobes oblong-triangular, about 1 mm long, 0.5 mm wide, acute at apex; column short, about 0.2 mm long.

Endemic, at the elevations of 1500-2300 m throughout the island, somewhat common.

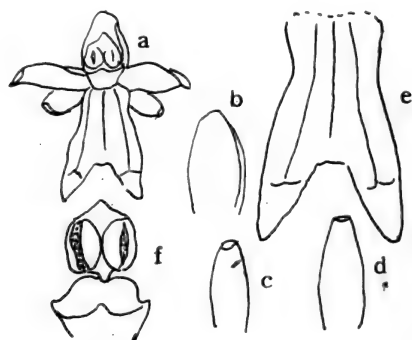


圖 (Fig)93 二裂唇莪苣蘭 (*Oberonia caulescens*)
 a. 花 (Flower) b. 後萼片 (Dorsal sepal)
 c. 側萼片 (Lateral sepal) d. 花瓣 (Petal)
 e. 唇瓣 (Lip) f. 蕊柱及花藥 (Column and anther)

着生蘭，根莖甚短，根多數，線形，甚長，長3-10 cm，無假球莖；莖直立，肉質，長3-5 cm；鞘2-3枚，基生，披針形，長約1 cm。

葉5-7枚，二列狀排列，披針形或長橢圓狀線形，肉質，綠色，長2.5-4 cm，寬3-3.5 mm，先端銳尖，基部鈍且略呈耳狀，全緣，中肋及側脈不顯著，表裏兩面均呈有光澤綠色；鞘通常包被於莖，長5-8 mm，肉質。

花甚小，多數，徑約2 mm，淡黃色，總狀花序；花莖頂生，長5-8 cm，直立或略呈拱形，黃白色；鞘2-4枚，披針形，長2-3 mm，先端銳尖；苞片卵狀三角形，長1.5 mm；花梗連同子房長3-4 mm，細長，光滑，淡黃色；萼片不整齊，後萼片圓卵形，甚小，長約1 mm，寬約0.6 mm，先端鈍，基部緊縮狀；側萼片卵狀三角形，凸出，長約1 mm，寬

0.8 mm ; 花瓣線狀長橢圓形，長1-1.2 mm，寬0.5-0.6 mm，先端鈍；唇瓣外形呈四方形，長3-4 mm，寬1-1.5 mm，脈2條，基部濶耳狀，先端2裂，裂片長橢圓狀三角形，長約1 mm，寬0.5 mm，先端銳尖；蕊柱短，長0.2 mm。

固有，生長於全島中海拔約1500-2300 m的山地，着生於樹幹上，較為普遍。

112. 日本莪苳蘭 (*Oberonia japonica* (Maxim) Makino)

Epiphytes; rhizomes short, creeping; stem short, 1-3 cm long, pendulous.

Leaves 4-8, closely approximate, fleshy, laterally flattened, linear-oblong, green, shining, 2-3 cm long, 3-5 mm wide, short-acute to obtuse, mucronate, sheathed at base, the sheaths short, 4-6 mm long.

Flowers small, red, numerous, 1-1.5 mm in diameter, racemose; scape pendulous or ascending, terminal, 3-8 cm long, 2-2.5 mm across; bracts ovate-lanceolate, acute, broad at base, membranous, spreading, 1.2-1.7 mm long, 0.6-0.8 mm wide; the pedicels with ovaries 1-1.5 mm long; sepals spreading, the dorsal one ovate-elliptic, 2-3 mm long, 0.5-0.7 mm wide, the lateral ones broadly ovate, 2-2.5 mm long, 0.5-0.6 mm wide; petals ovate, somewhat smaller than the sepals; lip elliptic-ovate, 6-7 mm long, 2-3 mm wide, 3-lobed, the lateral ones ovate, obtuse at apex, the middle one elongate ovate, 2-lobed at apex; column short; pollinia ovate, yellow.

Capsules obovate, 2-2.5 mm long, truncate at apex.

Japan. Taiwan, epiphytic on trunks or on rocks at the elevations of 600-1200 m in northern and central parts of the island, rather common.

着生蘭，根莖短，匍匐，莖短，長1-3 cm，懸垂或近似如此。

葉4-8枚，緊密排列，肉質，側生，扁平，線狀長橢圓形，具有光澤，長2-3 cm，寬3-5 mm，先端短銳尖至鈍，有尖突；基部有鞘，鞘短

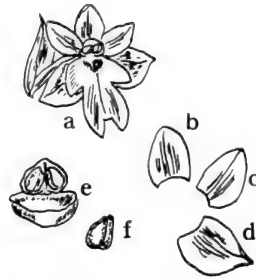


圖 (Fig) 94 日本莪苳蘭 (*Oberonia japonica*)
 a. 花 (Flower) b. 後萼片 (Dorsal sepal)
 c. 花瓣 (petal) d. 側萼片 (Lateral sepal)
 e. 蕊柱 (Column) f. 花粉塊 (Pollinia)

，長 4-6 mm 。

花甚小，紅色，多數，徑 1-1.5 mm，總狀花序；花莖下垂或水平生長，頂生，長 3-8 cm，徑 2-2.5 mm；苞片卵狀披針形，銳尖，基部較寬，膜質，擴展，長 1.2-1.7 mm，寬 0.6-0.8 mm；花梗連同子房長 1-1.5 mm；萼片擴展，後萼片卵狀橢圓形，長 2-3 mm，寬 0.5-0.7 mm，側萼片闊卵形，長 2-2.5 mm，寬 0.5-0.6 mm；花瓣卵形，較萼片略小；唇瓣橢圓狀卵形，長 6-7 mm，寬 2-3 mm，3 裂，側裂片卵形，先端鈍，中裂片長卵形，先端 2 裂；蕊柱短，花粉塊卵形，黃色。

蒴果倒卵形，長 2-2.5 mm，先端截斷狀。

日本。台灣，生長於北部及中部約 600-1200 m 的山地，多着生於樹幹或樹枝上，較為常見。

113. 恒春莪苳蘭 (*Oberonia kusukusensis* Hayata)

Epiphytes; roots filiform, short, creeping; stem short, usually with scape 10-15 cm long, fleshy.

Leaves several, distichous, alternate, somewhat remoted, linear-lanceolate or linear-falcate, 3-5 cm long, 3-5 mm wide, acute, amplexicaul at base, somewhat flaccid-like, fleshy, midrib and lateral veins inconspicuous, yellowish

green on both sides.

Flowers numerous, minute, racemose, brownish yellow, 1.5-2 mm in diameter, usually subverticillately aggregate on the node of scape; the scape terminal, 7-11 cm long, filiform, ascending or nearly so; bracts minute, triangular-lanceolate, about 1.5 mm long, 0.5 mm wide, acuminate at apex; the pedicels with ovaries 0.6-0.7 mm long, the dorsal sepal obovate-oblong, about 0.6-0.7 mm long, 0.5 mm wide, obtuse at apex, more or less contracted at base, obscurely denticulate or entire on margin; the lateral sepals strongly concave, triangular-oblong, about 0.6 mm long, obtuse at apex, broader and not contracted at base; petals ovate-oblong, 0.6 mm long, 0.5 mm wide obtuse or truncate-obtuse at apex, cuneate-contracted at base, obscurely denticulate on margin; lip 3-lobed, about 1-1.2 mm long, 0.6 mm wide, the lateral lobe oblique oblong, acuminate cuspidate at apex, 1.5 mm long, obscurely denticulate or subentire on margin; the median lobe oblong-rectangular, 0.5-0.6 mm long, 0.3-0.5 mm wide, truncately 2-lobed at apex, the lobes triangular, 0.5 mm long, acute at apex; column short, 0.5 mm long.

Endemic, known from medium altitudes of 800-1400 m throughout the island, rather rare.



圖 (Fig) 95 恒春莪苜蘭 (*Oberonia kusukusensis*)

a. 唇瓣 (Lip) b.c. 蕊柱 (Column)

着生蘭，根線形 短，匍匐；莖短，常與花莖長 10-15 cm，肉質。

葉數枚，兩列狀排列，互生，多少呈疏生狀，線狀披針形或線狀鐮刀形，長 3-5 cm，寬 3-5 mm，先端銳尖，基部抱莖，鐮刀狀，肉質，中肋或側脈不顯著，表裏兩面均呈黃綠色。

花多數，小，總狀花序，黃褐色，徑 1.5-2 mm，通常似輪生狀生長於花莖的節上；花莖頂生，長 7-11 cm，線形，上昇狀或近似如此，苞片小，三角狀披針形，長約 1.5 mm，寬 0.5 mm，先端漸尖；花梗連同子房長 0.6-0.7 mm，後萼片倒卵狀長橢圓形，長 0.6-0.7 mm，寬 0.5 mm，先端鈍，基部略呈緊縮狀，全緣或有不明顯的鋸齒；側萼片凸出，三角狀長橢圓形，長 0.6 mm，先端鈍，基部潤，但不呈緊縮狀；花瓣卵狀長橢圓形，長 0.6 mm，寬 0.5 mm，先端鈍或截斷狀鈍形，基部楔狀緊縮狀，邊緣有不明顯鋸齒；唇瓣 3 裂，長 1-1.2 mm，寬 0.6 mm，側裂片歪長橢圓形，先端漸尖尾狀，長 1.5 mm，邊緣有不明顯鋸齒或近似全緣，中裂片長橢圓狀四方形，長 0.5-0.6 mm，寬 0.3-0.5 mm，先端截斷狀 2 裂，裂片三角形，長 0.5 mm，先端銳尖；蕊柱短，長 0.5 mm。

固有，生長於中海拔約 800-1400 m 處，全島皆有，惟數量較少。

114. 黃花齒唇蘭 (*Odontochilus bisaccatus* Hayata)

Terrestrials; roots elongate; stem simple, from a creeping base, 10-35 cm long, slender, pale green, subglabrous, internodes 4-5 cm long, leafy upward.

Leaves 4-5, alternate, oblong, 4-5 cm long, 2-2.5 cm wide, acuminate or subacute at apex, obliquely and obtuse at base, membranous, entire, midrib white, sometimes 2 lateral veins white too, shining green surface, pale green beneath; the petioles 5-7 mm long, sheathed at base; the sheathes 7-9 mm long, cylindrical, hyaline.

Flowers 4-7, rather small, yellow, not widely opened, spicate, 3-4 mm wide; the scape terminal, 4-8 cm long, pubescent; bracts lanceolate, 1-1.2 cm long, 3-4 mm wide, acute at apex, 1-nerved, ciliate at base; pedicels with ovaries 3-5 mm long, glabrous, pale green, the dorsal sepal widely ovate, 4-4.5 mm long, about 3 mm wide, caudate-

obtuse at apex, contracted at base, 1-nerved, glabrous; the lateral sepals obliquely oblong, 6-7 mm long, 3-3.5 mm wide, obtuse at apex, contracted at base, somewhat recurved on margin, glabrous; petals obliquely widely ovate, 4-5.5 mm long, about 2.5 mm wide, caudate at apex, shortly attenuate at base, 1-nerved; lip Y-shaped, 6.5-7.5 mm long, the claw 4-4.5 mm long, shortly denticulate on either side, the lobes obovate-rectangular, 5-5.5 mm long, about 3 mm wide, spur rounded, shallowly bilobed, containing one hook gland on either lobe; column short, 0.5 mm long, 2-appendaged at apex; stigma 2, clavate, rostellum twisted.

Endemic, known from medium altitudes of 800 - 1700 m throughout the island, under the forests or moist shade rocks.

地生蘭；根甚長，莖單立無分枝，基部匍匐，先端基立，長10-35 cm，細長，淡綠色，近似光滑，節長4-5 cm，上部有葉。

葉4-5枚，互生，長橢圓形，長4-5 cm，寬2-2.5 cm，先端漸尖或近似銳尖，基部歪而鈍，膜質，全緣，中肋白色，有時2側脈亦呈白色，表面呈有光澤綠色，背面淡綠色，葉柄長5-7 mm，基部有鞘，鞘7-9 mm，圓柱形，透明。

花4-7枚，較小，黃色，不十分張開，穗狀花序，寬3-4 mm；花莖頂生，長4-8 cm，有毛茸；苞片披針形，長1-1.2 cm，寬3-4 mm，先端銳尖，脈1條，基部呈毛緣；花梗連同子房長3-5 mm，光滑，淡綠色；後萼片橢圓形，長4-4.5 mm，寬約3 mm，先端呈尾狀鈍，基部緊縮，脈1條，光滑；側萼片歪長橢圓形，長6-7 mm，寬3-3.5 mm，先端鈍，基部緊縮，邊緣略反捲，光滑；花瓣歪橢圓形，長4-5.5 mm，寬約2.5 mm，先端呈尾狀，基部短漸尖，脈1條；唇瓣Y字形，長6.5-7.5 mm，爪長4-4.5 mm，兩側有粗鋸齒，唇瓣片倒卵狀四方形，長5-5.5 mm，寬約3 mm；距圓形，淺2裂，兩側各有一鈎狀的腺點；蕊柱短，長0.5 mm，先端有2附屬體，柱頭2，棒棍狀，彎扭曲狀。

固有，生長於全島中海拔約800-1700 m的山地，多見於森林下或多潮濕陰暗的岩石上。



圖 (Fig) 96 黃花齒唇蘭 (*Odontochilus bisaccatus*)
 a. 着花之植物體 (Flowering plant)
 b. 後萼片 (Dorsal sepal) c. 花瓣 (Petal)
 d. 側萼片 (Lateral sepal) e. 唇瓣 (Lip)
 f. 蕊柱 (Column) g. 花 (Flower)

115. 台灣齒唇蘭 (*Odontochilus inabae* Hayata)

Terrestrials; rhizomes creeping; stem simple, rather stout 10-20 cm long, leafy below.

Leaves alternate, oblong-ovate or ovate, chartaceous, 4-5 cm long, 2-2.5 cm wide, acute, rounded to obtuse and oblique at base, 3-nerved elevated beneath; petioled; the petioles 1.5-2 cm long, sheathed at base.

Flowers 4-8, pink or white in terminal spike; scape densely pubescent, 5-9 cm long; bracts lanceolate, 8-12 mm long, dorsal sepal ovate to broadly so, 5-6 mm long, 4-5 mm wide, slightly caudate and obtuse at apex; lateral sepals oblong, spreading, 10-12 mm long, about 5 mm wide; petals ovate-linear, 5-6 mm long, 3 mm wide, connate with the inner side of dorsal sepals; lip 2-3 cm long, small, saccate at base, the claw slender, fimbriate, the limb v-shaped, bifid, the lobes ascending, cuneate; column short, about 0.8 mm long; pollinia narrowly obovoid.

Japan and Ryukyu. Taiwan, at lower and medium altitudes of 500-1700 m throughout the island, under the forests.

地生蘭，根莖匍匐，莖單立無分枝，較粗壯，長10-20 cm，基部有葉。

葉互生，長橢圓狀卵形或卵形，紙質，長4-5 cm，寬2-2.5 cm，先端銳尖，基部圓或鈍且歪，脈3條，隆起於背面；葉柄長1.5-2 cm，基部有鞘。

花4-8枚，粉紅色或白色，呈頂生的穗狀花序，花莖密佈有白色毛茸，長5-9 cm，直立；苞片披針形，長8-12 mm，後萼片卵形或闊卵形，長5-6 mm，寬4-5 mm，先端短尾狀且鈍，側萼片長橢圓形，擴展，長10-12 mm，寬約5 mm；花瓣卵狀線形，長5-6 mm，寬約3 mm，與後萼片邊緣略相連；唇瓣長2-3 cm，小，基部囊狀，爪細長，細絲裂，唇瓣片呈V字形，二裂，裂片平展，楔形；蕊柱短，長約0.8 mm；花粉塊狹倒卵形。

日本及琉球。台灣，生長於低至中海拔約500-1700 m山地，全島皆

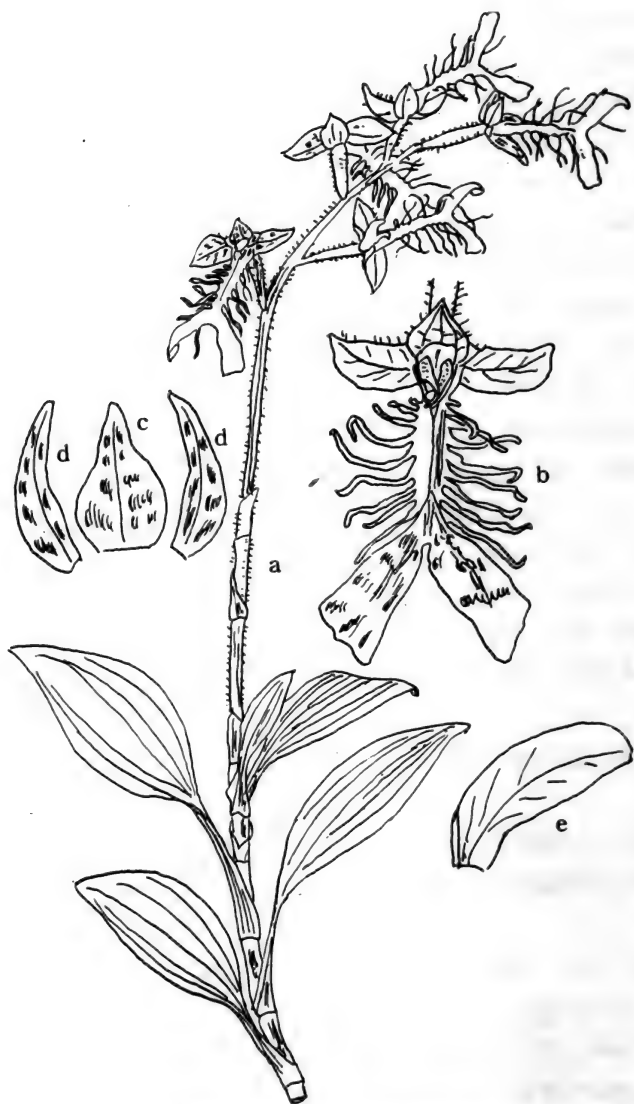


圖 (Fig) 97 台灣齒唇蘭 (*Odontochilus inabae*)
 a. 着花之植物體 (Flowering plant)
 b. 花 (Flower) c. 後萼片 (Dorsal sepal)
 d. 花瓣 (Petal) e. 側萼片 (Lateral sepal)

有，常見於叢林下。

116. 小黃斑蘭 (*Orchis alpestre* (Fukuyama) Ying)

Terrestrials; tubers ovoid or globose, 5-7 mm long, 3-4 mm in diameter; stem simple, erect, slender, 5-10 cm long, glabrous, somewhat flexuous; sheathes 2, basal, membranous, glabrous, truncate or acute at apex, amplexical at base.

Leaves 1-2, oblanceolate or narrowly oblong, 4.5-5.5 cm long, 5-10 mm wide, shortly acute, narrower decurrent to the petioles at base, entire, thickly membranous, glabrous, lustrous green surface, pale green beneath; midrib raised beneath.

Flowers 2-3, rarely 4, lightly purple or pink, 3-4 mm in diameter, racemose; the scape 4-6 cm long, erect or ascending, glabrous; the pedicels with ovaries 5-10 mm long, glabrous; sepals ovate-oblong, 4-5 mm long, 2-2.5 mm wide, obtuse at apex, contracted at base, entire, glabrous; the lateral ones slightly oblique, acute or obtuse at apex, contracted at base, glabrous, membranous, 3-nerved; petals ovate-lanceolate, oblique, 4-5 mm long, 1.2-1.6 mm wide, acute, contracted at base, glabrous or slightly pubescent, membranous, 1-3-nerved; lip erect, patent, shortly pubescent surface, glabrous beneath, 5-6 mm long, 3-lobed, the lateral lobes linear, subpatent, 3-3.5 mm long, 0.4-0.5 mm wide, acute or obtuse at apex, entire; median lobe obovate-rectangular, obtuse and slightly sinuate or aristate at apex; spur cylindrical, obtuse at apex, 4.5 mm long, about 1 mm in diameter; column short, 2-2.5 mm long.

Endemic, at high altitudes of 3400-3800 m in northern and central parts of the island on moist and mossy rocks.

地生蘭，塊根卵形或球形，長5-7 mm，徑3-4 mm；莖直立，細長

，長5-10 cm，光滑；鞘2枚，基生，膜質，光滑，先端截斷狀或銳尖形，基部抱莖。

葉1-2枚，倒披針形或狹長橢圓形，長4.5-5.5 cm，寬5-10 mm，先端短銳尖，基部漸狹而延伸至葉柄，全緣，厚，膜質，光滑，表面呈有光澤綠色，背面淡綠色，中肋於背面隆起，側脈不顯着。

花2-3枚，少數亦有4枚者，淡紫色或粉紅色，徑3-4 mm，較小，總狀花序，花莖長4-6 cm，直立或近似如此，光滑。花梗連同子房長5-10 mm，光滑；萼片卵狀長橢圓形，長4-5 mm，寬2-2.5 mm，先端鈍，基部緊縮狀，全緣，光滑，側萼片略歪，先端鈍或銳尖，基部緊縮狀，光滑，膜質，3-脈；花瓣卵狀披針形，略歪，長4-5 mm，寬1.2-1.6 mm，銳頭，基部緊縮，光滑或略有毛茸，膜質，脈1-3條；唇瓣直立，顯著，表面有短毛茸，背面光滑，長5-6 mm，3裂，側裂片線形，不顯著，長3-3.5 mm，寬0.4-0.5 mm，先端銳尖，基部緊縮或鈍，全緣，中裂片佔唇瓣的絕大部份，顯著，倒卵狀四方形，有深色的細斑點，先端鈍而凹入，且有短尖突；距圓柱形，長4-5 mm，徑約1 mm，蕊柱長2-2.5 mm。

固有，生長於中部及北部高海拔約3400-3800 m山地，多生長於潮濕而多苔蘚類的岩石上。

117. 合歡山蘭 (*Orchis formosensis* Ying)

Orchis formosensis Ying, sp. nov.

Terrestris, pusillum, gracilium erectum, glaberrimum, 6-8 cm altum; tuberibus globosis vel ovoideis, 1.2-1.5 cm longis, ca 1 cm in diametro; caulis brevis, tenuis teres, substrictus vel minus flexuosus, glaber; vaginis 1-0, membranaceis, glabris, amplexicaulibus, apice truncatis vel acutis, 1-foliatis.

Folia suberecta, patentia, oblonga vel ovata, 4.5-5.5 cm longa, 8-11 mm lata, apice acuminata, basi longe decurrentia et amplectentia, margine integra, chartacea, utrinque glabra.

Racemeus terminalis, erectus, 5-7 cm longus, laxiuscula 5-7-floratus; bracteis linearis, apice acuta, 4-5 mm longa,

basi contracteis, utrinque glabris; pedicellis cum ovariis 5.5-6.5 mm longis, gracilis, rectis glabris.

Flores rosei, minoris, 3-3.5 mm longis, 2-3 mm latis in apice caulis sublaxe dispositi; sepalum intermedium concavum, ovatum, 2-2.5 mm longum, ca 1 mm latum, apice acuminata, basi paullo contractum, margine integrum, glabrum, membranaceum; sepala lateralia oblonga, paullo obliqua 2 mm longa, ca 1 mm lata, apice acuminata vel obtusiuscula basi contracta, glabra, membranacea; petala cum sepalo in galeam conniventia, lanaceolata, 1.5-1.8 mm longa, ca 0.7-0.9 mm lata, obliqua, apice acutiuscula basi contracta, margine integra, utrinque glabra.

Labellum erecto-patens, trilobatum, 7-9 mm longis, 5-6 mm latis, lobis lateralibus oblongis, 3.5-4.5 mm longis, 2-2.5 mm latis, apice obtusis, margine integris, lobo intermedio rectangulo 4-5 mm longo, 2-2.5 mm lato, apice truncato vel obtuso cum emarginate, calcare cylindrico, 1-1.2 mm longo medio ca 1 mm in diametro; columna brevis, ca 2-2.5 mm alta.

Habit.: Nantou county, Mt. Hohuanshan, 2300-2500 m leg. S.S. Ying 4921, July 27 1976.

Terrestrials; tubers globose or ovoid, 1.2-1.5 cm long, about 1 cm in diameter, white, fleshy; stem short, terete, substricted or slightly bented, glabrous, sheaths 1 or absent, membranous, glabrous, amplexicual, truncate or acute at apex.

Leaf solitary suberect, patent, oblong or ovate, 4.5-5.5 cm long, 8-10 mm wide, acuminate at apex, narrowed decurrent to the sheaths at base, entire, chartaceous, glabrous, lustrous green surface, pale green beneath; midrib elevated beneath, lateral veins inconspicuous.

Flowers 5-7, rather small, 3-3.5 mm long, 2-3 mm wide, pink, racemose; scape terminal, erect, 5-7 cm long, green,

glabrous; bracts linear, 4-5 mm long, acute at apex, contracted at base, glabrous; the pedicels with ovaries 5.5-6.5 mm long, glabrous, slender, ascending; the dorsalsepal concave, ovate, 2-2.5 mm long, about 1 mm wide, acuminate at apex, slightly contracted at base, entire glabrous, membranous; the lateral ones oblong, slightly oblique, 2 mm long, about 1 mm wide, acuminate or obtuse at apex contracted at base, glabrous, membranaceous; petals connated with sepals, lanceolate 1.5-1.8 mm long, about 0.7-0.9 mm wide, oblique, acute at apex, contracted at base, entire, glabrous; lip erect, patent, 3-lobed, 7-9 mm long, 5-6 mm wide, the lateral lobe oblong, 3.5-4.5 mm long, 2-2.5 mm wide, obtuse at apex, entire, the median lobe rectangular, convex, 4-5 mm long, 2-2.5 mm wide, truncate or obtuse and emarginate at apex; spur cylindrical, 1-1.2 mm long, about 1 mm across; column short 2-2.5 mm long.

Endemic, known from high altitudes of 2300-2500 m in central part of the island, rather rare.

地生蘭，塊根球形或卵形，長1.2-1.5 cm，徑約1 cm，白色，肉質；莖甚短，圓柱形，光滑。鞘1枚或缺如，膜質，光滑，抱莖，先端截斷狀或銳尖形。

葉1枚，近似直立，顯著，長橢圓形或卵形，長4.5-5.5 cm，寬8-10 mm，先端漸尖形，基部漸窄而延伸至鞘，全緣，紙質，光滑，表面呈有光澤綠色，中肋於背面隆起，側脈不顯著。

花5-7枚，較小，長3-3.5 mm，寬2-3 mm，粉紅色，總狀花序；花莖直立，頂生，長5-7 cm，綠色，光滑；苞片線形，長4-5 mm，先端銳尖，基部緊縮，光滑；花梗連同子房長5.5-6.5 mm，光滑，細長，水平或略向上伸出，後萼片槽狀，卵形，長2-2.5 mm，寬1 mm，先端銳尖，基部略呈緊縮狀，全緣，光滑，膜質，側萼片長橢圓形，略歪，長2 mm，寬約1 mm，先端漸尖或鈍，基部緊縮，光滑，膜質；花瓣基部與萼片略相連，披針形，長1.5-1.8 mm，寬0.7-0.9 mm，基部歪，先端銳尖，基部緊縮，光滑；唇瓣直立，顯著，凸出，長7-9 mm，寬5-6 mm，

3裂，側裂片長橢圓形，長3.5-4.5 mm，寬2-2.5 mm，先端鈍，全緣，中裂片四方形，凸出，長4-5 mm，寬2-2.5 mm，先端截斷狀或鈍且凹頭；距圓柱形，長1-1.2 mm，徑約1 mm；蕊柱短，長2-2.5 mm。

固有，生長於台灣中部高海拔山地約2300-2500 m處，開闊地，少見。

本種係筆者在合歡山翠峰至新人崗間公路裸露邊坡地所採集，花為台灣蘭屬 (*Orchis*) 中最小者。福田泊明在合歡山亦曾採到 *Orchis taiwaniana* Fukuyana, 但兩者唇瓣幾乎完全不同，故特將此新種蘭花命名為 *Orchis formosensis* Ying。

118. 奇萊蘭 (*Orchis kiraishiensis* Hayata)

Terrestrials; tuberous roots ovoid, 5-6 mm in diameter; roots 4-6, slender, 5-8 cm long; stem simple, erect or ascending, slender, 10-18 cm long, pale green, glabrous; sheaths 1-2, membranous, tubulous, at the base of the stem,

Leaves 2, alternate, produced from the middle of the stem, linear or linear-lanceolate, 4-5 cm long, 7-8 mm wide, acute or acuminate at apex, attenuate to the petiole at base, entire, glabrous, lustrous green surface, pale green beneath; midrib raised on back; the sheaths tubulous, 1.2-1.6 cm long, glabrous.

Flowers solitary, rarely 2 or 3, purple or pink, rather small, 1-1.2 cm in diameter, racemose; scape terminal, 5-10 cm long, erect, slender, glabrous, green; bracts lanceolate, 7-9 mm long, green, acute at apex, membranous, glabrous; the pedicels with ovaries 1-1.2 cm long, glabrous, somewhat like a fusiform; sepals subequal, spreading, 8-9 mm long, 3-3.5 mm wide, the dorsal one oblong, acute at apex, more or less contracted at base, the lateral ones obliquely falcate-oblong, glabrous; petals ovate-oblong, 5.5-6.5 mm long, 3-3.5 mm wide, obtuse at apex, broadly auriculate at base, glabrous; lip obtriangular, long-spurred, 3-lobed, 1.2-1.5 cm

long, 1.5-1.6 cm wide, the median lobe about 5 mm long, truncate and emarginate with a arist at apex, the lateral lobes triangular; spur 8-9 mm long, 2-3 mm across; column about 3 mm long, erect, more or less recurved.

Endemic, a very common alpine orchid throughout the island at the elevations of 3000-3900 m, under the forests or on grassland.



圖 (Fig) 98 奇萊蘭 (*Orchis kiraishiensis*)
 a. 植物體 (Flowering Plant)
 b. 後萼片 (Dorsal sepal) c. 側萼片 (Lateral sepal)
 d. 花瓣 (Petal) e. 唇瓣 (Lip)
 f. 除去花萼及花瓣的花 (Flower, taken off sepals and petals)

地生蘭，塊根卵形，徑5-6 mm；根4-6，細長，長5-8 cm；莖單立無分枝，直立或近似如此，細長，長10-18 cm，淡綠色，光滑；鞘1-2，膜質，筒狀，位於莖的基部。

葉2枚，互生，抽自於莖中部，線形或線狀披針形，長4-5 cm，寬7-8 mm，先端銳尖或漸尖形，基部漸狹而延伸至葉柄，全緣，光滑，表面呈有光滑綠色，背面淡綠色，中肋隆起於背面；鞘筒形，長1.2-1.6 cm，光滑。

花單生，或少數亦有呈2-3枚者，紫紅色或粉紅色，較小，徑1-1.2 cm，總狀花序；花莖頂生，長5-10 cm，直立，細長，光滑，綠色；苞片披針形，長7-9 mm，綠色，先端銳尖，膜質，光滑，花梗連同子房長1-1.2 cm，光滑，略呈紡錘形；萼片近似整齊，擴展，長8-9 mm，寬3-3.5 mm，後萼片長橢圓形，先端銳尖，基部略呈緊縮狀；側萼片歪鐮刀狀長橢圓形，光滑；花瓣卵狀長橢圓形，長5.5-6.5 mm，寬3-3.5 mm，先端鈍，基部襍耳狀，光滑；唇瓣倒三角形，有長距，3裂，長1.2-1.5 cm，寬1.5-1.6 cm，中裂片長約5 mm，先端截斷狀凹頭而有尖突，側裂片三角形；距長8-9 mm，徑2-3 mm；蕊柱長約3 mm，直立，多少呈反捲。

固有，為生長於高山地區很普遍的高山蘭花，多生長於3000-3900高山地區，全島皆有分佈，常見於森林下或草生地。

119. 白花蘭 (*Orchis kunihikoana* Masamune & Fukuyama)

Terrestrials; tubers ovoid, 5-10 mm long, 4-6 mm in diameter, glabrous; roots few, filiform, pubescent; stem simple, erect or ascending, 8-12 cm long, terete, glabrous; sheaths few, membranous, glabrous, truncate, obtuse or acute at apex, completely amplexical at base.

Leaves 2-3, rarely 1, oblanceolate, linear-oblong or lanceolate, 3-4 cm long, 5-10 mm wide, acute or shortly acute at apex, long decurrent and amplexical at base, entire, glabrous.

Flowers 2-5, white, medium-size, 6-7 mm in diameter, racemose; the scape terminal, 3-5 cm long, erect or ascending, glabrous; bracts leaf-like, lanceolate, 1-1.5 cm long,

3-4 mm wide, acuminate at apex, slightly contracted at base, glabrous; the pedicels with ovaries 5-10 mm long, glabrous; sepals subequal, the dorsal one oblong, 6-7 mm long, about 2.5 mm wide, concave, acute at apex, slightly contracted at base, entire, glabrous, 3-nerved, the lateral ones ovate-oblong, 7-9 mm long, about 3.5 mm wide, somewhat oblique, acute at apex; petals ovate-oblong, 5.5-6 mm long, 2.5 mm wide, strongly oblique, obtuse at apex, glabrous, 3-nerved; lip 3-lobed, slightly pubescent surface, glabrous beneath, 8-10 mm long, 1-1.5 cm wide, the lateral lobes oblique obtuse or truncate-rounded at apex, the median lobe rectangular, retuse or emarginate at apex, about 6 mm wide; spur cylindrical, obtuse at apex; column about 3 mm long.

Endemic, known from the central and southern parts of the island at the elevations of 2700-3700 m, on moist rocks or grassland.

地生蘭，塊根卵形，長5-10 mm，徑4-6 mm，光滑；根少數，細長，有毛茸。莖單生無分枝，直立或近似如此，長8-12 cm，圓柱形，光滑；鞘少數，膜質，光滑，截斷狀，先端鈍或銳尖，基部完全抱莖。

葉2-3枚，少數亦有1枚者，線狀長橢圓形或披針形，長3-4 cm，寬5-10 mm，先端銳尖或短銳尖，基部漸窄延伸至葉柄而抱莖，全緣，光滑。

花2-5枚，白色，中型，徑6-7 mm，總狀花序；花莖頂生，長3-5 cm，直立或近似如此，光滑；苞片葉狀，披針形，長1-1.5 cm，寬3-4 mm，先端漸尖形，基部略緊縮狀，光滑；花梗連同子房長5-10 mm，光滑；萼片近似整齊；後萼片長橢圓形，長6-7 mm，寬約2.5 mm，槽狀，先端銳尖，基部略呈緊縮狀，全緣，光滑，脈3條；側萼片卵狀長橢圓形，長7-9 mm，寬3.5 mm，先端銳尖，基部略歪。花瓣卵狀長橢圓形，長5.5-6 mm，寬2.5 mm，先端鈍，基部甚歪，光滑，脈3條；唇瓣3裂，表面略有毛茸，背面光滑，長8-10 mm，寬1-1.5 cm，側裂片先端歪鈍或截斷狀圓形，中裂片四方形，先端鈍或凹頭，寬約6 mm，距圓柱形，先端鈍；蕊柱長約3 mm。

固有，生長於台灣中部及南部高海拔約 2700-3700 m 的山地，常見於多苔蘚類的岩石或草生地上。

120. 紅斑蘭 (*Orchis taolii* Ying)

Terrestrials; stem erect, glabrous, 3-8 cm long, slender, terete, 1-2 sheaths at base; tubers ovoid, 4-7 mm long, 3-5 mm diameter; sheaths membranous, glabrous, acuminate at apex, amplexical at base.

Leaves 2 or 3, linear-lanceolate or narrowly oblong, 3-6 cm long, 5-7 mm wide, acuminate at apex, decurrent and amplexical at base, entire, chartaceous, glabrous on both sides.

Flowers 2-5, terminal, relatively small, racemose; bracts lanceolate, 1-1.7 cm long, 3-3.5 mm wide, acuminate at apex, the pedicels with ovaries 6-11 mm long, glabrous; sepals white, the dorsal one oblong, concave, 3.5-4.5 mm long, 1.5-2 mm wide, acuminate at apex, the lateral ones lanceolate-triangular, oblique, 5.5-6.5 mm long, 1.2-1.7 mm wide, acuminate at apex, sometimes obtuse at apex; petals white, ovate-triangular, oblique, 3-4 mm long, 2-2.2 mm wide, acuminate at apex, glabrous; lip white with red spots, glabrous, 8-10 mm long, 8-9 mm wide, 3-lobed; gradually narrowed at base, the lateral lobes triangular, 3-4 mm long, 1.5-2 mm wide, acuminate at apex, median lobe 4-5 mm long, 4-4.5 mm wide, rounded or obtuse and 2-lobed at apex; the lobes 2-2.5 mm long, about 1 mm wide; spur cylindrical, 4-5 mm long, obtuse at apex, about 1 mm in diameter; column short, 1.5-2 mm long.

Endemic, known from northern part of the island at high altitudes of 3400-3600 m, on moist mossy rocks, rather rare.

地生蘭，莖直立，光滑，長 3-8 cm，細長，圓柱形，基部有鞘 1-2 枚；塊根卵形，長 4-7 mm，徑 3-5 mm；鞘膜質，光滑，先端漸尖形，

基部抱莖。

葉2或3枚，線狀披針形或狹長橢圓形，長3-6 cm，寬5-7 mm，先端漸尖形，基部延伸且抱莖，全緣，紙質，兩面俱光滑。

花2-5枚，頂生，較小，總狀花序，苞片披針形，長1-1.7 cm，寬3-3.5 mm，先端漸尖形；花梗連同子房長6-11 mm，光滑；萼片白色，後萼片長橢圓形，槽狀，長3.5-4.5 mm，寬1.5-2 mm，先端漸尖形，側萼片披針狀三角形，基部歪，長5.5-6.5 mm，寬1.2-1.7 mm，先端漸尖或鈍；花瓣白色，卵狀三角形，歪，長3-4 mm，寬2-2.2 mm，先端漸尖，光滑。唇瓣白色而具有紅色斑點，光滑，長8-10 mm，寬8-9 mm，3裂，基部漸窄，側裂片三角形，長3-4 mm，寬1.5-2 mm，先端漸尖形，中裂片長4.5 mm，寬4-4.5 mm，先端圓或鈍且又2裂，裂片長2-2.5 mm，寬約1 mm，距圓柱形，長4-5 mm，先端鈍，徑約1 mm；蕊柱短，長1.5-2 mm。

固有，生長於北部高海拔約3400-3500公尺的高山地區，見於潮濕多苔蘚類的岩石上，較為少見。

121. 細葉山蘭 (*Oreorchis gracillima* (Hayata) Schltr.)

Terrestrials; pseudobulbs closely approximate, ovoid or conical-ovoid, 1.2-1.6 cm long, about 8 mm across, acute at apex, rounded at base; roots many, produced from the base of pseudobulb.

Leaf (leaves) solitary, rarely 2, linear or linear-lanceolate, terminal on the pseudobulb, 30-60 cm long, 5-7 mm wide, acuminate at apex, attenuate and decurrent to petioles at base, entire, chartaceous, articulate, plicate, many-veined elevated beneath.

Flowers 20-30, orange yellow or brownish yellow, widely opened, racemose; scape terminal on the pseudobulb erect, 50-70 cm long, glabrous, yellowish green; sheaths 2 in the middle and base of scape, brownish, 5-6 mm long, acute at apex, amplexical at base; bracts linear-lanceolate, 4-6 mm long, about 1 mm wide, acute at apex; the pedicels with ovaries 1-1.5 cm long, slender, glabrous, erect or ascending;

sepals equal, patent, free, oblanceolate, 8-10 mm long, about 1.6 mm wide, obtuse and apiculate at apex, contracted at base the lateral ones somewhat falcate like; petals same as the sepals in shape, but somewhat shorter, acute at apex, 3-5-nerved; lip cuneate-obovate, 5.5-6.5 mm long, about 3 mm wide, shortly clawed at base; the claw 1.5-2 mm long, about 1 mm wide, the lamina 3-lobed. the lateral lobed crescent-shaped, curved inward, 2-2.5 mm long, about 0.6 mm wide. truncate at apex, the median lobe cuneate-obovate, 5-5.5 mm long, about 3 mm wide, rounded at apex, 5-nerved, cressed on margin, one appendage at base, lamellate about 1.5 mm long; column short, 2-3 mm long.

Endemic, known from high altitudes of 2300-3000 m in central and southern parts of the island, under the forests, rather rare.

地生蘭，假球莖緊密排列，卵形或圓錐狀卵形，長1.2-1.6 cm，徑約8 mm，先端銳尖，基部圓形；根多數，抽自於假球莖基部。

葉1枚，少數亦有2枚者，線形或線狀披針形，頂生於假球莖之上，長30-50 cm，寬5-7 mm，先端漸尖，基部漸窄而延伸至葉柄，全緣，紙質，有關節，皺褶，脈多數，隆起背面。

花20-30枚，橘黃色或黃褐色，總狀花序；花莖頂生於假球莖先端，直立，長50-70 cm，光滑，黃綠色；鞘2枚着生於花莖的中部及基部，長5-6 mm，先端銳尖，基部抱莖；苞片線狀披針形，長4-6 mm，寬約1 mm，先端銳尖；花梗連同子房長1-1.5 cm，細長，光滑，直立或近似如此；萼片整齊，顯著，離生，倒披針形，長8-10 mm，寬約1.6 mm，先端鈍且有尖突，基部呈緊縮狀；側萼片略呈鐮刀狀；花瓣與萼片同形，但較短，先端銳尖，3-5脈；唇瓣楔狀倒卵形，長5.5-6.5 mm，寬約3 mm，基部有短爪，爪長1.5-2 mm，寬約1 mm，唇瓣片3裂，側裂片新月形，內曲，長2-2.5 mm，寬約0.6 mm，先端截斷狀；中裂片楔狀倒卵形，長5-5.5 mm，寬約3 mm，先端圓，脈5條，邊緣繃折狀，基部有1附屬體，隆起線長約1.5 mm，蕊柱短，長2-3 mm。

固有，生長於全島中部及南部高海拔約2300-3000 m，生長於森林下，較少。

122. 黃鶴蘭 (*Phaius flavus* (Blume) Lindley)

Terrestrials; rhizome short; roots many, elongate; pseudobulbs closely approximate, narrowly ovoid conical, 3-5 cm long, 1.5-2 cm across, somewhat angled, green, truncate and ring at apex; stem elongate, 25-40 cm long, erect slender, usually enclosed by the green leaf-sheaths, glabrous.

Leaves 4-6, attached at the apex of pseudobulb, with very long sheaths which enclosedly the stem; the blade lanceolate or oblong-lanceolate, 30-50 cm long, 7-9 cm wide, plicate, chartaceous, acuminate at apex, narrowed to the sheath at base, 5-7-nerved, raised on back, green surface, pale green beneath.

Flowers 7-15, large, showy, 4-5 cm in diameter, yellow, racemose; scape produced from the base of pseudobulb, elongate, 30-45 cm long, erect rather robust, 5-6 mm across, green, sheathing scales 3-4 at the nodes, lanceolate, 2.5-3 cm long, membranous, acuminate, embracing the scape at base; bracts oblong, membranous, light yellow, 2-3 cm long, 1-1.5 cm wide, subacute at apex; the pedicels with ovaries 3-4 cm long, green, glabrous; sepals obovate-oblong, 3-4 cm long, 1-1.5 cm wide, more or less fleshy, subacute at apex, nerved, not much spreading; petals oblong, somewhat oblique, 3-3.5 cm long, about 9 mm wide; lip yellow with brown streaks in the middle within, broadly ovate, 3-3.2 cm long, 2.5-2.7 cm wide, fleshy, loosely embracing the column in natural position, 3-lobed, with strongly papillose brownish crispate-dentate margin near tip; spur whitish yellow, 7-8 mm long, glabrous; column 2-2.2 cm long, long-pubescent on the inner surface.

Japan and Ryukyu. Taiwan, known from the medium altitudes of 900-1800 m throughout the island, under ever-green forests, somewhat common.

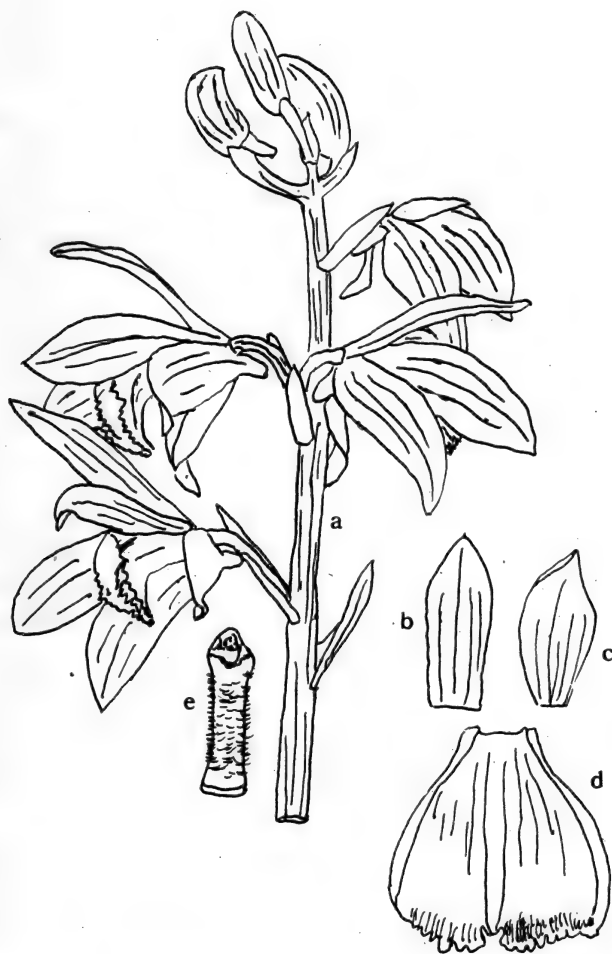


圖 (Fig) 99 黃鶴蘭 (*Phaius flavus*)
 a. 花序 (Inflorescence) b. 花萼 (Sepal)
 c. 花瓣 (Petal) d. 唇瓣 (Lip)
 e. 蕊柱 (Column)

地生蘭，根莖短，根多數，甚長，假球莖緊密排列，狹卵狀圓錐形，長 3-5 cm，徑 1.5-2 cm，略有稜角，綠色，先端截斷狀且有環紋；莖甚長，長 25-40 cm，直立，細長，常包被有綠色的葉鞘，光滑。

葉 4-6 枚，着生於假球莖先端，有甚長的葉鞘包被莖部，葉片披針形

或長橢圓狀披針形，長30-45 cm，寬7-9 cm，皺褶，紙質，先端漸尖，基部狹而延伸至葉柄，5-7脈隆起於背面，表面綠色，背面淡綠色。

花7-15枚，大，艷麗，徑4-5 cm，黃色，總狀花序；花莖抽自於假球莖基部，甚長，長30-45 cm，直立，較粗壯，徑5-6 mm，綠色，節部有3-4枚鞘狀苞片，披針形，長2.5-3 cm，膜質，先端漸尖，基部抱花莖；苞片長橢圓形，膜質，淡黃色，長2-3 cm，寬1-1.5 cm，先端近似銳尖；花梗連同子房長3-4 cm，綠色，光滑；萼片倒卵狀長橢圓形，長3-4 cm，寬1-1.5 mm，多少呈肉質，先端近似銳尖，有脈紋，不十分擴展；花瓣長橢圓形，略歪，長3-3.5 cm，寬約9 mm；唇瓣黃色，內面中部具有褐色的縱條紋，橢圓形，長3-3.2 cm，寬2.5-2.7 cm，肉質，3裂，先端呈褐色雞冠狀突起，距淡黃色，長7-8 mm，光滑；蕊柱長2-2.2 cm，內面有長毛。

日本及琉球。台灣，生長於中海拔約900-1800公尺的山地，全島皆有，生長於常綠潮葉林下，較常見。

123. 細莖鶴頂蘭 (*Phaius gracilis* (Lindley) Ying)

Phaius gracilis (Lindley) Ying comb. nov.

Calanthe gracilis Lindley, Gen & sp. orch. 25 (1833)

Terrestrials; rhizomes short; roots elongate; pseudobulb absent; stem elongate, 30-60 cm long, glabrous, green, rarely branched at base, nodes conspicuous.

Leaves elliptic-lanceolate, 15-25 cm long, 4-7 cm wide, acuminate on both ends, chartaceous, shining and green surface, pale green beneath, 5-7-nerved, raised on back, the lower leaves usually smaller and sheath-like.

Flowers numerous, rather small, 1-1.5 cm in diameter, pale yellow or yellow, racemose, slightly scent; scape produced from the lower node of stem, 25-40 cm long, green, slender, erect, glabrous, with several reduced sheathing leaves in the lower part; bracts lanceolate, 2-2.5 cm long, cauduous, acuminate at apex, the pedicels with ovaries 1-1.5 cm long, green, glabrous; sepals reflexed-spreading, the dorsal one lanceolate 12-17 mm long, 3-4 mm wide,

caudate-acuminate, 3-nerved; the lateral ones narrow, about 3 mm wide; petals oblong-ovate, 7-8 mm long, 3-5 mm wide; lip quadrangular-oblong, 3-lobed, 12-18 mm long, 3-5 mm wide, the median lobe with a broadly claw, the limb transversely oblong, truncate at apex, crispate-denticulate on margin, the lateral lobes ovate, ascending; column about 4 mm long, with pale yellow pubescent.

Japan and Ryukyu. Taiwan, at medium altitudes of 800-1600 m throughout the island, under the evergreen forests, rather common.

Although Dr. Hayata published a name of *Phaius gracilis* Hayata but the name is out of available, is a synonym of *P. mishensis*. so I combined a new name of *Phaius*.

地生蘭，根莖短，根甚長，無假球莖；莖甚長，長 30-60 cm，光滑，綠色，基部有分枝，節顯著。

葉橢圓狀披針形，長 15-25 cm，寬 4-7 cm，兩端均呈漸尖，紙質，表面呈有光澤綠色，背面淡綠色，脈 5 - 7 條隆起於背面，位於莖基部的葉較小，呈鞘狀。

花多數，較小，徑 1-1.5 cm，淡黃色或黃色，總狀花序，略有香味；花莖抽自於莖基部的節處，長 25-40 cm，綠色，細長，直立，光滑，在基部處有數枚退化鞘狀葉；苞片披針形，長 2-2.5 cm，早落，先端漸尖；花梗連同子房長 1-1.5 cm，綠色，光滑；萼片反捲狀擴展，後萼片披針形，長 12-17 mm，寬 3-4 mm，尾狀漸尖，脈 3 條，側萼片較狹，寬約 3 mm；花瓣長橢圓狀卵形，長 7-8 mm，寬 3-5 mm；唇瓣四方狀長橢圓形，3 裂，長 12-18 mm，寬 3-5 mm，中裂片有較寬的爪，瓣片縱長橢圓形，先端截斷狀，邊緣呈雞冠狀鈍鋸齒，側裂片近似直立，卵形；蕊柱長約 4 mm，具有淡黃色的毛茸。

日本及琉球。台灣生長於中海拔約 800-1600 公尺的山地，全島皆有分佈，生長於常綠闊葉林下，甚為普遍。

雖然早田文藏氏於台灣植物誌資料一書中發表過 *Phaius gracilis*，但此為細距鶴頂蘭的異名，其所發表之 *Phaius gracilis* 已失效。故筆者重又將 Lindley 發表之 *Calanthe gracilis* Lindley 加以組合而成有效應用之 *Phaius gracilis* (Lindley) Ying.



圖 (Fig) 100 細莖鶴頂蘭 (*Phaius gracilis*)

a. 着花之植物體 (Flowering plant)

b. 花 (Flower) c. 後萼片 (Dorsal sepal)

d. 花瓣 (Petal) e. 側萼片 (Lateral sepal)

f. 唇瓣 (Lip)

124. 細距鶴頂蘭 (*Phaius mishensis* (Lindley) Reichb.f.)

Terrestrials; roots elongate, 15-30 cm long, slender; pseudobulb absent; stem erect, 40-50 cm long, somewhat robust, green, leafy upward.

Leaves 4-6, oblong-lanceolate or obovate-oblong, 20-25 cm long, 5.5-7 cm wide, acute at apex, narrowed decurrent to the sheaths, entire, or slightly wavy on margin, shining green surface, pale green beneath; sheaths 5-10 cm long, green, amplexicual at base.

Flowers 3-6, rather large, pink laterally reddish orange, not widely opened, racemose; scape produced from the sheaths of the middle part of the stem, erect, 20-30 cm long, glabrous; bracts elliptic, 3-3.5 cm long, about 1.5 cm wide, caducous; the pedicels with ovaries 3-3.5 cm long, glabrous; sepals free, oblong, patent, 3-4 cm long, 1-1.5 cm wide, acuminate at apex; petals spathulate, 3-3.2 cm long, 6-7 mm wide, obtuse at apex, attenuate at base; lip 3-lobed, 3-3.2 cm long, about 2.5 cm wide, spurred, the lateral lobes erect, involucre the column, wavy on margin and apex; the median lobe about 9 mm long, 1-1.2 cm wide, emarginate or shallowly 2-lobed at apex, undulated on margin, disc with 4 slightly elevated ridges, hirsute, with brownish red spots within; spur about 1 cm long; column elongate, about 2 cm long.

Skkim. the Philippines, Assam, Thailand and Ryukyu. Taiwan, known from the medium altitudes of 900-1600 m, under humus forests.

地生蘭，根甚長，長15-30 cm，細長，假球莖缺如；莖直立，長40-50 cm，略粗壯，綠色，上部有葉。

葉4-6枚，長橢圓狀披針形或倒卵狀長橢圓形，長20-25 cm，寬5.5-7 cm，先端銳尖，基部漸窄延伸至葉鞘，全緣或略呈波狀緣，表面呈有光澤綠色，背面淡綠色，鞘長5-10 cm，綠色，基部抱莖。

花3-6枚，較大，粉紅色，後逐漸變成橘黃色，不十分張開，總狀花

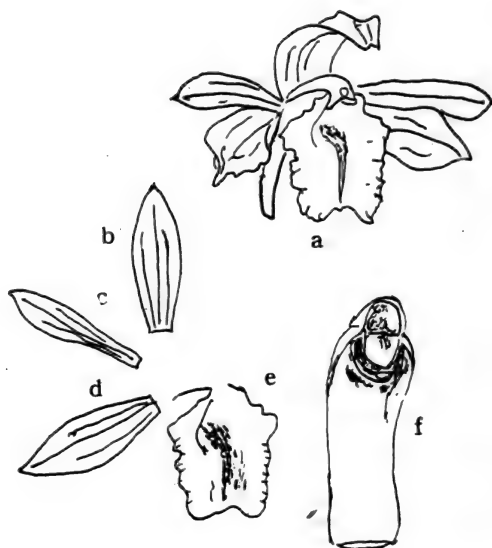


圖 (Fig) 101 細距鶴頂蘭 (*Phaius mishensis*)

- a. 花 (Flower) b. 後萼片 (Dorsal sepal)
 c. 花瓣 (Petal) d. 側萼片 (Lateral sepal)
 e. 唇瓣 (Lip) f. 蕊柱 (Column)

序；花莖抽自於莖中部有鞘處，直立，長 20-30 cm，光滑；苞片橢圓形，長 3-3.5 cm，寬約 1.5 cm，早落，花梗連同子房長 3-3.5 cm，光滑；萼片離生，長橢圓形，顯著，長 3-4 cm，寬 1-1.5 cm，先端漸尖；花瓣舌形，長 3-3.2 cm，寬 6-7 mm，先端鈍，基部漸狹；唇瓣 3 裂，長 3-3.2 cm，寬約 2.5 cm，有距，側裂片直立，包旋着蕊柱，先端呈波狀，中裂片長約 9 mm，寬約 1-1.2 cm，先端凹頭或淺 2 裂，波狀緣，中部有 4 條縱隆起線，有毛茸，內面有黃褐色斑點，距長 1 cm；蕊柱甚長，長約 2 cm。

錫金，菲律賓、阿薩姆、泰國及琉球。台灣，生長於全島中海拔約 900-1600 公尺的山地，生長於多腐植質的森林內。

125. 鶴頂蘭 (*Phaius tancarvilleae* (Banks) Blume)

Terrestrials; rhizome short; roots elongate; pseudobulbs tightly clustered rather irregular, enveloped by leaf-sheaths,

inconspicuous, 3-4 cm long, 3-3.5 cm in diameter, dull green, glabrous, stemless. c

Leaves 4-6, oblong-lanceolate or lanceolate, chartaceous, 40-70 cm long, 7-15 cm wide, plicate, attenuate, acuminate, gradually narrowed at base to the long petioled, 9-nerved, raised on back; the petioles 20-35 cm long, glabrous.

Flowers 20-35, large, 7-9 cm in diameter, fragrant, racemose, long-lived; scape produced from the fascicle leaves, 70-90 cm long, erect, terete, glabrous; bracts oblanceolate, green, deciduous, 3-4 cm long, 1-1.5 cm wide; the pedicels with ovaries 3-3.5 cm long, yellowish green; sepals powery-white outside, more or less red-brown inside, often with yellowish green margins, oblong, 5-6 cm long, 1-1.5 cm wide, acute, spreading; petals same as the sepals in color and shape, but somewhat shorter, only 5 cm long; lip almost free from the column, faintly 3-lobed and much plaited at the top, on the inner side dark vinous purple, pale-veined, long-hairy, the median lobe broadly rounded with a recurved mucro; spur terete, pink, more or less forked at tip, 8-11 mm long; column faintly curved, about 2 cm long.

S. China, n, India, Malaysia, Indonesia, Australia, Pacific Islands, Polynesia, Japan and Lyukyu. Taiwan, on humus land under the evergreen forests at the elevations of 500-1200 m throughout the island, not common, occasionally cultivated as a oramental.

地生蘭，根莖短，根甚長；假球莖緊密叢生，略呈不規則，常包被有葉鞘，長3-4 cm，徑3-3.5 cm，暗綠色，光滑，無莖。

葉4-6枚，長橢圓狀披針形，紙質，長40-70 cm，寬7-15 cm，皺摺，先端漸尖，基部漸狹而延伸至葉柄，脈9條，隆起於背面；葉柄長20-25 cm，光滑。

花20-35枚，大而艷麗，徑7-9 cm，有香味，總狀花序，花期甚長；



圖 (Fig) 102 鶴頂蘭 (*Phaius tancarvilleae*)

- a. 花 (Flower) b. 萼片 (Sepal)
 c. 花瓣 (Petal) d. 唇瓣 (Lip)
 e. 蕊柱 (Column)

花莖抽取於叢生的葉中，長 70-90 cm，直立、圓柱形，光滑；苞片倒披針形，綠色，早落，長 3-4 cm，寬 1-1.5 cm；花梗連同子房長 3-3.5 cm，黃綠色；萼片外面呈粉白色，內面則多少呈紅褐色，邊緣則呈黃綠色，長橢圓形，長 5-6 cm，寬 1-1.5 cm，先端銳尖，擴展；花瓣的形狀及顏色與萼片相同，但較短，長僅 5 cm；唇瓣幾完全與蕊柱離生，不明顯 3 裂，先端略呈皺摺狀，內面呈暗紅紫色，脈呈白色，有長毛茸；中裂片橢圓形，先端有略反捲的尖突；距圓柱形，粉紅色，先端略呈叉狀，長 8-11 mm；蕊柱長 2 cm，呈不明顯的彎曲。

中國南部、印度北部、馬來西亞、印尼、澳洲、太平洋島嶼、玻里西亞、日本及琉球。台灣，生長於全島約 500-1200 m 的山地，多見於常綠闊葉林下多腐植質的林床上，較為稀少，有時亦栽培為供觀賞植物。

126. 蝴蝶蘭 (*Phalaenopsis aphrodite* Reichb. f)

Epiphytes; roots filiform, numerous, elongate, 20-40 cm long, 2-3.5 mm in diameter, grayish or nearly so; stemless.

Leaves several, fascicled or nearly so, oblong elliptic or oblong, 25-40 cm long, 7-8 cm wide, obtuse or acuminate at apex, obtuse and slightly contracted at base, entire, lustrous green surface, pale green beneath, midrib impressed surface, slightly elevated beneath, subcoriaceous or slightly fleshy.

Flowers several, white, remotely racemose, 6-8 cm in diameter, slightly fragrant; scape elongate, 30-50 cm long, produced from leaved fascicles, horizontal or ascending; the pedicels with ovaries 3-5 cm long, glabrous or slightly pubescent; bracts minute; sepals oblong, 4-5.5 cm long, about 2.5 cm wide, blunt at apex, rounded at base; petals broadly rhombic-cuneate, 4-6 cm long and wide, obtuse at apex, shortly clawed at base; lip 3-lobed, the lateral lobes erect, half-rhombic oblong 2.5-3 cm long; the median lobe triangular, ending in a elongate antenna-like cirrhii; the disc with 2 deeper red markings; column short.

The Philippines and Taiwan. Taiwan known from islet Lanyu (蘭嶼) only, rather rare.

着生蘭，根線形，多數，甚長，長20-40 cm，徑2-3.5 mm，灰色或近似如此，無莖。

葉數枚，叢生或近似如此，長橢圓狀橢圓形或長橢圓形，長25-40 cm，寬7-8 cm，先端鈍或漸尖形，基部鈍而略呈緊縮狀，全緣，表面呈有光澤綠色，背面淡綠色，中肋於表面凹下，背面略隆起，亞革質或略呈肉質。

花數枚，白色，呈疏生的總狀花序，徑6-8 cm，略有香味；花莖甚長，長30-50 cm，抽自於葉叢中，水平或略呈上昇狀生長；花梗連同子房長3-5 cm，光滑或略有毛茸；苞片甚微小；萼片長橢圓形，長4-5.5 mm，寬約2.5 cm，先端鈍；花瓣闊菱狀楔形，長4-6 cm，寬4-6 cm，先端鈍，基部有短爪；唇瓣3裂，側裂片直立，半菱狀長橢圓形，長2.5-3 cm，中裂片三角形，先端有二條細長的鬚狀物，花盤上有二深紅色的附屬

物，蕊柱甚短。

菲律賓。台灣，僅產於蘭嶼島上，生長於熱帶降雨林中，數量甚少。

127. 石山桃 (*Pholidota cantoensis* Rolfe)

Epiphytes; rhizomes creeping, somewhat woody, 8-15 cm long, about 2 mm in diameter; roots produced from the base of pseudobulb, elongate; pseudobulb ovoid, remote, fleshy, 1 - 1.5 cm long, 5-7 mm in diameter, groove, green, truncate obtuse at apex, rounded at base; sheaths 2-5, deciduous, lanceolate, acute at apex.

Leaves 2, terminal on the pseudobulb, linear-lanceolate, 6-8 cm long, 5-8 mm wide, acuminate, narrowed to the petiolate at base, coriaceous or nearly so, glabrous, shining green surface, pale green beneath, midrib elevated beneath; the petioles 1-1.5 mm long, glabrous, green.

Flowers 8-14, rather small, 4-5 mm in diameter, yellowish white or white, racemose; seape producing from the base of pseudobulb, erect, 6-10 cm long, slender, glabrous; sheaths 4-6, lightly brown, subcoriaceous, acute at apex; bracts ovate, 4-5 mm long, about 4 mm wide, concave, subplicate, 5-nerved; the pedicels with ovaries 3-3.5 mm long, glabrous; sepals subequal, ovate, 4-4.5 mm long, 2-3 mm wide, narrowly obtuse at apex, contracted at base, slightly concave, 3-nerved, the lateral ones somewhat oblique at base; petals broadly oblong or broadly ovate, 4-4.5 mm long, about 3 mm wide, obtuse at apex, cuneate and obtuse at base, 3-nerved; lip widely rounded, bright yellow, 3-3.5 mm long, 4-4.5 mm wide, strongly convex, broadly rounded at apex, contracted at base; column about 2 mm long, subterete, glabrous.

Endemic, on mossy rocks or tree trunks at the elevations of 300-1400 m in the northern and central parts of the island, rather common.

着生蘭，根莖匍匐，略呈木質，長 8-15 cm，徑約 2 mm；根抽自於假球莖基部，甚長，淡褐色；假球莖卵形，疏生，肉質，長 1-1.5 cm，徑 5-7 mm，有溝紋，綠色，先端截斷鈍狀，基部圓；鞘 2-5 枚，早落，披針形，膜質，先端銳尖。

葉 2 枚，着生於假球莖的先端，線狀披針形，長 6-8 cm，寬 5-8 mm，先端漸尖，基部狹而延伸至葉柄，革質或近似如此，全緣，光滑，表面呈有光滑綠色，背面淡綠色，中肋於背面隆起；葉柄長 1-1.5 mm，光滑，綠色。

花 8-14 枚，較小，徑 4-5 mm，淡黃色或白色，總狀花序；花莖抽自於假球莖基部，先開花，而後長假球莖及葉，故長果的花莖多位於假球莖先端，直立，長 6-10 cm，細長，光滑；鞘 4-6，淡褐色，近似革質，先端銳

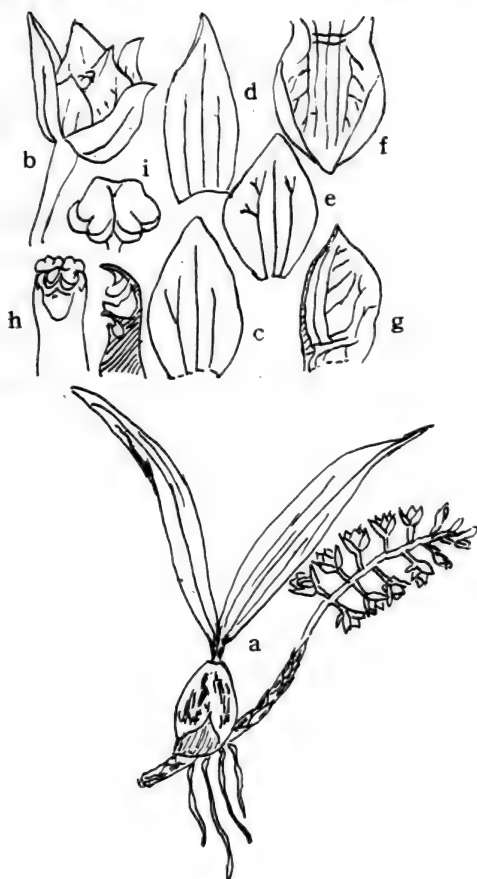


圖 (Fig) 103 石山桃 (*Pholidota cantoensis*)

- a. 着花之植物體 (Flowering plant)
b. 花 (Flower) c. 後萼片 (Dorsal sepal)
d. 側萼片 (Lateral sepal) e. 花瓣 (Petal)
f. 唇瓣 (Lip) g. 唇瓣縱切 (Lip in
vertical section)
h. i. 蕊柱 (Column) j. 藥蓋 (Operculum)

尖；苞片卵形，長4-5 mm，寬約4 mm，凸出，脈5條；花梗連同子房長3-3.5 mm，光滑；萼片近似整齊，卵形，長4-4.5 mm，寬2-3 mm，先端齊鈍，基部緊縮，略凸出，脈3條；側萼片基部略歪；花瓣潤長橢圓形或潤卵形，長4-4.5 mm，寬約3 mm，先端鈍，基部楔形或鈍，脈3條；唇瓣鮮黃色，潤圓形，長3-3.5 mm，寬4-4.5 mm，凸出，先端潤圓形，基部緊縮狀；蕊柱長2 mm，近似圓柱形，光滑。

固有，生長於台灣北部及中部海拔約300-1400 m的山地，多着生於多苔蘚類的岩石及樹幹上，較為常見。

128 短距粉蝶蘭 (*Platanthera brevicealcarata* Hayata)

Terrestrials; roots thickened, sometimes fusiform-like, elongate; stem simple, erect, including the scape 7-15 cm long.

