

# **THE STUDY ON WILD ORCHIDS AT YEE- AYE RESERVED FOREST OF KALAW TOWNSHIP IN SOUTHERN SHAN STATE**

Moe Sandar Shein<sup>1</sup>

## **Abstract**

The present work is concerned with the study on wild orchids of natural habitat in Yee Aye Reserved Forest in Kalaw Township. The Yee Aye Reserved Forest is situated in Kalaw Township of Taunggyi District and also the southern west part and 5.5 miles distance from Kalaw city. In this recent study 6 genera and 17 species were recorded from recent study Yee Aye Reserved Forest type is Hill ever green forest type. The Yee Aye Lake located in the centre of Yee Aye Reserved Forest. Most of the wild orchids were collected around the area of this lake. Epiphytic genera namely *Bulbophyllum*, *Coelogene*, *Dendrobium*, *Eria*, *Pholidota* and *Lusia* were collected. Photographs have been taken to record habits of orchids in nature. The collected specimens were classified, identified and described with colour photographs of their natural habitats and inflorescence. The morphological characters have been emphasized and artificial keys from the tribe to the species have been constructed and GPS location system.

**Keywords:** Wild Orchids, Yee Aye Reserved Forest, Epiphyte, Lithophyte, habitat, artificial keys.

## **Introduction**

The family Orchidaceae are largest family among Angiospermae, Monocotyledonae. Some botanist estimated about 35000 orchids among flowering plants. Orchidaceae grow well throughout the world. They can thrive in tropical, subtropical and temperate regions except in ice capped regions and deserts. The most wild orchids have distributed various regions of Myanmar that is tropical, subtropical and temperate regions, especially they have grown in temperate regions. Now The study area is Kalaw Township in Taunggyi district of Southern Shan State. Kalaw township is located on the east by Shwe Nyaung Township, on the west by Thazi Township, on the south by Pin Laung Township, on the north by Pindaya Township, and it lies

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<sup>1</sup>. Dr., Associate Professor, Botany Department, Bago University

between North latitude 20°25'-21°0' and East latitude 96°20-97°10'. There are various types of forest in this township that is hill evergreen forest, lower deciduous forest, Indine forest and mixed deciduous forest. Six reserved forest are controlled by Forest Department. Among them the invest gold area is Yee Aye reserved forest in the recent study. Which forest is Hill evergreen forest type (The hill evergreen forest is found in the north at altitudes of over 1,000 meters above sea level. In other regions they are found area of high altitudes. These type of forest is less dense than the tropical evergreen forest because it has less large trees. This type of forest too is quite cool because it is found at high altitudes. The hill evergreen forest is very important to the preservation of water sources. Trees are mainly shrubs mixed with some pines. Smaller plants in the forest include ground orchids and other tropical plants such as wild roses, violets and lilaes. In addition there are small plants that grown on the larger trees such as moss and orchids. (Hill evergreen forest <<pirun-Ku.ac.th>) where the wild Orchids have grown on the various plants.

Yee Aye reserved forest situated in Northern East of Pin Laung Township and North by Shwe Nyaung Township and Southern West part between Kalaw and Thazi Township 5.5 miles far from Kalaw city. The area of these forest is about 1952 acres and altitude of 1465 meters and lies between North latitude 20°36' and East longitude 96°31'. Genus *Bulbophyllum*, *Coelogyne*, *Dendrobium*, *Eria*, *Pholidota*, *Lucia* have been found in this area. In this recent study, (2) Subfamilies belong to (3) Tribes (5) Subtribes (6) genera and (11) species have been collected from this study area including epiphyte and lithophytes. The classification and taxonomic description of collected specimens are provided with coloured photographic and artificial keys of genera and species are also constructed.

### Methodology

The specimens were collected from Kalaw Township of Taunggyi District. All these specimens were colourful photographed to record their actual habitat and the nature of inflorescence. The collected specimens were classified according to Dresseler’s classification (R.L. Dresseler’s (1927) and identified by Seidenfaden (1992) Grant: B (1966): Nantiya Vaddhanaputi (2006) Hooker, J.D. (1954). Seidenfaden and Smitch (1965), Dassanayake, N.D. (1981), Flora of China Vol. I & II (2013) and Flora of Thailand Vol. XI & XII.Part I&II (2014) methods. Herbarium specimen well prepared and submitted to Botany Department Yangon University.

