

THE CHINESE SPECIES OF TORENIA

by

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Torenia, a genus of the Scrophulariaceae, is found primarily in tropical Asia. There are about 30 species. This paper is a taxonomic study of the Chinese species. Twelve species are recognized here plus two additional ones of uncertain status. The species are distributed primarily in the southern part of China.

Torenia is related to *Lindernia*, and at times it is not easy to draw a clear-cut distinction between the two. However, they should be considered as generically distinct, because there are many characteristics which are relatively constant and serve to differentiate them. In *Lindernia*, the calyx consists of separate or only slightly united sepals, but in *Torenia* the sepals are united nearly throughout and have the mid-vein of each raised into a ridge or a wing. In *Lindernia*, the corolla is larger and has an angular, open throat. In the inflorescence of *Lindernia* the bracts are usually foliose, but in *Torenia* the bracts are linear and much smaller than the foliage leaves.

The species of *Torenia*, like those of *Lindernia*, are lowland tropical plants most of which are widely distributed and weedy in nature. They are, in many cases, hard to distinguish from each other and particularly so in the dried state. The following is just a tentative arrangement for the known Chinese species. The identifications are based primarily on the literature with some aid from the herbarium material of neighboring regions. In addition to the following species, there are two more from Yunnan which have not yet been identified. One of them is represented by **H. T. Tsai 60172** and **62356** from Ping-pien District. and the other by **Tsai 54319**, **54320**, **54329**, and **59145** from Shang-pa District. They may represent some of the known species from tropical Asia.

Acknowledgement is hereby made to the curators of the following herbaria from which specimens are cited:

A	Arnold Arboretum	PH	Philadelphia Academy of Science
BKL	Brooklyn Botanic Garden	TAI	National Taiwan University
GH	Gray Herbarium	UC	University of California
MO	Missouri Botanical Garden	US	United States National Herbarium
NY	New York Botanical Garden		

Torenia LINNAEUS

Torenia L. Sp. Pl. 619. 1753, Gen. Pl. ed. V. 271. 1754.

Type species: *T. asiatica* L., the only original species.

A genus of about 30 species of the tropics of the Old World especially Asia.

KEY TO THE CHINESE SPECIES

- A Flowers axillary, solitary or in pairs, or subumbellate at ends of branches.
- B. Calyx 3-winged, with 2 entire lobes.....1. *T. glabra*
- BB. Calyx 5-winged or 5-keeled, with 2-5 lobes.
- C. Calyx with 2 lobes, the lobes sometimes shortly incised at the tips.
- D. Calyx with base acutely decurrent; fruiting calyx usually long and narrow, winged or keeled.
- E. Upper corolla-lip bilobed; fruiting calyx narrower, keeled; lower filaments toothed.
- F. Plants glabrous or slightly pubescent; lower filaments with distinct teeth.
- G. Fruiting calyx more or less ovoid; corolla with very dark violet lateral lobes2. *T. asiatica*
- GG. Fruiting calyx more or less cylindrical; corolla of a uniform light bluish color.
- H. Flowers large; corolla 3-4 cm. long; calyx 2.5 cm. long..3. *T. concolor*
- HH. Flowers small; corolla 1-1.5 cm. long; calyx 1.5 cm. long.....
.....4. *T. parviflora*
- FF. Plant densely pubescent; lower filaments with very small teeth.....
.....5. *T. hirsuta*
- EE. Upper corolla-lip entire; fruiting calyx broad, ovoid to oblong, winged or not; lower filaments with or without appendages.
- F. Plant erect, branching, less diffuse; calyx winged; lower filaments not toothed..... 6. *T. violacea*
- FF. Plant profusely diffusely branching; calyx not winged; lower filaments toothed.7. *T. vagans*
- DD. Calyx with the base rounded or cordate, not decurrent; fruiting calyx ovoid or oblong, strongly winged.....8. *T. cordifolia*
- CC. Calyx with 5 distinct lobes.....9. *T. fordii*
- AA. Flowers axillary, in racemes or panicles terminating the branches.
- B. Flowers axillary and racemed; pedicels short; leaves ovate.
- C. Corolla yellow; fruiting calyx narrower, keeled but not winged..10. *T. flava*
- CC. Corolla blue: fruiting calyx broader, winged.....11. *T. ciliata*
- BB. Flowers in terminal panicles; pedicels long and slender; leaves oblong, spatulate.....12. *T. oblonga*
- Species of doubtful status.....13. *T. nantoensis*
- Species of doubtful status.....14. *T. mollissima*

