

Takasi YAMAZAKI*: **Notes on Lindernia, Vandellia, Torenia
and their allied genera in Eastern Asia 3****

山崎 敬*: 東亜産アゼナ属, ウリクサ属, ハナウリクサ属とその類縁 3

C. Diagnoses.

- A) Folia palmate nervosa integra vel laxe oblique dentata. Antherae loculi inferiores obtusi emarginati. Semina laevia. Ovarium glabrum.*Lindernia*.
- A) Folia plerumque pinnate nervosa serrata. Antherae loculi inferiores obtusi vel acuti rarius calcarati non emarginati. Semina papillosa lacunosa.
- B) Corolla parva plerumque 4-10 mm. longa. Ovarium glabrum.
- C) Calyx exalatus 5 separatus. Labia corollarum posticorum ovata vel liguliformia margine glabra. Semina multi- et parvi-lacunosa.*Vandellia*.
- C) Calyx late alatus tri-separatus, alis membranaceis lunaribus. Labia corollarum posticorum orbiculata margine hirsuta. Semina grandi-lacunosa.
..... *Tuyamaea*.
- B) Corolla magna plerumque 15-30 mm. longa, labio postico orbiculato vel late orbiculato. Ovarium in parte superiore scabridum.*Torenia*.

Lindernia Allioni in Mélang. Phil. Math. Soc. Roy. Turin. 176-184 (1762-65) non vidi; G. Don (1837: 551)—*Ilysanthes* Rafinesque, Ann. Nat., 13 (1820) non vidi; Benthams (1846: 418)—*Iliogeton* Endlicher (1893: 684)—*Bazina* Rafinesque, Autik. Bot., 44 (1844); Pennell (1935: 157) pro syn.—*Pyxidaria* Aschs. et Kanitz ex O. Kuntze (1891: 464).

Folia integra. Stamina 4 fertilia. Capsula globoso-ovata.*Lindernia pyxidaria*.

Folia laxe dentata. Stamina 2 antica sterilia. Capsula ovato-oblonga.

..... *Lindernia dubia*.

Lindernia pyxidaria L. Mant. Pl. 2: 252 (1771); Pennell (1943: 28)—*Lindernia pyxidaria* Allioni, Fl. Pedem. 1: 57 (1785) non vidi; Maximowicz (1875: 449)—*Vandellia erecta* Benthams (1835: 36); (1846: 415)—*Ilysanthes gratioides* L. sensu Regel, Tent. Fl. Ussuri. 111 (1861)—*Vandellia pyxidaria* (Allioni) Maximowicz (1876: 449)—*Pyxidaria procumbens* Aschs. et Kanitz ex O. Kuntze (1891: 464)—*Lindernia erecta* (Benthams) Bonati (1927: 410)—*Azena*.

Distr. Japan (Hokkaido, Honsyu, Sikoku and Kyusyu), Korea, Manchuria, China

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and Formosa. Throughout Europa and Asia southward to India, Malaya and Polynesia.

Lindernia dubia (L.) Pennell (1935: 141)—*Ilysanthes dubia* (L.) Barnhart in Bull. Torrey Bot. Club. **26**: 376 (1899)—*Amerika-azena*.

An American species that appears to be introduced into central parts of Japan.

Hab. Honsyu: Prov. Settu, Nisinomiya (K. Yamadori, Oct. 1936); Prov. Yamasiro, Oguraike-ato (G. Nakai, 7 Aug., 1950); Kangetu-kyo (T. Yamazaki, Sept. 1952).

Vandellia Browne ex L. Mant. Pl. **1**: 89 (1767)—*Bonnaya* Link et Otto, Icon. Pl. Select., 252 (1820) non vidi; Endlicher (1839; 683)—*Hornemannia* Link et Otto, l. c. 9 (1820); Endlicher, l. c. no. 3952 (1839) pro syn.—*Tittomania* Reichenbach, Icon. Exot. **1**: 27 (1824) non vidi; Sprengel, Syst. Veget. **2**: 800 (1825).

