

Takasi TUYAMA*: A new saprophytic orchid,
Lecanorchis kiusiana

津山 尚*: ムヨウラン属の一新種

Last summer, Mr. Daisuke Shimizu of the Hattori Botanical Laboratory sent me orchid specimens both dried and formalined. On 14th of April, 1954 when he took a botanizing trip to the mountains of Kunimi-dake located on the border line of Prov. Satsuma and Prov. Higo, he discovered dried capsules of an saprophytic orchid exerting the humus on andestic substratum along a stream under the forest of *Castanopsis Sieboldii* and *Machilus Thunbergii*, its main undergrowth being *Ardisia villosa*. On the same stock he also found a very young flowering stem of the orchid only 2cm high above the humus and took the whole plant to his Laboratory to cultivate in a pot. It began to flower on about 16th of May, and he formalined it on 18th.

This saprophytic orchid belongs beyond doubt to the genus *Lecanorchis*. Two species of the genus have been known in Japan; i. e. *L. japonica* Bl. with white flowers and *L. nigricans* (*L. purpurea* Masam. nom. seminud.) with pale violet flowers. Mr. Shimizu's orchid, however, has creamy colored flower much smaller than the two above mentioned. When Schlechter's noted paper, *Orchideologiae Sino-japonicae Prodrum* was published in 1919, there was only one Blume's species known to us in the region concerned, but now to the genus the following species were added.—*L. Ohwii* Masam. (Formosa), *L. cerina* Fukuyama (Formosa), *L. brachycarpa* Ohwi (Okinawa), *L. flavicans* Fukuyama (Iriomote), *L. oligotricha* Fukuyama (Iriomote). The original description of *L. Ohwii* by Dr. Masamune (in *Trans. Nat. Hist. Soc. Formos.* **23**, no. 126-7: 208 (1933)) is rather too short to remind of the actual shape of the lip, but he compared this with *L. japonica*, and actually he described "supra medium trilobo intermedio multoties majore." The floral parts are much larger than Mr. Shimizu's and the color is "flavo-violaceis," and the hairiness of the lip is somewhat different ("medio pilis albis vel purpureis vel lamellis numerosis flexuosis barbato"). According to the original description of *L. flavicans* Fukuyama (in *Trans. Nat. Hist. Soc. Formos.* **32**, no. 225: 241-2 (1942)), again published with the same description in *Acta Phytotax. Geobot.* **14**, no. 4:

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123-4 (1952)], the calycula is much shorter (“ $\frac{1}{2}$ - $\frac{1}{3}$ mm altis”), the floral parts are larger and the intermediate lobe of the lip is much larger compared to lateral ones. The lip of *L. cerina* Fukuyama is absolutely trilobated, and that of *L. oligotricha* Fukuyama is spatulate. The shapes of lips of the remaining three species are shown in Figs. 3 and 4 which are quite different from Mr. Shimizu's.

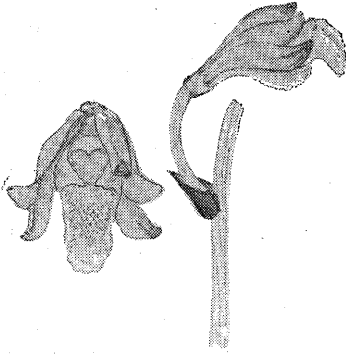


Fig. 1. *Lecanorchis kiusiana* Tuyama, sp. nov. A sketch, drawn from the living materials by Mr. Daisuke Shimizu. (\times ca. 2)

The genus now comprises about 18 species in the Malaysia, Formosa, Liukiu and Japan proper and this new species as well as *L. brachycarpa* has the smallest flower next to *L. bicarinata* Schlechter of New Guinea. This orchid is well distinguished from all of these, and I will describe it here as new. Fig. 2. was all drawn from formalined specimens.

The complete specimens collected by Mr. Shimizu which were so well prepared and his minute note accompanied by colored sketch from the living specimen facilitated my work very much. My hearty thanks are due to him. Dr. Jisaburō Ohwi of the National Science Museum, Tokyo kindly helped me with his experiences on the genus to whom I am also very grateful.

