

NOTES ON THE FLORA OF TAIWAN (8)—

Oxalis acetocella and its allies⁽¹⁾

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Abstract: There are two taxa related to *Oxalis acetocella* in Taiwan, which are treated as *O. acetocella* ssp. *taemoni* and *O. acetocella* ssp. *griffithii* var. *formosana* separately. The former is characterized by the leaflets having round lobes and the length being longer than the width; the latter is distinctive by leaflets having obtuse lobes and the length being shorter than the width and the size of leaflets is smaller when compared to *O. acetocella* ssp. *griffithii* var. *griffithii*. The diameter of rhizome of these two taxa are intermediate between *O. acetocella* and *O. griffithii* when compared with specimens collected from Europe, Japan and China.

INTRODUCTION

The first record for the allies of *Oxalis acetocella* in Taiwan was *O. griffithii* (Hayata, 1908) which was renamed as *O. acetocella* ssp. *japonica* (Huang & Liu, 1977) by following the treatment of Hara (1952). In Hara's treatment, he included Japanese and Taiwanese plants and also pointed out that Taiwanese plants was slightly different by having slender rhizomes and depress obtriangular leaflets with broad deep sinus and obtuse lobes. Latter on, Hara (1955) examined the type specimen of *O. japonica* and unexpected to find out that it was *O. corymbosa* for having glandular dots at the apex of leaflets. In consequence, he changed the name as *O. acetocella* subspecies *griffithii*. Terao (1977) also found out the characteristic of Taiwanese plants, i.e., slender, long and creeping rhizome which resemble *O. acetocella* while depressed obtriangular leaflets with obtuse lobes which resemble *O. griffithii*. Such observations let him treat Taiwanese plants as *O. acetocella* subspecies *formosana*.

The diameter of rhizome of Taiwanese plant, ranging from 0.7 mm to 1.1 mm long, is intermediate between *O. acetocella* (0.5 mm to 0.7 mm long) and *O. griffithii* (1.0 mm to 1.5 mm long) as the first author examined the specimens. Apart from the rhizome, the length of leaflets is also different (Fig. 1). Taiwanese plants are smaller than those of Japanese on the whole. There is another type of leaflets which is distinctive and had been treated as a new species, *O. taemoni*, by Yamamoto (1932). *O. taemoni*, having obovate leaflet which length is slightly longer than the width while that of *O. acetocella* and *O. griffithii* is shorter than the width, distributes in higher altitude in Taiwan from 3000 m to 3700 m high while Taiwanese *O. griffithii* distributes in the lower altitude from 1000 m to 3300 m high.

