

## TILIACEAE

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Shrubs or herbs (in our region) with muculaginous ducts and with an indumentum of stellate or rarely simple hairs or lepidote. Leaves alternate, simple. Stipules present or wanting, often fugaceous. Inflorescence axillary, terminal or oppositifolious, cymose or flowers solitary. Bracts and bracteoles present, small or large. Flowers hermaphrodite or unisexual by abortion, actinomorphic. Sepals 4—5, free or basally connate, caducous or persistent. Petals as many as the sepals or wanting, usually free, sometimes sepaloid, often glandular at the base. Stamens 10 to many, sometimes partly staminodial; filaments free or shortly connate at the base into a tube or in fascicles; anthers usually 2-celled, opening by longitudinal dehiscence or apical pores. Ovary superior, sessile on the receptacle or on a gonophore, 2-locular; style simple or obsolete; stigma entire or 2—10-split or -lobed. Ovules 1 to many in each locule, anatropous with axile placentation. Fruit drupaceous or capsular, smooth or spinose, or dry and indehiscent, the locules sometimes again divided by means of longitudinal and transverse partitions. Seeds 1 to many, pilose or alate. Embryo straight or somewhat curved. Endosperm abundant or scanty.

About 600 species in 50 genera of worldwide distribution but mainly in the tropics.

Key to the genera:

1. Fruits globose, indehiscent or tardily splitting, covered with bristles; leaves toothed and often angled or lobed; stamens inserted on a gonophore  
..... *Triumfetta*  
Fruit ellipsoid to linear-cylindric, capsular, glabrous, puberulous or woolly, without bristles; leaves not angled or lobed, serrate; stamens inserted on the receptacle..... *Corchorus*

*Corchorus* Linnaeus, Spec. Plant. 529. 1753

Herbs, undershrubs or shrubs with a tomentum of stellate or simple hairs. Leaves alternate, palmateveined, serrate, petiolate. Stipules small and bristle-like. Flowers solitary or 2—3 together, axillary or oppositifolious, hermaphrodite. Bracts and bracteoles present. Sepals 4—5, free, deciduous. Petals 4—5, free, without basal glands. Stamens nu-

merous or rarely twice as many as the sepals, inserted on a short torus; filaments free or more or less connate; anthers versatile, with longitudinal dehiscence. Ovary 2—5-locular, but 1-locular in bud; style simple; stigma papillate. Ovules many in each locule. Capsule chartaceous to coriaceous, linear and smooth or short and muricate, loculicidally 2—5-valved, sometimes with transverse septa inside. Seeds numerous, small. Endosperm present.

About 30 species throughout the tropics; two species, *C. olitorius* L. and *C. capsularis* L. are cultivated in many tropical countries for the important fibre jute.

**Key to the species:**

1. Leaf-blade without hairlike prolongations of the basal teeth; stipules small.. 2  
Leaf-blade with hairlike prolongations of the basal teeth; stipules more than 6 mm long..... 4
2. Capsule linear, glabrous or puberulous, 3—7 cm long; stems with longitudinal hairy lines..... 3  
Capsule oblong-ellipsoid, woolly, c. 12 mm long, 4-locular, with a short, erect beak; stem brownish stellate-tomentose..... *C. hirsutus*
3. Capsule 3-locular, linear, long-pointed at the apex..... *C. orinocensis*  
Capsule 2-locular, linear, acute at the apex and minutely 4-toothed.....  
..... *C. siliquosus*
4. Capsule 3-locular, up to 3 cm long, narrowly oblong, 3-winged and with 3, often bifid, beaks at the apex..... *C. aestuans*  
Capsule 5-locular, 5—7 cm long, linear, cylindric, 2 narrow ridges on each valve, valves ending in a long point forming a straight, mostly 5-dentate beak at the apex..... *C. olitorius*

***Corchorus hirsutus* L.**

LINNAEUS, Spec. Plant. 530. 1753; GRISEBACH, Fl. Br. W. Ind. Isl. 97. 1859 ['1864']; BOLDINGH, Fl. D.W. Ind. Isl. 1: 125. 1909; JOHNSTON, Proc. Bost. Soc. Nat. Hist. 34(7): 234. 1909; BOLDINGH, Fl. Ned. W. Ind. Eil. 268. 1913; Fl. D.W. Ind. Isl. 2: 62. 1914; URBAN, Symb. Ant. 8: 407. 1920; BRITTON & MILLSPAUGH, Bahama Fl. 262. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 543. 1924; FAWCETT & RENDLE, Fl. Jamaica 5(3): 87. 1926; QUESTEL, Fl. Isl. St. Bartholomew 145. 1941; LEON & ALAIN, Fl. Cuba 3: 234. 1953; ARNOLDO, Zakflora 77. 1954; Zakflora 203. 1964; ADAMS, Flowering plants of Jamaica 457. 1972; FOURNET, Fl. Guadeloupe & Martinique 1489. 1978.