Leaves 2-3, alternate, basal, oblanceolate or obovate-oblong, chartaceous, 2.5-4 cm long, 1.5-2 cm wide, obtuse, abruptly narrowed and embracing the stem at base.

Flowers 7-14, white or greenish white, in terminal spike; scape glabrous, usually with 1-2 scale-like lanceolate leaves; bracts broadly lanceolate, 4-7 mm long, 1-3 mm wide, acute at apex; dorsal sepal elliptic, about 3 mm long, 2 mm wide, 1-nerved, the lateral ones ovate, 4-4.5 mm long, about 2 mm wide, obtuse at apex; petals oblique ovate, rather thick, 2.5-3 mm long, about 2 mm wide, subobtusely, erect, forming a hood with dorsal sepal; lip oblong-ligulate, fleshy, 3.5-4 mm long, about 2.5 mm wide, sometimes curved at apex, spur 2-3 mm long, thickened at tip, obtuse; column short,

S. Japan. Taiwan, at high altitudes of 2100-3500 m in central mountain ranges, very common in alpine meadow, also occurred under the forests.

地生蘭，根粗厚，甚長，有時亦有呈紡錘狀者；莖單生無分枝，直立，細長，連同花莖長 7-15 cm。

葉 2-3 枚，互生，着生於莖的基部，倒披針形或倒卵狀長橢圓形，紙質，長 2.5-4 cm，寬 1.5-2 cm，先端鈍，基部漸窄且抱莖，表面呈綠色，但中肋呈白色，背面淡綠色。

花 7-14，白色或白綠色，呈頂生的穗狀花序；花莖光滑，常有 1-2



圖 (Fig) 104 短距粉蝶蘭 (*Platanthera brevicarata*)

- a. 着花之植物體 (Flowering plant)
- b. 後萼片 (Dorsal sepal) c. 花瓣 (Petal)
- d. 側萼片 (Lateral sepal) e. 唇瓣 (Lip)
- f. 除去花瓣及花萼的花 (Flower taken off
sepals and petals)

枚鱗片狀披針形的莖生葉；苞片闊披針形，長 4-7 mm，寬 1-3 mm，先端銳尖，後萼片卵狀橢圓形，長約 3 mm，寬約 2 mm，脈 1 條，側萼片卵

形，長4-4.5 mm，寬約2 mm，先端鈍；花瓣歪卵形，較厚，長2.5-3 mm，寬約2 mm，先端近似鈍，直立，與後萼片形成花兜，唇瓣長橢圓狀舌形，肉質，長3.5-4 mm，寬約2.5 mm，有時先端略向後反捲；距長2-3 mm，先端厚而鈍；蕊柱短。

日本南部。台灣，生長於全島高海拔約2100-3500 m的山地，常見於高山草原，有時亦生長於林下，甚為常見。

129. 長苞粉蝶蘭 (*Platanthera longibracteata* Hayata)

Terrestrials; roots fleshy, 1-1.5 cm long, fusiform; stem simple, 30-40 cm long, 4-angled, sheathing at base; the sheathes membranous, 3-4.5 cm long, obtuse at apex.

Leaves 3-4, alternate, spatulate or ovate-oblongate, 14-16 cm long, 2.5-3 cm wide, obtuse at apex, decurrent to gradually narrowed at base, chartaceous, entire, shining green surface.

Flowers 7-15, lax-racemose, white scape glabrous, 10-20 cm long, glabrous, 4-angled; bracts lanceolate, 1.2-1.7 cm long, acuminate at apex, entire; the pedicels with ovaries 6-8 mm long, ellipsoid; the dorsal sepal oblong-triangular, 2-3 mm long, about 1.5 mm wide, obtuse at apex. 3-nerved, the lateral ones oblong, 4-5 mm long, about 2 mm wide, obtuse at apex, narrowed at base, 3-nerved; petals triangular-oblong, 3-3.5 mm long, about 1 mm wide, 1-nerved, acute at apex, strongly contracted at base; lip linear, 5-6 mm long, 0.5 mm wide, 1-nerved, obtuse at apex, spurred, the spur linear, 1-1.2 cm long, 0.5 mm in diameter, obtuse at apex; column short.

Endemic, at high altitudes of 2200-3000 m, on grasslands; in central and southern parts of the island, rather common.

地生蘭，根肉質，長1-1.5 cm，紡錘形；莖直立，無分枝，長30-40 cm，4稜形，基部有鞘；鞘膜質，長3-4.5 cm，先端鈍。

葉3-4枚，互生，舌形或卵狀倒披針形，長14-16 cm，寬2.5-3 cm，先端鈍，基部漸狹而延伸抱莖，紙質，全緣，表面呈有光澤綠色。

花7-15枚，疏生的穗狀花序，白色，花莖光滑，長10-20 cm，光滑

，四稜；苞片披針形，長1.2-1.7 cm，先端漸尖，全緣；花梗連同子房長6-8 mm，橢圓形，後萼片長橢圓狀三角形，長2-3 mm，寬約1.5 mm，先端鈍，脈3條，側萼片長橢圓形，長4-5 mm，寬約2 mm，先端鈍，基部狹，脈3條；花瓣三角狀長橢圓形，長3-3.5 mm，寬約1 mm，脈1條，先端銳尖，基部緊縮；唇瓣線形，長5-6 mm，寬0.5 mm，脈1條，先端鈍，有距、距線形，長1-1.2 cm，徑0.5 mm，先端鈍；蕊柱短。

生長於中部及南部高海拔約2200-3000 m的草地，較為常見。

130. 厚唇粉蝶蘭 (*Platanthera pachyglossa* Hayata)

Terrestrial; roots 3-5, thickened, elongate, creamy white, 3-4 cm long, 5-6 mm in diameter; stem simple, erect, included the scape 30-40 cm long, slender, glabrous, green, sheathed at base; sheaths 2-3, membranous.

Leaves 4-5, alternate, ovate-oblong or oblong-lanceolate, 6-7 cm long, 1.5-2 cm wide, acute, obtuse at base, semiamplexicaul, entire, lustrous green surface, pale green beneath, midrib raised beneath.

Flowers numerous, yellowish green, small, 6-7 mm in diameter, spicate; scape terminal, 10-20 cm long, green, glabrous or slightly whitish hirsute; bracts lanceolate, 4-6 mm long, acute at apex; the pedicels with ovaries 1-1.2 cm long, cylindric, glabrous, green; sepals unequal, the dorsal one rounded or ovate-rounded, 4.5-5.5 mm long, 4-4.5 mm wide, obtuse at apex, truncate or cordate and contracted at base, the lateral ones linear-lanceolate, 6.5-7.5 mm long, 2-2.5 mm wide, acute at apex, somewhat recurved on margin; petals broadly rounded, strongly oblique, 5-5.5 mm long, about 4 mm wide, long cuspidate at apex; lip linear-lanceolate, spurred, 9-10 mm long, 2-3 mm wide; spur 10-15 mm long, about 2 mm across, obtuse at apex; column short, broad, 5-6 mm long.

Endemic, one of the commonest alpine orchids at the elevations of 2500-3400 m throughout the island, usually on grassland or exposed field.

地生蘭，根3-5枚，粗厚，甚長，粉白色，長3-4 cm，徑5-6 mm；莖單生，無分枝，直立，連同花莖長30-40 cm，細長，光滑，綠色，基部有鞘；鞘2-3枚，膜質。

葉4-5枚，互生，卵狀長橢圓形或長橢圓狀披針形，長6-7 cm，寬1.5-2 cm，先端銳尖，基部鈍，近似抱莖，全緣，表面呈有光澤綠色，背



圖 (Fig) 105 厚唇粉蝶蘭 (*Planthera pachyglossa*)
 a. 花序 (Inflorescence) b. 花 (Flower)
 c. 蕊柱 (Column)

面淡綠色，中肋於背面隆起。

花多數，黃綠色，較小，徑6-7 mm，穗狀花序；花莖頂生，長10-20 cm，綠色，光滑或略有白色毛茸；苞片披針形，長4-6 mm，先端銳尖；花梗連同子房長1-1.2 cm，圓柱形，光滑，綠色；萼片不整齊，後萼片圓或卵圓形，長4.5-5.5 mm，寬4-4.5 mm，先端鈍，基部截斷狀或心形且呈緊縮狀；側萼片線狀披針形，長6.5-7.5 mm，寬2-2.5 mm，先端銳尖，邊緣略反捲；花瓣圓形，甚至，長5-5.5 mm，寬約4 mm，先端長尾端；唇瓣線狀披針形，有距，長9-10 mm，寬2-3 mm；距長10-15 mm，徑約2 mm，先端鈍；蕊柱短，長5-6 mm，略潤。

固有，生長於全島高海拔約2500-3400 m的高山地區，常見於高山地區。
= *p. stenoglossa* Hayata

131. 薄萼粉蝶蘭 (*Platanthera stenosepala* Schltr.)

Terrestrials; roots thickened, somewhat tuberous; stem erect or ascending, 7-12 cm long, slender, 1-leaved near base, glabrous or nearly so.

Leaves radical or basal, oblong or ovate-oblong, 5-8 cm long, 2.5-3.5 cm wide, rounded, cordate or obtuse and embracing the stem at base, entire, green surface and pale green beneath.

Flowers 5-10, rather small, yellowish green, terminal, racemose; scape glabrous, green, 6-11 cm long, erect or ascending; bracts ovate lanceolate, acute at apex, 4-8 mm long; the dorsal sepal narrowed ovate, 4-5 mm long, 3-4 mm wide, 3-nerved; the lateral ones linear-lanceolate, 1-nerved, 5-7 mm long, about 1.5 mm wide; petals oblique ovate, 4.5-5.5 mm long, 2-3 mm wide, acute at apex; lip elongate ligulate, more or less fleshy, 6-8 mm long, about 2 mm wide, entire; spur slender, 12-18 mm long, pendulous, obtuse at apex column hoof-shaped; pollinia ovate.

Ryukyu. Taiwan, at the elevations of 300-800 m in northern mountains, on moist and mossy rocks and grassland, somewhat rarely.

地生蘭，根粗厚，有些呈塊狀；莖直立或近似如此，長7-12 cm，細長，在基部有葉1枚，光滑或近似如此。

葉根生或位於莖的基部，長橢圓形或卵狀長橢圓形，長5-8 cm，寬2.5-3.5 cm，先端圓，基部近似心形或鈍且抱莖，全緣，表面綠色，背面淡綠色，網狀脈甚為顯著。

花5-10枚，較小，黃綠色，頂生，總狀花序；花莖光滑，綠色，長6-11 cm，直立或近似如此；苞片卵狀披針形，先端銳尖，長4-8 mm；後萼片狹卵形，長4-5 mm，寬3-4 mm，脈3條；側萼片線狀披針形，脈1條，長5-7 mm，寬1.5 mm；花瓣歪卵形，長4.5-5.5 mm，寬2-3 mm，先端銳尖；唇瓣長舌形，多少呈肉質，長6-8 mm，寬約2

mm, 全緣; 距細長, 長 12-18 mm, 懸垂; 先端鈍; 蕊柱蹄形, 花粉塊卵形。



圖 (Fig) 106 薄萼粉蝶蘭 (*Platanthera stenosepala*)

- a. 植物體 (Plant) b. 花序 (Inflorescence)
 c. 花 (Flower) d. 後萼片 (Dorsal sepal)
 e. 花瓣 (Petal) f. 側萼片 (Lateral sepal)
 g. 唇瓣 (Lip) h. 蕊柱 (Column)

琉球。台灣, 生長於北部約 300-800 m 的山地, 多常於多苔蘚類潮濕的山地及草生地上, 較為少見。

132. 台灣舌唇蘭 (*Platanthera taiwaniana* Ying)

Terrestrials; tubers ovoid white, 3-5 mm long, about 4 mm in diameter; stem simple, erect, slender, included the scape 15-20 cm long, terete, glabrous, green; sheaths white, 2-4 cm long, membranous.

Leaves 2, alternate, basal, ovate or ovate-oblong, 5-7 cm long, 2-3 cm wide, acute at apex, narrowed decurrent to the sheaths at base, chartaceous or membranous, entire or slightly wavy, glabrous, lustrous green surface, pale green beneath, midrib impressed surface and elevated beneath, lateral veins inconspicuous.

Flowers numerous, yellowish green or light green, relatively small, racemose; the scape 8-10 cm long, terminal, erect; bracts lanceolate or ovate-lanceolate, 6-9 mm long, 2-3 mm wide, acute at apex, glabrous; the pedicels with ovaries 4-6 mm long, erect, glabrous; the dorsal sepal ovate, 2-2.5 mm long, about 1.5 mm wide, obtuse at apex, contracted at base, the lateral ones ovate, 1.5-2 mm long, about 1.5 mm wide, obtuse or acute at apex; petals linear-ovate, 2-3 mm long, about 1 mm wide, acuminate at apex; lip patent, spatulate, 4-6 mm long, 2-3 mm wide, entire, rounded at apex; spur 2-2.5 mm long, about 1 mm across, pale yellow or yellowish white.

Endemic, known from central and southern parts of the island at high altitudes of 3200-3600 m on grassland, rather rare.

地生蘭，塊根卵形，白色，長3-5 mm，徑約4 mm；莖單立，直立，細長，連同花莖長15-20 cm；圓柱形，光滑，綠色；鞘白色，長2-4 cm，膜質。

葉2枚，互生，基生，卵形或卵狀長橢圓形，長5-7 cm，寬2-3 cm，先端銳尖，基部狹而延伸至鞘，紙質或膜質，全緣或波狀緣，光滑，表面呈有光澤綠色，背面淡綠色，中肋於表面凹下而於背面隆起，側脈不顯著。

花多數，黃綠色或淡綠色，較小，總狀花序；花莖長8-10 cm，頂生，直立；苞片披針形或卵狀披針形，長6-9 mm，寬2-3 mm，先端銳尖，光滑；花梗連同子房長4-6 mm，直立，光滑；後萼片卵形，長2-2.5 mm，寬約1.5 mm，先端鈍，基部緊縮；側萼片卵形，長1.5-2 mm，寬約1.5 mm，先端鈍或銳尖；花瓣線狀卵形，長2-3 mm，寬約1 mm，先端漸尖；唇瓣顯著，舌形，長4-6 mm，寬2-3 mm，全緣，先端圓，距長2-2.5 mm，徑約1 mm，淡黃色或黃白色。

固有，生長於中部及南部高海拔約3200-3600 m山地，多見於草生地，較為稀少。

133. 山慈姑 (*Pleione bulbocoides* (Franch) Rolfe)

Terrestrials; pseudobulb oblong or oblong-ovoid, 2.5-3.5

cm long, 2-3 cm across, purplish red; stemless.

Leaf 1, at the top of the pseudobulb, present after flowering, oblanceolate, 12-18 cm long, 2-4 cm wide, chartaceous, acute, attenuate at base, plicate, 5-7-nerved, glabrous, entire.

Flowers solitary, very rarely 2 or 3, large, showy, pink, 3-4 cm across; scape produced from the last year pseudobulb, 5-6 cm long, glabrous; bracts narrowly lanceolate, 4-5 cm long, acute at apex; the pedicels with ovaries 1-2.5 cm long; sepals subequal, spatulate, 4.5-6 cm long, 1-1.5 cm wide, rounded acute, narrowed at base, 5-7-nerved; petals same as the sepals in shape, but smaller and narrower, 5-6 cm long, 6-8 mm wide; lip white with yellowish brown spots, widely ovate, 5-6 cm long, 4-4.5 cm wide, rounded and emarginate or slightly 2-lobed at apex, contracted at base, entire basally, fimbriate from medium up to the tip; keels 4, 3-4 cm long, 1-1.5 mm wide; column elongate, 3-3.5 cm long, 3-4 mm wide; slightly curved.

China, Taiwan, under the thickets or epiphytic on mossy rocks at medium altitudes of 1000-2000 m throughout the island, somewhat common.

地生蘭，假球莖長橢圓形或長橢圓狀卵形，長2.5-3.5 cm，徑2-3 cm，紫紅色，無莖。

葉一枚，着生於假球莖先端，花後始長出，倒披針形，長12-18 cm，寬2-4 cm，紙質，先端銳尖，基部漸尖，皺折，脈5-7條，光滑，全緣。

花單生，極少數亦有2或3枚者，大，顯著，粉紅色，徑3-4 cm；花莖抽自於去年假球莖的先端，長5-6 cm，光滑；苞片狹披針形，長4-5 cm，先端銳尖；花梗連同子房長1-2.5 cm，萼片近似整齊，舌狀，長4.5-6 cm，寬1-1.5 cm，先端圓而銳尖，基部窄，脈5-7條；花瓣與萼片同形，但較小且較窄，長5-6 cm，寬6-8 mm；唇瓣白色而有黃褐色斑點，闊卵形，長5-6 cm，寬4-4.5 cm，先端圓且凹頭或淺2裂，基部呈緊縮狀，基部全緣，中部至先端則呈絲狀細裂；隆起線4條，長3-4 cm，

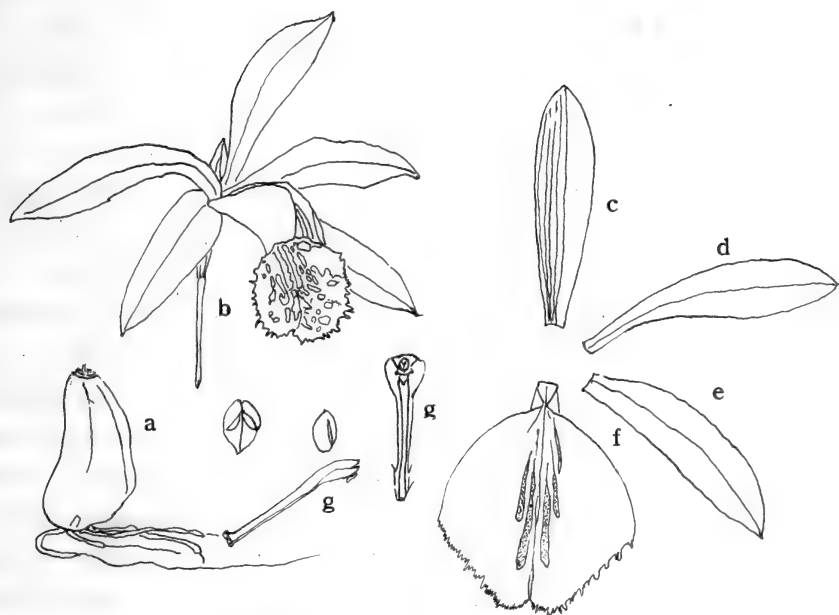


圖 (Fig) 107 山慈姑 (*Pleione bulbocoides*)

- a. 假球莖 (Pseudobulb) b. 花 (Flower)
 c. 後萼片 (Dorsal sepal) d. 花瓣 (Petal)
 e. 側萼片 (Lateral sepal) f. 唇瓣 (Lip)
 g. 蕊柱 (Column)

寬 1-1.5 mm; 蕊柱甚長, 長 3-3.5 cm, 寬 3-4 mm, 略彎曲。

中國, 台灣, 生長於叢林下或着生於多苔蘚類的岩石上, 多常於中海拔約 1000-2000 m 山地, 全島皆有, 較常見。

134. 台灣柄唇蘭 (*Podochilus taiwanianus* Ying)

Podochilus taiwanianus Ying, sp. nov.

Epiphyta; rhizomata brevato, radicibus multis longiusculis filiformibus vulgo simplicibus rigidiusculis, flexuosis puberulis; caulis simplicibus, basi approximativ conexus, 60-80 cm longis, teretibus, glabris.

Folia alterna, disticha, ovato-retunda vel elliptico-

oblonga, 2-2.5 cm longis, 1-1.3 cm lata, apice obtusa, emarginata, basi paullo contracta, supra viridia, subtus pallidiora utrinque glabra, chartaceae, cun vaginis articulata, vaginis tubiformis, 5-6 mm longis, arcte amplexicaule, imbricatis, persistentis.

Racemus lateralis, abbreviatus, 7-12 mm longus, glaber; bracteis minutis, lanceolato-triangulari, 1.5-2 mm longa, flavo-alba, apice acute, pedicellis 1-1.5 mm, longis, glabris.

Flores 4-7, albescentes, minoribus, 2-3 mm in diametro; sepala inaequalia, posticum liberum, ovatum, 1.8-2.2 mm longum, 1-1.2 mm latum, apice obtusum, basi contractum, utrinque glabrum; sepala lateralia oblonga vel ovato-oblonga, 2-2.2 mm longa, ca 1.5 mm lata, apice acutiuscula, basi versus dilatata, superne libera basi pediculi columnae adnata mentum breve latius 1 mm longum formantia; petala ovata, 1.8-2 mm longa, ca 1 mm lata, apice acute, basi paullo contracta; labellum ovatum vel oblongum, 1.5-1.8 mm longum, 1-1.2 mm latum, margine integra, utrinque obtusa, basi saccati, concavum; column brevissima 0.5 mm longa; pollinia 4.

Habit.: Pingtung Hsein, Nanjenshan, S.S. *Ying* 4692 Jan. 23 1976.

Epiphytes; rhizome short; roots many, elongate, filiform, simple, rigid, slightly pubescent; stem simple, usually several in a cluster, erect, 60-80 cm long, glabrous, green, usually enclosed by leaf-sheathes.

Leaves alternate, distichous, ovate-rounded or elliptic-oblong, 2-2.5 cm long, 1-1.3 cm wide, obtuse at apex, emarginate, slightly contracted at base, lustrous green surface, pale green beneath, glabrous on both sides, chartaceous, connected with sheathes with articulate; the sheathes tubular, 5-6 mm long, strongly amplexicaul, imbricate, persistent.

Flowers 4-7, white, small, 2-3 mm in diameter; racemose; scape very short, lateral, 7-12 mm long, produced from nearly each leaf-axile, glabrous; bracts minute, lanceolate-triangular, 1.5-2 mm long, acute at apex, yellowish white; pedicels with ovaries 1-1.5 mm long, glabrous, yellowish green. sepals unequal, the dorsal one free, ovate, 1.8-2.2 mm long, 1-1.2 mm wide, obtuse at apex, contracted at base, glabrous on both sides, the lateral ones oblong or ovate-oblong, 2-2.2 mm long, about 1.5 mm wide, acute at apex, slightly swollen at base, free upward, adnate with column at base, and forming a short about 1.5 mm long mentum; petals ovate, 1.8-2 mm long, about 1 mm wide, acute at apex, slightly contracted at base; lip ovate or oblong, 1.5-1.8 mm long, 1-1.2 mm wide, entire, obtuse on both ends, sac-like at base, concave; column short, about 0.5 mm long; pollinia 4.

Endemic, known from southern tip of the island, at the elevations 100-400 m, epiphytic on tree trunks, rather rare.

着生蘭，根莖短，根多數，甚長，線形，無支根，略有毛茸。莖單立無分枝，數莖叢生於一處，直立，長60-80 cm，光滑，綠色，常包被有葉鞘。

葉互生，呈兩列狀排列，卵狀圓形或橢圓狀長橢圓形，長2-2.5 cm，寬1-1.3 cm，先端鈍，凹頭，基部略呈緊縮狀，表面呈有光澤綠色，背面呈淡綠色，表裏兩面均光滑無毛，紙質，以關節與葉鞘相連；鞘略呈筒狀，長5-6 mm，基部抱莖，覆瓦狀排列，殘存。

花4-7枚，白色，較小，徑2-3 mm，總狀花序；花莖甚短，腋生，長7-12 mm，幾在每一葉腋均有花莖長出，光滑；苞片較小，披針狀三角形，長1.5-2 mm，光滑，黃白色；花梗連同子房長1-1.5 mm，光滑，黃白色；萼片不整齊，後萼片離生，卵形，長1.8-2.2 mm，寬1-1.2 mm，先端鈍，基部緊縮狀，表裏兩面皆光滑，側萼片長橢圓形或卵狀長橢圓形，長2-2.2 mm，寬約1.5 mm，先端銳尖，基部略膨大，上部離生，基部與蕊柱相連，並形成長約4.5 mm的穎。花瓣卵形，長1.8-2 mm，寬

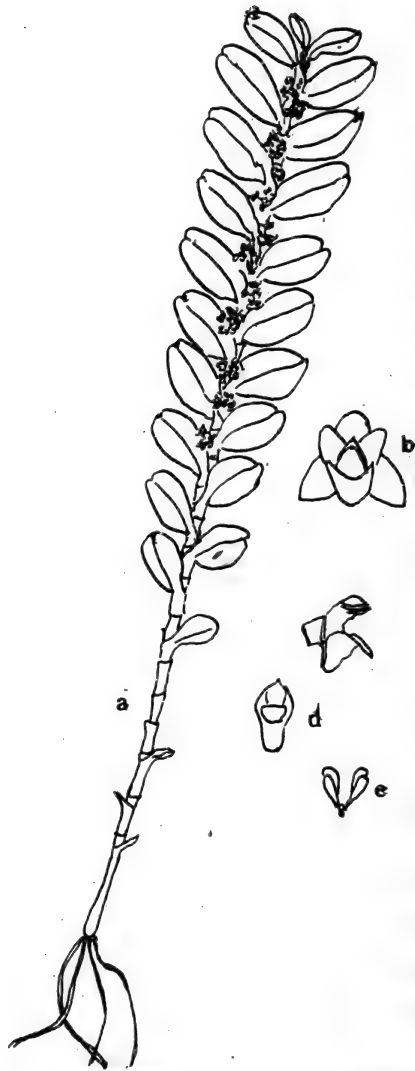


圖 (Fig) 108 台灣柄唇蘭 (*Podochilus taiwanicus*)

- a. 着花之植物體 (Flowering plant)
- b. 花 (Flower)
- c. 蕊柱及唇瓣 (Column and Lip)
- d. 蕊柱 (Column)
- e. 花粉塊 (Pollinarium)

約 1 mm，先端銳尖，基部略緊縮；唇瓣卵形或長橢圓形，長 1.5-1.8 mm，寬 1-1.2 mm，全緣，兩端均鈍，基部囊狀，凸出；蕊柱短，長約 0.5 mm，花粉塊 4 枚。

固有，生長於台灣恒春半島南端南仁山一帶海拔 100-400 m 的常綠森林中，着生於樹幹上，較為少見。

135. 台灣囊唇蘭 (*Saccolabium formosanum* Hayata)

Epiphytes; roots produced from stem, elongate, grayish white, 5-10 cm long, stem slender, prostrate or pendulous, 10-20 cm long, yellowish green; pseudobulbs absent.

Leaves distichous, remote, oblong, 2-2.5 cm long, 6-7 mm wide, obtuse and shortly apiculate at apex, obtuse and articulate at base, entire, somewhat fleshy, midrib impressed surface and elevated beneath; lateral veins inconspicuous sheathed; sheaths 4-5 mm long, persistent, enclosed the stem, green.

Flowers 1-2, yellow with red spotted, 1-1.5 cm in diameter; the scape axillary, produced from leaf-axile, 2-3 cm long, green, slender; bracts minute, scarious, 2-3 mm long, acute at apex; the pedicels with ovaries 9-11 mm long, pale yellow; sepals equal, free, patent, oblong, 4.5-5.5 mm long, about 3 mm wide, obtuse at apex, concave; petals somewhat like sepals in shape, but slightly narrower, rounded at apex, recurved on margin; lip connate with column, sessile, saccate; the sac 6-7 mm long, about 5.5 mm across in the mouth, red spotted within; the lamina patent, rounded-rectangular, 4-5 mm long, about 1 cm wide, truncate and emarginate at apex, slightly hirsute in the middle; column short, 1.5-1.8 mm long, about 3 mm wide; rostellum 3-dentated.

Endemic, known from medium altitudes of 800-1800 m throughout the island, epiphytic on tree trunks, rather common.

着生蘭，根抽自於莖上，甚長，灰白色，長 5-10 cm；莖細長，匍匐

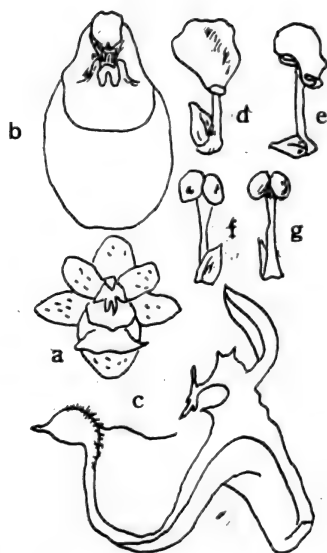


圖 (Fig) 109 台灣囊唇蘭 (*Saccolabium formosanum*)
 a. 花 (Flower)
 b. 唇瓣及蕊柱除去唇瓣片 (Lip and column lamina taken off)
 c. 唇瓣蕊柱及後萼片，縱切 (Lip, column and a dorsal sepal medially cut)
 d. e. f. g. 花粉塊在花藥內 (pollinarium in an anther)

或下垂，長 10-20 cm，黃綠色，無假球莖。

葉 2 列排列，疏生，長橢圓形，長 2-2.5 cm，寬 6-7 mm，先端鈍而有短尖突，基部鈍而有關節與葉鞘相連，全緣，略呈肉質，中肋於表面凹下，背面隆起，側脈不顯著，有鞘；鞘 4-5 mm，殘存，包被於莖上，綠色。

花 1-2 枚，黃色而有紅色斑點，徑 1-1.5 cm，花莖腋生，抽自於葉腋，長 2-3 cm，綠色，細長，苞片小，長 2-3 mm 先端銳尖；花梗連同子房長 9-11 mm，淡黃色；萼片整齊離生，顯著，長橢圓形，長 4.5-5.5 mm，寬約 3 mm，先端鈍，凸出；花瓣形狀與花萼相似，但略狹，先端圓

，邊緣反捲；唇瓣與蕊柱相連無柄，有囊，囊長6-7 mm，徑約5.5 mm，內面有紅色斑點，唇瓣片顯著，圓 四方形，長4-5 mm，寬約1 cm，先端截斷狀而凹入，中部略有毛茸，蕊 柱短，長1.5-1.8 mm，寬約3 mm；喙3齒。

固有，生長於全島中海拔約800-1800 m山地，着生於樹幹上，普遍。

136. 紅斑囊唇蘭 (*Saccolabium fuscopunctatum* Hayata)

Epiphytes; roots elongate, gray, 4-6 cm long; pseudo-bulb none; stem short, 1-3 mm long, scattered dark red spots.

Leaves distichous, narrowly oblong, 1-2 cm long, 3-4 mm wide, acute or obtuse, rounded to the sheaths at base, subsessile, coriaceous, smooth, scattered with dark red maculations all over, midrib raised on back; the sheaths imbricate, cylindrical, 5-6 mm long, somewhat oblique.

Flowers 2-4, rarely solitary, lightly yellow, with dark purple maculations within, 4-6 mm long, 5-7 mm across, racemose; the scape axillary, short, erect or pendulous, slender, glabrous; bracts narrowly oblong, minute, 1-1.5 mm long, membranous, obtuse at apex; the pedicels with ovaries 1-1.2 mm long, glabrous; sepals elliptic, 4-4.5 mm long, 2-3 mm wide, spreading, rounded at apex, truncate at base, glabrous; petals oblong or elliptic, 3.5-4 mm long, about 2.5 mm wide, obtuse at apex; lip somewhat adnate to the column at base, sac 5-6 mm long, scattered with dark red maculations, the lamina rounded, 2-2.5 mm across, shortly 2-lobed at apex, convex; column short, 1-1.5 mm long, 3 mm wide.

Endemic, epiphytic on the tree trunks in central parts of the island at the elevations of 900-1800 m, not common.

着生蘭，根甚長，灰色，長4-6 cm；無假球莖；莖短，長1-3 mm，散生有暗紅色斑點。

葉呈2列狀排列，狹長橢圓形，長1-2 cm，寬3-4 mm，先端銳尖或鈍，基部鈍而有葉鞘，近似無柄，革質，光滑，全體散生有暗紅色斑點，

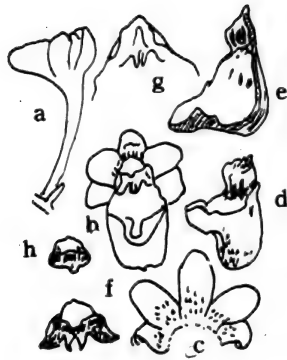


圖 (Fig) 110 紅斑囊唇蘭 (*Saccolabium fuscopunctatum*)
 a. 花芽 (Flowering bud) b. 花 (Flower)
 c. 萼片及花瓣 (Sepal and petal)
 d. 唇瓣及蕊柱 (Lip and Column)
 e. 唇瓣及蕊柱縱切 (the Same medially cut)
 f.g. 蕊柱先端可見喙及花藥 (Apical part of column showing rostellum and anther are seen)
 h. 藥蓋 (Operculum)

中肋隆起於背面；葉鞘覆瓦狀排列，圓筒狀，長5-6 mm，基部略歪。

花2-4枚，少數亦有一枚者，淡黃色，而內面有暗紅色斑點，長4-6 mm，徑5-7 mm，總狀花序；花莖腋生，短，直立或懸垂，細長，光滑；苞片狹長橢圓形，微小，長1-1.5 mm，膜質，先端鈍；花梗連同子房長1-1.2 mm，光滑；萼片橢圓形，長4-4.5 mm，寬2-3 mm，擴展，先端圓，基部截斷狀，光滑；花瓣長橢圓形或橢圓形，長3.5-4 mm，寬約2.5 mm，先端鈍；唇瓣基部與蕊柱略相連，有囊，囊長5-6 mm，散生有暗紅色斑點；唇瓣片圓形，徑2-2.5 mm，先端短2裂，凸出；蕊柱短，長1-1.5 mm，寬約3 mm。

固有，着生於樹幹上，多生長於台灣中部海拔約900-1800 m，不甚常見。

137. 日本囊唇蘭 (*Saccolabium japonicum* Makino)

Epiphytes; roots many, elongate, produced from middle

to base of stem, grayish; stem simple, 2-6 cm long, robust, usually enclosed by leaf-sheaths.

Leaves 5-15, alternate, distichous, falcate-oblongate, 3-8 cm long, 6-15 mm wide, obtuse or subacute at apex, narrower decurrent to sheaths at base, coriaceous, lustrous green surface, midrib impressed surface and elevated beneath, lateral veins inconspicuous.

Flowers 4-10, pale yellow, 1-1.2 cm in diameter, racemose, the scape axillary, produced from the axile of leaves, 2-4 cm long, erect or ascending; bracts deltoid, 1-2 mm long, acute at apex; the pedicels with ovaries 1-1.5 mm long, green, smooth; sepals equal, oblong or spathulate-oblong, 4-4.5 mm long, about 1.5 mm wide, sometimes with rose-purple spotted on the inside, obtuse at apex; petals oblong-spathulate, 3-3.5 mm long, 1-1.2 mm wide, obtuse at apex; lip with a relatively large sac, about 3 mm across at the mouth, 4 mm in depth, adnate with column at base; the lamina depressed deltoid, white scattered with yellowish purple spots, obscurely denticulate on margin; column short; pollinia 2, white, globose.

Capsules sessile, sometimes short-peduncled, narrowly oblong-cylindric, 1.5-2 cm long, ridged.

S. Japan and Lyukyu. Taiwan, known from lower altitudes of 500-1000 m throughout the island, not common.

着生蘭，根多數，甚長，抽自於莖的中部及基部的葉腋，灰色，莖長 2-6 cm，粗壯，常包被葉鞘，黃綠色。

葉 5-15 枚，互生，二列狀排列，鐮刀狀倒披針形，長 3-8 cm，寬 6-15 mm，先端鈍或近似銳尖，基部狹而延伸至葉鞘，革質，表面呈有光澤綠色，中肋於表面凹下背面隆起，側脈不顯著。

花 4-10 枚，淡黃色，徑 1-1.2 cm，總狀花序；花莖腋生，抽自於葉腋，直立或近似如此，長 2-4 cm；苞片三角形，長 1-2 mm，先端銳尖，花梗連同子房長 1-1.5 mm，綠色，平滑；萼片整齊，長橢圓形或舌狀長橢圓形，長 4-4.5 mm，寬約 1.5 mm，有時內面有紫紅斑點，先端鈍；

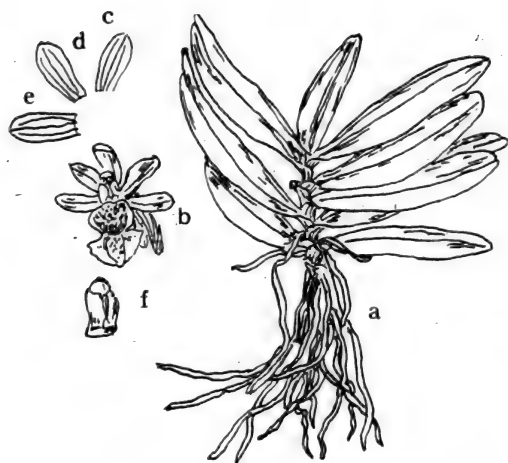


圖 (Fig) 111 日本囊唇蘭 (*Saccolabium japonicum*)
 a. 植物體 (Plant) b. 花 (Flower)
 c. 後萼片 (Dorsal sepal) d. 花瓣 (Petal)
 e. 側萼片 (Lateral sepal) f. 蕊柱 (Column)

花瓣長橢圓狀舌形，長 3-3.5 mm，寬 1-1.2 mm，先端鈍；唇瓣較大，基部有一較大的囊，囊口徑約 3 mm，深約 4 mm，基部與蕊柱相連；唇瓣片三角形，白色，散生有紫黃色斑點，邊緣有不明顯的鋸齒；蕊柱短，花粉塊 2 枚，白色，球形。

蒴果無柄或短柄，狹長橢圓狀圓柱形，長 1.5-2 cm，有稜線。

日本南部及琉球、台灣，生長於全島低海拔約 500-1000 m，惟產量較少。

138. 蘭嶼囊唇蘭 (*Saccolabium kotoense* (Yamamoto) Yamamoto)

Epiphytes; roots elongate, terete, 15-25 cm long, about 2 mm in diameter; stem short, 1-2 cm long, somewhat robust.

Leaves 2-5, alternate, distichous, patent, oblong-linear or oblong-lanceolate, to oblong-elliptic, 7-14 cm long, 2-3

cm wide, obtuse or retuse at apex, slightly contracted at base, entire, fleshy coriaceous, midrib impressed surface and slightly elevated beneath, lustrous green surface, slightly pale beneath.

Flowers numerous, rather small, 7-8 mm in diameter, racemose; scape axillary produced from leaf-axil, 10-15 cm long, 5-7 mm in diameter, robust, ascending or horizontal, glabrous, stricted; bracts widely triangular, 3-3.5 mm long, about 4 mm wide, acute at apex; the pedicels with ovaries 6-8 mm long, creamy white; sepals creamy white, the dorsal one elongate-elliptic or oblanceolate, 4-4.5 mm long, about 2.5 mm wide, rounded at apex, the lateral ones broadly ovate, subobliquely, 5-5.5 mm long, about 2.5 mm wide, obtuse at apex; petals spatulate, 3.5-4 mm long, 1.5-1.6 mm wide, obtuse at apex, subnarrowed at base; lip 3-lobed, creamy white with purplish red specks, saccate; the lateral lobes minute, erect, triangular or auriculate, 1-1.1 mm long, about 0.7 mm wide; the median lobe connate with sac, spatulate, 3-4 mm long, 2-2.5 mm wide obtuse at apex sac 6-7 mm long, about 1 mm in diameter; column erect, 0.7-1 mm long, more or less contracted at base.

Endemic, known from islet Lanyu only, epiphytic on tropical rain forests, rather common.

着生蘭，根甚長，圓柱形，長15-25 cm，徑約2 mm；莖短，長1-2 cm，粗壯。

葉二一五枚，互生，兩列狀排列，顯著，長橢圓狀線形或長橢圓狀披針形至長橢圓狀橢圓形，長7-14 cm，寬2-3 cm，先端鈍或微凹，基部略呈緊縮狀，全緣，肉質狀革質，中肋表面凹下，背面略凸出，表面為有光澤綠色，背面呈淡綠色。

花多數，較小，徑7-8 mm，總狀花序；花莖腋生，抽自於葉腋，長10-15 cm，徑5-7 mm，粗壯，水平生長或近似如此，光滑，有稜狀突起；苞片闊三角形，長3-3.5 mm，寬約4 mm，先端銳尖；花梗連同子房長6-8 mm，淡白色；萼片淡白色，後萼片長橢圓形或倒披針形，長4-4.5

mm，寬約2.5 mm，先端圓；側萼片橢圓形，基部略歪，長5-5.5 mm，寬約2.5 mm，先端鈍；花瓣舌形，長3.5-4 mm，寬1.5-1.6 mm，先端鈍，基部略狹；唇瓣3-裂，乳白色而有紫紅色斑點，有囊，側裂片微小，直立、三角形或耳形，長1-1.1 mm，寬0.7-0.8 mm，中唇片與囊先端相連，與囊連成一體，舌形，長3-4 mm，寬2-2.5 mm，先端鈍，囊長6-7 mm，徑約1 mm，蕊柱直立，長0.7-1 mm，基部多少呈緊縮狀。

固有，生長於蘭嶼島上的熱帶降雨林中，着生於樹幹上，較為常見。

139. 小花囊唇蘭 (*Saccolabium rupestris* (Fukuyama) Ying)

Epiphytes; rhizomes short; roots elongate, 4-7 cm long, 1-1.5 mm in diameter grayish, flexuous; stem slender, somewhat pendulous, 5-10 cm long, 1-1.5 mm in diameter, brownish red spots scattered, glabrous.

Leaves alternate, distichous, elliptic or elliptic-lanceolate, 9-12 mm long, 3.5-6 mm wide, acute, contracted at base, coriaceous, brownish red spots scattered on both sides, entire, midrib impressed surface, inconspicuous beneath.

Flowers 3-6, 6-8 mm in diameter, racemose; scape lateral, produced from leaf-sheath, 1.5-3 cm long, somewhat pendulous, red spots scattered; bracts minute, linear, 2-3 mm long, 0.2 mm wide; the pedicels with ovaries 5-7 mm long, glabrous; sepals green firstly and then pale yellow, red spots scattered, the dorsal one orbicular-elliptic, 5-5.5 mm long, about 3 mm wide, obtuse at apex, contracted at base, the lateral ones obovate-elliptic, 5-6 mm long, about 3 mm wide; petals green firstly and then pale yellow, red spots scattered, elliptic, 5 mm long, about 3 mm wide, rounded, contracted at base; lip saced at base, the lamina white, red spots scattered, and one green speck in the middle of lamina, widely semiorbicular, 3-4 mm long, 6-7 mm wide, truncate-rounded at apex, irregularly denticu-

lated or slightly crenulate on margin, callus in the medium and upward; the sac somewhat sour-like, complanate-hemisphere, red spots scattered, 5-6 mm long, 3-3.5 mm across, glabrous; column short, 2-2.5 mm long.

Endemic, known from northern part of the island at medium altitudes of 1200-2200 m on evergreen forests.

The flowers of this species is somewhat like that of *S. kotoense* Yamamoto but different from it by plant body and the number and color of flowers. also resemble *S. fuscopunctatum* Hayata in general appearance, but different from it by flower characters.

着生蘭、根莖短，根甚長，長4-7 cm，寬1-1.5 mm，灰色，彎曲；莖細長，略呈下垂，長5-10 cm，徑1-1.5 mm，散生有紅色斑點，光滑。

葉互生，兩列狀排列，橢圓形或橢圓狀披針形，長9-12 mm，寬3.5-6 mm，先端銳尖，基部緊縮，革質，表裏兩面均散生有鮮紅色斑點，全緣，中肋於表面凹下，背面葉脈不顯著。

花3-6枚，徑6-8 mm，總狀花序；花莖側生，抽自於葉腋，長1.5-3 cm，略呈下垂，散生有紅色斑點；苞片小，線形，長2-3 mm，寬0.2 mm；花梗連同子房長5-7 mm，光滑；萼片初呈綠色後變成淡黃色，散生有紅色斑點，後萼片圓狀橢圓形，長5-5.5 mm，寬約3 mm，先端鈍，基部緊縮；側萼片倒卵狀橢圓形，長5-6 mm，寬約3 mm；花瓣初為綠色，後轉變成淡黃色，有紅色斑點，橢圓形，長5 mm，寬3 mm，先端圓，基部緊縮；唇瓣基部有囊，唇瓣片白色，散生有紅色斑點，在唇瓣片的中間有一綠色的塊斑，寬半圓形，長3-4 mm，寬6-7 mm，先端截斷狀圓形，基部有不規則微鋸齒，中部及先端有硬粒；囊略呈距狀，狹球形，散生有紅色斑點，長5-6 mm，徑3-3.5 mm，光滑；蕊柱短，長2-2.5 mm。

固有，生長於台灣北部中海拔約1200-2200 m山地，常綠樹林內。

本種花跟 *S. kotoense* Yamamoto 很相似，但兩者的區別點為植物體大小不一，而且花的顏色及數目也不一樣；本種外形跟 *S. fuscopunctatum* Hayata 很相似，但花則完全不同。

140. 應氏囊唇蘭 (*Saccolabium shaoyaoii* Ying)

Saccolabium shaoyaoii Ying, sp. nov.

Epiphyta, caulibus prostratis ad nodos radicanibus foliosis, 10-15 cm longis; radicis gracilis, 4-7 cm longis.

Folia alterna, disticha oblonga vel oblongo-lanceolata, 2-2.5 cm longa 6-8 mm lata, carnosa, apice obtusa, brevi in petiolum 2-3 mm longum, cum vaginis articulatum deciduum contracta; vaginis 4-5 mm longis, persistentibus caulem obtegentibus.

Flores 2-3, subapertientes, 8-10 mm in diametro; scapi lateralis, breves, 2-2.5 cm longi, glabri, apice acutis pedicellis 4-5 mm longis, glabri; sepala aequalia, libera, patentia, oblonga, virido-flava vel albo-flava, cum 1 longitudinalina stricta, 6-7 mm longa, 3-4 mm lata, apice obtusa basi non contracta; petala oblongo-lanceolata, albo-flava, cum 1 longitudinalina stricta, 5-6 mm longa, 2.5-3 mm lata, apice obtusa; labellum albo-flavum, ad basin columnae sessile basi saccatum, saccis 5-7 mm longis, 4.5 mm in diametro, intus purpureo-rubrus punctatus; lamina patenti 5-6 mm longa, 9-12 mm lata, late triangulata apice truncate, supra medio callo rubro-purpureo-punctata; columna brevis, crassa, ca. 2.5 mm longa.

Habit: Ilan county: Taipingshan (太平山); leg. S.S. Ying 2165 (Typus, NTUF.) Sept. 30 1973.

The specific name dedicate to my elder brother Dr. Shao-yao Ying for his valuable helps in this course of study.



圖 (Fig) 112 應氏囊唇蘭 (*Saccolabium shaoyaoii*)

a. 花 (Flower)

着生蘭，莖匍匐或下垂，從節處長出根及葉來，長10-15 cm；根細長，長4-7 cm。

葉互生，兩列狀排列，長橢圓形或長橢圓狀披針形，長2-2.5 cm，寬6-8 mm，略呈肉質，先端鈍，基部有短柄，柄長2-3 mm，並以關節與葉鞘連接，葉鞘長4-5 mm，殘存。

花2-3枚，不十分顯著，徑8-10 mm，花莖側生，短，長2-2.5 cm，光滑；苞片小，披針狀三角形，長3-3.5 cm，先端銳尖；花梗長4-5 mm，光滑；萼片離生，顯著，長橢圓形，黃綠色或淡黃色，中間有一紅褐色縱的條紋，長6-7 mm，寬3-4 mm，先端鈍，基部不呈緊縮；花瓣長橢圓狀披針形，淡黃色，也有一紅褐色縱條紋，長5-6 mm，寬2.5-3 mm，先端鈍；唇瓣淡黃色，基部與蕊柱相連，有囊，囊長5-7 mm，徑4.5 mm，內面有紅褐色斑點；唇瓣片顯著，長5-6 mm，寬9-12 mm，瀾三角形，先端截斷狀，表面中間有紅褐色斑點；蕊柱短，厚，長約2.5 mm。

固有，生長於台灣北部森林內，生長高度約800-1400 m，較少。

141. 球花囊唇蘭 (*Saccolabium taiwanianum* Ying)

Saccolabium taiwanianum Ying, sp. nov.

Gastrochilus taiwanianus Ying, M.M.S.

Epiphyta, radices 10-30 cm longo, ca. 1 mm in sectionis diametro; caulibus prostratis vel pendulatis, teretis, 3-7 cm longis, 5-7 mm in diametro; vaginis foliorum instructis ad nodos radicanibus.

Folia 5-7 vel 10-14, alterna, disticha, oblonga vel oblongo-ovata, 5-15 cm longa, 1.8-2.2 cm lata, apice obtusa cum leviter bilobata vel emarginata, basi obtusa cum vaginis articulatum, contracta, margine integra vel undulata, supra virida subtus pallida crassa coracea supra 1-sulcata subtus plus minus convexa; vaginis 6-7 mm longis, persistentibus caulem obtegentibus.

Flora 6-10, apertientesm mediocribus, corymbi vel corymbo-racemi, 1.2-1.8 cm in diametro; scapi laterali, 3-5 cm longi, glabri, viridi; bracteis triangulatis, 1-1.5 mm

longis, membraneis, pallido virida, apice acuta; pedicellis cum ovariis 6-10 mm longi, glabri; sepala cum petala exteriore virida interiora flavo-virida vel flavo-alba, libera; sepala elliptico-oblongata vel oblongo-lanceolata, 8-10 mm longa, 3-4 mm latis, apice obtusa, plus minus crassa, 3-nervia; petala oblongo-lanceolata, 8-9 mm longa, 2.5-3.5 mm latis, apice obtusa; labellum basi as columnam adnatum plus minus cum alis columnae continuum saccatum; sacco 8-10 mm longo, 3-4 mm in diametro, albo cum intus rubro-punctato: lamina alba, 5-6 mm longa, 7-9 mm lata, margine fimbriata, semi-rotundata, medium pallo-flava cum rubro-punctata; columna brevi, 2-3 mm longa, pallido-flava, basi columna cum labellum adnata rubroascentia.

Habit: Taipei county: Urai, S.S. Ying 2130 (Typus) NTUF.).

The species is very near to *S. japonicum*, but it can be different from the latter by leaf shape and size and fimbriate margin of lip.

着生蘭，根甚長，長10-30 cm，徑約1 mm，灰白色，無假球莖；莖單生無分枝，懸垂或呈匍匐狀，圓柱形，長4-7 cm，徑5-7 mm，上有殘存的葉鞘，莖上節處有氣生根生出。

葉5-7枚，少數亦有呈10-14枚者，互生，兩列狀排列，長橢圓形或長橢圓狀卵形，長5-15 cm，寬1.8-2.2 cm，先端鈍且呈淺2裂或凹頭狀，基部鈍，以關節與葉鞘相連，緊縮狀，全緣或波狀緣，表面鮮綠色，背面淡綠色，厚革質，中肋表面凹入，背面凸出；鞘長6-7 mm，殘存於莖上。

花6-10枚，顯著，中型，繖房花序或總狀繖房花序，徑1.2-1.8 cm；花莖腋生，長3-5 cm，光滑，綠色；苞片三角形，長1-1.5 mm，膜質，淡綠色，先端銳尖，花梗連同子房長6-10 mm，光滑；萼片與花瓣外面呈綠色，內面黃綠色或黃白色，離生；萼片橢圓狀倒披針形或長橢圓狀披針形，長8-10 mm，寬3-4 mm，先端鈍，多少略肉質，脈3條；花瓣長橢圓狀披針形，長8-9 mm，寬2.5-3.5 mm，先端鈍；唇瓣基部與二柱相連且延伸而成囊狀；囊長8-10 mm，徑3-4 mm，白色，內面有

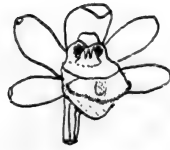


圖 (Fig) 113 台灣囊唇蘭 (*Saccolabium taiwanianum* ,
a. 花 (Flower)

紅色斑點，唇瓣片白色，長5-6 mm，寬7-9 mm，邊緣細絲狀裂，半圓形，中間有一黃斑塊，上有紅色斑點；蕊柱短，長2-3 mm，淡黃色，與囊交接處有一大紅斑。

固有，生長於全島低海拔山地約400-1000 m處，森林內。

142. 隔距蘭 (*Sarcanthus paniculatus* (Ker- Gawl)
Lindley)

Epiphytes; roots produced from the monopodial stem, grayish white, green at tip, sometimes branched, terete, elongate, 4-5 mm in diameter; pseudobulb absent; stem simple, erect or ascending at apex, 20-35 cm long, 5-8 mm across.

Leaves distichous, linear, 15-17 cm long, 1.5-2 cm wide, emarginate or obliquely 2-lobed at apex, narrowed to the sheaths at base, coriaceous, entire, midrib impressed surface and elevated beneath, lateral veins inconspicuous, lustrous green surface; the sheaths 2-3 cm long, amplexicaul.

Flowers numerous, small, 5-7 mm in diameter, scentless, panicled; scape axillary, produced from leaf-axils, erect or ascending, 20-30 cm long, glabrous; the peduncles 3-5, slender, 8-10 cm long; the bracts ovate-triangular, 2-2.5 mm long, 1-2 mm wide, acute at apex, somewhat recurved; the pedicels with ovaries 4-5 mm long, glabrous, yellowish green; sepals equal, oblong, spreading, yellow or lightly

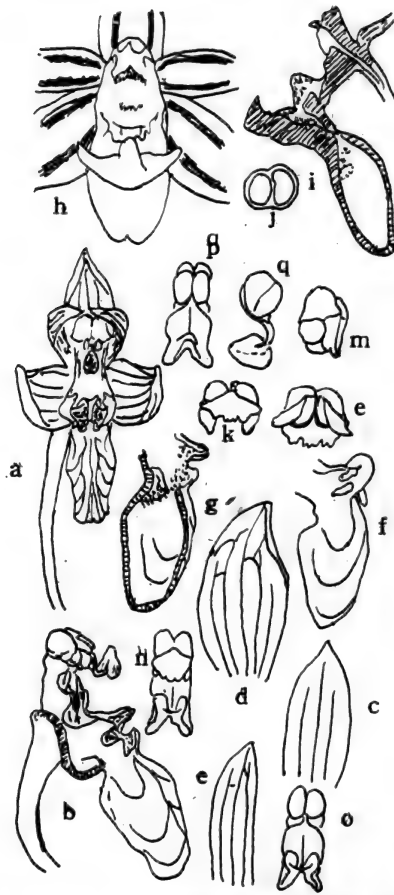


圖 (Fig) 114 隔距蘭 (*Sarcanthus paniculatus*)
 a. 花 (Flower) b. 除去萼片、花瓣及唇瓣片的花
 (Flower taken off sepal, petal and terminal
 lobe of lip) c. 後萼片 (Dorsal sepal)
 d. 側萼片 (Lateral sepal) e. 花瓣 (Petal)
 f. g. 唇瓣 (Lip) h. 唇瓣及蕊柱 (Lip and
 Column) i. 唇瓣及蕊柱的縱切 (Lip and
 Column in vertical section)
 j. 距的橫切 (Transverse section of spur)
 k. l. m. 藥蓋 (Operculum)
 n. o. p. q. 花粉塊 (Pollinarium)

yellow, 2 purple streaks within, 4-5 mm long, 2-3 mm wide, obtuse at apex; petals linear-oblong, 4-5 mm long, 1.5-2 mm wide, 2 purple streaks within; lip adnate to the column at base, 4-5 mm long, spurred, the lamina 3-lobed, the lateral lobes broadly triangular, 1-1.5 mm long, about 2 mm wide, erect, recurved on margin, obtuse at apex; the median lobe acutely triangular, 2.2-2.5 mm long, about 4 mm wide; the spur 4-5 mm long, 3-4 mm wide, obtuse at apex; column white, dark red at base.

China Taiwan known from the northern regions at the elevations of 400-1100 m in evergreen forests, especially common at Urai area.

着生蘭，根抽自於單軸莖上，灰白色，先端綠色，有時有分枝，甚長，徑4-5 mm；無假球莖；莖單立無分枝，直立或近似如此，長20-35 cm，徑5-8 mm。

葉呈兩列狀排列，線形，長15-17 cm，寬1.5-2 cm，先端凹或不規則淺2裂，基部窄而延伸至鞘，革質，全緣，中肋於表面凹下背面隆起，側脈不顯著，表面呈有光澤綠色；鞘長2-3 cm，抱莖。

花多數，較小，徑5-7 mm，無香味，圓錐花序；花莖腋生，抽自於葉腋，直立或呈拱形，長20-30 cm，光滑；小花軸3-5條，細長，長8-10 cm；苞片卵狀三角形，長2-3.5 mm，寬1-2 mm，先端銳尖，略反捲，花梗連同子房長4-5 mm，光滑，黃綠色；萼片整齊，長橢圓形，擴展，黃色或淡黃色，內面有2條暗紅色條紋，長4-5 mm，寬2-3 mm，先端鈍，花瓣線狀長橢圓形，長4-5 mm，寬1.5-2 mm，內面有2條暗紅色條紋；唇瓣基部與蕊柱連生，長4-5 mm，有距；唇瓣片3裂，側裂片闊三角形，長1-1.5 mm，寬約2 mm，直立、邊緣反捲，先端鈍；中裂片銳尖三角形，長2.2-2.5 mm，寬約4 mm；距長4-5 mm，寬3-4 mm，先端鈍；蕊柱白色，基部暗紅色。

中國，台灣，生長於台固有，生長於台灣北部海拔約400-1100 m山地，着生於常綠闊葉林的樹幹上，尤多常見於烏來地區。

143. 綫草 (*Spiranthes sinensis* (Person) Ames)

Terrestrials; roots thickened, 4-6 cm long, about 2 mm

in diameter; stemless.

Leaves 3-5, linear, linear-lanceolate or linear-oblongate, 5-12 cm long, 3-6 mm wide, thinly fleshy, glabrous, acute to acuminate, narrowed at the base, sessile or nearly so, midrib raised on back.

Flowers many, small, 3-5 mm in diameter, spicate, pink or white with pink tip, rarely pure white, slightly open; scape produced from the base, 10-20 cm long, erect, pubescent or nearly so; bracts ovate or narrowly oblong, 4-8 mm long, long-acuminate at apex, appressed to the ovaries; ovaries 4-5 mm long, erect, patently hairy; sepals lanceolate, 4-5 mm long, with a recurved top, obtuse at base; petals linear-lanceolate, erect, 3-4 mm long, 0.4-0.5 mm wide; lip sessile, obovate, white, slightly 3-lobed, base broad, convex, on the inner side on either side with a fleshy-appressed thickening against the column, median lobe elliptic, dentate-undulate, hairy on the inner side.

Capsules erect, ellipsoidal, 5-7 mm long; seeds enclosed by a membranous wing.

China, Siberia, Java, India, Afghanistan, Ceylon, Japan, Sumatra, Borneo, Australia, Tasmania and New Zealand. Taiwan, on grassy localities, wayside or rice fields at lower altitudes of 0-300 m throughout the island, not common.

Dr. Hara proposed a new variety *S. sinensis* var. *amoena* in Journ. Jap. Bot. 44:59, 1969, mainly based on the name of *Neottia amoena* M. Bieberst., no detail description about the variety; the reduction of *S. suishanensis* and *S. australis* var. *shuishanensis* was made by Dr. Ames in Merrill's Enum. Pl. Philip. Pl. (1924), nearly all the descriptions of the *S. sinensis* which I can get, white flowers were described.

地生蘭，根粗厚，長4-6 cm，徑約2 mm，無莖。

葉3-5枚，線形，線狀披針形或線狀倒披針形，長5-12 cm，寬3-6 mm



圖 (Fig) 115 綬草 (*Spiranthes sinensis*)

- a. 着花之植物體 (Flowering plant)
 b. 花 (Flower) c. 後萼片 (Dorsal sepal)
 d. 花瓣 (Petal) e. 側萼片 (Lateral sepal)
 f. 唇瓣 (Lip) g. 蕊柱 (Column)

，薄肉質，光滑，先端銳尖至漸尖，基部漸窄，無柄或近似無柄，中肋於背面隆起。

花多數，較小，徑3-5 mm，穗狀花序，粉紅色或白色帶有紅暈，亦有少數呈純白色，略開放；花莖抽自於基部，長10-20 cm，直立，有毛茸或近似如此；苞片卵形或狹長橢圓形，長4-8 mm，先端長漸尖形，向子房方向壓縮；子房長4-5 mm，直立，有毛茸；萼片披針形，長4-5 mm，先端反捲，基部鈍；花瓣線狀披針形，直立，長3-4 mm，寬0.4-0.5 mm；唇瓣無柄，倒卵形，白色，淺3裂，基部潤，凸出，在內面與蕊柱相對的兩側各有一肉質的附屬物，中裂片橢圓形，粗鋸齒狀波狀緣，內面有毛茸。

蒴果直立，橢圓形，長5-7 mm；種子包被有膜質的翅。

中國、西伯利亞、爪哇、印度、阿富汗、錫蘭、日本、蘇門答臘、婆羅州、澳洲及紐西蘭。台灣，生長於全島平地至300 m的山地，多見於草地、田野上，惟較為少見。

144. 扁根蜘蛛蘭 (*Taeniophyllum complanatum* Fukuyama)

Epiphytes; leafless; stemless, small, green, roots strongly flattened, elongate-linear, slightly flexuous, glabrous, 5-6 cm long, about 2 mm wide.

Flowers 3-10, small, glabrous, greenish, racemose; the scape produced from roots, suberect, slender, green, 1-4 cm long; bracts minute, persistent, triangular, 0.5-0.6 mm long, acute at apex, glabrous; the pedicels erect, 3-3.5 mm long, mostly glabrous, rarely scattered minute glandular piloses; sepals and petals connated from medium to base, free at apex, slightly reflexed; the dorsal sepal oblong-ovate, 2-2.5 mm long, about 0.5 mm wide, partly free, acute at apex; the lateral sepals and petals same as the dorsal ones in shape and size; lip with spur, about 3 mm long, oblong, entire, somewhat narrower upward; appendages nearly to upward, small, about 0.5 mm long, conical; spur subglobose, glabrous, about 1 mm long, glabrous; column very short. Capsules elongate, terete, about 1 cm long, 1.5 mm

in diameter.

Endemic, known from southern part of the island at the elevations of 300-800 m, on tree trunks, rather rare.



圖 (Fig) 116 扁根蜘蛛蘭 (*Taeniophyllum complanatum*)

a. 着花之植物體 (Flowering plant)

着生蘭，無葉，無莖，小，綠色，根扁平，長線形，略呈彎曲，光滑，長 5-6 cm，寬約 2 mm。

花 3-10 枚，光滑，綠色，總狀花序，花莖抽自於根叢，近似直立，細長，綠色，長 1-4 cm；苞片小，殘存，三角形，長 0.5-0.6 mm，先端銳尖，光滑；花梗直立，長 3-3.5 mm，大多數為光滑，少數散生有微小的腺毛，花萼片及花瓣中部及基部連生呈管狀，略先端分離，略反捲；後萼片長橢圓狀卵形，2-2.5 mm，寬約 0.5 mm，部份離生，先端銳尖，側萼片及花瓣與後萼片大小及形狀相同；唇瓣有距，長 3 mm，長橢圓形，全緣，先端略狹，附屬體在近先端處，小，約長 0.5 mm，圓錐形，距近似球形，光滑，長約 1 mm，光滑；蕊柱短。蒴果長圓柱形，長約 1 cm，徑 1.5 mm。

固有，生長於南部低海拔約 300-800 m 山地，着生樹幹上，較少。

145. 蜘蛛蘭 (*Taeniophyllum glandulosum* Blume)

Epiphytes; roots many, green, fascicled, 2-3 cm long, 1-1.3 mm in diameter, terete, somewhat compressed; stem absent or very short.

Leafless.