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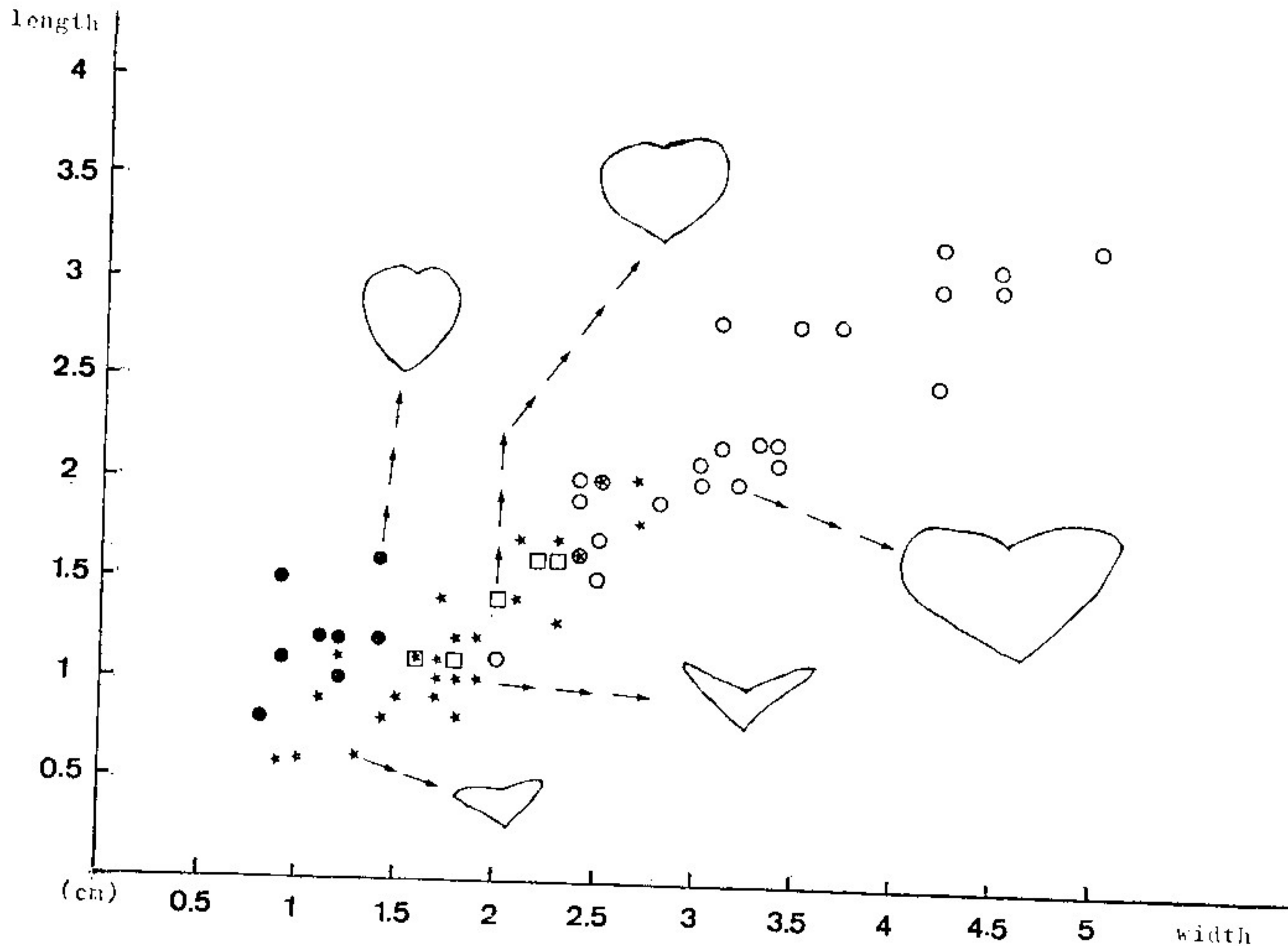


Fig. 1. The diagram of the shapes of leaflets of *Oxalis acetocella* ssp. *taemoni* (●), *O. acetocella* ssp. *griffithii* var. *formosana* (★), *O. acetocella* (□), *O. acetocella* ssp. *griffithii* (○).

Yamamoto (1932) pointed out that *O. taemoni* is different from Taiwanese *O. griffithii* by having round tip of leaflets and the bigger flower. But only the shape of leaflets hold true when the first author examined the specimens. The other characters are within the variation range.

Owing to the distinctive shape of leaflets, we treat *O. taemoni* as a subspecies of *O. acetocella* while Taiwanese *O. griffithii* as a variety of subspecies *griffithii* in order to consist with the obtuse tip of the leaflets of *O. acetocella* subspecies *griffithii*.

The specimens studied in this work are all deposited in TAI.

Key to the subspecies and variety

1. Leaflets obcordate, with round lobes
 2. Leaflets 1.5–2.5 cm wide, the length shorter than the width; rhizomes thinly covered with petiole-base (China, Japan, Europe) 1. *Oxalis acetocella* ssp. *acetocella*
 2. Leaflets 0.7–1.5 cm wide, the length longer or as long as the width; rhizomes densely covered with petiole base (Taiwan)...2. *Oxalis acetocella* ssp. *taemoni*
1. Leaflets obtriangular, with obtuse lobes
 3. Leaflets (2–)2.5–4.5(–5) cm wide (China, Japan)..... 3a. *Oxalis acetocella* ssp. *griffithii* var. *griffithii*
 3. Leaflets (0.9–)1.5–2.5(–2.7) cm wide (Taiwan)3b. *Oxalis acetocella* ssp. *griffithii* var. *formosana*

TAXONOMIC TREATMENT

Oxalis acetocella L., Sp. Pl. ed. 1. 411. 1753; Schlechtendal, Langenthal & Schenk, Fl. Deut. 21: 66. f. 2109. 1885; Tutin, Heywood, Burgeo & Moore, Fl. Europea 2: 192, 1968; Terao in *Acta Phytotax. Geobot.* 30: 58, 1979.