### Results

In this paper (2) subfamily, (4) tribes, (5) subtribes (6) genera and (11) species have been collected from study area. According to Seidenfaden and Wood (1992)

#### Key to the Subfamily

- 1. Pollina soft, waxy, without stalk or with caudiculae only rarely with stipes. Anther erect and earlier ontogeny ----- (I)  
***Epidendroideae***
- 1. Pollinia catilagenous or bony, usually with stipes. Anther incumbent already from earliest stages in ortogeny often strongly deflexed at maturity. -----  
----- (II) ***Vandoideae***

**I. Subfamily Epidendoideae**

Subfamily	Tribe	Subtribe	Genus	Species	Myanmar name		
Epidiandrodeae	Coelogyneae	Coelogyinae	<i>Coelogyne</i>	<i>tenasserimensis</i>	ငွေနှင်းဖြူ ရှည်သေး		
				<i>nitata</i>	ငွေနှင်းဖြူ မျိုးကွဲ		
					<i>Pholidota</i>	<i>arfticulata</i>	None
					<i>Eria</i>	<i>pannea</i>	နတ်သမီးပန်း
						<i>amica</i>	နတ်သမီးပန်း
					<i>Dendrobium</i>	<i>cariniferum</i>	မဟာဒေဝီ
						<i>Tortile</i>	သူယောင်ပန်း
					<i>Bulbophyllum</i>	<i>siamense</i>	သင်္ဃေကြယ်
						<i>refractum</i>	သင်္ဃေပန်ကာ
						<i>secundum</i>	သင်္ဃေနက် မျိုးကွဲ
						<i>blepharistes</i>	None

**Key to the Genera of Subtribe Coelogyinae**

- 1. Pseudobulb large. Lip not saccate with papillose. Column long and slender. ----- **1. *Coelogyne***
- 1. Pseudobulb slender. Lip saccate at the base without papillose. Columns hort. ----- **2. *Pholidota***

**1. *Coelogyne* Lindl.**

Sympodial epiphyte with creeping rhizome. Pseudobulb oblong ovate. Leaves two alternate. Inflorescence from the base of the pseudobulb. Sometime terminal, with persistant peduncular bracts. Flower medium. Sepals

and petals free. Lip trilobe. Column long and slender with large wings around the stigmatic surface. Anther two cells. Pollinia 4.

**Key to the species of genus *Coelogyne***

- 1. Flower yellow. Midlobe of lip broadly flat with two long lateral keels on blade, reddish brown patch on mesochile and dark brown at the base. -----  
----- 1. *C. tenasserimensis*
- 1. Flower pure whit. Midlobe of lip oblong acute with three crenulate on tubercle and reddish yellow eyes. ----- 2. *C nitata*

**1.1. *Coelogyne tenaserimensis* Seiden.f.**



Habit



Inflorescence



Flower

**1.1 *Coelogyne tenaserimensis* Seiden.f.**

Epiphyte. Pseudobulb compressed with deeply ridges. Leaves oblong acuminate in pairs. Inflorescence with 4-5 flowers, erect from the base of the pseudobulb, closed persistent sheath at the base. Flower yellow, about 2.5 cm across. Sepal 3 equal, oblong acute, yellow, margin extrose, about 1.5 cm long 0.5 cm wide. Petals lanceolate, acute, back ward, yellow. Lip trilobed, side lobes triangular obtuse, small erect, yellow, midlobe broadly flat, much wavy on hypochile, two straight long lateral keels on the blade, yellow with reddish orange block on mesochile and dark brown at the base. Column pale yellow, curved with red strip. Pollinia 4.