Mostly a rather low shrub but also up to 2 m high, especially on Bonaire, and then tenuous; branches erect or prostrate, brown to purplish-black, scurfy brownish stellate-tomentose. Leaves petiolate; blade ovate, elliptic or oblong-lanceolate, mostly obtuse at the apex, rounded or slightly cordate at the base, 1—2.5 × 0.5—1.5 cm, margin crenate-dentate, soft stellate-pubescent on both sides, paler beneath; petioles 3—10 mm long, brown stellate-tomentose. Stipules filiform to linear-lanceolate, 2 mm long, stellate-tomentose. Inflorescence consisting of 2—8-flowered umbels opposite the leaf; peduncle and pedicels 4—7 mm long, stellate-tomentose. Sepals 5, tomentose with white and scattered brown stellate hairs, oblong, acute at the apex, 5—6.5 mm long.

Petals 5, bright yellow or sometimes pink, broadly ovate, c.  $8 \times 5$  mm, with a honey-mark near the base. Stamens numerous, free or united into groups at the very base; filaments filiform, c. 5 mm long; anthers 0.5 mm long, versatile, cordate at the base, extrorse, inserted on the slightly raised, saucer-shaped receptacle. Ovary 4-locular, oblong, stellate-tomentose, 2 mm long, 1 mm wide; style cylindrical, 4 mm long; stigma deeply 4-lobed. Ovules numerous in each locule. Capsule oblong-ellipsoid or oblong, densely tomentose to woolly, obtuse, with a short, erect beak, 4-locular, 12 mm long and c. 6 mm thick. Seeds irregularly ellipsoid, 1.5—2 mm, black, smooth.

From Mexico to tropical South America, Bahamas, West Indies; also in north-eastern tropical Africa.

Rather common shrub, especially on limestone.

**ARUBA:** seashore near Fontein (Boldingh 6469, fr. Jan.); limestone plateau near Fontein (Arnoldo 256, fl. & fr. Dec.); Boca Grandi (Stoffers 1385, fl. & fr. Jan.); along the coast near Fontein (Stoffers 1368, fl. & fr. Jan.); Fontein (Suringar s.n., fr. Feb. [L]); Seroe Blancoe (Boldingh 6508, fl. Jan.); Palm Beach (Stoffers 1788, fl. & fr. Jan.); Pova Beach (Stoffers 1414, fl. Jan.).

**BONAIRE:** Playa Foenchi (Stoffers 995, fl. & fr. Dec.); Seroe Ventana (Stoffers 1066, fl. Dec.; 1063, fr. Dec.); near Playa Grandi (Boldingh 7286, fr. Feb.); calcareous hills near Rincón (Boldingh 7075, fr. Feb.; 7056, fl. Feb.); calcareous hills near Onima (Boldingh 5400, fl. & fr. Feb.); Lima Plantation (Stoffers 494, fr. Dec.). Onima (Suringar s.n., fr. Feb. [L]); Boca Onima (Suringar s.n., fr. Feb. [L]); Slagbaai Plantation (Suringar s.n., fr. Feb. [L]).

**CURAÇAO:** from Westpunt to Savonet (Boldingh 5066, fl. & fr. Nov.); calcareous hills near Siberië (Boldingh 5262d, depaup. Nov.); Rooi Behoenda (Boldingh 5400, fl. & fr.); hills near Rooi Behoenda (Boldingh 4921, depaup.); hofje of Valentijn (Boldingh 5365, fl. & fr. Nov.); seashore near Knip (Boldingh 5563, fl. & fr. Dec.); St. Jan (Burgers 16, fl. Dec.); Pareira (Arnoldo 1768, fl. & fr. Dec.; Stoffers 441, fl. Oct.); Santa Barbara Plantation (Stoffers 397, fl. Oct.); id., Tafelberg (Stoffers 5097, fl. & fr. Nov.); Seroe Christoffel (Stoffers 1226, fl. Dec.); hills near Knip (Stoffers 1160, fl. Dec.); Veeris Berg (de Wilde 159, fl. & fr. Ap. [L]).