1. *Torenia glabra* OSBECK

Torenia glabra Osbeck, Dagbok Ostind. Resa. 210. 1757; Merrill in Lingnan Sci. Journ. 5: 165. 1927.

Torenia benthamiana Hance in Ann. Sci. Nat. IV. Bot. 18: 226. 1862; Maxim. in M el. Biol. 9: 411. 1875; Forbes & Hemsl. in Journ. Linn. Soc. Bot 26: 187. 1890.

In ravines and about rice fields, southern China and Tonkin. Flowering in August.

Kwangsi: No precise locality, **H. H. Chung 6117** (NY), **8315** (NY); south of Tze-an, western Kwangsi, **R. C. Ching 6337** (NY); Ling-yuen District, **A. N. Steward & H. C. Cheo 589** (NY); Yung District, **A. N. Steward & H. C. Cheo 1071** (GH, NY).

Kwangtung: Whampao, **Hance 5901** (NY); Lofau Shan, **E. D. Merrill 10920** (NY, UC); Ting Wu Shan, **S. Y. Lau 20243** (NY); Yang-shan District, **T. M. Tsui 689** (MO, NY, US); Ying Tak, **W. T. Tsang & D. C. Wong 14326** (UC); Lung Tau Shan, **To & Tsang 12563** (US).

Hainan: Taam-chau District, **W. T. Tsang 16350** (NY, UC, US); Vg chi Shan, **Chu Vong May 116** (UC); Dung Ka, **N. K. Chun & C. L. Tso 43388** (NY).

Fukien: Shou-mem, **R. C. Ching 2283** (US); Yen-ping, **Chou Kuang Han 8339** (UC).

2. *Torenia asiatica* LINNAEUS

Torenia asiatica L. Sp. Pl. 1: 619. 1753; Hook. f., Fl. Brit. Ind. 4: 27. 1884.

Linnaeus type was based on a collection made by Osbeck from Canton.

Shaded and moist, open places, to an altitude of about 185 meters, in eastern India and Ceylon to Java, and China. Flowers purplish, with very dark lateral lobes. Flowering in July and August.

Chekiang: Ping Yang, **R. C. Ching 2077** (UC, US).

Anhwei: South of Chimen, **R. C. Ching 4435** (UC), **8816** (US).

Kiangsi: Lung-nan District, **S. K. Lau 4769** (GH, US).

Kwangtung: Lofaushan, **E. D. Merrill 10951** (UC); Canton, Honam Island, **C. O. Levine 1120** (BKL, MO, US); Canton, **W. Y. Chun 6942** (NY), **Y. Tsiang 3269** (NY).

Fukien: No precise localities, **H. H. Chung 6626** (NY), **F. P. Metcalf 467** (UC).

In the herbarium, *Torenia asiatica* L. and *T. concolor* Lindl. are often confused with one another. Hooker originally treated the latter species as a variety of *T. asiatica* L., but later (l. c. 734) he said that: "This (*T. asiatica* var. *concolor*) I have since seen growing, and think it may be a different species". Bretschneider (Hist. Europe. Bot. Disc. China 486. 1898) said of *T. concolor*: "This plant is probably regarded in herbarium as *T. asiatica* L., but living specimens forbid its union in that species". In the dried state the two species are alike in general habit, but the corolla of *T. concolor* is uniformly colored while the lateral lobes of the corolla of *T. asiatica* L. are a very dark purple. This is clearly evident in all dried specimens. Moreover, *T. asiatica* appears to have relatively broader, more ovoid fruiting calyx than the cylindrical one of *T. concolor*.