A) Calycis lobi fere ad basin liberi.

B) Stamina 2 antica fertilia, filamentis in basi appendiculatis.

C) Antherae loculi inferiores acuti. Capsula globosa vel oblongo-elliptica calyce brevior vel leviter superans.Sect. *Tittomania*.

D) Folia irregulariter dentata vel subintegra, dentibus obtusis rotundatis. Staminum appendices perbreves dentiformes. Capsula ovato-globosa.Series *Viscosae*.

E) Folia petiolata irregulariter grosse dentata 20-30 mm. longa 8-15 mm. lata. Pedicelli calyceque glanduloso-pilosi.*Vandellia viscosa* (1).

E) Folia subsessilia margine subintegra vel obsolete crenata 5-11 mm. longa 5-8 mm. lata. Pedicelli grabrescentes. Calyx barbatus. ...*Vandellia hirta* (2).

D) Folia regulariter serrata, serris triangulatis acutis. Staminum appendices evolutae clavatae vel lineares. Capsula elliptica vel late oblonga. Series *Setulosae*.

E) Folia late ovata basi cuneata 8-16 mm. longa 7-13 mm. lata. Calyx in anthesi 5 mm. longus. Corolla calyce vix superans ca. 6 mm. longa, fauce glabro, labio superiore ovato bidentato, lobis triangulatis acutis. Staminum appendices clavatae.*Vandellia setulosa* (3).

E) Folia triangulari-ovata basi truncata vel subcordata 15-30 mm. longa 10-20 mm. lata. Calyx in anthesi 5-9 mm. longus. Corolla calyce longior 9-13 mm. longa, fauce ventrale punctato, labio superiore obovato bifido, lobis ovatis obtusis. Staminum appendices lineares. ...*Vandellia scutellariaeformis* (4).

C) Antherae loculi inferiores calcarati. Capsula lanceolato-linearis calyce plus duplo superans.Sect. *Angustifoliae*.

D) Folia lanceolata subsessilia basi attenuata. Corolla 6-8 mm. longa. Stami-

- num appendices lineares.*Vandellia angustifolia* (5).
- D) Folia ovata basi truncata vel rotundata conspicue petiolata. Staminum appendices perbreves.
- E) Folia basi truncata vel subcordata breviter petiolata (1-2 mm.). Pedicellus in fructu 13-42 mm. longus calyce 3-10-plo longior. Corolla 10-15 mm. longa. Staminum appendices globosae.*Vandellia cordifolia* (6).
- E) Folia basi rotundata, petiolis 3-5 mm. longis. Pedicellus in fructu 3-7 mm. longus calyce 1-1.5 plo longior. Corolla 7-8 mm. longa. Staminum appendices punctatae.*Vandellia brevipedunculata* (7).
- B) Stamina 2 antica sterilia, filamentis non appendiculatis.
- C) Folia lineari-lanceolata vel anguste oblonga obtuse vel argute pauci-serrata.
- D) Folia lineari-lanceolata. Corolla ca. 5 mm. longa. Staminodium rectum.*Vandellia tenuifolia* (8).
- D) Folia oblanceolata vel oblanceolato-oblonga. Corolla 7-9 mm. longa. Staminodium arcuatum.*Vandellia anagallis* (9).
- C) Folia oblonga vel elliptica, acuminata vel aristata multiserrata.
- D) Caulis ramosus prostratus non stolonifer. Folia oblonga aristato-serrata 10-20 mm. longa 4-8 mm. lata. Sepala setacea. Corolla ca. 5.5 mm. longa fauce glabra.*Vandellia ciliata* (10).
- D) Caulis primarius simplex erectus mox basi stolonifer. Folia elliptica vel elliptico-orbiculata 10-50 mm. longa 8-20 mm. lata, serris acuminatis non aristatis. Sepala acuminata non setacea. Corolla 12-14 mm. longa fauce ventrale lanata.*Vandellia antipoda* (11).
- A) Calycis lobi in anthesi usque supra medium coaliti.
- B) Staminum appendices filiformes. Capsula elliptica calyce subaequilonga.*Sect. Torenioides**Vandellia crustacea* (12).
- B) Staminum appendices punctatae. Capsula linearis calyce 2-4-plo longior.*Sect. Ellobum**Vandellia chinensis* (13).
- Sect. I. **Tittomannia** Bentham (1846: 413). Calyx 5-partitus. Labia corollarum posticarum ovata bi-dentata. Antherae loculi inferiores acuti. Capsula globosa vel elliptica calyce brevior vel vix superans.
- Series I. **Viscosae** Yamazaki ser. nov. Planta humilis vel decumbens. Appendices staminum perbreves dentiformes. Capsula globosa vel elliptica.*Typus Vandellia viscosa*.
- 1) **Vandellia viscosa** (Hornemann) Merrill (1912: 246)—*Gratiola viscosa*