Flowers 1-3, minute, 1-2.2 mm long, about 1 mm across, pale yellow, racemose; scape produced from the fascicled roots, slender, 8-12 mm long, glabrous, green; bracts deltoid, membranous, acute at apex, 1-1.2 mm long, pale green; the pedicels with ovaries about 1 mm long, green, glabrous; sepals equal, lanceolate, not expanded, pale green, 1.5 - 2 mm long, acaminate at apex, adnate to the middle of the petal; petal, ovate-lanceolate, somewhat shorter than the sepals; lip cymbitorm, about 1.5 mm long, needle-like at apex which usually inflexed; spur saccate; column short, adnate to the base of the lip.

Capsules oblong-ovoid, ascending, about 5 mm long, 3-5-ridged.

Korea, Japan and Ryukyu. Taiwan, at medium altitudes of 700-1200 m throughout the island, not common.

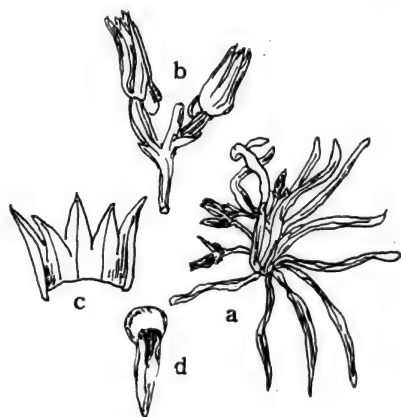


圖 (Fig) 117 蜘蛛蘭 (*Taeniophyllum glandulosum*)

a. 着花之植物體 (Flowering plant)

b. 花 (Flower)

c. 萼片及花瓣 (Sepals and petals)

d. 唇瓣 (Lip)

着生蘭，根甚多，綠色，叢生，長 2-3 cm，徑 1-1.3 mm，圓柱形

，略呈扁平；無莖或莖甚短。

無葉。

花1-3枚，小形，長1-2.2 mm，徑約1 mm，淡黃色；花莖抽自於叢叢生根中，細長，長8-12 mm，光滑，綠色；苞片三角形，膜質，先端銳尖，長1-1.2 mm，淡綠色；花梗連同子房長1 mm，綠色，光滑；萼片整齊，披針形，不十分開張，略呈筒狀，淡綠色，長1.5-2 mm，先端漸尖，中部以下與花瓣相連；花瓣卵狀披針形，較花萼略短；唇瓣舟形，長約1.5 mm，先端呈針狀，反捲；距囊狀；蕊柱短，與唇瓣基部相連。

蒴果長橢圓狀卵形，長約5 mm，3-5稜。

韓國、日本及琉球。台灣，生長於中海拔約700-1200 m的山地，着生於樹枝上，較少。

146. 黃花小杜鵑蘭 (*Tainia hualienia* Ying)

Tainia hualienia Ying, sp. nov.

Terrestris, erecta, humilis, 15-20 cm alta; rhizomate repente, abbreviato, radicibus gracilibus, filiformibus flexuosis brevissime pilosis; pseudobulbus ovoideus, virideus, glaberrimus, 1-1.5 cm longus, 6-8 mm in diametro, interdum basi squamatus, squamis pseudobulbum superantibus, scariosis nervosis.

Folia solitaria, erecta ex apice pseudobulbi orunda, petiolata; lamina linearia vel linearo-lanceolata, 6-8 cm longa, 1-1.5 cm lata, apice acuminata basi angusta et petiolum, gracilem, 2 cm longum, abeuntia, margine integra, chartacea, utrinque glabra, trinervata, nervis subtus prominente elevatis, inter nervos multivenulosa.

Scapus erectus, strictus, cum racemo 20-35 cm longus, glaberrimus, remote 2-3-vaginat, vaginis 1-1.5 cm longis alte vaginantibus tubiformibus apice breve acuminatis. Racemus florifer 3-4.5 cm longus, sublux floratus; bracteis minutis, linearis, 4-6 mm longis.

Flores flavi, subapertientes, glabri, pedicellis 1-1.5 cm longis, glabris; sepala lanceolata or linearo-lanceolata, 9-

12 mm longa, 3-4 mm lata, apice acuminata basi non contracta, membranacea, utrinque glabra, trinervata, lateralibus intermedio sed paulo brevioribus; petals linearia paulo obliqua 6-8 mm longa, ca 1 mm lata, apice acuta, basi contracta, utrinque glabra, membranacea, 3-5-nervata.

Labellum leviter recurvum explanato obovato-cuneatum, 1-1.5 cm longum, superiore trilobatum, inferiore unguiculo-atenuatum et cum pede columnae articulatum, utrinque glaberrimum lobo intermedio 3-3.5 mm longo, 6-7 mm lato, apice acuto, lobis lateralibus minoribus erectus apice obtusis; lamellis 3, paraelis aequalibus e basi usque apiceum decurrentibus. columna erecta, semiteres, 4-6 mm longa, basi ad pedem brevem producta.

Habitat.: Hualien county: Taipalung, alt. 600 m leg.: S.S. Ying 3509. Feb. 2-4 1975.

地生蘭，根莖匍匐，短；根細長，線形，有毛茸；假球莖卵形，綠色，光滑，長1-1.5 cm，徑6-8 mm，基部有鞘。

葉一枚，着生於假球莖的先端，直立，有柄。葉片線形或線狀披針形，長6-8 cm，寬1-1.5 cm，先端漸尖，基部狹而延伸至葉柄，全緣、紙質、表裏兩面均光滑，脈三條，葉脈於表面凹下，背面隆起。側脈多數。

花5-9枚，黃色或淡黃色，光滑，張開；花莖直立，有稜角，長20-35 cm，光滑，基部有疏生的鞘2-3枚，鞘長1-1.5 cm，先端短漸尖，基部筒狀；苞片小，線形，長4-6 mm；花梗連同子房長1-1.5 cm，光滑，綠色，萼片披針形或線狀披針形，長9-12 mm，寬3-4 mm，先端漸尖，膜質，光滑，脈3條，側萼片較短；花瓣線形，略歪，長6-8 mm，寬約1 mm，先端銳尖，基部緊縮，光滑，膜質，3-5條脈。唇瓣略向前反捲，倒卵狀楔形，長1-1.5 cm，先端三裂，下部呈漸尖爪狀，與蕊柱以關節相連，光滑，中裂片長3-3.5 mm，寬6-7 mm，先端銳尖，側裂片較小，直立，先端鈍；蕊柱直立，長4-6 mm。

固有，生長於本島東部低海拔約400-800 m 山地，森林下，較稀少。

147. 島田氏小杜鵑蘭 (*Tainia shimadai* Hayata)

Terrestrials; rhizomes short, creeping; pseudobulbs dark purple or black in color, elongate ovoid, broad at base, 2.5-3.5 cm long, 6-8 mm across, glabrous; sheathes solitary, covered with pseudobulb, membranous. sometimes deciduous.

Leaf solitary, terminal on pseudobulb, ascending or erect, lanceolate or elongate lanceolate, 15-30 cm long, 3-4.5 cm wide, acuminate, narrowed to the petioles at base, 3-nerved, raised on back, shining green surface, pale green beneath, entire, plicate; petioles 3-5 cm long, glabrous, dark purple, 4-ribs.

Flowers 10-20, rather large, 1-1.5 cm in diameter, scentless, racemose; scape produced from the base of pseudobulb, slender, erect, 35-45 cm long, glabrous, pale green with dark purple dots; sheaths two, at middle and base of scape, tubular, pale purple, membranous, 4-6 cm long, acute at apex; bracts lanceolate, 8-10 mm long, acute at apex, 1-keeled, membranous; pedicels with ovaries 1-1.3 cm long, glabrous, green, somewhat purple; sepals pale purple with 1-3-purple veins; the dorsal one lanceolate or linear-lanceolate, 1.5-1.8 cm long, 2.5-3 mm wide, acuminate, attenuate at base, the lateral ones obliquely falcate lanceolate, 1-1.2 cm long, sometimes forming a obscure mentum, 2-2.5 mm wide; petals lanceolate, 1-1.2 cm long, 2-2.5 mm wide, acute at apex, glabrous, same as the sepals in color, 3-nerved; lip yellow with purple red specks within, 1-1.5 cm long, 8-10 mm wide, 3-lobed, 2-3-keeled, short-clawed, the lateral lobes erect, somewhat recurved inside, glabrous, entire; median lobe truncate and maculate at apex, entire; column pale green, erect, 7-8 mm long, 2 mm wide.

Endemic, at lower to medium altitudes of 500-1800 m throughout the island, under evergreen forests, very common.



圖 (Fig) 118 鳥田氏小杜鵑蘭 (*Tainia shamadai*)
 a. 着花之植物體 (Flowering plant)
 b. 花 (Flower) c. 後萼片 (Dorsal sepal)
 d. 側萼片 (Lateral sepal) e. 花瓣 (Petal)
 f. 唇瓣 (Lip) g. 蕊柱 (Column)

地生蘭，根莖短，匍匐；假球莖暗紫色或黑色，長卵形，基部寬，長2.5-3.5 cm，徑6-8 mm，光滑；鞘單一，包覆假球莖，膜質，有時早落。

葉一枚，着生於假球莖先端，直立或近似如此，披針形或長披針形，長15-30 cm，寬3-4.5 cm，先端漸尖，基部窄而延伸至葉柄，脈3條，隆起於背面，表面呈有光澤綠色，背面淡綠色，全緣，繃褶，葉柄長3-5 cm，光滑，暗紫色，4稜。

花10-20，較大，徑1-1.5 cm，無香味，總狀花序；花莖抽自於假球莖基部，細長，直立，長35-45 cm，光滑，淡綠色而有暗紫色斑點；鞘二枚，位於花莖的中部及基部，筒狀，淡紫色，膜質，長4-6 cm，先端銳尖；苞片披針形，長8-10 mm，先端銳尖，脈1條，膜質；花梗連同子房長1-1.3 cm，光滑，綠色，帶有紫色；萼片淡紫色而帶有1-3條紫色的脈，後萼片披針形或線狀披針形，長1.5-1.8 cm，寬2.5-3 mm，先端漸尖，基部漸窄；側萼片歪鐮刀狀披針形，長1-1.2 cm，有時形成一不明顯的頰，寬2-2.5 mm；花瓣披針形，長1-1.2 cm，寬2-2.5 mm，先端銳尖，光滑，與萼片同色，脈3條；唇瓣黃色而有內面紫紅色斑點，長1-1.5 cm，寬8-10 mm，3裂，有2-3條隆起線，短爪，側裂片直立，內面略反捲，光滑，全緣，中裂片先端截斷狀，且有尖突，全緣；蕊柱淡綠色，直立，長7-8 mm，寬約2 mm。

固有，生長於全島低至中海拔山地約500-1800 m的山地，見於常綠林下，常見。

148. 台灣白蠟蘭 (*Thrixspermum formosanum* (Hayata) Schltr.)

Epiphytes; roots shorter, creeping, 4-6 cm long, 0.5-1 mm in diameter, gray; stem simple, short, 1-1.2 cm long, enclosed by the leaf-sheath.

Leaves distichous, alternate, lanceolate or linear-lanceolate, 4-4.5 cm long, 3-5 mm wide, fleshy, subcoriaceous, acute, attenuate to the sheaths at base, entire and slightly recurved on margin, midrib impressed surface, elevated beneath, lateral veins inconspicuous.

Flowers 2-4, white, small, 5-9 mm in diameter, race-

mose; scape axillary, produced from the axil of leaf, 4-5 cm long, horizontal or suberect, slender, glabrous, green; bracts minute, triangular, 2-2.2 mm long, acute at apex; the pedicels with ovaries 2-3 mm long, glabrous, green; sepals subequal, patent, free, the dorsal one oblong, 7-9 mm long, 3-3.5 mm wide, obtuse at apex, the lateral ones obovate, 6-8 mm long, 4-5 mm wide, obtuse at apex, shortly obliquely and adnate to the column at base; petals narrowly oblong, 6-7 mm long, about 2 mm wide, obtuse at apex; lip 3-lobed, white, red spots within, with a basal 4-6 mm long pouch, the lateral lobes erect, petaloid, rounded, 4-5 mm long, the median lobe minute or obsolete, hirsute within; column erect, 1.5-2 mm long.

Endemic, at lower and medium altitudes of 300-1500 m in evergreen forests in central and southern parts of the island, not common.

着生蘭，根短，匍匐，長4-6 cm，徑0.5-1 mm，灰色；莖單立無分枝，長1-1.2 cm，包被有葉鞘。

葉呈二列狀排列，互生，披針形或線狀披針形，長4-4.5 cm，寬3-5 mm，肉質或近似革質，先端銳尖，基部漸窄而延伸葉柄，邊緣無鋸齒且略呈反捲，中肋於表面凹下，而於背面隆起，側脈不顯著。

花2-4枚，白色，較小，徑5-9 mm，總狀花序；花莖腋生，抽自於葉腋，長4-5 cm，水平生長或近似直立、細長、光滑、綠色；苞片小，三角形，長2-2.2 mm，先端銳尖；花梗連同子房長2-3 mm，光滑，綠色；萼片近似整齊、顯著、離生、後萼片長橢圓形，長7-9 mm，寬3-3.5 mm，先端鈍；側萼片倒卵形，長6-8 mm，寬4-5 mm，先端鈍，基部略歪且與蕊柱相連；花瓣狹長橢圓形，長6-7 mm，寬約2 mm，先端鈍；唇瓣3裂、白色、內面有紅色斑點，基部有1長4-6 mm的囊，側裂片直立、花瓣狀，圓，長4-5 mm，中裂片小而不顯著，內面有毛茸；蕊柱直立，長1.5-2 mm。

固有，生長於台灣中部及南部中及低海拔山地約300-1500 m處，常見於常綠林內，較少。

149. 溪頭白蛾蘭 (*Thrixspermum saruwatarii* (Hayata)
Schltr.)

Epiphytes; roots elongate, terete, whitish gray, 20-35 cm long, 0.5-1 mm across; stem short, 1.5-2.5 cm long, usually enclosed by the leaf-sheaths, glabrous.

Leaves alternate, distichous, linear-lanceolate, fleshy, 4-5 cm long, 5-8 mm wide, obtuse or acute and emarginate at apex, attenuate at base; midrib raised on both sides; sheaths short, 3-4 mm long.

Flowers 2-6, white, racemose, scentless, medium-sized, 0.7-1.2 cm in diameter; scape axillary, green, pendulous, 3-6 cm long, glabrous; pedicels with ovaries 3-5 mm long; bracts ovate-lanceolate, 2-3 mm long, green, acute at apex; sepals unequal, the dorsal one oblong, 4-6 mm long, 2.5-3 mm wide, obtuse and maculated at apex, more or less contracted at base, the lateral ones oblique ovate-oblong, 6-8 mm long, 2.5-3.5 mm wide, obtuse, contracted at base; petals linear-lanceolate, 5-6 mm long, 1-2 mm wide, obtuse at apex; lip 3-lobed, reddish yellow within, with a basal 2-3 mm long pouch, the lateral lobes obliquely obovate, 3-4 mm long, about 2 mm wide, truncate-obtuse at apex, hairy without, glabrous within, minute gnawed on margin, the median lobe thick, triangular, 0.5-1 mm long; column short, 0.5-0.7 mm long.

Endemic, epiphytic on tree branches at medium altitudes of 700-1400 m in central part of the island, somewhat common.

着生蘭，根甚長，圓柱形，灰白色，長20-35 cm，徑0.5-1 mm；莖甚短，長1.5-2.5 cm，常包被有葉鞘，光滑。

葉互生，兩列狀排列，線狀披針形，肉質，長4-5 cm，寬5-8 mm，先端鈍或銳尖且略凹入，基部漸窄，中肋隆起於表裏兩面；鞘甚短，長3-4 mm。

花2-6枚，白色，總狀花序，無香味，中型，徑0.7-1.2 cm；花莖

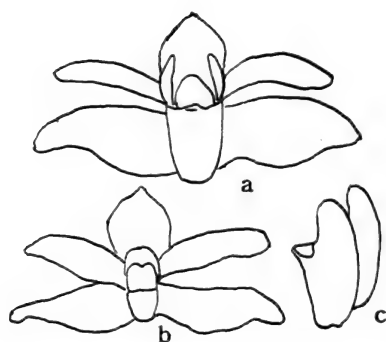


圖 (Fig) 119 溪頭白蛾蘭 (*Thrixspermum saruwatarii*)
 a. 花 (Flower)
 b. 除去唇瓣的花 (Flower lip taken off
 showing the foot of Column)
 c. 唇瓣 (Lip)

腋生，綠色，下垂，長 3-6 cm，光滑；花梗連同子房長 3-5 mm；苞片卵狀披針形，長 2-3 mm，綠色，先端銳尖；萼片不整齊，後萼片長橢圓形，長 4-6 mm，寬 2.5-3 mm，先端鈍而有尖突，基部多少呈緊縮狀，側萼片歪卵狀長橢圓形，長 6-8 mm，寬 2.5-3.5 mm，先端鈍，基部緊縮狀；花瓣線狀披針形，長 5-6 mm，寬 1-2 mm，先端鈍；唇瓣 3 裂，內面黃紅色，基部有一長 2-3 mm 的囊，側裂片歪倒卵形，長 3-4 mm，寬約 2 mm，先端截斷鈍狀，外面有毛茸，內面光滑，邊緣微鋸齒，中裂片厚，三角形，長 0.5-1 mm；蕊柱短，長 0.5-0.7 mm。

固有，生長於本島中部中海拔約 700-1400 m 的山地，着生於樹幹或樹枝上。

**150. 垂枝白蛾蘭 (*Thrixspermum subulatum* (Blume)
 Reich. f)**

Epiphytes; roots numerous, filiform, 4-10 cm long, grayish, branched; stem simple, pendulous, 30-60 cm long, compressed, enclosed by the leaf-sheathes, leafy from middle to upward.

Leaves numerous, alternate, distichous, oblong, 4.5-6 cm long, 2.5-3 cm wide, keeled, fleshy coriaceous, obtuse at apex, narrowed and connated the sheaths with articulate at base, yellowish green surface, pale green beneath; sheaths imbricate, 3-4 cm long, enclosed the stem, yellowish green.

Flowers few, white or pale yellow, rarely orange, rather small, 7-10 mm in diameter, racemose; the scape lateral, 3-4 cm long, glabrous; bracts minute, 5-6 mm long, acute at apex, deciduous; sepals free, the dorsal one oblong, 6-8 mm long, about 4.5 mm wide, obtuse at apex, the lateral ones ovate, 5-6 mm long, about 5 mm wide, obtuse and maculate at apex; petals broadly oblong, 7-8 mm long, obtuse at apex, contracted at base; lip subsaccate or strong convex, strongly sinus at apex, scattered with yellow spots, hirsute, 3-keeled inside.

Capsules linear-cylindric, 8-11 cm long, 1-1.5 mm across.

Thiland, Sumatra, Java, Bali, Kangean Isl. Amboina, Philippines. Taiwan, known from the southern scape of the island, usually hanging perpenicularly from the branches of the tall trees, rather rare.

着生蘭，根多數，線形，長4-10 cm，灰色或黃褐色，有分枝；莖單立無分枝，懸垂，長30-60 cm、扁平、包被有葉鞘，葉多抽自於莖的中部至先端。

葉互生，兩列狀排列，長橢圓形，長4.5-6 cm，寬2.5-3 cm，有龍骨突起，肉質狀革質，先端鈍，基部狹且以關節與葉鞘相連，表面黃綠色，背面淡綠色。

花少數，淡黃色或白色，少數亦有呈橘黃色，較小，徑7-10 mm，總狀花序；花莖腋生長3-4 cm，光滑；苞片較小，長5-6 mm，先端銳尖，早落；萼片離生；後萼片長橢圓形，長6-8 mm，寬約4.5 mm，先端鈍；側萼片卵形，長5-6 mm，寬約5 mm，先端鈍而有尖突；花瓣潤長橢圓形，長7-8 mm，先端鈍，基部緊縮；唇瓣近似囊狀或強凸出，先端微凹，散布有黃色斑點，有毛茸，內面有3條隆起線。

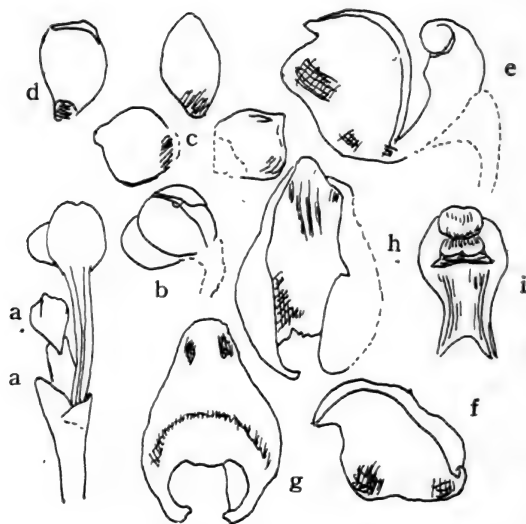


圖 (Fig) 120 垂枝白蛾蘭 (*Thrixspemum subulatum*)
 a. 花序 (Inflorescence) b. 花芽 (Flower-bud)
 c. 萼片 (Sepal) d. 花瓣 (Petal)
 e. 除去花萼及花瓣的花以示唇瓣及蕊柱 (Flower taken off sepals and petals to show lip and Column)
 f.g.h. 從各方面看唇瓣 (Lip seen from different sides)
 i. 蕊柱及足 (Column and foot)

蒴果線狀圓柱形，長 8-11 cm，徑 1-1.5 mm。

泰國、蘇門答臘、爪哇、巴里島、菲律賓。台灣，生長於本島南部恒春地區，多生長於高大樹幹的先端，懸垂於樹枝上，較為少見。

151. 香筒距蘭 (*Tipularia odorata* Fukuyama)

Terrestrials; pseudobulbs approximate, oblique ovoid or oblong-ovoid, 1-2-noded, 1-1.5 cm long, white, sometimes scattered with brownish spots; rhizomes short; roots few, slender.

Leaf solitary, ovate, 2-5 cm long, 1-2 cm wide, acute at apex, rounded at base, chartaceous, entire or slightly crisped on margin, glabrous, 3-nerved, green or yellowish green surface, slightly brownish beneath; the petioles 1-3 cm long, slender, slightly brownish, glabrous.

Flowers 8-12, small, fragrant, brown or dark brown, glabrous, 5-7 mm in diameter, racemose; scape produced from the base of pseudobulb, 10-15 cm long, slender, glabrous, slightly brownish; sheaths 1-2, basal; bracts minute, inconspicuous; the pedicels with ovaries 4-6 mm long, glabrous, greenish purple; the dorsal sepal linear-oblong or narrowed spatulate, 4-5 mm long, 2-3 mm wide, obtuse at apex, contracted at base, entire, glabrous, dark brown, green on margin, 3-nerved, the lateral ones similar to the dorsal one; petals lanceolate or lanceolate-oblong, 3.5-4.5 mm long, 1.5-2.5 mm wide, obtuse or acute at apex, contracted at base, entire, glabrous, 1-3-nerved; lip 3-lobed, long-spurred, 3-4 mm long, the lateral lobes short, rounded, somewhat irregularly denticulate on margin, the median lobe larger, linear, attenuate or acute at apex, the spur 8-11 mm long, glabrous, obtuse at apex; column erect, 3-4 mm long.

Endemic, known from high altitudes of 2700-3200 m in northern and central parts of the island, under the forests, rather rare.

地生蘭，假球莖緊密排列，歪卵形或長橢圓狀卵形，節1-2枚，長1-1.5 cm，白色，有時散生有褐色斑點；根莖短，根少數，細長。

葉1枚，卵形，長2-5 cm，寬1-2 cm，先端銳尖，基部圓，紙質，全緣或略呈波浪狀，光滑，脈3條，表面綠色或黃綠色，背面略呈紫羅蘭色；葉柄長1-3 cm，細長，略呈淡褐色，光滑。

花8-12枚，較小，有香味、褐色或暗褐色，徑5-7 mm，總狀花序；花莖抽自於假球莖基部，長10-15 cm，細長，光滑，淡褐色；瓣1-2枚，基生；苞片小，不顯著；花梗連同子房長4-6 mm，光滑，綠紫色；

後萼片線狀長橢圓形或狹舌形，長4-5 mm，寬2-3 mm，先端鈍，基部緊縮、全緣，光滑，暗褐色，邊緣帶有綠色，脈3條；側萼片與後萼片相似；花瓣披針形或披針狀長橢圓形，長3.5-4.5 mm，寬1.5-2.5 mm，先端鈍或銳尖，基部緊縮，全緣，光滑，脈1-3條；唇瓣3裂，長距，長3-4 mm，側裂片短，圓，邊緣呈不規則鋸齒，中裂片大，線形，先端漸尖或銳尖，距長8-11 mm，光滑，先端鈍；蕊柱直立，長3-4 mm。

固有，生長於北部及中部的高海拔山地約2700-3200 m處，常見於森林下，較少。

152. 毛舌蘭 (*Trichoglottis ionosma* (Linlley) J.J. Smith)

Epiphytes; roots elongate, 30-40 cm long; stem robust, 30-50 cm long, erect, cylindric, erect or ascending, usually enclosed by the leaf-sheaths; pseudobulb absent.

Leaves alternate, distichous, linear or linear-lanceolate, 10-20 cm long, 2-3 cm wide, coriaceous, lustrous green surface, yellowish green beneath, obtuse and shallowly 2-lobed at apex, obtuse at base, midrib elevated beneath, lateral veins inconspicuous; sheaths 1-1.5 cm long.

Flowers 10-20, large, showy, light yellow, with brownish red spots within, racemose, sometimes rarely paniculate; scape axillary, produced from the leaf-axils, elongate, 40-60 cm long; sepals free, the dorsal one oblong or obovate-oblong, 1.5-2 cm long, 7-8 mm wide, obtuse and emarginate at apex; the lateral ones obovate, 2-2.2 cm long, 8-10 mm wide; petals narrowly ovate, 1.5-2 cm long, 5-7 mm wide, obtuse at apex; lip white with red spots, 3-lobed, adnate to the column at base, shortly spurred, the median lobe ligulate, cymbiform, the lateral lobes triangular, short; column about 5 mm long.

The Philippines and Lyukyu. Taiwan, known from the northern and southern parts of the island, at the elevations 500-900 m, on tree crown, rather common.

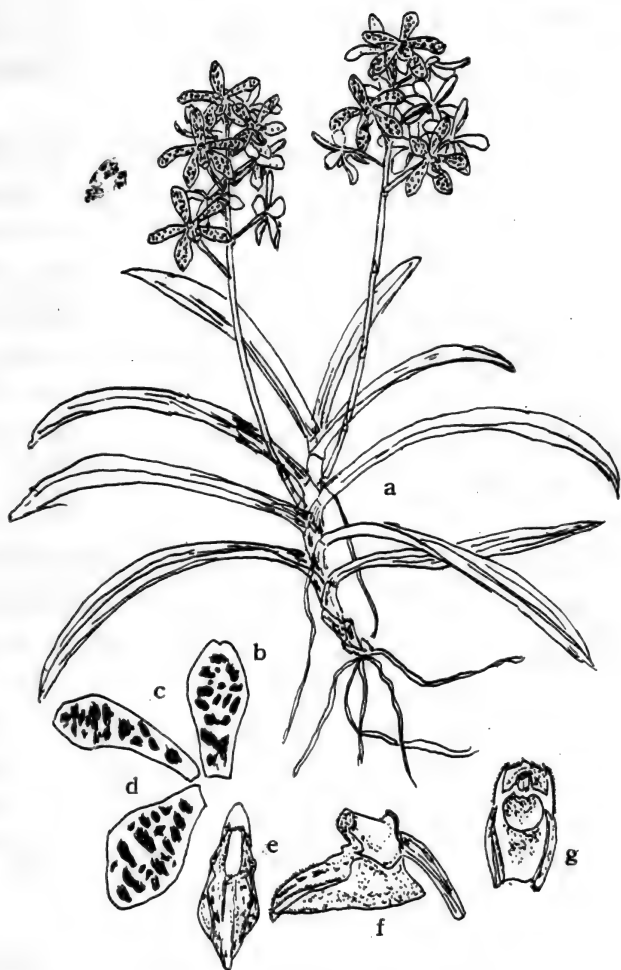


圖 (Fig) 121 毛舌蘭 (*Trichoglottis ionosma*)
 a. 着花之植物體 (Flowering plant)
 b. 後萼片 (Dorsal sepal) c. 花瓣 (Petal)
 d. 側萼片 (Lateral sepal) e. 唇瓣 (Lip)
 f. 蕊柱及唇瓣 (Column and Lip)
 g. 蕊柱 (Column)

着生蘭、根甚長，長 30-40 cm；莖粗壯，長 30-50 cm，直立，圓柱形，常包被有葉鞘，無假球莖。

葉互生，二列狀排列，線形或線狀披針形，長 10-20 cm，寬 2-3 cm，革質，表面呈有光澤綠色，背面黃綠色，先端鈍或淺 2 裂，基部鈍，中肋於背面隆起，側脈不顯著，鞘長 1-1.5 cm。

花 10-20，大，艷麗，淡黃色，內面具有紅褐色斑點，總狀花序，有時亦有少數呈圓錐花序者；花莖腋生，抽自於葉腋，甚長，長 40-60 cm，萼片離生，後萼片長橢圓形或倒卵狀長橢圓形，長 1.5-2 cm，寬 7-8 mm，先端鈍且略呈凹頭，側萼片倒卵形，長 2-2.2 cm，寬 8-10 mm；花瓣窄卵形，長 1.5-2 cm，寬 5-7 mm，先端鈍；唇瓣白色而有紅色斑點，3 裂，基部與蕊柱相連，有短距、中裂片舌形、舟形、側裂片三角形，短；蕊柱長約 5 mm。

菲律賓及琉球。台灣，生長於北部及南部海拔約 500-900 m 的山地，多着生於樹冠層，較為常見。

153. 穗花毛舌蘭 (*Trichoglottis rosea* (Lindley) Ames)

Epiphytes; roots elongate, gray or slightly brown; stem simple, clustered, pendulous, 30-50 cm long, slender, leafy; pseudobulb absent; sheaths caducous, membranous.

Leaves distichous, sessile, narrowly lanceolate or ligulate, 7-9 cm long, 1-1.5 cm wide, acuminate or acute at apex, contracted at base, articulate, coriaceous, dark green surface, sometimes tinged with brown when young, slightly reflexed on margin; sheaths persistent, about 1.5 cm long.

Flowers numerous, produced all along the stem, 1.4-1.6 cm in diameter, axillary, long-lived, racemose; the scape produced from leaf-axile, elongate, bracts triangular, about 2 mm long; sepals white or pale yellow, free, subequal, the dorsal one narrowly oblong-spathulate, 8-10 mm long, 3-3.5 mm wide, obtuse at apex, the lateral ones somewhat oblique, 8-10 mm long, 4-5 mm wide, obtuse at apex, slightly contracted at base; petals narrowly spathulate, 8-9 mm long, about 3 mm wide, obtuse, attenuate at base; lip

white, tinged with red, 4-5 mm long, about 2.5 mm wide, saccate at base, 3-lobed, the lateral lobes minute, obtuse at apex, denticulate, about 2 mm long, the median lobe widely rounded, 2.5-3 mm long, about 3.5 mm wide, emarginate, shortly obtuse and mucronate at apex; column short, about 2.5 mm long.

The Philippines. Taiwan, known from the southern part of the island, at the elevations of 200-600 m, epiphytic on the tree trunks, somewhat common.

着生蘭，根甚長，灰色或淡褐色；莖單生，叢生，下垂，長30-50 cm，細長，有葉，無假球莖，鞘早落，膜質。

葉兩列狀排列，無柄，狹披針形或舌形，長7-9 cm，寬1-1.5 cm，先端漸尖或銳尖，基部緊縮狀，有關節，革質，表面暗綠色，有時在幼時帶有褐色，邊緣略反捲，鞘殘存，長約1.5 cm。

花多數，全莖上均有生長，徑1.4-1.6 cm，腋生，花期甚長，總狀花序；花莖抽自於葉腋，甚長，長15-20 cm；苞片三角形，長約2 mm；萼片白色或淡黃色，離生，近似整齊，後萼片狹長橢圓狀舌形，長8-10 mm，寬3-3.5 mm，先端鈍；側萼片略歪，長8-10 mm，寬4-5 mm，先端鈍，基部略緊縮；花瓣狹舌形，長8-9 mm，寬約3 mm，先端鈍，基部漸狹。唇瓣白色，帶有紅暈，長4-5 mm，寬約2.5 mm，基部呈囊狀，3裂，側裂片小，先端鈍，有鋸齒，長約2 mm，中裂片橢圓形，長2.5-3 mm，寬約3.5 mm，凹頭，先端短鈍而有尖突；蕊柱短，長約2.5 mm。

菲律賓。台灣、生長於南部低海拔約200-600 m處，着生於樹幹上，較為常見。

154. 竹莖蘭 (*Tropidia angulata* Blume)

Terrestrials; rhizomes elongate; roots slender, sometimes branched, with a small globose-like tubers at tip; stem simple, erect, 5-15 cm long, stiff, green, glabrous; sheaths 2-3, membranous.

Leaves 2-3, alternate, sometimes nearly to subopposite, oblong-lanceolate or ovate-lanceolate, thickened chartaceous, 7-9 cm long, 3-5 cm wide, glabrous plicate, acuminate

and shortly aristate at apex, rounded or subcordate at base, entire, 5-7-nerved raised beneath, subsessile or short petiolated; the petioles 5-12 mm long, usually enclosed by the sheaths.

Flowers 10-18, small, 4-6 mm in diameter, not widely opened, creamy white, spicate; scape terminal, 5-8 cm long, green, glabrous, erect; bracts lanceolate, 5-8 mm long, acuminate at apex, glabrous; the pedicels with ovaries 4-6 mm long, glabrous; sepals subequal, the dorsal one lanceolate, 5-7 mm long, about 2 mm wide, acuminate at apex, glabrous, the lateral ones adnate each other from the base to middle and forming a cymbiform chin; petals oblique lanceolate, shorter than the sepals; lip ovate-lanceolate, 5-7 mm long, erect, glabrous, spurred, the spur 2-3 mm long, obtuse at apex; column 2-2.5 mm long, pollinia linear-lanceolate, about 2 mm long.

Sikkim, Assam, Burma, India, Thailand, Malaya, Java, Philippines, Ryukyu and south Japan. Taiwan, known from lower altitudes of 200-800 m throughout the island under the forest.

地生蘭，根莖甚長；根細長，有時具有分枝，先端具有球狀的小塊根；莖單立，無分枝，直立，長5-15 cm，硬，綠色，光滑；鞘2-3枚，膜質。

葉2-3枚，互生，有時生長得近似對生，長橢圓狀披針形或卵狀披針形，厚或粗紙質，長7-9 cm，寬3-5 cm，光滑，有皺褶，先端漸尖且呈短尖突，基部圓或近似呈心形，全緣，脈5-7條隆起於背面，近似無柄或僅具短柄，葉柄長5-12 mm，常包被於葉鞘中。

花10-18枚，小，徑4-6 mm，不十分張開，乳白色，穗狀花序；花莖頂生，長5-8 cm，綠色，光滑，直立；苞片披針形，長5-8 mm，先端漸尖，光滑；花梗連同子房長4-6 mm，光滑；萼片近似整齊，後萼片披針形，長5-7 mm，寬約2 mm，先端漸尖，光滑，側萼片基部至中部相連合而形成一舟狀管狀物；花瓣歪披針形，較萼片為短；唇瓣卵狀披針形，長5-7 mm，直立，光滑，有距，距長2-3 mm，先端鈍，蕊柱長2-



圖 (Fig) 122 竹莖蘭 (*Tropidia angulata*)

- a. 着花之植物體 (Flowering plant)
 b. 花 (Flower) c. 後萼片 (Dorsal sepal)
 d. 側萼片 2 枚 (Two lateral sepal)
 e. 花瓣 (Petal) f. 唇瓣 (Lip)
 g. 蕊柱 (Column)

2.5 mm ; 花粉塊線狀披針形，長約 2 mm 。

錫金、阿薩姆、緬甸、印度、泰國、印尼、菲律賓、琉球及日本南部。台灣，生長於全島低海拔山地約 200-800 m 處，多見於常綠林下。

155. 台灣香草蘭 (*Vanilla griffithii* var. *formosana* Ito.)

Terrestrials; stem elongate, 1 m or more long, usually climbing other plants like a climber, glabrous, terete, green, 5-6 mm in diameter.

Leaves alternate, oblong or oblong-elliptic, 15-20 cm long, 5-7 cm wide, acuminate or acute at apex, obtuse or rounded and contracted at base, coriaceous, somewhat fleshy, entire, shining green surface, pale green beneath, glabrous, midrib raised on both surfaces, lateral veins inconspicuous; the petioles 1-1.5 cm long, groove, glabrous.

Flowers 2, rarely one or 3, relatively larger, 3-3.5 cm in diameter, racemose; scape axillary, produced from upward leaf-axile, 2-3 cm long; the pedicels with ovaries 2.5-3 cm long, glabrous, green; bracts oblong-triangular, 1-1.5 cm long, membranous, acute or obtuse at apex; sepals and petals pale green, free, spreading, the sepals oblanceolate, 3.5-4 cm long, about 1 cm wide, abruptly acute or obtuse at apex, attenuate at base, glabrous, the lateral ones somewhat narrower than the dorsal, oblique at base; petals linear-oblanceolate, 3.5-4 cm long, 5-8 mm wide, acute at apex, gradually attenuate at base; lip brownish yellow, tubular, jointed with column at base, 3-lobed, 3-3.5 cm long, 4-4.5 cm wide, the lateral lobes broad, rounded, overlapping and enfolding the apex of the column; the median lobe triangular to rounded, the edge thin and fine frilled; column white, 2.5-3 cm long, rostellum square. Fruits cylindrical, 7-9 cm long, about 1 cm thickened, smooth, more or less curved.

The species in Malaya, Borneo and Sumatra; the variety

endemic to Taiwan, known from lower altitudes of 200-700 m under the forests or along river-side, rather co-



圖 (Fig) 123 台灣香草蘭 (*Vanilla griffithii* var. *formosana*)
a. 植物體 (The plant) b. 後萼片 (Dorsal sepal)

c. 側萼片 (Lateral sepal) d. 花瓣 (Petal)

e. f. g. 唇瓣 (Lip)

mmom.

The variety differ from typical phase by less flowers (2-4-flowered) and flower color.

地生蘭，莖甚長，長1 m或更長，常攀援其他植物而呈藤本狀，光滑，圓柱形，綠色，徑5-6 mm。

葉互生，長橢圓形或長橢圓狀橢圓形，長15-20 cm，寬5-7 cm，先端漸尖或銳尖，基部鈍或圓且呈緊縮狀，革質或略呈肉質，全緣，表面呈有光澤綠色，背面淡綠色，光滑，中肋於兩面均隆起，側脈不顯著；葉柄長1-1.5 cm，有溝紋，光滑。

花2枚，少數亦有1枚或3枚者，較大，徑3-3.5 cm，總狀花序；花莖腋生，抽自於莖上部的葉腋，長2-3 cm；花梗連同子房長2.5-3 cm，光滑，綠色；苞片長橢圓狀三角形，長1-1.5 cm，膜質，先端銳尖或鈍；萼片及花瓣呈淡綠色，離生，擴展，萼片倒披針形，長3.5-4 cm，寬約1 cm，先端突銳尖或鈍，基部漸窄，光滑；側萼片較狹，基部歪；花瓣線狀倒披針形，長3.5-4 cm，寬5-8 mm，先端銳尖，基部漸狹；唇瓣黃褐色，與蕊柱中部相連合而呈管狀，3裂，長3-3.5 cm，寬4-4.5 cm，側裂片寬，圓，將蕊柱先端包住，中裂片三角形至圓形，邊緣薄且波狀；蕊柱白色，長2.5-3 cm，喙四方形；蒴果圓柱形，長7-9 cm，寬1 cm，光滑，略彎曲。

種見於馬來西亞、婆羅洲及蘇門答臘，變種為台灣固有，生長於低海拔200-700 m的山地，生長於森林下或沿溪岸生長。

變種與種的區別點在於花少數2-4枚及花的顏色不同。

156. 台灣二尾蘭 (*Vrydagzynea formosana* Hayata)

Terrestrials; roots elongate; stem simple, erect or ascending from a creeping base, terete, including the scape 8-12 cm long, glabrous in the lower part.

Leaves 2-4, alternate, basal, oblong or ovate-oblong, 2.5-3.5 cm long, 1.2-1.6 cm wide, acute or acuminate at apex, obtuse or rounded at base, chartaceous, entire or slightly wavy on margin, grayish green surface, pale green beneath, midrib impressed surface and elevated beneath; petioles with sheaths about 1 cm long, glabrous.

Flowers 7-10, yellowish purple, rather small not widely opened, racemose; scape terminal, 7-10 cm long, whitish hairy; bracts ovate-lanceolate, 3-5 mm long, acute at apex, contracted at base, hairy without and glabrous within, ciliate on margin; the pedicles with ovaries 5-7 mm long, about 1 mm across, hirsute; sepals linear-lanceolate, 5-6 mm long, about 2.5 mm wide, obtuse and slightly swelled at apex, contracted at base, the dorsal one with petals forming a hood, the lateral ones strongly oblique at base; petals ovate-lanceolate, 4.5-5 mm long, about 2 mm wide, attenuate at apex, contracted at base, 1-nerved; lip oblong, spurred, erect, 4-5 mm long, about 2 mm wide, obtuse at apex, spur cylindrical, 2-3 mm long, about 1 mm across, pale green, glabrous; column short, about 1.5 mm long; rostellum triangular, about 1.5 mm long.

Endemic, known from lower to medium altitudes of 300-800 m in northern part of the island only, under the forests, rather rare.

地生蘭，根甚長，莖單立無分枝，直立或起自於匍匐的基部，圓柱形，連同花莖長8-12 cm，下部光滑。

葉2-4枚，互生，基生，長橢圓形或卵狀長橢圓形，長2.5-3.5 cm，寬1.2-1.6 cm，先端銳尖或漸尖，基部鈍或圓，紙質，全緣或略呈波狀緣，表面灰綠色，背面淡綠色，中肋於表面凹下而背面隆起；葉柄連同鞘長約1 cm，光滑。

花7-10枚，黃紫色，較小，不十分開張，總狀花序；花莖頂生，長7-10 cm，具有白色毛茸；苞狀卵狀披針形，長3-5 mm，先端銳尖，基部緊縮狀，外面有毛茸，內面光滑，邊緣有毛茸；花梗連同子房長5-7 mm，徑約1 mm，有毛茸；萼片線狀披針形，長5-6 mm，寬約2.5 mm，先端鈍而略膨大，基部緊縮狀，後萼片與花瓣形成花兜，側萼片基部甚歪；花瓣卵狀披針形，長4.5-5 mm，寬約2 mm，先端漸尖，基部緊縮，脈1條，唇瓣長橢圓形，有距，直立，長4-5 mm，寬約2 mm，先端鈍，距圓柱形，長2-3 mm，徑約1 mm，淡綠色，光滑；蕊柱短，長約1.5 mm，喙三角形，長約1.5 mm。

固有，生長於北部低至中海拔約 300-800 m 山地，常見於森林下，較爲少見。

157. 恒春線柱蘭 (*Zeuxine hengchuanense* Ying)

Zeuxine hengchuanense Ying, sp. nov.

Terrestris; caulis, 8-15 cm altus, rectus, carnosus usque glaber et pallide suffuscus.

Folia 4-5, oblonga vel oblong-ovata, 4-6 cm longa, 2-3 cm lata, apice acuminata, basi obtusa cum leviter obliqua, integra, chartacea, 3-nervata; petiolis 1-1.2 cm longis, ca 3 mm latis; vaginis 5-8 mm longis, basi amplexicaulis, glabris.

Flores 5-8 in apice scapi subdense spicati, 6-7 mm in diametri; scapus gracillimus elongatus rectus 15-20 cm longus, hirsutus, basi 2-3 squamatus; squamis leviter suffuscus, 8-10 mm longis, apice acuta, basi amplexicauli; bracteis lanceolatis, leviter concavatis, 6-9 mm longis, 3-4 mm latis, apice acuta, membranaceis; pedicellis cum ovariis 6-7 mm longi, viridi, glabri, cum 2 albi stricti; sepalum posticum ovatum, concavum, leviter leteum, 4.5-5.5 mm longum, 2.5-3.5 mm latum, apice acutum, cum petal lateralibus galaeformans, sed ad spicem 3-lobatum; sepala laterala lanceolata vel oblonga, 6-7 mm longa, 2-3 mm lata, apice obtusa; petala non nihil cuneatoidea, alba, 4-6 mm longa, 2.5-3.5 mm lata; labellum 7-8 mm longum, 2-2.5 mm latum, basi gibboso-saccatum, unguatum; unguula 3-4 mm longa, apice 2-loba; lobis rotundis, 3.5-4.5 mm longis, 2-2.5 mm latis, integra, basi 2 flavi maculi, basi cum apice rotundum; columna 3-4 mm longa.

Habit.: Pingtung Hsien, Hungchuan, Nan-jen shan (南仁山), leg. S.S. Ying s.r. Jan. 24, 1976.

This species is characterized by the lip 2-lobed at apex, the lobes round, entire not toothed.

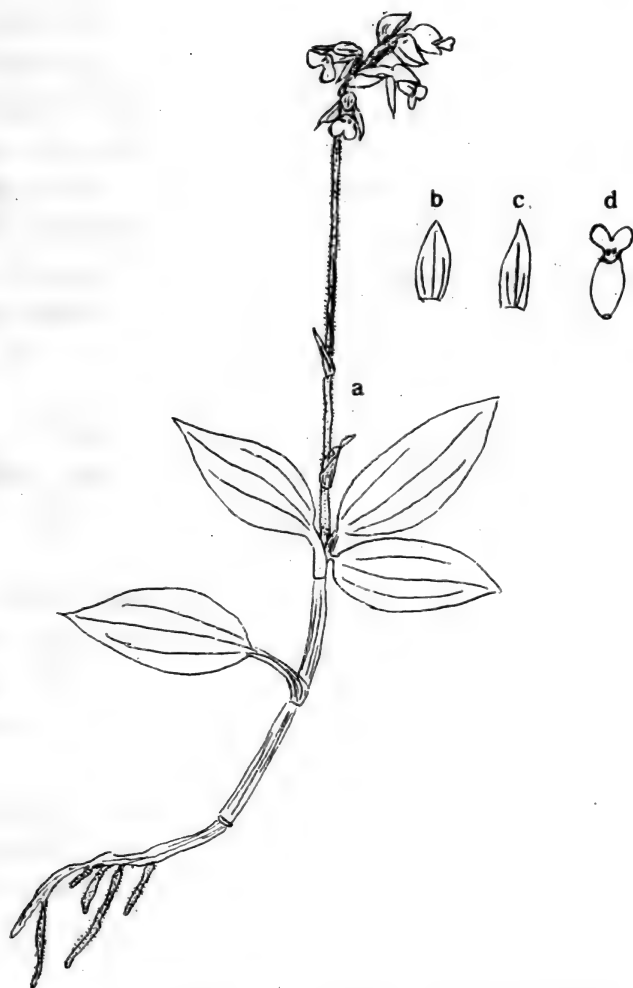


圖 (Fig) 124 恒春指柱蘭 (*Zeuxine hengchuanense*)

a. 着花之植物體 (Flowering Plant)

b. 後萼片 (Dorsal sepal)

c. 花瓣 (Petal) d. 唇瓣 (Lip)

地生蘭，莖直立，長 8-15 cm，光滑，略帶有淡褐色。

葉 4-5 枚，着生於莖的上部，長橢圓形或長橢圓狀卵形，長 4-6 cm，

寬2-3 cm，先端漸尖形，基部鈍且略歪，全緣，紙質，脈3條；葉柄長1-1.2 cm，寬約3 mm；鞘5-8 mm，基部抱莖，光滑。

花5-8枚，着生於花莖先端，呈密生的穗狀花序，徑6-7 mm；花莖細長，直立，長15-20 cm，有毛茸；基部有鞘2-3枚；鞘淡褐色，長8-10 mm，先端銳尖，基部抱莖；苞片披針形，略凸出，長6-9 mm，寬3-4 mm，先端銳尖，膜質；花梗連同子房長6-7 mm，綠色，光滑，有2條白色條紋；後萼片卵形，淡橘黃色，長4.5-5.5 mm，寬2.5-3.5 mm，先端銳尖，與花瓣相生而形成花兜；側萼片披針形或長橢圓形，離生，長6-7 mm，寬2-3 mm，先端銳；花瓣略呈楔形，白色，長4-6 mm，寬2.5-3.5 mm；唇瓣長7-8 mm，寬2-2.5 mm，基部有爪，爪長3-4 mm，先端2裂，裂片圓形，長3.5-4.5 mm，寬2-3 mm，全緣，基部有2黃色斑點，先端及基部均呈圓形；蕊柱長3-4 mm。

固有，生長於恒春半島的南仁山，常綠潤葉林下，較為稀少。

本種的特徵①葉着生於莖先端②唇瓣先端2裂，裂片圓形，邊緣無鋸齒，全緣。

158. 線柱蘭 (*Zeuxine strateumatica* (Linn.) Schltr.)

Terrestrials; rhizome elongate; roots thickened, short; stem simple, suberect or creeping at base and erect upward, 5-20 cm long, green, sometimes purplish red or brownish, leafy at base.

Leaves 5-8, basal, fleshy, linear or linear-lanceolate, 1.8-4 cm long, 2-5 mm wide, acuminate, sheathing at base, midrib raised on beneath, entire and somewhat recurved on margin, brownish or light brown in color; sheaths 2-3 mm long, membranous.

Flowers several, not widely opened, spicate, 2-4 mm in diameter, white, sometimes tinged with purplish pink, abruptly recurved above the ovary; scape terminal, 3-5 cm long, erect, subglabrous; bracts broadly ovate, scarious, 8-12 mm long, 1-nerved, acute at apex, longer than the flowers; ovary 4-6 mm long; sepals unequal, the dorsal one broadly ovate, 5-6 mm long, about 3 mm wide, 1-nerved, the la-

teral ones oblong, 1-nerved, about 5 mm long, 2-4 mm wide; petals oblique ovate, 4-5 mm long, 2.5-3 mm wide, 1-nerved; lip oblong-spathulate, yellow, with a slightly contracted fleshy shortly saccate papillose base, emarginate or shallowly 2-fid at apex; anthers short, obtuse; column short.

Capsules ellipsoidal, about 5-6 mm long; seeds numerous, enclosed by a thin membranous wing.

Afghanistan, India, Ceylon, Malaya Peninsula, S. China, Assam, Japan, Java, Amboina and the Philippines. Taiwan, known from sea coastal regions in southern part of the island, not common.

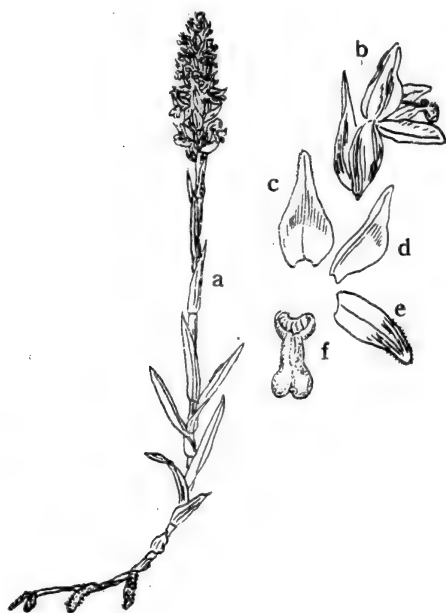


圖 (Fig) 125 線柱蘭 (*Zeuxine strateumatica*)
 a. 着花之植物體 (Flowering plant)
 b. 花 (Flower) c. 後萼片 (Dorsal sepal)
 d. 花瓣 (Petal) e. 側萼片 (Lateral sepal)
 f. 唇瓣 (Lip)

地生蘭，根莖長，根粗厚，短；莖無分枝，近似直立或基部匍匐，先端直立，長5-20 cm，綠色，有時亦有呈紫紅色的，基部有葉。

葉5-8枚，基生，肉質，線形或線狀披針形，長1.8-4 cm，寬2-5 mm，先端漸尖，基部有鞘，全緣，先端的邊緣略反捲，褐色或淡褐色，鞘長2-3 mm，膜質。

花數枚，不十分開張，穗狀花序，徑2-4 mm，白色，有時帶有紫紅色暈，從子房上反曲；花莖頂生，長3-5 cm，直立，近似光滑；苞片橢圓形，乾膜質，長8-12 mm，脈1條，先端銳尖，較花爲長；子房長4-6mm；萼片不整齊，後萼片橢圓形，長5-6 mm，寬約3 mm，脈1條，側萼片長橢圓形，脈1條，約長5 mm，寬2-4 mm；花瓣歪卵形，長4-5 mm，寬2.5-3 mm，脈1條；唇瓣長橢圓狀舌形，黃色，基部略呈緊縮，肉質，短囊狀且有柔毛，先端凹頭或淺2裂；花藥短，鈍；蕊柱短。

蒴果橢圓形，長5-6 mm；種子多數，包有薄膜狀的翼。

阿富汗、印度、錫蘭、馬來半島、中國南部、阿薩姆、日本、印尼、菲律賓。台灣，見於海邊，較爲少見。



Coeloglossum viride (Linn.) Hartm
from Europe
(Alpine plants of Europe, page 133,
col. photo 274)

2. ALPINE ORCHIDS - TAIWAN

台灣的高山蘭花

(Abstract) This is a taxonomic study of the alpine orchids of Taiwan, a total of 21 genera, 42 species and 4 varieties are recognized in this study, of which 5 new combinations of names are proposed, an attempt is made to summarize the present knowledge of alpine orchids of Taiwan. (摘要) 本論文係論述台灣的高山蘭花，所謂的高山蘭花係指生長於海拔 2500 公尺以上高山上的蘭花，有些蘭花從低海拔一直能生長到 2500 公尺或更高的山區者，亦包括在內，約有 21 屬 42 種及 5 變種的高山蘭花被論述，其中有 2 個新組合植物，不論是屬、種或變種均有詳細敘述其性狀及產地，且附有詳細的屬及種、變種的檢索表，以供讀者鑑定用。

INTRODUCTION (前言)

So far as the author knows, there are no complete revisions about the alpine orchids of Taiwan. Some alpine orchids were described by Japanese botanists in the magazines of *Journal Japanese Botany* and *Botany Magazine Tokyo* respectively in the period of 1908 to 1944. But a systematic revision of Taiwan alpine orchids is still wanted.

In the study of alpine flora of Taiwan, orchids as one part of my whole study in the past seven years. I collected orchid specimens nearly all parts of the island, as well as cultivated in my home garden to study its flower characters and habit. After these years study, I desire to give a reasonable revision of alpine orchids as one part of my alpine flora of Taiwan, here I present it.

The definition of alpine orchid here is the orchids which grows on mountains at the elevations between 2500-

3997 meters above sea level, some species grow on low or medium altitudes but extend to 2500 meters or higher, are also included.

This paper is an attempt to summarize the knowledge of alpine orchids of Taiwan, for each genera, species and varieties of alpine orchids in Taiwan, an analytical key to each genus, species and variety has been prepared; description for each genus, species and variety together with note on habit and general distribution has been given.

All specimens cited in this paper are deposited in herbaria of Departments of Botany and Forestry, National Taiwan University; here I wish to express my hearty thanks to the curators of the herbaria mentioned above for their kindly letting me examine their materials.

(This paper first published in the Quart. Journ. Chinese Forestry volume 10 number 3 (1977), here I give some modifications, no synonym list in this paper, all synonym please see part 3. An Enumeration of the Indigenous Orchids of Taiwan, some descriptions which present in part 1, The Illustrations, are also omitted.)

就筆者所知，有關台灣高山上蘭花系統分類上的研究，始終是缺乏的，在西元1906至1944年代裏，雖然一些日本植物分類學家發表了些高山蘭花於日本植物研究雜誌及東京植物學雜誌上，但有系統的分類論文，一直是沒有的。

在筆者研究高山植物誌的過程中，過去七年中蘭科植物始終是筆者研究的範疇之一，筆者幾乎在全島各地採集許多蘭科植物標本，同時也帶回家中栽植於庭園中，以觀察花的特徵及習性，經過這許多年研究後筆者希望能對台灣的高山蘭花提供一有系統的更正，以作為筆者所著的「台灣高山植物誌」的一部份。

這裡所謂的高山蘭花是指生長於海拔2500~3997公尺間的蘭花；有些種類能從低或中海拔一直能生長到2500公尺或更高的山地，也包括在其中。

本論文係將台灣的蘭花，每一屬、種及變種有系統地整理，除了屬與屬

間、種、變種間有詳細檢索表外；屬及種、變種的詳細敘述，以及習性及分佈均詳細論及。

本論文所引用的標本，均收藏於台灣大學植物系及森林系的標本館，在此，筆者謹向兩館的工作人員允許筆者檢視標本致謝。

(本論文將載於中華林學季刊第十卷第二期或第三期，筆者已將略加修改轉載於此，所有的異名均加以取消，有關的異名請見第三部分，台灣野生蘭名錄；第一部份圖鑑裏已有的種類，在此敘述則取消，以免重複)。

ORCHIDACEAE 蘭 科

Perennial terrestrial, epiphytic or saprophytic herbs with rhizomes or tuberous roots or rootstocks; stem leafy or scapose frequently thickened at the base into pseudobulbs and bearing aerial assimilating roots. Leaves simple, entire, flat, plicate or rarely equitant with parallel nerves, usually sheathed at base, the sheaths nearly always closed and ending the stem.

Flowers mostly bisexual, zygomorphic, often of very beautiful form and colour but sometimes small and colorless or green, bracteate, racemose, paniculate, spicate or solitary; perianth superior, composed of 6 petaloid segments in 2 whorls or the outer whorl calyx-like and inner corolla-like or the outer rarely corolla-like and the inner minute, free or variously connate in each whorl, the outer 3 (sepal) nearly equal, the inner lateral ones (petals) usually similar to the sepals or smaller, the median one (lip or labellum) adaxial, usually larger, variously shaped, spurred or saccate at the base which often containing nectar or nectar-secreting tissue; stamens 1 or 2, adaxial to the style and forming a column (Gynostemium), anthers or anther 2-locular, introrse, opening by a slit lengthwise, pollens granular or generally agglutinated into mealy, waxy or bony masses (pollinia), at one end the pollinium

may be extended into a sterile portion (caudicle); stigma viscid or rough, placed under the rostellum or in a cavity between the anther-locular; ovary inferior, usually twisted, 1-locular with 3-partietal or ovary rarely 3-locular with axile placentas, ovules numerous and minute, anatropous.

Fruit a capsule with 3 or 6 valves rarely berry-like; seeds minute, often drawn out at each end or rarely winged, without endosperm, embryo not differentiated.

About 650 genera and more than 20000 species world-wide distribution, especially abundant in the tropics, main centres of distribution are Indo-Malay and tropical America. More than 90 genera in Taiwan, and 21 genera, the alpine ones.

多年生地生、着生或腐生草本，具有很莖、塊根或塊狀根。莖有葉或呈花莖狀，基部常粗厚形成假球莖狀，在其上生長有吸收作用的根。葉單生、全緣、扁平、有皺襞的或少數呈平行脈狀，基部常有鞘，鞘的基部常抱莖。

花多數為兩性，不整齊，具有很艷麗的形態及色彩，但有時花亦有很小，無色或綠色者，有苞片、總狀、圓錐或穗狀花序，少數亦有呈單生的；花被片上位，由6枚排成2列的花被片組成，外緣者呈萼片狀，內緣者花冠狀，或者少數外緣者呈花瓣者，內緣者小而不顯著，離生或呈種種連生成一輪；外緣三枚（萼片）近似整齊，內緣側生兩枚（花瓣）常與萼片相似或較小，內緣中間者為唇瓣，較大，有種種不同的形態，基部有距或囊，其內常含有蜜腺或分泌蜜組織；雄蕊1或2枚，與花柱相連而形成蕊柱，花藥二室，內向，縱孔裂，花粉粒狀常聚集而成粗粉狀，蠟質，骨質的塊狀稱為花粉塊；在花粉塊的一端可延伸成一無孕性的部份，稱為花粉柄；柱頭呈黏質的或較粗糙的，通常位於喙的下方或在花藥室間的空洞裏；子房下位，常呈扭曲狀，1室而有3側生胎座，少數亦有呈3室的，如為3室則呈中軸胎座，胚珠多數，甚微小，倒生。

果實為蒴果，有3或6裂瓣，少數亦有呈漿果者；種子微小，常拉向於一側或有薄翅，沒有胚乳，胚不分化。

約有650屬，2萬種以上，全世界各地均有分佈，尤其是盛產於熱帶，主要分佈中心為印度、馬來西亞及熱帶美洲。台灣約有90屬以上，其中21

屬中，含有高山性的蘭花。

key to the genera 屬的檢索表

1. Fertile stamens 2 1. *Cypripedium*
(孕性雄蕊 2 枚) (袋唇蘭屬)
1. Fertile stamen 1.
(孕性雄蕊 1 枚)
2. Anthers attached to the column by a broad inarticulate base, persistent and immobile; pollenia with caudicles attached to a viscid or gland at the base. (花藥以闊而無關節的基部附着在蕊柱上，殘存及不能移動的，花粉塊有柄基部連生有黏盤或腺點)
3. Stigma 1, entire, within the cavity under the anther-locules or 2 and projecting from the cavity. (柱頭 1 枚全緣位於花藥室下的洞內或 2 枚在洞中突出)
4. Lip with elongate or short spur at the base; stigma 1 undivided. (唇瓣基部有長或短的距，柱頭 1 枚，不分歧的)
5. Glands naked, not in a buricule; flowers mostly green, rarely purple. (腺體裸露，不呈耳狀，花多呈綠色，少數有呈紫色者)。
6. Stigma elevated thickened, lip 3-lobed near to apex, the median lobe minute, simulating the lateral ones, flowers purple 2 *Coeloglossum* (裂唇蘭屬)
(柱頭突出且厚唇瓣近先端 3 裂中裂片小，與側片略相似花紫紅色)
6. Stigma not elevated, not thickened; lip commomly entire, not lobed, flowers green or white
(柱頭不突出亦不粗厚，唇瓣通常是全緣，不分裂 3. *Platanthera*
花綠色或白色) (粉蝶蘭屬)
5. Glands contained in a bursicule of the rostellum, flowers white, pink or purple 4. *Orchis*
(腺體包藏喙內耳狀物中花白色、粉紅色或紫紅色) (蘭屬)
4. Lip without or with spur at the base; stigma 2, more or less prominent and projecting from the cavity.

- (唇瓣的基部有或無距，柱頭2枚，多少顯著且突出於洞外)
5. Leaf solitary, cordate, flowers pink 5. *Hemipila*
(葉一枚，心形花粉紅色) (舌喙蘭屬)
5. Leaves 2 to several, linear or lanceolate, not cordate,
flowers green or white.
(葉二至數枚，線形或披針形不呈心形，花綠或白色)
6. Lip without spur, rostellum short, not armed 6. *Hermanium*
(唇瓣無距，喙短，不分岐) (角盤蘭屬)
6. Lip with spur, rostellum with arms 7. *Habenaria*
(唇瓣有距，喙有分岐) (玉鳳蘭屬)
3. Stigma 2 divided into 2 horns, not in cavity under the
anther-locules, flowers small; lip entire, without a
spur 8. *Androcorys*
(柱頭2枚分裂成2角狀而不是位於花藥室下的空 (無距蘭屬)
洞內，花小唇瓣全緣無距)
2. Anthers easily detached from the column or early wi-
thering; pollinia with a caudicle and gland at the apex.
(花藥易自蕊柱分離或易凋落，花粉塊的先端有一柄或腺體)
3. Pollinia granular, soft anthers commonly persistent,
inflorescence terminal.
(花粉塊粒狀，花藥通常殘存，花序頂生)
4. Anther reclined on the column, incumbent.
(花藥橫臥於蕊柱上，呈橫臥狀的)
5. Column very short with a tooth or wing on each side
at the apex, 9. *Microtis*
(蕊柱短，在兩側先端有齒或翼) (葱葉蘭屬)
5. Column distinct, somewhat elongate, without wing.
(蕊柱顯著，較長，無翼)
6. Plants with short slender rhizomes.
(植物體具有短而細的根莖)
7. Leaves 2, opposite; lip 2-lobed or entire 10. *Listera*
(葉二枚，對生；唇瓣2裂或全緣) (雙蘭屬)

7. Leaves more than 2, alternate, lip convex.
(葉多於2枚, 互生, 唇瓣凸出)
8. Lip with a chin at base, distinctly jointly between the upper and lower portions 11. *Cephalanthera*
(唇瓣基部有頰, 明顯地相連於上下部間) (立花蘭屬)
8. Lip without or distinct chin at base, not jointed between the upper and lower portions 12. *Epiactis*
(唇瓣基部無明顯的頰, 不相連於上下部間) (鈴蘭屬)
6. Plants with corms or fleshy to corolloid rhizomes.
(植物體具有球莖或肉質至珊瑚狀的根莖)
7. Leaves jointed at base 13. *Bletilla*
(葉連生於基部) (白及屬)
7. Leaves not jointed, soft 14. *Stigmatodacystylus*.
(葉不連生於基部, 柔軟) (絲柱蘭屬)
4. Anthers more or less erect; rostellum erect or nearly so.
(花藥多少呈直立狀, 喙直立或近似如此)
5. Stigmas 2, distinct; lip with claw, verticose at base
(柱頭2枚, 顯著, 唇瓣有爪, 基部呈膨大 15. *Myrmecis*
狀) (全唇蘭屬)
5. Stigma one, broad; lip sessile, hairy at base
(柱頭1枚, 闊寬; 唇瓣無爪, 基部有毛茸) 16. *Goodyera*
(斑葉蘭屬)
3. Pollinia waxy or cartilaginous, anthers easily detached, inflorescence terminal or lateral.
(花粉塊蠟質或膠質, 花藥易於分離, 花序頂生或側生)
4. Inflorescence terminal.
(花序頂生)
5. Leaves solitary, stemless; lip spurred 17. *Tipularis*
(葉單一, 無莖, 唇瓣有距) (筒距蘭屬)
5. Leaves 2-3, basal, shortly stemmed; lip spurless
(葉2~3枚基生, 有短莖, 唇瓣無距) 18. *Malaxis*
(小柱蘭屬)

4. Inflorescence lateral.
(花序側生)
5. Leaves convolute in bud.
(葉在葉芽時呈包旋狀)
6. Pollinia with caudicle but without stipe; leaves 2 to few
, lip adnate to the column at base 19. *Calanthe*
(花粉塊有花粉柄, 葉 2 至 3 枚蕊柱與唇瓣在基部相連) (根節蘭屬)
6. Pollinia 4, without a caudicle, Leaves solitary or 2; lip
inserted at the base of the column, not forming a tu-
be 20. *Oreorchis*
(花粉塊 4 枚無花粉柄, 葉單 1 或 2 枚, 唇瓣抽自於
蕊柱基部, 不連生成筒狀) (山蘭屬)
5. Leaves conduplicate in bud 21. *Cymbidium*
(葉在葉芽時呈摺合狀) (蕙蘭屬)

1. CYPRIPIEDIUM Linn. 袋唇蘭屬

Terrestrials; rhizomes short, creeping; roots coarsely fibrous; stem erect, simple, leafy upward.

