

蘭嶼の天南星科植物

著者	Chang Ching-en
著者別表示	張 慶恩
journal or publication title	The journal of phytogeography and taxonomy
volume	32
number	2
page range	110-115
year	1984-12-15
URL	http://doi.org/10.24517/00056231



Ching-en CHANG* : The Araceae of Botel Tobago

張 慶恩* : 蘭嶼の天南星科植物

This paper is mainly based on the materials deposited in the Herbarium of the Department of Forestry, National Pingtung Institute of Agriculture, with the exception of a few which are preserved in the Herbarium of the Department of Botany, National Taiwan University (NTU) and the Herbarium of the Taiwan Forest Research Institute (TFRI).

I should like to express my hearty gratitude to Dr. DOMINGO A. Madulid of the National Herbarium of the Philippines for his courtesy in loaning the specimens with which I compared with my collections, to Dr. J. MURATA for his kind help in sending a book entitled "Catalogue of the type specimens preserved in the Herbarium of University of Tokyo (Part 1, Araceae 1981), and to Dr. K. UEDA for his sending on loan the specimens from the Ryukyus. I extend my thanks also to Dr. Dan H. NICOLSON and Dr. T. C. HUANG for their valuable suggestions.

Key to the genera

1. Scandent herbs or epiphytes; flowers hermaphrodite.
 2. Perianth present1. *Pothoidium*
 2. Perianth absent
 3. Ovary 1-celled2. *Epipremnum*
 3. Ovary 2-celled3. *Rhaphidophora*
1. Erect herbs; flowers unisexual, the perianth absent.
 2. Leaves divided4. *Arisaema*
 2. Leaves entire
 3. Leaves net-veined; stamens forming synandria.
 4. Ovary 1-celled
 5. Ovules few, basal. ...5. *Alocasia*
 5. Ovules many, parietal.6. *Colocasia*
 4. Ovary 4-celled, ovules many in each cell.7. *Xanthosoma*
 3. Leaves parallel-veined; stamens usually free from each other.

4. Spathe wholly persistent; ovary 2 ~3-celled.....8. *Homalomena*
4. Tube of spathe persistent, the limb soon deciduous; ovary 1-celled.9. *Schismatoglottis*

1. *Pothoidium* SCHOTT

Pothoidium SCHOTT in Oester. Bot. Wochenbl. 7: 70. 1857, Aroid. 1. 26. t. 57. 1857.

1. *Pothoidium lobianum* SCHOTT in Oester. Bot. Wochenbl. 7: 70. 1857; ENGL. in DC. Monog. Phan. 2: 95. 1879, Pflanzenr. 21: 46. 1905; MERR. in Philip. Journ. Sci. 1. Suppl. 32. 1906; LIU & HUNAG in Fl. Taiwan 5: 810. 1978.

Habitat: Thickets, altitude about 300 m.

Distribution: Malaysia and Philippines.

Specimens examined: HOSOKAWA 8130 (NTU); SASAKI, May 6, 1924 (NTU); CHANG 11735.

2. *Epipremnum* SCHOTT

Epipremnum SCHOTT in Bonplandia 5: 45. 1857; SCHOTT, Gen. Aroid. 79. 1858.

1. *Epipremnum pinnatum* (L.) ENGL. in Engl. & KRAUSE in Pflanzenr. 37: 60. f. 25. 1908; HATUS., Fl. Ryukyus 757. 1971; WALKER, Fl. Okinawa S. Ryukyu Isl. 282. 1976; LIU & HUANG in Quart. Journ. Taiwan Mus. 16: 137. 1963, in Fl. Taiwan 5: 807. 1978.

Pothos pinnata L. Sp. Pl. ed. 2. 1374. 1963.

Rhaphidophora pinnata SCHOTT in Bonplandia 5: 45. 1857; BAKER & BAKH. Fl. Java 3: 107. 1968.

Epipremnum mirabile SCHOTT, Gen. Aroid. t. 79. 1858.

Habitat: In thickets altitude about 300 m.

Distribution: Southeastern Asia, Taiwan (including Green Island), through Malaysia to Australia.