Hornemann, Enum. Pl. Hort. Hafn., 19 (1807) non vidi.—*Hornemannia viscosa* (Hornem.) Willdenow, Enum. Pl. Hort. Berol. 2: 654 (1847)—*Vandellia hirsuta* Hamilton ex Bentham (1835: 36); (1846: 414)—*Pyxidaria viscosa* (Hornem.) O. Kuntze (1891: 464)—*Lindernia hirsuta* (Hamilt.) Wettstein (1895: 79); Bonati (1927: 419)—*Lindernia viscosa* (Hornem.) Boldingh, Zakfl. Landouw. Java, 165 (1916); Merrill, Sp. Blanc. 14 (1918); Alston (1931: 213)—*Lindernia cruciformis* Hayata (1920: 78).

Distr. India, Malay, Indo-china, Southern China, (Prov. Kiangsu, Shanghai 上海), Formosa (Prov. Kaohsung, Ping-tung 屏東), Philippines, Java, Borneo.

2) ***Vandellia hirta*** (Chamisso et Schlechtendal) Yamazaki comb. nov.—*Torenia hirta* Chamisso et Schlechtendal in Linnæa 2: 571 (1827)—*Gratiola pusilla* Willdenow ex L. Sp. Pl. ed. 4, 1: 105 (1797), non Thunberg—*Vandellia diffusa* Blanco, Fl. Philipp. ed. 3, t. 368 (1877-83)—*Pyxidaria pusilla* (Willd.) O. Kuntze (1891: 464)—*Lindernia pusilla* (Willd.) Merrill (1916: 312); Schlechter (1921: 573)—*Lindernia stellarifolia* Hayata (1920: 77)—*Lindernia hirta* (Cham. et Schl.) Pennell (1943: 250); Mukerjee (1945: 131).

Distr. India to Africa, Malaya, Polynesia, Southern China and Formosa (Prov. Kaohsung, Kuralitz 龜仔舟. Prov. Hualien, Hua-lien-kahg 花蓮港. Prov. Taiping, Tansui 淡水).

Vandellia mollis Bentham (1835: 37); (1846: 414)—*Lindernia mollis* (Bentham) Wettstein (1895: 79).

Distr. Sikkim, Assam, Bengal, Burma, Malay, Indo-china and Southern China (Hainan, Z. Katumada 1908, Li 1916).

Series 2. ***Setulosae*** Yamazaki ser. nov. Planta elongata adscendens vel erecta. Appendices staminum clavatae vel filiformes. Capsula elliptica vel ovata-oblonga.

.....Typus *Vandellia setulosa*.

3) ***Vandellia setulosa*** (Maxim.) Yamazaki comb. nov.—*Vandellia urticifolia* (non Hance) sensu Matsumura, Cat. Pl. Herb. Coll. Sci. Imp. Univ., 142 (1886)—*Torenia setulosa* Maxim. (1886: 72)—*Lindernia setulosa* (Maxim.) Tuyama ex Hara (1943: 207)—*Sisoba-urikusa*.