Leaves 2 to several, alternate or opposite, exarticulate, convolutive, many nerved, sometimes plicate.

Flowers 1 to few, rather large, showy, zygomorphic; sepals and petals somewhat differentiate, widely spreading, lateral sepals usually united; petals narrower; lip large, saccate or pouch-shaped, the margin more or less inrolled around the orifice; column incurved with a short-stalked, 2-locular anther on each side, and a dilated, rather petal-like staminode adnate to the back at tip; stigma terminal, obsolete 3-lobed.

About 30 species in temperate regions of N. hemisphere, one in America tropics. 4 species in Taiwan, and all the alpine ones.

地生蘭, 根莖短, 匍匐; 根有粗鬚根; 莖直立, 無分枝, 上部有葉。

葉 2 至數枚, 互生或對生, 無關節, 包旋性的, 脈多數, 有時呈褶皺狀。

花一枚或少數，較大，顯著，不整齊，萼片及花瓣略呈分化，離生，擴展，側萼片常互相連生；花瓣狹；唇瓣大，囊狀或袋形，近開口處邊緣略呈捲曲；蕊柱內曲，有短梗，在每側有一 2 室的花藥，及有 1 膨大略呈瓣狀的退化雄蕊連生於先端的背側；柱頭頂生，有不明顯 3 裂。

約有 30 餘種，主分佈於北半球溫帶，一種產於熱帶美洲。四種產於台灣，均生長於高山地區。

KEY TO THE SPECIES (種的檢索表)

1. Leaves 2, opposite or nearly so.

(葉二枚，對生或近似對生)

2. Lip small, 0.9-1.1 cm in diameter; leaves not sheathed 1. *C. debile*

(唇瓣小，徑為 0.9-1.1 cm，葉無鞘) (小袋唇蘭)

2. Lip large, 5-6 cm in diameter, leaves sheathed

(唇瓣大，徑為 5-6 cm，葉有鞘) 2. *C. japonica*
var. *formosanum*

(台灣袋唇蘭)

1. Leaves 3-5, alternate, not opposite.

(葉三至五枚，互生，不呈對生)

2. Leaves oblong, larger, 10-20 cm long, 5-8 cm wide; flowers pink or reddish purple 3. *C. macranthum*

(葉長橢圓形，大，長 10-20 cm，寬 5-8 cm，花粉紅或紅紫色)
(高山袋唇蘭)

2. Leaves oblong-lanceolate, smaller, 5-10 cm long, 1.5-3 cm wide, flowers white or yellowish brown

(葉長橢圓狀披針形，較小長 5-10 cm，寬 1.5-3 cm，花白色或黃褐色) 4. *C. guttatum*
var. *segawai*

(狹葉袋唇蘭)

1. *Cypripedium debile* Reichb.f, Xenia orch. 2:233 (1865). (小袋唇蘭)

Description please see page 137. (種的敘述請見第 137 頁)

Specimen examined: (詳察過下列標本)

Taiwan: Ilan County: Nanhutashan, T.C. Huang 7755.

Hualien county: Chungyangchienshan, S.S. *Ying* 3181, 3182, 3183, 3184.

JAPAN: **Nikko**, H. Kitagawa not date, Sendai. S. *Tamaki* s.n. May 30 1912. Siogama, *Iisibea* not date.

2. **Cypripedium japonicum** Thunb. var. **formosanum** (Hayata) *Ying* in Chinese Flow. (15): 33, *pl.1* (1975) & in Quart. Chin For. 8(4): 141 & Alp. Pl. Taiwan in Col. 1: 70, *col. photo. 93* (1975). (台灣袋唇蘭)

Description: please see page 139. (種的敘述請見第139頁)

Specimen examined: (詳察過下列標本)

TAIWAN: **Ilan county**: Nanhutashan, S.S. *Ying* 3571, *M.T. Kao* 8615; Siyenaukou, S. *Suzuki* s.n. Oct. 24 1928.

Taichung county: Mt. Seisuishan, *T. Nakamura* s.n. June 21 1941. *Nokogun*, S. *Hibino* & *R. Rikkawa* s.n. July 4

1938. **Nantou county**: Hohuanshan, *E. Matuda* s.n. Sept.

16 1919. **Taitung county**: Kuanshan, *Yamamoto* & *Mori* s. n. Aug. 10 1941.

3. **Cypripedium macranthum** Sw. in Vet. Acad. Handl. Stockl. 251 (1800); Hayata, *Icon. Pl. Form.* 2: 136 (1912). 高山袋唇蘭

Terrestrials; rhizome short-creeping with rather thick firm roots from the nodes; stem simple, erect, 30-50 cm long, hirsute.

Leaves 3-5, alternate, ovate-rounded or oblong-elliptic, 10-18 cm long, 5-8 cm wide, acute or abruptly acuminate at apex, amplexicaul the stem at base, usually forming a short sheath, many-veined; the veins slightly elevated on both sides, hirsute all over, especially on veins, ciliate on margin, chartaceous, pale green beneath.

Flowers solitary, large, showy, terminal, rose to rose-purple, rarely white, 3.5-6 cm in diameter; the scape

4-5 cm long, erect or sometimes ascending upward, hirsute; the pedicels with ovaries 1-1.5 cm long, slightly pilose, the dorsal sepal ovate, 4-5 cm long, acuminate at apex, the lateral ones wholly connate somewhat longer than the dorsal one; petals narrowly ovate, acuminate at apex, crisped-pubescent inside at base; lip pouch-shaped, about 2.5 cm in diameter, 1.8 cm long, elongate hirsute within; column convex.

Korea, northern and northeastern China, Kamchatake, Siberia and e. Europe. Taiwan, known from high altitudes of 3400-3800m in northern and central parts of the island, on rocks, rather rare.

Specimen examined: (詳察過下列標本)

TAIWAN: Ilan county: Nanhutashan, Masamune, Fukuyama & Nakamura s.n. July 17 1940.

JAPAN: Ruiran, Prov. Kushiro, Y. Kudo s.n. July 8 1917.

地生蘭，根莖短而匍匐，在節處常生長有粗厚的根；莖單生，直立，長30-50 cm，有毛。

葉3-5枚，互生，卵狀圓形或長橢圓狀橢圓形，長10-18 cm，寬5-8 cm，先端銳尖或突漸尖狀，基部抱莖而形成一短鞘狀，脈多數，表裏兩面均略隆起，有毛茸，尤其是在葉脈處，葉緣呈毛緣，紙質，背面淡綠色。

花單生，大，顯著，頂生，粉紅色或粉紅紫色，少數亦有呈白色者，直徑3.5-6 cm；花莖長4-5 cm，直立或有時呈上昇狀，有毛茸；花梗連同子房長1-1.5 cm，略有毛茸，後萼片卵形。長4-5 cm，先端漸尖；側萼片幾乎全部相連，較後萼片略長；花瓣狹卵形，先端漸尖，基部內面有冠毛；唇瓣袋形，徑約2.5 cm，長1.8 cm，內面有長毛茸，蕊柱凸出。

韓國、中國北部及東北部，堪察加半島，西伯利亞及東歐。台灣生長於高海拔約3400-3800公尺的岩石上，分佈於北部及中部，較少。

4. **Cypripedium guttatum** Sw. var. **segawai** (Masamune) Ying, **comb. nov.** 狹葉袋唇蘭

Cypripedium segawai Masamune in Trans. Nat. Hist. Form. **23**: 209 (1933)

Terrestrials; rhizomes short, creeping; roots few, filiform, slender, flexible, produced from rhizome, 5-10cm long; stem simple, erect, 20-30cm long, hirsute.

Leaves 3-4, alternate, patent, ovate, ovate-oblong to oblong-lanceolate, 5-10cm long, 1.5-3cm wide, acuminate, amplexical at base, chartaceous, entire and ciliate on margin, many-veined, the veins slightly impressed surface and elevated beneath, lustrous green surface and pale green beneath.

Flowers solitary, terminal, medium-sized, 3-4cm in diameter, yellowish white; the scape terminal, 4-7cm long, hirsute, erect or nearly so; the bracts lanceolate, acuminate at apex, leaf-like, ciliate on margin; the pedicels with ovaries 1-1.5cm long, erect; the dorsal sepal oblong-lanceolate, 1.7-2.7cm long, about 1cm wide, acuminate at apex, the lateral sepals connate each other and bifid at apex, somewhat narrower than the dorsal one; petals broadly ovate or somewhat rhombic-like, attenuate; lip pouch-shaped, about 2cm in diameter, pilose on the central part within; column diverging, clavate-like.

The species in northern China and Siberia; the variety endemic, known from high altitudes of 3400-3900m in central part of the island, on rocks, rather rare.

Specimen examined:

TAIWAN: Nantou county: Chiraichushan, *Segawa Suzuki s.n.* Aug. 1934.

地生蘭，根莖短，匍匐；根少數，線形，細長，彎曲，長自於根莖，長5-10cm；莖單生，無分枝，直立，20-30cm，有毛茸。

葉3-4枚，互生，顯著，卵形，卵狀長橢圓形或長橢圓狀披針形，長5-10cm，寬1.5-3cm，先端漸尖，基部抱莖，紙質，全緣，葉緣有毛茸，脈多數，表面微凹下，背面隆起，表面呈有光澤綠色，背面淡綠色。

花單生，頂生，中型，徑3-4cm，黃白色；花莖頂生，長4-7cm，有毛茸，直立或近似如此；苞片披針形，先端漸尖，葉狀，毛緣；花梗連同子房

長 1-1.5 cm，直立，後萼片長橢圓狀披針形，長 1.7-2.7 cm，寬約 1 cm，先端漸尖，側萼片及互相連生僅先端 2 裂，較後萼片較狹，花瓣闊卵形或略呈菱形，漸尖，唇瓣袋形，徑約 2 cm，內部中間有毛茸；蕊柱分歧，棍棒狀。

種見於中國北部及西伯利亞，變種固有，生長於中部高海拔約 3400-3900 m 處，見於岩屑地上，較少。

2. COELOGLOSSUM Hartm. 裂唇蘭屬

Terrestrials; roots thickened, elongate, fleshy; stem simple, erect. Leaves few, cauline, alternate. Flowers rather many, small, terminal, purple or green, spicate; the bracts leaf-like, green; sepals connivent in the upper part and forming a hood with petals; lip 3-lobed near to apex, the medium lobe minute, simulating the dorsal lobe; spur very short; anther-locules distinct; pollinia oblong, partly hidden by a small bursicule; caudicles rather elongate; glands small, scarcely broader than the caudicle; rostellum bifid very low; stigma depressed.

Several species chiefly in the temperate regions of N. Hemisphere. one species in alpine regions of Taiwan.

地生蘭，根粗厚，甚長，肉質，莖單生，直立。葉少數，莖生，互生。花較多，小，頂生，紫紅色或綠色，穗狀花序，苞片葉狀，綠色，萼片上部與花瓣互相密接而形成花兜，唇瓣近先端處 3 裂，中裂片甚小，與後萼片略相似，距甚短，花藥室顯著；花粉塊長橢圓形，部份被一小耳狀物隱藏，柄甚長，腺體小，較柄略寬，喙兩裂，甚低，柱頭呈壓縮狀。

數種，主分佈於北半球溫帶，台灣的高山地帶有一種生長著。

1. *Coeloglossum nankotaizanensis* (Masamune) Ying in Quart. Chin. For. 8(4):149 (1975). 台灣裂唇蘭

Description please see page 109. (詳細種的敘述請見第 109 頁)

Specimen examined: (下列標本曾詳察過)

TAIWAN: Hsuehshan, S.S. Ying 3843, 2845 (Type of *C. taiwanianum*).

EUROPE: Scandinavicae: Norgei Nystuchve Dovre, N.

Johauson s.n. July 17 1878. Italy: Bosc. de Corvara in Val. Badic, *Kai Larsen s.n.* July 17 1965 (Specimens of *C. viride* (Linn.) Hartm.).

JAPAN: Komaga dake oshima, *I. Yamamoto s.n.* July 15 1922; In herbosis Vershnig Arundan, *Y. Kudo & Tatewaki s.n.* Aug. 24 1929. Honshu Nageno Nishikoma, *M.T. Kao 8319* (Specimens of *C. viride* var *bracteatum* (Willd) Richt.).

Lin (Native Orchids of Taiwan vol. 1, page 108, col. photos 56-57) treated this species as conspecific with *C. viride* (Linn.) Hartm. I review the book of Alpine Plants of Europe which was written by Mr. Oba. In page 133 col. photos 274-275 of the book, it clearly show, the *C. nankotaizanensis* different from *C. viride* by leaf size and shape, in the latter, the leaves usually ovate to rounded, 3-4 cm long, obtuse at apex, the specimens of *C. viride* which from Scandinavicae and Italy were deposited in the herbarium of Department of botany, national Taiwan University also reveal the leaf characters are not like *C. nankotaizanensis*. The Taiwan *Coeloglossum* somewhat resemble to *C. viride* var. *bracteatum* (Willd.) Rich. which from Korea, China, e. Siberia and Japan, but it can be distinguish by lip characters.

林氏在台灣野生蘭第一卷第 108 頁及彩色圖 56-57 中，將本種跟歐洲所產的歐洲裂唇蘭 (*C. viride* (Linn) Hartm) 列為同種。但筆者檢視大場達之所著的歐洲的高山植物一書第 133 頁，彩色圖片 274-275 中，明白顯示台灣裂唇蘭與歐洲裂唇蘭在葉片的形狀及大小上有顯著的不同；歐洲裂唇蘭的葉常為卵形或圓形，長 3-4 cm，先端鈍，筆者也檢視存放於台大植物系標本館藏放採自於歐洲瑞典及義大利的歐洲裂唇蘭的標本，也明白地顯示出跟台灣裂唇蘭有所不同。台灣裂唇蘭跟產自韓國、日本、中國大陸的長苞裂唇蘭 (*C. viride* var. *bracteatum* (Willd.) Rich.) 有些相似，但從葉形及唇瓣的特徵上也能區別出來。

3. PLATANThERA L.C. Rich. 粉蝶蘭屬

Terrestrials; rhizome short; roots thickened, elongate; stem simple or none.

Leaves exarticulate, convolutive, usually cauline, 1 to several, linear to elliptic, toward the top of the stem, gradually passing into the bracts.

Flowers rather small, greenish rarely white, few to many in terminal raceme or spike, resupinate, bracteate; sepals subequal, ovate, the dorsal one erect, sometimes forming a hood with the petals; lateral sepals spreading; petals similar to the sepals; lip spurred, entire; column short on the top on either side of the anther with a more or less distinct, pulvinate stolid; anther inserted by a broad firmly adnate base, erect, emarginate at the top, cell distinct, prolonged toward the base of the anther and a viscidium; rostellum broad, short; fertile stigma contiguous or at best separate by a furrow, forming one shining plane.

About 100 species, chiefly in temperate and cooler regions of the northern Hemisphere. 7 species in Taiwan, and 5 species, the alpine plants.

地生蘭，根莖短，根粗厚，長，莖單立或無莖。

葉不具關節，旋繞性，常呈莖生，1或數枚，線形至橢圓形，一直能生長於莖先端，到先端大多呈苞片狀。

花較小，綠色或白色，少數至多數，呈頂生的總狀花序或穗狀花序，轉位，有苞片，萼片近似整齊，卵形，後萼片直立，有時與花瓣形成花兜，側萼片擴展；花瓣與萼片相似；唇瓣有距，全緣；蕊柱短，在花藥兩端有一多少呈明顯狀枕形的柄。花藥嵌入於一潤而連生的基部，直立，先端凹入，室顯著，延伸至花藥基部，有粘盤，喙潤，短；孕性柱頭相接觸或以淺溝相隔，而形成一光滑面。

約有100種，主分佈於北半球的溫帶及冷帶地區，台灣產七種，其中五種為高山性。

KEY TO THE SPECIES 種的檢索表

1. Spur short, about 2-2.5 mm long.
(距很短, 長約 2-2.5 mm)
 2. Flowers green or yellowish green, lip tongue-like,
not reflexed at tip 1. *P. taiwaniana*
(花綠色或黃綠色, 唇瓣舌形, 先端不向後反捲) (台灣舌唇蘭)
 2. Flowers white, lip oblong, reflexed or curved at tip ...
(花白色, 唇瓣長橢圓形, 先端向後 2. *P. brevicealcarata*
反捲) (短距粉蝶蘭)
1. Spur elongate, more than 6 mm long.
(距甚長, 通常在 6 mm 以上者)
 2. Flowers green or yellowish green.
(花綠色或黃綠色)
 3. Lip ovate-oblong, about 5 mm long, spur reflexed
(唇瓣卵狀長橢圓形, 長 5 mm, 距反捲) 3. *P. sigeyosii*
(高山粉蝶蘭)
 3. Lip linear, 6-7 mm long, 0.6 mm wide, spur not re-
flexed 4. *P. pachyglossa*
(唇瓣線形, 長 6-7 mm, 寬 0.6 mm, 距不反 (厚唇粉蝶蘭)
捲)
 2. Flowers white 5. *P. longibracteata*
(花白色) (長苞粉蝶蘭)

1. *Platanthera taiwaniana* Ying in Quart. Journ. Chin. For. **8**(4): 144 & Alp. Pl. Taiwan in col. **1**: 73, col. photo. **100** (1975). 台灣舌唇蘭

Description: please see page 294. 詳細種的敘述請見第 294 頁

Specimen examined: (詳察過下列標本)

TAIWAN: Chiayi county: Tashuik'ushan, S.S. Ying
2811.

2. *Platanthera brevicealcarata* Hayata in Journ. Col. Sci. Univ. Tokyo **30**(1): 350 (1911), (Mat. Fl. Form.);

Ying in Chin. Flower (6) : 33, t.2 (1974) & Alp. Pl. Taiwan in col. 1 : 72, f.98 (1975). 短距粉蝶蘭

Description: please see page 288. 詳細種的敘述請見第 288 頁

Specimen examined: (詳察過下列標本)

TAIWAN:

Ilan county : Nanhutashan, S. Suzuki s.n. July 1922, G. Masamune, N. Fukuyama & Nakamura 3169; Siyuenaikou, S. Suzuki 5073; Chuangyangchienshan, S.S. Ying 3189, T. Suzuki & N. Fukuyama s.n. July 28 1936. **Miaoli county** : Tapachienshan, N. Fukuyama s. n. July 26 1932, H. Simada s. n. July 16 1935, S. Sasaki s. n. July 18 & 19 1932. **Taichung county** : Hseuhshan, S.S. Ying 3884, 3885, Mori s.n. Oct. 20 1936, S. Sasaki s.n. July 23 1931, G. Masamune s.n. July 18 1930. **Nantou county** : Chirai south peak, S. Sasaki s.n. Aug. 24 1929; Chihchiayangtashan, G. Masamune s.n. July 7 1930. **Chiayi county** : Mt. Morrison, H. Simada SH 893; Minami, T. Suzuki s.n. July 31 1935. **Kaohsiung county** : Kuanshan, N. Fukuyama s.n. July 12 1935.

3. **Platanthera sigeyosii** Masamune in Bot. Mag. Tokyo 46 : 773 (1932). 高山粉蝶蘭 - P. ...

Terrestrials; roots few, fleshy, elongate, 2-3.5cm long, 3-4mm in diameter, yellowish or pale yellow, scattered pilose; stem erect, including scape 30-35cm long, glabrous, green.

Leaves lanceolate, lanceolate-oblong or narrowly oblong, 7-9cm long, 2-2.5cm wide, acuminate at apex, attenuate and amplexicaul at base, glabrous, lustrous green surface, pale green beneath.

Flowers many, terminal, green or yellowish green, spicate; scape terminal, erect, 10-15cm long, glabrous, green; 4-angular; bracts erect-patent, lanceolate, acuminate at apex, glabrous; ovaries 1.2-1.5cm long, about 3mm wide; the dorsal sepal ovate-rounded, concave, 5-6mm

long, obtuse at apex, 5-nerved, the lateral ones falcate-ovate, as long as the dorsal sepal, concave; petals obliquely ovate, 4.5-5mm long; lip ovate-oblong, 5-5.5mm long, obtuse at apex; spur cylindric, deflexed curved, about 1 cm long, obtuse at apex; column short.

Endemic, known from central part of the island at the elevations of 2600-3100m, on grasslands, rather rare.

Specimen examined: (詳察過下列標本)

TAIWAN: Taichung county: Chichiayangtashan, S. Suzuki 5470 (Typus).

地生蘭、根少數、肉質，甚長，長2-3.5cm，徑3-4mm，黃色或淡黃色，散生有柔毛，莖直立，連同花莖長30-35cm，光滑，綠色。

葉披針形，披針狀長橢圓形或狹長橢圓形，長7-9cm，寬2-2.5cm，先端漸尖，基部漸狹而抱莖，光滑，表面呈有光澤綠色，背面淡綠色。

花多數，頂生，綠色或黃綠色，穗狀花序；花莖頂生，直立，長10-15cm，光滑，綠色，4稜形；苞片直立顯著，披針形，先端漸尖，光滑；子房長1.2-1.5cm，寬約3mm，後萼片卵狀圓形，下部凹入，長5-6mm，先端鈍，脈5條，側萼片鐮刀狀卵形，與後萼片同長，花瓣歪卵形，長4.5-5mm；唇瓣卵狀長橢圓形，長5-5.5mm，先端鈍；距圓柱形，反捲彎曲，長約1cm，先端鈍，蕊柱短。

固有，生長於中部高海拔約2600-3100m的高山草原上，較少。

4. *Platanthera pachyglossa* Hayata, Icon. Pl. Form. 4: 123, pl. 21 (1914). 厚唇粉蝶蘭

Description: please see page 291. 詳細種的敘述請見第291頁

Specimen examined: (詳細過下列標本)

TAIWAN: Hsinchu county: Kitasoten, T. Suzuki 4605.
Miaoli county: Itzeshan, S. Sasaki s.n. July 18 1932; Tapachienshan, T.C. Huang & C.F. Hsieh 7263. **Nantou county:** Hohuanshan, S.S. Ying 4817, 4833, 3798, 1273, 1273
B. Taichung county: Hseuhshan, S. Sasaki s.n. July 23 1932, S.S. Ying 3837, 3711; Chichiayangtashan, G. Masamune s.n. July 9 1930. **Chiayi county:** Mt. Morrison, S. Sasaki s.n. Aug. 1935; Tashuik'ushan, S.S. Ying 2768,

= *P. sachalinensis* v. *comitii***5. *Platanthera longibracteata* Hayata, Icon. Pl. Form.****4: 122 (1914).** 長苞粉蝶蘭

Description: Please see page 290. (詳細種的敘述請見第 290 頁)

Specimen examined: (詳察過下列標本)

TAIWAN: Ilan county: Taipingshan, S. Suzuki s.n.

May 8 1932 & Aug. 10 1928. **Taipei county:** Saukun et Kyanrawa, T. Suzuki 17090. **Miaoli county:** Tapachienshan, T.C. Huang & C. F. Hsieh 7200. **Nantou county:** Hohuan-shan, S. S. Ying 4799, 4805; Tungyen to Yin Hai, M.T. Kao & C.F. Hsieh 5734. **Taichung county:** Hseuhshan, S.S. Ying 3701. **Chiayi county:** Tungpu to Patungkuang, Nakamura s.n. Aug. 17 1942; Patungkuang to Hsiukuluan-shan, S.S. Ying 1923; Chienshan, S.S. Ying 2840, 2830, 2800, 2777; Mt. Morrison, S. Sasaki s.n. Aug. 1936.

4. ORCHIS Linn. 蘭屬

Terrestrials; rarely epiphytic which usually growing on rocks or tree trunks; rhizomes short; roots tuberous or not; stem simple, few-leaved. Leaves exarticulate, convolutive, linear to elliptic-oblong, alternate, sometimes nearly radical.

Flowers few, rather small, bracteate, in terminal spike, resupinate; bracts small or conspicuous; sepals free, spreading; the dorsal one often forming a hood with petals; lip slightly adnate to the column 3-lobed, spurred at base; column short with parallel anther-locules; pollinia with a caudicle attached to glands, these in a bursicle or pouch.

About 100 species of the northern temperate zone of world. eight species in Taiwan, all the alpine plants.

地生蘭，少數亦有呈着生者，常生長於岩石或樹幹上；根莖短，根塊狀

或不呈塊狀；莖單生，有少數的葉。葉不具關節，包旋性，線形至橢圓狀長橢圓形，互生，有時幾全呈根生狀態。

花少數，較小，有苞片，呈頂生的穗狀花序，轉位；苞片小或顯著；萼片離生、擴展，後萼片常與花瓣形成花罩（花兜）；唇瓣與蕊柱略相連，3裂，基部有距；蕊柱短，常與花藥室平行；花粉塊有柄且附着有腺體。

約有 100 種，主分佈於北半球溫帶，台灣產 8 種，皆為高山性。

KEY TO THE SPECIES 種的檢索表

1. Median lobe of lip deeply 2-lobed, not with a sinus at apex.

(唇瓣的中裂片深 2 裂，先端不具小尖突)

= *O. himalaica*

2. Flowers white with pink spots in lip 1. *O. taoloi*

(花白色唇瓣上有粉紅色斑點)

紅斑蘭

2. Flowers pink not with any color spots in lip

(花粉紅色，唇瓣上不具任何顏色的斑點) 2. *O. tominagai*

紅花蘭

1. Median lobe of lip entire, emarginate or 3-lobed, if the latter, the median lobe like a sinus.

(唇瓣的中裂片全緣或凹頭的或 3 裂，如為 3 裂，中裂片通常具有尖突)

2. Median lobe of lip entire or emarginate.

(唇瓣的中裂片全緣或凹頭的)

3. Flowers small, lightly violet with small brownish yellow spots in the inner surface of lip 3. *O. alpestris*

= *An. kashyapa nitens*

(花較小，淡紫色在唇瓣內面有小而黃褐色的斑點)

小黃斑蘭

3. Flowers relatively large, rose, red, reddish purple, rarely white, not spotted.

(花較大，薔薇色，紅色，紅紫色，少數呈白色，不具斑點)

4. Leaves oblong or ovate-lanceolate, 5-6 cm long, 1-1.5 cm wide 4. *O. yuukiana*

= *An. kashyapa grande*

(葉長橢圓形或卵狀披針形，長 5-6 cm，寬 1-1.5 cm)

紫花蘭

4. Leaves linear or linear-lanceolate, 3-9 cm long, 3-6 mm wide.

(葉線形或線狀披針形，長 3-9 cm，寬 3-6 mm.)

5. Flowers usually white, rarely rose-purple; lip rounded-obovate in outline, about 6mm long, 0.5mm wide 5. *O. takasago-montana*
(花通常白色少數亦有呈紅紫色者, 唇瓣圓倒卵形, 高山蘭
長約6mm, 寬0.5mm)

5. Flowers rose; lip semi-orbicular or ovate-rounded in outline, about 1-1.2cm long, 8-9mm wide
(花粉紅色, 唇瓣半圓形或卵狀圓形 6. *O. taiwanensis*
長1-1.2cm, 寬8-9mm) 台灣蘭

2. Median lobe of lip 3-lobed and the median lobe like a sinus.

(唇瓣中裂片3裂, 其中裂片如同一小尖突)

3. Flowers white 7. *O. kunihikoana* ✓
(花白色) 白花蘭

3. Flowers purplish red 8. *O. kiraiishiensis* ✓
(花紅紫色) 奇萊蘭

= *O. kunihikoana*

1. **Orchis taolooi** Ying, Alp. Pl. Taiwan in Col. 1: 75, pl. 102 (1975). 紅斑蘭

Description: Please see page 273. 種的敘述詳見第273頁

Specimen examined: 詳察過下列標本

TAIWAN: Miaoli county: Tapachienshan, S.S. Ying 4179, 4164, 4120, 4121 (Typus).

2. **Orchis tominagai** (Hayata) Ying in Quart. Journ. Chin. Forest. 8(4): 140 (1975). 紅花蘭

Terrestrials; tubers ovoid, 5-7mm in diameter, glabrous; stem simple, erect or ascending, 8-12cm long, slender, glabrous; sheaths 1-2, lanceolate, membranous, acuminate at apex, amplexical at base.

Leaves solitary or two, alternate, oblanceolate or linear-lanceolate, 4-5cm long, 3-4mm wide, acute, gradually attenuate at base, membranous, entire, midrib elevated be-

neath; lateral veins inconspicuous, shining green above, pale green beneath.

Flowers 1 or 2, rather small, 6-7mm in diameter, racemose; the scape terminal, 3-4cm long, erect, glabrous; the pedicels with ovaries 7-10mm long, glabrous; sepals oblong, 6-7mm long, 3-4mm wide, the dorsal one obtuse, contracted at base, glabrous, 3-nerved; the lateral ones oblique; petals ovate or oblong triangular, 5.5-6.5mm long, about 3mm wide, acute at apex, much obliquely at base, with short claws; lip adnate to the column at base, sessile, slightly plicate, obtriangular in outline, 1-1.2cm long, about 3mm wide, 3-lobed, cuspidate at apex; spur 5-6mm long, about 1mm across, acute at apex; column short, about 1.5mm long.

Endemic, known from the central part of the island at the elevations of 2700-3700m, on moist and mossy rocks, rather rare.

Specimen examined: (詳察過下列標本)

TAIWAN: Nantou county: Tientashan, *T. Towingana* s.n.
Aug. 1916.

地生蘭，塊根卵形，徑5-7mm，光滑；莖單生，直立或斜上昇，長8-12cm，細長，光滑；鞘1-2枚，披針形，膜質，先端漸尖，基部抱莖。

葉單一或二枚，互生，倒披針形或線狀披針形，長4-5cm。寬3-4mm，先端銳尖，基部漸窄，膜質，全緣，中肋隆起於背面，側脈不顯著，表面呈有光澤綠色，背面淡綠色。

花1或2枚，較小，徑6-7mm，總狀花序；花莖頂生，長3-4cm，直立，光滑；花梗連同子房長7-10mm，光滑；萼片長橢圓形，長6-7mm，寬3-4mm；後萼片先端鈍，基部緊縮，光滑，脈3條，側萼片基部歪；花瓣卵形或長橢圓狀三角形，長5.5-6.5mm，寬約3mm，先端銳尖，基部甚歪，有短爪；唇瓣基部與蕊柱相連，無柄，略皺褶，外形呈倒三角形，長1-1.2cm，寬約3mm，3裂，先端尾狀，距長5-6mm，徑約1mm，先端銳尖；蕊柱短，長約1.5mm。

固有，生長於台灣中部高海拔約2700-3700m，見於潮濕多苔蘚類的

岩石上，較少。

= *Amitostigma alpestre*

3. **Orchis alpestre** (Fukuyama) Ying in Quart. Journ. Chin. For. **8**(4): 140 (1975). 小黃斑蘭

Description: Please see page 265. 詳細種的敘述請見第265頁
Specimen examined: (詳察過下列標本)

TAIWAN: Ilan county: Nanhutashan: *N. Fukuyama 4692*.
Nantou county: Hohuanshan, *S.S. Ying 4930*.

= *Amitostigma gracile* (R.) Schltr

4. **Orchis yuukiana** (Fukuyama) Ying in Quart. Journ. Chin. For. **8**(4): 140 (1975). 紫花蘭

Terrestrials; tubers ovoid or oblong-elliptic; stem simple, 10-30 cm long, erect, slender, glabrous; sheaths 1 or 2, basal, membranous, amplexical at base.

Leaves solitary, rarely two, narrowly oblong, ovate-lanceolate or rarely elongate elliptic, 5-6 cm long, 1-1.5 cm wide, obtuse or acute at apex, decurrent and amplexical at base, chartaceous, glabrous, entire.

Flowers 10-20, pink, subpatent, racemose; the scape 3-5 cm long, erect or ascending, glabrous; bracts ovate-lanceolate, 5-6 mm long, acuminate at apex, contracted and slightly amplexical at base, glabrous; the pedicels with ovaries 1-1.7 cm long, glabrous; the dorsal sepal ovate, 2.5-3 mm long, 1.5-2 mm wide, obtuse at apex, contracted at base, concave, membranous, 1-nerved; the lateral ones obovate, 3 mm long, 2 mm wide, slightly oblique, obtuse, attenuate at base, membranous, glabrous, 1-nerved; lip glabrous, suberect, 3.5-4 mm long, 3-lobed, the median lobe obovate-cuneate, 1.5-2 mm long, about 1.5 mm wide, truncate at apex, concave, the lateral lobes linear or elongate triangular, 1-1.5 mm long; spur cylindrical, 2-2.5 mm long, obtuse at apex; column short.

Endemic, at the elevations of 2400-2900 m in central

part of the island, on grassland, rather rare.

Specimen examined: (詳察過下列標本)

TAIWAN: Miaoli county: *N. Fukuyawa 4116*.

地生蘭，塊根卵形或長橢圓狀橢圓形；莖無分枝，長10-30cm，直立，細長，光滑；鞘1或2枚，基生，膜質，基部抱莖。

葉單生，極少數有2枚者，狹長橢圓形，卵狀披針形或少數為長橢圓形的，長5-6cm，寬1-1.5cm，先端鈍或銳尖，基部延伸而抱莖，紙質，光滑，全緣。

花10-20枚，粉紅色，近似顯著，總狀花序；花莖長3-5cm，直立或斜上昇，光滑；苞片卵狀披針形，長5-6mm，先端漸尖，基部緊縮而略抱莖，光滑；花梗連同子房長1-1.7cm，光滑，後萼片卵形，長2.5-3mm，寬1.5-2mm，先端鈍，基部緊縮，凹入成槽狀的，膜質，脈1條，側萼片倒卵形，長3mm，寬2mm，略歪，先端鈍，基部漸狹，膜質，光滑，脈1條；唇瓣光滑，近似直立，長3.5-4mm，3裂，中裂片倒卵狀楔形，長1.5-2mm，寬約1.5mm，先端截斷狀，基部凹入成槽狀，側裂片線形或長三角形，長1-1.5mm；距圓柱形，長2-2.5mm，先端鈍；蕊柱短。

固有，生長於中部高海拔約2400-2900m處。

5. *Orchis takasago-montana* Masamune in *Trans. Nat.*

Hist. Soc. Form. **24**: 206 (1934). 高山蘭 = *Orchis chinensis* D. Don

Terrestrials; tubers ovoid or fusiform, 3-4mm long, about 2.5mm in diameter; stem simple, erect or nearly so; sheath one, basal, membranous.

Leaves 2-3, alternate, linear-lanceolate, 3-7cm long, 3-4mm wide, acute or acuminate at apex, narrowly decurrented to the sheaths at base, chartaceous, entire, glabrous on both surfaces; sheaths glabrous, cylindrical, 1-10mm long. pedicels with ovaries fusiform, 6-9mm long; sepals subequal, the dorsal one ovate or oblong, 4

Flowers 3-4, white or rarely rose-purple, patent, 1.2-1.5cm in diameter, racemose; bracts lanceolate or nearly so, 7-8mm long, acute at apex; the ovate or oblong, 4-4.5mm long, about 2mm wide, the lateral ones obliquely falcate-oblong, 4-4.5mm long, about 2mm wide, obtuse

and mucronate at apex; petals smaller, ovate, 4-4.5mm long, about 2mm wide; lip 3-lobed, spurred, the lamina rounded-obovate in outline, 6-7mm long, about 6.5mm wide; the median lobe about 5mm long, 4mm wide, truncate at apex, lateral lobes minute.

Endemic, known from high altitudes of central part of the island, rather rare.

Specimen examined: (詳察過下列標本)

TAIWAN: Nantou county: Nankaoshan, *Masamune et al.* *unse s.n. Feb. 1933.*

地生蘭，塊根卵形或紡錘形，長3-4mm，徑約2.5mm；莖無分枝，直立或近似如此；鞘一枚，基生，膜質。

葉2-3枚，互生，線狀披針形，長3-7cm，寬3-4mm，先端銳尖或漸尖，基部漸窄延伸而抱莖，紙質，全緣，表裏兩面均光滑；鞘光滑，圓柱形，長1-10mm。

花3-4枚，白色或少數紫紅色，顯著，徑1.2-1.5cm，總狀花序；苞片披針形或近似如此，長7-8mm，先端銳尖；花梗連同子房長6-9mm，紡錘形；萼片近似整齊，後萼片卵形或長橢圓形，長4-4.5mm，寬約2mm，側萼片歪鐮刀狀長橢圓形，長4-4.5mm，寬2mm，先端鈍而有短尖突；花瓣較小，卵形，長4-4.5mm，寬約2mm；唇瓣3裂，有距，唇瓣片外形呈圓狀倒卵形，長6-7mm，寬約6.5mm，中裂片長約5mm，寬約4mm，先端截斷狀，側裂片微小。

固有，生長於台灣中部高海拔山地，較稀少。

6. *Orchis taiwanensis* Fukuyama in Bot. Mag. Tokyo **49**: 290 (1935). 台灣蘭

Terrestrials; tubers ovoid or globose, 5-6mm across, glabrous; stem simple, 7-18cm long, erect or ascending, glabrous, sheaths 1-2, membranous, acute at apex, amplexical at base.

Leaves 2 or 3, alternate, linear, linear-lanceolate or lanceolate, 3.5-9cm long, 4-15mm wide, chartaceous, acute or acuminate at apex, gradually attenuate or abruptly contracted at base, 3-nerved, glabrous, shining green sur-

face, pale green beneath.

Flowers 3-11, pink, subpatent, 6-8mm in diameter, racemose; the scape terminal, erect, 3-5 cm long, glabrous; bracts lanceolate, 1-1.5 cm long, acuminate at apex, contracted at base, glabrous; the pedicels with ovaries 1-2 cm long, glabrous, erect; the dorsal sepal elliptic, 5-5.5 mm long, about 2.5 mm wide, obtuse, narrowed at base, concave, 1-nerved, glabrous; the lateral sepals oblique oblong or ovate-oblong, strongly reflexed, 5-6 mm long, 3-3.5 mm wide; petals obliquely oblong, 5-5.5 mm long, about 2.5 mm wide, wavy on margin, 1-nerved, obtuse at apex; lip sessile, semi-orbicular or ovate-orbicular in outline, about 1 cm long, 1.1 cm wide, minutely pilose surface, truncate or obtuse at base, shallowly 3-lobed, the lateral lobes oblique oblong or semi-orbicular, obtuse at apex; the median lobe semi-orbicular; slightly wavy on margin; spur erect, about 1.2 cm long, 1.5 mm in diameter; column about 2 mm long.

Endemic, known from the central part of the island at the elevations of 2600-3400 m on grassland, not common.

Specimen examined: (詳察過下列標本)

TAIWAN: Nantou county: Hohuanshan. *N. Fukuyama*
4526. Taichung county: Hseuhshan. *M. Tagawa* 4529, 4530.

地生蘭，塊根卵形或球形，徑5-6 mm；莖無分枝，長7-18 cm，直立或斜上昇，光滑；鞘1-2枚，膜質，先端銳尖，基部抱莖。

葉2或3枚，互生，線形，線狀披針形或披針形，長3.5-9 cm，寬4-15 mm，紙質，先端銳尖或漸尖，基部漸狹而突呈緊縮狀，脈3條，光滑，表面呈有光澤綠色，背面淡綠色。

花3-11枚，粉紅色，近似顯着，徑6-8 mm，總狀花序；花莖頂生，直立，長3-5 cm，光滑；苞片披針形，長1-1.5 cm，先端漸尖形，基部緊縮狀，光滑，花梗連同子房長1-2 cm，光滑，直立；後萼片橢圓形，長5-5.5 mm，寬約2.5 mm，先端鈍，基部窄且凹入而成槽狀，脈1條，光滑；側萼片歪長橢圓形或卵狀長橢圓形，強反捲，長5-6 mm，寬3-3.5

mm; 花瓣歪長橢圓形，長 5-5.5mm，寬 2.5mm，波狀緣，脈 1 條，先端鈍；唇瓣無爪，外形呈半圓形或卵狀圓形，長 1 cm，寬 1.1 cm，表面有短柔毛，基部截斷狀或鈍形，淺 3 裂，側裂片歪長橢圓形或半圓形，先端鈍；中裂片半圓形，略呈波狀緣；距直立，長約 1.2 cm，徑 1.5mm；蕊柱長約 2mm。

固有，生長於台灣中部高海拔約 2600-3400 m 處，見於草生地，較稀少。

7. *Orchis kunihkoana* Masamune & Fukuyama in Bot. Mag. Toago **49**: 663 (1935) 白花蘭

Description: Please see page 271. (種的敘述詳見第 271 頁)

Specimen examined: (詳察過下列標本)

Nantou county: Tashuikutashan. *D. Orimoto* 4704. S.S. *Ying* 2812. Shukuluan S.S. *Ying* 2708.

8. *Orchis kiraishiensis* Hayata, Icon. Pl. Form. **9**: 116, f. 41 (1920). 奇萊蘭

Description: Please see page 269. (種的敘述詳見第 269 頁)

Specimen examined: (詳察過下列標本)

TAIWAN: Ilan county: Nanhutashan. S.S. *Ying* 2041. Taichung county: Hseuhshan. S.S. *Ying* 5131. Chiayi county: Mt Morrison. S.S. *Ying* 1962.

5. HEMIPILIA Lindley 舌緣蘭屬

Terrestrials; tubers ovoid, fleshy. Leaf solitary, radical, cordate or nearly so. Flowers few to rather many, racemose; sepals equal, the lateral ones spreading; petals broadly ovate, entire; lip continuous with column, obscurely 3-lobed, spreading, spurred; the spur trumpet-shaped; column very short; rostellum broad, projecting from between anther-cells, complicate, stigmatic process absent; anther-cell subdivergent; the tip produced into grooves of the rostellum; pollinia 2, the caudicles long, the glands

distinct, exposed.

Several species in Himalaya, Thailand and Vietnan.
one species in Taiwan.

地生蘭，塊根球形，肉質。葉單一，根生，心形或近似如此。花少數或較多，總狀花序，萼片整齊，側萼片擴展；花瓣闊卵形，全緣；唇瓣連與蕊柱，不明顯3裂，擴展，有距，距喇叭狀；蕊柱甚短，喙闊，相連於花藥室間，複雜的；無柱頭附屬物，花藥室近似分散而出，先端有溝狀的喙；花粉塊2枚，柄長，腺體顯著，裸出。

約有數種，主產於喜馬拉雅山，泰國及越南。台灣產一種。

1. **Hemipilia cordifolia** Lindley, Gen. & Sp. Orch. 296 (1835); Masamune, List Vasc. Pl. Taiwan 159 (1954). 圓葉舌緣蘭

Terrestrials; root a fleshy tuber, ovoid, 1-2.5 cm long, 3-4 mm in diameter, glabrous, sometimes scattered purple spots; stemless or short stem.

Leaf solitary, rounded cordate, 5-7 cm long, 5-6 cm wide, acuminate and shortly caudate at apex, cordate at base, thickened chartaceous, somewhat fleshy, entire or obscurely crispate, lustrous green surface, pale green beneath, 3-7-nerved raised on beneath, glabrous.

Flowers 10-20, small, 1-1.5 cm long, 7-9 mm in diameter, pink or lightly purple, racemose; scape terminal, 16-24 cm long, erect, slender, glabrous; bracts lanceolate or ovate-lanceolate, 6-7 mm long, acute at apex, amplexical at base; the pedicels with ovaries 1.5-2 cm long; sepals subequal, oblong, patent; the dorsal one concave, 5-6 mm long, about 3 mm wide, obtuse at apex, usually forming a hood with petals; the lateral ones somewhat oblique, 5-5.5 mm long, about 3.5 mm wide, obtuse at apex, reflexed; petals obovate, 6-7.5 mm long, 3-4 mm wide, obtuse at apex, oblique at base; lip 7-8 mm long, 4-5 mm wide, 3-lobed, spurred; the spur 1.2-1.5 cm long, about

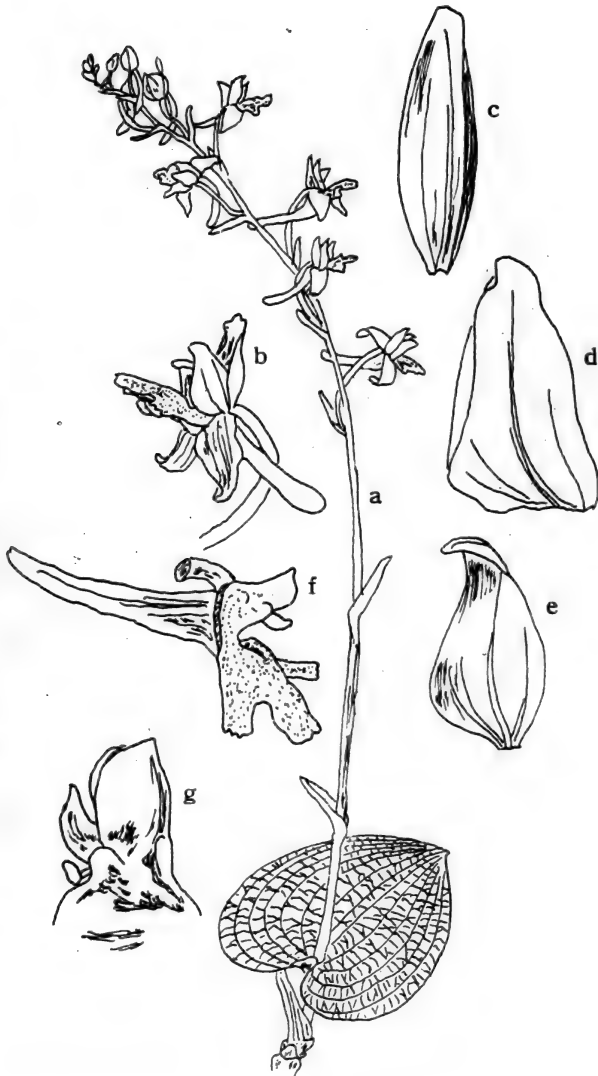


圖 (Fig) 126 圓葉舌綠蘭 (*Hemipilia cordifolia*)

- a) 開花植物體 (Flowering plant) b) 花 (Flower) c) 後萼片 (Dorsal sepal) d) 側萼片 (Lateral sepal) e) 花瓣 (Petal) f) 唇瓣, 蕊柱距 (Lip, Column spur) g) 蕊柱 (Column)

2mm across; the lobes rectangular, truncate at apex; the median one largest and longest, hirsute; column short, 4-6mm long.

Himalaya regions. Taiwan, known from the alpine regions of the elevations of 1800-2900m in northern and central parts of the island, under the *tsuga* forests and grasslands, rather common.

Specimen: examined:

TAIWAN: Taichung county: Hseuhshan, S.S. *Ying* 3698

地生蘭，根呈肉質塊根，卵形，長1-2.5cm，徑3-4mm，光滑，有時散生有紫紅色斑點；無莖或莖很短。

葉一枚，圓心形，長5-7cm，寬5-6cm，先端漸尖而略呈短尾狀，基部心形，厚紙質，略呈肉質，全緣或有不明顯皺折。表面呈有光澤綠色，背面淡綠色，脈3-7條隆起於背面，光滑。

花10-20枚，小，長1-1.5cm，徑7-9mm，粉紅色或淡紫色，總狀花序；花莖頂生，長16-24cm，直立，細長，光滑；苞片披針形或卵狀披針形，長6-7mm，先端銳尖，基部抱莖；花梗連同子房長1.5-2cm；萼片長橢圓形，顯著，後萼片凹入而成槽狀，長5-6mm，寬約3mm，先端鈍，常與花瓣形成花兜；側萼片略歪，長5-5.5mm，寬約3.5mm，先端鈍，反捲；花瓣倒卵形，長6-7.5mm，寬3-4mm，先端鈍，基部歪；唇瓣長7-8mm，寬4-5mm，3裂，有距，距長1.2-1.5cm，徑約2mm，裂片四方形，先端截斷狀，中裂片最大及最長，有毛茸，蕊柱短，長4-6mm。

喜馬拉雅山地區，台灣，生長於北部及中部高海拔約1800-2900m山地，常見於鐵杉林下及草生地間，較常見。

6. HERMINIUM Linn. 角盤蘭屬

Terrestrials with an undivided radical tuber. Leaves few, not articulate, linear, sheathed at base. Flowers small, many in terminal green spikes, resupinate; sepals equal, free; petals usually smaller, conniving hood with the dorsal sepal; lip spreading or pendulous, adnate to the column at base, ecalcarate, 3-lobed; column very

short at the top on either side of the anther with a tuberos stolid; anther inserted by a broad firmly adnate base, obtuse; pollinia 2, pyriform, each with a very short caudicle and a viscidium, fertile stigma flat or convex, confluent at base separated by a furrow.

About 12 or more species in Europe and Asia. one species in Taiwan.

地生蘭，有不分化的塊根。葉少數，不具關節，線形，基部有鞘。花小，多數，呈頂生的穗狀花序，綠色，轉位的；萼片整齊，離生，花瓣常較小，與後萼片相連而形成花兜；唇瓣擴展或懸垂，基部與蕊柱相連，無距，3裂；蕊柱甚短，在花藥的兩側有一筒狀的瘤狀突起，花藥抽自於潤而連生的基部，鈍；花粉塊2枚，梨形，每一枚具有很短的柄及粘盤，孕性柱頭扁平或凸出，基部匯合而以淺溝相隔。

約有十二或更多種，主分佈於歐洲及亞洲，台灣僅產一種。

1. **Herminium lanceum** (Thunb. ex Sw.) J. Vuijk. in *Blumea* 11:228 (1961). 角盤蘭，餘零子草

Description: Please see page 207. / 種的敘述詳見第207頁

Specimen examined: (詳察過下列標本)

TAIWAN: Ilan county: Nanhutashan, S.S. *Ying* 3068; Taipingshan, S. *Suzuki s.n.* July 17 & 19 1929 & Aug. 8 1928; Sihyuen, S. *Suzuki s.n.* Oct. 23 1928. **Taoyuen county:** Tahu, H. *Simada SH1189*. **Nantou county:** Hohuanshan, S.S. *Ying* 4924, 4811; Tung yen to Yin Hai, T.C. *Huang, C.F. Hsieh & M.T. Kao* 5720. **Maioli county:** Tapachienshan, S.S. *Ying* 4356. **Taichung county:** Hseuh-shan, S.S. *Ying* 3838, 3839; Chichiayangtashan, S. *Suzuki s.n.* July 9 1930, G. *Masamune s.n.* July 7 1930. **Chiayi county:** Alishan to Taishan, *Yamamoto & Mori s.n.* Nov. 6 1932; **Kaohsiung county:** Chienching, *Yamamoto & Mori s.n.* Aug. 12 1936; Chushan, *Yamamoto & Mori s.n.* Aug. 10 1936. **Pingtung county:** Chinanshan, *Yamamoto & Mori s.n.* Aug. 13 1936.

7. HABENARIA Willd. 玉鳳蘭屬

Terrestrials with tuberous roots or with rhizome; stem simple arising from tuberous roots.

Leaves exarticulate, convolutive, linear to oblong, acute, herbaceous.

Flowers green, white, yellow, pink or purple, small to rather large, resupinate, in terminal erect raceme or spike; sepals equal, the dorsal one vaulted, usually conniving a hood with the petals; petals entire or 2-partite; lip spurred, 3-lobed or 3-partite, slightly adnate to base of the column; spur long thin with funnel-shaped base; column short on either side of the anther with tubercular stielid; anther erect, broadly inserted; pollinia 2, each with a caudicle; rostellum small, rarely larger; stigmas 2, distinct, vaulted or mostly each on a short to long stigmatophore.

About 700 species, nearly a cosmopolitan genus. more than 10 species in Taiwan, and two species, the alpine ones.

地生蘭，具有塊根或根莖，莖無分枝，抽自於塊根。

葉無關節，迴旋性，線形或長橢圓形，先端銳尖，紙質或草質。

花綠色、白色、黃色、淡紅色或紫紅色，小或較大，轉位，呈頂生直立總狀花序或穗狀花序，萼片整齊，後萼片凹下而成槽狀，常與花瓣相連而形成花兜，花瓣全緣或2裂；唇瓣有距，3裂或3深裂，基部與蕊柱相連，距長而瘦，基部略成漏斗狀；蕊柱短，在花藥的兩側各有一筒狀的瘤狀突起；花藥直立，花粉塊2枚，有柄，喙小，少數亦有較大者；柱頭2枚，顯著，槽狀或多數與一柱頭具有一或長或短的柱頭帶。

約有七百餘種，全世界各地皆有分佈；台灣約產十種左右，其中2種為高山性。

KEY TO THE SPECIES 種的檢索表

1. Flowers green or greenish yellow, lip linear oblong

(花綠色或黃綠色，唇瓣線狀長橢圓

形)

..... 1. *H. longicalcarata*

長距玉鳳蘭

1. Flowers white; lip linear 2. *H. transnokoensis*
(花白色, 唇瓣線形) 能高山玉鳳蘭

1. ***Habenaria longicalcarata*** (Hayata) Ying, **comb. nov.**
長距玉鳳蘭

Platanthera longicalcarata Hayata in Journ. Cr. Sci. Univ. Tokyo **30** (1):350 (1911), (Mat. Fl. Form.).

Tulotis devolii Lin. et Hu in Quart. Chin. For. Journ. **9** (1):53, pl. 2 (1976). syn. nov.

Tulotis longicalcarata (Hayata) Ying MMS.

Terrestrials; roots thickened, fleshy, sometimes cylindrical-like, 4-6 cm long; stem simple, green, erect, including scape 20-40 cm long, leafy at the base, smooth.

Leaves linear-lanceolate, lanceolate to lanceolate-oblong, 10-15 cm long, 1.5-2.5 cm wide, obtuse at apex, narrowed and amplexicaul at the base, lustrous green surface, pale green beneath.

Flowers 5-9, green, small, spicate; the scape 15-25 cm long, terminal, green, glabrous, with some small leaf-like scales; bracts lanceolate or linear-lanceolate, 1-1.2 cm long, acuminate at apex; the ovaries green, ascending, 1-1.5 cm long; sepals subequal, the dorsal one ovate or elliptic-ovate, 3-3.2 mm long, about 2.5 mm wide, obtuse at apex, the lateral ones spreading, somewhat narrower, 3.5-4 mm long, about 1.5-2 mm wide; petals narrowly oblong, 3-3.1 mm long, about 1 mm wide, obtuse, oblique at base; lip spurred, 3-lobed at base, the lateral lobes minute, square, spreading, median lobe ovate or oblong, obtuse and slightly curved at apex; spur cylindrical, 7-10 mm long; column short.

Endemic, known from central part of the island at the elevations of 1700-2800 m, on grassland or roadside, rather rare.

Specimen examined: **TAIWAN: Chiayi county: Mt. Morrison, S. Nagasawa 697.**

Lin and Hu's *T. devolii* just match the characters of Hayata's *Platanthera longicalcarata*, Here I propose a new name of combination of *H. longicalcarata* in stead of *T. devolii*. the genus *Toultis* now usually in stead of by *Habenaria*.

地生蘭，根粗厚，肉質，有時呈圓柱狀，長4-6cm；莖無分枝，綠色，直立，連同花莖長20-40cm，基部有葉，光滑。

葉線狀披針形，披針形至披針狀長橢圓形，長10-15cm，寬1.5-2.5cm，先端鈍，基部窄而抱莖，表面為有光澤綠色，背面為淡綠色。

花5-9枚，綠色，小，穗狀花序，花莖長15-25cm，頂生，綠色，光滑，有數枚如葉狀的鱗片；苞片披針形或線狀披針形，長1-1.2cm，先端漸尖；子房綠色，斜上昇，長1-1.5cm；萼片近似整齊，後萼片卵形或橢圓狀卵形，長3-3.2mm，寬2.5mm，先端鈍，側萼片擴展，略窄，長3.5-4mm，寬1.5-2mm；花瓣狹長橢圓形，長3-3.1mm，寬約1mm，先端鈍，基部歪；唇瓣有距，基部3裂，側裂片小，四方形，擴展，中裂片卵形或長橢圓形，先端微彎曲；距圓柱形，長7-10mm，蕊柱短。

固有，生長於台灣中部海拔約1700-2800m山地，草地或路旁，較稀少。

2. *Habenaria transnokoensis* (Ohwi et Fukuyama) Ying *comb. nov.* 能高山玉鳳蘭

Platanthera transnokoensis Ohwi et Fukuyama in Bot. Mag. Tokyo **48**: 297 (1934),

Toultis transnokoensis (Ohwi et Fukuyama) Ying MMS.

Terrestrials; roots thickened, elongate, fleshy, 5-7cm long; stem simple, including scape 20-30cm long, terete, leafy from medium to base, sheathed at base; the sheaths 2, leafy, lanceolate.

Leaves 2-3, elliptic or oblong-elliptic, 7-12cm long, 2-4cm wide, obtuse or obtuse-acute at apex, decurrent and amplexicaul at base, membranous, glabrous.

Flowers many, white, glabrous, subdense, spicate, the scape terminal, erect, 9-14cm long; bracts lanceolate, acute at apex, glabrous; the ovaries erect, about 7mm long, glabrous; sepals subequal, the dorsal one broadly ovate, 4-4.5mm long, about 3mm wide, rounded-obtuse at apex, contracted at base, 3-nerved, the lateral ones subfalcate-ovate, deflexed, somewhat narrower and longer than the dorsal one, about 5.5mm long, 2.5mm wide, obtuse at apex, 3-nerved; petals obliquely ovate, 4-4.2mm long, 2-2.25mm wide, obtuse at apex; lip 3-lobed at base, the medium lobe patent, linear, suberect, declinate, 6.5-6.8mm long, 1.2-1.25mm wide, obtuse at apex, the lateral ones minute, triangular, about 1mm long, acute at apex; spur cylindrical, slender, 7-8mm long, about 1.2mm in diameter; anthers parallel, erect, clavate, rounded at apex, acuminate at base; rostellum inconspicuous.

Endemic, known from central part of the island at high altitudes of 3000-3500m, on rocks, rather rare.

Specimen examined:

TAIWAN: Nantou county: Chirai south peak, *J. Ohwi* 3971.

地生蘭，根粗厚，甚長，肉質，長5-7cm；莖無分枝，連同花莖長20-30cm，圓柱形，基部及中部有葉，基部有鞘，鞘2枚，葉狀，披針形。

葉2-3枚，橢圓形或長橢圓狀橢圓形，長7-12cm，寬2-4cm，先端鈍或鈍銳尖，基部延伸而抱莖，膜質，光滑。

花多數，白色，光滑，近似密生，穗狀花序；花莖頂生，直立，長9-14cm；苞片披針形，先端銳尖，光滑；子房直立，長約7mm，光滑；萼片近似整齊，後萼片闊卵形，長4-4.5mm，寬約3mm，先端圓鈍，基部緊縮狀，脈3條，側萼片近似鐮刀狀卵形，突然下曲，較後萼片狹而較長，長5.5mm，寬2.5mm，先端鈍，脈3條；花瓣歪卵形，長4-4.2mm，寬2-2.25mm，先端鈍；唇瓣基部3裂，中裂片顯著，線形，近似直立，傾斜，長6.5-6.8mm，寬1.2-1.25mm，先端鈍，側裂片小，三角形，長約1mm，先端銳尖，距圓柱形，細長，長7-8mm，徑1.2mm，花藥

平行，直立，棍棒狀，先端圓，基部漸尖，喙不顯著。

固有，生長於台灣中部高海拔約 3000-3500 公尺處，見於多苔蘚類岩石上，較少。

8. ANDROCORYS Schltr. 無距蘭屬

Terrestrials; roots tuberous, ovoid. Leaf solitary, erect, radical, narrow; flowers small, several, scape erect, slender, terminal, the sepals unequal, the dorsal one concave, ovate, adante to the base of petals, the lateral sepals reflexed, oblong; petals spreading, obliquely ovate, usually forming a hood with the dorsal speal; lip small, entire, ligulate, narrowed toward the obtuse apex, adnate to base of the lateral sepals, spurless, anthers large, the locules small, lateral, incurved, the connective larger; rostellum deltoid, erect, with spreading lateral lobes; stigmas 2, papillose, stalked, the caudicles attached to the rostellum; ovary sessile, slightly twisted.

3 or 4 species chiefly in China and Japan. one species in Taiwan.

地生蘭，根呈塊狀，卵形。葉一枚，直立，根生，狹。花小，數枚，花莖直立，細長，頂生，萼片不整齊，後萼片槽狀，卵形，基部與花瓣相連，側萼片突然下曲，長橢圓形；花瓣擴展，歪卵形，通常與後萼片形成花罩；唇瓣小，全緣，舌狀，由狹而至較鈍的先端，基部與側萼片相連，無距，花藥大，室小，側生，內曲的；藥隔大；喙三角形，直立，有擴張性的側裂片，柱頭 2 枚，有柔毛的，有柄，柄附着於喙上，子房無柄，略呈扭曲狀。

3 或 4 種，主分佈於中國及日本，台灣產 1 種。

1. *Androcorys pusillensis* (Ohwi et Fukuyama) Ying, **Comb. nov.** 小無距蘭

Hermillium pusillum Ohwi & Fukuyama in Bot. Mag. Tokyo 48:430 (1934).

Terrestrials; roots tuberous, ovoid, 6-8mm long, 5-7 mm in diameter, pubescent; stem slender, glabrous, 10-13

cm long, stricted, 1-leafed, 1-2-sheathed at base; the sheaths submembranous, dark brown, obtuse at apex, amplexical, at base.

Leaf one, patent, ovate or elongate elliptic, 2-4 cm long, 1-1.5 cm wide, obtuse, narrowly decurrent and amplexical at base, membranous or subchartaceous, glabrous.

Flowers 8-13, small, opened; the scape terminal, 8-9 cm long, glabrous; ovary 5-5.5 mm long, cylindrical, twist, glabrous; sepals unequal, 1-nerved, irregularly denticulate on margin, membranous, the dorsal sepal broadly ligulate, 1-1.2 mm long, about 1 mm wide, obtuse at apex, narrowed at base; the lateral sepals elongate-oblong, 2.2-2.5 mm long, about 0.75 mm wide, acute at apex, more or less narrowed at base; petals connate with dorsal sepal and forming a hood, orbicular, 1.2-1.5 mm long, about 1 mm wide, rounded at apex, strongly obliquely at base, 1-nerved; lip ligulate, spurless, 2-2.2 mm long, about 0.75 mm wide, glabrous, obtuse at apex, narrowed at base, column short.

Endemic, known from high altitudes of 2500-3500 m in southern part of the island, under the forests, rather rare.

Specimen examined:

TAIWAN: Chiayi county: Mt, Morrison, *J. Ohwi 4119* (Typus).

地生蘭，根塊狀，卵形，長6-8mm，徑5-7mm，有毛茸，莖細長，光滑，長10-13cm，有稜線突起，有葉1枚，基部有鞘1-2枚；鞘近似膜質，暗褐色，先端鈍，基部抱莖。膜質或近似膜質，光滑。

葉1枚，顯著，卵形或長橢圓形，長2-4cm，寬1-1.5cm，先端鈍，基部狹延伸抱莖，膜質或亞膜質，光滑。

花8-13枚，小，開放，花莖頂生，長8-9cm，光滑；子房5-5.5mm，圓柱形，扭曲，光滑，萼片不整齊，脈1條，邊緣有不規則鋸齒，膜質；後萼片闊舌形，長1-1.2mm，寬約1mm，先端鈍，基部狹，側萼片長橢圓形，長2-2.5mm，寬約0.75mm，先端銳尖，基部略窄；花瓣與後萼片相連而形成花罩，圓形，長1.2-1.5mm，寬約1mm，先端圓，基部基

歪，脈1條；唇瓣舌形，無距，長2-2.2mm，寬約0.75mm，光滑，先端鈍，基部窄，蕊柱短。

固有，生長於台灣南部的高海拔約2500-3500m，森林下，較少。

9. MICROTIS R. Br. 葱葉蘭屬

Terrestrials with tuberous roots; stem low, 1-foliolate. Leaf solitary, exarticulate, elongate linear, terete, sheathing the lower part of the stem.

Flowers small, numerous, resupinate, in terminal spike, minutely bracteate; dorsal sepal erect, broad, incurved, lateral ones smaller, patent, oblong or lanceolate, spreading or reflexed; petals lanceolate, smaller than the sepals; lip manifestly, differing from the petals, attached to the base of column, spreading or reflexed, with 2 basal thickenings; spurless; column very short, with 2 auricles at apex; rostellum short; stigma short, obtuse, attached at base of rostellum; anther erect, persistent, broad; pollinia granular.

About dozen species chiefly in Australia, a few in e. Asia and Malaya. one species in Taiwan.