Specimens examined: KUDO, July 6, 1930 (NTU); MIYAKE 5461 (TFRI); CHANG 16755. Green Island: KAWAKAMI 5460 (TFRI).

*Department of Forestry, National Pingtung Institute of Agriculture, Taiwan.

3. *Rhaphidophora* HASSK.

Rhaphidophora HASSK. in Flora 25: Beibl. 1: 11. 1842; SEEM. Fl. Vit. 286. p. p. 1868; ENGL. & KRAUSE in Engl., Pflanzenr. 37: 17. 1908.

1. *Rhaphidophora liukiensis* HATUSIMA in Act. Phytotax. Geobot. 20: 56. f. 1. 1962, Fl. Ryukyus 758. 1971; WALKER, Fl. Okinawa S. Ryukyu Isl. 281. 1976.

Rhaphidophora perkinsiae sensu LIU & HUANG in Quart. Journ. Taiwan Mus. 16: 141. 1963, in Fl. Taiwan 5: 813. 1978; non ENGL.

Habitat: In thickets.

Distribution: Ryukyus.

Specimens examined: SASAKI, June 15, 1926 (NTU); HANADA, March 18, 1943. (NTU); CHANG 7643.

R. perkinsiae ENGL. was recorded for the first time to the flora of Botel Tobago by LIU and HUANG. However I have found that the characters of the specimens from Botel Tobago do not agree with the original description of ENGLER's species, especially in the leaves having a rounded base and venation being more prominent. A duplicate of the type of *R. liukiensis* HATUSIMA (HATUSIMA 23199 from Iriomote), in the herbarium of Department of Botany, National Taiwan University, matches well with the specimens from Botel Tobago. A duplicate of our collections was sent to M. M. J. van BALGOOY, Rijkherbarium at Leiden, who suggested that it resembled much better *R. liukiensis* than *R. perkinsiae*. Of course there is still the possibility that *R. liukiensis* is a synonym of some other Philippine species. But the literature cited above shows it appears to be a good species.

4. *Arisaema* MARTIUS

Arisaema MARTIUS in Flora 14: 458. 1831.

1. *Arisaema ringens* (THUNB.) SCHOTT in Schott & Endl. Melet. Bot. 17. 1832; LIU & HUANG in Quart. Journ. Taiwan Mus. 16: 134. 1963, in Fl. Taiwan 5: 905. 1978; HATUS., Fl. Ryukyus 760. 1971; WALKER, Fl. Okinawa S. Ryukyu Isl. 287. 1976.

Habitat: In low wetlands.

Distribution: China, Taiwan, S. Korea, Japan and Ryukyus.

Specimens examined: HOSOKAWA, Aug. 1935 (NTU); CHANG 11481.

5. *Alocasia* (SCHOTT) G. DON

Alocasia (SCHOTT) G. DON in Sweet, Hort. Brit. ed. 3: 631. 1937; NICOLSON in Taxon 12: 208. 1963.

1. *Alocasia macrorrhiza* (L.) G. DON in Sweet, Hort. Brit. ed. 3: 631. 1937; LIU & HUANG in Quart. Taiwan Mus. 16: 128. 1963, in Fl. Taiwan 5: 799. 1978; HATUS., Fl. Ryukyus 762. 1971.

Arum macrorrhizon L. Sp. Pl. 965. 1973.

Alocasia indica SPACH, Hist. Nat. Veg. Phan. 12: 47. 1846.

Habitat: In wet thickets, rare.

Distribution: Ceylon, northeastern India to Japan, Malay peninsula and Indonesia.

Specimens examined: CHANG 16644.

2. *Alocasia odora* (LODD.) SPACH. Hist. Nat. Veg. Phan. 12: 46. 1846; WALKER, Fl. Okinawa S. Ryukyu Isl. 284. 1976.

Arum odorum LODD. Bot. Cab. 5: pl. 416. 1820.

Habitat: In moist shaded woods or along the river, rather common.

Distribution: Northeastern India to China, Taiwan (including Green Island) and Philippines.