Distr. Honsyu (Ise, Kii), Sikoku (Tosa), Kyusyu (Oosumi, Ins. Oosima and Ins. Tokunosima).

4) ***Vandellia scutellariaeformis*** (Yamazaki) Yamazaki comb. nov.—*Lindernia scutellariaeformis* Yamazaki in Journ. Jap. Bot. 27: 67 (1952).

Distr. Formosa (Prov. Tainan, Hou-tai-pu 後大埔).

Vandellia urticaefolia Hance in Journ. Bot., 301 (1868)—*Lindernia urticaefolia* (Hance) Bonati (1927: 421).

Distr. Indo-china and Southern China (Prov. Kwantung, Tapu, Tung-hoo-shan, W. T. Tang, 1932).

Sect. II. **Sympodostola** Yamazaki sect. nov. Caulis sympodialiter elongatus repens. Flores in axillis foliorum superiorum sparse umbellati. Calyx 5-partitus. Appendices staminum magnae globosae. Capsula elliptica calyce subaequilonga.

..... Typus *Vandellia nutans*.

Vandellia nutans Yamazaki (1953: 36).

Distr. Indo-china (Siam, Doi-step, B. Hayata 1921).

Sect. III. **Angustifoliae** Hara (1943:205). Calyx 5-partitus. Staminum appendices filiformes vel globosae. Antherae loculi inferiores calcarati. Capsula lanceolato-linearis calyce plus duplo-longior.

5) **Vandellia angustifolia** Bentham (1846: 417)—*Tittomania angustifolia* Bentham in Wall. Cat. no. 3951 (1830) nom. nud.—*Vandellia cymulosa* Miquel in Ann. Mus. Lugd.-Bat. 2: 17 (1865)—*Pyxidaria cymulosa* (Miquel) O. Kuntze (1891: 464)—*Lindernia angustifolia* (Bentham) Wettstein (1895:79)—*Lindernia cymulosa* (Miquel) Matsumura (1912: 562) —*Aze-togarasi*.

Distr. Honsyu (northwards to Rikutyu and Ugo), Sikoku, Kyusyu, Ryukyu; Southern Corea, Central and Southern China, Indo-china, Malay, Java, Burma, Assam, Nepal, Kumaon and Ceylon.

6) **Vandellia cordifolia** (Colsm.) G. Don (1838: 549)—*Gratiola cordifolia* Colsmann (1793: 15)—*Bonnaya cordifolia* (Colsm.) Sprengel (1825: 42)—*Vandellia pedunculata* Bentham (1835: 37); (1846: 416)—*Vandellia cerastoides* Collet ex Hemsley (1890:1000)—*Lindernia pedunculata* (Bentham) Wettstein (1895:79)—*Lindernia cordifolia* (Colsm.) Merrill (1923: 437)—*Sima-urikusa*.

Distr. Southern Kyusyu (Ins. Yaku), Ryukyu, Formosa, Southern China, Indo-china, Malay, Borneo, Philippines, Australia, India, Ceylon and Java.

7) **Vandellia brevipedunculata** (Migo) Yamazaki comb. nov.—*Lindernia brevipedunculata* Migo in Journ. Shanghai Sci. Instit. Sect. 3, 4: 160 (1939).

Distr. Central China (Prov. Chekiang, Chang-hwa 昌化).

Sect. IV. **Seliquosae** Bentham (1835:32); Walpers (1844-45: 288) Sepala libera Labia corollarum ligularia apice truncata integra vel vix emarginata. Stamina 2 antica sterilia, appendicibus deficientibus, filamentis filiformibus. Capsula linearis calyce duplo-triplo superans.

8) **Vandellia tenuifolia** (Colsm.) Haines (1922: 634)—*Gratiola tenuifolia* Colsmann (1793: 8)—*Bonnaya tenuifolia* (Colsm.) Sprengel (1825: 42)—*Ilysanthes*

tenuifolia (Colsm.) Urban (1884: 435)—*Lindernia tenuifolia* (Colsm.) Alston (1931: 214)—*Hime-kutibasi-gusa*.