- Myanmar Name - Ngwe Hinn Phyu Shay Thaye (ငွေနှင်းဖြူ ရှည်သေး)
- Occurrence - Myanmar, Kalaw Township, Yee-Aye reserved forest.  
N 20° 34", E 96° 30', 1415 alt.
- Distribution - N E India, Burma, Thailand (Seidenfaden, 1992)
- Ecology - Epiphyte, Hill evergreen forest. Flowering period April

### 1.2. *Coelogyne nitada* Lindl.



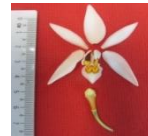
Habit



Inflorescence



Flower



### 1.2. *Coelogyne nitada* Lindl. Coll. Bot. 33: Gen. and Sp: 40: Fol. Orchit

#### *C. ocellata* Lindl. In Wall. Cat. 1953.

Epiphyte. Pseudobulb subglobose, dark green. Leaves oblong acute, glabrous. Inflorescence erect with 3-5 flowers. Flower pure white, 4.00 cm across. Sepals 3 oblong lanceolate, white with nerves equal, expended. Petals lanceolate acute, pure white with distinct nerved. Lip trilobed, side lobes rounded with yellow spot, midlobe ovate acute, crenate keels white with 3 crenulate on tubercle in reddish yellow eyes. Column pale green, long curved with wings. Pollinia 4.

Myanmar Name - Ngwe Hinn Phyu Myo Kwe (ငွေနှင်းဖြူမျိုးကွဲ)

Occurrence - Myanmar, Kalaw Township, Yee- Aye reserved forest. N 20° 35", E 96° 31'

Distribution - NW Himalaya eastwards to Yunnan (**Seidenfaden**, 1992)

Ecology -Epiphyte, Hill evergreen forest, 1417 alt. Flowering period March- April

## 2. *Pholidota* Lindl.

Epiphyte or lithophyte, pseudobulb cylindrical and slender. Leaves arising from the top of pseudobulbs, ovate-oblong lanceolate, apex acute, shortly petiole. Inflorescence terminal from top of pseudobulbs, rachis often conspicuous zigzag fashion. Flower small to large, floral bract distinct, cymbiform. Sepals concave. Lip sessile at the base of the column, saccate. Colum very short with wide wing around the anther. Colum foot absent. Anther 2 chamber. Pollinia 4, waxy, globose.

### 2.1. *Pholidota articulata* Lindl.



Habit



Inflorescence



Flower

### 2.1. *Pholidota articulator* Lindl. in Wall. Cat 1992. And Gen & Sp-Orch 1830:30

#### *Pholidota griffithii* HK. F, Le PL. T.1881. 1889

Epiphyte. Pseudobulb, long cylindrical with grooved. Leaves two, oblong lanceolate with prominent veins, slightly coriaceous. Inflorescence terminal, short, erect. Flower creamy green, about 1.00 cm across; floral bracts cymbiform about 1.00 cm long 0.8 cm wide. Dorsal sepal and lateral sepals are equal in size and shape, ovate acute, concave, not expanded, 0.7 cm long and 0.5 cm wide. Lateral petals are smaller than the sepals, ovate acute. Lip saccate at hypochite with 5 longitudinal keels, expanded at epichile, which bears bilobed, each lobe rounded, recurved, broader than the long, slightly twisted, pale yellow patch at base. Colum shortly clavate. Asellum triangular. Pollina 4 wavy.

- Myanmar Name - Kwyet-hme-pan-myo-kywe (ကြွက်မြီးပန်း ချိုးကွဲ)
- Occurrence - Rare species, Myanmar, Kalaw Township, Yee-Aye reserved forest. N 20° 36' 2.5", E 96° 32' 1.3",
- Distribution - India, Nepal, Bhutan, Bangladesh, South China, Myanmar, Indochina, Peninsular, Malaysia, Borneo, Java Sumatra (**Floral of Thailand** 2014, Volume 12, Part two). (**Flora of China** 2014). Myanmar, Java Malaya (**Holtun R.E.** 1969)
- Ecology period - Epiphyte, Hill evergreen forest. 1412 meter. Flowering period May to November

### 3. *Eria* Lindl.

Epiphyte with erect. Pseudobulbs are tufted, crowded on creeping root stock. Stem short sometimes branching. Leaves coriaceous articulate, duplicate, thin or fleshy, sessile or petiolate, glabrous sometimes hairy. Inflorescences raceme, terminal or lateral, one or many flowered. Flower