Specimens examined: CHANG 11481; Green Island; KUDO, July 7, 1930 (NTU).

Differ from *A. macrorrhiza* by the peltate leaves.

6. *Colocasia* SCHOTT

Colocasia SCHOTT in Schott & Endl., Melet. Bot. 18. 1832.

1. *Colocasia esculenta* (L.) SCHOTT in Schott & Endl., Melet. Bot. 18. 1832.

Arum esculentum L., Sp. Pl. 965. 1753.

Colocasia antiquorum SCHOTT in Schott & Endl., Melet. Bot. 18. 1832.

Colocasia esculenta (L.) SCHOTT var. *antiquorum* (SCHOTT) HUBB. & REHD. in Bot. Mus. Leafl. 1: 5. 1932.

Habitat: Cultivated in wet or swampy soil.

Distribution: Native of India. Now cultivated in all tropical countries.

Specimens examined: CHANG 16598.

The edible tuber is the principal food of the natives.

7. *Xanthosoma* SCHOTT

Xanthosoma SCHOTT in Schott & Endl., Melet. Bot. 19. 1832.

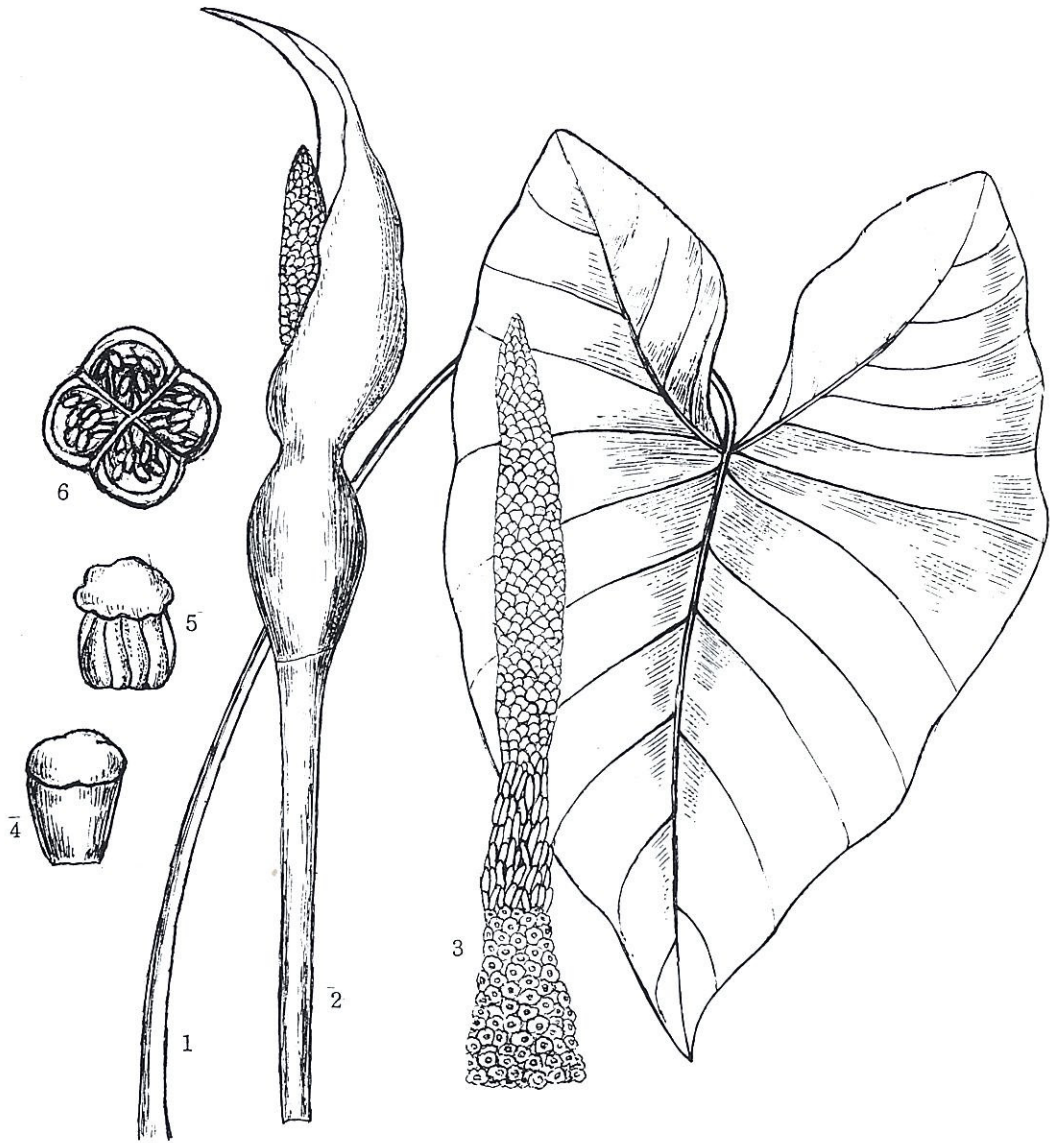


Fig. 1. *Xanthosoma sagittifolium* (L.) SCHOTT

1. leaf, 2. spathe and spadix, 3. spadix, 4. female flower, 5. male flower, 6. cross section of ovary.

1. *Xanthosoma sagittifolium* (L.) SCHOTT in Schott & Endl., Melet. Bot. 19. 1832. Fig. 1.

Arum sagittifolium L., Sp. Pl. 960 1753.

Habitat: Commonly cultivated in low lands or hillside.

Distribution: W. Indies.

Specimens examined: CHANG 16679.

This plant is an important food crop much like taro (*Colocasia esculenta*) for the natives. I would imagine that the plants could also be cultivated by

the aboriginal people in Taiwan proper, but I have not seen specimens in any herbarium on Taiwan.

This genus is recorded for the first time for the cultivated flora of Taiwan.

2. *Xanthosoma nigrum* (VELL.) MANSF. in Kulturpfl. Beih. 2: 549. 1959.

Arum nigrum SCHOTT in Oestr. Bot. Wochenbl. 212. 1857.

Xanthosoma villoaceum SCHOTT, Ind. Hort. Sem. Berol. 370. 1853.