地生蘭，有塊根；莖短。葉1枚，無關節，長線形，圓柱狀，莖基部有鞘。

花小，多數，轉位，頂生的穗狀花序，有微小的苞片；後萼片直立，潤，內曲，側萼片小，顯著，長橢圓形或披針形，擴展或反捲；花瓣披針形，較萼片為小，唇瓣顯然地不同於花瓣，基部與蕊柱相連，擴展或反捲，基部有2附屬物，無距；蕊柱很短，先端有2耳狀物，喙短，柱頭短，先端鈍，基部與喙相連，花藥直立，殘存，潤，花粉粒狀。

約有十二種，主分佈於澳洲，少數生長於亞洲東部及馬來西亞，台灣僅產一種。

1. *Microtis unifolia* (Forst. f.) Reichb. f., Beitr. Syst. Pfl. 62 (1871); Sasaki, List Pl. Form. 134 (1928) 葱葉蘭

Terrestrials; roots tuberous, globose, 4-7mm in diame-

ter; stem 10-30 cm long, 1-leaved, with few membranous sheaths.

Leaf one, at the middle of stem, sheathing, terete, 10-25 cm long, 2-2.5 mm wide, gradually narrowed to the tip, obtuse.

Flowers 10 to 18, in terminal 5-15 cm long spike, greenish; bracts ovate-lanceolate, membranous, 2-4 mm long, nearly nervedless, mostly acuminate mucronate; dorsal sepal rounded ovate, 2-2.5 mm long, 2 mm wide, erect, concave, slightly incurved at tip, obtuse; lateral sepal elliptic, 2-2.5 mm long, about 1 mm wide, obtuse, reflexed; petals narrowly ovate, 1.5-2 mm long, 0.5-0.6 mm wide, erect, lip spreading, rectangular-oblong, fleshy, 2-2.5 mm long, about 1 mm wide, truncate at apex, slightly broadened at base, with 2 obscurely callosities at base, spurless; column about 1 mm long; pollinia 2, elliptic, with slender caudicle.

Capsules obovate-elliptic, 4-5 mm long, 2-3 mm wide; seeds enclosed by netted membranous wing.

Chian, Japan, Lyukyu, Java, The Philippines, Srilanka, India and Australia. Taiwan, Known from lower to high altitudes up to 2500 m in northern part of the island, on grassland or shade places, rather rare.

Specimen examined: (詳察過下列標本)

TAIWAN: **Ilan county:** Nanhutashan, S.S. *Ying* 3580.
Taipei county: Shuiyuenti, S. *Sasaki s.n.* March 27 1927, *T.Y. Lin s.n.* March 24 1929, *Shimzu s.n.* Oct. 3 1934, S. *Suzuki s.n.* April 13 1929; Tanshui, S. *Sasaki s.n.* April 7 1929.

地生蘭，根塊狀，球形，徑4-7 mm；莖10-30 cm，有葉1枚，有數枚膜質的鞘。

葉一枚，生長於莖中部，有鞘，圓柱形，長10-25 cm，寬2-2.5 mm，狹，先端鈍。

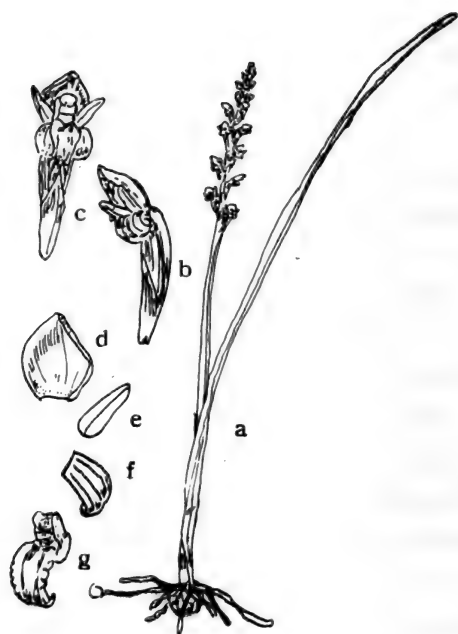


圖 (Fig) 127 葱葉蘭 (*Microtis unifolia*)

a) 着花之植物體 (Flowering plant) bc) 花 (Flower) d) 後萼片 (Dorsal sepal) e) 花瓣 (Petal) f) 側萼片 (Lateral sepal) g) 唇瓣 (Lip)

花 10-18 枚，呈頂生長 5-15 cm 長的穗狀花序，綠色；苞片卵狀披針形，膜質，長 2-4 mm，幾乎無脈，先端有漸尖突；後萼片圓狀卵形，長 2-2.5 mm，寬約 2 mm，直立，槽狀，先端略內曲，鈍，側萼片橢圓形，長 2-2.5 mm，寬約 1 mm，先端鈍，反捲；花瓣狹卵形，長 1.5-2 mm，寬 0.5-0.6 mm，直立；唇瓣擴展，四方狀長橢圓形，肉質，長 2-2.5 mm，寬約 1 mm，先端截斷狀，基部略寬大，基部有 2 不明顯的硬塊，無距，蕊柱長約 1 mm，花粉塊 2 枚，橢圓形，有細長的柄。

蒴果倒卵狀橢圓形，長 4-5 mm，寬 2-3 mm；種子有淺膜網狀的翅。

中國、日本、琉球、爪哇、菲律賓、席里藍卡、印度及澳大利亞。台灣，生長於低至高海拔約 2500 m 處，多見於北部草生地或蔭濕地。

10. LISTERA R. Br. 雙葉蘭屬

Terrestrials; rhizomes slender, short; stem erect, simple; Leaves 2, opposite, near to middle of the stem, sessile, exarticulate, herbaceous or subcoriaceous, spreading, not sheathed, ovate-rounded.

Flowers small, few to many, in terminal raceme, yellowish green or green, sometimes red or purple, pedicelled; bracts small; sepals equal, free, spreading or reflexed; petals similar to the sepals; lip longer than the sepal, attached to base of column, spreading, often pendulous at tip, entire or bifid, usually articulate near base; column erect, short, without a foot, wingless; rostellum terminal, sometimes reclined; stigma broad; anther-locules contiguous; pollinia usually bifid in each locule, granular.

Capsules pedicelled, obovoid or globose, erect or spreading.

About 40 species in Siberia, Europe, e. Asia and N. America. Seven species in Taiwan, and five species, the alpine plants.

地生蘭，根莖細長，莖直立，無分枝。葉2枚，對生，生長於莖的中部，無柄，無關節，草質或近似革質，擴展，無鞘，卵狀圓形。

花小，少數至多數，呈頂生的總狀花序，黃綠色或綠色，有時亦有呈紅色或紫紅色者，有柄；苞片小，萼片整齊，離生，擴展或反捲；花瓣與萼片相似，唇瓣較萼片為長，附着於蕊柱基部，擴展，先端常下垂，全緣或2裂，基部常有關節。蕊柱直立，短，無蕊柱足，無翅，喙頂生，有時呈橫臥狀；柱頭潤，花藥室相連，花粉塊通常在每室中2裂，粒狀。

蒴果有柄，倒卵形或球形，直立或擴散狀。

約有40餘種，分佈於西伯利亞、歐洲、東亞及北美。台灣產七種，其中5種為高山性植物。

KEY TO THE SPECIES 種的檢索表

1. Lip entire, not lobed at apex.

(唇瓣全緣，先端無裂片)

2. Lip rectangular, truncate at apex, wavy on margin
(唇瓣四方形, 先端截斷狀, 波狀緣) 1. *L. taiwaniana*

台灣雙葉蘭

2. Lip spatulate, broadly cordate at apex, entire on margin 2. *L. taizansis*

(唇瓣舌形, 先端闊心形, 全緣) 大山雙葉蘭

1. Lip 2-lobed or emarginate at apex.

(唇瓣先端2裂或凹頭狀)

2. Lip elongate triangular, slightly 2-lobed or emarginate at apex 3. *L. morrisonicola*

(唇瓣長三角形, 先端淺2裂或凹頭狀) 玉山雙葉蘭

2. Lip elongate cuneate, deeply 2-lobed at apex.

(唇瓣長楔形, 先端深2裂)

3. Lip short, 7-8mm long, the lobes of lip linear, about 2mm long 4. *L. nankomontana*

(唇瓣短, 長7-8mm, 唇瓣裂片線形, 長約2mm) 南湖雙葉蘭

3. Lip longer, 2-2.2cm long, the lobes of lip oblong, 2.5-3.5mm long 5. *L. macrantha*

(唇瓣較長, 長2-2.2cm, 唇瓣裂片長橢圓形, 長2.5-3.5mm) 巨藥雙葉蘭

1. **Listera taiwaniana** Ying in Bull. Exp. For. Nat. Taiwan Univ. (114):156 (1974) & Chin. Flow. (11):51, *pl. 4* & Alp. Pl. Taiwan in col. 1: 71, *col. phot. 94* (1975). 台灣雙葉蘭

Description: Please see page 238. (種的敘述詳見第238頁)

Specimen examined: (詳察下列標本)

TAIWAN: Hualien county: Maboulasheshan, S.S. Ying 2732.

2. **Listera taizanensis** Fukuyama in Bot. Mag. Tokyo 48: 431 (1934). 大山雙葉蘭

Terrestrials; stem erect, simple, 11-16cm long, glabrous, slender; sheaths solitary or absent, basal.

Leaves 2, opposite, at the middle of stem, patent, ovate-semiorbicular or triangular, 2-2.5 cm long, about 2.5 cm wide, acute at apex, cuspidate-truncate or triangular-truncate at base, membranous, entire, glabrous on both sides.

Flowers 11-13, racemose, greenish; the scape terminal, 4-8 cm long, simple, glabrous, 1-4-sheathed; the sheaths usually like the bracts; the bracts ovate-lanceolate, 3 mm long, 1-1.5 mm wide, acute at apex, not contracted at base, 1-nerved; the pedicels with ovaries erect, glabrous, 5-7 mm long; the dorsal sepal narrowly ovate, 2-2.2 mm long, about 0.6 mm wide, acute or acuminate at apex, not contracted at base, glabrous, 1-nerved; the lateral ones somewhat larger, falcate-oblong, 2.5 mm long, 1 mm wide, acute at apex, glabrous, 1-nerved; petal linear or spatulate-linear, 2-2.5 mm long, about 0.3 mm wide acute at apex; lip spatulate, erect, 3.5-4.5 mm long, 0.5 mm wide, not lobed, somewhat swollen at base, rounded at apex; column thickened, recurved, about 1.5 mm long.

Endemic, known from high altitudes of 3100-3750 m in northern part of the island, rather rare.

Specimen examined: (詳察過下列標本)

TAIWAN: Ilan county: Nanhutashan, *N. Fukuyama* 4123 (Typus), *G. Masamune*, *N. Fukuyama & Nakamura* 3065, 3079.

地生蘭；莖直立，無分枝，長11-16 cm，光滑，細長；鞘單一或無，基生。

葉2枚，對生，生長於莖的中部，顯著，卵狀半圓形或三角形，長2-2.5 cm，寬約2.5 cm，先端銳尖，基部尾狀截斷狀或三角狀截斷狀，膜質，全緣，表裏兩面均光滑。

花11-13枚，總狀花序，帶綠色的，花莖頂生，長4-8 cm，單生，光滑，有鞘1-4枚，鞘通常如同苞片狀，苞片卵狀披針形，長3 mm，寬1-

1.5mm，先端銳尖，基部不呈緊縮狀，脈1條；花梗連同子房長5-7mm，直立，光滑；後萼片狹卵形，長2-2.2mm，寬約0.6mm，先端銳尖或漸尖，光滑，脈1條；側萼片較大，鐮刀狀長橢圓形，長2.5mm，寬約1mm，先端銳尖，光滑，脈1條；花瓣線形或舌狀線形，長2-2.5mm，寬約0.3mm，先端銳尖；唇瓣舌形直立，長3.5-4.5mm，寬約0.5mm，不分裂，基部略膨大，先端圓；蕊柱厚，反曲，長約1.5mm。

固有，生長於高海拔約3100-3750m處，多見於北部地區，較少。

3. *Listera morrisonicola* Hayata, Icon. Pl. Form. 2:140 (1912). 玉山雙葉蘭

Terrestrials; stem slender, erect, simple, terete, 10-15 cm long, about 1mm in diameter, glabrous, green.

Leaves 2, opposite, on the middle of stem, ovate or ovate-orbicular, 2-2.5 cm long, 1.5-1.8 cm wide, acute and more or less with callus at apex, rounded at base, entire, thickened membranous, glabrous on both surfaces, lustrous green surface, pale green beneath, midrib and veins slightly faint.

Flowers few, spicate, yellowish green, patent, 1.5-2 cm in diameter; the scape terminal, simple, 2-3 cm long, the pedicels with ovaries 4-6 mm long; bracts ovate-lanceolate, 6-7 mm long, about 3 mm wide, obtuse at apex, obscurely 3-nerved; sepals equal, lanceolate, 6-7 mm long, about 2 mm wide, acute at apex; petals linear-lanceolate, 6-7 mm long, 1-1.5 mm wide, 1-nerved; lip elongate-obtriangular, 1-1.5 cm long, about 5 mm wide, slightly 2-lobed and emarginate at apex, concave at base, 3-5-nerved; column short, about 3 mm long; anthers narrowed, about 1 mm long. Capsules obovoid, prominently 3-stricted, 7-8 mm long, about 4 mm across.

Endemic, known from high altitudes of 2300-3300 m in central and southern parts of the island, rather rare.

Specimen examined: (詳察過下列標本)

TAIWAN: Chiayi county: Mt. Morrison, T. Kawakami
et S. Sasaki s.n. Oct. 1909 S.S. Ying 1947.

地生蘭，莖細長，直立，無分枝，圓柱形，長10-15 cm，徑約1 mm，光滑，綠色。

葉2枚，對生，生長於莖的中部，卵形或卵圓形，長2-2.5 cm，寬1.5-1.8 cm，先端銳尖且多少呈硬塊狀尖突，基部圓，全緣，厚膜質，表裏兩面俱光滑，表面呈有光澤綠色，背面則呈淡綠色，中肋及側脈不顯著。

花少數，呈穗狀花序，黃綠色，顯著，徑1.5-2 cm；花莖頂生，無分枝，長2-3 cm；花梗連同子房長4-6 mm；苞片卵狀披針形，長6-7 mm，寬約3 mm，先端鈍，不明顯脈3條，萼片整齊，披針形，長6-7 mm，寬約2 mm，先端銳尖；花瓣線狀披針形，長6-7 mm，寬1-1.5 mm，脈1條；唇瓣長倒三角形，長1-1.5 cm，寬約5 mm，先端淺2裂或凹頭狀，基部略呈槽狀，脈3-5條；蕊柱短，長約3 mm；花藥狹，長約1 mm。蒴果倒卵形，有明顯稜線3條，長7-8 mm，徑約4 mm。

固有，生長於中部及南部南海拔約2300-3300 m處，較稀少。

4. *Listera nankomontana* Fukuyama in Bot. Mag. Tokyo
49: 291 (1935). 南湖雙葉蘭

Terrestrials; stem erect, slender, 20-25 cm long, glabrous. Leaves 2, opposite, in the middle of stem, broadly ovate, 2-2.2 cm long, 1.5-2.5 cm wide, acute at apex, truncate at base, entire, somewhat thickened membranous, glabrous, pale green beneath.

Flowers few, laxly racemose, patent; the scape terminal, 9-12 cm long, simple, stricted, sheathed; the sheaths lanceolate, 3-5 mm long, acute at apex; bracts lanceolate, 2-3 mm long, acute, contracted at base; the pedicels with ovaries 6-9 mm long, glabrous, suberect; sepals glabrous, 1-nerved, membranous, the dorsal one ligulate, 2.5-2.6 mm long, about 1 mm wide, obtuse at apex, the lateral ones somewhat larger and more or less falcate-like, about 3 mm long; petals linear, 2.5 mm long, 0.5 mm wide, obtuse at apex, more or less swelled at base, membranous, gla-

brous, 1-nerved; lip elongate-cuneate, patent, 7-8mm long, 3.5mm wide, glabrous, membranous, 2-lobed from medium to apex; the lobes attenuate acute at apex, about 2mm long; column suberect, about 2.5mm long.

Endemic, known from high altitudes of 3000-3700m in northern and central parts of the island, under the forests, rather rare.

Specimen examined: (詳察過下列標本)

TAIWAN: Ilan county: Nanhutashan, *N. Fukuyama*

4139. **Taichung county:** Jenkaoshan, *S. Suzuki 5600.*

地生蘭，莖直立，細長，長20-25cm，光滑。葉2枚，對生，生長於莖中部，橢圓形，長2-2.2cm，寬1.5-2.5cm，先端銳尖，基部截斷狀，全緣，略呈厚紙質，光滑，背面白綠色。

花少數，疏生總狀花序排列，顯著；花莖頂生，長9-12cm，無分枝，有稜角，有鞘；鞘披針形，長3-5mm，先端銳尖；苞片披針形，長2-3mm，先端銳尖，基部緊縮狀，花梗連同子房長6-9mm，光滑，近似直立；萼片光滑；脈1條，膜質；後萼片舌形，長2.5-2.6mm，寬約1mm，先端鈍，側萼片較大而且略呈鐮刀狀，長約3mm；花瓣線形，長2.5mm，寬0.5mm，先端鈍，基部略膨大，膜質，光滑，脈1條；唇瓣長楔形，顯著，長7-8mm，寬3.5mm，光滑，膜質，從中部起2裂，裂片漸狹，先端銳尖，長約2mm；蕊柱近似直立，長約2.5mm。

固有，生長於北部及中部高海拔約3000-3700m，森林下，較稀少。

5. **Listera macrantha** Fukuyama in Ann. Rep. Bot. Gard. Taipei Univ. 3:86 (1933). 巨藥雙葉蘭

Terrestrials; stem slender, simple, 15-17cm long, puberulent upward, sheathed at base, sheaths membranous, completely amplexical at base.

Leaves 2, opposite, patent, broadly ovate or ovate-semiorbicular, 1.5-2cm long, 1.5-2cm wide, acute at apex, truncate at base, entire, membranous, glabrous, pale green beneath.

Flowers 3-6, rather large, racemose; the scape termi-

nal, simple, 7-10cm long, erect, glabrous, 1-2-sheathed; the sheaths lanceolate, 2-4mm long; bracts ovate-lanceolate, 3-5mm long, acute at apex, contracted at base, glabrous 1-nerved; the pedicees with ovaries 5-7mm long, glabrous, erect; sepals patent, glabrous, 1-nerved, membranous, the dorsal one lanceolate-ovate, 4-4.5mm long, about 3mm wide, obtuse at apex, slightly contracted at base, the lateral ones larger, flacate-ovate, 4-5mm long, acute, contracted at base; petals linear, 4-4.5mm long, 1-1.5mm wide, obtuse, somewhat swollen at base, 1-nerved; lip cuneate, 2-2.2 cm long, glabrous, membranous, 2-lobed from middle to apex, the lobes oblong, more or less narrowed, truncate-rounded at apex, entire, 2.5-3.5 mm long; column about 4-5mm long.

Endemic, known from northern and central parts of the island at the elevations of 3000-3800m under the forests, rather rare.

Specimen examined : (詳察過下列標本)

TAIWAN : **Ilan county** : Nanhutashan, *N. Fukuyama* 4140, *Y. Hashioka* s.n. July 28 1934, *G. Masamune*, *N. Fukuyama* & *Nakamura* 3029. **Taichung county** : Hseuh shan *T. Hosokawa* 4145.

地生蘭，莖細長，無分枝，長 15-17 cm，上部有毛茸，基部有鞘，鞘膜質，基部完全抱莖。

葉 2 枚，對生，顯著，橢圓形或卵狀半圓形，長 1.5-2 cm，寬 1.5-2 cm，先端銳尖，基部截斷狀，全緣，膜質，光滑，背面淡綠色。

花 3-6 枚，較大，總狀花序；花莖頂生，無分枝，長 7-10 cm，直立，光滑，鞘 1-2 枚，鞘披針形，長 2-4 mm；苞片卵狀披針形，長 3-5 mm，先端銳尖，基部緊縮狀，光滑，脈 1 條；花梗連同子房長 5-7 mm，光滑，直立；萼片顯著，光滑，脈 1 條，膜質；後萼片披針狀卵形，長 4-4.5 mm，寬約 3 mm，先端鈍，基部略緊縮狀，側萼片大，鐮刀狀卵形，長 4-5 mm，先端銳尖，基部緊縮；花瓣線形，長 4-4.5 mm，寬 1-1.5 mm，先端鈍，基部略膨大，脈 1 條；唇瓣楔形，長 2-2.2 cm，光滑，膜質，2 裂

，裂片長橢圓形，略狹，先端截斷圓狀，全緣，長 2.5-3.5 mm；蕊柱長 4-5 mm。

固有，生長於北部及中部高海拔約 3000-3800 m，森林下，較少。

11. CEPHALANTHERA L. C. Rich. 立花蘭屬

Terrestrials; rhizomes short; roots creeping, elongate; stem simple, leafy, erect. Leaves exarticate, alternate, plicate, convolutive, chartaceous to membranous, lanceolate, oblong to elliptic, strongly nerved, sheathed at base.

Flowers small to medium-sized, spicate, erect, white or yellow, sheaths leaf-like, at the base of the scape; sepals nearly equal, free, not full opened; petals slightly smaller than the sepals, often broader; lip with a chin at base, erect, distinctly jointed between the upper and lower portions, inflated at base, 3-lobed, the lateral lobes erect, without winged; rostellum scarcely surpassing the broad stigma; anther shortly stipate, broadly ovate, the locules contiguous; pollinia bifid in each locule, granular; capsules erect.

15 species in temperate regions of the N. hemisphere. one species in Taiwan.

地生蘭，根莖短，根匍匐，甚長；莖無分枝，有葉，直立。葉無關節，互生，縱褶的，回旋性，紙質至膜質，披針形，長橢圓形至橢圓形，脈顯著，基部有鞘。

花小或中型，穗狀花序，直立，白色或黃色，鞘葉狀，位於莖的基部；萼片近似整齊，離生，不十分張開；花瓣較萼片略小，但常較潤；唇瓣基部有頰，直立，有明顯關節連接上半部及下半部，基部膨大，3裂，側裂片直立，無翅，喙極少超越潤的柱頭，花藥有短柄，潤卵形，室連續，每室中花粉塊2裂，粒狀；蒴果直立。

約有 15 種，主分佈於北半球溫帶，台灣僅產一種。

1. *Cephalanthera alpicola* Fukuyama in Bot. Mag. Tokyo

Description: Please see page 101. (詳細種的敘述, 請見第101頁)

Specimen examined : (詳察過下列標本)

TAIWAN: Ilan county : Nanhutashan, *T.C. Huang 7776*; Chungyangchienshan, *S.S. Ying 3158*. **Taichung county :** Hseuhshan, *S.S. Ying 3833, 3835, 3846*. **Chiayi county :** Hsiukuluanshan, *S.S. Ying 1927*.

12. EPIPACTIS Adans. 鈴蘭屬

Terrestrials; rhizomes creeping; stem simple, erect, leafy. Leaves alternat, exarticulate, convolutive, sessile, plaited, chartaceous, ovate to lanceolate.

Flowers small to medium-sized, short-pedicelled, nodding, racemose, greenish or yellow, sometimes purple; bracts long, leaf-like, herbaceous, narrow; sepals equal or nearly so, spreading, strongly-nerved; petals similar to the sepals; lip sessile on the base of the column, broad, strongly constricted at the middle, the lower portion deeply concave, the upper portion dilated; column short, stigma transverse under the broad prominent rostellum; anther erect, obtuse; pollinia bilobed in each locule, granular, the gland globose; ovary reflexed at maturity. Capsules spreading or pendulous.

More than 20 species in temperate regions of Europe, Asia and N. America. one species in Taiwan.

地生蘭, 根莖匍匐; 莖無分枝, 有葉。葉互生, 無關節, 包旋性, 無柄, 有繡摺的, 紙質, 卵形至披針形。

花小至中型, 有短柄, 下垂, 總狀花序, 綠色或黃色, 有時亦有紫色者; 苞片長, 葉狀, 草質, 狹; 萼片整齊或近似如此, 擴展, 脈顯著; 花瓣與萼片相似; 唇瓣無爪, 位於蕊柱基部, 闊, 中部呈強緊縮狀, 下部則呈深槽狀, 上部則擴展; 蕊柱短, 柱頭在闊而顯著的喙下轉動; 花藥直立, 鈍; 花粉塊在每室中二裂, 粒狀, 腺體球形; 子房成熟時向下卷曲; 蒴果擴展或下

垂。

20種以上，主分佈於歐洲溫帶，亞洲及北美洲；台灣僅產1種。

1. **Epipactis ohwii** Fukuyama in Bot. Mag. Tokyo **48**: 298 (1934). 台灣鈴蘭

Terrestrials; roots filiform, glabrous, 10-20 cm long; stem simple, erect, 40-50 cm long, stricted, slender, glabrous, leafless and 1-2-sheathed at base, 3-4-leaved upward.

Leaves elliptic or oblong-elliptic, 4-6 cm long, 1.5-2 cm wide, obtuse or obtuse-acute at apex, contracted at base, scabrous, amplexical, entire, lustrous.

Flowers 8-12, green or light green, not widely-opened, subpatent, nodding; the scape terminal, 7-8 cm long, erect, pilose or scabrous; bracts leaf-like, linear-oblong or lanceolate, glabrous, 2.5-3.5 cm long; the pedicels with ovaries 1-1.2 cm long, green; sepals ovate, 7-9 mm long, about 3.5 mm wide, acute at apex, strongly contracted at base, midrib keeled; petals ovate-oblong, 7-8 mm long, about 3 mm wide, glabrous, somewhat oblique, attenuate or cuspidate-obtuse at apex, contracted at base, midrib prominent; lip glabrous 6-6.6 mm long, the median lobe somewhat constricted, the hypochilum saccate-semiglobose, 4-4.5 mm long, about 3.5 mm wide, with 2 fleshy elevations on surfaces; column glabrous, short, about 3 mm long.

Endemic, known from the northern part of the island at the elevations of 2400-2900 m under the forests.

Specimen examined: (詳察過下列標本)

TAIWAN: Ilan county: Nanhutashan, S.S. Ying 3142.

地生蘭，根線形，光滑，長10-20 cm；莖無分枝，直立，長40-50 cm，有稜角，細長，光滑，基部無葉僅有1-2枚鞘，上部有葉3-4枚，葉橢圓形或長橢圓狀橢圓形，長4-6 cm，寬1.5-2 cm，先端鈍或鈍

銳尖，基部緊縮狀，乾膜質，抱莖，全緣，表面呈有光澤綠色。

花 8-12 枚，綠色或淡綠色，不十分開張，下垂；花莖頂生，長 7-8cm，直立，有柔毛的；苞片葉狀，線狀長橢圓形或披針形，光滑，長 2.5-3.5 cm；花梗連同子房長 1-1.2 cm，綠色，萼片卵形，長 7-9mm，寬約 3.5 mm，先端銳尖，基部強緊縮，中肋隆起；花瓣卵狀長橢圓形，長 7-8mm，寬約 3mm，光滑，略歪，先端漸狹或尾狀鈍，基部緊縮，中肋顯著。唇瓣光滑，長 6-6.6mm，中裂片略緊縮；後半部囊狀半圓形，長 4-4.5mm，寬 3.5mm，表面有 2 條肉質隆起線；蕊柱光滑，短，長約 3mm。

固有，生長於北部高海拔約 2400-2900 m 處山地，森林下。

14. BLETILLA Reichb. f. 白及屬

Terrestrials; pseudobulbs ovoid or near so; stem leafy, simple. Leaves few, from the node of the pseudobulb, jointed at base, thin, convolutive, plicate, elliptic-lanceolate to oblong.

Flowers few in terminal raceme, usually rose, purple or white, rather large, bracteate, pedicellate; bracts caudous, the pedicels short; sepals and petals alike, free, ascending; lip 3-lobed, with elevated cristate lines on the inner side, lateral lobes usually embracing the slender column, the median lobe slightly recurved; column erect, small, briefly winged; pollinia 8, minute in pairs, waxy, with distinct caudicle.

Several species in China, Japan and Vietnan. Two species in Taiwan, and one species, the alpine plant.

地生蘭，假球莖卵形或近似如此；莖有葉，單葉。葉少數，抽自於假球莖節處，基部有關節，薄，包旋性，縱摺的，橢圓狀披針形至長橢圓形。

花少數，呈頂生的總狀花序，通呈粉紅，紫紅或白色，較大，有苞片，有花梗；苞片早落，花梗短；萼片及花瓣相同，離生，斜上昇；唇瓣 3 裂，內面有雞冠狀隆起線；側裂片常擁抱住細長的蕊柱，中裂片略反捲；蕊柱直立，小，有短翅；花粉塊 8 枚，小，成對，臘質，有明顯的柄。

數種，分佈於中國、日本及越南、台灣產 2 種，其中 1 種為高山性。

1. **Bletilla formosana** (Hayata) Schltr. in Fedde Repert. Beih. 10: 256 (1911); Hayata, Icon. Pl. Form. 6: 75 (1917). 台灣白及

Description: Please see page 55. (詳細種的敘述請見第55頁)

Specimen examined:

TAIWAN: Ilan county, Taipingshan, S. Suzuki 1115 s.n. Aug. 15 1928, S.S. Ying 2170. Nanhutashan, G. Masamune, N. Fukuyama & Nakamura s.n. July 12 1940; Nanshan village, S.S. Ying 3206; Lotung, Y. Yamamoto s.n. Nov. 3 1928. **Taipei county**: Kinyu, T. Suzuki 7652; Pi-yahau et Ssukan, T. Suzuki 7125. **Taichung county**. Taoshan, S. Sasaki s.n. July 15 1932; Between Takimi et Sakabe, Y. Kudo et K. Mori s.n. July 9 1930; Sakahau to Kirai, T. Nakamura 5540; Rumoan et Sikikun, S. Suzuki 4917. **Kaohsiung county**: Chishan Y. Yamamoto et Mori YM 274. **Pingtung county**: Lanyu, S. Sasaki & Y. Yamamoto s.n. June 1 1947. **Taitung county**: Taitung mountains, Y. Yamamoto s.n. April 1-7 1930. **Hualien county**: Tailukou, Hosokawa s.n. Aug. 12 1932, S. Suzuki s.n. Nov. 2 1931. Taiwan, U. Faurie s.n. July 1915.

14. **STIGMATODACTYLUS** Maxim. 絲柱蘭屬

Saprophytes; rhizomes short, fleshy; stem delicate, short, erect. Leaves few, minute, somewhat scale-like, alternate. Flowers few, small, racemose, shortly pedicellate, resupinate; the bracts ovate, small, the ovaries short; sepals and petals not much differing, spreading, linear, acute, the dorsal sepal largest; lip spreading, rounded, thin flat with a small bilobed appendage near the base; column slender, erect, slightly incurved in upper part; narrowly wing-margined, with a small fringer-like appendage on the center within, toothed at base, sometimes

with a second process beneath the stigma; pollinia 2, granulate, ellipsoidal, nearly waxy.

Several species in India, Japan, Java and Malaya. one species in Taiwan.

腐生蘭，根莖短，肉質，莖柔弱，短，直立。葉少數，小，略呈鱗片狀，互生。花少數，小，總狀花序，有短柄，轉位；苞片卵形，小，子房短；萼片及花瓣無多大差異，擴展，線形，銳尖；後萼片最大，唇瓣擴展，圓形，淺而扁平，近基部有1小而2裂的附屬物；蕊柱細長，直立，先端略向內彎，邊緣有狹翼，內面中部有一小流蘇狀的附屬物，基部有齒，有時在柱頭之下有一第二附屬物；花粉塊2枚，粒枚，橢圓形，近似臘質。

數種分佈於印度，日本，爪哇及馬來西亞。台灣僅產一種。

1. **Stigmatodactylus sikokianus** Maxim. ex Makino, Ill. Fl. Jap. 1. t. 43 (1891) & in Bot. Mag. Tokyo 19: 69 (1905). 絲柱蘭

Saprophytes; rhizomes tuberous, small, 2.5-3.5mm in diameter; stem simple, 3-10 cm long, stricted, erect, slender, glabrous, delicate. Leaves 2-3, scale-like, the basal one small, the median one larger, ovate, 3-5mm long, 2-4mm wide, acute or acuminate at apex, obtuse at base, obscurely 3-nerved, thin chartaceous.

Flowers 2 or 3, small, pale purplish green, loosely racemose; bracts ovate, somewhat similar to the median cauline scale-like leaf; the pedicels with ovaries 5-7mm long, the dorsal sepal linear-lanceolate, about 4mm long, the lateral ones somewhat slender, about 2.5mm long, spreading upward, ciliate on the margin at base; petals linear, about 3.5mm long, greenish and scattered with purple red spots; lip rounded about 4mm in diameter, with ~~obsolete~~ teeth on upper margin; the appendage about half as long as the lip. lanceolate and deeply bifid, spurless; column erect, about 3.5mm long, 2-toothed; pollinia 4, caudicles absent.

Japan. Taiwan, known from at high altitudes of 2300-3600 m in northern part of the island, under the forests, rather rare.

Specimen examined: (詳察過下列標本)

TAIWAN: Ilan county: Nanhutashan, S.S. Ying 3205.

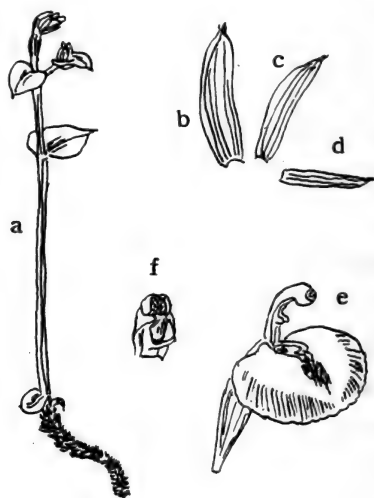


圖 (Fig) 128 絲柱蘭 (*Stigmatodaetylus sikokianus*)

a) 植物體 (Flowering plant) b) 後萼片 (Dorsal sepal)
 c) 花瓣 (Petal) d) 側萼片 (Lateral sepal) e) 唇瓣, 蕊柱及子房 (Lip Column and ovary) f) 蕊柱 (Column)

腐生蘭，根莖塊狀，小，徑2.5-3.5mm；莖無分枝，長3-10cm，有稜狀突起，直立，細長，光滑，纖弱狀。葉2-3枚，鱗片狀，最下位者最小，中位者最大，卵形，長3-5mm，寬2-4mm，先端銳尖或漸寬，基部鈍，不明顯脈3條，薄紙質。

花2或3枚，小，淡紫綠色，疏生的總狀花序；苞片卵形，有些跟中部莖生鱗片狀的葉相似；花梗連同子房長5-7mm；後萼片線狀披針形，長約4mm，側萼片略細長，長約2.5mm 上部擴展，邊緣有柔毛；花瓣線形，長約3.5mm，帶有綠色散生有紫紅色斑點；唇瓣圓，徑約4mm，前端邊緣有不明顯鋸齒，附屬物約為唇瓣的半長，披針形且深2裂，無距，蕊柱直

立，長約3.5mm，2齒裂；花粉塊4枚，無柄。

日本。台灣，生長於北部高海拔約2300-3600m處，森林下，較稀少。

15. MYRMECHIS Blume 金唇蘭屬

Terrestrials; rhizomes creeping; stem short or rather long, ascending above and with creeping base.

Leaves exarticulate, convolutive, on the lower part of the stem, small, green, petioled.

Flowers relatively small, few, in terminal erect raceme, resupinate, slightly open; sepals free, slightly differing, the dorsal one forming a hood with petals, lateral ones with an oblique, concave base; petals broadly lanceolate; lip attached to the base of the column, rather long-clawed, spatulate, entire at the base with a short pouch which hidden by the lateral sepals; claw of the lip with incurved, entire or finely serrate margin; lamina recurved, broad; column short, not either side with a short stigmatophore; pollinia 2, 2-fid; caudicles very short; stigma 2, distinct on each side of the short erect rostellum; rostellum short, 2-fid.

Few species in e. Asia and Java. one species and one variety in Taiwan.

地生蘭，根莖匍匐，莖短或較長，基部呈匍匐狀，先端呈斜上昇。

葉無關節，包旋性，位於莖的下部，小，綠色，有葉柄。

花較小，少數，呈頂生直立的總狀花序排列，轉位，稍微張開；萼片離生，略有不同，後萼片與花瓣形成花兜，側萼片有一歪而槽狀的基部；花瓣闊披針形；唇瓣與蕊柱基部相連，有長爪，舌形，基部全緣，有一短囊常隱藏於側萼片內；唇瓣的爪的邊緣全緣或有細鋸齒；唇瓣片反曲，闊；蕊柱短；花粉塊2枚，2裂，柄甚短，柱頭2，每邊明顯地有1短而直立的喙，喙短，2裂。

數種，分佈於東亞及印尼，台灣產一種及一變種。

KEY TO THE VARIETIES 變種的檢索表

1. Lobes of lip emarginate, the elongate claw of lip entire
, without finely serrate on margin
..... 1. *M. japonica* var. *japonica*

(唇瓣的裂片凹頭, 唇瓣的長爪全緣, 邊緣無細鋸齒) (全唇蘭)

1. Lobes of lip reounded, not emarginate, the elongate claw
of lip with finely serrate on margin
(唇瓣的裂片先端圓, 不呈凹 2. *M. japonica* var. *sasakii*
頭狀, 唇瓣的長爪的邊緣有細鋸齒) 南湖全唇蘭

1. ***Myrmechis japonica*** (Reichb.f.) Rolfe in Journ. Linn
Soc. 36: 44 (). 全唇蘭

Terrestrials; rhizome short, creeping; roots few, rather short; stem 3-12 cm long, long-creeping at base, erect and usually with white crisped multicellular hairs upward.

Leaves 3-5, alternate, rounded-ovate or broadly ovate, 6-10 mm long, 5-7 mm wide, obtuse on both ends, thickened chartaceous; the petioles 4-9 mm long, briefly dilated below with a short membranous sheath at base.

Flowers 2-3, rather small, white, racemose; the scape terminal, 2-3.5 cm long, with light red hairs; bracts ovate or ovate-lanceolate, 3-4 mm long, scarious, appressed to the ovaries, acute at apex; the pedicels with ovaries somewhat longer than bract, ascending; the dorsal sepal ovate, 7-8 mm long, about 5 mm wide, acute and somewhat caudate at apex, contracted at base; the lateral ones obliquely ovate, same as the dorsal sepal in length; petals linear-ovate, narrower than the lateral sepals, somewhat spreading upward; lip about 1 cm long, saccate at base, elongate clawed and bifid upward, the claw entire, not with finely serrate on margin, the lobes of laminae emarginate at apex, column short.

Japan: Taiwan; known from high altitudes of 2200-2900 m in central and southern parts of the island, under the forests, not common.

Specimen examined: (詳察過下列標本)

TAIWAN: Chiayi county: Alishan, U. Faurie 929.

地生蘭，根莖短，匍匐；根少數，較短；莖長 3-12cm，基部匍匐，先端直立，常具有白色多細胞毛茸。

葉 3-5 枚，互生，圓狀卵形或瀾卵形，長 6-10mm，寬 5-7mm，首尾兩端俱鈍，厚紙質；葉柄長 4-9mm，基部短瀾張而與短，膜質的鞘相連。

花 2-3 枚，較小，白色，總狀花序；花莖頂生，長 2-3.5 cm，有淺紅色毛茸；苞片卵形或卵狀披針形，長 3-4 mm，乾膜質，平展依附於子房上，先端銳尖。花梗連同子房略較苞片為長，斜上昇的；後萼片卵形，長 7-8mm，寬約 5mm，先端銳尖而略呈尾狀，基部緊縮；側萼片歪卵形，與後萼片同長；花瓣線狀卵形，較側萼片為狹，先端略擴展；唇瓣長約 1 cm，基部囊狀，有延伸的爪，先端 2 裂；爪全緣，邊緣無細鋸齒，唇瓣片凹頭，蕊柱短。

日本，台灣，產於中部及南部高海拔約 2200-2900 m 處，森林下，較少。

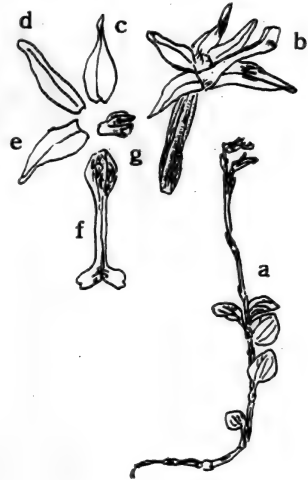


圖 (Fig) 129 日本 (*Myrmechis japonica*)

- a) 着花之植物體 (Flowering plant) b) 花 (Flower)
 c) 後萼片 (Dorsal sepal) d) 花瓣 (Petal) e) 側萼片 (Lateral sepal) f) 唇瓣 (Lip) g) 蕊柱 (Column)

2. *Myrmechis japonica* (Reichb. f.) Rolfe var. *sasakii* (Yamamoto) Ying *comb. nov.* *Myrmechis sasakii* Yamamoto
 Suppl. Icon. Pl. Form. 2:1 f.1 (1926) 南湖全唇蘭

Different from the typical phase by elongate claw which usually with finely serrate on margin, and the lobes of the lip obtuse, not emarginate at apex.

Endemic, known from northern part of the island at high altitudes of 2400-3100m under forests.

Specimen examined : (詳察過下列標本)

TAIWAN: Ilan county : Nanhutashan, S.S. Ying 3194.

Miaoli county : Tapachienshan S.S. Ying 4350.

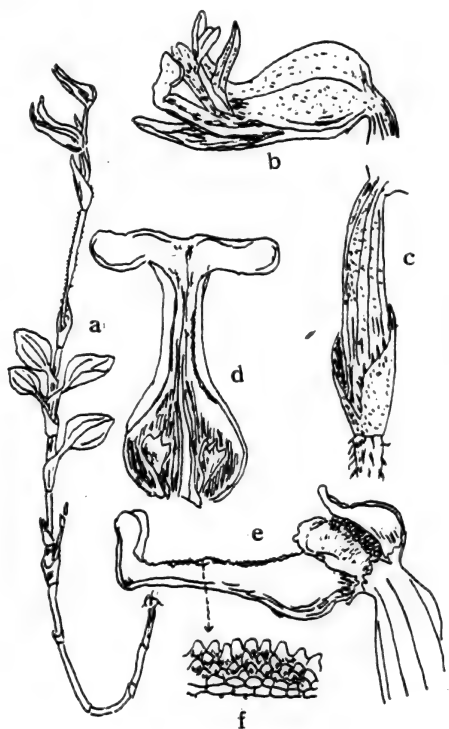


圖 (Fig) 130 南湖全唇蘭 (*Myrmechis japonica* var. *sasakii*)
a) 着花及植物體 (Flowering plant) b) 花 (Flower) c) 子房及苞片 (Ovary and Bract) d) 唇瓣 (Lip) e) 唇瓣蕊柱及花藥 (Lip, column and anther) f) 唇瓣爪上的細鋸齒 (Fine serrate on claw of lip)

與種的不同點，在於唇瓣的長爪的邊緣常具有細鋸齒緣，唇瓣裂片先端鈍，不呈凹頭狀。

固有種，僅見於台灣北部高海拔約 2400-3100m 處，森林下。

16. GOODYERA R. Br. 斑葉蘭屬

Terrestrials; rarely subepiphytes; roots mostly fleshy; stem short or long, creeping at base, rarely entirely erect.

Leaves exarticulate, convolutive, mostly basal, alternate, petioled.

Flowers few to many, in terminal lax or dense spike, small or rather large, resupinate; sepals nearly equal, the dorsal one erect, forming a hood with petals, the lateral ones spreading to suberect; petals unequal-sides; lip sessile, ascending, concave, entire, recurved, hairy at base; column short, nearly terete, not appendaged; pollinia 2, divided into numerous contiguous lobules, 2-partite, with caudicles; rostellum erect, 2-dentate to 2-partite; stigma simple, often cupular. Capsules erect, erostate.

About 100 species chiefly in tropical and temperate regions in both hemisphere. More than 10 species in Taiwan, and about three species, the alpine plants.

地生蘭，少數亦有呈半着生的，根多數肉質；葉短或長，基部匍匐，僅少數呈直立狀。

葉無關節，包迴性，多數基部着生，互生，有葉柄的。

花少數或多數，呈頂生疏生或密集的穗狀花序排列，小或較大，轉位；萼片近似整齊，後萼片直立，與花瓣形成花兜，側萼片擴展或近似直立；花瓣基部歪；唇瓣無爪，斜上昇，槽狀，全緣，反捲，基部有毛茸，蕊柱短，近似呈圓柱形，無附屬物；花粉塊 2 枚，分裂成多數相續的小塊，2 裂，有柄；喙直立，2 齒裂或深裂，柱頭短，無分岐，通常呈杯狀。蒴果直立。

約有 100 餘種，分佈於南、北兩半球的熱帶及溫帶。台灣約產 10 種，其中有 3 種為高山性。

KEY TO THE SPECIES (種的檢索表)

1. Leaves with white specks all over the surface
..... 1. *G. schlechtendaliana* 白花斑葉蘭

(葉表面滿佈有白色的斑塊)

1. Leaves with white midrib only, no white specks present on the surface.

(表面僅中肋爲白色，無白色斑塊)

2. Flowers white, sometimes tinged with pink

(花白色，有時微帶有粉紅色) 2. *G. morrisonicola*

玉山斑葉蘭

2. Flowers light pinkish brown 3. *G. velutina*

(花淡紅褐色)

白肋斑葉蘭

1. **Goodyera schlechtendaliana** Reichb. f. in *Linnaea* **22**

: 861 (1849). 白花斑葉蘭

Description: Please see page 194. (種的詳細敘述請見第194頁)

Specimen examined: (詳察過不列標本)

TAIWAN: Ilan county: Nanhutashan, S.S. *Ying* 3069, 3100; Chungyangchienshan, S.S. *Ying* 3157, 3166. **Taiepi county:** Kaboshan, T. *Suzuki* ST17925. **Miaoli county:** Tapachienshan, S.S. *Ying* 4356, 4358, 3985, 3987.

2. **Goodyera morrisonicola** Hayata in *Journ. Col. Sci.*

Univ. Tokyo **30** (1): 343 (1911), (*Mat. Fl. Form.*); *Icon. Pl. Form.* **4**: 116, *pl. 17* (1914). 玉山斑葉蘭

Description: Please see page 186. (種的詳細敘述請見第186頁)

Specimen examined: (詳察過下列標本)

TAIWAN: Ilan county: Nanhutashan, S.S. *Ying* 1981, 2080, 3104; Chungyangchienshan, S.S. *Ying* 3167, 3171. **Taichung county:** Hseuhshan, S.S. *Ying* 3772, 5082, 5102, 5085, 5089, 5086. **Chiayi county:** Mt. Morrison, T. *Kawakami & U. Mori* 2323 (Type of photo.).

Almostly all the Japanese botanists reduced the *G. morrisonicola* to synonym of *G. velutina*, until now some our botanists do that, but I examined the photograph of

type and original description with good drawing carefully and I realize that the *G. morrisonicola* is a distinct species, it different from the *G. vetulina* by leaf and flowers characters, it just match Fukuyama's *G. nankoensis*. and I list *G. nonkoensis* Fukuyama as a synonym of *G. morrisonicola* Hayata.

幾乎所有的日本植物學家都將玉山斑葉蘭列為白肋斑葉蘭的異名中，即使今日，在台灣的一些植物學家也跟隨着這樣做。但經筆者仔細研究模式標本的照片及有精細圖繪的原文記載。我認為玉山斑葉蘭應為1獨立的種，它跟白肋斑葉蘭的區分在於葉及花的特徵上，玉山斑葉蘭的特徵跟福山泊明所敘述的南湖斑葉蘭 (*G. nonkoensis* Fukuyama) 相同。因此，我將南湖斑葉蘭列入玉山斑葉蘭的異名內。

3. **Goodyera velutina** Maxim. in Regel. Gartenfl. 36 (1867); Ying in Chin. Flow. (11):55, pl. 3 (1975). 白肋斑葉蘭

Description: Please see page 196. (種的敘述詳見第196頁)

Specimen examined: (詳察過下列標本)

TAIWAN: Ilan county: Taipingshan, S. Suzuki s.n.

Aug. 5 1928; Nanhutashan, S.S. Ying 2927; chungyangchientshan, S.S. Ying 3180, 3172. **Taoyuen county:** Nanchia-

tienshan, S.S. Ying 4360. **Maioli county:** Luchangtashan, N. Fukuyama s.n. July 9 1932. **Taichung county:** Shao-

sheuhshan, T.S. Liu et al., s.n. Oct. 12 1957. **Taitung county:** Hsinchuangshan, Y. Yamamoto 442.

17. TIPULARIA Nutt. 筒距蘭屬

Terrestrials; pseudobulbs solid, usually closely approximate and connected horizontally by short rhizome; stemless. Leaves solitary, basal, elongate-petioled.

Flowers several, rather small, loosely racemose, pedicellate; scape from the pseudobulb, erect, with few sheathing scales at base; the bracts minute, or absent; sepals and petals equal, spreading, free, narrow; lip 3-lobed

, spurred the lateral lobes basal, short or rounded up - turned, the median lobe slender, flat, oblong, entire or retuse; spure elongate, slender, horticontal; column shorter than the sepal, erect, narrowly winged above; anthers terminal; pollinia 4 in 2 cell, waxy, unappendaged. Capsules clavate-fusiform or oblong-cylindric, pendulous.

Several species in N. Americam e. Asia and Himalayas. one species in alpine regions of Taiwan.

地生蘭，假球莖實心的，常緊密排列而以水平短根莖相連，無莖。葉一枚，基生，有長柄。

花數枚，較小，疏生的總狀花序，有花柄的；花莖抽自於假球莖，直立，基部有少數鞘狀的鱗片；苞片小或無，萼片及花瓣整齊，擴展性，離生，狹；唇瓣3裂，有距，側裂片基生，先端短而圓，中裂片細長，扁平，長橢圓形，全緣或微凹頭的；距甚長，細長，水平生長；蕊柱較萼片為短，直立，上部有狹翼；花藥頂生，花粉塊4枚分列於2室中，臘質，無附屬物。蒴果棍棒狀紡錘形或長橢圓狀圓柱形，下垂。

數種，分佈於北美、東亞及喜馬拉雅山地區。台灣僅產1種，見於高山地區。

1. *Tipularia odorata* Fukuyama in Bot., Mag. Tokyo **52**: 243 (1939). 香筒距蘭

Description: Please see page 330. (種的敘述詳見第330頁)

Specimen examined:

Taiwan: Miaoli county: Tapachienshan, S.S. Ying 1875. **Taichung county:** Hseuhshan, S.S. Ying 3809.

18. MALAXIS Sw. 小柱蘭屬

Terrestrials or epiphytic; rhizomes short or long; stem creeping, ascending or erect, often swollen into a pseudobulb.

Leaves 1 to few, exarticulate, plaited, membranous, broad, flat, sheathed at base.

Flowers few to many, rather small, not resupinate, in

terminal dense or lax raceme; bracts small, narrower; sepals free, spreading, recurved or sometimes incurved; petals narrower, sometimes filiform; lip sessile, erect, or spreading, ecalcarate, usually embracing the column by shorter or longer basal auricles, rarely exarticulate, entire, 2-to 3-lobed or fimbriate; column very short, flat, stelids 2, distinct; column-foot absent; anther erect, deciduous, locules separate, persistent; pollinia 4, pairwise, cohering, waxy, without any appendage.

Fruit a capsule, small, ovoid.

More than 200 species widely distributed in the world, especially in tropics. Less than 10 species in Taiwan, among that, two species, the alpine plants.

地生蘭或着生蘭，根莖短或長，莖匍匐，斜上昇或直立，常膨大而成假球莖狀。

葉1枚或少數，無關節，綳摺的，膜質，潤，扁平，基部有鞘。

花少數至多數，較小，不轉位，呈頂生疏或密的總狀花序；苞片小，狹；萼片離生，擴展，反曲或有時內曲，花瓣狹，有時呈線形；唇瓣無爪，直立或擴展，無距，通常以短或長的耳狀物抱住蕊柱，極少數是無關節的，全緣，2裂，3裂或絲狀裂；蕊柱甚短，扁平，瘤狀突起2枚，無蕊柱足；花藥直立，早落，室分離，殘存；花粉塊4枚，成對，臘質，無任何附屬物。

超過200種以上，廣泛地分佈於世界各地，尤其在熱帶地區最多。台灣約有數種，其中有2種是高山性。

KEY TO THE SPECIES 種的檢索表

1. Leaf solitary, broadly ovate or elliptic, smaller, 4-8 cm long, 3-5 cm wide 1. *M. monophylla*

(葉單一潤卵形或橢圓形，較小，長4-8 cm，寬3-5 cm) 單葉小柱蘭

1. Leaves 2, nearly opposite, ovate-lanceolate, larger, 12-17 cm long, 3.5-4.5 cm wide 2. *M. taiwaniana*

(葉二枚，近似對生，卵狀披針形較大長12-17 cm，寬3.5-4.5 cm) 台灣小柱蘭

1. **Malaxis monophylla** (Linn.) Sw. in Act. Holm. 234 (1800). 單葉小柱蘭

Description: Please see page 245. (種的敘述請見第245頁)

Specimen examined: (詳察過下列標本)

TAIWAN: Nantou county: Hohuanshan, S.S. *Ying* 4925

Kaohsiung county: Kuanshan, Y. *Yamamoto* & U. *Mori* YM648.

2. **Malaxis taiwaniana** *Ying* in Quart. Journ. Chin. For. 8(4):143 & Alp. Pl. Taiwan in col. 1:71, col. photo. 95 (1975). 台灣小柱蘭

Description: Please see page 247. (種的敘述詳見第247頁)

Specimen examined: (詳察過下列標本)

TAIWAN: Nantou county: Kuankao, S.S. *Ying* 2920, July 26 1974 (Typus).

19. CALANTHE R. Br. 根節蘭屬

Terrestrials; very rarely epiphytes with more or less manifest pseudobulb.

Leaves few, radical, exarticulate or sometimes articulate, convolutive, rather larger, plicate, chartaceous.

Flowers few to many, small to large, resupinate, in racemes; scape erect or sometimes pendulous; bracts persistent or deciduous, small or prominent; sepals equal, free, spreading; petals similar to the sepals or narrower; lip spurred, basally connate with the margin of the entire column into a tube, often 3-lobed, rarely entire, the median lobe sometimes bifid; column short, erect; column-foot none; anther proclined; pollinia 8 in 2 locules, waxy, slender, with caudicles; rostellum 2-lobed or 2-fid; stigma separated.

Capsules oblong, usually pendulous.

About 200 species in tropical and temperate regions of

Asia. More than 16 species in Taiwan, only one species, the alpine plant.

地生蘭，極少數亦有呈着生者，有多變化的假球莖。葉少數，根生，無關節或有時有關節，包廂性，較大，有皺摺，紙質。

花少數至多數，小或大，轉位，呈總狀花序排列；花莖直立或少數有時呈下垂者；苞片殘存或早落，小或顯著；萼片整齊，離生，擴展；花瓣與萼片相似但較狹；唇瓣有距，基部和蕊柱相連而成管狀，常3裂，少數亦有呈全緣者，中裂片有時又2裂；蕊柱短，直立；無蕊柱足；花藥側臥；花粉塊8枚分列二室中，臘質，細長，有柄，喙2裂或2淺裂。蒴果長橢圓形，常懸垂。

約200餘種，分佈於亞洲熱帶及溫帶地區，台灣16種以上，其中一種為高山性。

1. **Calanthe tricarinate** Lindley, Gen. & Sp. Orch. 252 (1833). 紅唇根節蘭

Description: Please see page 97. (種的敘述詳見第97頁)

Specimen examined: 詳察過下列標本。

TAIWAN: Ilan county: Chungyangchienshan, S.S. Ying 3173.

20. **OREORCHIS** Lindley 山蘭屬

Terrestrials; rhizome short; roots elongate; pseudobulbs ovoid or oblong, closely approximate or not; stemless.

Leaves 2, rarely solitary, enclosed the middle of pseudobulb, exarticulate, convolutive, narrow, plicate.

Flowers rather small, pedicellate, racemose; scape erect, simple, with a few sheathing scales at base; bracts minute; sepals equal, free, ascending or with incurved tips; petals similar to the sepals somewhat shorter; lip adante to the base of the column, spurless, claw erect; the lamina 3-lobed, the lateral lobes short, erect, narrow; the median lobe broad, spreading; column elongate, sub-

clavate, in upper part wingless; column-foot absent; anther terminal, 1-celled; pollinia 4, subglobose, distinct; caudicles short.

A dozen species in Himalaya, China, Korea, Japan and e. Siberia. Four species in Taiwan, and two species, the alpine plants.

地生蘭，根莖短；根甚長；假球莖卵形或長橢圓形，緊密排列或不如此；無莖。

葉2枚，少數單生，包被於假球莖的中部，無關節，包旋性，狹，有皺摺。

花較小，有花梗，總狀花序；花莖直立，無分枝，有少數鞘狀鱗片於基部；苞片小，萼片整齊，離生，斜上昇，或先端內曲；花瓣與萼片相似但較短；唇瓣與蕊柱基部相連，無距，爪直立，唇瓣片3裂，側裂片短，直立，狹，中裂片闊，擴展；蕊柱甚長，近似棍棒狀，上半部無翼狀膜，無蕊柱足；花藥頂生，1室；花粉塊4枚，近似球形，顯著，柄短。

約有十二種，分佈於喜馬拉雅山、中國、韓國、日本及西伯利亞東部。台灣產四種，其中有2種為高山性。

KEY TO THE SPECIES 種的檢索表

1. Leaves solitary, rarely 2, linear, 30-36 cm long, 5-7 mm wide; flowers many remotely arranged in the scape

(葉單一，極少數有2枚者，線形，長30-36 1. *O. gracillima*
cm, 寬5-7 mm; 花多數疏生於花莖上) 細莖山蘭

1. Leaves two, linear-lanceolate, 26-33 cm long, 6-8 mm wide; flowers many and densely arranged in the scape

(葉2枚，線狀披針線，長26-33 cm, 寬6-8 2. *O. ohwii*
mm, 花多數而且是呈密花的總狀花序) 南湖山蘭

1. ***Oreorchis gracillima*** (Hayata) Schltr. in Fedde Re-
Pert. Beih. 4: 223 (1919), (Sino-Jap. Orch. Prodr.);
Hayata, Icon. Pl. Form. 10: 33 (1921). 細莖山蘭

Description: Please see page 274. (種的敘述詳見第274頁)

Specimen examined: (詳察過下列標本)

2. *Oreorchis ohwii* Fukuyama in Bot. Mag. Tokyo 49:296 (1935). 南湖山蘭

Terrestrials; pseudobulbs globose-ovoid, 1-1.5 cm across; roots elongate, filiform, flexuous, villose.

Leaves 2, terminal on the pseudobulb, linear-lanceolate, 25-33 cm long, 6-8 mm wide, acuminate at apex, narrowed and attenuate to the petioles at base, chartaceous or thickened membranous, glabrous on both sides, many-veined, lustrous green surface, pale beneath.

Flowers patent, numerous, racemose; scape terminal, erect, simple, stricted, 15-25 cm long, remotely 2-sheathed; the sheathe 2-5 cm long, shortly acute, completely amplexical at base, glabrous; bracts minute, ovate-lanceolate, about 3 mm long, acuminate, glabrous; the pedicels with ovaries 7-9 mm long, slender; the dorsal sepal oblong or oblong-lanceolate, 5-6 mm long, about 2 mm wide, acute, attenuate at base, the lateral ones oblong, slightly oblique falcate, acute, contracted at base; petals oblanceolate, 5-6 mm long, about 1.5 mm wide, acute, attenuate at base, glabrous, 3-5-nerved; lip glabrous, 4-5 mm long, clawed at base, 3-lobed, the lateral lobes oblanceolate, 1.5-2 mm long, acute at apex, the median lobe obtriangular or cuneate-obovate, truncate-rounded at apex, crisped on margin, appendages or keels on the middle of lateral lobes; column about 2.5 mm long, glabrous; pollinia 4, globose, distinct.

Endemic, known from northern part of the island, at medium to high altitudes of 1800-2600 m, under the forests.

Specimen examined: (詳察過下列標本)

TAIWAN: Ilan county : Nanhutashan, T.C. Huang 7735.

地生蘭，假球莖球狀卵形，徑1-1.5 cm；根甚長，線形，彎曲，有柔

毛。

葉2枚，頂生於假球莖上，線狀披針形，長25-33cm，寬6-8mm，先端漸尖，基部狹而漸延伸至葉柄，紙質或厚膜質，表裏兩面均光滑，脈多數，表面有光澤綠色，背面淡綠色。

花顯著，多數，總狀花序；花莖頂生，直立，無分枝，有稜角，長15-25cm，有稀疏鞘2枚；鞘長2-5cm，先端短銳尖，基部抱莖，光滑。苞片小，卵狀披針形，長約3mm，先端漸尖，光滑；花梗連同子房長7-9mm，細長；後萼片長橢圓形或長橢圓狀披針形，長5-6mm，寬2mm，先端銳尖，基部緊縮；花瓣倒披針形，長5-6mm，寬約1.5mm，先端銳尖，基部漸狹，光滑，脈3-5條；唇瓣光滑，長4-5mm，基部有爪，3裂，側裂片倒披針形，長1.5-2mm，先端銳尖，中裂片倒三角形或楔狀倒卵形，先端截斷圓形，邊緣呈波狀皺摺，側裂片的中部有附屬體或隆起線；蕊柱長2.5mm，光滑；花粉塊4枚，光滑，球形，顯著。

固有，生長於北部中及南海拔約1800-2600m的山地，森林下。

21. CYMBIDIUM Sw. 蕙蘭屬

Terrestrials or epiphytes, with closely approximate, erect pseudobulbs; rhizome short, creeping. Leaves fasciculate, articulate, duplicate, linear, rather narrow, coriaceous.

Flowers medium sized to large, 1 to many, in erect or pendulous racemes, ecalcarate, resupinate; bracts short; sepals free, equal, spreading; petals similar to the sepals or slightly shorter; lip elastically inserted on the anterior side of the base of the column, concave, on the inner side in the lower half with 2 longitudinal keels; median lobe recurved; column short, slender, without a foot, suberect, anther proclined; pollinia 2, by the aid of a common short, broad, elobate transverse stipe attached to the visidium, furrow, waxy.

Capsules oblong, often with aremnant of the perianth and column at apex.

70 or more species in India, Malaya, E. Asia, Madagas-

car and Australia. 10 or more species in Taiwan, only one species, the alpine plants.

地生蘭或着生蘭，有緊密排列直立的假球莖；根莖短，匍匐。葉叢生，有關節，線形，較狹，革質。

花中型或大型，1或多枚，呈直立或下垂的總狀花序，無距，轉位；苞片短；萼片離生，整齊，擴展；花瓣與萼片相似但較短；唇瓣着生於蕊柱基部，槽狀；在下半部內面有2條隆起線，中裂片反捲；蕊柱短，細長，無蕊柱足，近似直立，花藥偃臥；花粉塊2枚，有柄，有粘盤，臘質。

蒴果長橢圓形，常有殘存的花被及蕊柱於先端。

約有70或更多種，主分佈於印度，馬來西亞，亞洲東部、馬拉加西及澳洲。台灣產10種以上，其中僅一種為高山性。

1. **Cymbidium tortisepalum** Fukuyama in Bot. Mag. Tokyo 48: 304, f. 1 (1930). 菅草蘭

Description: Please see page 135. (種的敘述詳見第135頁)

Specimen examined: (詳察過下列標本)

TAIWAN: Taichung county: Wulin, S.S. Ying 5270.

2. **Cymbidium tortisepalum** Fukuyama var. **viridiflorum** Ying, var. nov. 綠花菅草蘭

A typo florum virida differt.

The variety differs from the typical phase by green flowers.

Type locality: Lishan, S.S. Ying 5282. (Typus).

Distribution: Endemic, Specimen examined: **TAIWAN.**

Taichung county: Lishan, S.S. Ying 5282 (Typus).

本變種與種的不同在於開綠色。

3. AN ENUMERATION OF INDIGEOUS ORCHIDS OF TAIWAN

台灣野生蘭名錄

1. ACAMPE Lindley 厚唇蘭屬

1. *Acampe longifolia* Lindley, Fol. Orch. Acampe 1 (1853).

厚唇蘭

Vanda longifolia Lindley, Wall. cat. 7322 (1832).

Saccolabium longifolium Hook. f., Fl. Brit. Ind. 6:62 (1890).

Acampe multiflora (Lindley) Lindley, Fol. Orch. Acampe 1 (1853)

Vanda multiflora var. *longipedunculata* Trimen., Syst. Cat. Ceyl. 90 ()

Acampe wightiana var. β Thwaites, Enum. Pl. Ceyl. 303 (1861).

Sarcanthus taiwanianus Hayata in Journ. Col. Sci. Univ. Tokyo 30(1): 337 (1911), (Mat. Fl. Form.)

Cleisostoma taiwanianum (Hayata) Hayata, Icon. Pl. Form. 4: 98, f. 51 (1914).

Cleisostoma taiwanianum (Hayata) Tang & Wang in Act. Phytotax. 1(1): 97 (1951).

Sarcophyton taiwanianum (Hayata) Garay in Bot. Mus. leafl. Harvard. Univ. 23(4): 202 (1972).

Distribution (分佈): Sikkim (錫金), Himalaya (喜馬拉雅山), Burma (緬甸), Assam (阿薩姆), Srilanka (席里蘭卡), Thailand (泰國), Malaya (馬來西亞), China (中國) and Taiwan. (台灣)

Dr. Garay proposed a new name of combination of *Sarcophyton taiwanianum* in stead of *Sarcanthus taiwanianus*, but after read the original description very carefully, I agree with Mr. Nackejima's oppinion, the *Sarcanthus taiwa-*

nianus is a synonym of *Acampe longifolia*; the drawing of *Cleisostoma taiwaniana* from Hayata's Icon. Pl. Form. vol. 4, page 98, I think it is a error one, from original description, the spur was 3 mm long and 1.5 mm wide, but the drawing was not match the original description at all.