***Lecanorchis kiusiana* Tuyama sp. nov.**

Saprophytica aphylla perennis erecta ca. 3-7 cm alta; rhizoma breve lignescens multo-ramosum horizontaliter situm; radices multae elongatae filiformes patulae in sicco angulato-sulcatae flexuosae ca. 1.0-1.5 mm crassae emittens. Caulis florifer strictus ex apicem rhizomatis assurgens rigidulus glaber teres in vivo albido-cereus paulo coerulescens sed in sicco nigrescens superiore sensim tenuior basi ca. 1.8 mm sursum 0.8-1.0 mm crassus remote pauci-squamulatus, suprema infra racemum inter squamas 1.3-2.8 cm distans inferiore subconferte squamulatus, squamis vaginatis adpressis apice acutis vel acuminatusculis inferioribus longissimis ca. ad 13 mm longis fuscis vel ad apices tantum fuscis ceteris albis in sicco nigrescentibus, sed squamis infimis 4-5 conferte dispositis ampule vaginatis caulem amplectentibus atrofuscis in vivo lucidissimis ca. 4.0-5.5 mm longis oribus valde obliquis hic ca. 4 mm latis. Racemus brevis sed post anthesin valde elongatus, parte florifera ca. 0.8-1.8 cm longa stricta

2-4 remotiflora, internodiis sub anthesi basalibus 12 mm longis superioribus juvenioribus brevioribus et sursum alabastris subconfertis instructis; bracteis florum ovarius multo brevioribus caulem semiamplectentibus persistentibus integris glabris in explanato late ovato-deltaoideis vel deltaoideis basilaribus majoribus 4.5 mm longis superioribus minoribus ca. ad 2.5 mm longis apice margineque in tempore florendi fusciscentibus.

Flores inodorati subapertiens ascendens longe subcampanulati pallide luteoli;

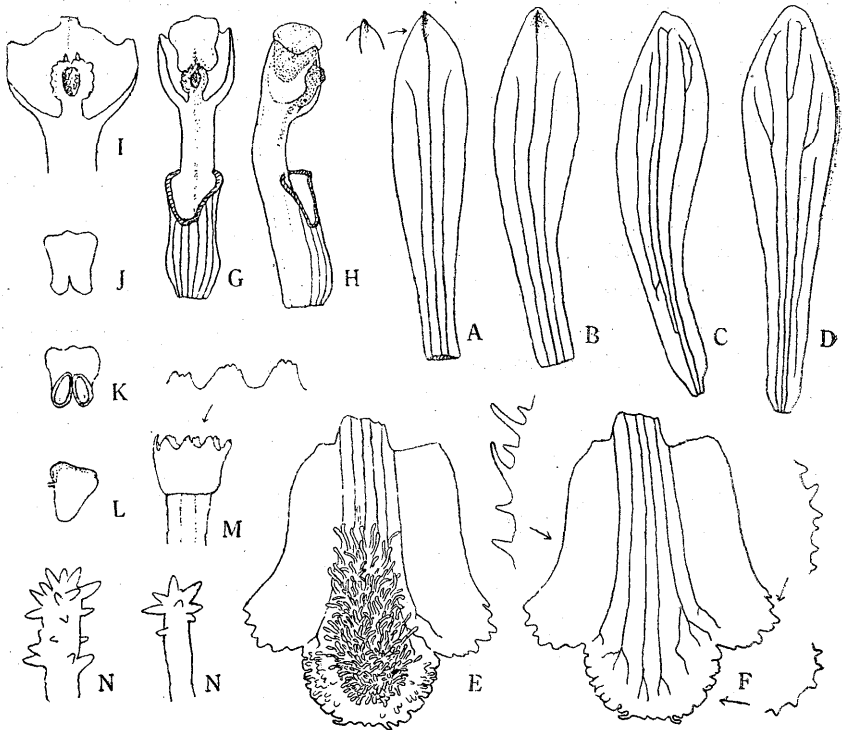


Fig. 2. *Lecanorchis kiusiana* Tuyama, sp. nov. A. Middle sepal, with highly magnified apex. B. Lateral sepal. C, D. Petals. E. Free portion of the lip, explanated. F. The same without hairs, with three marginal portions highly magnified. G. Column seen ventrally, with basal part of the lip connated to it. H. The same seen laterally, distal part of the anther and the stigmatic projection are seen through the translucent (in formalin) lateral wing of the column. I. Apex of column slightly explanated, with the filament at the apex. (×ca. 8). J. Stamen seen dorsally. K. Stamen seen ventrally. L. Stamen seen laterally with the filament. M. Calyculus with the upper portion of the ovary, with the highly magnified marginal part. N. Hairs on the lip-plate. (×ca. 50).—All ×ca. 5, except when otherwise indicated. Figures were drawn from formalined specimens.