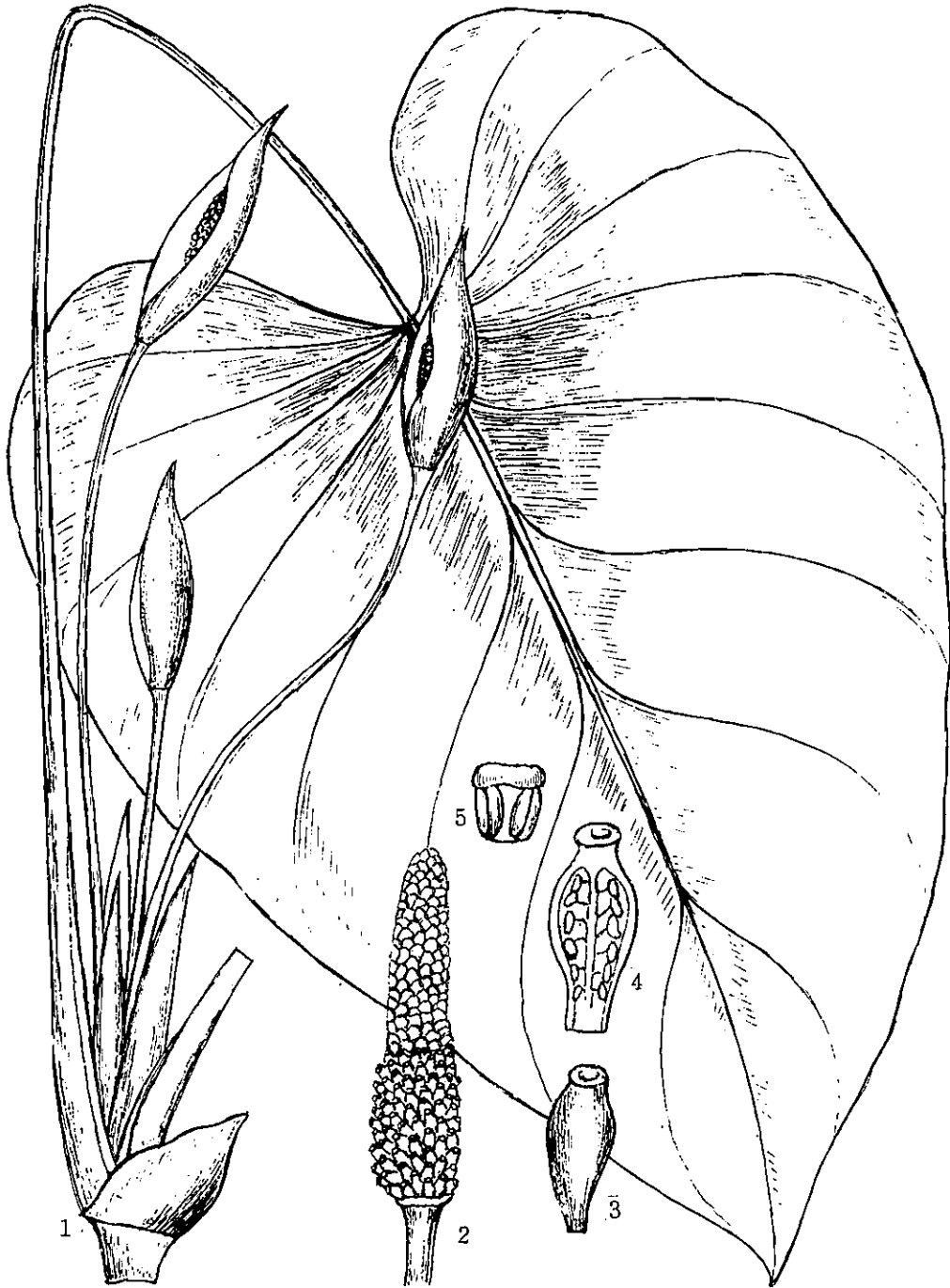


Fig. 2. *Homalomena philippinensis* ENGL.

1. habit, 2. spadix, 3. ovary, 4. vertical section of ovary, 5. anther.

Habitat: Cultivated in low lands.

Distribution: Tropical America.

Specimens examined: CHANG 16756.

This species is much like *X. sagittifolium*, but can be distinguished by the smaller leaves with violet margins and primary lateral veins, especial-

ly on the lower side.

The deep violet stem and leaves are coated with white powder.

8. *Homalomena* SCHOTT

Homalomena SCHOTT in Schott & Endl., Melet.