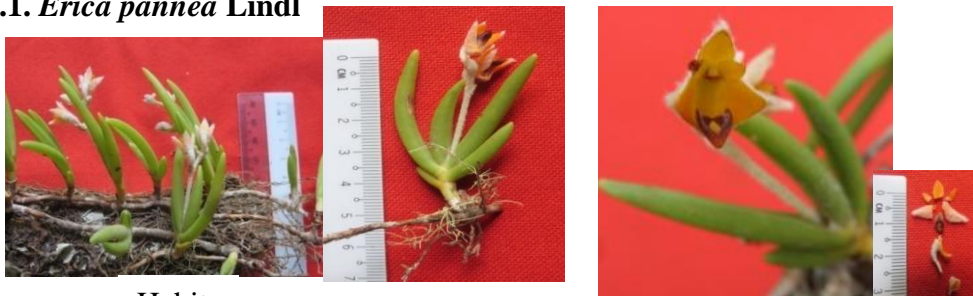


small, resupinate. Lip trilobe sessile on the column foot. Column large or short. Pollinia 8 with caudical. Only one genus *Eria* of Subtribe Eriinae was collected in study area.

**Key to the species of Genus *Eria***

1. Pseudobulb absent, leaves terete, floral bract very small. Flower yellowish orange. Lip concave with glandular callus----- 1. *E. pannea*
1. Pseudobulb fusiform,leaves oblong acute. Flower pale green with purple strip. Lip broader than the long three keels on mesochile. -----2.*E. amica*

**3.1. *Eria pannea* Lindl**



Habit

Inflorescence

Flower

**3.1. *Eria pannea* Lindl. Bot, Reg.28:64, Misc 79.1942.**

***E nivos*a Ridl., J.Nat. Hist. Siam Soe 4:116, 1921.**

Epiphyte. Stem very short, about 3.00-5.00 cm high with long rhizome. Leafy stem arise on equal apart on the rhizome. Leaf terete, yellowish green, flattened at the base, about 3.00-4.00 cm long and 0.5 cm wide. Inflorescence raceme erect, 3-4 flowers, peduncle very short. Flower small, yellowish orange hairy, about 0.8 cm across, resupinate. Sepals 3, dorsal sepal oblong acute, about 0.7 cm long and 0.5 cm wide inner surface yellow, white hairy outside. Petals 3, lateral sepals shorter than the sepals, linear; mentum long, obtuse. Lip oblong obtuse, brownish black, concave with glandular callus on lip, column very short. Pollinia 8.

Myanmar Name - Nat Tha Mee Pan (နတ်သမီးပန်း)

Occurrence - Myanmar, Kalaw Township, Yee-Aye reserve forest  
N 20° 35", E 96° 31" (Chin, Taninthayi (Kress *et al.*, 2003)

Distribution - Malaya, Indonesia (**Seidenfaden**, 1992.)

Ecology - Epiphyte, Hill evergreen forest, 1366 m alt. Flowering  
period April

### 3.2. *Eria amica* Rchb.f.



Habit



Inflorescence



Flower

### 3.2. *Eria amica* Rchb.f. Van-orch. 2:162 1870-A.Dkerr 1969

#### *Eria confuse* HK-j. Ic. Pl-T.1850

Epiphyte. Stem fusiform with several nodes about 10.00 cm in height. Leaves alternate, oblong acute, thin, leaf. Sheath overlapping at the base about 8.00 cm long 2.00 cm wide, entire, both surfaces glabrous. Inflorescence raceme, axillary, many-flowered, peduncle suberect. Flower greenish yellow, resupinate, about 1-2 cm long and 2.00 cm wide, floral bract cymbiform, large, deflexed, incurved, pale green, persistent about 0.8 cm long and 0.6 cm wide, glabrous sepal 3, dorsal sepal oblong acute, glabrous about 0.7 cm long 0.4 cm wide light greenish yellow with three purple lines, lateral oblong-obtuse, sepals fuse at the base forming mentum obtuse. Petals 3, lateral petals

narrow, greenish yellow with purple lime. Lip trilobed, side lobes small, semicircular front edge, midlobe broader than long with retuse at apex, reddish purple, keels on mesochile. Column short, pale yellow, stout. Pollinia 8. Operculum pale yellow.