**ST. EUSTATIUS:** slope of The Quill near Bengalen (Boldingh 656a, fl. June); Signal Hill (Boldingh 1044, fl. June); Little Mountains to Venus Bay (Boldingh 994, fr. June).

**ST. MARTIN:** Simson Bay (Arnoldo 3431, fl. & fr. Jan.); Low Lands, near airfield (Arnoldo 1234, fl. & fr. March; Stoffers 2689, fl. & fr. Ap.); id., near Mullet Pond (Boldingh 2762, fr. Aug.); airfield (Stoffers 2372, fl. & fr. March); Philipsburg (Stoffers 2314, fl. & fr. March); west of Simson Bay (Stoffers 2516, fl. & fr. March); without loc. (George s.n. sub Boldingh 2495a, fl. fr.); near French frontier (Suringar s.n., fr. May [L]).

### **Corchorus orinocensis** Kunth

KUNTH in HUMBOLDT, BONPLAND & KUNTH, *Nov. Gen. & Spec. Pl.* 5: 337. 1823; URBAN, *Symb. Ant.* 4: 382. 1910; BOLDINGH, *Fl. Ned. W. Ind. Eil.* 269. 1913; *Fl. D.W. Ind. Isl.* 2: 62. 1914; FAWCETT & RENDLE, *Fl. Jamaica* 5 (3): 86, fig. 38. 1926; LEON & ALAIN, *Fl. Cuba* 3: 234. 1953; ARNOLDO, *Zakflora* 77. 1954; *Zakflora* 203. 1964; ADAMS, *Flowering plants of Jamaica* 457. 1972; FOURNET, *Fl. Guadeloupe & Martinique* 1490. 1978.

Erect herb, bushy and sometimes woody at the base, up to 1.25 m high; branchlets glabrous except for a line of arachnoid hairs decurrent from the base of the petiole. Leaves petiolate; blades lanceolate to elliptic-lanceolate, acute to long-acuminate at the apex, rounded or somewhat cordate at the base, 2—8 × 0.7—2 cm, membranaceous, margins irregularly serrate and ciliate, glabrous or nearly so but the veins hirtellous; petioles 0.5—1.5 cm long, hirsute-arachnoid on the adaxial (upper) side. Stipules subulate, 4—6 mm long, ciliate. Flowers usually oppositifolious, solitary or 2 together; pedicels c. 5 mm long, hirsute-arachnoid. Sepals 5, narrowly linear, long-acuminate, 7—8 × 1—1.5 mm, somewhat hirsute without, glabrous within. Petals 5, yellow, spatulate to narrowly obovate, rounded at the apex, 5—8 × 2—3 mm, glabrous. Stamens numerous; filaments free to somewhat united, 5—7 mm long; anthers slightly arcuate, c. 0.6 mm long. Ovary narrowly oblong, 3-locular, slightly 3-angled, 1.5—2 mm high, short sericeous; style 2—3 mm long, somewhat 3-angled, glabrous; stigma peltate. Ovules numerous in each locule. Capsule erect, linear, cylindric, 3-sulcate, long-pointed at the apex, 3—6.5 cm long and 2 mm in diam, 3-locular, valves chartaceous, nearly glabrous. Seeds numerous, polygonal, 1.5 mm long, black.

Tropical America from the southern United States southwards; West Indies.

Weed, mainly in hofjes (small areas planted with fruittrees).

BOINAIRE: Sabana (Arnoldo 391, fl. & fr. Jan.); near Rincón (Boldingh 7113, fl. & fr. Jan; 7021, fr. Jan.); Slagbaai Plantation (Stoffers 598, fl. Nov.); west of Jatoe Bacoë, behind dam (Stoffers 632, fl. & fr. Nov.).

CURAÇAO: Museum garden, Mundo Nobo (Arnoldo 1986, fl. & fr. March; 2023, fl. & fr. Ap.); Piscadera Baai (Britton & Shafer 3134, fr. March); Hofje near Jan Thiel (Nagelkerken 352, fl. & fr. Jan.); Hato (Boldingh 5345, fl. & fr. Nov.); Noordkant Plantation (Stoffers 127, fr. Oct.); hofje van Engelen (Boldingh 5434, fl. Nov.); hills near Brakkeput (Boldingh 5396, fl. & fr. Nov.; Suringar s.n., fl. & fr. Jan. [L]); Brievengat (Suringar s.n., fr. Febr. [L]); Zuurzak (Suringar s.n., fr. Jan [L]); Zuikertuintje (Suringar s.n., fr. Febr. [L]); without loc. (Ascherson s.n., fl.).