ovariis albis vel dilute coerulascentibus gracilibus teretibus non vel leviter contortis in tempore florendi ca. 5.5–9.0 mm longis 0.8 mm crassis glabris 6-sulcatis apice calyculis campanulatis albis vel dilute coerulescentibus 1.3–1.5 mm longis supra basin levissime constrictis oribus 1.7–2.2 mm latis margine subregulariter dentatis praeditis, dentis integris subacutis sed saepius crenulato-denticulatis.

Sepalum intermedium dilute luteum oblanceolatum 3-nervatum 9.5–10.0 mm longum supra medium 1.7–1.8 mm latum in explanato 1.8–2.0 mm latum concavulum vel planiuscule naviculatum sed in apice dorso paulum incrassatum fuscescens carinulatum acutiusculum saepe apiculatum toto interdum leviter obliquum. Sepala lateralia, intermedia similis sed plus minus majora et saepissime valde obliqua 10.5–11.5 mm longa 2 mm lata in explanato 2.4 mm lata apice obtuso-acuta 3-nervata.

Petala lateralia densius lutea plana quam sepalum majora tenuioraque oblanceolata basin versus angustata leviter obliqua 11.0–11.8 mm longa 2.4–2.6 mm lata 3- vel sub-4-nervata nervis apice furcatis et leviter anastomosantia, apice non incrassata obtusa vel oblique obtuso-truncata basi inaequaliter subito angustata.

Labellum album basi cum marginis anterioribus gynostemii adnatum et tubum formans sursum liber et valde dilatatum parte libera involuta apice abrupte recurvata sepala excerta 8.5 mm longa 7.4 mm lata nervis 5 paralleliter longitudinalibus

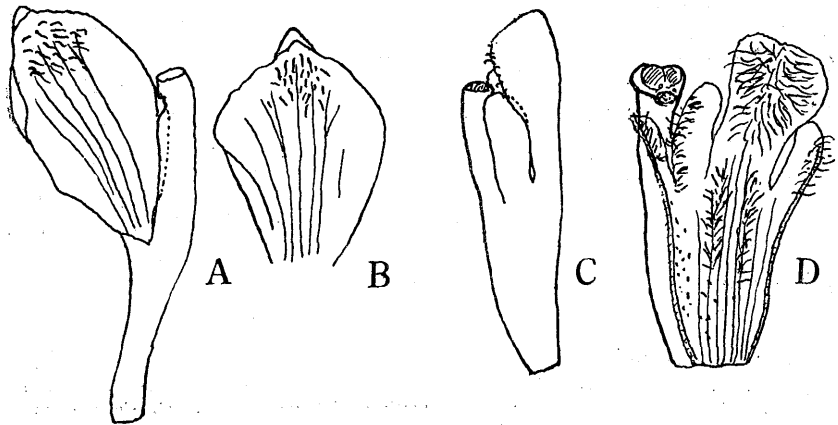


Fig. 3. *Lecanorchis nigricans* Honda and *L. brachycarpa* Ohwi. A. *L. nigricans*, lip with the column laterally seen, a little explanated. Drawn from the dried specimen of the type locality (Prov. Kii, leg. Kashiyama, no. 2). B. The same, free part of the lip explanated. C. *L. brachycarpa*, lip with the column, side-view. Drawn from the dried type-specimen (Ins. Okinawa, leg. Taira). D. The same dissected and a little explanated. All redrawn from Dr. J. Ohwi's sketch. A, B \times ca. 4.5, C, D \times ca. 6.

apice furcatis praedita, in explanato infra medium paululo angustata margine plana sed longius subremote celluloso-papulosa supra medium 3-lobata; lobis lateralibus involutim erectis obtusis enervis gynostemium manifeste superantibus transversè ca. 2.0 mm latis margine anteriore repando-dentatis et remote minuteque celluloso-papulosis; lobo intermedio ca. 3.4 mm lato 3.0-2.8 mm longo semiorbiculato valde obtuso vel subtruncato margine plicatim lobulato intra marginem supra pilis brevioribus praedito, lobulis margine remote minuteque celluloso-papulosis; lamina lobae intermediae medio longitudine in area elliptica pilis carnosis erectis congestis apice clavatim obtusis sparse celluloso-papulosis dilute violaceis sed interioribus intensius violaceis ca. 0.08 mm crassis fere ad ca. 1.0 mm longis praedita sed pilis basilaribus sparsioribus et retrorsin disposita.