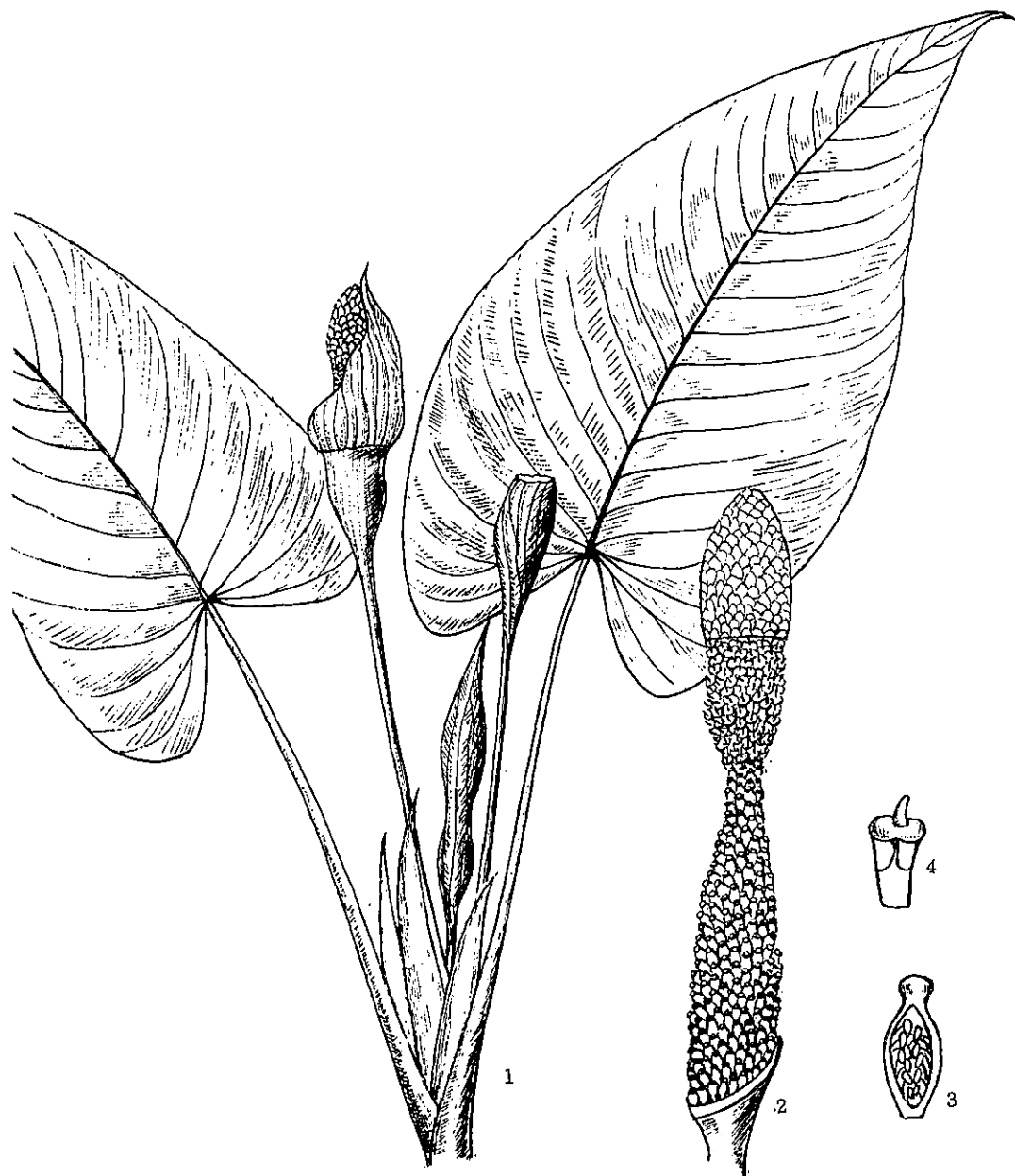


Fig. 3. *Schismatoglottis calytrata* (ROXB.) ZOLL. & MOR.
1. habit, 2. spadix, 3. vertical section of ovary, 4. stamen.

Bot. 20. 1832: ENGL. & KRAUSE in Engl.,
Pflanzenr. 55: 25. f. 33. 1912.

1. *Homalomena philippinensis* ENGL. ex ENGL. &
KRAUSE in Pflanzenr. 55: 55. t. 33. 1912; MERR.,
Enum. Philip. Fl. Pl. 1: 180. 1922; HATUSIMA in
Mem. Fac. Agr. Kagoshima Univ. 5 (3): 61. 1966.
Fig. 2.

Habitat: In thickets, especially low wetlands,
sometimes along the river.

Distribution: Philippines and Green Island.

Specimens examined: KAO 6326 (NTU),
CHANG 16535, Green Island; KUDO & MORI 1740.
(TFRI).

The present species is characterized by the

ovate leaves being cordate at the base, the broad connective concealing the anther-cells, and the staminodes being elongate-clavate, as long as the pistil.

The specimens of this species in the herbaria of Taiwan are often confused with *Colocasia kotoensis* HAYATA, which is treated in this paper as a synonym of *Schismatoglottis calyptrata* (ROXB.) ZOLL. & MOR. Both can be easily distinguished by the characters of leaves and the floral structure.

9. *Schismatoglottis* ZOLL. & MOR.

Schismatoglottis ZOLL. & MOR. Syst. Verz. Zoll. Ind. Archip. 83. 1854; ENGL. & KRAUSE in Engl., Pflanzenr. 55: 82. 1912.