Myanmar Name - Nat Tha Mee Pan (နတ်သမီးပန်း)

Occurrence - Myanmar, Kalaw Township, Yee- Aye reserved forest.

N 20° 35" 12', E 96° 31', (Chin, Taninthayi (Kress *et al.*,2003)

Distribution - NW Himalaya eastwards to China and Taiwan (Seidenfaden,1992)

Ecology - Epiphyte, Hill evergreen forest, 1366 m alt. Flowering period, April

**4. *Dendrobium Sw.***

Pseudobulb more or less elongated cylindrical, leafy pseudobulb at stems. Leaves bifoliate, alternate. Flowers are lateral, fascicle or racemes. Sepals and petals nearly uniform in shape. Two lateral sepals are longer than the other, adhere commonly to the side of the column, usually prolong into a blunt spur. Pollinia 4 in pairs side by side, quite free. Anther two cells.

**Key to the species of Genus *Dendrobium***

- 1. Inflorescence suberect with 2-3 flowers. Flower rose purple. Sepals and petals oblong waved spirally twisted. Lip creamy yellow with dark purple stripe at the base. ----- **1. *D. tortile***
- 1. Inflorescence subterminal with 2-3 flowers. Flower whitish orange. Petals broader than the sepals with keel on the adaxil. Midlobe of lip rounded, slightly endulate with four fimbriate keels on the mesochile. -----  
--- **2. *D. cariniferum***

#### 4.1. *Dendrobium tortile* Lindl.



Habit

Inflorescence

Flower

#### 4.1. *Dendrobium tortile* Lindl. In Gard-Chron. 1847, 797.

Epiphyte. Pseudobulb sub fusiform compressed, erect, clavate furrowed narrow at the base. Leaves narrow retuse, glabrous. Inflorescence pseudoterminal, pendulous with 2-3 flowers, peduncle short. Flower showy, rose purple with long pedicle, about 6.00 cm across, mentum conical, purple. Dorsal and lateral sepal purple, oblong, undulate and twisted, equal in size, about 4.00 cm long 1.00 cm wide. Lateral petals as long as sepals, equal in size and shaped. Lip subsaccate with a dilated everted erose limb, creamy white with light purple veins on blade, dark purple line at hypochile, pubescent on both sides. Column short, about 1.00 cm long 0.2 cm wide, green. Operculum purple with papillose. Pollina 4, oblong, yellow.

Myanmar Name - Thu Young Pan (သူယောင်ပန်း)

Occurrence - Myanmar, Kalaw Township, Yee- Aye reserved forest.

N 20° 35' 6.11", E 96° 32' 45",

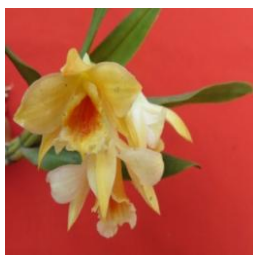
Distribution - NE India, Andamans, Thailand and Malaya (Seidenfaden, 1992), Myanmar (Grant's, 1966) Report from Myanmar (Kress *et al.*, 2003)

Ecology - Epiphyte, Hill evergreen forest. 1420m. Flowering period  
March

#### 4.2. *Dendrobium cariniferun* HG. Reichenbach, Gard.



Habit



Inflorescenc



Flower

#### 4.2. *Dendrobium cariniferun* HG. Reichenbach, Gard. Chron. 1869: 611: 1896

##### *Callista carinifera* (H.G Reichenbach) Kurtze.

Pseudobulb erect, fusiform with fine black hairy sheaths, about 10-15.00 cm long, 4-5 cm wide. Leaves oblong acute with densely hair on abaxial surface. Inflorescence pseudoterminal, 2-3 flowers with short peduncle. Flower yellowish orange, 5.00 cm across, fragrant, thickly texture, Dorsal sepals ovate lanceolate, lateral sepals obliquely ovate triangular with strong keels on the back. Mentum as long as the dorsal sepal corniform acute, incurved. Lateral petals obovate acute. Lip trilobed, embracing the column, orange inside, side lobes rounded crenate, midlobe obovate, margin irregularly notched, excurved at apex, creamy yellow with 5 distinct shortly fimbriate keels on epichile creamy yellow with orange inside. Column short, about 0.5 cm long 0.2 cm wide. Operculum subspherical, white. Pollinia 4.