Distr. Southern Ryukyu (Ins. Miyako, Ins. Iriomote), Formosa, Southern China, Indo-china, Burma, Bengal, Southern India, Ceylon and Java.

9) **Vandellia anagallis** (Burmam) Yamazaki comb. nov.—*Ruellia anagallis* Burmann f., Fl. Ind. 135 (1768); Rumphius, Herb. Amboin. 5: 46, t. 170, f. 2 (1747)—*Bonnaya veronicaefolia* (non Sprengel) sensu Benthani (1846: 421); Maximowicz (1876: 450); Bonati (1927: 436)—*Bonnaya verbenaeefolia* Sprengel sensu Wight (1849: t. 1412)—*Lindernia veronicifolia* F. von Müller, Fragmenta Phytogr. Australiae 6: 101 (1867–68) excl. syn.—*Ilysanthes veronicifolia* Urban (1884: 436) excl. syn.—*Ilysanthes antipoda* Merrill in Philipp. Jour. Sci. 19: 38 (1921)—*Vandellia veronicaefolia* Haines (1922: 633)—*Lindernia anagallis* (Burmam) Pennell in Journ. Arn. Arbor. 24: 252 (1943).

var. **anagallis**.—*Nokoba-suzumeno-togarasi*.

A var. *verbenaeefolia*, foliis oblongis vel elliptico-oblancoelatis basi in petiolum obsoletum attenuatis margine utrinque 7–9 grosse serratis differt.

Distr. Insulae Ogasawara (Ins. Titizima), Formosa, Indo-china, Philippines, India and Australia.

var. **verbenaeefolia** (Colsm.) Yamazaki comb. nov.—*Gratiola verbenaeefolia* Colsmann (1793: 8)—*Ruellia serrata* Thunberg in Nova Acta Reg. Soc. Sci. Upsal. 7: 143, t. 4, f. 3 (1815)—*Bonnaya verbenaeefolia* (Colm.) Sprengel (1825: 42)—*Vandellia pachypoda* Franchet et Savatier, Enum. Pl. Jap. 1: 346; 2: 457 (1877) nom. nud.—*Bonnaya veronicaefolia* var. *verbenaeefolia* (Colsm.) Hooker f. (1884: 285)—*Pyxidaria pachypoda* (Fr. et Sav.) O. Kuntze (1891: 465)—*Lindernia pachypoda* (Fr. et Sav.) Matsumura (1912: 562) pro parte.—*Ilysanthes veronicifolia* Urban sensu Furumi (1916: 114)—*Vandellia verbenaeefolia* (Colsm.) Haines (1922: 634)—*Ilysanthes veronicifolia* var. *verbenaeefolia* (Colsm.) Makino ex Makino et Nemoto, Fl. Jap. ed. 1: 214 (1925)—*Vandellia serrata* (Thunberg) Nakai in Thunberg Misc. Pap. Jap. Pl. app. 19 (1935)—*Ilysanthes serrata* (Thunb.) Makino (1940: 144, t. 432)—*Lindernia verbenaeefolia* (Colsm.) Pennell (1943: 31)—*Lindernia anagallis* var. *verbenaeefolia* (Colsm.) Hara (1948: 254)—*Suzume-no-togarasi*.

Distr. Honsyu (eastwards to Iwasiro and Kozuke), Sikoku, Kyusyu, Ryukyu, Formosa, Central and Southern China, Micronesia, Burma and India.