3. *Torenia concolor* LINDLEY

Torenia concolor Lindl. in Bot. Reg. t. 62. 1846; Forbes & Hemsl. in Journ. Linn. Soc. Bot. 26: 187. 1890; Matsum. & Hay. in Journ. Coll. Sci. Imp. Univ. Tokyo 22: 277. 1906 (Enum. Pl. Formos.); Hay, Gen. Ind. Pl. Formos. 53. 1916; Hand.-Maz., Symb. Sin. 7: 837. 1936; Mori in Masumune, Short Fl. Formos. 193. 1936; Li in Quart Journ. Taiwan Mus. 3: 62. 1950.

Torenia rubens Benth. in DC. prodr. 10: 410. 1846, Fl. Hongk. 250. 1861; Maxim. in Mel. Bio. 9: 410. 1875. This was given as a synonym of *T. concolor* by Hook. f., Fl. Brit. Ind. 4: 734. 1884.

Torenia rubens Benth. var. *grandiflora* Benth., Fl. Hongk. 250. 1861.

Torenia asiatica L. var. *concolor* Hook. f., Fl. Brit. Ind. 4: 227. 1884.

Ravines, moist places, and wayside, from India to Tonkin and southern China. Flowers purplish. Flowering in July and August.

Kwangtung: Hongkong. **C. Wright 354** (US), **C. Ford s. n.** (NY), **85** (MO, US), **318** (PH); Ting-wu Shan, **Y. Tsiang 763** (UC), **C. L. Tso 21321** (NY), **S. K. Lau 20356** (MO, NY), **T. N. Liou 833** (NY); Sunyi, **C. Wang 31213** (NY); Nam-hou, **S. P. Ko 51543** (NY), **51545** (NY); Lung-tau Mountain, **To and Tsang 12754** (US).

Hainan: Ta Han, **J. L. Gressitt 865** (MO).

Taiwan: All specimens cited-TAI; No precise locality. **U. Faurie 8144**; Taihoku, Doba, **S. Suzuki 6327**; Taihoku, Sozan, **S. Suzuki 10275**; Taihoku, Suigenti, **S. Suzuki s. n.**, **Ichiro Tanaka s. n.**; Taihoku, Sintien, **S. Suzuki s. n.**, **H. Shimizu 2285**; Taihoku **Y. Nakamura 4064**, **Yamamoto & Suzuki s. n.**; Dandan, Kiirun, **S. Suzuki 4488**, **Masamune 618**; Kiirun, **Sasaki s. n.**; Saiteimon, Heito, **S. Suzuki 11372**; Arisan, **Tsukahara s. n.**; Insula Shushi in Nichgetsutan, **Kudo & Sasaki 15574**; Inter sopan et Kurayu, **Kudo & Mori 1207**; from Nanryo to Mt. Kasho, **Kudo & Mori 306**; Taitoty. **T. Hosokawa 5267**; Insl. Kizan, **Masamune & Suzuki s. n.**; varan ad Nichi-getsutan, **Kudo & Sasaki 15180**; Rengechi, Taityu, **S. Hibino & S. Suzuki s. n.**; Taitoty. Daibungun, **Suzuki-Tokio 7944**; Mt. Noko, **S. Suzuki 2740**; Kwarenko, **S. Suzuki 1549**, **Suzuki-Tokio 9275**; Kuaru, **E. Matuda 1634**; Mt. Tanoorei, **Suzuki-Tokio 7382**; inter Ryohen et Mohen, **S. Suzuki 6068**; Mt. Hassenzan, **S. Suzuki s. n.**; Tainan, **H. Morimoto s. n.**; Taichung Hsien: Mt. Pahsien, **T. I. Chuan et al 2711**; Mt. Am-mashan, **T. S. Liu et al Oct. 20, 1957**; Nantou Hsien: Lien-hua-chi, **M. T. Kao 4044**; Taitung Hsien: Botel Tobago, **Liu, Keng et al 461**.