Myanmar Name - Maha Deiwi (မဟာဒေဝီ)

Occurrence - Myanmar, Kalaw Township, Yee- Aye reserved forest. N 20° 36' 2.5", E 96° 31' 37", Chin, Kachin, Shan, Taninthayi (Kress *et al.*, 2003)

Distribution - NE India, Laos, Myanmar, Thailand, Vietnam (**Flora of China**, 2010) Report from Myanma (**Kress et al.**, 2003), Assam, Myanmar, Thi, Malasia, Indionisia, Phillippines (Seidenfaden, 1992)

Ecology -Epiphyte, Hill evergreen forest. 1400 m, alt. Flowering period- March-April

Only one genus *Bulbophyllum* of Subtribe Bulbophyllinae was found in study area.

### 5. *Bulbophyllum* Thou.

Pseudobulb close or distinct, vary in size its top carrying a single leaf, only rarely two. Inflorescence one to many flower arising at the base of the pseudobulb. Flowers single or closed head flower much varying in size from small to quite large. Sepals equal or lateral sepals much larger than the dorsal, joined to the column foot to form mentum, petals always smaller than the sepals. Lip almost nearly mobile, usually fleshy, tongue-shaped, straight or curved, papillose or warty. Column short with conspicuous wings, column foot curved forward. Pollinia 4.

#### Key to the species of Genus *Bulbophyllum*

1. Inflorescence with many flowers. Lateral petals, spatulate with long papillose. ----- **1. *B. secundum***
1. Inflorescence subumbellate with a few flowers. Lateral petals nearly circular with fat dark purple fibrates at apex ----- **2. *B. blepharistes***

**5.1. *Bulbophyllum securdum* HK.f.**



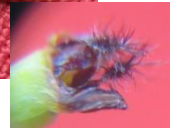
Habit



Inflorescence



Flower



Petals

**5.1. *Bulbophyllum securdum* HK.f. Fl.Brit. India 5: 764, 1890**

Epiphyte, pseudobulb close depress, conic to lenticular on rhizome. Leaves elliptic, obtuse acute with petiole. Inflorescence erect, elongated with 8-20 flowers, about 15-20.00 cm long and 0.2 cm wide, floral bract triangular, acuminate. Flower resupinate, second, pale green with dull reddish or purple. Sepals 3 equal, dorsal sepal ovate acute, hooded lateral sepals triangular, pale green with reddish purple at the base, ciliolate, fleshy with furrow in the centre. Petals 3, Lateral petals obovate to spatulate, about 0.2 cm long and 0.1 cm wide, papillose toward tip, margin ciliate, apex rounded to obtuse, very smaller than the sepals, black lip purple oblong, fleshy, finely papillose with margin ciliate, slightly concave on hypochile with deeply cleft and basal callus reddish brown tubercle on mesochile, about 0.4 cm long 0.2 cm wide. Column triangula. Pollinia 4 long.

Myanmar Name - Thazin-Net (သဇင်နက်)

Occurrence - Myanmar, Kalaw Township, Yee- Aye reserved forest. 20° 36",  
E 96°32'

Distribution- Himalaya, Thailand, Yunnan (Seidenfaden, 1992), India,  
Myanmar, Nepal, Thailand, Vietnam (Floral of China, 2008)

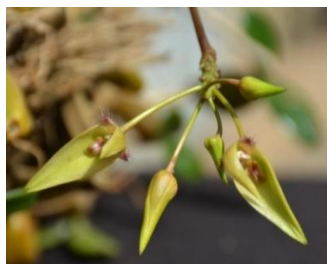


Ecology -Epiphyte, Hill evergreen forest, 1412 mm alt. Flowering period March-April

### 5.2. *Bulbophyllum blepharistes* Rchb. f.



Habit



Inflorescence



Flower

5.2. *Bulbophyllum blepharistes* Rchb. F. Flora: 278, 1872-A.DKess 1969:

*Cirrhopetalumspicatum* Gagnep. Bull Mus. Parisz. S.22(3): 402. 1950

*Cirrhopetalumblepharistes* Uook. F. 1896

*Tripudianthesblepharistes* (Kchbf.) Sglach.Kres 2007.