1. ssp. *acetocella*

白花酢醬草

ASIA: China: Yunan, C. W. Wang 68492. Japan: Kudo s. n. July 1916, s. n. Aug. 1916; Kitami, H. Ishidoyo s. n. June 1916; Kiso, Y. Hashioka s. n. Aug. 1931. EUROPE: without locality, Schönach s. n.; Denmark: Aarhus, Larsen & Pedersen 210; Switzerland: Kt. St. Gallen, E. Zogg 4518.

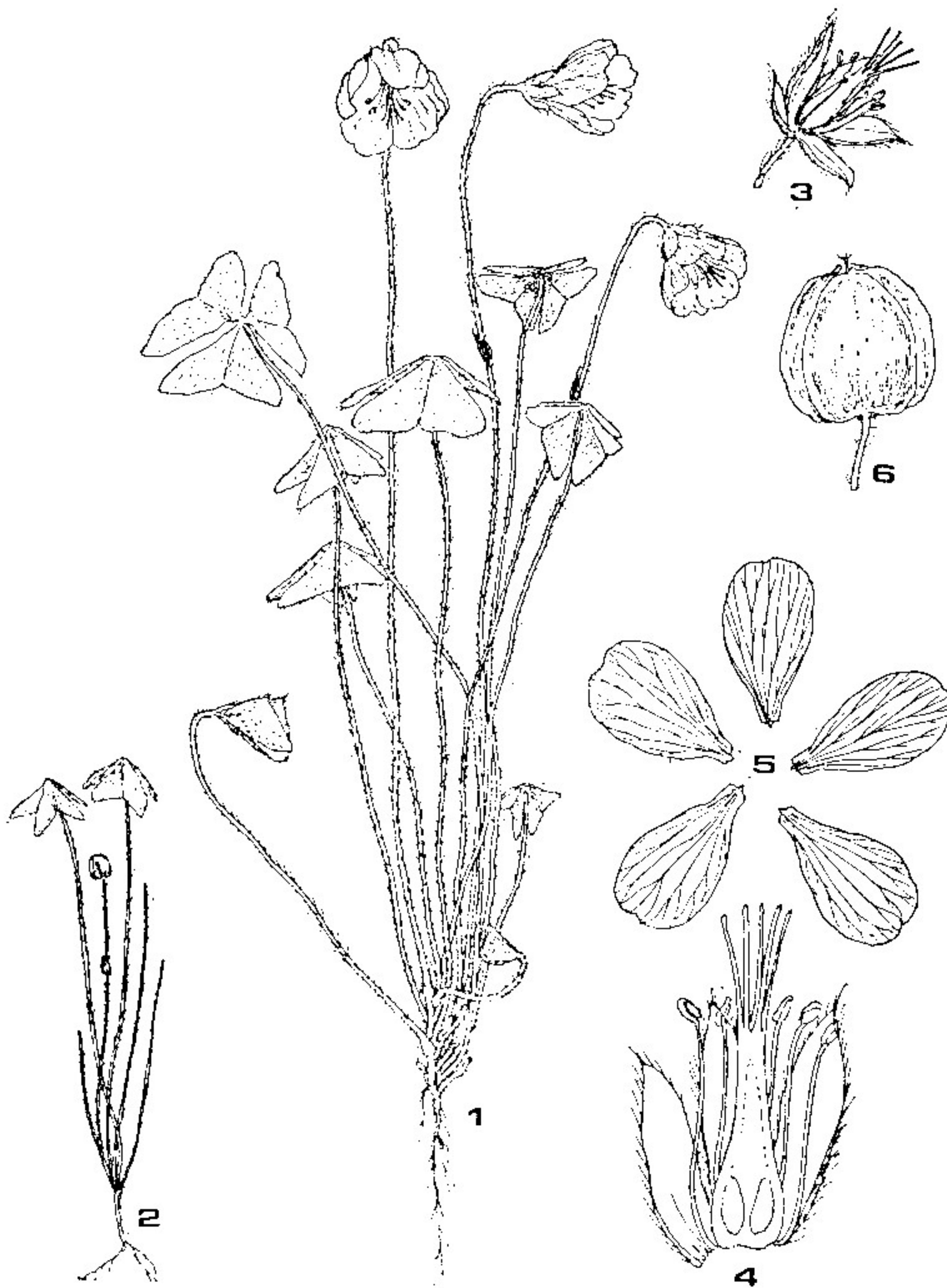


Fig. 2. *Oxalis acetocella* L. ssp. *griffithii* var. *formosana* (Terao) Huang & Huang. 1. Habit at flowering stage; 2. Habit at fruiting stage; 3. A flower removed the petals; 4. Longitudinal section of a flower; 5. Petals; 6. A capsule.

2. ssp. *taemoni* (Yamamoto) Huang & Huang, *comb. nov.* 大霸尖山酢醬草

O. taemoni Yamamoto in *Journ. Soc. Trop. Agr.* 4: 51. 1932.

Taiwan: Hsinchu: Tapachienshan, *Ito s. n.* July 1915 (Type!); Hsueshan, *Mori s. n.* Oct. 1936, *Wang et al.* 4049.

3. ssp. *griffithii* (Edgew. & Hook. f.) Hara in *Journ. Jap. Bot.* 30: 22. 1955; Fl. E. Him. 168. 638. 661. 1966; Veldkemp in Fl. Malesiana ser. 1. 71: 157. 1971; Terao in *Acta Phytotax. Geobot.* 30: 61. 1979.

O. griffithii Edgew. & Hook. f., Fl. Brit. Ind. 1: 436. 1875; Hayata, Fl. Mont. Formos. 66. 1908.

O. acetocella L. ssp. *japonica* (Fr. & Sav.) Hara in *Journ. Fac. Sci. Univ. Tokyo* sect. 3. 6: 82 1952, *excl. basionym.*