Gynostemium album semiteres ca. 7.5 mm longum apice medio filamentum antherae et a latere staminodiis binis subdeltoideis leviter emarginatis praeditum, toto anteriore leviter arcuatum labello valde brevius e basi usque ad medium cum labello adnatum infra apicem subito cupuliforme membranaceo-dilatatum et valde excavatum clinandrio profundo formans, sed anteriore valde apertum hic parte ventrali gynostemii incurvatim productum; haec pars apice compresso-capitulata, capitula anteriore medio longitudinaliter elliptico-elevata

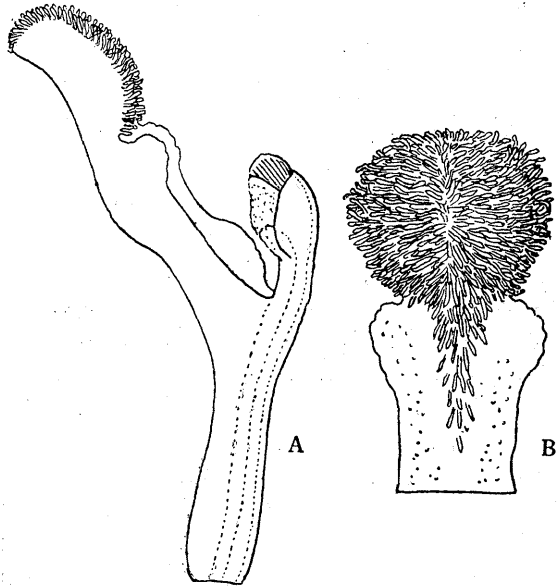


Fig. 4. *Lecanorchis japonica* Bl. A. Lip with column laterally seen, apical part of the column collapsed. Drawn from the dried specimen (Prov. Higo, leg. Mayebara). B. The same, free part of the lip, explanated. All \times ca. 5.

hic partem stigmatiferam formans, margine levissime verruculosa dorso bicarinulata et apice 2-apiculata hic rostellum formans et cum anthera contigens.

Anthera sulphureo-lutea valde *carnosa subquadrangularis* ca. 1.4-1.5 mm longa crassa superiore angustiora tenuioraque basi subtruncata apice bilobata ventrale polliniis 2 praedita dorso et ventrali viso ambitu quadrangulata sed a latere viso anguste deltoidea apice obtusa supra basin filamenta brevissimo plano tenui adnata.

Caulis fructifer fere ad 13-24 cm altus in sicco 1.0-1.4 mm crassus nigrescens lucidusculus, internodiis in parte fructifera 3.8 cm altis superioribus brevioribus i. g. 1.3, 0.6 cm longis. Capsula nigra luciduscula oblique ascendens remota sed superiore proximata inter se 0.7-3.8 cm distans in tempore dehiscenti 1.9-2.0 cm longa in explanato 5-7 mm lata apice cum collumna persistenti ca. 2 mm longa et basi pedicello brevi crasso ca. 2.0-3.5 mm longo.

Nom. Jap. *Usuki-muyoran* (nov.)

Spec. Typ. Japan; Kiusiu: Satsuma, Isagun, Yamano, Zissōdani, alt. 400 m in humis secundum rivulo (leg. Daisuke Shimizu, Apr. 14, 1954, type in Herb. Mus. Sci. Nation., Tokyo).