Epiphyte, pseudobulb is yellow, obovate, slightly 4 angles in column ovoid, about 2-5 cm long 2.00 cm wide. Leaves oblong ovate with cleft apex two leaves, bifoliate, glabrous. Inflorescence subumbel on long scape with a few flowers about 8-9.00 cm long with brown peduncle, rising from the leafless pseudobulbs. Flower greenish yellow about 3.00 cm long 2-3 cm wide. Dorsal sepal oblong acute 1.5 cm long 0.5 cm wide, pale green with brown stripes lateral sepals, obliquely triangular about 3.00 cm long 1.5 cm wide, lower surfaces of edges join forming narrow ellipse, with purple stripe at the base. Lateral petals nearly circular with fat dark purple fimbriate at apex. Lip about 6-7 cm across. Lip tongue-shaped with groove, obtuse, yellow



side lobes, curved backward outside. Column pale yellow with purple spot at the base and yellow horn. Pollinia 4 in pairs.

Myanmar Name - None

Occurrence - Myanmar, Kalaw Township, Yee-Aye reserved forest. N 20° 36", E 96° 31'

Distribution- Myanmar, Thailand (**Seidenfaden**, 1992), Rare species, Feb, 8, 2018, JJveam, Brachartha Rchbf. *http. Thaninthayi (Kress et al, 2003)*

Ecology - Epiphyte, tropical deciduous forest, Hill evergreen forest. 1367 m alt. Flowering period – November

**II. Subfamily. Vandoideae**

Subfamily	Tribe	Sutribe	Genus	Species	Myanmar Name
Vandoideae	Vandaeae	Sarcanthinae	<i>Lucia</i>	<i>Psyche</i> Rchb.f.	none

**6. Lucia. Gaud**

Epiphyte. Stem long. Leaves terete. Pseudobulb absent. The root vermiform. Flower spicate on a short, dense scape very short and thickened. Sepals and petal free, equal or petals larger than the sepals. Lip fleshy, fixed immovably to the base of column, distinctly divided by groove into a basal hypochile and epichile, basal part more or less hollow, sometime in the distinct side lobes, apical part usually longer, often wrinkled grooved longitudinally. Colum short, foot absent. Pollinia 2, with short broad stipe.

### 6.1. *Lucia pshyche* Rchb.f.



Habit



Inflorescenc



Flower

### 6.1. *Lucia pshyche* Rchb.F. in Box.Xeit.1863, 98, in Gard Chron 1963, 342.

#### *Lucia loosenis* Guill Bull. Mus. Paris 2.5. 35 (6): 651 (1963).

Monopodial epiphyte. Stem long with ridged. Pseudobulb absent. Leaves terete, elongated obtuse, dull green with violet blotch. Inflorescence one to two flowers, perforating the leaf sheath. Flower solitary, large, about 2.00 cm long 1.3 cm wide. Dorsal sepals ovate obtuse, slightly incurved, greenish white, lateral sepals ovate obtuse, fleshy margin entire. Lateral petals linea spathulate longer than the sepals. Lip broadly oblong, ovate retuse, dark purple with trace, side lobes tessellate, convex, about 1.8 cm long 1.5 cm wide, glabrous. Column short and stout, white. Operculum white and smooth. Pollinia 2, stigmatic surface concave. Ovary inferior.

Note : *Lucia pshyche* Rchb.f. was revealed as native in Myanmar (Holtum, 1964)

Myanmar Name - None

Occurrence - Myanmar, Kalaw Township, Yee-Aye reserved forest.