10) **Vandellia ciliata** (Colsm.) Yamazaki comb. nov.—*Gratiola ciliata* Colsmann (1793: 14)—*Gratiola serrata* Roxburgh, Fl. Ind. 1: 139 (1820)—*Bonnaya brachiata* Link et Otto, Icon. Pl. Select. Berol. 1: 25 (1820) non. vidi; Benthani (1846;

420)—*Bonnaya ciliata* (Colsm.) Sprengel (1825: 41)—*Lindernia serrata* (Roxb.) F. v. Müller, Syst. Census. Austr. Pl. **1**: 97 (1882) non vidi.—*Ilysanthes serrata* (Roxb.) Urban (1884: 436)—*Ilysanthes ciliata* (Colsm.) O. Kuntze (1891: 461); Schlechter (1924: 109)—*Bonnaya aristatoserrata* Hayata, Icon. Pl. Formos. **9**: 79 (1920)—*Ilysanthes aristatoserrata* Hayata, l. c. 80 (1920) pro syn.—*Vandellia brachiata* (Link et Otto) Haines (1922: 632)—*Lindernia ciliata* (Colsm.) Pennell in Brittonia **2**: 182 (1936).

Distr. Southern Formosa (Prov. Tainan, Chia-i 嘉義; Prov. Kaohsiung, Fang-shan 枋山), Southern China, Indo-china, Malay, India, Ceylon, Java, Philippines and New-Guinea.

11) **Vandellia antipoda** (L.) Yamazaki comb. nov.—*Ruellia antipoda* L. Sp. Pl. ed. 1, 635 (1753)—*Gratiola veronicaefolia* Retz, Observ. Bot. 4: 8 (1786) non vidi.—*Gratiola ruellioides* Colsmann (1793: 12)—*Gratiola reptans* Roxburgh, Fl. Ind. **1**: 140 (1820)—*Bonnaya reptans* (Roxb.) Sprengel (1825: 41)—*Bonnaya veronicaefolia* (Retz.) Sprengel (1825: 41); Wight (1849: t. 141)—*Bonnaya ruellioides* (Colsm.) Sprengel (1825: 41)—*Ilysanthes reptans* (Roxb.) Urban (1884: 436)—*Ilysanthes ruellioides* (Colsm.) O. Kuntze (1891: 462)—*Bonnaya brachiata* (non Link et Otto) sensu Matsumura et Hayata (1906: 280)—*Ilysanthes brachiata* Urban ex Matsumura (1912: 561)—*Ilysanthes ciliata* (non O. Kuntze) sensu Merrill (1923: 440)—*Ilysanthes serrata* (non Urban) sensu Makino et Nemoto, Fl. Jap. ed. 1: 213 (1925)—*Lindernia antipoda* (L.) Alston (1931: 214)—*Lindernia ruellioides* (Colsm.) Pennell in Brittonia **2**: 182 (1936); Hara (1943: 208 et 283); Mukerjee (1945: 133)—*Kutibasi-gusa*.

Distr. Southern Ryukyu (northwards to Okinawa Island), Formosa, Southern China, Indo-china, Malay, Burma, India, Java, Philippines and New-Guinea.

Vandellia multiflora (Bonati) Yamazaki comb. nov.—*Bonnaya multiflora* Bonati (1927: 436).

Distr. Indo-china; Cochinchine and Annam (Dran, B. Hayata, 1921).

Sect. V **Torenioides** Benth (1846: 413). Calyx ante anthesi 5 dentatus vel irregulariter 5 lobatus, sepalis connatis. Appendices staminum clavatae vel filiformes. Capsula elliptica calyce subaequilonga.

Series. 1. **Bifidae** Yamazaki ser. nov. Calyx bilabiatus, sepalis 3 superioribus connatis irregulariter trilobatis, 2 inferioribus connatis bifidis. Typus *Vandellia ligulata*.

Vandellia ligulata Yamazaki (1953: 37).

Distr. Indo-china; Annam (Dran, B. Hayata, 1921).

Séries 2. **Crustaceae** Yamazaki ser. nov. Calyx 5 dentatus, sepalis 5 connatis.