Takao, **Yamada 29**; Sintiku, **H. Shimizu 57, 289**.

4. *Torenia parviflora* HAMILTON

Torenia parviflora Ham. ex Benth., Scroph. Ind 39. 1835, in DC. Prodr. 10: 410. 1846; Hook. f., Fl. Brit. Ind. 4: 278. 1884; Hance in Journ. Bot. 16: 231. 1878; Maxim. in Mél. Biol. 9: 410. 1875; Forbes & Hemsl. in Journ. Linn. Soc. Bot. 26: 188. 1890.

Tropical Asia.

Kwangtung: Lofaushan, **C. Ford s. n.** (NY).

Various authors have stated that this species is found in Kwangtung, but I have seen only one specimen (cited above) that may be referable to this species. It is very similar to *T. asiatica* but has smaller flowers and somewhat shorter pedicels.

5. *Torenia hirsuta* WILLDENOW

Torenia hirsuta Willd., Sp. Pl. 3: 266. 1800; Merrill in Lingnan Sci. Journ. 5: 165. 1927.

In grasslands and at the edges of rice fields to an altitude of about 600 meters, from India to southern China (Kwangtung and Hainan). Flowers purplish blue. Flowering from May through July.

Kwangtung: Hongkong, **C. Ford 335** (US), **Fung Hom 19453** (NY); Honam Island **C. O. Levine 654** (BKL, MO, US); Canton, **Read s. n.** (PH); Kochow, **Y. Tsiang 2691** (NY).

Hainan: Hainan, **C. Wang 34177** (NY), **35321** (NY), **H. Y. Liang 62194** (NY), **64822** (NY), **66012** (NY, US); Five Finger Mountains, **F. A. McClure 9587** (NY, UC); Taam-chau District, Sha Po Shan, **W. T. Tsang 16087** (MO, NY, US); Chingmai District, **C. I. Lei 871** (NY); Dung Ka, **N. K. Chung & C. L. Tso 43386** (NY).

This species is closely related to *T. asiatica* L. and *T. concolor* Lindl. but has smaller leaves and smaller flowers and is densely pubescent in habit. The original description, as pointed out by Merrill, is very short and imperfect.

6. *Torenia violacea* (AZAOLA) PENNELL

Torenia violacea Pennell in Journ. Arnold Arb. 24: 255. 1943; Li in Quart. Journ. Taiwan Mus. 3: 63. 1950, in Taiwania 1: 163. 1950.

Mimulus violaceus Azaola ex Blanco, Fl. Filip. ed. 2: 357. 1845. See Merrill, Sp. Blanco. 347. 1918, and Pennell, l. c.

Torenia peduncularis Benth. in Wall. List. n. 3956. 1831, *nomen nudum*, ex Hook. f., Fl. Brit. Ind. 4: 276. 1884; Forbes & Hemsl. in Journ. Linn. Soc. Bot. 26: 189. 1890; Diels in Bot. Jahrb. 29: 567. 1900; Hay. in Journ. Coll. Sci. Imp. Univ. Tokyo 35(19): 173. 1908 (Fl. Mont. Formos.); Hay. Gen. Ind. Fl. Formos. 193. 1916; Merrill in Trans. Amer. Philos. Soc. II. 24(2): 352. 1935; Nemoto Fl. Jap. Suppl. 668. 1936; Mori in Masamune, Short Fl. Formos. 193. 1936.

"*Torenia cordifolia*" sensu Hance in Journ. Bot. 16: 231. 1878, non Roxb.

A weedy plant wide spread in India and Malaysia and in southern China.

Chekiang: No precise locality, **Barchet 515** (US).

Kiangsi: Lu Shan, **Steward & Cheo 212** (NY).