- 2 **Acampe taiwaniana** Ying in Chinese Flow. (8):30, Pl. 8 & Bull. Exp. For, Nat. Taiwan Univ. (114): 156 (1974).
台灣厚唇蘭

Acampe longifolia Lindley var. *taiwaniana* Ying in Chin. Flow. (8):30, pl. 8 (1974).

Distribution (分佈): Endemic (固有種).

2. ACANTHOPHIPPIUM Blume 罈花蘭屬

- 3 **Acanthophippium striatum** Lindley, Bot. Reg. Misc. 41 (1838). 罈花蘭

Acanthophippium unguiculatum (Hayata) Fukuyama in Bot. Mag. Tokyo 48:301 (1934).

Tainia unguiculata Hayata, Icon. Pl. Form. 4:61, f. 28 (1914); Schltr. in Fedde Repert. Beih. 4:176 (1919), (Orch. Sino-Jap. Prodr.).

Distribution (分佈): Nepal (尼泊爾), Himalaya (喜馬拉雅山) and Taiwan (台灣).

- 4 **Acanthophippium sylhetense** Lindley, Gen. & Sp. Orch. 177 (1833). 紅花罈花蘭

Acanthophippium yamamotoi Hayata, Icon. Pl. Form. 6:73 (1917) & Gen. Ind. Form. 75 (1917).

Acanthophippium pictum Fukuyama in Bot. Mag. Tokyo 49:666 (1935).

Acanthophippium mintimianum Lindley & Cogn. in Journ. des Orch. 7:138 ().

Distribution (分佈): Himalaya (喜馬拉雅山), The Philippines (菲律賓) and Taiwan (台灣)

3. AGROSTOPHYLLUM Blume 糠穗蘭屬

5. **Agrostophyllum formosana** Rolfe in Ann. Bot. 9: 157 (1895). 糠穗蘭

Agrostophyllum cyathiforme J. J. Smith, Fl. Buit. 6: 291 f. 222 (1905), syn. nov.

Distribution (分佈): The Philippines (菲律賓), Java (爪哇), Sumatra (蘇門答臘), Malaya (馬來西亞) and Taiwan (台灣).

4. ANDOCORYS Schltr. 無距蘭屬

6. **Andocorys pusillensis** (Ohwi & Fukuyama) Ying Col.

Illust. Indig. Orch. Taiwan 1: 382 (1977). 小無距蘭

Hermidium pusillum Ohwi & Fukuyama in Bot. Mag. Tokyo 48: 430 (1934).

Distribution (分佈): Endemic (固有種).

5. ANOECTOCHILUS Blume 金線蓮屬

7. **Anoectochilus koshunensis** Hayata, Icon. Pl. Form. 4: 104, f. 54 (1914); Schltr. in Fedde Repert. Beih. 4: 176 (1919), (Orch. Sino-Jap. Prodr.). 高雄金線蓮

Distribution (分佈): Endemic (固有種).

8. **Anoectochilus roxburgii** (Wall.) Lindley in Wall. cat. n. 7387 (1832); Matsum. & Hayata in Journ. Col. Sci. Univ. Tokyo 22: 415 (1906), (Enum. Pl. Form.); Hayata in l.c. 30(1): 342 (1911), (Mat. Fl. Form.). 金線蓮

Chrysobaphus roxburgii Wall., Tent. Fl. Nep. 37, pl. 27 (1826).

Anoectochilus formosana Hayata, Icon. Pl. Form. 4: 101, f. 53 (1914).

Distribution (分佈): S. China (中國南部) and Taiwan (台灣).

6. APHYLLORCHIS Blume 莖菜無葉蘭屬

9. **Aphyllorchis montana** (Thwaites) Reichb.f. in Linnaea 41: 57 (1877); Nackejima, Enum. Orch. Ryukyu 1: 35, pl. 8, 2: 103 (1971); Hatusima, Fl. Ryukyu 857 (1971). 莖菜無葉蘭

Apaturia montana Thwaites, Enum. Pl. Ceyl. 30 (1861).
non Lindley.

Aphyllorchis prainii Hook.f., Fl. Brit. Ind. 6: 117
(1890) & Icon. Pl. t. 2192.

Aphyllorchis purpurea Fukuyama in Bot. Mag. Tokyo 48:
431 (1934).

Aphyllorchis tanegashimensis Hayata in Journ. Col. Sci.
Univ. Tokyo 30 (1) : 344 (1911), (Mat. Fl. Form.).

Aphyllorchis unguiculata Rolfe ex Downie in Kew. Bull.
415 (1925); Seidenf. & Smith, Orch. Thailand 1: 62; f. 43
(1959) & 4 (2) : 728 (1965).

Distribution (分佈) : Thailand (泰國), Srilanka (席斯藍卡), India (印度), Sikkim (錫金), Ryukyu (琉球) and Taiwan (台灣).

7. APPENDICULA Blume 竹節蘭屬

10. **Appendicula cornuta** Blume, Bijdr. 302 (1825); Lindley, Gen. & Sp. Orch. 229 (1833); J.J. Smith, Buitenz. 6: 522 (1905), (Orch. Java) fig. atlas fig. 396 (1912). 竹節蘭

Appendicula congenera Blume, Bijdr. 303 (1825).

Dendrobium manillense Schauer in Nov. Act. Nat. Cur.
19, Suppl. 1: 430 (1845)

Appendicula manillensis Reichb.f. ex Miq., Fl. Ind.
Bat. 3: 703 (1859).

Appendicula bifaria Lindley in Hook., Kew. Journ. 7:
35 (1855).

Appendicula reduplicata Par. & Reichb.f., Otia Bot.
419

Hamb. **1**: 45 (1878).

podochilus cornutus Schltr. in Mem. Herb. Boiss. **21**: 34 (1900).

podochilus brachiatus Schltr. in l.c. **21**: 40 (1900).

podochilus congener Schltr. in Fedde Beih. **1**: 337 (1912), (Orch. Deuts-New-Guin.).

Appendicula kotoensis Hayata in Journ. Col. Sci. Univ. Tokyo **30**(1): 341 (1911), (Mat. Fl. Form.) & Gen. Pl. Form. 75 (1917).

Distribution (分佈): India (印度), Malaya (馬來西亞), Java (爪哇), Borneo (婆羅州), China (中國) and Taiwan (台灣).

11. **Appendicula formosana** Hayata in Journ. Col. Sci. Univ. Tokyo **30**(1): 340 (1911), (Mat. Fl. Form.) & Gen. Ind. Pl. Form. 75 (1917). 台灣竹節蘭

Distribution (分佈): Endemic (固有種).

12. **Appendicula terrestis** Fukuyama in Bot. Mag. Tokyo **50**: 22 (1936). 蘭嶼竹節蘭

Distribution (分佈) Endemic (固有種)

8. ARMODORUM Breda. 假腎藥蘭屬

13. **Armodorum labrosum** (Lindley ex Paxt.) Schltr. in Fedde Repert. **10**: 197 (1911). 假腎藥蘭

Arrhyschium labrosum Lindley ex Paxt. Fl. Gard. **1**: 142 (1850-51).

Arachnanthe bilinguis Benth in Journ. Linn. Soc. **18**: 332 (1881).

Arachnis labrosa Reichb. f. in Bot. Centralbl. **28**: 343 (1886).

Renanthera bilinguis Reichb. f. Xenia Orchid. **1**: 7, t. 4 ().

Renanthera labrosa Reichb. f., Xenia Orchid. **1**: 88 () .

Renanthera leptantha Fukuyama in Schred.

Distribution (分佈): Assam (阿薩姆), Burma (緬甸),
Java (爪哇) and Taiwan (台灣).

9. ARUNDINA Blume 禾葉蘭屬

14. *Arundina graminifolia* (Don.) Hochr. var. **chinensis**
(Blume) Ying, Col. Illust. Indig. Orch. **1**: 51, col.
photo. 6 (1977). 禾葉蘭

Arundina chinensis Blume, Bijdr. 402 (1825); Henry,
List Pl. Form. 92 (1896).

Arundina affinis Griff. Notul. **3**: 330 (1851).

Cymbidium meyenii Schauer. in Nov. Act. Cun. 14,
Suppl. **1**: 433 (1843).

Arundina philippi Reichb. in Linnaea **25**: 227 (1852)

Arundina meyenii Reichb. f. l.c. **25**: 227 (1852).

Arundina pulchella Teijsin et Biennend in Nedl.
Kruiddk. Arch. **3**: 400 (1855).

Arundina pulchera Miq. in Journ. Bot. Neerl. **1**: 30
(1861).

Distribution (分佈): Species (種) in Malaya peninsula
(馬來半島) and Indonesia (印尼); the variety (變種) in S.
China (中國南部), Ryukyu (琉球) and Taiwan (台灣).

10. ASCOLABIUM Ying 假囊距蘭屬

15. *Ascolabium pumillum* (Hayata) Ying, Col. Illust.
Indig. Orch. Taiwan **1**: 54, col. photo. 7 (1977). 假囊距蘭

Saccolabium pumillum Hayata in Bot. Mag. Tokyo **20**:
76 (1906) & in Journ. Col. Sci. Univ. Tokyo **30** (1):
337 (1911), (Mat. Fl. Form.).

Ascocentrum pumillum (Hayata) Schltr. in Fedde Re-
pert Beih. **4**: 285 (1919), (Orch. Sino-Jap. Prodr.).

Distribution. (分佈): Endemic (固有種).

11. BLETILLA Reichb.f. 白及屬

16. *Bletilla formosana* (Hayata) Schltr. in Fedde Repert. Beih. **10**: 256 (1911); Hayata, Icon. Pl. Form. **6**: 75 (1917); Ying in Chin. Flow. (7): 37, *pl.* 3 (1974). 台灣白及

Bletia formosana Hayata in Journ. Col. Sci. Univ. Tokyo **30** (1): 323 (1911), (Mat. Fl. Form.).

Bletilla morrisonensis (Hayata) Schltr. in l.c. **10**: 256 (1911).

Bletia morrisonensis Hayata in l.c. **30** (1): 324 (1911).

Distribution (分佈): Endemic (固有種).

17. *Bletilla kotoensis* (Hayata) Schltr. in Fedde Repert. Beih. **10**: 256 (1911); Hayata, Icon. Pl. Form. **6**: 75 (1917). 蘭嶼白及

Bletia kotoensis Hayata in Journ. Col. Sci. Univ. Tokyo **30**: (1): 324 (1911), (Mat. Fl. Form.).

Bletilla striata (Thunb.) Reichb.f. var. *kotoensis* Masamune in Sci. Rep. Kanazawa Univ. **9**: 129 (1964), *syn. nov.*

Distribution (分佈): Endemic, (固有種), known from islet Lanyu (蘭嶼) only.

12. BRACHYCORYTHIS Lindley 擬粉蝶蘭屬

18. *Brachycorythis truncatolabellata* (Hayata) Ying, *comb. nov.* 擬粉蝶蘭

Platanthera truncatolabellata Hayata, Icon. Pl. Form. **4**: 124, *f.* 65 (1914).

Phyllomphax truncatolabellata (Hayata) Schltr. in Fedde Repert. Beih. **4**: 119 (1919), (Orch. Sino-Jap. Prodr.).

Platanthera obcorulata sensu Matsum. et Hayata in Journ. Col. Sci. Univ. Tokyo **22**: 419 (1906), (Enum. Pl. Form.). *non* Lindl.

Distribution (分佈): Endemic (固有種).

13. **BULBOPHYLLUM** Thou. 石豆蘭屬

19. **Bulbophyllum affine** Lindley in Wall. cat. n. 1982
(1839). 恒春石豆蘭

Bulbophyllum kusukusense Hayata, Icon. Pl. Form. 4:
48, f. 19 (1914).

Sarcopodium affine Lindley in Paxt. Fl. Gard. 1: 155
().

Distribution (分佈): Himalaya (喜馬拉雅山), Vietnan
(越南) and Taiwan (台灣).

20. **Bulbophyllum albociliatum** (Liu et Su) Seidenf. in
Mus. Paris 3, s. 71: 109 (1973). 白緣石豆蘭

Cirrhopetalum albociliatum Liu et Su in Quart. Journ.
Taiwan Mus. 24: 173, Pl. 1 (1971).

Distribution (分佈): Endemic (固有種).

21. **Bulbophyllum aureolabellum** Lin, Nat. Orch. Taiwan
1: 38, col. Photo. 7-8 (1975). 耳唇石豆蘭

Bulbophyllum gracillimum sensu Hayata, Icon. Pl. Form.
2: 132 (1912), non Rolfe

Distribution (分佈): Endemic (固有種).

22. **Bulbophyllum flaviflorum** (Liu et Su) Seidenf. in
Bull. Mus. Paris 3, s. 71: 109 (1973). 黃花石豆蘭

Cirrhopetalum flaviflorum Liu et Su in Quart. Journ.
Taiwan Mus. 24: 174, pl. 2 (1971).

Bulbophyllum flaviflorum (Liu et Su) *sensu* Ying in
Chin Flow. (13): 28 (1974), non Seidenf.

Distribution (分佈): Endemic (固有種).

23. **Bulbophyllum insulsoides** Seidenf., Dansk. Bot. Arkiv.
Bind. 29, N.R. 1: 89 (1973). 總狀花石豆蘭

Bulbophyllum racemosum sensu Hayata in Journ. Col.
Sci. Univ. Tokyo 30: (1): 317 (1911), (Mat. Fl. Form.).
non Rolfe

Distribution (分佈): Endemic (固有種).

24. **Bulbophyllum japonicum** (Makino) Makino in Bot.

Mag. Tokyo **24**: 31 (1910). 日本紅花石豆蘭

Cirrhopetalum japonicum Makino, Ill. Fl. Jap. Pl. 42
(1891).

Bulbophyllum inabai Hayata, Icon. Pl. Form. **4**: 47,
f. 9 (1914).

Cirrhopetalum inabai (Hayata) Hayata, Icon. Pl. Form.
4: 47 (1914).

Bulbophyllum rubrotabellum Lin in Taiwania **20**: 163
(1975), syn. nov.

Distribution (分佈): Japan (日本) and Taiwan (台灣).

25. **Bulbophyllum linchianum** Ying, col. Ill. Indig. Orch.
Taiwan 1: 61, col. photo. 11 (1977). 邵氏石豆蘭

Cirrhopetalum linchianum Ying, l.c.

Distribution (分佈): Endemic (固有種).

26. **Bulbophyllum macraei** (Lindley) Reichb. f. in Walp.
Ann. **6**: 263 (1861). 烏來石豆蘭

Cirrhopetalum macraei Lindley, Gen. & Sp. Orch. 59
(1833).

Cirrhopetalum uraiense Hayata, Icon. Pl. Form. **4**: 51
(1914).

Bulbophyllum uraiense Hayata, l.c. **4**: 51 (1914).

Bulbophyllum tangasimense Masamune in Journ. Geobot.
Hokuriku **16**: 57 (1968).

Distribution (分佈): India (印度) Srilanka (錫斯藍卡)
Japan (日本) Lyukyui (琉球) and Taiwan (台灣)

27. **Bulbophyllum macraei** (Lindley) Reichb. f. var. *autu-*
mnale (Fukuyama) Ying, *comb. nov.* 紫花石豆蘭

Bulbophyllum autumnale (Fukuyama) Ying in Bull.
Exp. For. Nat. Taiwan Univ (114): 156 (1974).

Cirrhopetalum autumnale Fukuyama in Bot. Mag. To-
kyo **49**: 760 (1935).

The variety differ from the typical phase by purple
flowers and the shape of sepals.

Distribution (分佈) : Endemic (固有變種)

28. **Bulbophyllum melanoglossum** Hayata, Icon. Pl. Form. 4: 49, pl. 10 (1914). 紫紋石豆蘭

Cirrhopetalum melanoglossum Hayata, Icon. Pl. Form.

4: 49 (1914).

Cirrhopetalum striatum Liu et Su in Quart. Journ.

Taiwan Mus. 24: 176 pl. 3 (1971).

Distribution (分佈) : Endemic (固有種).

29. **Bulbophyllum omerandrum** Hayata, Icon. Pl. Form. 4: 50 (1914). 黃唇石豆蘭

Cirrhopetalum omerandrum (Hayata) Hayata, l.c. 4:

50 (1914).

Distribution (分佈) : Endemic (固有種).

30. **Bulbophyllum remotifolium** (Fukuyama) Ying in Bull. Exp. For. Nat. Taiwan Univ. (114): 156 (1974). 紅毛緣石豆蘭

Cirrhopetalum remotifolium Fukuyama in Bot. Mag.

Tokyo 49: 669 (1935).

Bulbophyllum hirundinis sensu Lin, Nat. Orchid. Taiwan 1: 44, col. Phot. 11 (1975), non (Gagnep.) Seidenf.

Distribution (分佈) : Endemic (固有種).

31. **Bulbophyllum retusiusculum** Reichb.f. in Gard. Chron. 1182 (1869), Seidenf. in Dansk. Bot. Ark. 29(1): 195 (1973). 黃萼石豆蘭

Bulbophyllum flavisepalum Hayata, Icon. Pl. Form. 2:

131 (1912).

Cirrhopetalum flavisepalum Hayata, Icon. Pl. Form.

2: 131 (1912).

Distribution (分佈) : Southeastern Asia (東南亞) and Taiwan (台灣)

32. **Bulbophyllum riyanum** Fukuyama in Bot. Mag. Tokyo 49: 668 (1935). 假豆蘭

Distribution (分佈) : Endemic (固有種).

33. **Bulbophyllum rubropunctatum** Ying, Col. Ill. Indig. Orch. Taiwan 1:75, col. photo. 17 (1977). 紅斑石豆蘭
Cirrhopetalum rubropunctatum Ying, l.c.
 Distribution (分佈): Endemic (固有種).
34. **Bulbophyllum setaceum** Lin, Nat. Orch. Taiwan 1:55, col. photo. 25-27 (1975). 鸚冠蘭
 Distribution (分佈): Endemic (固有種).
35. **Bulbophyllum somai** Hayata, Icon. Pl. Form. 9:109, f.37 (1920). 小石豆蘭
Bulbophyllum drymoglossum sensu, Lin, Nat. Orch. Taiwan 1:40, col. photo. 9 (1975), non Maxim. ex Okubo.
 Distribution (分佈): Endemic (固有種).
36. **Bulbophyllum taiwanense** (Fukuyama) Seidenf. in Bull. Mus. Paris 3.s. 29(1):89 (1973). 台灣石豆蘭
Cirrhopetalum taiwanense Fukuyama in Bot. Mag. Tokyo 49:761 (1935).
Bulbophyllum taiwanense (Fukuyama) Ying in Bull. For. Nat. Taiwan Univ. (114):157 (1974).
 Distribution (分佈): Endemic (固有種).
37. **Bulbophyllum tokioi** Fukuyama in Bot. Mag. Tokyo 49:439 (1935). 紫花小石豆蘭
 Distribution (分佈): Endemic (固有種).
38. **Bulbophyllum tokioi** Fukuyama form **alboviride** Fukuyama in Bot. Mag. Tokyo 52:245 (1938). 綠白花小石豆蘭
 Distribution (分佈): Endemic. (固有種).
39. **Bulbophyllum transarisanense** Hayata, Icon. Pl. Form. 6:73 (1916). 阿里山石豆蘭
Bulbophyllum viridiflorum Hayata, Icon. Pl. Form. 2:133 (1912), non Schltr.
Bulbophyllum transarisanense Hayata form. *alboviride* Fukuyama in Masamune, List Vasc. Pl. Taiwan 167(1954).

Distribution (分佈) : Endemic (固有種) .

40. **Bulbophyllum umbellatum** Lindley in Wall. Cat. 1984 (1829). 繖花石豆蘭

Bulbophyllum saruwatarii Hayata, Icon. Pl. Form6 : 72 (1916).

Cirrhopetalum saruwatarii (Hayata) Hayata, l.c.

Cirrhopetalum formosanum Rolfe in Kew. Bull. 372 (1914).

Bulbophyllum formosanum (Rolfe) Seidenf. in Dansk., Bot. Ark. 29 (1) : 171 (1973).

Bulbophyllum formosanum (Rolfe) Ying in Bull. Exp. For. Nat. Taiwan Univ. (114) : 156 (1974).

Distribution (分佈) : China (中國), W. Himalaya (喜馬拉雅山), Nepal (尼泊爾), Sikkim (錫金), Bhutan (不丹), Assam (阿薩姆) and Vietnan (越南).

13. CALANTHE R.Br. 根節蘭屬

41. **Calanthe actinomorpha** Fukuyama in Bot. Mag. Tokyo 49 : 668 (1935). 小黃花根節蘭

Phaius actinomorpha (Fukuyama) Lin, Nat. Orch. Taiwan. 1 : 224, col. photos 138-139 (1975).

Distribution (分佈) : Endemic. (固有種) .

42. **Calanthe albo-longicalcarata** Ying in Bull. Exp. For. Nat. Taiwan Univ. (114) : 155 (1974) & Chin. Flow. () : 34, pl. 3 (1975). 白花長距根節蘭

Distribution (分佈) : Endemic (固有種) .

43. **Calanthe alismaefolia** Lindley, Fol. Orch. Calanthe 8 (1854); Garay & Sweet, Orch. S. Ryukyu Isl. 122 (1974). 黑斑根節蘭

Calanthe nigropuncticulata Fukuyama in Bot. Mag. Tokyo 48 : 437 (1934).

Calanthe japonica Blume ex Miq. in Ann. Mus. Bot. Ludg. Bat. 2 : 205 (1866).

Distribution (分佈): S. China (中國南部), Sikkim (錫金), Japan (日本) and Taiwan (台灣).

44. **Calanthe arisanensis** Hayata in Journ. Col. Sci. Univ. Tokyo **30** (1): 327 (1911), (Mat. Fl. Form.) 阿里山根節蘭

Calanthe raishaensis Hayata, Icon. Pl. Form. **6**: 77 (1916).

Distribution (分佈): Endemic (固有種).

45. **Calanthe aristulifera** Reichb.f. in Bot. Zeit. **36**: 74 (1878). 垂花根節蘭

Calanthe elliptica Hayata in Journ. Col. Sci. Univ. Tokyo **30** (1): 329 (1911), (Mat. Fl. Form.).

Calanthe kirishiensis Yatabe in Bot. Mag. Tokyo **6**: 253, t. 7 (1893).

Distribution (分佈): Japan (日本) and Taiwan (台灣).

46. **Calanthe caudatilabella** Hayata, Icon. Pl. Form. **4**: 66, pl. 13 (1914). 尾唇根節蘭

Distribution (分佈): Endemic (固有種).

47. **Calanthe densiflora** Lindley in Wall. Cat. n. 7344 (1839); Masamune in Journ. Geobot. **19**(4): pl. 10 (1971). 密花根節蘭

Calanthe kauoi Yamamoto in Trans. Nat. Hist. Soc. Form. **20**: 38 (1930) & Suppl. Icon. Pl. Form. **5**: 11 (1932).

Distribution (分佈): Himalaya (喜馬拉雅山麓) and Taiwan (台灣).

48. **Calanthe fimbriata** Franch in Nouv. Arch. Mus. Paris ser. II **10**: 86 (1887). 綠唇緣根節蘭

Calanthe fimbriatmarginata Fukuyama in Bot. Mag. Tokyo **48**: 301 (1934).

Calanthe schlechteri Hara in Journ. Jap. Bot. **9**: 122 (1933).

Distribution (分佈): China (中國), Japan (日本) and

Taiwan (台灣).

49. **Calanthe lyroglossum** var **forsythiflora** (Hayata)
Ying, col. III. Ind. Orchid. 1: 88 col. phot. (1977) 黃花根節蘭

Calanthe forsythiflora Hayata, Icon. Pl. Form. 4: 67, pl. 14 (1914).

Calanthe lyroglossa sensu Lin, Nat. Orchid. Taiwan 1: 88, col. photo. 41 (1975) *non* Reichb.f.

Calanthe liukuensis Schltr. in Fedde Repert. Beih. 4: 67 (1919).

Distribution (分佈): Japan (日本), Lyukyu (琉球) and Taiwan (台灣).

50. **Calanthe graciliflora** Hayata in Journ. Col. Sci. Univ. Tokyo 30(1): 329 (1911), (Mat. Fl. Form.). 細花根節蘭

Distribution (分佈): Endemic (固有種).

51. **Calanthe herbacea** Lindley, Fol. Orch. Calanthe 10 (1854); Yamamoto in Trans. Nat. Hist. Soc. Form. 20: 98 (1930). 短柱根節蘭

Calanthe brevicolumna Hayata in Journ. Col. Sci. Univ. Tokyo 30(1): 328 (1911), (Mat. Fl. Form.).

Distribution (分佈): Himalaya (喜馬拉雅山麓) and Taiwan (台灣).

52. **Calanthe kintaroi** Yamamoto in Journ. Soc. Trop. Agric. Taiwan 6: 550 (1934). 紫紅花根節蘭

Distribution (分佈): Endemic (固有種).

53. **Calanthe masuca** (D. Don) Lindley in Wall. Cat. n. 7337 (1839). 長距根節蘭

Calanthe longicalcarata Hayata ex Yamamoto in Trans. Nat. Hist. Soc. Form. 20: 39 (1930).

Calanthe seikooensis Yamamoto in Journ. Soc. Trop. Agric. Taiwan 3: 237 (1931).

Distribution (分佈): India (印度), Malaya (馬來西亞) and

Taiwan (台灣).

54. **Calanthe matsudai** Hayata, Icon. Pl. Form. 9: 112, f. 38 & 39 (1920). 禾葉根節蘭

Distribution (分佈): Endemic (固有種).

55. **Calanthe pulchra** (Blume) Lindley var. *formosana* (Rolfe) Ying, **comb. nov.** 台灣根節蘭

Calanthe formosana Rolfe in Ann. Bot. 9: 157 (1895); Henry, List Pl. Form. 92 (1896).

Calanthe yushuni Mori et Yamamoto in Journ. Soc. Trop. Agric. 4: 188 (1932).

Distribution (分佈): The variety (變種) endemic (固有種).

56. **Calanthe reflexa** (O. K.) Maxim. in Bull. Acad. Petersb. 18: 68 (1873); Hayata, Icon. Pl. Form. 4: 71, f. 34 (1914). 反捲根節蘭

Alismorchis reflexa O.K., Rev. Gen. pl. 2: 650 (1819).

Calanthe okushiriensis Miyabe & Tatew in Trans. Sapporo Nat. Hist. Soc. 14: 190 (1936).

Paracalanthe reflexa (Maxim.) Kudo in Journ. Trop. Agric. Taiwan 2: 235 (1935).

Calanthe reflexa var. *okushiriensis* (Miyabe & Tatew.) Ohwi

Distribution (分佈): Korea (韓國), Japan (日本) and Taiwan (台灣).

57. **Calanthe sasaki** Hayata, Icon. Pl. Form. 4: 71, f. 35 (1914). 佐佐木氏根節蘭

Distribution (分佈): Endemic (固有種).

58. **Calanthe striata** R. Br. var. *pumila* (Fukuyama) Ying, **comb. nov.** 小根節蘭

Calanthe pumila Fukuyama in Bot. Mag. Tokyo 49: 438 (1935).

Distribution (分佈): Endemic (固有變種).

59. **Calanthe striata** R. Br. var. **sieboldii** (Decne) Maxim. in Bull. Acad. Sci. St. Petersb. **8**: 641 (1872). 川上氏根節蘭

Calanthe sieboldii Decne in Rev. Hort. ser. Iv, **4**: 381 (1855).

Calanthe kawakamii Hayata in Journ. Col. Sci. Univ. Tokyo **30**(1): 330 (1911) (Mat. Fl. Form.).

Calanthe takeoi Hayata, Icon. Pl. Form. **9**: 111 (1920).

Distribution (分佈): Japan (日本), Lyukyu (琉球) and Taiwan (台灣).

60. **Calanthe tricarinata** Lindley, Gen. & Sp. Orch. 252 (1833). 紅唇根節蘭

Calanthe megalophora Franch, Pl. David. **2**: 123 (1887).

Calanthe torifera Schltr., in Fedde Repert. Beih **4**: 68 et 243 (1919), (Jap. Orch. Sino Prodr.).

Calanthe lamellata Hayata, Icon. Pl. Form. **4**: 70, f. 33 (1914).

Distribution (分佈): Himalaya (喜馬拉雅山麓), W. China (中國西部), Japan (日本) and Taiwan (台灣).

61. **Calanthe triplicata** ((Rumph) Willem) Ames in Philipp. Journ. Sci. **2**: 326 (1907); J. J. Smith, Orch. Java Fig. Atlas **2**: f. 157 (1909). 白花根節蘭

Flos triplicatus Rumph, Herb. Amb. **6**: 115, t. 52, f. 2 (1750).

Orchis triplicata Willem. in Usteri. Ann. Bot. **18**: 52 (1796) -- (Since Willemet's species is a Mauritius plant it could not very well be *Calanthe triplicata* (Rumph.) Ames which was described from a plant from Amboina, yet Willemet cited Rumph's plate and description).

Limodorum veratrifolium Willd., Sp. Pl. **4**: 122 (

1805).

Calanthe veratrifolia (Willd.) R. Br. Bot. Reg. 9, t. 702 (1823).

Alismorchis veratrifolia (Willd.) Kuntze, Rev. Gen. Pl. 2: 650 (1891).

Calanthe veratrifolia (Willd.) R. Br. Kenyia F. M. Bail. Qd. Agric. Journ. 28: 276 (1912).

Calanthe furcata Batem. ex Lindley, Bot. Reg. Misc. 28 (1838).

Alismorchis furcata O. Ktze, Rev. Gen. 650 (1891).

Calanthe matsumurana Schltr. in Fedde. Repert. 2: 168 (1906).

Distribution (分佈): South China (中國南部), India (印度) throughout Malaya (馬來西亞) and Indonesia (印尼) to Australia (澳大利亞), New Guinea (新幾內亞), the Philippines (菲律賓), Japan (日本) and Taiwan (台灣).

14. CALYPSO Salisb. 匙唇蘭屬

62. *Calypso bulbosa* (Linn.) Reichb. f. Ic. Fl. Germ. 13: 158, t. 137 (18). 匙唇蘭

Cypripedium bulbosum Linn., Sp. Pl. 351 (1753).

Cytherea borealis Salisb. in Trans. Hort. Soc. 1: 301 (1812).

Limodorum boreale Sw in Schrad. Neues. Journ. 1: 85 (1805).

Orchidium americanum Steud., Nom. ed. II, 2: 222 ().

Orchidium arcticum Sw., Summa Veg. Scand. 32 ().

Orchidium boreale Sw. in Svensk. Bot. t. 518 ().

Norna borealis Wahlb., Fl. Suec. ed. II, 561 (1826).

Cymbidium boreale Sw. in Nov. Act. Soc. Sci. Upsal.

6: 76 (1799).

Calypso occidentalis Heller. in Bull. Torr. Bot. Culb.

193 (1898).

Calypso borealis Salisb., Parad. Lond. t. 89 (1806).

Calypso japonica Maxim. ex. Kom. in Act. Hort. Petrop. 20: 533 ().

Distribution (分佈): North temperate zone (北溫帶).

15. CEPHALANTHERA L.C. Rich. 立花蘭屬

63. *Cephalanthera alpicola* Fukuyama in Bot. Mag. Tokyo

52: 242 (1938). 台灣立花蘭

Distribution (分佈): Endemic (固有種).

16. CHAMAEANTHUS Schltr. 低藥蘭屬

64. *Chamaeanthus wenzellii* Ames, Orch. 5: 200 (1915);

Hsieh in Quart. Journ. Taiwan Mus. 8: 224 (1955). 低藥蘭

Distribution (分佈): The Philippines (菲律賓) and Taiwan (台灣).

17. CHEIROSTYLIS Blume 指柱蘭屬

65. *Cheirostylis chinensis* Rolfe in Ann. Bot. 9: 158 (

1895); Henry, List. Pl. Form. 92 (1896); Matsum. et Hayata in Journ. Col. Sci. Univ. Tokyo 22: 416 (1906), (Enum. Pl. Form.). 指柱蘭

Cheirostylis liukiensis Masamune in Journ. Soc. Trop. Agric. Taiwan 2: 36 (1930).

Distribution (分佈): China (中國), Lyukyu (琉球) and Taiwan (台灣).

66. *Cheirostylis flabellata* Wight, Icon. t. 1727 ();

Lindley in Journ. Linn. Soc. 1: 187 (); Hook. f., Fl. Brit. Ind. 6: 106 (). 扇葉指柱蘭

Cheirostylis cochinchinensis Blume, Fl. Jav. Orch. 45, t. 39, f. 2 ().

Goodyera flabellata A. Rich. in Ann. Sci. Nat. ser. 2, 15: 79, t. 12 ().

Cheirostylis inabai Hayata, Icon. Pl. Form. 4: 108, f. 56 (1914).

Distribution (分佈): Vietnan (越南), India (印度) and Taiwan (台灣).

67. ***Cheirostylis taiwanensis*** Yamamoto in Journ. Soc. Trop. Agric. Taiwan 5: 54 (1933). 台灣指柱蘭

Distribution (分佈): Endemic (固有種).

68. ***Cheirostylis takeoi*** (Hayata) Schltr. in Fedde. Repert. Beih. 4: 171 (1919), (Orch. Sino-Jap. Prodr.). 無葉指柱蘭

Arisanorchis takeoi Hayata, Icon. Pl. Form. 4: 110, f. 57 (1914).

Distribution (分佈): Thailand (泰國) and Taiwan (台灣).

69. ***Cheirostylis tatewakii*** Masamune in Journ. Trop. Agric. Taiwan 4: 195 (1933): 太魯閣指柱蘭

Distribution (分佈): Endemic (固有種).

18. **CHILOSCHISTA** Lindley 梅蘭屬

(*Chilochista* Mein),

70. ***Chiloschista segawai*** (Masamune) Ying in Bull. Exp. For. Nat. Taiwan Univ. (114): 155 (1974). 梅蘭

Sarcochilus segawai Masamune in Trans. Nat. Hist. Soc. Form. 24: 212 (1934).

Thrixspermum segawai Masamune, l.c.

Chilochista segawai Masamune & Fukuyama in Bot. Mag. Tokyo 52: 247 (1936).

Distribution (分佈): Endemic (固有種).

71. ***Chiloschista segawai*** (Masamune) Ying var. *taiwani-*

ana Ying, Col. Ill. Ind. Orch Taiwan 1:107, col. photo. 33
(1977). 綠花梅蘭

Distribution (分佈): Endemic (固有種).

19. CHRYSOGLOSSUM Blume 金唇蘭屬

72. *Chrysoglossum formosanum* Hayata in Journ. Col. Sci. Univ. Tokyo 30(1):318 (1911), (Mat. Fl. Form.). 台灣金唇蘭

Chrysoglossum ornatum sensu Lin, Nat. Orch. Taiwan 1:106, col. photo. 55 Dissected f. 33 (1975), *non* Blume.

Distribution (分佈): Endemic (固有種).

20. COELOGLOSSUM Hartm. 裂唇蘭

73. *Coeloglossum nankotaizanensis* (Masamune) Ying in Quart. Chin. For. 8(4):149 (1975). 台灣裂唇蘭

Herminium nankotaizanensis Masamune in Journ. Soc. Trop. Agric. Taiwan 4:194 (1932).

Platanthera nankotaizanensis (Masamune) Masamune in Bot. Mag. Tokyo 46:773 (1932).

Coeloglossum taiwanianum Ying, Alp. Pl. Taiwan in Col. 1:71, col. phot. 101 (1975).

Coeloglossum viride sensu Lin, Nat. Orch. Taiwan 1:108, col. photo. 56-57, (1975), *non* (Linn.) Hartm.

Distribution (分佈): Endemic (固有種).

21. COLLABIOPSIS Ying 假吻蘭屬

74. *Collabiopsis formosanum* (Hayata) Ying, Col. Ill. Indig. Orch. 1:112, col. photo. 36 (1977). 台灣假吻蘭

Collabium formosanum Hayata in Journ. Col. Sci. Univ. Tokyo 30(1):319 (1911), (Mat. Fl. Form.).

Distribution (分佈): Endemic (固有種).

75. *Collabiopsis uraiensis* (Fukuyama) Ying, *comb. nov.* 烏來假吻蘭

Collabium uraiensis Fukuyama in Bot. Mag. Tokyo
48: 300 (1934).

Distribution (分佈): Endemic (固有種).

22. CORYBAS Salisb. 鎧蘭屬

76. *Corybas taiwanensis* Lin in *Taiwania* 20:162, pl. 1
(1975). 台灣鎧蘭

Distribution (分佈): Endemic (固有種).

23. CORYMBORCHIS Thou. ex Blume 綉球蘭屬

77. *Corymborchis veratrifolia* Thou. ex Blume, *Orch.*
Ind. Arch. 125, t. 42 (1855) 綉球蘭

Corymborchis sakisimensis (Fukuyama) Fukuyama in
Trans. Nat. Hist. Soc. Form. 31:290 (1941).

Corymborchis assamica Blume, *l.c.* 126, t. 43 (1855).

Corymbis varatrifolia Reichb. f. in *Flora* 67:684 (1865).

Corymbis sakisimensis Fukuyama.

Distribution (分佈): India (印度), Thailand (泰國),
Malaya (馬來西亞), s. China (中國南部) and Taiwan (台灣).

24. CREMASTRA Lindley 馬鞭蘭屬

78. *Cremastra appendiculata* var. *triloba* (Hayata) Ying
in *Chinese Flow*(26): 4, f. 3 (1976). 台灣馬鞭蘭

Cremastra triloba Hayata, *Icon. Pl. Form.* 4: 84,
f. 40 (1914).

Cremastra appendiculata sensu Lin, *Nat. Taiwan Orch.*
1:110 (1975), non (D. Don) Makino.

Distribution: the variety (變種) is endemic (固有).

25. CRYPTOSTYLIS R. Br. 隱柱蘭屬

79. *Cryptostylis arachnites* (Blume) Hassk., *Cat. Bog.*

8 (1844). 隱柱蘭

Zosterostylis arachnites Blume, Bijdr. 419 (1825).

Zosterostylis zeylanica Lindley, Gen. & Sp. Orch. 446
(1840).

Zosterostylis walkerae Wight, Icon. 5, I, 20 t.1748,
IV (1852).

Cryptostylis erythroglossum Hayata, Icon. Pl. Form.
4: 117, t.18 (1914).

Distribution (分佈): India (印度), Srilanka (席里藍卡),
Malaya (馬來西亞), Java (爪哇), Bornea (婆羅州) and
Taiwan (台灣).

80. **Cryptostylis arachnites** (Blume) Hassk. var. **philippinensis** (Schltr.) Ying, Col. Ill. Indig. Orch. 1:107
col. photo. 39(1977). 綠斑隱柱蘭

Cryptostylis philippinensis Schltr. in Engl. Bot. Jahrb.
58: 54 (1922).

Cryptostylis taiwaniana Masamune in Trans. Nat. Hist.
Soc. Form. 23: 208 (1933).

Distribution (分佈): The Philippines (菲律賓) and Taiwan (台灣).

26. CYMBIDIUM Sw. 蕙蘭屬

81. **Cymbidium aloifolium** (L.) Sw. in Nov. Act. Soc. Sci. Upsal. 6: 73 (1799); Hayata, Icon. Pl. Form. 4: 74, f.37 (1914). 垂花蕙蘭

Epidendrum aloifolium Linn., Sp. Pl. 953 (1753).

Aerides borassi Buch-Ham. ex Smith in Rees. Cyclop. 39: 8 ().

Cymbidium crassifolium Lindley in Wall. n. 7357 ().

Cymbidium mannii Reichb.f. in Flora 15: 274 (1872).

Distribution (分佈): Srilanka (席里藍卡), India peninsula (印度半島) and Taiwan (台灣).

82. **Cymbidium dayanum** Reichb. f. in Gard. Chron. 710
437

(1869); Ying in Chin. Flow. (2):54, pl.1 (1974). 鳳蘭

Cymbidium simonsianum King et Planting in Journ. As. Soc. Beng. **44**:239 (1895); Hayata, Icon. Pl. Form. **4**: 82, f.39 (1914).

Cymbidium alborubena Makino in Bot. Mag. Tokyo **16**: 11 (1902).

Cymbidium marginatum Makino in Iinuma Somoku-Dzusetsu ed. 3 **4**: 183 (1913).

Cymbidium acutum Lindley in Journ. Linn. Soc. **32**: 334 () .

Cymbidium eburneum Lindley var. *dayanum* Hook.f.

Cymbidium dayanum Reichb. f. var. *austro-japonicum* Tuyama.

Cymbidium pulcherrimum Hort. Sand in Gard. Chron. **2**: 721 (1891).

Distribution (分佈): India (印度), Sikkim (錫金), Malaya (馬來西亞), Sumatra (蘇門答臘) Celebes (西里伯斯) the Philippines (菲律賓), S. China (中國南部) and Taiwan.

83. **Cymbidium faberi** Rolfe in Kew. Bull. **1896**:198 (1896). 九華蘭

Cymbidium oiwakensis Hayata, Icon. Pl. Form. **6**: 80, f.14 (1916)

Distribution (分佈): China (中國) and Taiwan (台灣).

84. **Cymbidium gyokuchin** Makino var. **arrogans** (Hayata) Ying, in Col. Ill. Indig. Orch. Taiwan **1**: 126, Col. photo. 43 (1977). 大屯素心蘭

Cymbidium arrogans Hayata, Icon. Pl. Form. **4**: 76 (1914) et **6**: 79, f.12 (1917).

Distribution (分佈): The variety endemic (固有變種).

85. **Cymbidium formosanum** Hayata in Journ. Col. Sci. Univ. Tokyo **30**(1):335 (1911), (Mat. Fl. Form.) & Icon. Pl. Form. **4**:77 (1914); Ying in Chinese Flow. (3): 32, pl.1 (1974). 台灣春蘭

Distribution (分佈): Endemic (固有種).

86. **Cymbidium gracillium** Fukuyama in Trans. Nat. Soc. Form. **22**: 413, *f. 1 et 2* (1932); Ying in Chinese Flow. (4): 59, *pl. 8* (1974). 細葉蕙蘭
Cymbidium formosanum Hayata var. *gracillium* (Fukuyama) Liu et Su, Nat. Orch Taiwan rev. ed. 48 (1975).
 Distribution (分佈): Endemic (固有種).
87. **Cymbidium lancifolium** Hook. f., Exot. Fl. 1, f. 51 (); Hayata, Icon. Pl. Form. **4**: 79 (1914); Ying in Chin. Flow. (5): 33, *pl. 1* (1974). 竹葉蘭
Cymbidium nagi-folium Masamune in Bot. Mag. Tokyo **44**: 220 (1930).
Cymbidium gibsoni Lindley & Paxt., Flow. Card. **3**: 144 (1852-53).
Cymbidium javanicum Blume, Bijdr. 380 (1825).
 Distribution (分佈): Java (爪哇), Japan (日本) and Taiwan (台灣).
88. **Cymbidium lancifolium** var. *aspidistrifolium* (Fukuyama) Ying, *comb. nov.* 綠花竹葉蘭
Cymbidium aspidistrifolium Fukuyama in Bot. Mag. Tokyo **48**: 438, *f. 2* (1934).
Cymbidium javanicum Blume var. *aspidistrifolium* (Fukuyama) Maekawa in Journ. Jap. Bot. **33**: 320 (1958), *nom. nud.*
 Distribution (分佈): Lyukyu (琉球) and Taiwan (台灣).
89. **Cymbidium lancifolium** var. *syunitianum* (Fukuyama) Ying, *comb. nov.* 佐舜氏竹葉蘭
Cymbidium syunitianum Fukuyama in Bot. Mag. Tokyo **49**: 757 (1935).
 Distribution (分佈): Endemic (固有種).
90. **Cymbidium kanran** Makino in Bot. Mag. Tokyo **16**: 10 (1902). 寒蘭
Cymbidium linearisepalum Yamamoto in Trans. Nat. Hist. Soc. Form. **20**: 40 (1930).

Cymbidium linearisepalum Yamamoto form. *atoropu-
rpureum* Yamamoto in Trans. Nat. Hist. Soc. Form. **20**:
41 (1930).

Cymbidium linearisepalum Yamamoto form. *atrovirens*
Yamamoto, l.c. **20**: 41 (1930).

Distribution (分佈): Japan (日本), Lyukyu (琉球) and
Taiwan (台灣).

91. **Cymbidium kanran** Makino var. **misericos** (Hayata)
Ying, **comb. nov.** 綠唇寒蘭

Cymbidium misericos Hayata, Icon. Pl. Form **4**: 79,
f. 38-6 (1914).

Cymbidium kanran Makino form. *misericos* (Hayata)
Ying in Chin. Flow. (23): 7 (1976).

Distribution (分佈): Endemic (固有種).

92. **Cymbidium kanran** Makino var. **purpureo-hiemale**
(Hayata) Ying, **comb. nov.** 毛唇寒蘭

Cymbidium purpureo-hiemale Hayata, Icon. Pl. Form.
4: 81 (1914).

Cymbidium kanran Makino form *purpureo-hiemale* (
Hayata) Ying in Chinese Flow. (23): 7 (1976).

Distribution (分佈): Endemic (固有種).

93. **Cymbidium kanran** Makino var. **babae** (Kudo) Ying
in Chinese Flow. (23): 7 (1976).

Cyperorchis babae Kudo ex Masamune in Journ. Jap. Bot.
8: 259 (1932).

Distribution (分佈); Endemic (固有種).

94. **Cymbidium pumilum** Rolfe in Kew. Bull. **1907**: 130
(1907). 小蕙蘭, 金陵邊蘭

Cymbidium illiberale Hayata, Icon. Pl. Form. **4**: 78
(1914).

Distribution (分佈): China (中國) and Taiwan (台灣).

95. **Cymbidium oreophilum** Hayata, Icon. Pl. Form. **4**: 80,
f. 38-c (1914). 四季蘭

Cymbidium rubrigemmum Hayata, Icon. Pl. Form 6:81, f.15 (1916).

Cymbidium miseriors Hayata var. *oreophilum* Hayata, Icon. Pl. Form. 4:81 (1914).

Cymbidium ensifolium var. *rubrigemum* (Hayata) Liu et Su, Nat. Orch. Taiwan rev. ed. 53. (1976).

Distribution (分佈): Endemic (固有種).

96. **Cymbidium sinense** Willd., Sp. Pl. 4:111 (1805); Fukuyama in Masamune, Short Fl. Form. 287 (1936). 報歲蘭

Epidendron sinense Ander. Bot. Rep. 3:216 (1802).

Cymbidium fragrans Salisb in Trans. Hort Soc. 1:298 (1812).

Cymbidium hoosai Makino in Bot. Mag. Tokyo 16:27(1902)

Distribution (分佈): China (中國) and Taiwan (台灣).

- 96a. **Cymbidium sinense** Willd. form **albo-jucundissimum** (Hayata) Fukuyama in Trans Nat. Hist. Soc. Form. 22:415 (1932). 白花報歲蘭

Cymbidium albo-jucundissimum Hayata, Icon. Pl. Form. 4:74 (1914).

Cymbidium sinense Willd. var. *albo-jucundissimum* Masamune in Trop. Hort. 3:31 (1933).

Distribution (分佈): China (中國) and Taiwan (台灣).

- 96b. **Cymbidium sinense** Willd. form. **margicoloratum** (Hayata) Fukuyama in Masamune, Short Fl. Form. 287 (1936). 紅緣唇報歲蘭

Cymbidium sinense Willd. var. *margicoloratum* Hayata, Icon. Pl. Form. 6:82, f.16-b et 17 (1916).

Distribution (分佈): Endemic (固有種).

97. **Cymbidium tortisepalum** Fukuyama in Bot. Mag. Tokyo 48:304, f.1 (1934). 菅草蘭

Distribution (分佈): Endemic (固有種).

98. **Cymbidium tortisepalum** Fukuyama var. *viridiflorum*

Ying, Col. Illust. Indig. Orch. Taiwan 1:415 (1977). 綠
花唇蘭

Distribution (分佈): Endemic (固有變種).

27. **CYPRIPEDIUM** Linn. 袋唇蘭屬

99. **Cypripedium debile** Reichb. f., Xenia Orch. 2:233
(1865). 小袋唇蘭

Cypripedium cardiophyllum Fr., & Sav., Enum. Pl. Jap.
2:39 (1879).

Distribution (分佈): Japan (日本) and Taiwan (台灣).

100. **Cypripedium guttatum** Sw. var. **segawai** (Masamune)
Ying Col. Illust. Indrg Orch. Taiwan 1:357(1977). 狹葉袋唇蘭

Cypripedium segawai Masamune in Trop. Hort. 3:31 &
Trans. Nat. Hist. Soc. Form. 23:209 (1933).

Distribution (分佈): the variety is endemic (固有變種).

101. **Cypripedium japonicum** Thunb. var. **formosanum** (
Hayata) Ying in Chinese Flow. (15):33, pl. 1 (1975) &
in Quart. Chin. Form. 8(4):141 (1975). 台灣袋唇蘭

Cypripedium formosanum Hayata, Icon. Pl. Form. 6:66,
f. 9 (1917).

Cypripedium japonicum sensu Hayata, Icon. Pl. Form.
2:136 (1912), non Thunb

Distribution (分佈): The species (種) in China (中國)
and Japan (日本); The variety (變種) endemic (固有).

102. **Cypripedium macranthum** Sw. in Vet. Acad. Hamdl.
Stockl. 251 (1800); Hayata, Icon. Pl. Form. 2:136
(1912). 高山袋唇蘭

Cypripedium thunbergii Blume, Orch. Archip. Ind. 169
() .

Cypripedium speciosum Rolfe in Kew. Bull 1911:207
(1911).

Cypripedium atsmori Morren in Belg. Hort. 1:171, t. 1
(1851).

Cypripedium calceolus var. *atsmori* (Morren) Pflizer.

Cypripedium macranthum Sw. var. *speciosum* (Rofe) Koidz.

Cypripedium taiwanianum Masamune in Trop. Hort. **3**: 31 (1933).

Distribution (分佈) : Korea (韓國), Japan (日本), northern and northeastern China (中國北部及東北部), Kmchatake (堪察加), Siberia (西伯利亞), e. Europe (歐州東部) and Taiwan (台灣).

28. DENDROBIUM Sw. 石斛屬

103. **Dendrobium baileyi** F. Muell., Fragm. Phyt. Aust. **8**: 173 (1874). 細莖石斛

Dendrobium keffordii F. Muell., Biol. Proc. R. Soc. Qd. **1**: 2 (1884).

Callista baileyi (F. Muell.) Kantze, Rev. Gen. Pl. **2**: 654 (1891).

Dendrobium somai Hayata, Icon. Pl. Form. **6**: 71 (1916), *syn. nov.*

Distribution (分佈) : Australia (澳州) and Taiwan (台灣).

104. **Dendrobium biflorum** Sw. in Nov. Act. Soc. Sci. Upsal. **6**: 84 (1799). 雙花石斛

Dendrobium furcatopedicellatum Hayata, Icon. Pl. Form. **4**: 39, *f. 14* (1914).

Distribution (分佈) : Pacific island (太平洋諸島) and Taiwan (台灣).

105. **Dendrobium chameleon** Ames, Orch. **2**: 174 (1908). 鬚大石斛

Dendrobium randaiense Hayata in Journ. Col. Sci. Univ. Tokyo **30** (1) : 315 (1911), (Mat. Fl. Form.).

Dendrobium longicalcarata Hayata, Icon. Pl. Form. **4**: 43 (1914). Distribution (分佈) : The Philippines (菲律賓) and Taiwan (台灣).

106. **Dendrobium clavatum** Lindley var. **aurantiacum** (

Reichb.f.) Tang et Wang in Act. Phytotax. Sin. **1**:40
(1951). 黄花石斛

Dendrobium aurantiacum Reichb. r. in Gard. Chron.
III, **2**:98 (1887).

Dendrobium flaviflorum Hayata in Journ. Col. Sci.
Univ. Tokyo **30**(1):312 (1911), (Mat. Fl. Form.).

Distribution (分佈): Burma (緬甸), Vietnan (越南)
and Taiwan (台灣).

107. *Dendrobium crumenatum* Sw. in Schrad. Journ. Bot.
2:237 (1799). 木斛

Dendrobium kwashotense Hayata, Icon. Pl. Form.
4:41, f. 13d-g & f. 15 (1914)

Onychium crumenatum Blume, Bijdr. 326 (1825).

Callista crumenata Ktze, Rev. Gen. Pl. **2**:653 (1891).

Dendrobium cumulatum Kranzl. in Engl. Pflanzen.
IV, 50, II, B, 21, 115 (1910).

Dendrobium caninum Merr. in Philip. Journ. Sci.
19:344 (1921), non *Epidendrum caninum* Burm.f.

Distribution (分佈): The Philippines (菲律賓), Ma-
laya (馬來西亞), Java (爪哇), Thailand (泰國), Sri-
lanka (錫斯里藍卡) and Taiwan (台灣).

108. *Dendrobium equitans* Kraenzl. in Eng. Pfl-rich.
4:50, II, B. 21, 228, f.229 (1910); Hayata in
Journ. Col. Sci. Univ. Tokyo **30**(1):315 (1911), (Mat. Fl. Form.); Ying in Chin. Flow. (13):33(1975).
蘭嶼石斛

Distribution (分佈): Endemic (固有種).

109. *Dendrobium falconeri* Hook.f. Bot. Mag. *t.* 4944 () . 紅唇石斛

Dendrobium erythroglossum Hayata, Icon. Pl. Form.
4:36, f. 13a (1914) & **7**:40, pl.12 (1918).

Distribution (分佈): Himalaya (喜馬拉雅山麓) to Bu-

- rma (緬甸) and Thailand (泰國), also in Taiwan (台灣).
110. **Dendrobium leptocladum** Hayata, Icon. Pl. Form. 4: 43 (1914). 禾葉石斛
Dendrobium tenuicaule sensu Hayata in Journ. Col. Sci. Univ. Tokyo 30(1): 316 (1911), *non* Hook. f.
 Distribution (分佈): Endemic (固有種).
111. **Dendrobium linawianum** Reichb. f. in Walp. Ann. 6: 284 (1861); Hayata in Journ. Col. Sci. Univ. Tokyo 30(1): 313 (1911), (Mat. Fl. Form.). 金石斛
Dendrobium moniliforme sensu Lindley in Bot. Reg. t. 1314 (1830), *non* (Linn.) Sw.
Dendrobium alboviride Hayata, Icon. Pl. Form. 9: 108, f. 36 (1920).
Callista linawiana Ktze, Rev. Gen. 655 (1891).
Ormostemma purpurea Rafin, Flor. Tellur. 38 (1836).
 Distribution (分佈): China (中國) and Taiwan (台灣).
112. **Dendrobium miyakei** Schltr. in Fedde Repert. Beih. 4: 64 (1919), (Orch. Sino-Jap. Prodr.); Hayata, Icon. Pl. Form. 10: 32 (1921); Ying in Chinese Flow. (3): 32, pl. 1 (1974). 紅花石斛
Dendrobium hainanense Matsum. et Hayata in Journ. Col. Sci. Univ. Tokyo 22: 408 (1906), (Enum. Pl. Form.).
Dendrobium pseudo-hainanense Masamune in Trop. Hort. 3: 33 (1933).
 Distribution (分佈): Endemic (固有種).
113. **Dendrobium moniliforme** (Linn.) Sw. in Nov. Act. Upsal. 6: 85 (1790); Hayata, Icon. Pl. Form. 4: 44 (1914); Ying in Chin. Flow (13): 32, t. 3 (1975). 石斛
Epidendrum moniliforme Linn., Sp. Pl. 1: 954 (1753).

Epidendrum monile Thunb., Fl. Jap. 30 ().

Dendrobium monile (Thunb.) Kraenzl. in Engl. Pfl-
rich. IV, 50, II, B 21, 50 (1910).

Oncidium Japonicum Blume

Distribution (分佈): China (中國), Korea (韓國),
Japan (日本) and Taiwan (台灣).

114. *Dendrobium pallens* Ridl. in Journ. Linn. 32: 241
(1894). 南洋石斛

Distribution (分佈): Malaya (馬來西亞) and
(台灣).

115. *Dendrobium tosaense* Makino, Ill. Fl. Jap. pl. 46
(1891). 綠黃花石斛

Dendrobium pere-fauriei Hayata, Icon. Pl. Form.
6: 70 (1916).

Dendrobium tosaense Makino var. *pere-fauriei* Ma-
samune in Journ. Trop. Agri. Taiwan 4: 196 (1932).

Distribution (分佈): Japan (日本), Lyukyu (琉球)
and Taiwan (台灣).

29. **DENDROCHILUM** Blume 穗花一葉蘭

116. *Dendrochilum microchilum* (Schltr.) Ames, Orch.
2: 87 (1908) & in Philip. Journ. Sci. 5, Bot. 341
(1910). 穗花一葉蘭

Platyclinis microchila Schltr. in Bull. Herb. Boiss.
2: 6 (1906).

Dendrobium venustulum (Ames) Pfitz. in Engl.
Pflanzen. IV, 50, II, B. 7, 116, f. 38a (1907);
Ames, Orch. 2: 88, pl. 22 (1908).

Acoridium venustulum Ames in Proc. Biol. Soc. Wa-
sh. 19: 147 (1906).

Dendrochilum formosanum Schltr. in Fedde Repert
Boiss ser. I, II, 6 185 (1919) (Orch. Sino-Jap. Prodr.
); Yamamoto, Suppl. Pl. Form. 2: 5 (1926).

Platyclinis formosana Schltr. in Bull. Herb. Boiss.

ser. II, VI, 302 (1906); Matsum. & Hayata in Journ. Col. Sci. Univ. Tokyo **22**: 420 (1906), (Enum. Pl. Form.).

Distribution (分佈): The Philippines (菲律賓) and Taiwan (台灣).

30. DIDYMOPLEXIS Griff. 雙唇蘭屬

117. *Didymoplexis pallens* Griff. in Calc. Journ. Nat. Hist. 4, pl. 17 (1844); Matsum. & Hayata in Journ. Col. Sci. Univ. Tokyo **22**: 418 (1906), (Enum. Pl. Form.); Hayata in l.c. **30**(1): 346 (1911), (Mat. Fl. Form.). 雙唇蘭

Didymoplexis nipponica Honda in Bot. Mag. Tokyo **46**: 168 (1932).

Didymoplexis formosana Hayata ex Sasaki, List Pl. Form. 128 (1928).

Distribution (分佈): Tropical Asia (熱帶亞州) and Taiwan (台灣).

118. *Didymoplexis subcampanulata* Hayata, Icon. Pl. Form. **2**: 176 (1912) & **4**: 119 f. 63 (1914). 台灣雙唇蘭

Distribution (分佈): Endemic (固有種).

31. DIPLOPRORA Hook. f. 倒垂蘭屬

119. *Diploprora championi* (Lindley) Hook. f., Fl. Brit. Ind. **6**: 26 (1890); Henry, List Pl. Form. 93 (1896); Matsum. & Hayata in Journ. Col. Sci. Univ. Tokyo **22**: 413 (1906), (Enum. Pl. Form.). 倒垂蘭

Cottonia championi Lindley ex Benth. in Hook. Kew. Journ. **7**: 35 (1855).

Luisia bicaudata Thw., Enum. Pl. Zeyl. 302 (1861)

Vanda bicuadata Thw., l.c.

- Diploprora kusukusensis* Hayata, Icon. Pl. Form. **4**: 86, f. 42 (1914).

Distribution (分佈): Himalaya (喜馬拉雅山), Burma (緬甸), Srilanka (席里藍卡), S. China (中國南部) and

Taiwan (台灣)。

120. **Diploprora uraiensis** Hayata, Icon. Pl. Form. 4:87, f. 43 (1914); Ying in Chine. Flow. (5):33, pl. 1 (1974). 烏來倒垂蘭

Distribution (分佈): Endemic (固有種)。

32. DISPERSIS Sw. 雙袋蘭屬

121. **Dispersis orientalis** Fukuyama in Bot. Mag. Tokyo 50:17 (1936)。

Distribution (分佈): Endemic (固有種)。

33. EPHEMERANTHA P. F. Hunt. & Summerh. 暫花蘭屬

122. **Ephemerantha comata** (Blume) Hunt. & Summerh. in Taxon 10:103 (1961); Dockrill Austr. Indig. Orch. 314 (1969). 暫花蘭

Desmotrichum comata Blume, Bijdr. 230 (1825).

Dendrobium comatum (Blume) Lindley, Gen. & Sp. Orch. 76 (1830); J. J. Smith, Fl. Buitenz. 6:313 (1905); Holtt., Fl. Malaya 1:266, f. 56 (1957).

Dendrobium criniferum Lindley, Bot. Reg. 30, misc. 41 (1844).

Callista comata (Blume) Kuntze, Rev. Gen. Pl. 2:654 (1891).

Dendrobium thysanochilum Schltr. in K. Schum. & Laut., Nachtr. Fl. Deut. Schutz. Sudseo. 152 (1905).

Desmotrichum criniferum (Lindley) Krzl., Pflanz. Heft 45:348 (1910).

Desmotrichum scope Krzl., l.c. 349 (1910).

Ephemeranthera thysanochila (Schltr.) P. F. Hunt. & Summerh., l.c. 106.

Flickingeria comata (Blume) A. D. Hawkes, Orquidea 27:302 (1965).

Dendrobium fimbriatolabellum Hayata, Icon. Pl. Form.

4: 38, f. 13b. (1914).

Distribution (分佈): Australia (澳州), Malaya (馬來西亞), Sumatra (蘇門答臘), New Guinea (新幾內亞), The Philippines (菲律賓) and Taiwan (台灣).

34. EPIGENEIUM Gagnep. 着類蘭屬

123. **Epigeneium nakaharai** (Schltr.) Summer. in Kew. Bull. 1957: 263 (1957). 着類蘭

Dendrobium nakaharai Schltr. in Fedde Repert. 2: 169 (1906) & l.c. 4: 213 (1919), (Orch. Sino-Jap. Prodr.); Matsum. & Hayata in Journ. Col. Sci. Univ. Tokyo 22: 408 (1906), (Enum. Pl. Form.); Ying in Chinese Flow. (10): 54, pl. 4 (1974).

Epigeneium chapaense Gagnep in Bull. Mus. Paris 596 (1932).

Distribution (分佈): Vietnam (越南) and Taiwan (台灣).

124. **Epigeneium sanseiense** (Hayata) Summer in Kew. Bull. 1957: 263 (1957). 疏花着類蘭

Dendrobium sanseiense Hayata, Icon. Pl. Form. 6: 70 (1916).

Distribution (分佈): Endemic. (固有種).

35. EPIPACTIS (Linn. in part.) Sw. 鈴蘭屬

125. **Epipactis ohwii** Fukuyama in Bot. Mag. Tokyo 48: 298 (1934). 台灣鈴蘭

Distribution (分佈): Endemic (固有種).

36. EPIPOGUM (Gmel.) L.C. Rich. 虎舌蘭屬

126. **Epipogum roseum** (D. Don.) Lindley in Journ. Linn. Soc. 1: 177 (1857); Ames, Orch. 2: 48 (1908); Holtt., Orch. Malaya ed. 3, 107 (1964); Seidenf. et Smit, Orch. Thail. (pt. 1): 65, f. 45 (1959); Tuyama

- in Journ. Jap. Bot. **42**: 302 (1967) 虎舌蘭
Limodorum roseum D. Don, Prodr. Fl. Nep. 30 (Feb. 1825).
- Ceratopsos rosea* (D. Don.) Lindley, Gen. & Sp. Orch. 384 (1840).
- Galera rosea* (D. Don.) Blume, Mus. Bot. Lugd. Bat. **2**: 188 (1856).
- Galera nutans* Blume, Bijdr. 416 (June-Dec. 1825).
- Epipogum nutans* (Blume) Reichb. f., Bonplandia **1857**: 36 (1857).
- Podanthera pallida* Wight, Icon. t. 1759 (1852).
- Galera rolfei* Hayata in Journ. Col. Sci. Univ. Tokyo **30** (1): 348 (1911), (Mat. Fl. Form.) & Icon. Pl. Form. **4**: 121, f. 64 (1914).
- Epipogum rolfei* (Hayata) Schltr. in Fedde Repert **10**: 5 (1911).
- Epipogum makinoanum* Schltr. in Fedde Repert Beih **4**: 153 (1919), (Orch. Sino. Jap. Prodr.).
- Epipogum africanum* Schltr. in Englers. Bot. Jahrb. **45**: 399 (1911).
- Galera kusukusensis* Hayata, Icon. Pl. Form. **4**: 121, pl. 20 (1914).
- Epipogum kusukusense* (Hayata) Schltr. in Fedde Repert. Beih. **4**: 153 (Orch. Sino-Jap. Prodr.).
- Epipogum poneranthum* Fukuyama in Trans. Nat. Hist. Soc. Form. **32**: 243 (1942).
- Epipogum sinicum* Tso in Sunyatsenia **1**: 132 (1933).
- Epipogum dentilabellum* Ohtani et Suzuki in Sci. Rep. Yokosuka city Mus. **6**: 28, pl. 4 (1961).
- Distribution (分佈): Tropical Asia (熱帶亞州), Japan (日本), Australia (澳大利亞) and Taiwan (台灣).

37. **ERIA** Lindley 絨蘭屬

127. **Eria amica** Reichb.f., Xenia Orch. **2**:162 (1865); Masamune, List. Vasc. Pl. Taiwan 166 (1954). 小筒脚蘭

Eria hypomelana Hayata, Icon. Pl. Form. **4**:54, f. 22 (1914).

Distribution (分佈): Himalay (喜馬拉雅山) and Taiwan (台灣)。

128. **Eria corneri** Reichb.f. in Gard. Chron. **2**:106 (1878); Matsum. & Hayata in Journ. Col. Sci. Univ. Tokyo **22**:409 (1906), (Enum. Pl. Form.); Hayata in *l.c.* **30**(1):320 (1911), (Mat. Fl. Form.); Ying in Chinese. Flow. (9):28, t. 8 (1974). 絨蘭

Eria septemlamella Hayata, Icon. Pl. Form. **4**:56, f. 24 (1914).