- 3a. var. *griffithii*

山酢醬草

China: Yunan: Weisi, *C. M. Wang* 63964. Japan: Niigata, *M. Togashi* 7139; Honshu, *M. T. Kao* 8409; Zenetsu, *Y. Yamamoto s. n.* July 1915.

- 3b. var. *formosana* (Terao) Huang & Huang, *comb. nov.*

臺灣山酢醬草 Fig. 2.

O. acetocella L. ssp. *formosana* Terao in *Acta Phytotax. Geob.* 30: 61. 1979.

O. acetocella ssp. *japonica sensu* Huang & Liu in Fl. Taiwan 3: 427. pl. 671. 1977, *non* Hara.

Taiwan: Ilan: Taipingshan, *Huang et al.* 10776*; Ssuyuan-Nanshantsuen, *Yang* 2083. Taoyuan: Lalashan, *Wang* 973, *Jeng* 842. Hsinchu: Chiuchiushanchuang-Tapachienshan, *Hsu & Kuoh* 13962. Nantou: Chihyuanshanchuang, *Tang* 454, 1006, 1245. Chiayi: Alishan, *Huang* 2545, *Tang* 26, *Kao* 9187. Kaohsiung: Tienchih, *Huang et al.* 3538. Pingtung: Wushan, *Hosokawa* 5352. Taitung: Chuyung, *Yamamoto & Mori* 548.

Note: * specimen for drawing.

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臺灣植物誌之觀察 (8)

白花酢醬草及其近緣種

黃星凡 黃增泉

摘 要

臺灣有二種白花酢醬草 (*Oxalis acetocella*) 之近緣種，臺灣山酢醬草及大霸尖山酢醬草。後者分布於臺灣北部高海拔山區，小葉倒卵形，且裂片圓形；前者分布於臺灣中海拔山區，小葉倒三角形，且裂片鈍狀。此二者之地下莖直徑介於白花酢醬草及山酢醬草 (*O. griffithii*) 之間。由於大霸尖山酢醬草小葉之葉長大於葉寬，在相關種類裡是特殊的一羣，因此處理為白花酢醬草之亞種。而臺灣山酢醬草之小葉長度，整體而言較之山酢醬草來得短，因此處理為山酢醬草之變種。