N 20° 35' 55.8", E 96° 3' 45",

- Distribution - Myanmar (Native), Thailand (**Holtum**, 1964) (**Seidanfadan**, 1992) (**Grand's**, 1996) Mon, Thaninthayi (**Kress et al**, 2003)
- Ecology - Epiphyte, Hill evergreen forest. 1412 m alt. Flowering period- May

### Discussion

This paper based on some collected wild orchids specimens. The present list is (2) subfamily, (3) tribe, (5) subtribe, (6) genera and (17) species. The subfamily Epidendroideae includes (2) tribe, (4), subtribe, (6) genera and (11) species. Genus *Coelogyne*, *Polidata*, *Eria*, *Dendrobium*, *Bulbophyllum* and *Lucia* have been collected from study area. In recent study, two species of genus *Coelogyne* was collected in this study area that is *Coelogyne tenasserimensis* Seidenf. which possess its midlobe broadly flat, much wavy on hypochile, straight long lateral keels on blade, and reddish orange on mesochile dark brown at the base *C. nitada* Lindl. which distinguished character is pure white flower, sidelobes of lip with yellow spot and midlobe with 3 crenulate on tubercle in reddish yellow eyes. Only one species of genus *Pholidota* is *Pholidota articulate* Lindl. possess saccate lip with 5 longitudinal keels and expended at epichile. Two species genus *Eria* are *E.pannea* Lindl., *E. and amica* Rchb.f., *Eria pannea* Lindl. has terreat leave, pseudobulb absent, flower yellowish orange and saccate lip with granular yellow callus. *Eria amica* Rchb.f. possess pale green flower with purple stripe and yellow midlobe with three keels on mesochile. Two species of genus *Dendrobium* are *D. tortile* Lindl., and *D. cariniferum* Rchb.f., *D. tortile* Lindl. which distinct character is spirally twisted waxy oblong sepals and petals. *D. cariniferum* Rchb.f. contains long incurved mentum, sepals with keeled on the back and rounded midlobe slightly undulate with four fimbriate keels on mesochile. Two species of genus *Bulbophyllum* are *B.secundum* HK.f., and *B. blepharistes*. Rchb.f. *B.secundum* HK.f. has small spatulate

lateral petals with long black papillose. *B. blepharistes*. **Rchb.f.** possess subumbellate erect inflorescence, lateral sepals obliquely triangular, lower surface of edges join forming narrow ellipse, lip purple tongue-shaped with groove.

In subfamiluy Vandoideae, (1) tribe, (1) subtribe and only one genus was collected from study area. Only genus of subtribe Sarcarthinae under tripe vandaeae is genus *Lucia*. Only species of genus *Lucia* is *Lucia psyche* which diagnostic character is one flower inflorescence, lip broadly ovate dark purple, retuse, convex with tubercle line. In this paper, all collected species are epiphyte and lithophytes.

### Conclusion

In recent study some species of *Eria pannea*, *Eria amica*, *Bulbophyllum secum dum* , *B. blepharistes*, and *Lucia psyche* **Rchb.f.** were only found in Chin, Mon, Thaninthayi, Kachin by (Kress *et al*, 2003) but these species are also found in Kalaw Township of Taunggyi District in Southern Shan State. Among them *Lusia psyche*, **Rchb.f.** is native in Myanmar. (**Holttum,1964**) and *B.blepharistes* Rchb.f. is becomed rarely to find nowadays ([www.orchidspecies.com](http://www.orchidspecies.com)) and also found the different character of leaves in species *Eria pannea* **Lindl.** There are a lot of genus *Bulbophyllum* in this study area for the future study. Today wild orchids are gradually disappeared by human activity and some are disappeared completely by invalid trade to neighboring countries. Therefore all nationality must be protect the living jewels by strong forest law for natural resource of Myanmar. So the orchidologist have to find out continuously and help partially for Flora of Myanmar, and report to government for protection of our living jewels.

### Acknowledgements

An author wish like to thank Dr. Aye Aye Tun, Rector of Bago University, for allowing me to undertake this research paper. I am also grateful to U Kyaw Myo Naing (

Forest Department, Kalaw Township) for his kind help, helping with forest type literature and collecting of specimens during field trip. I am also thanks Dr. Moe Moe Shwe, Professor of Head, Department of Botany, Bago University for understanding for my research work.

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