Eria yakushimensis Nakai in Bot. Mag. Tokyo **36**:20 (1922).

Eria goldschmidtiana Schltr. in Fedde Repert. Beih. **4**:107 (1919), (Orch. Sino-Jap. Prodr.).

Eria petelotii Gagnep in Bull. Mus. Nat. Paris ser. 2, **2**:309 (1930).

Dendrobium bonianum Gagnep. in Bull. Mus. Nat. Hist. Paris ser. 2, **2**:333 (1930).

Eria boniana (Gagnep.) Tang & Wang in Acta Phytotax. Sin. **1**:84 (1951).

Distribution (分佈): S. China (中國南部), Lyukyu (琉球) and Taiwan (台灣).

129. **Eria formosana** Rolfe in Kew. Bull. 194 (1896); Henry, List Pl. Form. 91 (1896). 垂花絨蘭

Eria tomentosiflora Hayata, Icon. Pl. Form. **2**:137 (1912).

Eria plicatilabella Hayata, Icon. Pl. Form. **4**:55, f. 23 (1914).

Eria copelandii sensu Makino et Nemoto Fl. Jap.

rev. ed. 1641 (1931).

Eria philippinensis Ames, Orch. 1: 94 (1905).

Distribution (分佈): The Philippines (菲律賓) and Taiwan (台灣).

130. *Eria ovata* Lindley in Bot. Reg. 30: sub. t. 29 (1844) ; Ames Orch. 2: 195 (1908) & 5: 149 (1915); Hsieh in Quart. Journ. Taiwan Mus. 8: 243 (1955). 卵葉絨蘭

Eria luchuensis Yatabe in Bot. Mag. Tokyo 7: 131, pl. 6 (1893).

Eria elmeri Ames, Orch. 1: 93 (1905).

Eria bidentata Nakai in Bot. Mag. Tokyo 34: 144 (1920).

Distribution (分佈): Lyukyu (琉球), the Philippines (菲律賓) and Taiwan (台灣).

131. *Eria ovata* var. *retroflexa* (Lindley) Garay & Sweet, Orch. S. Ryukyu Isl. 113 (1974). 長莖絨蘭, 大筒脚蘭

Eria retroflexa Lindley in Journ. Linn. Soc. Bot. 3: 60 (1859).

Eria merrillii Ames in Phil. Journ. Sci. Bot. 2: 331 (1907).

Eria racemosa Leavitt. in Phil. Journ. Sci. Bot. 4: 206 (1907).

Eria nudicaulis Hayata, Icon. Pl. Form. 2: 138 (1912).

Eria glabra Schltr. in Fedde Repert. Beih. 10: 90 (1912).

Eria maboroensis Schltr. in Fedde Repert. Beih. 1: 658 (1912).

Eria bontocensis Ames in Phil. Journ. Sci. 8: 427 (1913).

Distribution (分佈) : The Philippines (菲律賓), Borneo (婆羅州), Celebes (西里伯斯) New Guinea (新幾內亞), Ryukyu (琉球) and Taiwan (台灣).

32. **Eria reptans** (Fr. & Sav.) Makino in Bot. Mag. Tokyo **15**: 128 (1901). 阿里山絨蘭

Dendrobium reptans Fr. & Sav., Enum. Pl. Jap. **2**: 511 (1879).

Eria japonica Maxim. in Bull. Acad. Sci. St-petersb. **31**: 103 (1887).

Eria arisanense Hayata, Icon. Pl. Form. **4**: 54, t. 22 (1914).

Eria hosokawae Hawkes & Heller in Lloydia **20**: 130 (1957).

Callistra reptans (Fr. et Sav.) O. Ktze., Rev. Gen. Pl. **2**: 655 (1891).

Distribution (分佈) : China (中國), s. Japan (日本南部), Ryukyu (琉球) and Taiwan (台灣).

133. **Eria reptans** (Fr. & Sav.) Makino var. **matsudai** (Hayata) Ying, *comb. nov.* 松田氏絨蘭

Eria matsudai Hayata, Icon. Pl. Form. **9**: 109 (1920).

Distribution (分佈) : Endemic (固有種).

134. **Eria sawadae** Yamamoto in Journ. Soc. Trop. Agric. Taiwan **3**: 238 (1931). 短莖絨蘭

Distribution (分佈) : Endemic (固有種).

38. ERYTHODES Blume 小蠅蘭屬

135. **Erythrodes formosana** Schltr. in Fedde Rep. Beih. **4**: 169 (1919), (Orch. Sino-Jap. Prodr.); Hayata, Icon. Pl. Form. **10**: 33 (1921); Yamamoto in Journ. Soc. Trop. Agric. Taiwan. **3**: 239 (1931). 台灣小蠅蘭

Physurus chinensis sensu Matsum. et Hayata in Journ. Col. Sci. Univ. Tokyo **22**: 409 (1906), (Enum.

Pl. Form.); Hayata, Icon. Pl. Form. **4**:99, *f.52* (1914)
& **6**: 87 (1916). *non* Rolfe

Distribution (分佈): Endemic (固有種).

39. EULOPHIA R. Br. ex Lindley 芋蘭屬

136. **Eulophia bicarinata** (Lindley) Hook.f., Fl. Brit.
Ind. **6**: 6 (1890). 密花芋蘭

Cyrtopera bicarinata Lindley in Wall. cat. 7363(1832).

Cyrtopera formosana Rolfe, Kew. Bull. **1896**: 198
(1896).

Eulophia formosana Rolfe in Journ. Linn. Soc. **36**:
28 (1903); Matsum. & Hayata in Journ. Col. Sci. Univ.
Tokyo **22**: 412 (1906), (Enum. Pl. Form.).

Distribution (分佈): Himalaya (喜馬拉雅山) and Taiwan
(台灣).

137. **Eulophia dentata** Ames in Philip. Journ. Sci. 6; Bot.
51 (1911) & Orch. **5**: 102 (1915). 齒唇芋蘭

Eulophia segawa Fukuyama in Bot. Mag. Tokyo **48**:
437, *f.1* (1934).

Distribution (分佈): The Philippines (菲律賓) and
Taiwan (台灣).

138. **Eulophia graminea** Lindley in Wall. cat. no. 7372
(1832); Merrill. in Sunyatsenia **1**: 15 (1930). 禾
葉芋蘭

Eulophia sinensis Miq. in Journ. Bot. Neerl. **1**: 91
(1861); Schltr. in Fedde Repert. Beih. **4**: 261 (1919),
(Orch. Sino-Jap. Pordr.).

Eulophia ramosa Hayata in Journ. Col. Sci. Univ.
Tokyo **30**(1): 332 (1911); Schltr. *l.c.* **4**: 262 (1919).

Eulophia inconspicua Griff. Notul. 349().

Eulophia gusukumai Masamune in Trans. Nat. Hist.
Soc. Form. **24**: 208 (1934).

Eulophia taiwanensis Hayata in Journ. Col. Sci.

Univ. Tokyo **30**(1): 333 (1911), (Mat. Fl. Form.).

Distribution (分佈): Assam (阿薩姆); Srilanka (席里藍卡), Burma (緬甸), Singapore (新加坡), Vietnan (越南), Malaya peninsula (馬來半島) S. China (中國南部) and Taiwan (台灣).

139. **Eulophia graminea** Lindley var. **kitamurai** (Masamune) Ying, **comb. nov.** 台灣芋蘭

Eulophia kitamurai Masamune in Journ. Soc. Trop. Taiwan **4**: 192 (1932),

Eulophia taiwanensis Hayata var. *kitamurai* Masamune in Bot. Mag. Tokyo **46**: 773 (1932).

Distribution (分佈): Endemic (固有種).

140. **Eulophia herbacea** Lindley, Gen. & Sp. Orch. 182 (1833). 草芋蘭

Eulophia brachycentra Hayata, Icon. Pl. Form. **4**: 72, f. 36a (1914).

Distribution (分佈): Srilanka (席里藍卡), Macrae (馬卡里), India (印度), Malaya (馬來西亞) and Taiwan (台灣).

141. **Eulophia macrostachya** Lindley, Gen. et Sp. Orch. 183 (1833); Fukuyama in Bot. Mag. Tokyo **48**: 304 (1934). 大芋蘭

Eulophia emarginata Blume, Fl. Jav. Orch. 153 (1858).

Graphorchis macrostachya Ktze, Rev. Gen. Pl. **2**: 662 (1891).

Graphorchis blumeana Ktze, Rev. Gen. Pl. **2**: 663 (1891).

Distribution (分佈): India (印度), Srilanka (席里藍卡), Sumatra (蘇門答臘), Java (爪哇), Ternate (), Borneo (婆羅州), New Guinea (新幾內亞), Leyete (), Mindane (), Australia (澳大利亞) and Taiwan (台灣).

142. **Eulophia zollingeri** (Reichb.f.) J.J. Smith, Orch. Java 228 (1905). 芋蘭
Cyrtopera zollingeri Reichb.f. in Bonplandia 5:38 (1857).
Eulophia macrhiza Blume, Orch. Archip. Ind. 183 (1858).
Eulophia ochobiensis Hayata, Icon. Pl. Form. 6:78 (1916).
 Distribution (分佈): Java (爪哇), Malaya (馬來西亞), Lyukyu (琉球) and Taiwan (台灣).

40. GALEOLA Lour. 山珊瑚屬

143. **Galeola altissima** (Blume) Reichb.f., Xenia Orch. 2:77 (1865); Matsum., Ind. Jap. 2(1):246 (1912); Hayata, Icon. Pl. Form. 3:194 (1913). 山珊瑚
Cyrtasia altissima Blume, Bijdr. 396, t.6 (1825).
Cyrtasia altissima (Reichb.f.) Masamune in Trop. Hort. 3:36 (1933), non Blume, nom. nud.
Galeola ochobiensis Hayata, Icon. Pl. Form. 6:87, f.19 (1916).
 Distribution (分佈): India (印度), Malaya (馬來西亞), Java (爪哇), Ryukyu (琉球) and Taiwan (台灣).
144. **Galeola lindleyana** Reichb.f., Xenia Orch. 2:78 (1865). 林德氏山珊瑚
Galeola matsudai Hayata, Icon. Pl. Form. 9:114 (1920).
 Distribution (分佈): Himalaya (喜馬拉雅) and Taiwan (台灣).

41. GASTRODIA A. Br. 天麻屬

145. **Gastrodia elata** Blume, Mus. Bot. Lugd. Bat. 2:174 () . 天麻

Gastrodia dioscoreirhiza Hayata, Icon. Pl. Form. 6: 93 (1916).

Distribution (分佈): Himalaya Asia (喜馬拉雅山) and Taiwan (台灣).

146. *Gastrodia javanica* (Blume) Lindley, Gen. & Sp. Orch. 212 (1836). 爪哇天麻

Epiphantes javanicana Blume, Bijdr. 421, t. 4 (1825).

Gastrodia malayana Ridl., Mat. Fl. Mal. Penin. 1: 207 (1907).

Gastrodia stapfii Hayata in Journ. Col. Sci. Univ. Tokyo 30(1): 347 (1911), (Mat. Fl. Form.).

Gastrodia lutea Fukuyama in Bot. Mag. Tokyo 49: 666 (1935).

Distribution (分佈): Java (爪哇), the Philippines (菲律賓) and Taiwan (台灣).

147. *Gastrodia taiwaniana* Fukuyama in Bot. Mag. Tokyo 48: 358 (1934). 台灣天麻

Distribution (分佈): Endemic (固有種).

42. GEODORUM Jacks 地寶蘭屬

147. *Geodorum densiflorum* (Lam.) Schltr., Orch. Sino-Jap. Prodr. 259 (1919).

Limodorum densiflorum Lam., Encycl. 3: 516 (1788). 密花地寶蘭

Limodorum recurvum Roxb., Pl. Coron. 1: t. 33, 39 (1795).

Malaxis cernua Willd., Sp. Pl. 4: 93 (1805).

Otandra cernua Salisb. in Trans. Hort. Soc. 1: 298 (1812).

Geodorum dilatatum R. Br. in Ait. Hort. Kew. ed. 2, 5: 298 (1813).

Limodorum candidum Roxb., Hort. Beng. 63 (1814).

Cistella cernua Blume, Bijdr. 293, t. 55 (1825).
Ortmannia cernua Opiz. in Flora 17: 592 (1834).
Geodorum nutans (Persl.) Ames, Orch. 2: 164 (1908).

Dendrobium nutans Persl., Rel. Haenok. 1: 102 (1827).

Arethusa glutinosa Blanco, Flor. Filip. 641 (1834).

Dendrobium haenckeanum Steud., Nomencl. ed. 2; 1: 490 (1840).

Geodorum semicristatum Lindley, Fol. Orch. Geod. 2 (1854).

Geodorum pallidum Llanos, Mem. R. Acad. Madr. 4: 507 (1859).

Tropidia grandis Hance in Journ. Linn. Soc. 13: 128 (1873).

Geodorum formosanum Rolfe in Ann. Bot. 9: 157 (1895).

Distribution (分佈): Malaya Peninsula (馬來半島), Indonesia (印尼), The Philippines (菲律賓), Ryukyu (琉球) and Taiwan (台灣).

43. GOODYERA R. Br. 斑葉蘭

149. **Goodyera biflora** (Lindley) Hook. f., Fl. Brit. Ind. 6: 114 (1894). 雙花斑葉蘭

Georchis biflora Lindley in Wall. Cat. 7379 (1831).

Goodyera macrantha Maxim. in Regel. Gartenfl. 16: 36, pl. 553 (1867).

Distribution (分佈): Korea (韓國), Japan (日本), Nepal (尼泊爾), India (印度), S. China (中國南部) and Taiwan (台灣).

150. **Goodyera bilamellata** Hayata, Icon. Pl. Form. 4: 111, f. 58 (1914). 雙稜斑葉蘭

Distribution (分佈): Endemic (固有種).

151. **Goodyera daibuzanensis** Yamamoto in Journ. Soc. Trop. Agric. **4**: 305 (1932). 大武斑葉蘭
 Distrribution (分佈): Endemic (固有種).
152. **Goodyera foliosa** (Lindley) Hook. f., Fl. Brit. Ind. **6**: 113 (1890). 高嶺斑葉蘭
Georchis foliosa Lindley, Gen. & Sp. 496 (1840).
Goodyera sononarae Fukuyama in Trans. Nat. Hist. Soc. Form. **32**: 297 (1942).
Goodyera commelinoides Fukuyana in Nat. Hist. Soc. Form. **32**: 297 (1942).
 Distribution (分佈): S. China (中國南部), Japan (日本), Lyukyu (琉球), Malaya (馬來西亞), Korea (韓國), Himalaya (喜馬拉雅山) and Taiwan (台灣).
153. **Goodyera fumata** Thw., Enum. Pl. Zey. 314 (1861). 台灣斑葉蘭
Goodyera formosana Rolfe in Ann. Bot. **9**: 159 (1895); Henry, List Pl. Form. 93 (1896); Matsum. & Hayata in Journ. Col. Sci. Univ. Tokyo **22**: 417 (1906), (Enum. Pl. Form.).
Epipactis formosana Eaton in Prodc. Biol. Soc. Wash. **21**: 64 (1908).
Peramium formosanum (Rolfe) Makino in Journ. Jap. Bot. **6**: 34 (1929).
Goodyera caudatilabella Hayata, Icon. Pl. Form. **4**: 112 (1914).
 Distribution (分佈): Thailand (泰國) and Taiwan (台灣).
154. **Goodyera grandis** (Blume) Blume, Fl. Jav. Orch. 36 (1858); Garay & Sweet, Orch S. Ryukyu Isl. 69 (1974). 紅花斑葉蘭
Neottis grandis Blume, Bijdr. **8**: 407 (1825).
Goodyera longibracteata Hayata, Icon. Pl. Form. **6**: 92 (1916).
Goodyera longicolumna Hayata, Icon. Pl. Form. **4**: 114,

f. 61a-h (1914).

Goodyera cyrtoglossa Hayata, Icon. Pl. Form. 4: 113,
f. 60 (1914).

Goodyera rubicunda (Blume) Lindley in Bot. Reg.
25; misc. 61 (1839).

Distribution (分佈): Australia (澳大利亞), New Guinea
(新幾內亞), Sumatra (蘇門答臘), Malaya (馬來西亞),
Java (爪哇), Ryukyu (琉球) and Taiwan (台灣).

155. ***Goodyera matsumurana*** (Eaton) Schltr. in Bull.
Herb. Bioss. ser. II, 6: 298 (1909); Lin, Nat. Orch.
Taiwan 1: 174, col. phot. 107-108 (1975). 白網紋斑葉
蘭

Goodyera albo-reticulata Hayata in Journ. Col. Sci.
Univ. Tokyo 30(1): 342 (1911), (Mat. Fl. Form.).

Epipactis matsumurana Eaton in Proc. Biol. Soc.
Washington 21: 65 (1908).

Goodyera hachijoensis Yatabe var. *matsumurana* (
Schltr.) Ohwi ex Hats et Amano (1958).

Goodyera yamiana Fukuyama in Bot. Mag. Tokyo
50: 18 (1936).

Distribution (分佈): Ryukyu (琉球), Japan (日本)
and Taiwan (台灣).

156. ***Goodyera maximowizana*** Makino in Bot. Mag. Tokyo
23: 137 (1909). 翠玉斑葉蘭

Goodyera bifida Maxim. in Hel. Biol. 12: 992
(1888). 翠玉斑葉蘭

Goodyera foliosa var. *laevis* Finet.

Peramium maximowiziana (Makino) Makino in Journ.
Jap. Bot. 6: 34 (1926).

Distribution (分佈): S. Korea (韓國南部), Japan (日本)
Ryukyu (琉球) and Taiwan (台灣).

157. ***Goodyera morrisonicola*** Hayata in Journ. Col. Sci.
Univ. Tokyo 30(1): 343 (1911), (Mat. Fl. Form.)

- & Icon. Pl. Form. **4**:116, *t. 17*. (1914). 玉山斑葉蘭
Peramium morrisonicola Makino in Journ. Jap.
 Bot. **6**:34 (1926).
- Goodyera nankoensis* Fukuyama in Bot. Mag.
 Tokyo **48**:432 (1934).
- Distribution (分佈): Endemic, (固有種).
158. **Goodyera ogatai** Yamamoto, Suppl. Icon. Pl. Form.
3:9, *f. 3* (1927). 小斑葉蘭
- Distribution (分佈): Lyukyu (琉球) and Taiwan (台灣).
159. **Goodyera pachyglossa** Hayata, Icon. Pl. Form. **4**:117
 (1914). 厚唇斑葉蘭
- Peramium pachyglossa* (Hayata) Makino in Journ.
 Jap. Bot. **6**:34 (1929).
- Distribution (分佈): Endemic (固有種).
160. **Goodyera pendula** Maxim. in Bull. Acad. Sci. St.
 Petersb. **32**:623 (1888) & in Mel. Biol. **12**:924
 (1888). 垂枝斑葉蘭
- Epiactis pendula* Eaton in Proc. Biol. Soc. Wash.
21:65 (1908).
- Peramium pendulum* Makino in Journ. Jap. Bot. **6**:
 34 (1926).
- Distribution (分佈): Japan (日本) and Taiwan (台灣).
161. **Goodyera procera** (Ker-Gawl.) Hook., Exot. Fl.
t. 39 (1823); Henry, List Pl. Form. **39** (1896);
 Hayata in Journ. Col. Sci. Univ. Tokyo **30**(1):344
 (1911), (Mat. Fl. Form.). 斑葉蘭
- Neottia procera* Ker-Gawl in Bot. Reg. *t. 639* (1822).
- Goodyera lancefolia* Fr. & Sav., Enum. Pl. Jap.
2:520 (1879).
- Peramium procera* (Ker-Gawl) Makino in Journ.

Jap. Bot. **6**: 34 (1926).

Cionosaccus lanceolatus Breda, Orch. Kuhld. & Hass.
t. l (1827).

Cordlostyis filiosa Falc. in HK. Journ. Bot. **4**: 75
(1842).

Goodyera carnea A. Rich in Ann. Sci. Nat. ser. II,
15: 40 (1841).

Leucostachys procera (Ker-Gawl.) Hoffag, Preisv.
Orch. 26 (1842).

Orchiodes procerum (Ker-Gawl.) O.Ktze, Rev. Gen.
675 (1891).

Epipactis procera (Ker - Gawl.) Eaton in Proc. Biol.
Soc. Wash. **21**: 65 (1908)

Distribution (分佈): China (中國), Malaya (馬來西
亞), India (印度), Japan (日本), Lyukyu (琉球) and
Taiwan (台灣).

162. **Goodyera repens** (Linn.) R. Br. in Aiton, Hort. Kew.
ed. 2 **5**: 198 (1813). 匍枝斑葉蘭

Salyprium repenum Linn., Sp. Pl. 945 (1753).

Goodyera nantoensis Hayata in Journ. Col. Sci. Univ.
Tokyo **30** (1): 343 (1911), (Mat. Fl. Form.).

Distribution (分佈): China (中國) N. Mongolia (北蒙
古), Korea (韓國), Japan (日本), Himalaya (喜馬拉雅山)
, Pakistan (巴基斯坦), Siberia (西伯利亞), N. America
(北美), Columbia (哥倫比亞), Alaska (阿拉斯加), New
England (新英格蘭), Europe (歐州), India (印度), Si-
kkim (錫金) and Taiwan (台灣).

163. **Goodyera schlechtendaliana** Reichb.f. in Linnaea
22: 861 (1849). 白花斑葉蘭

Goodyera arisanensis Hayata, Icon. Pl. Form. **6**: 91
(1917). *syn. nov.*

Georchis schlechtendaliana Reichb.f. in Bonplandis
5: 35 (1857).

Goodyera japonica Blume, Orch. Archip. Ind. 38 (1858).

Goodyera similis Blume, l.c. 39 (1858).

Distribution (分佈): China (中國), Japan (日本), Korea (韓國) and Taiwan (台灣).

164. **Goodyera velutina** Maxim. in Regel. Gartenfl 36 (1867); Ying in Chin. Flow. (11): 55, pl. 3 (1975).
白肋斑葉蘭

Orchiodes velutina O. Ktze., Rev. Gen. 675 (1891).

Epipactis velutina Eaton in Proc. Biol. Soc. Wash. 21: 65 (1908).

Peramium velutinum (Maxim.) Makino in Journ. Jap. Bot. 6: 37 (1929).

Distribution (分佈): Korea (韓國), Japan (日本) and Taiwan (台灣).

165. **Goodyera viridiflora** (Blume) Blume, Orch. Archip. Ind. 41, pl. 9c, f. 2, 12-16 (1858). 綠花斑葉蘭

Neottia viridiflora Blume, Bijdr. 408 (1825).

Goodyera longrostrata Hayata, Icon. Pl. Form. 4: 115, f. 61 i-j (1914).

Distribution (分佈): Australia (澳大利亞), Thailand (泰國), India (印度), Java (爪哇), Malaya (馬來西亞), Japan (日本), Ryukyu (琉球), S. China (中國南部) and Taiwan (台灣).

166. **Goodyera viridiflora** var. **seikoomontana** (Yamamoto) Ying, Col. Ill. Indig. Orch. 1: 198, col. phot. 82 (1977). 新港山斑葉蘭

Goodyera seikoomontana Yamamoto in Journ. Soc. Trop. Agric. Taiwan 4: 187 (1932).

Distribution (分佈): Endemic (固有種).

44. **HABENARIA** Willd. 玉鳳蘭屬

167. **Habenaria ciliolaris** Kranzl. in Engl. Bot. Jahrb. **16**: 169 (1892); Hayata in Journ. Col. Sci. Univ. Tokyo **30**(1): 352 (1911); Schltr. in Fedde Repert. Beih. **4**: 124 (1919), (Orch. Sino-Jap. Prodr.). 玉鳳蘭

Distribution (分佈): China (中國) and Taiwan (台灣).

168. **Habenaria delessertiana** Kranzl. in Ann. Conserv. & Jard. Bot. Geneve **108** (1897). 線瓣玉鳳蘭

Habenaria linearipetala Hayata, Icon. Pl. Form. **4**: 126, pl. 23 (1914).

Habenaria amanoano Ohwi

Distribution (分佈): The Philippines (菲律賓), Lyukyu (琉球) and Taiwan (台灣).

169. **Habenaria dentata** (Sw.) Schltr. in Fedde, Repert. Beih. **4**: 125 (1919), (Orch. Sino-Jap. Prodr.). 齒玉鳳蘭

Orchis dentata Sw. in Vet. Acad. Handl. Stockh. **21**: 207 (1800).

Platanthera dentata Lindley, Sp. & Gen. Orch. **296** (1833).

Habenaria geniculata D. Don., Prod. Fl. Nep. **25** (1825).

Habenaria miersiana Champ. ex Benth. in Hook. Kew Journ. **7**: 37 (1855).

Distribution (分佈): S. China (中國南部), Himalaya (喜馬拉雅山) and Taiwan (台灣).

170. **Habenaria dentata** (Sw.) Schltr. var. **tohoensis** (Hayata) Ying, **comb. nov.** 東埔玉鳳蘭

Habenaria tohoensis Hayata, Icon. Pl. Form. **4**: 128, f. 67 (1914).

Distribution (分佈): Endemic (固有種).

171. **Habenaria galeandra** Benth., Fl. Hongk. 363 (1861).

Distribution (分佈): S. China (中國南部) and Taiwan (台灣).

172. **Habenaria goodyeroides** D. Don, Prod. Fl. Nep. 25 (1825). 白緣邊玉鳳蘭

Habenaria hayataeana Schltr. in Fedde Repert Beih. 4: 129 (1919), (Orch. Sino-Jap. Prodr.); Hayata, Icon. Pl. Form. 10: 33 (1921).

Habenaria goodyeroides D. Don. var. *formosana* Hayata, Icon. Pl. Form. 4: 126, pl. 22 (1914).

Distribution (分佈): India (印度), Malaya (馬來西亞), Himalaya (喜馬拉雅山), and Taiwan (台灣).

173. **Habenaria hosokawae** Fukuyama in Bot. Mag. Tokyo 48: 297 (1934). 細川氏玉鳳蘭

Distribution (分佈): Endemic (固有種).

174. **Habenaria lacerifera** (Lindley) Benth., Fl. Hongk. 362 (1861). 台灣鵝毛玉鳳蘭

Coeloglossum laceriferum Lindley, Gen. & Sp. Orch. 302 (1833).

Habenaria formosana Matsum. et Hayata ex Schltr. in Fedde Repert. Beih. 4: 127 (1919), (Orch. Sino-Jap. Prodr.).

Peristylus flagellifer var. *acutifolius* (Hayata) Hatusima, Fl. Ryukyu 840 (1971).

Habenaria tentaculata var. *acutifolia* Hayata in Journ. Col. Sci. Univ. Tokyo 30(1): 354 (1911), (Mat. Fl. Form.).

Peristylus formosanus (Matsum. et Hayata) Hatusima

Habenaria brevicarata Fukuyama in Trans. Nat. Hist. Soc. 22: 42 (1932).

Distribution (分佈): India (印度), China (中國), Ryukyu (琉球) and Taiwan (台灣).

= *Tulotis devolii* Lin. & Hu.

175. **Habenaria longicalcarata** (Hayata) Ying, Col. Illust Indig. Orch. Taiwan 1: 379 (1977) 長距玉鳳蘭
Platanthera longicalcarata Hayata in Journ. Col. Sci. Univ. Tokyo 30(1): 350 (1911), (Enum. Pl. Form.).
Tulotis longicalcarata (Hayata) Ying MMS.
Tulotis devolii Lin et Hu in Quart. Journ. Chin. Forest. 9(1): 53, pl. 2 (1976).
Distribution (分佈): Endemic (固有種).
176. **Habenaria longiracema** Fukuyama in Bot. Mag. Tokyo 49: 758 (1935). 總狀花玉鳳蘭
Distribution (分佈): Endemic (固有種).
177. **Habenaria longitenticulata** Hayata, Icon. Pl. Form. 4: 127, pl. 24 (1914) 絲花玉鳳蘭
Distribution (分佈): Endemic (固有種).
178. **Habenaria polytricha** Rolfe in Hook., Icon. Pl. 1. 2496 (1896). 多裂綠玉鳳蘭
Habenaria cirrhifera Ohwi in Acta. Phytotax. Geobot. 1: 141 (1931).
Distribution (分佈): Ryukyu (琉球) and Taiwan (台灣).
179. **Habenaria rupestris** Lin et T. W. Hu in Quart. Journ. Chin. Forest. 9(1): 54 (1976). 岩波玉鳳蘭
Distribution (分佈): Endemic (固有種).
180. **Habenaria transnokoensis** (Ohwi) et Fukuyama
Ying, Col. Illust. Indig. Orch. Taiwan 1: 380 (1977) 能高山玉鳳蘭
Platanthera transnokoensis Ohwi et Fukuyama in Bot. Mag. Tokyo 48: 297 (1934).
Tulotis transnokoensis (Ohwi et Fukuyama) Ying MMS.

Distribution (分佈) : Endemic (固有種).

45. HARAELLA Kudo 香蘭屬

181. **Haraella retrocalla** (Hayata) Kudo in Journ. Trop. Agric. Taiwan **2**: 27 (1930). 紅花香蘭

Saccolabium retrocallosum Hayata, Icon. Pl. Form. **4**: 92, f. 47 (1914).

Gastrochilus retrocallus Hayata, Gen. Ind. Fl. Form. **79** (1917).

Gastrochilus retrocallosus (Hayata) Schltr. in Fedde Repert. Beih. **4**: 289 (1919), (Orch. Sino-Jap. Prodr.).

Distribution (分佈) : Endemic (固有種).

182. **Haraella odorata** Kudo in Journ. Trop. Agric. Taiwan **2**: 26, pl. 1 (1930). 香蘭

Saccolabium odoratum Makino et Nemoto, Fl. Jap. **1675** (1931).

Saccolabium odoratum Makino et Nemoto ex Ying in Bull. Exp. For. Nat. Taiwan Univ. (114): 154 (1974).

Gastrochilus odoratus (Kudo) Masamune in Trop. Hort. **3**: 37 (1933).

Distribution (分佈) : Endemic (固有種).

46. HEMIPILIA Lindley 舌喙蘭屬

183. **Hemipilia cordifolia** Lindley, Gen. & Sp. Orch. **296** (1833); Masamune, List Vasc. Pl. Taiwan **159** (1954). 圓葉舌喙蘭

Hemipilia formosana Hayata in Journ. Col. Sci. Univ. Tokyo **30**(1): 354 (1911), (Mat. Fl. Form.) & Icon. Pl. Form. **4**: 129, pl. 25 (1914).

Distribution (分佈) : Himalaya (喜馬拉雅山) and Taiwan (台灣).

47. **HERMINIUM** Linn. 角盤蘭屬

184. **Herminium lanceum** (Thunb. ex Sw.) J. Vuijk. in Blume **11**: 228 (1961). 角盤蘭, 餘零子草

Ophrys lancea Thunb. ex Sw. in Kongl. Vet. Akad. Handl. Stockh. **21**: 223 (1800).

Aceras angustifolia Lindley in Bot. Reg. sub. *l.* 1525 (1832)

Herminium angustifolia (Lindley) Benth. ex Hook.f., Fl. Brit. Ind. **6**: 129 (1890).

Monorchis angustifolia (Lindley) O. Schwarz. in Mitt. Thwing. Bot. Ges. **1**: 95 (1949).

Herminium lanceum var. *longicrure* (C. Wright) Hara in Journ. Jap. Bot. **44**: 60 (1969).

Aceras longicruris C. Wright ex A. Gray in Mem. Amer. Acad. ser. 2, **6**: 411 (1859).

Aceras angustifolia var. *longicruris* (C. Wright) Miq., Prol. 139 (1866).

Herminium angustifolium var. *longicrus* (C. Wright) Makino in Bot. Mag. Tokyo **10**: 109, **12**: 15 (1898.)

Herminium longicrure (C. Wright) Wang & Tang in Act. Phytotax. Sin. **1**(1): 61 (1951).

Distribution (分佈): China (中國), Japan (日本), Korea (韓國), Lyukyu (琉球), the Philippines (菲律賓) and Taiwan (台灣).

48. **HETAERIA** Blume 伴蘭屬

185. (**Hetaeria agyokuana** (Fukuyama) Nackejima,) Enum. Orch. Ryukyu **2**: 105 (1971). 阿玉山伴蘭

— *Zeuxine agyokuana* Fukuyama in Bot. Mag. Tokyo **48**: 433 (1934).

Distribution (分佈): Endemic (固有種).

186. **Hetaeria cristata** Blume var. **tokioi** (Fukuyama) Ying, **comb. nov.** 紅花伴蘭

Hetaeria tokioi Fukuyama in Bot. Mag. Tokyo 48:
434 (1934).

Distribution (分佈): The variety endemic (固有變種).

187. **Hetaeria oblongifolia** Blume, Bijdr. 410, pl. 14 (1825) & Orch. Archip. Ind. 102 (1858). 長橢圓葉伴蘭

Distribution (分佈): Java (爪哇). The Philippines (菲律賓) and Taiwan (台灣).

188. **Hetaeria taiwaniana** Ying, Col. Illust. Inoig. Orch. Taiwan 1: 210, col. photo 88 (1977). 台灣伴蘭

Distribution (分佈): Endemic (固有種).

49. HIPPEOPHYLLUM Schltr 馬葉蘭屬

189. **Hippeophyllum pumilum** Fukuyama 小馬葉蘭

Distribution (分佈): Endemic (固有種).

50. HOLCOGLOSSUM Schltr. 槽舌蘭屬

190. **Holcoglossum quasipinifolium** (Hayata) Schltr. in Fedde Repert. Beih. 4: 285 (1919), (Orch. Sino-Jap. Prodr.); Hayata, Icon. Pl. Form. 10: 34 (1921). 槽舌蘭

Saccolabium quasipinifolium Hayata, Icon. Pl. Form. 2: 144 (1912) & 4: 90, f. 46 (1914).

Distribution (分佈): Endemic (固有種).

51. HYLOPHILA Lindley 小唇蘭屬

191. **Hylophila nipponica** (Fukuyama) Ying, comb. nov. 台灣小唇蘭

Dicerostylis nipponica Fukuyama in Bot. Mag. Tokyo 50: 19 (1936).

Distribution (分佈): Endemic (固有種).

52. IONE Lindley 莖蘭屬

192. **Ione bifurcatiflorens** Fukuyama in Bot. Mag. Tokyo

49: 440 (1935). 雙花莖蘭

Distribution (分佈): Endemic (固有種).

193. **Ione sasakii** Hayata, Icon. Pl. Form. **2**: 139 (1912)
& **4**: 52, f. 21 (1914). 台灣莖蘭

Distribution (分佈): Endemic (固有種).

53. LECANORCHIS Blume 皿蘭屬

194. **Lecanorchis cerina** Fukuyama in Bot. Mag. Tokyo
49: 291 (1935). 黃花皿蘭

Lecanorchis brachycarpa Ohwi in Act. Phytotax.
Geobot. **7**: 35 (1938).

Lecanorchis flavicans Fukuyama in Trans. Nat. Hist.
Soc. Form. **32**: 241 (1942).

Distribution (分佈): Lyukyu (琉球) and Taiwan (台灣).

195. **Lecanorchis nigricans** Honda in Bot. Mag. Tokyo
45: 470 (1931). 紫花皿蘭

Lecanorchis purpurea Masamune in Prel. Rep. Veg.
Yaku. 60 (1929).

Lecanorchis ohwii Masamune in Trans. Nat. Hist.
Soc. Form. **23**: 208 (1933).

Lecanorchis oligotricha Fukuyama in Trans. Nat.
Hist. Soc. Form. **32**: 242 (1942).

Distribution (分佈): S. Japan (日本南部), Ryukyu (琉球) and Taiwan (台灣).

54. LIPARIS L.C. Rich 羊耳蒜屬

196. **Liparis amabilis** Fukuyama in Bot. Mag. Tokyo **52**:
245 (1938). 白花草耳蒜

Distribution (分佈): Endemic (固有種).

197. **Liparis auriculata** Blume ex Miq. in Ann. Mus.
Bot. Lugd. Bat. **2**: 203 (1865); Liu et Su in Quart.
Journ. Taiwan Mus. **28**: 270, f. 2 (1975). 卵葉羊耳蒜

Liparis yakushimensis Masamune in Bot. Mag. Tokyo
43: 250 (1929).

Distribution (分佈): Japan (日本) and Taiwan (台灣).

198. **Liparis bicallosa** (D. Don) Schltr. in Fedde Repert.
Beih. 4: 196 (1919), (Orch. Sino-Jap. Prodr.). 台灣羊
耳蒜

Limodorum bicallosum Buch-Ham. ex. Don, Prodr.
Fl. Nep. 49 (1823).

Bleilia bicallosa D. Don, Prodr. Fl. Nep. 30 (1823).

Cymbidium bituberculatum Hook., Exot. Fl. 2, t. 116
(1825).

Liparis bituberculata Lindley, Bot. Reg. sub. t. 882
(1827).

Ditulis nepalensis Rafin., Fl. Tellw. 4: 49 (1836).

Sturmia bituberculata Reichb. f. in Bonpl. 2: 22 (1854).

Leptorchis bituberculata O. Ktze, Rev. Gen. 671,
1896).

Liparis formosana Reichb. f. in Gard. Chron. 1: 394
(1880).

Distribution (分佈): Ryukyu (琉球), China (中國),
Japan (日本) and Taiwan (台灣).

199. **Liparis chloroxantha** Hance in Journ. Bot. Brit. For.
21: 231 (1833). 黃綠花羊耳蒜

Liparis taiwaniana Hayata in Journ. Col. Sci. Univ.
Tokyo 30(1): 311 (1911) & Icon. Pl. Form. 4: 34,
f. 10, pl. 7 (1914), syn. nov.

Cestichis taiwaniana Nakai in Bot. Mag. Tokyo
30: 148 (1916), syn. nov.

Distribution (分佈): S. China (中國南部), Hainan (海
南島) and Taiwan (台灣).

200. **Liparis cordifolia** Hook. f. in Hook., Icon. Pl. 19,

t.1811 (1889) & Fl. Brit. Ind. **5**:692 (1890). 圓葉羊耳蒜

Liparis keitaoensis Hayata, Icon. Pl. Form. **7**:40, pl. 13 (1918).

Distribution (分佈): Himalaya (喜馬拉雅山) and Taiwan (台灣).

201. **Liparis henryi** Rolfe in Kew. Bull, **1896**:193 (1896); Henry, List Pl. Form. 91 (1896); Matsum. & Hayata in Journ. Col. Sci. Univ. Tokyo **22**:407 (1906), (Enum. Pl. Form.). 享氏羊耳蒜

Distribution (分佈): Endemic (固有種).

202. **Liparis hensoensis** Kudo in Journ. Soc. Trop. Agric. Taiwan **2**:237 (1930). 工藤氏羊耳蒜

Distribution (分佈): Endemic (固有種).

203. **Liparis laurisilvatica** Fukuyama in Ann. Rep. Bot. Gard. Taipei **3**:83 (1933). 樟林羊耳蒜

Distribution (分佈): Endemic (固有種).

204. **Liparis macrantha** Rolfe in Ann. Bot. **9**:156 (1895); Henry, List Pl. Form. 91 (1896); Matsum. & Hayata in Journ. Col. Sci. Univ. Tokyo **22**:406 (1906), (Enum. Pl. Form.); Hayata, Icon. Pl. Form. **4**:18, f. 6 (1914). 紅花羊耳蒜

Liparis nigra Seidenf. in Bot. Tidsskerift. **65**:129 (1969), *syn. nov.*

Distribution (分佈): Thailand (泰國) and Taiwan (台灣).

205. **Liparis macrantha** Rolfe var. **sootenzanensis** (Fukuyama) Ying, in Col. Illust. Indig. Orchid Taiwan **1**:224 Col. photo, 95 (1977). 插天山羊耳蒜

Liparis sootenzanensis Fukuyama in Ann. Rep. Bot. Gard. Taipei **3**:84 (1933).

Distribution (分佈): Endemic (固有種).

206. **Liparis nakaharai** Hayata in Journ. Col. Sci. Univ.

Tokyo **30**(1) : 310 (1911) & Icon. Pl. Form. **4** : 29,
f. 27 (1914). 恒春羊耳蒜

Cestichis nakaharai Kudo in Journ. Soc. Trop.
Agric. Taiwan **1** : 147 (1930).

Distribution (分佈) : Endemic (固有種).

207. **Liparis nervosa** (Thunb.) Lindley, Gen. & Sp. Orch.
26 (1840); Matsum. & Hayata in Journ. Col. Sci.
Univ. Tokyo **22** : 406 (1906), (Enum. Pl. Form.). 小紅
花羊耳蒜

Ophrys nervosa Thunb., Fl. Jap. 27 (1784).

Epidendrum nervosum Thunb. in Journ. Linn. Soc.
2 : 327 ().

Sturmia nervosa (Thunb.) Reichb. f. in Bonplandia
3 : 250 (1855).

Liparis formosana sensu Matsum. & Hayata in Journ.
Col. Sci. Univ. Tokyo **22** : 406 (1906), (Enum. Pl.
Form.), non Reichb. f.

Malaxis nervosa Sw. in Vet. Akad. Nya. Handl.
Stockh. **21** : 235 (1800).

Liparis cornicaulis Makino in Bot. Mag. Tokyo
5 : 213 (1891).

Liparis bambusaefolia Makino in Bot. Mag. Tokyo
8 : 46 (1892).

Distribution (分佈) : S. China (中國南部), Japan (日
本), Lyukyu (琉球) and Taiwan (台灣).

208. **Liparis nokoensis** Fukuyama in Bot. Mag. Tokyo
48 : 435 (1934). 能高山羊耳蒜

Cestichis nokoensis (Fukuyama) Maekawa in Ic.
Pl. As. Or. **2** : 104. (1937).

Distribution (分佈) : Endemic (固有種).

209. **Liparis odorata** (Willd.) Lindley, Gen. & Sp. Orch.
26 (1833); Henry, List Pl. Form. 91 (1896); Ma-
tsum. & Hayata in Journ. Col. Sci. Univ. Tokyo **22** : 407

(1906), (Enum. Pl. Form.). 香羊耳蒜

Malaxis odorata Willd, Sp. Pl. 4: 91 (1805).

Leptorchis odorata (Willd.) O. Kuntze, Rev. Gen. 67 (1891).

Empusa paradoxa Lindley, Gen. et Sp. Orch. 17 (1833).

Liparis paradoxa Reichb.f. in Walp. Ann. 6: 218 (1861).

Malaxis lancefolia Sm. in Rees. Cycl. 22, n.7 ().

Distribution (分佈): India peninsula (印度半島), Japan (日本), Ryukyu (琉球) and Taiwan (台灣).

210. **Liparis platybolba** Hayata, Icon. Pl. Form. 4: 30, f. 8 (1914). 扁球羊耳蒜

Cestichis platybolba (Hayata) Kudo in Journ. Soc. Trop. Argic. Taiwan 2: 147 (1930).

Distribution (分佈): Endemic (固有種).

211. **Liparis plicata** Fr. et Sav., Enum. Pl. Japan 2: 509 (1876); Henry, List Pl. Form. 91 (1896). 羊耳蒜

Cestichis plicata (Fr. et Sav.) Maekawa in Ic. As. Or. 2: 102 (1937).

Liparis caespitosa sensu Matsum. et Hayata in Journ. Col. Sci. Univ. Tokyo 22: 406 (1906), (Enum. Pl. Form.).

Liparis uchiyamae Schltr. in Bull. Herb. Boiss. ser. 2, 6, 308 (1906); Hayata, Icon. Pl. Form. 4: 35, f. 11 (1914).

Distribution (分佈): S. China (中國南部), Japan (日本), Ryukyu (琉球) and Taiwan (台灣).

212. **Liparis plicata** Fr. et Sav. var. **kawakamii** (Hayata) Ying, comb. nov. 川上氏羊耳蒜

Liparis kawakamii Hayata, Icon. Pl. Form. 4: 28, f. 5 (1914).

Distribution (分佈) : Endemic (固有種) .

213. **Liparis rizalensis** Ames, Orch. **6** : 295 (1920) ;
Shieh in Quart. Journ. Taiwan Mus. **8** : 254 (1955) .
蘭嶼羊耳蒜

Liparis lateishii Kudo in Journ. Soc. Trop. Agric.
Taiwan **3** : 16 (1931) ; Fukuyama in Bot. Mag. Tokyo
50 : 21 (1936) .

Distribution (分佈) : The Philippines (菲律賓) and
Taiwan (台灣) .

214. **Liparis sasakii** Hayata, Icon. Pl. Form. **4** : 32, f. 9
(1914) . 佐佐木氏羊耳蒜

Distribution (分佈) : Endemic (固有種) .

215. **Liparis shaoshunia** Ying, Col. Ill. Indig. Orch. **1** : 230
, col. photo. 98 (1977) 綠唇羊耳蒜

Distribution (分佈) : Endemic (固有種) .

216. **Liparis somai** Hayata, Icon. Pl. Form. **4** : 33, t. 6
(1914) . 相馬氏羊耳蒜

Distribution (分佈) : Endemic (固有種) .

217. **Liparis viridiflora** (Blume) Lindley, Gen. & Sp.
Orch. **31** (1833) . 綠花羊耳蒜

Malaxis viridiflora Blume, Bijdr. 392 (1825) .

Liparis longipes Lindley in Qall. Pl. Asiat. Rar. I,
31, t. 35 (1830) .

Liparis pendula Lindley in Bot. Reg. **24**, misc. 94
(1838) .

Liparis spathulata Lindley in Bot. Reg. **26**, misc. 81
(1840) .

Sturmia longipes Reichb. f. in Bonpl. **3** : 250 (1855) .

Liparis longipes Lindley var. *spathulata* Ridl. in
Journ. Linn. Soc. **22** : 294 (1886) .

Liparis triloba Ridl. in l.c. **22** : 295 (1886) .

Liparis dolichopoda Hayata, Icon. Pl. Form. **4** : 27,
t. 5 (1914) .

Cestichis pendula Pfritz. in Engl. & Prantl., Nat. Pflanzen. 2, Abt. 6, 131, f. 128 c-e, g. (1889).

Leptorchis longipes Ktze, Rev. Gen. Pl. 2: 670 (1891).

Leptorchis triloba Ktze, l.c. 671 (1891).

Stichorchis pendula Pfitz. in Engl. & Prantl., Nat. Pflanzenfam. Nachtr. 1: 103 (1897).

Cestichis longipes Ames, Orch. 1: 75 (1905).

Cestichis dolichopoda Hayata, Icon. Pl. Form. 4: 27, t. 5 (1914).

Distribution (分佈): India (印度), Srilanka (席里藍卡), Burma (緬甸), Thailand (泰國), Vietnan (越南), Malaya Peninsula (馬來半島) the Philippines (菲律賓), Samoa (三毛亞) and Taiwan (台灣).

55. LISTERA R. Br. 雙葉蘭屬

218. **Listera deltoidea** Fukuyama in Bot. Mag. Tokyo 49: 759 (1935). 插天山雙葉蘭

Distribution (分佈): Endemic (固有種).

219. **Listera macrantha** Fukuyama in Ann. Rep. Taipei Bot. Gard. 3: 86 (1933). 巨藥雙葉蘭

Distribution (分佈): Endemic (固有種).

220. **Listera morrisonicola** Hayata, Icon. Pl. Form. 2: 140 (1912). 玉山雙葉蘭

Ophras morrisonicola Makino in Journ. Jap. Bot. 6: 34 (1929).

Distribution (分佈): Endemic (固有種).

221. **Listera nankomontana** Fukuyama in Bot. Mag Tokyo 49: 291 (1935). 南湖雙葉蘭

Distribution (分佈): Endemic (固有種).

222. **Listera pseudonipponica** Fukuyama in Bot. Mag. Tokyo 49: 665 (1935). 假日本雙葉蘭

Distribution (分佈): Endemic (固有種).

223. **Listera shaoii** Ying, Col. Illust. Indig Orch. Taiwan 1:236, col. photo 101 (1977). 邵氏雙葉蘭
Distribution (分佈): Endemic (固有種).
224. **Listera suzukii** Masamune in Trop. Hort. 3:42 (1933) & in Trans. Nat. Hist. Soc. Form. 23:209 (1933). 鈴木氏雙葉蘭
Distribution (分佈): Endemic (固有種).
225. **Listera taiwaniana** Ying in Bull. Exp. For. Nat. Taiwan Univ. (114): 156 (1974) & Chin. Flow. (11): 51, pl. 4 (1975) & Quart. Journ. Chin. For. 8 (4): 142 (1975).
Distribution (分佈): Endemic (固有種).
226. **Listera taizanensis** Fukuyama in Bot. Mag. Tokyo 48: 431 (1934). 大山雙葉蘭
Distribution (分佈): Endemic (固有種).
227. **Listera uraiensis** Ying, Col. Illust. Indig. Orch. Taiwan 1: 240, col. photo. 102 (1977). 烏來雙葉蘭
Distribution (分佈): Endemic (固有種).

56. LUISIA Gaud. 釵子股屬

228. **Luisia cordata** Fukuyama in Bot. Mag. Tokyo 48: 306 (1934). 圓葉釵子股
Distribution (分佈): Endemic (固有種).
229. **Luisia teres** (Thunb.) Blume, Rumphia 4: 50 (). 釵子股
Epiderdum teres Thunb., Fl. Jap. 30 (1784).
Luisia fauriei Sw.
Luisia liukiensis Schltr. in Bull. Herb. Boiss. ser. II, 6: 465 (1906).
Luisia megasepala Hayata, Icon. Pl. Form. 4: 85, f. 41 (1914).
Distribution (分佈): Japan (日本), Ryukyu (琉球) and Taiwan (台灣).

230. **Luisia teres** (Thunb.) Blume var. **botanensis** (Fukuyama) Ying, **comb. nov.** 牡丹釵子股

Luisia botanensis Fukuyama in Bot. Mag. Tokyo
49: 442 (1935).

Distribution (分佈): Endemic (固有變種).

57. MACODES Blume 擬線柱蘭屬

231. **Macodes petola** (Blume) Lindley, Gen. & Sp. Orch.
497 (1833). 擬線柱蘭

Neottia petola Blume, Bijdr. 407, t.2 (1825).

Anoectichilus petola Hort. ex Gentil., Pl. Cult.
Serres. Jard. Bot. 18 (1907).

Anoectichilus veitchianus Hort. ex Blume, Coll.
des. Orch. 1: 119 ().

Distribution (分佈): Sumatra (蘇門答臘), the Philippines (菲律賓), Ryukyu (琉球) and Taiwan (台灣).

232. **Macodes tabiyahanensis** (Hayata) Ying, **comb. nov.**
台灣擬線柱蘭

Zeuxine tabiyahanensis Hayata, Icon. Pl. Form.
6: 89 (1917).

Adenostylis tabiyahanensis Hayata, l.c.

Distribution (分佈): Endemic (固有種).

58. MALAXIS Soland 小柱蘭屬

233. **Malaxis bancanoides** Ames, Orch. 2: 129 (1908). 新
小柱蘭

Microstylis irioiomtensis Masamune in Trans. Nat.
Hist. Soc. Form. 24: 208 (1934).

Distribution (分佈): Ryukyu (琉球) and Taiwan (台灣).

234. **Malaxis latifolia** J.E. Smith in Rees Cyclo. 22, n.3
(1814); Baker, Fl. Jav. 3: 293 (1968). 小柱蘭

Microstylis latifolia (J. E. Smith), J.J. Smith, Orch.

Fl. Jav. 248 (1905); Schltr. in Fedde Repert. Beih. 4: 191 (1919), (Sino-Jap. Orch. Prodr.); Ying in Chin. Flow. (3): 33, pl. 1 (1974).

Dienia fusca Lindley, Gen. & Sp. Orch. 22 (1830).

Microstylis congesta Reichb.f. in Walp. Ann. 6: 206 (1861); Henry, List Pl. Form. 91 (1896); Matsum. & Hayata in Journ. Col. Sci. Univ. Tokyo 22: 406 (1906), (Enum. Pl. Form.).

Microstylis bernaysii F. Mull., Frag. 11: 21 (1878).

Dienia congesta Lindley, Bot. Reg. 10, sub. t. 825 (1824).

Malaxis plicata Roxb., Hort. Beng. 63 (1814).

Malaxis kizanensis (Masamune) Hatusima, Fl. Ryukyu 863 (1971)

Malaxis kizanensis (Masamune) Ying in Bull. Exp. For. Nat. Taiwan Univ. (114): 154 (1974).

Malaxis kizanensis (Masamune) S. Y. Hu in Quart. Journ. Taiwan Mus. 27: 433 (1974).

Microstylis latifolia Sm. var. *fusca* Ames in Philip. Journ. Sci. 6, Bot. 45 (1911).

Microstylis congesta Reichb.f. var. *fusca* Ridl. in Journ. Linn. Soc. 24: 335 (1888).

Liparis bernaysii F. Muell., Fragm. 11: 21 (1878).

Gastroglottis montana Blume, Bijdr. 387 (1825).

Microstylis trilobulata Kurz., Rept. Veg. Andan. Isles App. B 19 (1870).

Microstylis latifolia J.J. Smith var. *fusca*. J.J. Smith, Fl. Buitena 249 (1905).

Distribution (分佈): S. China (中國南部), Java (爪哇), India (印度), Nepal (尼泊爾), Malaya (馬來西亞), The Philippines (菲律賓), Queensland (昆士蘭) and Taiwan (台灣).

235. *Malaxis matsudai* (Yamamoto) Hatushima, Fl. Ryukyu

863 (1971). 松田氏小柱蘭

Microstylis matsudai Yamamoto, Suppl. Icon. Pl. Form. **2**:4, f.2 (1926).

Malaxis matsudai (Yamamoto) Ying in Bull. Exp. For. Nat. Taiwan Univ. (114): 154 (1974).

Malaxis matsudai (Yamamoto) S.Y. Hu in Journ. Quart. Taiwan Mus. **27**: 434 (1974).

Distribution (分佈): Lyukyu (琉球) and Taiwan (台灣).

236. **Malaxis miyakei** (Schltr.) Tang. & Wang in Act. Phytotax. Sin. **1**: 73 (1951). 疏花小柱蘭

Microstylis miyakei Schltr. in Repert. Sp. Nov. Fedde **10**: 437 (1911).

Malaxis miyakei (Schltr.) Ying in Bull. Exp. For. Nat. Taiwan Univ. (114): 154 (1974).

Malaxis miyakei (Schltr.) S.Y. Hu in Quart. Journ. Taiwan Mus. **27**: 434 (1974).

Distribution (分佈): Lyukyu (琉球) and Taiwan (台灣).

237. **Malaxis monophylla** (Linn.) Sw. in Act. Holm. 234 (1800). 單葉小柱蘭

Ophrys monophyllos Linn., Sp. Pl. ed. **1**, 947 (1753).

Microstylis monophyllos Lindley, Gen. & Sp. Orch. **19** (1833).

Achroanthus monophyllos Greene, Pittonia **2**: 183 ().

Achroanthus acuminata Rafin, New Fl. Amer. **1**: 59 ().

Microstylis diphyllus Lindley, l.c.

Achroanthus cilifolia Rafin, l.c.

Achroanthus monophyllos Greene form. *diphyllus* Koidz. in Matsum., Icon. Koishikav. **3**: 27, t. 159 ().

Microstylis arisanensis Hayata, Icon. Pl. Form. **6**: 68, f. 10, pl. 11 (1917).

Microstylis mucifera Ridl. in Journ. Linn. Soc. **24**: 333 (1888).

Malaxis diphyllus Champ. & Schltr. in Linnaea **3**: 34 (1828).

Malaxis brachypoda Fern in Rhodora **28**: 176 (1926).

Malaxis monophyllos Sw. var. *brachypoda* (Gray)
Morris et Eames

Liparis inconspicua Makino in Bot. Mag. Tokyo **6**: 48 (1892).

Malaxis arisanensis (Hayata) S.Y. Hu in Quart. Journ. Taiwan Mus. **27**: 432 (1974).

Distribution (分佈): Korea (韓國), Japan (日本), China (中國), Siberia (西伯利亞), Europe (歐州), Alaska (阿拉斯加), N. America (北美), Aleutian Island (澳倫汀島) and Taiwan (台灣).

238. **Malaxis ramosii** Ames in Journ. Philip. Sci. **6**: 45 (1911); Lin in Quart. Journ. Chin. For. **9**(1): 53, pl. 3 (1976). 圓唇小柱蘭

Distribution (分佈): The Philippines (菲律賓) and Taiwan (台灣).

239. **Malaxis roohutensis** (Fukuyama) Ying in Bull. Exp. For. Nat. Taiwan Univ. (114): 154 (Nov. 1974). 老佛山小柱蘭

Microstylis roohutensis Fukuyama in Trans. Nat. Hist. Soc. Form. **22**: 415, f. 3 (1932).

Malaxis roohutensis (Fukuyama) S.Y. Hu in Quart. Journ. Taiwan Mus. **27**: 435 (Dec. 1974).

Distribution (分佈): Endemic (固有種).

240. **Malaxis taiwanensis** Ying in Quart. Journ. Chin. Forest. **8**(4): 143 & Alp. Pl. Taiwan in col. **1**: 71, f. 95 (1975). 台灣小柱蘭

Distribution (分佈) : Endemic (固有種) .

59. MICROTATORCHIS Schltr. 假蜘蛛蘭屬

241. **Microtatorchis taiwaniana** Ying, Col. Ill. Indig. Orch. Taiwan **1**:248col. photo. 108 (1977) . 卵葉假蜘蛛蘭
Distribution (分佈) : Endemic (固有種) .

60. MICROTIS R. Br. 葱葉蘭屬

242. **Microtis unifolia** (Forest.f.) Reichb.f., Beitr. Syst. Pfl. **62** (1871) ; Sasaki List Pl. Form. **134** (1928) .
葱葉蘭

Ophrys unifolia Forest.f., Fl. Ins. Aust. Prodr. **59** (1786) .

Epipactis porrifolia Sw. in Kongl. Sevnsk. Vet - Akad. Vya. Handl. **21**: 233 (1800) .

Microtis formosana Schltr. in Engl. Bot. Jahrb. **45**: 382 (1911) .

Microtis rara R. Br., Prodr. Nov. Holl. **321** (1810) ; Lindley, Gen. & Sp. Orch. **396** (1833) .

Microtis porrifolia R. Br., Prod. Nov. Holl. **320** (1810) .

Microtis banksii A. Cunn. ex Hook. in Bot. Mag. **62**, sub. *t.* **3377** (1835) .

Microtis pulchella Lindley, *l.c.* **394** .

Microtis fruteorum Schltr. in Linnaea **20**: 568 (1847) .

Microtis javanica Reichb.f. in Bonpl. **5**: 36 (1857) .

Distribution (分佈) : China (中國), Japan (日本), Ryukyu (琉球), Java (爪哇), The Philippines (菲律賓), Srilanka (斯里藍卡), India (印度), Australia (澳州) and Taiwan (台灣) .

61. MISCHOBULEUM Schltr. 葵蘭屬

243. *Mischobulbum cordifolium* (Hook. f.) Schltr., Orch.

Deutsch. New. Guin. 98 (1912). 葵蘭

Tainia cordifolia Hook. f., Icon. Pl. 19, t. 186 (1889);
Hayata, Icon. Pl. Form. 4: 61 (1914).

Tainia fawiei Schltr. in Fedde Repert. Beih. 9:
282 (1921).

Distribution (分佈): S. China (中國南部) and Taiwan
(台灣).

62. MYRMECHIS Blume 全唇蘭屬

244. *Myrmechis japonica* (Reichb. f.) Rolfe in Linn.
Journ. Soc. 36: 44 (). 全唇蘭

Rhamphidia japonica Reichb. f. in Bot. Zeit. 26: 39
(1878).

Myrmechis drymoglossifolia Hayata, Icon. Pl. Form.
6: 90, f. 20 (1917).

Distribution (分佈): Japan (日本) and Taiwan (台灣
).

245. *Myrmechis japonica* (Reichb. f.) Rolfe var. *sasakii*
(Yamamoto) Ying, Col. Illust. Indig. Orchid. Taiwan
1: 403 (1977) 南湖全唇蘭

Myrmechis sasakii Yamamoto, Suppl. Icon. Pl. Form.
2: 1, f. 1 (1926).

Myrmechis nankotaisanensis Yamamoto in Schred.
Distribution (分佈): Endemic (固有變種).

64. NERVILIA Comm. ex Gaud. 一點廣屬

246. *Nervilia aragoana* Gaud. in Freyc. Voy. Bot. 422,
35 (1826). 一點廣

Pogonia nervilia Blume, Mus. Bot. Lugd. Bat. 1: 32
(1849); Hayata in Journ. Col. Univ. Tokyo 30(1):
345 (1911), (Mat. Fl. Form.).

Aplostellis flabelliformis Ridl., Fl. Mal. Penins.
4: 203 (1924).

Pogonia flabelliformis Lindley in Wall. Cat. n.
7400 (1833).

Pogonia gracilis Blume

Distribution (分佈): India (印度) throughout southeastern Asia (全東南亞), Indonesia (印尼) to Samoa (三毛亞) and Taiwan (台灣).

247. **Nervilia discolor** (Blume) var. **purpurea** (Hayata) Ying, Col. Ill. Indig. Orch. 1: 253, col. photo. 110 (1977). 紫背一點廣

Pogonia purpurea Hayata in Journ. Col. Sci. Univ. Tokyo 30(1): 345 (1911), (Mat. Fl. Form.).

Nervilia purpurea (Hayata) Schltr. in Fedde Repert. Beih. 10: 6 (1911); Hayata, Icon. Pl. Form. 4: 118, pl. 19 (1914).

Distribution (分佈): The variety (變種) is endemic (固有的).

248. **Nervilia taitoensis** (Hayata) Schltr. in Fedde Repert. Beih. 10: 6 (1921). 台東一點廣

Pogonia taitoensis Hayata in Journ. Col. Sci. Univ. Tokyo 30(1): 346 (1911), (Mat. Fl. Form.).

Distribution (分佈): Endemic (固有種)

64. OBERONIA Lindley 莪苜蘭屬

249. **Oberonia arisanensis** Hayata, Icon. Pl. Form. 4: 23, f. 3 (1914). 阿里山莪苜蘭

Distribution (分佈): Endemic (固有種).

250. **Oberonia caulescens** Lindley, Gen. & Sp. Orch. 15 (1833); Seidenf. in Dansk. Bot. Ark. 25(3): 36 (1968). 二裂唇莪苜蘭

Oberonia bilobatalabella Hayata, Icon. Pl. Form. 4: 24, f. 4 (1914).

Distribution (分佈): The Himalaya (喜馬拉雅山) and

Taiwan (台灣).

251. **Oberonia formosana** Hayata in Journ. Col. Sci. Univ. Tokyo **30**(1): 309 (1911), (Mat. Fl. Form.) & Icon. Pl. Form. **4**: 25, *f.3, f-g* (1914). 台灣莪苣蘭
Distribution (分佈): Endemic (固有種).
252. **Oberonia gigantea** Fukuyama in Bot. Mag. Tokyo **49**: 295 (1935). 大莪苣蘭
Distribution (分佈): Endemic (固有種).
253. **Oberonia japonica** (Maxim.) Makino 日本莪苣蘭
Malaxis japonica Maxim. in Bull. Acad. Petersb. **22**: 257 (1877).
Malaxis makinoi Masamune in Mem. Fac. Sc. & Agric. Taihoku Univ. Bot. **4**: 583 (1934).
Oberonia insularis Hayata in Journ. Col. Sci. Univ. Tokyo **30**(1): 310 (1911), (Mat. Fl. Form.).
Distribution (分佈): Japan (日本) and Taiwan (台灣).
254. **Oberonia kusukusensis** Hayata, Icon. Pl. Form. **4**: 26, *f.3, i-k* (1914). 恒春莪苣蘭
Distribution (分佈): Endemic (固有種).

65. ODONTOCHILUS Blume 齒唇蘭屬

255. **Odontochilus bisaccatus** Hayata, Icon. Pl. Form. **4**: 99, *pl. 15* (1914). 黃花齒唇蘭
Anoectichilus bisaccatus Hayata, Icon. Pl. Form. **4**: 99, *pl. 15* (1914).
Pristiglottis bisaccata (Hayata) Nackejima in Biol. Mag. Okinawa (13): 33 (1975).
Odontochilus bisaccatus Hayata ex Lin, Nat. Orch. Taiwan **1**: 214, *col. photo 135* (1975);
Anoectochilus lanceolatus sensu auct Taiwan Seidenf. in Seartryk. Bot. Tidsskrift. **66**: 309 (1971), non Lindley.
Distribution (分佈): Endemic (固有種).

256. **Odontochilus inabai** Hayata, Icon. Pl. Form. **4**:102, ¹⁰⁴
pl. 16 (1914). 台灣齒唇蘭
Anoectochilus inabai Hayata, Icon. Pl. Form. **4**:102,
pl. 16 (1914).
Odontochilus inabai Hayata ex Lin, Nat. Orch.
Taiwan **1**:216, *col. photos 136 - 137* (1975).
Odontochilus candidus Lin et Hsu in *Taiwania* **21**:
234 (1976).
Distribution (分佈): Endemic (固有種).