Hupei: No precise locality, **A. Henry 158** (US).

Szechuan: Omei Shan, **W. P. Fang 2431** (US), **3247** (US), **3271** (US), **17654** (TAI), **17640** (TAI), **Y. S. Liu 1485** (A), **T. C. Peng 4** (A), **K. N. Yin 150** (A), **C. L. Chow 6713** (TAI), **6993** (TAI).

Kwangtung: Lofaushan, **C. Ford s. n.** (PH, NY, US), 56 (MO); Ka-ying District, **W. T. Tsang 21452** (GH, NY).

Taiwan: All specimens cited are TAI; Taihoku, Rumoan, **S. Sasaki s. n.**; Taihoku, Kasinokihira, **S. Suzuki 6302**; Taihoku, **Ohtsuka s. n.**; Sintiku, **Sakurai 4**, **Kanazuko 3**; Niitakagun, Naihunpo, **S. Suzuki 13**; Mt. Taihei, **S. Suzuki s. n.**; Tainan, **H. Morimoto 477**; Shimizu, **Y. Shimada s. n.**; Kagi, **S. Sasaki s. n.**

7. *Torenia vagans* ROXBURGH

Torenia vagans Roxb., Fl. Ind. 3: 96. 1832; Hook. f., Fl. Brit. Ind. 4: 277. 1884; Forbes & Hemsl. in Journ. Linn. Soc. Bot. 26: 189. 1890; Diels in Bot. Jahrb. 29: 567. 1900; Hand.-Maz., Symb. Sin. 7: 837. 1936.

Torenia diffusa D. Don, Prodr. Fl. Nep. 86. 1825; Benth. in DC. Prodr. 10: 1846; Maxim. in Mel. Biol. 9: 410. 1875.

Roadsides, at altitudes of 600–1100 meters, in India and southwestern China (Yunnan and Sikang). Flowers violet. Flowering in July and August.

Sikang: Kanting, **C. Y. Chiao 2013** (A), **2025** (A).

Yunnan: Tchen-fen-chen, **E. E. Maire s. n.** (GH).

This species is related to *T. violacea* (Azaola) Pennell (*T. peduncularis* Benth.), but is readily distinguished from it by its more diffused branching habit, the toothed lower filaments, and by its calyx being not winged.

8. *Torenia cordifolia* ROXBURGH

Torenia cordifolia Roxb., Pl. Corom. 2: 52. t. 161. 1798; Benth. in DC. Prodr. 10: 409. 1846; Hook. f., Fl. Brit. Ind. 4: 276. 1884; Franch., Pl. David. 2: 222. 1888; Forbes & Hemsl. in Journ. Linn. Soc. Bot. 26: 187. 1890; Hand.-Maz., Symb. Sin. 7: 837. 1936; Li in Taiwan 1: 162. 1950.

Mountain slopes to altitudes of 850 to 1900 meters. Northern India, China, Burma, and Java. Flowers purple. Flowering from July to September.

Chekiang: No precise locality, **Barchet 505** (US).

Kiangsi: Ihwang, **Y. Tsiang 10027** (NY); Yungshiu, **Y. Tsiang 935** (NY).

Kweichow: Anlung, **Y. Tsiang 24518A** (NY).

Szechuan: Mount Omei, **Faber 679** (NY), **680** (NY), **994** (NY), **C. L. Chow 7063** (TAI).

Yunnan: No precise localities, **A. Henry 9227** (NY, PH), **9467** (NY), **10375** (NY); Mengtze, **A. Henry 9467A** (PH, US); Fo-hai, **C. W. Wang 73704** (A), **74133** (A), **76223** (A); Nan-chiao, **C. W. Wang 75188** (A), **76938** (A); Che-li District, **C. W. Wang 75769** (A), **78158** (A, TAI), **78757** (A, TAI), **78688** (A, TAI), **78396** (A), **77569** (A), **79262** (A, TAI); Jenn-yeh District, **C. W. Wang 78896** (A); Shang-pa District, **H. T. Tsai 54634** (A); Ping-pien District, **H. T. Tsai 62786** (A); Chenkiang, **T. T. Yu 17359** (A); Shunning, **T. T. Tü 17615** (A); Sochieh, **T. T. Yü 19394** (A).