12) **Vandellia crustacea** (L.) Bentham (1835: 35); (1846: 413)—*Carparia crustacea* L. Mant. Pl. 87 (1767)—*Hornemannia ovata* Link et Otto, Icon. Pl. Select. Berol. 9: t. 3 (1820) non vidi.—*Torenia crustacea* (L.) Chamisso et Schlechtenedal in Linnaea 2: 570 (1827)—*Pyxidaria crustacea* (L.) O. Kuntze (1891: 464)—*Lindernia crustacea* (L.) F. von Müller, Syst. Census. Austr. Pl. 1: 97 (1882) non vidi.—*Urikusa*.

Distr. Central and Western Honsyu (eastwards to Kozuke and Kazusa), Sikoku, Kyusyu, Southern Corea, Ryukyu, Formosa, Central and Southern China, Micronesia. Throughout tropics of Old World.

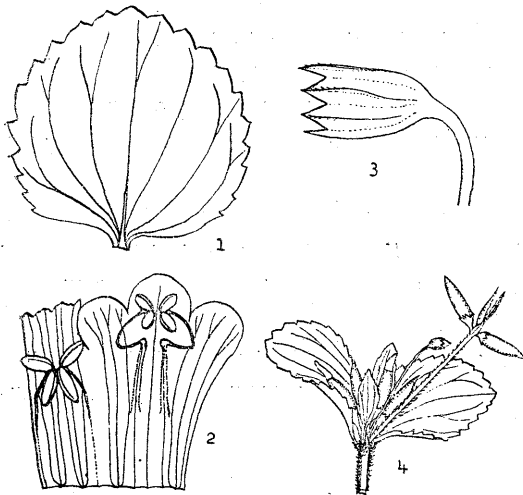
Vandellia oblonga Bentham (1835: 35); (1846: 413)—*Torenia oblonga* (Bentham) Hance in Ann. Sci. Nat. 15: 227 (1861).

Distr. Southern China (Hong-kong, B. Hayata, 1917 and 1921: Hainan, Ching-mai, C. I. Lei, 1932), and Indo-china (Annan, Yat'lu, B. Hayata, 1921 and Bum'mo, B. Hayata, 1921).

Sect. VI. **Ellobum** Bentham (1846: 416). Calyx 5 dentatus, sepalis connatis. Capsula linearis calyce 2-4 plo longior.

13) **Vandellia chinensis** Yamazaki sp. nov. Herba annua. Radix gracilis perpendicularis radículas multas fibrosas emittens. Caulis erectus 13-15 cm. altus divaricato-ramosus tetragonus facie sulcatus glaber ad angulos striatus dense hispidus

ad nodos densissime hispidus. Folia membranacea late elliptica vel orbiculata apice rotundata basi rotundato-truncata vel rotundata breviter petiolata utrinque 7-11 serrata, serris late triangulatis acutis vel mucronatis margine hispidulis, 15-24 mm. longa 12-24 mm. lata utrinque glabra 5-7 conspicue nervosa. Flores normali in terminalibus ramorum solitarii longipedicellati basi 1 bracteati, bractis setaceis 1 mm. longis



Vandellia chinensis 1) Folium $\times 1.5$. 2) Corolla expansa $\times 9$
3) Calyx $\times 9$ 4) Inflorescentia mag. nat.

acutis, pedicellis 6-12 mm. longis gracilibus glabris. Calyx tubulosus 5 costatus ad costas striatas sparse hirsutus inter costas sulcatus membranaceus glaber in anthesi ca. 2.5 mm. longus 1.8 mm. latus apice 5-dentatus, dentibus triangulatis acutis margine glabris. Corolla immatolata ca. 3 mm. longa, tubo cylindrico utrinque glabro, labio superiore ignoto, labio inferiore subaequaliter trilobato, lobis orbiculatis. Stamina 4 perfecta, appendicibus punctatis, loculis antherarum obtusis. Ovarium globosum glabrum. Capsula cleistogama in terminalibus ramuliorum 3-5. cymosa brevissime pedicellata lanceolata calyce 4 plo longior 7-8 mm. longa 2.5 mm. lata apice acuminata, pedicellis 0.5-1 mm. longis parvissime bracteatis. Semina numerosa fusca 0.5 mm. longa 0.3 mm. lata lacunosa papillosa.