この腐生蘭の記相文は服部植物研究所の清水大典氏が採集された花のある標本のフォルマリン漬及び果実のある乾燥標本及び着色図、私信中のデータによつてまとめたものである。

採集地は肥後と薩摩の国境の国見山塊の麓、鹿児島県、伊佐郡、山野、十曾谷(ジッソウダニ) 海拔 400 m の地で、附近は安山岩地帯であり、溪流畔の南に面したシイ、タブ、ツルコウジ森林の林床である。採集日は 1954 年 4 月 14 日で、前年の乾燥した蒴果の標本と地上に 2 cm 許り芽を出した若い花茎の株を手に入れた。これを研究所に持帰つて鉢で培養した所、5 月 16 日頃開花を始め、5 月 18 日にこれを液漬した。開花茎の標本は 2 個あつて、各の高さは約 3 及び 7 cm、茎の色は蠟白色に青色を帯び(子房及び副萼も同じ)、基部の鞘葉には生時には強い光沢がある。花は全開せず、淡クリーム黄色で、花弁は萼より色が濃く、唇弁は白色であるが、その中央にやや密に生じる肉質毛は淡紫色で、毛叢の中心にあるもの程濃色である。ムヨウラン *Lecanorchis japonica* Bl. には香氣があるが、この花は無香である。日本産の同属植物、ムヨウラン及びクロムヨウラン(ムラサキムヨウラン) *L. nigricans* Honda の花色は白色及び淡紫色で、共に本種の花より非常に大形である。この属は唇弁の他に花蓋片には形の上の特長が少いので、種の決定に當つて唇弁の形態は大切になる。近隣地域に産する同属植物の何れとも異なるので、新種と認めてウスキムヨウラン(淡黄無葉蘭) *Lecanorchis kiusiana* の名を与えた。このような腐生植物は度々発見される可能性が少いし、またたとえ採集されても、今回の標本のように注意深くデータをととのえることは稀であろうから、繁雑さをいとわずに詳しく記相文を書いて後の参考にした。芯柱の構造もよく判つたが、他種の記相文にはこの記述が殆んど全く欠けている。属の性質の追加又は修正に役立つこと

を期待する。日本産の他の2種は花序及び果序の形によつても区別がつくが、本種のとれらに関するデータを詳記したのはそういう将来に対する含みをもつたものである。従つてこの部分の絶対値は実はもつと多くの標本から集めた後でないと直接には種の特長には取れないものである。

本属はマレーア南部及び琉球、台湾、日本内地に約18種を産する。フィリッピンからの記録は未だないが、将来は当然発見されるであろう。分布圏の東はスマトラ (Ins. Mantewari) 及びタイ国 (マレー半島の部分)、西は濠領委任統治西ニューギニアの Waria 及び Torricelli 地方に及んでいる。本種の花は属中でも最も小型のもの次に位する。標本にされた植物は注意深く移植されたとはいえ、その影響で花の大きさが小さくなつておそれがないでもない。それは将来確めたい点である。本種を含めた日本産の3種の唇弁は属中で著しく分化した3つの方向を示していて、互に類縁の遠いものである。南方にはこれらの傾向のもの他に単に篋形を示すものもある。また各種の唇弁の外形に関らず、基部から中央にかけて縦に2本の隆起物のあるものもある。ウスキムヨウランの花期は5月、クロムヨウランは6月、ムヨウランは7-8月で互にずれている。第3, 4図にはこれらの他にオキナワムヨウラン *L. brachycarpa* Ohwi の図も参考のために加えた。

なおムヨウランの立派な生態図が伊藤圭介氏の日本産物誌美濃部中三十九丁に出てゐる。本文は次のようである。「ムヨウラン (異名及び文獻略) 武蔵郡上麻生村山中櫛木林下ノ石間ニ生ズ、又尾州東谷山ニモ間アリ、一根二三莖ヲ抽テ、高サ七八寸、或ハ尺許ニ及ブ、莖細ク葉無クシテ、因リテ無葉蘭ノ名アリ、根上ニ微ク鱗甲状アリ、芒種ノ頃、莖頭六七花ヲ着ク、淡褐或ハ白地ノ蘭花様ニシテ、幽致最モ愛スベシ、微香アリ、根ハ深く地ニ入り形「アツモリ、サウ」ノ根ニ似テ、大ニシテ色稍黒シ、」ここに花の色に「淡褐」とあるのは注意を要する。終りに本研究に対して材料、写生図を提供された服部植物研究所の清水大典氏及び助言と写生図を与えられた国立科学博物館の大井次三郎博士に感謝する。

Errata 正 誤 Vol. 30 No. 4

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	20	Veginae	Vaginae	125	27-28	同, 白岩山	西白杵郡, 鞍岡村, 白岩山
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