Kwangsi: Shang-sze District, Shih Wan Tai Shan, **W. T. Tsang 24158A** (NY).

9. *Torenia fordii* J. D. HOOKER

Torenia fordii Hook. f., Bot. Mag. 111: t. 6797B. 1885; Forbes & Hemsl. in Journ. Linn. Soc. Bot. 26: 188. 1890. Duplicates of type, *C. Ford s. n.* from Lofaushan, seen. Southern China. Flowers white, slightly reddish.

Kiangsi: Kien-nan District, **S. K. Lau 4223** (GH).

Kweichow: Fan Ching Shan, **Steward, Chiao, & Cheo 428** (NY).

Kwangtung: Hongkong, **C. Ford s. n.** (NY); Lofaushan, **C. Ford s. n.** (MO, US); Canton & vicinity, **C. O. Levine 1257** (BKL, MO), **1312** (MO); Wat-shui shan, **W. Y. Chun 8054** (NY); Wan-tong-shan, **H. Y. Liang 61418** (NY).

10. *Torenia flava* HAMILTON

Torenia flava Ham. ex Benth., Scroph. Ind. 38. 1835, in DC. Prodr. 10: 411. 1846, Fl. Hongk. 250. 1861; Hook. f., Fl. Brit. Ind. 4: 278. 1884; Hance in Journ. Bot. 16: 231. 1878; Maxim. in Mel. Biol. 9: 410. 1875; Forbes & Hemsl. in Journ. Linn. Soc. Bot. 26: 188. 1890; Merrill in Lingnan Sci. Journ. 6: 286. 1928; Matsum. & Hay. in Journ. Coll. Sci. Imp. Univ. Tokyo 22: 277. 1906 (Enum. Pl. Formos.); Hay., Gen. Ind. Fl. Formos. 53: 1916; Nemoto. Fl. Jap. Suppl. 668. 1936; Mori in Masamune, Short Fl. Formos. 193. 1936; Li in Quart. Journ. Taiwan Mus. 3: 63. 1950, in Taiwania 1: 163. 1950.

Torenia hokutensis Hay., Icon. Pl. Formos. 9: 80. 1920; Nemoto, Fl. Jap. Suppl. 668. 1936; Mori in Masamune, Short Fl. Formos. 193. 1936.

"*Torenia Fordii*" sensu Matsum. & Hay. in Journ. Coll. Sci. Imp. Univ. Tokyo 22: 278. 1906 (Enum. Pl. Formos.); Hay., Gen. Ind. Fl. Formos. 53. 1916; Nemoto, Fl. Jap. Suppl. 668. 1936; Mori in Masamune, Short Fl. Formos. 193 1936: **non** Hook. f.

Sides of fields, to an altitude of 900 meters, in eastern India, southern China and western Malaysia. Flowers yellow.

Szechuan: Mount Omei, **W. P. Fang 3271** (NY), **17615** (TAI).

Yunnan: Jenn-yeh District, **C. W. Wang 80229** (A).

Kweichow: Fan Ching Shan, **Steward, Chiao, & Cheo 428** (US).

Kwangsi: Shang-sze District, Shih Wan Tai Shan, **W. T. Tsang 24036** (MO, NY); Shih Wan Tai Shan, **C. L. Tso 23585** (NY).

Kwangtung: Kochow, **Y. Tsiang 968** (UC); Canton, **Y. Tsiang 2797** (NY), **Y. K. Wang 2792** (NY); Ying Tak, **W. T. Tsang & Y. C. Wong 14583** (UC).