Hab. China: Prov. Chekiang, Hang-chou (杭州), Ling-yin-szu (靈隱寺) (Koiti Kimura, 24 Oct. 1933—Typus in Herb. Univ. Kyoto).

Sect. VII. **Perdurantes** Yamazaki sect. nov. Planta perennis. Calyx 5-dentatus, sepalis connatis. Capsula oblonga.....Typus *Vandellia perennans*.

Vandellia perennans Yamazaki (1953: 39).

Distr. Indo-china (Tonkin, Tamdao, B. Hayata, 1917).

Litterae

Alston A. H. G. in Trimen, Hand-Book Fl. Ceylon, 4, Suppl. 213-214 (1931).
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A) 葉は掌状脈、全辺又は不明瞭な歯牙をもつ。花粉袋の下端は凹頭。子房は無毛。種子は小穴を有せず、種皮は平滑。……………アゼナ属 (*Lindernia*)

A) 葉は羽状脈、鋸齒をもつ。花粉袋の下端は鋭頭。種子は数列に並んだ小穴をもち、種皮には薄紙状の突起が散在する。

B) 花冠は小さく 4-10 mm, 上唇は卵形又は長方形。子房は無毛。蒴果は萼と同長又は超出する。……………ウリクサ属 (*Vandellia*).

B) 花冠は大きく 15-30 mm, 上唇は広円形。蒴果は萼に包まれる。子房は上部に短毛を散生する。……………ハナウリクサ属 (*Torenia*).

アゼナ属 (*Lindernia*)

A) 葉は全辺。花は 4 本の完全雄蕊をもつ。蒴果は球状楕円形。アゼナ (*L. pyxidaria*).

A) 葉は少数の歯牙をもつ。4 本の雄蕊のうち下側の 2 本は花粉袋を欠く。蒴果は長楕円形。……………アメリカアゼナ (*L. dubia*).

ウリクサ属 (*Vandellia*)

A) 萼片は殆んど基部まで離れている。

B) 4 本の雄蕊のうち下側の 2 本は花粉袋と附属突起をもつ。

C) 花粉袋の下端は鋭頭。蒴果は長楕円形で萼より僅か長い。花は白色。……………シソバウリクサ (*V. setulosa*)

C) 花粉袋の下端は尖った爪となる。蒴果は細長く萼の 2 倍以上。花は淡紅紫色。

D) 葉は線状長楕円形、基部の方へ次第に狭くなり、無柄。花冠は 6-8 mm. 雄蕊の附属体は線形。……………アゼトウガラシ (*V. angustifolia*).

D) 葉は三角状卵形、短い柄をもち、基部截形。花冠は 9-10 mm. 雄蕊の附属体は小球形。……………シマウリクサ (*V. cordifolia*).

B) 下側 2 雄蕊は花粉袋と附属突起を欠き、線状の花糸のみの仮雄蕊となる。

C) 葉は広線形か狭楕円形、小数 (4-9 対) の鈍頭又は鋭頭の鋸齒をもつ。

D) 葉は広線型。花冠は 5 mm. 仮雄蕊は直線状。……………ヒメクチバシグサ (*V. tenuifolia*).

D) 葉は狭長楕円形又は長楕円形。花冠は 7-9 mm. 仮雄蕊は彎曲する。

E) 葉は長楕円形、7-9 対の明瞭な鋸齒をもつ。……………ノコバズメノトウガラシ (*V. anagallis*).

E) 葉は狭長楕円形、4-7 対の浅い鋸齒をもつ。……………ズメノトウガラシ (*V. anagallis* var. *verbenaefolia*).

C) 葉は楕円形又は広楕円形、多数 (20-35 対) の鋭く尖った鋸齒をもつ。……………クチバシグサ (*V. antipoda*).

A) 萼裂片はくつついている。花は 4 本の完全雄蕊をもつ。蒴果は楕円形、萼とほぼ同長。……………ウリクサ (*V. crustacea*).