66. ORCHIS (Tourn.) Linn. 蘭屬 *L. formosensis*

257. **Orchis alpestre** (Fukuyama) Ying in *Quart. Journ. Chin. Forest.* **8**(4):140 (1975) 小黃斑蘭
Amistostigma alpestre Fukuyama in *Bot. Mag. Tokyo* **49**:664 (1935).
Distribution (分佈): Endemic (固有種).
258. **Orchis formosensis** Ying, *Col. Illust. Indig. Orch. Taiwan* **1**:266, *col. photo. 117* (1977). 合歡山蘭
Distribution (分佈): Endemic (固有種).
259. **Orchis kiraishiensis** Hayata, *Icon. Pl. Form.* **9**:116, *f. 41* (1920); Ying, *Alp. Pl. Taiwan* **1**:72, *col. photo. 96* (1975). 蒼萊蘭
Ponerorchis kiraishiensis (Hayata) Ohwi in *Act. Phytotax. Geob.* **5**:146 (1936); Masamune, *List Vasc. Pl. Taiwan* 158 (1954).
Distribution (分佈): Endemic (固有種).
260. **Orchis kunihiokoana** Masamune et Fukuyama in *Bot. Mag. Tokyo* **49**:663 (1935); Ying, *Alp. Pl. Taiwan* in *col. 1*:72, *col. photo. 97* (1975). 白花蘭
Orchis kiraishiensis Hayata var. *leucantha* Masamune in *Trop. Hort.* **3**:45 (1933).
Orchis kiraishiensis Hayata form. *leucantha* Masamune in *Trop. Agric. Journ. Soc. Taiwan* **3**:246

(1931).

Distribution (分佈) : Endemic (固有種) .

261. **Orchis takasago-montana** Masamune in Trans. Nat. Hist. Soc. Form. **24** : 206 (1934). 高山蘭

Ponerorchis takasago-montana Ohwi in Acta Phytotax. Geobot. **5** : 146 (1936).

Distribution (分佈) : Endemic (固有種) .

262. **Orchis taiwanensis** Fukuyama in Bot. Mag. Tokyo **49** : 290 (1935). 台灣蘭

Ponerorchis taiwanensis Ohwi in Act. Phytotax. Geobot. **5** : 146 (1936).

Distribution (分佈) : Endemic (固有種) .

263. **Orchis taolooi** Ying, Alp. Pl. Taiwan in col. **1** : 75, pl. 102 (1975). 紅斑蘭

Amitostigma taolooi Ying, l.c. **1** : 75, pl. 102 (1975).

Distribution (分佈) : Endemic (固有種) .

264. **Orchis tomingai** (Hayata) Ying in Quart. Chin. Forest. **8**(4) : 140 (1975). 紅花蘭

Gymnadenia tomingai Hayata, Icon. Pl. Form. **6** : 93 (1916).

Amitostigma tomingai (Hayata) Schltr. in Fedde Repert. Beih. **4** : 95 (1919), (Orch. Sino-Jap. Prodr.) ; Hayata, Icon. Pl. Form. **10** : 32 (1921).

Distribution (分佈) : Endemic (固有種) .

265. **Orchis yuukiana** (Fukuyama) Ying in Journ. Quart. Chin. Forest. **8**(4) : 140 (1975) 紫花蘭

Amitostigma yuukiana Fukuyama in Bot. Mag. Tokyo **48** : 429 (1934).

Distribution (分佈) : Endemic (固有種) .

67. OREORCHIS Lindley 山蘭屬

266. **Oreorchis fargesii** Finet in Bull. Soc. Bot. Fr. **Xlilii** 697 () . 密花山蘭

Oreorchis subcapitata (Hayata) Schltr. in Fedde Repert. Beih. **4**: 225 (1919) (Orch. Sino-Jap. Prodr.); Hayata, Icon. Pl. Form. **10**: 34 (1921).

Oreorchis fargesii Finet var. *subcapitata* Hayata, Icon. Pl. Form. **2**: 142 (1912) et **4**: 35, f. 12 (1914).

Distribution (分佈): Himalaya (喜馬拉雅山) and Taiwan (台灣).

267. **Oreorchis gracillima** (Hayata) Schltr. in Fedde Repert. Beih. **4**: 223 (1919), (Orch. Sino-Jap. Prodr.); Hayata, Icon. Pl. Form. **10**: 33 (1921). 細葉山蘭

Oreorchis gracilis Fr. et Sav. var. *gracillima* Hayata, Icon. Pl. Form. **2**: 141 (1912).

Distribution (分佈): Endemic (固有種).

268. **Oreorchis ohwii** Fukuyama in Bot. Mag. Tokyo **49**: 296 (1935). 南湖山蘭

Distribution (分佈): Endemic (固有種).

68. PACHYSTOMA Blume 粉口蘭屬

269. **Pachystoma chinense** Reichb.f. var. **formosanum** (Schltr.) Ying, **comb. nov.** 台灣粉口蘭

Pachystoma formosanum Schltr. in Fedde Repert. Beih. **4**: 245 (1919), (Orch. Sino-Jap. Prodr.); Hayata, Icon. Pl. Form. **10**: 34 (1921).

Pachystoma chinense sensu Matsum. et Hayata in Journ. Col. Sci. Univ. Tokyo **22**: 409 (1906), (Enum. Pl. Form.) *non* Reichb.f.

Distribution (分佈): The variety endemic (固有變種).

69. PHAIUS Lour. 鶴頂蘭屬

270. **Phaius flavus** (Blume) Lindley, Gen. & Sp. Orch. **128** (1833). 黃鶴蘭

Limodorum flavum Blume, Bijdr. 375 (1825).

Phaius minor Blume in Mus. Bot. Lugd. Bat. **2**:
181 (1856).

Phaius undulatomarginata Hayata, Icon. Pl. Form.
4: 59, f. 27 (1914).

Phaius somai Hayata, Icon. Pl. Form. **6**: 74 (1917).

Phaius maculatus var. *minor* (Blume) Fr. & Sw.
Distribution (分佈): S. China (中國南部), Srilanka
(席里藍卡), Java (爪哇), Malaya (馬來西亞), Japan
(日本), Ryukyu (琉球), India (印度), Sumatra (蘇門
答臘) the Philippines (菲律賓), Thailand (泰國) and
Taiwan (台灣).

271. **Phaius gracilis** (Lindley) Ying, Col. Ill. Indig.
Orch. Taiwan **1**: 278, col pho 123 (1977). 細莖鶴頂蘭

Calanthe gracilis Lindley, Gen. & Sp. Orch. 25
(1833).

Calanthe longipes Hook.f., Fl. Brit. Ind. **6**: 195
(1890).

Phaius longipes (Hook.f.) Holtt. in Gard. Bull.
Singapore **11**: 286 (1947).

Calanthe vensula Schltr. in Fedde Repert. Beih.
4: 68 (1919), (Orch. Sino-Jap. Prodr.).

Paracalanthe venusta Kudo in Journ. Trop. Agric.
Taiwan **2**: 236 (1930).

Cephalantheropsis gracilis (Lindley) S.Y. Hu in
Quart. Journ. Taiwan Mus. **25**: 213 (1972).

Distribution (分佈): Japan (日本), Ryukyu (琉球),
Malaya (馬來西亞), Java (爪哇), The Philippines (菲律
賓), Thailand (泰國) and Taiwan (台灣).

277. **Phaius gracilis** (Lindley) Ying var. **calanthoides**
(Ames) Ying, **comb. nov.** 假細莖鶴頂蘭

Phaius calanthoides Ames, Orch. **2**: 153 (1908).

Phaius longipes (Hook.f.) Holtt. var. *calanthoi-*
des (Ames) Lin, Nat. Orch. Taiwan **1**: 232 (1975).

Calanthe dolichopoda Fukuyama in Bot. Mag. Tokyo
49: 296 (1935).

Calanthe kooshunensis Fukuyama in Ann. Rep. Taipei
Bot. Gard. 3: 85 (1933).

Distribution (分佈) : Taiwan (台灣) and The Philippines
(菲律賓).

278. **Phaius mishensis** (Lindley) Reichb. f. in Bonpl.
5: 43 (1857); Garay & Sweet, Orch. S. Ryukyu Isl.
127 (1974). 細距鶴頂蘭

Limatodes mishensis Lindley in Lindley ex Paxt.,
Fl. Gard. 3: 36 (1852).

Phaius gracilis Hayata in Journ. Col. Sci. Univ.
Tokyo 30(1): 322 (1911), (Mat. Fl. Form.).

Distribution (分佈) : Skkim (錫金), The Philippines
(菲律賓), Assam (阿薩姆), Thailand (泰國), Ryukyu
(琉球) and Taiwan (台灣).

279. **Phaius tancarvilleae** (Bankers) Blume (*P. tanke-
villei*, *P. tankervilleae* or *P. tankervilleae* in error),
Mus. Bot. Lugd. Bat. 2: 177 (1858); Masamune, List
Vasc. Pl. Taiwan 164 (1954). 鶴頂蘭

Limodorum tancarvilleae Bank. in L'Herit. sert.
Angl. 28 (1789); Aiton, Hort. Kew. ed. 1, 3: 302,
t. 12 (1789).

Limodorum incarvillei Pers., Syn. Pl. Enchir. Bot.
2: 520 (1807).

Bletia incarvillei (Banks) R. Br. in Ait. Hortus
Kew. ed. 25: 205 (1813).

Phaius grandifolius sensu Lindley in Wall. cat. n.
3747 (1825); Matsum. et Hayata in Journ. Col.
Sci. Univ. Tokyo 22: 410 (1906), (Enum. Pl. Form.
). non Lour.

Phaius incarvillei O. Kuntze

Phaius bicolor Lindley, Gen. & Sp. 128 (1833).

Calanthe speciosa Vieill. in Am. Soc. Nat. ser.
IV, 16: 44 (1861).

Phaius wallichii Lindley in Wall. Pl. As. Rar.
2: 46, t. 158 (1831); Hook. f., Fl. Brit. Ind. **5: 816**
(1890).

Phaius leucophaeus F. Muell., Fragm. Phyt. Aust.
4: 163 (1864).

Pachyone spectabilis Salisb., Trans. Hort. Soc.
1: 261 (1820).

Phaius blumei Lindley, Gen. & Sp. Orch. Pl. 127
(1831); Blume, Fl. Jav. Orch. 4, *t. 1* (1858).

Phaius grandifolius Lindley var. *superbus* Van
Houtte, Fl. d. S. **7: 259, t. 38** (1951-52).

Phaius carromi F. Mull., Essay. Pl. Exped. Burdekin
19 (1860).

Distribution (分佈): S. China (中國南部), n. India
(印度北部), Malaya (馬來西亞), Indonesia (印尼), Au-
stralia (澳洲) Pacific islands (太平洋島嶼), Polynesia
(波尼西亞), Japan (日本), Lyukyu (琉球) and Taiwan
(台灣).

70. PHALAENOPSIS Blume 蝴蝶蘭屬

280. *Phalaenopsis aphrodite* Reichb. f. in Hamb. Gartenz.
18: 35 (1862); Henry, List Pl. Form. 92 (1896);
Matsum et Hayata in Journ. Col. Sci. Univ. Tokyo
22: 414 (1906), (Enum. Pl. Form.). 蝴蝶蘭

Phalaenopsis amabilis var. *aphrodite* (Reichb. f.)
Ames, Orch. **2: 226** (1908).

Phalaenopsis gloriosa Reichb. f. in Gard. Chron.
III, 3: 554 (1888).

Phalaenopsis sanderiana Reichb. f. in Flora **65:**
466 (1882).

Phalaenopsis ambigua Reichb. f. in Hamb. Gartenz.

18: 35 (1862) & Xen. Orch. 2: 6 (1862).

Phalaenopsis amabilis var. *ambigua* Burb. in
The Garden 22: 119 (1882).

Distribution (分佈): The Philippines (菲律賓) and
Taiwan (台灣).

281. **Phalaenopsis riteiwanensis** Masamune in Trans
Nat. Hist. Soc. Form. 24: 213 (1934). 小蘭嶼蝴蝶蘭

Stauroglottis riteiwanensis Masamune, l.c.

Distribution (分佈): Endemic (固有種).

71. PHOLIDOTA Lindley 山桃蘭屬

282. **Pholidota cantonensis** Rolfe in Kew. Bull. 1896:
196 (1896). 石山桃

Pholidota uraiensis Hayata, Icon. Pl. Form. 4: 64,
f. 29 (1914).

Distribution (分佈): S. China (中國南部) and Taiwan
(台灣).

72. PHREATIA Lindley 陂蘭屬

283. **Phreatia formosana** Rolfe in Ann. Bot. 9: 156 (1895);
Henry, List. Pl. Form. 99 (1896). 台灣陂蘭

Distribution (分佈): Endemic (固有種).

284. **Phreatia goliathensis** J.J. Smith in Bull. Jard. Bot.
Buitenz. ser. 2, 13: 73 (1914). 蘭嶼陂蘭

Phreatia kotoinsularis Fukuyama in Bot. Mag. Tokyo
50: 23 (1936).

Distribution (分佈): New Guinea (新幾內亞) and Taiwan
(台灣).

285. **Phreatia morii** Hayata, Icon. Pl. Form. 4: 58 f. 25
(1914). 森氏陂蘭

Distribution (分佈): Endemic (固有種).

73. **PLATANThERA** L.C. Rich. 粉蝶蘭屬

286. **Platanthera brevicarata** Hayata in Journ. Col. Sci. Univ. Tokyo **30**(1): 350 (1911), (Mat. Fl. Form.); Ying in Chin. Flow. (6): 33, *t.* 2 (1974) & Alp. Pl. Taiwan in col. **1**: 72, *col. phot.* 98 (1975).
短距粉蝶蘭

Distribution (分佈): Endemic (固有種).

287. **Platanthera longibracteata** Hayata, Icon. Pl. Form. **4**: 122 (1914). 長苞粉蝶蘭

Distribution (分佈): Endemic (固有種).

288. **Platanthera pachyglossa** Hayata, Icon. Pl. Form. **4**: 123, *pl.* 21 (1914); Ying in Chin. Flow. (6): 33, *pl.* 2 (1974) & Alp. Pl. Taiwan in col. **1**: 73, *col. photo.* 99 (1975). 厚唇粉蝶蘭

Platanthera hachijoensis Honda in Bot. Mag. Tokyo **49**: 2 (1935).

Platanthera amamiana Ohwi in Journ. Jap. Bot. **13**: 440 (1937).

Platanthera angustata sensu, Garay & Sweet, Orch. S. Ryukyu Isl, **32** (1974), *non* Lindley.

Distribution (分佈): Lyukyu (琉球) and Taiwan (台灣).

289. **Platanthera sigeyosii** Masamune in Bot. Mag. Tokyo **46**: 773 (1932). 高山粉蝶蘭

Distribution (分佈): Endemic (固有種).

290. **Platanthera stenoglossa** Hayata, Icon. Pl. Form. **4**: 123 (1914) & **6**: 93 (1916). 薄唇粉蝶蘭

Distribution (分佈): S. Japan (日本南部) Lyukyu (琉球) and Taiwan (台灣).

291. **Platanthera stenosepala** Schltr. in Fedde Repert. Beih. **4**: 44 et 117 (1919), (Orch. Sino-Jap. Prodr.) ; Hayata, Icon. Pl. Form. **10**: 32 (1921). 薄萼粉蝶蘭

Distribution (分佈) ; S. Japan (日本南部), Ryukyu (琉球) and Taiwan (台灣).

292. **Platanthera taiwaniana** Ying in Quart Journ. Chin. For. **8**(4) : 144 & Alp. Pl. Taiwan in Col. **1** : 73, col. photo. 100 (1975). 台灣舌唇蘭

Tulotis taiwanensis Ying, l.c.

Distribution (分佈) : Endemic (固有種).

74. PLEIONE D. Don. — 葉蘭屬

293. **Pleione bulbocodioides** (Franch.) Rolfe in Orch. Rev. **11** : 291 (1901-05). 山慈姑、台灣—葉蘭

Coelogyne bulbocodioides Franch. in Nouv. Arch. Mus. Paris ser. 2, **10** : 84 (1888).

Pleione formosana Hayata in Journ. Col. Sci. Univ. Tokyo **30**(1) : 326 (1911) (Mat. Fl. Form.).

Coelogyne formosana Hayata, Icon. Pl. Form. **4** : 64 (1914).

Pleione pricei Rolfe in Bot. Mag. *t.* 8729 (1917).

Distribution (分佈) : S. China (中國南部) and Taiwan (台灣).

294. **Pleione bulbocodioides** (Franch.) Rolfe var. **nivea** (Fukuyama) Ying, **comb. nov.** 白花山慈姑

Pleione formosana Hayata form. *nivea* Fukuyama in Trans. Nat. Hist. Soc. Form. **22** : 415 (1932).

Pleione formosana Hayata var. *nivea* (Fukuyama) Masamune in Trop. Hort. **3** : 48 (1933).

Distribution (分佈) : Endemic (固有種).

74. PODOCHILUS Blume 柄唇蘭屬

295. **Podochilus taiwanianus** Ying, Col. Ill. Indig. Orch. Taiwan **1** : 297, col. photo. 134 (1977). 台灣柄唇蘭

Distribution (分佈) : Endemic (固有種).

75. POGONIA Juss. 朱蘭屬, 鬚唇蘭屬

296. **Pogonia minor** Makino in Bot. Mag. Tokyo **23**: 137 (1910); Fukuyama in l.c. **52**: 244 (1938). 鬚唇蘭

Pogonia japonica Reichb.f. var. *minor* Makino in Bot. Mag. Tokyo **12**: 103 (1898).

Pogonia ophioglossoides A. Gray var. *minor* Makino in Bot. Mag. Tokyo **12**: 103 (1898).

Distribution (分佈): Japan (日本) and Taiwan (台灣).

77. POMATOCALPA Breda 鹿角蘭屬

297. **Pomatocalpa acuminata** (Rolfe) Schltr. in Fedde Repert. Beih. **4**: 290 (1919), (Orch. Sino-Jap. Prodr.). 鹿角蘭

Cleisostoma acuminatum Rolfe in Kew. Bull. **1913**: 144 (1913).

Pomatocalpa acuminata Fukuyama *sensu* in Masamune, Short Fl. Form. 299 (1936).

Distribution (分佈): Endemic (固有種).

298. **Pomatocalpa brachybotrya** Hayata, Gen. Ind. Fl. Form. 81 (1917) et Icon. Pl. Form. **10**: 35 (1921). 台灣鹿角蘭

Pomatocalpa brachybotrya (Hayata) Schltr. in Fedde Repert. Beih. **4**: 29 (1919), (Orch. Sino-Jap. Prodr.).

Cleisostoma brachybotrya Hayata, Icon. Pl. Form. **4**: 95, f. 49 (1914).

Distribution (分佈): Endemic (固有種).

77. SACCOLABIUM Blume 囊唇蘭屬

299. **Saccolabium formosanum** Hayata in Journ. Col. Sci. Univ. Tokyo **30**(1): 336 (1911) & Icon. Pl. Form. **4**: 88, f. 44 (1914) & **6**: 85 (1917). 台灣囊唇蘭

Gastrochilus formosanum (Hayata) Hayata, Gen.

Ind. Fl. Form. 78 (1917), & Icon. Pl. Form. 10:35 (1921).

Gastrochilus formosanus Schltr. in Fedde Repert. Beih. 4:288 (1919), (Orch. Sino-Jap. Prodr.).

Distribution (分佈): Endemic (固有種).

300. **Saccolabium fuscopunctatum** Hayata, Icon. Pl. Form. 2:143 (1912) & 4:89, f. 45 (1914). 紅斑囊唇蘭

Gastrochilus fuscopunctatus (Hayata) Hayata, Gen. Ind. Fl. Form. 78 (1917) & Icon. Pl. Form. 10:35 (1921).

Gastrochilus fuscopunctatus (Hayata) Schltr. in Fedde Repert. Beih. 4:288 (1919), (Orch. Sino-Jap. Prodr.).

Distribution (分佈): Endemic (固有種).

301. **Saccolabium japonicum** Makino, Ill. Fl. Japon 1, n. 73, t. 13 (1891). 日本囊唇蘭

Gastrochilus japonicus (Makino) Schltr. in Fedde Repert. Beih. 7:315 (1913).

Saccolabium somai Hayata, Icon. Pl. Form. 4:93 (1914).

Gastrochilus somai (Hayata) Hayata, Gen. Ind. Fl. Form. 79 (1917) & Icon. Pl. Form. 10:35 (1921).

Gastrochilus somai Schltr. in Fedde Repert. Beih. 4:289 (1919), (Orch. Sino-Jap. Prodr.).

Distribution (分佈): Japan (日本), Lyukyu (琉球) and Taiwan (台灣).

302. **Saccolabium kotoense** (Yamamoto) Yamamoto in Journ. Jap. Bot. 3:236 (1926) et Suppl. Icon. Pl. Form. 2:6, f. 3 (1926). 蘭嶼囊唇蘭

Tuberolabium kotoense Yamamoto in Bot. Mag. Tokyo 38:209 (1923).

Distribution (分佈): Endemic (固有種).

303. **Saccolabium matsudai** (Hayata) Makino et Nemoto,

Fl. Jap. ed. 2, 1674 (1931). 松田氏囊唇蘭

Gastrochilus matsudai Hayata, Icon. Pl. Form. 9: 116, f. 40 (1920).

Distribution (分佈): Endemic (固有種).

304. **Saccolabium nebulosum** (Fukuyama) Ying in Bull. Exp. For. Nat. Taiwan Univ. (114): 154 (1974). 菁花囊唇蘭

Gastrochilus nebulosus Fukuyama in Bot. Mag. Tokyo 49: 762 (1935).

Saccolabium nebulosum S.Y. Hu in Quart. Journ. Taiwan Mus, 28: 151 (1975).

Distribution (分佈): Endemic (固有種).

305. **Saccolabium quercetorum** (Fukuyama) Ying in Bull. Exp. For. Nat. Taiwan Univ. (114): 154 (1974). 樑囊唇蘭

Gastrochilus quercetorum Fukuyama in Bot. Mag. Tokyo 49: 826 (1935) & 50: 16 (1936).

Saccolabium quercetorum (Fukuyama) S.Y. Hu in Quart. Mus. Journ. Taiwan 28: 152 (1975).

Distribution (分佈): Endemic (固有種).

306. **Saccolabium raraensis** (Fukuyama) Ying in Bull. Exp. For. Nat. Taiwan Univ. (114): 154 (1974). 拉拉山囊唇蘭

Gastrochilus raraensis Fukuyama in Bot. Mag. Tokyo 48: 441 (1934).

Saccolabium raraensis (Fukuyama) S.Y. Hu in Quart. Journ. Taiwan Mus. 28: 152 (1975).

Distribution (分佈): Endemic (固有種).

307. **Saccolabium rupestris** (Fukuyama) Ying in Bull. Exp. For. Nat. Taiwan Univ. (114): 152 (1974). 小花囊唇蘭

Gastrochilus rupestris Fukuyama in Bot. Mag. Tokyo 49: 768 (1935).

Saccolabium rupestris (Fukuyama) S.Y Hu in Quart.
Journ. Taiwan Mus. **28**: 152 (1975).

Distribution (分佈) : Endemic (固有種).

308. **Saccolabium shaoyaoii** Ying, Col. Illust. Indig.
Orch. Taiwan **1**: 310, col. photo. 140 (1977). 應氏囊唇蘭

Gastrochilus shaoyaoii Ying M.M.S.

Distribution (分佈) : Endemic (固有種).

309. **Saccolabium taiwanianum** Ying, Col. Illust. Indig.
Orch. Taiwan **1**: 311, col. photo 141 (1977). 球花囊唇蘭

Gastrochilus taiwanianus M.M.S.

Distribution (分佈) : Endemic (固有種).

78. SARCANTHUS Lindley 隔距蘭屬

310. **Sarcanthus paniculatus** (Ker - Gawl.) Lindley in
Bauer, Illustr. Orch. Pl. Gen. **1**. 9 (). 隔距蘭

Aerides paniculatum Ker-Gawl., Bot. Reg. **3**: 20
().

Vanda paniculata R. Br. in Bot. Reg. sub. **1**. 506
().

Sarcanthus fuscomaculatus Hayata, Icon. Pl. Form.
4: 94, f. 48 (1914).

Sarcanthus formosanus (Hance) Rolfe in Journ.
Linn. Soc. **36**: 37 (1903-05); Matusm. et Hayata in
Journ. Soc. Col. Univ. Tokyo **22**: 414 (1906).

Cleisostoma formosanum Hance in Journ. Bot. **22**: 364
(1884).

Cleisostoma paniculatum (Ker-Gawl.) Garay in
Bot. Mus. Leafl. Harvard. Univ. **23** (4): 173 (1972).

Distribution (分佈) : S. China (中國南部) and Taiwan
(台灣).

312. **Sarcanthus uraiensis** Hayata, Icon. Pl. Form. **8**: 130,
f. 58 (1919). 烏來隔距蘭

Cleisostoma uraiense (Hayata) Garay & Sweet, Orch.

S. Ryukyu 156 (1974).

Sarcanthus micranthe Ames, Orch. 5: 248 (1915).

Sarcanthus viridescens Fukuyama in Bot. Mag Tokyo 50: 24 (1936).

Cleisostoma viridescens (Fukuyama) Garay in Bot. Mus. Leaflet. Harvard. Univ. 23(4): 175 (1972).

Distribution (分佈): The Philippines (菲律賓) and Taiwan (台灣).

79. *SCHOENORCHIS* Blume 蘆蘭屬

313. *Schoenorchis paniculata* Blume var. *vanoverberghii* (Ames) Ying, *comb. nov.* 密花蘆蘭

Schoenorchis vanoverberghii Ames, Orch. 5: 242 (1915).

Schoenorchis paniculata sensu Liu et Su in Quart. Journ. Taiwan Mus. 2: , pl. (197). non Blume

Distribution (分佈): The Philippines (菲律賓) and Taiwan (台灣).

80. *SPATHOGLOTTIS* Blume 苞舌蘭屬

314. *Spathoglottis plicata* Blume; Bijdr. 401, f. 76 (1825); Hayata in Journ. Col. Sci. Univ. Tokyo 30(1): 322 (1911); 苞舌蘭

Bletia angustata Gaudich. in Freyc. Voy. Uram. et Physic. Bot. 421 (1826)

Paxtonia rosea Lindley in Bot. Reg. 24, Misc. 61, t. 60 (1838).

Bletia angustifolia Gaudich. l.c. t. 32 (1826).

Spathoglottis liliacina Griff., Notul. 3: 323 (1851).

Phaius shumphii Blume, Mus. Bot. Lugd.-Bat. 2: 179 (1856).

Spathoglottis spicata Lindley in Journ. Linn. Soc. 3: 9 (1859).

Distribution (分佈): Malaya Peninsula (馬來半島), The Philippines (菲律賓), Sumatra (蘇門答臘), Java (爪哇), Amboina (阿波尼), Celebes (西里伯斯), Borneo (婆羅州), New Guinea (新幾內亞), Caroline island (加露林島) and Taiwan (台灣).

81. SPIRANTHES L.C. Rich. 綬草屬

315. **Spiranthes sinensis** (Person) Ames, Orch. **2**: 53 (1908). 綬草, 盤龍參

Neottia sinensis Person, Syn. Pl. **2**: 511 (1807); Poir in Lam. Encycl. Suppl. **4**: 85 (1816).

Ophrys spiralis sensu Georgi Bemerck, Reise Russ. Reich. **1**: 232 (1775), *non* Linn.

Aristotelea spiralis sensu Lour, Fl. Cochinch. **2**: 522 (1792), *non* *Spiranthes spiralis* Koch.

Epidendrum aristotelia Raeusch., Nomencl. Bot. ed. **3**, 265 (1797).

Neottia spiralis Willd., Sp. Pl. **4**: 74 (1805).

Neottia australis R. Br., Prodr. Nov. Holl. **3**19 (1810).

Neottia flexuosa Sm. in Rees Cycl. **24**, no. 9 (1819).

Neottia parviflora Sm. *l.c.* no. 10.

Neottia amoena Mlibieb., Fl. Taur. Cauc. **3**: 606 (1819).

Spiranthes pudica Lindley, Collect. Bot. *t.* **30** (1821).

Neottia australia R. Br. β *chinensis* Lindley in Bot. Reg. **7**: 602 (1822).

Spiranthes australia Lindley in Bot. Reg. **10**, sub. *t.* **823** (1824).

Spiranthes parviflora Lindley *l.c.*

Spiranthes flexuosa Lindley, *l.c.*

Neottia crispata Blume, Bijdr. **406** (1825).

Spiranthes amoena Spreng, Syst. Veg. 3:708
(1826).

Neottia pudica Sweet, Hort. Brit. ed. 2, 485 (1830).

Spiranthes wightiana Lindley in Wall. cat. no. 7378
(1832).

Calanthe australis Ait. ex Loud., Hort. Brit. Suppl. 2:615 (1839).

Spiranthes longispicata A. Rich. in Ann. Sci. Nat. II, 15:78 (1841).

Spiranthes densa A. Rich. in *l.c.*

Spiranthes indica Steud., Nomend. Bot. ed. 22:225 (1841).

Spiranthes crispata Zoll. & Mor., Syst. Verz. Java 89 (1845).

Spiranthes novaezelandiae Hook. f., Fl. N. Zeal. 1:243 (1853).

Spiranthes australis Lindley var. *pudica* Lindley in Hook., Kew. Journ. Bot. 7:38 (1855).

Spiranthes stylites Lindley in Journ. Linn. Soc. 1:178 (1857).

Gyrostachys australis Blume, Fl. Jav. Orch. 108 (1858).

Gyrostachys australis Blume var. *amoena* Blume, *l.c.*

Gyrostachys australis Blume var. *wightiana* Blume, *l.c.*

Gyrostachys australis Blume var. *flexuosa* Blume, *l.c.*

Gyrostachys australis Blume var. *parviflora* Blume, *l.c.*

Gyrostachys australis Blume var. *crispata* Blume, *l.c.*

Spiranthes australis Lindley var. *wightiana* Lindley
ex Hook.f., Fl. Brit. Ind. 6:102 (1890).

Gyrostachys stylites Ktze, Rev. Gen. Pl. 2:664
(1891).

Spiranthes australia Lindley var. *suishanensis* Hayata,
Icon. Pl. Form. 6:86 (1916).

Spiranthes suishanensis Schltr. in Orch. Sino-Jap.
Prodr. 161 (1919).

Spiranthes sinensis (Person.) Ames var. *amoena*
(M.-Bieb.) Hara in Journ. Jap. Bot. 44:59 (1969).

Distribution (分佈): China (中國), Java (爪哇),
India (印度), Afghanistan (阿富汗), Srilanka (席里藍卡),
Japan (日本) Sumatra (蘇門答臘), Borneo (婆羅州),
Australia (澳州), Tasmania (達斯門亞), New Zealand
(紐西蘭), and Taiwan (台灣).

82. STIGMATODACTYLUS Maxim. 絲柱蘭

316. *Stigmatodactylus sikokianus* Maxim. ex Makino,
Ill. Fl. Jap. 1, t. 43 (1891) & in Bot. Mag. Tokyo
19:69 (1905). 絲柱蘭

Distribution (分佈): Japan (日本) and Taiwan (台灣).

83. TAENIOPHYLLUM Blume 蜘蛛蘭屬

317. *Taeniophyllum complanatum* Fukuyama in Bot. Mag.
Tokyo 49:449 (1935). 扁根蜘蛛蘭

Distribution (分佈): Endemic (固有種).

318. *Taeniophyllum crassipes* Fukuyama in Bot. Mag.
Tokyo 52:247 (1938). 厚蜘蛛蘭

Distribution (分佈): Endemic (固有種).

319. *Taeniopyllum glandulosum* Blume, Bijdr. 356 (1825);
Garay & Sweet, Orch. S. Ryukyu 159 (1974). 蜘蛛蘭

Taeniophyllum aphyllum Makino, Phangerog. Pterid.

Jap. Ic. III, 1-3, t. 11 (1899).

Sarcochilus aphyllis Makino, Pterid. et Phan. Jap. 6: 48 (1892).

Cryptorchis aphyllus Makino, l.c. 7: 118 (1893).

Distribution (分佈): Japan (日本), Ryukyu (琉球) and Taiwan (台灣).

320. **Taeniophyllum formosanum** Hayata, Gen. Ind. Fl. Form. 81 (1917). 台灣蜘蛛蘭

Taeniophyllum sp. Hayata, Icon. Pl. Form. 2: 145 (1912).

Distribution (分佈): Endemic (固有種).

84. TAINIA Blume 小杜鵑蘭屬

321. **Tainia bilamellata** (Fukuyama) Ying, comb. nov. 二稜小杜鵑蘭

Oreorchis bilamellata Fukuyama in Bot. Mag. Tokyo 48: 436 (1934).

Distribution (分佈): Endemic (固有種).

322. **Tainia gokanzanensis** Masamune, Mat. Syst. Vi, fasc. 1, 38 (1937). 合歡山小杜鵑蘭

Distribution (分佈): Endemic (固有種).

323. **Tainia hualienia** Ying, Col. Illust. Indig. Orch. Taiwan 1: 321, col. photo. 146 (1977). 黃花小杜鵑蘭

Distribution (分佈): Endemic (固有種).

324. **Tainia laxiflora** Makino in Bot. Mag. Tokyo 23: 138 (1909). 疏花小杜鵑蘭

Tainia piyanensis Fukuyama in Bot. Mag. Tokyo 49: 293 (1935).

Distribution (分佈): Japan (日本), Ryukyu (琉球) and Taiwan (台灣).

325. **Tainia shimadai** Hayata, Icon. Pl. Form. 6: 75, t. 7, f. 11 (1917). 島田氏小杜鵑蘭

Distribution (分佈): Endemic (固有種).

326. *Tainia shimadai* Hayata var. *elliptica* (Fukuyama) Ying, **comb. nov.** 圓葉小杜鵑蘭

Tainia elliptica Fukuyama in Bot. Mag. Tokyo **49**: 293 (1935).

Distribution (分佈): Endemic (固有變種).

85. THELASIS Blume 短柱蘭屬

327. *Thelasis clausa* Fukuyama in Bot. Mag. Tokyo **49**: 440 (1935). 蘭嶼短柱蘭

Distribution (分佈): Endemic (固有種).

328. *Thelasis taiwaniana* (Fukuyama) Ying, **comb. nov.** 台灣短柱蘭

Phreatia taiwaniana Fukuyama in Bot. Mag. Tokyo **49**: 44 (1935).

Distribution (分佈): Endemic (固有種).

86. THRIXSPERMUM Lour. 白妙蘭屬

329. *Thrixspermum eximium* L.O. Wms. in Bot. Mus. Leaflet. Harvard. Univ. **6**: 87 (1938); Lin in Quart. Chin. For. **9**(1): 54, *pl.* 4 (1976). 異色瓣白妙蘭

Distribution (分佈): The Philippines (菲律賓) and Taiwan (台灣).

330. *Thrixspermum fantasticum* L.O. Williams in Bot. Mus. Leaflet. Harvard. Univ. **6**: 82, (1938); Garay & Sweet, Orch. S. Ryukyu **148** (1974). 白妙蘭

Thrixspermum neglectum Fukuyama in Trans. Nat. Hist. Soc. Form. **32**: 269 (1942); Honda in Bot. Mag. Tokyo **56**: 461 (1942).

Distribution (分佈): The Philippines (菲律賓) and Taiwan (台灣).

331. *Thrixspermum formosanum* (Hayata) Schltr. in Fedde Repert. Beih. **4**: 227 (1919), (Orch. Sino-Jap. Prodr.). 台灣白妙蘭

Sarcochilus formosanus Hayata in Journ. Col. Sci. Univ. Tokyo **30**(1):336 (1911), (Mat. Fl. Form.).
Distribution (分佈): Endemic (固有種).

332. *Thrixspermum kusukusense* (Hayata) Schltr. in Fedde Repert. Beih. **4**:274 (1919), (Orch. Sino-Jap. Prodr.). 恒春白蚵蘭

Sarcochilus kusukusensis Hayata, Icon. Pl. Form. **6**:84 (1917).

Distribution (分佈): Endemic (固有種).

333. *Thrixspermum laurisilvaticum* (Fukuyama) Garay in Bot. Mus. Leaflet. Harvard Univ. **23**(4):207 (1972). 樟林白蚵蘭

Sarcochilus laurisilvaticus Fukuyama in Bot. Mag. Tokyo **52**:246 (1938).

Thrixspermum laurisilvaticum (Fukuyama) Ying in Bull. Exp. For. Nat. Taiwan Univ. (114):157 (1974).

Distribution (分佈): Endemic (固有種).

334. *Thrixspermum pricei* Schltr. in Fedde Repert. Beih. **4**:274 (1919), (Orch. Sino-Jap. Prodr.). 皮氏白蚵蘭

Dendrocalia pricei Rolfe in Kew. Bull. **1914**:144 (1914) Distribution (分佈): Endemic (固有種).

335. *Thrixspermum saruwatarii* Schltr. in Fedde Repert. Beih. **4**:275 (1919). (Orch. Sino-Jap. Prodr.); Hayata, Icon. Pl. Form. **10**:34 (1921). 溪頭白蚵蘭

Sarcochilus saruwatarii Hayata, Icon. Pl. Form. **6**:84, f. 18 (1916).

Distribution (分佈): Endemic (固有種).

336. *Thrixspermum sasakii* Masamune in Trans. Nat. Hist. Soc. Form. **24**:212 (1934). 佐佐木氏白蚵蘭

Distribution (分佈): Endemic (固有種).

337. *Thrixspermum subulatum* (Blume) Reichb.f., Xen. Orch. **2**:122 (1867); Ames, Orch **7**:134 (1922); Seidhenf., Bot. Tidssk. **65**:145, f. 30 (1969). 垂枝

白蚬蘭

Dendrocola subulata Blume, Bijdr. 291 (1825).

Thrixspermum pendulicaule (Hayata) Schltr. in Fedde. Repert. Beih. 4: 274 (1919), (Orch. Sino-Jap. Prodr.) ; Hayata, Icon. Pl. Form. 10: 34 (1921).

Aporum pendulicaule Hayata, Icon. Pl. Form. 4: 44, f. 16 (1914).

Dendrobium pendulicaulum Hayata, l.c.

Aerides subulatum Lindley, Gen. & Sp. Orch. 241 (1833).

Sarcochilus subulatum (Blume) Reichb.f. in Walp. Ann. 6: 500 (1863).

Thrixspermum falcilobium Schltr. in Bull. Herb. Boiss. II, 6: 469 (1906).

Distribution (分佈): Thailand (泰國), Sumatra (蘇門答臘) Java (爪哇), Bali (巴里), Kangean Isl. (卡格島), Ambina (阿比娜) the Philippines (菲律賓) and Taiwan (台灣).

87. TIPULARIA Nutt. 筒距蘭屬

338. *Tipularia odorata* Fukuyama in Bot. Mag. Tokyo 52: 243 (1939). 香筒距蘭

Distribution (分佈): Endemic (固有種).

88. TRICHOGLOTTIS Blume 毛舌蘭屬

339. *Trichoglottis ionosma* (Lindley) J.J. Smith in Nat. Tijdschr. Ned. Ind. 72 (1912); Ames, Orch. 5: 255 (1915). 毛舌蘭

Cleisostoma ionosma Lindley, Bot. Reg. 33, t. 41 (1847).

Staurochilus ionosma (Lindley) Schltr. in Fedde. Repert. Beih. 4: 287 (1919), (Orch. Sino-Jap. Prodr.).

Trichoglottis ionosma (Lindley) Hayata, Gen. Ind.

Fl. Form. 82 (1917).

Distribution (分佈) : The Philippines (菲律賓) and Taiwan (台灣).

340. **Trichoglottis ionosma** (Lindley) J.J. Smith var. **luchuensis** (Rolfe) Ying, **comb. nov.** 琉球毛舌蘭

✓ *Stauroopsis luchuensis* Rolfe in Kew. Bull. 131 (1907).

Trichoglottis luchuensis (Rolfe) Garay & Sweet in Bot. Mus. Leaflet. Harvard Univ. **23**(4) : 209 (1972).

Distribution (分佈) : Lyukyu (琉球) and Taiwan (台灣).

- *** **Trichoglottis ionosma** (Lindley) J.J. Smith var. **luzonensis** (Ames) Ying, **comb. nov.** 呂宋毛唇蘭

Trichoglottis luzonensis Ames, Orch. **5** : 255 (1915).

Vandopsis kapperiana Krunz. in Fedde Repert. Beih. **17** : 390 (1921).

Distribution (分佈) : The Philippines (菲律賓).

341. **Trichoglottis rosea** (Lindley) Ames in Merr, Enum. Philip. Pl. **3** : 440 (1925). 穗花毛唇蘭

Cleisostoma rosea Lindley in Bot. Reg. 24, Misc. 80 (1838).

Trichoglottis flexuosa Rolfe ex Ames, Orch. **1** : 107 (1905) & **2** : 257 (1908) & **5** : 255 (1915).

Pomatocalpa rosea J.J. Smith in Nat. Tijdschr. Ned. Ind. **72** : 106 (1912).

Trichoglottis brevibracema Hayata in Journ. Col. Sci. Univ. Tokyo **30**(1) : 338 (1911), (Mat. Fl. Form.).

Distribution (分佈) : The Philippines (菲律賓) and Taiwan (台灣).

89. TROPIDIA Blume 竹莖蘭屬

342. **Tropidia angulata** Blume, Orch. Arch. Ind. 122 (1858); Henry, List Pl. Form. 92 (1896); Matsum. & Ha-

yata in Journ. Col. Sci. Univ. Tokyo **22**:414 (1906),
(Enum. Pl. Form.). 竹莖蘭

Tropidia govindovii Blume, l.c.

Tropidia semilibera Blume, l.c.

Govindovia nervosa Wight, l.c. 2090.

Decaisnea Angulosa Lindley in Wall. Cat. 7388 (1833).

Cnemidia semilibera Lindley, l.c.

Tropidia calcarata Ames, Philip. Journ. Sci. 7, Bot. 7 (1912) & Orch. **5**:47 (1915).

Tropidia somai Hayata, Icon. Pl. Form. **6**: 85, pl. 13 (1916).

Distribution (分佈): Sikkim (錫金), Assam (阿薩姆), Burma (緬甸), India (印度), Philippines (菲律賓), Ryukyu (琉球), S. Japan (日本南部) and Taiwan (台灣).

343. **Tropidia formosana** Rolfe in Ann. Bot. **9**:158 (1895); Henry, List Pl. Form. 92 (1896). 台灣竹莖蘭

Tropidia curculigoides sensu Liu et Su in Quart. Journ. Taiwan Mus. **28**:271 f. 4 (1975) non Lindley.

Distribution (分佈): Endemic (固有種).

90. VANDA Jones 萬代蘭屬

344. **Vanda lamellata** Lindley in Bot. Reg. t. 24, Misc. 66. (1838); Sheih in Quart. Journ. Taiwan Mus. **8**:274 (1955). 萬代蘭

Vanda cumingii Lindley ex Paxt. in Lond. Hort. Brit. Suppl. **3**:654 (1850).

Vanda amiensis Masamune et Sagawa in Trans. Nat. Soc. Form. **24**:212 (1934).

Distribution (分佈): The Philippines (菲律賓) and Taiwan (台灣).

91. VANILLA Sw. 香草蘭屬

345. *Vanilla griffithii* Reichb. f. var. **formosana** Ito,
Icon. Pl. Jap. 1:1, t. 1 (1911). 台灣香草蘭

Vanilla griffithii ~~sne su~~ Hayata in Journ. Col. Sci.
Univ. Tokyo 30(1): 342 (1911), (Mat. Fl. Form.),
non Lindley

Vanilla somai Hayata, Icon. Pl. Form. 6:88, t. 14
(1917).

Distribution (分佈): Endemic (固有種).

346. *Vanilla griffithii* Reichb. f. var. **ronoensis** (Hayata)
Ying, **comb. nov.** 毛香草蘭

Vanilla ronoensis Hayata, Icon. Pl. Form. 9: 114
(1920).

Distribution (分佈): Endemic (固有變種).

92. VEXILLABIUM Maekawa 瓣唇蘭屬

347. *Vexillabium humillum* (Fukuyama) Ying, **comb. nov.**
小瓣唇蘭

Cystopus humillis Fukuyama in Bot. Mag. Tokyo 48:
307 (1934).

Pristiglottis humillis (Fukuyama) Fukuyama in Bot.
Mag. Tokyo 49: 666 (1935).

Distribution (分佈): Endemic (固有種).

348. *Vexillabium integrum* (Fukuyama) Ying, **comb. nov.**
全緣瓣唇蘭

Pristiglottis integra Fukuyama in Bot. Mag. Tokyo
50: 20 (1936).

Distribution (分佈): Endemic (固有種).

93. VRYDAGZYNEA Blume 二尾蘭屬

349. *Vrydagzynea formosana* Hayata, Icon. Pl. Form. 6:
89 (1917). 台灣二尾蘭

Distribution (分佈): Endemic (固有種).

94. YOANIA Maxim. 姚氏蘭屬

350. **Yoania japonica** Maxim., Mem. Biol. **8**:647(1873).

姚氏蘭

Yoania japonica Maxim. var. *squamipes* Fukuyama
in Bot. Mag. Tokyo **52**:244 (1938).

Distribution (分佈): Japan (日本) and Taiwan (台灣).

95. ZEUXINE Lindley 線柱蘭屬

351. **Zeuxine fluvida** Fukuyama in Ann. Rep. Taipei Bot.

Gard. **3**:81 (1933). 黃花線柱蘭 = *Z. nervosa* (Lindl.) Trimen

Distribution (分佈): Endemic (固有種).

352. **Zeuxine formosana** Rolfe ex Hemsl. In Ann. Bot.

9:158 (1895); Henry, List Pl. Form. 92 (1896).

台灣線柱蘭

Adenostylis formosana Hayata, Gen. Ind. Fl. Form.

75 (1917).

Zeuxine nervosa sensu Seidenf. in Seartryk-Bbt.
Tidsskrift. **65**:114 (1969), non Benth.

Distribution (分佈): Endemic (固有種).

353. **Zeuxine hengchuanense** Ying, Col. Illust. Indig. Orch.

Taiwan **1**:342, col. photo. 157 (1977). 恒春線柱蘭

Distribution (分佈): Endemic (固有種). = *Z. nervosa* (Lindl.) Trimen

354. **Zeuxine kantoekiense** Tatewaki et Masamune in

Bot. Mag. Tokyo **46**:772 (1932) 港口線柱蘭

Distribution (分佈): Endemic (固有種).

355. **Zeuxine nijimai** Tatewaki et Masamune in Bot. Mag.

Tokyo **46**:772 (1932). 玉線柱蘭

Distribution (分佈): Endemic (固有種).

356. **Zeuxine reflexa** King et Pantl. in Ann. Bot. Gard.

Calc. **8**:291 (). 阿里山線柱蘭

Zeuxine arisanensis Hayata, Icon. Pl. Form. **4**:106,
f. 55 (1914).

Adenostylis arisanensis Hayata, Gen. Fl. Ind. Form.

75 (1917); Sasaki, List Pl. Form. 120 (1928).

Distribution (分佈): The Himalaya (喜馬拉雅山) and Taiwan (台灣).

357. **Zeuxine odorata** Fukuyama in Bot. Mag. Tokyo 50: 20 (1936). 香線柱蘭

Distribution (分佈): Endemic (固有種).

358. **Zeuxine somai** Tuyama in Bot. Mag. Tokyo 50: 27 (1936). 相馬氏線柱蘭 = *Z. nervosa* (Lindl.) T. Yam.

Distribution (分佈): Endemic (固有種).

359. **Zeuxine strateumatica** (Linn.) Schltr. in Fedde Repert. Bieh. 1: 77 (1911), (Deuts. Neu-Guin.). 線柱蘭

Orchis strateumatica Linn. Sp. Pl. 943 (1753), ed. 2 1336 (1763).

Adenostylis sulcata Blume

Zeuxine sulcata Lindley in Wall. cat. 7392 (1832).

Adenostylis strateumatica (Linn.) Ames, Orch. 2: 58 (1908).

Spiranthes strateumatica Lindley in Bot. Reg. 10, sub. t. 824 (1824).

Adenostylis emarginata Blume, Bijdr. 414 (1825).

Adenostylis integerrima Blume, l.c. 414, f. 17.

Zeuxine procumbens Blume, Fl. Jav. Orch. 56 t. 22, f. 3, t. 236 (1858).

Pterygodium sulcatum Roxb., Fl. Ind. ed. 2, 3: 452 (1832).

Tripleura pallida Lindley in Wall. Cat. 7391 (1832) & Gen. & Sp. Orch. 452 (1840).

Zeuxine emarginata Lindley, Gen. & Sp. Orch. 485 (1840).

Zeuxine integerrima Lindley, l.c. 486.

Zeuxine membranacea Lindley, l.c.

Neottia strateumatica R. Br. ex Steud., Nam. Bot.

ed. 2, 2:194 (1841).

Neottia strateumatica R. Br. ex Steud., Nom. Bot,
ed. 2, 2:194 (1841).

Zeuxine bracteata Wight, Icon. 5, 16, t. 1724 (1852).

Zeuxine brevifolia Wight, l.c. t. 1725.

Zeuxine robusta Wight, l.c. t. 1726.

Zeuxine tripleura Lindley in Jourh. Linn. Soc. 1:186 (1857).

Distribution (分佈): Afghanistan (阿富汗), India (印度), Srilanka (席里藍卡), Malay peninsula (馬來半島), S. China (中國南部), Assam (阿薩密), Japan (日本) and Taiwan (台灣).

360. ***Zeuxine strateumatica*** (Linn.) Schltr. var. ***rupicola*** (Fukuyama) Ying, **comb. nov.** 岩線柱蘭

Zeuxine rupicola Fukuyama in Bot. Mag. Tokyo 49: 292 (1935).

Distribution (分佈): Endemic (固有種).

4. GLOSSARY

(蘭科植物辭彙，僅供中文讀者參考)

(For Chinese readers only)

- acaulescent 無莖的
acicular 針形的
acotyledonous 無子葉的
aculeate 有刺的
acuminate 漸尖的
acute 銳尖的
adnate 相連，指全部或不同程度的連結在一起
aerial 氣生
alate 翼狀的
alternate 互生的
amplexicual 抱莖的
anastomosing 網狀的
ancipitous 兩側均銳
annual 一年生的
anomalous 不正常的
anterior 前緣或先端
anther 花藥
anthesis 指花開放，花粉成熟柱頭準備接受花粉的那段時間
antrorse
apetalous 無花瓣的
aphyllous 無葉的
apiculate 尖突的
appendage 附屬物
appendicular 有附屬物的
approximate 緊密地靠在一起但不連生
arachnoid 蜘蛛形的
arcuate 弓形的

- aristate 芒狀或刺狀的附屬物，尤指花的苞片
- articulate 有關節的
- ascending 斜上昇的
- asepalous 無萼片的
- asexual 無性的
- asymmetrical 不對稱的
- attenuate 細長的，漸尖的
- auricle 耳狀附屬物
- auriculate 有耳狀附屬物的
- axillary 腋生的
- basifixed 附着於基部的
- beak 鳥喙狀的，如鳥喙狀的尖銳
- bifid 2裂
- bigeneric 應用於雜交中，兩不同屬中的種類行交配
- bilobate 2裂的
- bilocular 2室
- bisexual 兩性
- blade 葉或花瓣擴展部份（葉片或花瓣片）
- bract 苞片
- bracteate 有苞片的
- bulbose 有鱗莖的
- bulbous 鱗莖狀的
- caespitose 叢生的
- calcarate 距
- calli 硬的肉突（複數）
- callosity 厚而硬的肉突
- callus 硬的肉突（單數）
- canaliculate 管道或縱溝紋
- capitate 頭狀的，集成頭狀
- capitulum 頭狀或集成頭狀
- capsule 蒴果
- carinate 隆起的，龍骨狀突起
- carnose 肉質的、鬆軟的

- cauda** 多少呈尾狀的
caudicle 小莖、小枝，在蘭花裏則為花粉上的小柄
caulescent 有莖的
cauline 莖生的
chartaceous 紙質的
ciliate 邊緣有毛的
clavate 棍棒狀的
claw 爪，指花瓣基部延伸細長線形部份
clawed 有爪的
cleistogamous 在花未開放時便已完成授粉作用
clinandrium 藥床的
clone 植物衍生於無性繁殖的
coalesce 生長於一起的，指花的相似部份
coherent 兩相似或靠近在一起部份或器官相連在一起
column 蕊柱，由雄蕊及雌蕊合生而成
compressed 扁平的
concave 凹入的，如盤的內面
conduplicate 兩部份縱疊在一起
congeneric 同一屬的
connivent 連生在一起的
convex 凸出的
convolute 包旋的，迴旋的
cordate 心形的
coriaceous 革質的
corm 球莖
costate 中肋，主脈
cotyledon 子葉
crenate 鈍鋸齒的
crenulate 細鈍鋸齒的
crest 雞冠狀突起，見於唇瓣中
crested 有雞冠狀突起的
cruciate 十字形的
cucullate 罩狀的

- cuneate 楔形的
- cupular 杯形的
- cymbiform 舟形的
- cytology 細胞學
- deciduous 早落的
- decumbent 沿着地面生長僅先端向上或斜上昇（指莖）
- decurrent 沿伸的
- decurved 下曲的
- deflexed 突然彎曲或下曲
- dehiscent 開裂的
- delto id 三角形的
- dentate 齒狀的
- denticulate 細齒狀的
- diandrous 有二枚雄蕊的，屬於袋唇蘭族（*Cypripedilinae*）的蘭花
俱爲此特徵
- dicotyledon 雙子葉的
- didymous 雙生的
- dimorphic 兩種形態的
- dioecious 雌雄異株
- disc 盤狀的
- discoid 似同盤形的
- disk 盤狀的
- distichous 排成2列的
- diurnal 白日的，白日開花的
- divaricate 擴展的
- divergent 擴展
- dorsal 後的，猶指萼片
- ebracteate 無苞片的
- ecalcarate 無距的
- echinate 有刺毛的，有剛毛的
- ecology 生態學
- ellipsoid 橢圓形
- elliptic 橢圓形的

emarginate 凹頭的，先端凹入的
endemic 固有的，原生的
ensiform 劍形的
ephemeral 短命的，指花開時間
epichil 唇瓣的上半部
epiphyte 着生植物
epiphytic 着生的，着生植物的
erose 邊緣呈鼠啃狀的
evanescent 短命的
evergreen 常綠的
exotic 外來的
exserted 連接於某一部份或器官
falcate 鐮刀狀的
fascicle 叢生的
filiform 線形的
fimbriate 邊緣呈絲狀的
fimbriolate 邊緣呈細絲狀的
flabellate 扇形的
flaccid 軟而輕的
flexuose 彎曲的，曲折的
foetid 有惡臭的
foliaceous 葉狀的
fornicate 拱形的，彎曲的
fringed 邊緣有毛狀的附屬物
fruit 果實
fugacious 早凋的
fusiform 紡錘形的
galeate 頭盔形的
geminate 成對的
genera 屬（複數）
geniculate 突然彎曲的
genus 屬（單數）
glabrate 變成光滑的或近似光滑的

- glabrous 光滑的
glaucous 有白粉狀的
gynostemium 蕊柱與 Column 同義
habitat 習性的
herbaceous 草質的
herbarium 標本館
hirsute 有粗毛的
hyaline 透明的
hypochil 唇瓣的基部或後半部
imbricate 覆瓦狀的
incised 銳淺裂的
incumbent 依附於其他物體上
indehiscent 不開裂的
indigenous 自生的，原生的，不是外來的
inflexed 彎曲或突然向內或向後彎曲的
inflorescence 花序
infundibuliform 漏斗狀的
internode 節間
introduced 外來的，引進的
introrse 面向內側
involute 向內卷曲的
keel 龍骨狀突起
keeled 有龍骨突起的
labellum 唇瓣
lacerate 撕裂邊緣呈撕裂狀
lacinate 撕裂的邊緣呈撕裂狀的
lamella 薄片物（複數）
lamellae 薄片物（單數）
lamellate 有薄片物的
lamina （葉花瓣、唇瓣）片
lanceolate 披針形
lateral 側生的，腋生的
lenticular 扁豆形的

ligulate 舌形的
limb 花瓣或唇瓣廣潤的部份以別於爪
linear 線形
lineate 有顯着的線狀物或條紋
linguiform 舌形的
lingulate 舌形的
lithophyte 岩生植物
lithophytic 岩生植物的
lobe 裂片
lobed 有裂片的
lobulate 有小裂片的
lobule 小裂片的
maculate 有斑塊的，斑點的
marginate 有潤而明顯的邊緣
membranaceous 膜質的
mentum 類狀的由側萼片基部與延伸的蕊柱足相連而成
mesochil 唇部的中部
midrib 中肋，主脈
monandrous 只有一枚雄蕊的
monocotyledon 單子葉植物
monoecious 雌雄同株
monopodial 單軸性，指莖的生長不生分枝
nephroid 腎形的
nerve 脈
nerved 有脈的
nocturnal 夜間開花的
node 節
nodose 有節的
nomenclature 命名法
obcordate 倒心形的
oblanceolate 倒披針形的
oblique 歪
oblong 長橢圓形

obtuse 鈍的
orbicular 圓的
orbiculate 圓形的
orchidist 蘭花家指愛好栽培蘭花者
orchidologist 蘭科植物專家指研究蘭花者
orchidology 蘭學的
oval 橢圓形
ovate 卵形（指形狀）
ovoid 卵形（指實體）
palmate 掌狀的
panicle 圓錐花序
paniculate 圓錐花序的
papillae 乳狀突起
papillose 有乳狀突起的
parasite 寄生
parasitic 寄生的
partite 深裂的
pectinate 形狀似梳子的
pedicel 花柄
pedicellate ovary 花柄子房
peduncle 花序柄的
pedunculate 有花序柄的
peltate 盾狀的
pendulous 下垂的
perfect 完全的花中有雄蕊及雌蕊者
perfoliate 葉圍繞於莖的
perianth 花被
persistent 殘存的
petal 花瓣
petaloid 如花瓣狀的
petiolate 有葉柄的
petiole 葉柄
pilose 有柔毛的

pistil 雌蕊
pistillate 有雌蕊的
plaited 縱褶的如扇的縱褶的
plicate 縱褶如扇的
pollen 花粉
pollination 授粉作用
pollinia 花粉塊(複數)
pollinium 花粉塊(單數)
process 附屬物
procumbent 匍匐狀的
prostrate 匍匐的
pseudobulb 假球莖
puberulent 有細柔毛的
puberulous 多少有毛的
pubescent 有毛的
pulvinate 如墊狀的
punctate 呈點狀的
raceme 總狀花序
racemose 呈總狀花序的
rachis 主軸, 指花序的主軸
radiate 放射狀的
radical 根生的
reclinate 垂直反折或反捲
recurved 反後捲曲, 向後反捲
reflexed 突然向下或向後反捲
remote 疏生的
reniform 腎形的
resupinate 轉位
reticulate 網狀的
retorse 向後或向下
retuse 先端圓或鈍而略淺凹入
revolute 向外反捲
rhizome 根莖

- rhombic 菱形
 rib 脉
 ringent 裂隙
 rootstock 地下莖，根莖
 rosette 指葉基部叢生在一起
 rotate 輪狀的
 rugose 扭曲狀的，粗糙
 rugulose 細扭曲狀的
 saccate 囊狀的
 sagittate 箭頭狀的
 saprophyte 腐生植物
 saprophytic 腐生植物的
 scape 花莖
 scapose 有花莖的
 scarious 乾薄、膜質且不呈綠色
 secund 生於一側的，單方面的
 seed 種子
 segment 裂片
 self-fertilization 自花授粉
 self-pollination 自花授粉。
 semi-eiphyte 半着生植物，指植物着生於多腐植質的樹幹上，本身非着生性。
 sepal 萼片
 septum 隔膜
 serrate 有鋸齒的
 sheath 鞘
 simple 無分枝的
 sinuate 波狀緣
 sinus 裂縫處，指二裂片間的凹入處
 species 種
 specific 種的
 spicate 穗狀花序的
 spike 穗狀花序

- spreading 擴展
spur 距
stamen 雄蕊
staminate 雄性的
staminode 退化雄蕊
staminodium 退化雄蕊
standard 指袋唇蘭亞族 (*Cypripedilinae*) 中的後萼片
stigma 柱頭
stipe 柄狀的(花粉)柄
stipitate 有柄的
striate 細而縱的帶、條紋、脊或溝
strict 稜線的動稜狀突起的
striolate 不明顯的條紋
subtended 包被的
succulent 肉質的, 多汁的
sulcate 有縱溝紋的
symmetrical 對稱的
sympodial 複軸的
synsepal 袋唇蘭亞族中側萼片的互相連生在一起
terete 圓柱形
terminal 頂生
terrestrial 地生
tomentose 有綿毛的
tooth 齒狀的
tortuous 扭曲的
tribe 族
trilobate 三裂的
truncate 截斷狀
tuber 塊莖
umbel 繖形花序
umbellate 呈繖形花序的
undulate 波狀的
unguiculate 有爪的

- unguicula 爪
unilateral 一方的單方的
unisexual 單性的
variety 變種
ventral 前方的
ventricose 一側膨大的
verticil 輪
villous 柔毛的
virgate 繩狀的
viscid 黏質的
vittate 縱條紋的
whorl 輪生的
wing 翼，指器官邊緣薄而膜質的物質
winged 有翅的，有翼的
zygomorphic 左右對稱的

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6. LIST OF NEW TAXA AND NEW NAMES

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筆者所著學術性論文

1. 台灣高山植物彩色圖鑑第壹卷。
詳細介紹，請見次頁
2. 台灣杜鵑花目的植物：原載於中華林學季刊，9卷4期105-138頁及10卷1期111-132頁，英文寫著，售價45元。
3. 大霸尖山高山植群的研究，原載於台大實驗林研究報告(118)號217-238頁，說明大霸尖山高山地區植物群落分佈，售價33元(中文)
4. 雪山地區高山植群的研究，原載於中華林學季刊9卷3期119-136頁，說明雪山地區高山植物群落的分佈，售價33元(中文)
5. 太平山區四十年來植被的變遷及演進，原載於省立博物館年刊第15卷17-24頁及16卷1-20頁，中文，說明太平山區四十年來植物群落的變遷及演進並敘述太平山植物的垂直分佈，售價43元。
6. 玉山及秀姑巒山高山植物的研究，原載於森林第8期20-32頁，說明玉山及秀姑巒山高山植被的異同及植物群落，已售完。
7. 南湖大山植被概觀，原載於省博物館科學年刊第十六卷73-84頁，說明南湖大山植物群落，中文，售18元。
8. 北大武山植相的研究，原載於台大實驗林研究報告114號137-164頁，說明北大武山植物的垂直分佈及植物群落，售23元。
9. 台灣高山植物名錄，原載於中華林學季刊8卷3期89-122頁8卷4期123-151頁。列舉生長於2500 m以上高山植物計537種，中英文，售50元。
10. 台灣高山植物形態的研究，原載於中華林學季刊9卷1期39-53頁，已售完。
11. 一種產自台灣的新種吊鐘花，原載於中華林學季刊9卷2期145-146，已售完。
12. Cruciferae 原載 *Flora of Taiwan* 2卷673-700頁論述台灣十字花科的植物，已售完。
13. Caryophyllaceae 原載於 *Flora of Taiwan* 2卷320-355，論述台灣十字花科的植物，已售完。
14. Polygonacéae 原載於 *Flora of Taiwan* 2卷259-292頁，論述台灣蓼科植物，已售完。

- 15 The Symplocaceae of Taiwan 原載於台大實驗林研究報告 116 號 545-571 頁，論述台灣灰木科植物，英文，售 40 元。
 - 16 The Chenopodiaceae and Droseraesae of Taiwan 原載於台大實驗林研究報告 114 號 127-136 頁論述台灣的藜科及茅膏菜科植物，英文，售 10 元。
 - 17 幾種產自東台灣的新種植物，原載於中華林學季刊 6 卷 1 期 167-173 頁，發表 3 種發於台灣東部的植物，英文，售 10 元。
 - 18 保護台灣的野生植物，原載於省博物館科學年刊 14 卷 41-46 頁，已售完
 - 19 台灣的行道樹林，原載於台大實驗林林叢叢刊 51 號 1-25 頁，已售完。
 - 20 台灣的百合科植物，原載於省博物館科學年刊第 13 卷 61-96 頁，已售完。
 - 21 台灣棕櫚科植物誌要，原載於中華林學季刊 2 卷 3 期 95-125 頁，已售完
- 凡欲購上列存書，請利用 郵政劃撥 105422 號應紹舜帳戶匯寄書款，收到後，隨即寄奉。

著者另一著者

台灣植物彩色圖鑑之一

台灣高山植物彩色圖鑑第壹卷(內容如下)

- (1) 植物術語圖解：將常用植物術語用簡圖加以說明。
- (2) 圖鑑：彩色圖片 104 幅介紹台灣的高山植物 102 種、每種植物均有彩色圖片 1-2 幅、並有中文的詳細介紹及簡明的英文介紹，分佈高度、生長環境及台灣鄰近地區是否有這一種植物均加以說明。一卷在手、野外攀登高山辨識植物易如反掌。
- (3) 台灣的高山、附彩色照片 7 幅；泛論本省五大山脈的分佈山脈內的名山、高度及一般地質及地理的情況，均加以詳細說明。
- (4) 台灣的高山勝景；說明高山景緻的特質、如山岳島，冰河遺跡，高山湖泊、雲瀑及雲海、河川及河階等。均有詳細說明。
- (5) 台灣高山植物生態淺說：淺明地說明高山植物的生態、包括高山上特異的生長環境，亞寒帶林、高山岩原及岩屑地、高山草原等生態上的特質。
- (6) 台灣高山植物形態的研究。將高山植物的形態依根莖，葉、花、果實及種子等器官、分別說明生長於高山者與山地者的不同、附黑白顯微照相圖片及其他圖片 16 幅加以說明之。
- (7) 高山植物的栽培，研討高山植物移植於平地的方法、分別依高山植物的分類、栽植方法，土壤、水份、日照、施肥，病蟲害及養護等項加以說明

。使能將高山植物移植於平地上益增庭園樂趣。

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台灣植物彩色圖鑑之二

台灣蘭科植物彩色圖鑑第壹卷

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