Hainan: Hainan, **C. Wang 34023** (NY), **34270** (NY); Wang-tong-shan, **W. Y. Chung 7034** (NY); Shiu-hang-tsze, **W. Y. Chun 7194** (NY); Yaichow, **H. Y. Liang 62640** (NY); Dung Ka, **N. K. Chun & C. L. Tso 43330** (NY, US); Tsam-chau District, Sha Po Shan, **W. T. Tsang 15992** (NY, UC, US); Ngai District, **S. K. Lau 605** (MO, NY, UC, US).

Taiwan: All specimens cited are TAI; Taihoku, Hokuto, **G. Nakahara s. n.**, **T. Kawakami 7265**, **Sasaki s. n.**, **Nobuo Murakami 182**; Baibara, Hori, **S. Suzuki s. n.**; Lake Suisya, **S. Sasaki s. n.**; prope Sekün, ad Nichigetsutan, **Kudo & Sasaki 15254**; Baran, ad Nichigetsutan, **Kudo & Sasaki 15181**; Kuwarusu, **E. Matuna 247**; Keppanzan, Sintikusyu, **Suzuki-Tokio 4714**; Taihoku-si, Senjozan, **Nakamura-Taizo 2570**; Nanhuto, **Mori s. n.**; Taichu, **T. Seki 106**.

11. *Torenia ciliata* SMITH

Torenia ciliata Smith in Ree's Cyclop. 5: 36. 1819; Hook. f., Fl. Brit. Ind. 4: 278. 1884.

Riverside, under forest, at an altitude of about 1600 meters. in northwestern Yunnan, and also in Burma.

Yunnan: Salween Valley, Sekai **T. T. Yü 23047 (A)**.

This species has not been previously reported from China. It is a close relative of ***T. flava*** Ham., but can be readily distinguished from it by the corolla which is blue rather than yellow and by the distinctly winged fruiting calyx.

12. *Torenia oblonga* (BENTHAM) HANCE

Torenia oblonga Hance in Ann. Sci. Nat. IV. Bot. 15: 277. 1861, in nota; Maxim. in Mém. Biol. 9: 411. 1875; Forbes & Hemsl. in Journ. Linn. Soc. Bot. 26: 188. 1890.

Vandellia oblonga Benth., Scroph. Ind. 35. 1835 in DC. Prodr. 10: 413. 1846; Hook. & Arn., Bot. Beechey Voy. 202. 1836.

Torenia lobelioides Hook. & Arn., Bot. Beechey Voy. 202. 1836.

Kwangtung and Hainan.

Kwangtung: Hongkong, **C. Wright 356 (US)**.

Hainan: Ching-mai District. **C. I. Lei 4 (NY, US)**, **846 (NY)**.

This species appears to be intermediate between *Lindera* and *Torenia*, but probably should best be included in *Torenia*. It is however, in general appearance quite different from other species of the genus.

13. *Torenia nantoensis* HAYATA

Torenia nantoensis Hay., Icon. Pl. Formos. 9: 81. 1920; Nemoto, Fl. Jap. Suppl. 668. 1936; Mori in Masamune, Short Fl. Formos. 193. 1936; Li in Quart. Journ. Taiwan Mus. 3: 64. 1950.

Hayata's species is based on a single collection. **Y. Shimada**. Nov. 16, 1917. See Li, Loc. cit for further discussion.

14. *Torenia arisanensis* SASAKI

Torenia arisanensis Sasaki Trans. Nat. Hist. Soc. of Formosa. 21: 222

This species is *Mimulus tenellus* Bunge and Hayata's plant *Mimulus formosana* Hay. is a synonym of *M. tenellus*.

中國之公草母草屬

李 惠 林

摘 要

本文訂正中國玄參科公草母草屬 (*Torenia*) 之分類，計為數十二種，另存疑者二種，占全屬三十餘種之三分之一。在中國大率見於南方暑熱之低地，常分佈廣泛普遍若莠草然。各種間之區分常不明顯。本屬與 *Lindernia* 屬之關係最為接近。