1. *Schismatoglottis calyptrata* (ROXB.) ZOLL. & MOR., Syst. Verz. 83, 1954; ENGL. in DC. Mon. Phan. 2: 352. 1879. Fig. 3.

Calla calyptrata ROXB. Fl. Ind. 3: 514. 1832; ENGL. & KRAUSE in Engl., pflanzenr. 55, 114, 1912; BAKER & BAKHUIZEN, Fl. Java 3: 115. 1968.

Colocasia kotoensis HAYATA, Icon. Pl. Form. 5: 247. 1915. syn. nov.

Habitat In thickets usually mixed with

Homalomena philippinensis

Distribution: Burma, Philippines, Malay Archipelago, Indonesia to New Guinea.

Specimens examined: KANO, July 6, 1935 (NTU); HANADA, May 13, 1943 (NTU); SASAKI 5456 (TFRI).

The genus is new to the flora of Botel Tobago and Taiwan. The present species is characterized by the ovate leaves with rather dense venation, spadix sessile and clubbed at apex, and the upper staminate part not separated from the pistillate part by naked interspace. Though I have not seen the type of *S. calyptrata*, from the literature and the specimens from the Philippines one can identify this species. HAYATA's *Colocasia kotoensis* was based on TASHIRO in August, 1914. There is no duplicate of the type in any herbarium on Taiwan, but I have seen a beautiful photograph of it. With the photograph and the detailed original description it is believed better to consider *C. kotoensis* as conspecific with *S. calyptrata*.

Formerly under more primitive conditions, the tubers of the plants were used for food by the native aborigines.

(Received May 15, 1984)

○ 阿部近一 徳島県野草図鑑<下>徳島新聞社(〒770 徳島市幸町1丁目6番地), 昭和59年6月25日発行。B 6版, 319頁。定価2,500円。

本誌31巻2号に<上>を紹介したが、その続刊である。各頁に1~2種が、カラー写真に簡単な解説を加えて編集されている。本書に登載されたものでは、シコクヒロハテンナンショウ・イシツチテンナンショウ・コウチテンナンショウ・ツルギテンナンショウなどのテンナンショウ属の植物やアワコバイモ・スダレギボウシ・アワムヨウラン・ナルトオウギなどは他の図鑑で見られない特異な種類である。

○ 堀野末男 植物加賀・江沼 昭和59年9月20日, 北国出版社(〒920金沢市香林坊2-5-1)発行。A 5版, 256頁(口絵, カラ写真18頁を含む), 3,500円。

著者は現在, 加賀市作見公民館長で同市文化財専門委員を兼ねて居られる。長年教職にあるかたわら加賀市・江沼郡周辺の植物の研究をつづけて来られた。本書はその間の知見をまとめたもので, 4章から成り, 第1章は加賀海岸の植生と生態, 第2章は随想で“植物の名前”・“郷土の巨樹”・“ヤナギの花”など27篇をおさめ, 第3章は大日山・富士写が岳・鹿島の森など13カ所の植物を述べ, 最後の第4章はこの地域に産する147科591属1203種の植物の目録である。随所に自然保護を訴える著者の願いがにじみ出ている。

○ 清水秀雄(号嶺波)草姿 草月会石川県第二支部(代表者近岡仙嶺〒920 金沢市暁町14-15), 昭和59年12月10日発行。26×36 cm, 定価12,000円。

著者は, 生涯を草月流の活花の世界に投じられ, 活花界初の北国芸能賞を受けられ, さらに, 全国草月会々員中, 第一人者として, 家元蒼風氏より功労賞を受賞して居られる。しかし, 流儀を超越した御活躍ぶりは, 石川県活花界の重鎮として高く評価されている。本書は昭和12年頃より描き溜めてこられた図の中より100枚余を選んで刊行されたと聞かす。著者の序文に記されているように, 草の生きた姿を写すことを念願にした由である。正にその言葉のように各図は生き生きとしていて, 見るものに話しかけてくるような気がする。私は, 彼が活けた花が, 光輝く芸術品として勝れているのは, 図を描くことによって, それぞれの草の性質を, ことこまかに観察しておられることによるものと確信している。(里見信生)