### ***Corchorus siliquosus* L.**

LINNAEUS, *Spec. Plant.* 529. 1753; GRISEBACH, *Fl. Br. W. Ind. Isl.* 97. 1859 ['1864']; DUSS, *Fl. phan. Ant. franç.* 89. 1897; BOLDINGH, *Fl. D.W. Ind. Isl.* 1: 125. 1909; JOHNSTON, *Proc. Bost. Soc. Nat. Hist.* 34(7): 234. 1909; URBAN, *Symb. Ant.* 4: 382. 1910; BOLDINGH, *Fl. Ned. W. Ind. Eil.* 269. 1913; URBAN, *Symb. Ant.* 8: 406. 1920; BRITTON & MILLSAUGH, *Bahama Fl.* 262. 1920; BRITTON & WILSON, *Sci. Surv. Porto Rico & Virgin Isl.* 5: 543. 1924; FAWCETT & RENDLE, *Fl. Jamaica* 5(3): 85. 1926; WILLIAMS, *Fl. Trinidad & Tobago*: 1: 106. 1929; LEON & ALAIN, *Fl. Cuba* 3: 233. 1953; GOODING *et al.*, *Fl. Barbados* 275. 1965; ADAMS, *Flowering plants of Jamaica* 457. 1972; Fournet, *Fl. Guadeloupe & Martinique* 1490. 1978.

Bushy herb, woody at the base, up to 1.75 m high; branchlets smooth, terete, one or two longitudinally puberulous lines, otherwise glabrous. Leaves petiolate; blade ovate to elliptic, acute at the apex, rounded or somewhat cordate at the base, 2—7.5 × 1—3.5 cm, membranaceous, glabrous or nearly so on both sides, margin crenate-serrate; petioles 0.5—1.8 cm long, short-puberulous above. Stipules lanceolate to subulate, c. 2.5 mm long. Flowers axillary or oppositifolious, usually solitary or 2—3 together and then the peduncle 3 mm long; pedicels 2—7 mm long, puberulous. Sepals 5, narrowly

oblong-lanceolate, long-acuminate, 7—8 mm long and 1.5 mm wide, yellow-tinged, fleshy. Petals 5, yellow, obovate, rounded at the apex 6 × 3 mm. Stamens numerous, free; filaments 4—5 mm long; anthers oblong, 0.5 mm long. Ovary oblong to narrowly oblong, 3 mm high, short-puberulous, 2-locular; style filiform, 2.5 mm long; stigma slightly bilobed. Ovules numerous in each locule. Capsule erect, linear, compressed contrary to the partitions, acute at the apex and minutely 4-toothed, 30—60 × 2.3 mm, valves chartaceous to coriaceous, puberulous. Seeds numerous in each locule, trigonal, c. 1 mm long, bluish-black.

Tropical America from southern Florida southwards.

Weed of roadsides, waste places, thickets and rough pastures.

ST. MARTIN: airfield (Stoffers 2392, fr. March); top of the hills on the western side of Cul de Sac, 200—300 m (Boldingh 3005, fr. Aug.); road to Marigot (Suringar s.n., fr. May [L]).

### **Corchorus aestuans L.**

LINNAEUS, Syst. Nat. ed. 10. 1079. 1759; GRISEBACH, Fl. Br. W. Ind. Isl. 97. 1859 ['1864']; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 542. 1924; FAWCETT & RENDLE, Fl. Jamaica 5(3): 88. 1926; WILLIAMS, Fl. Trinidad & Tobago 1: 105. 1929; QUESTEL, Fl. Isl. St. Bartholomew 145. 1941; LEON & ALAIN, Fl. Cuba 3: 233. 1953; ARNOLDO, Zakflora 146. 1954; Zakflora 202. 1964; GOODING *et al.*, Fl. Barbados 275. 1965; ADAMS, Flowering plants of Jamaica 457. 1972; FOURNET, Fl. Guadeloupe & Martinique 1489. 1978; — *Corchorus acutangulus* LAMARCK, Encycl. 2: 104. 1786; BOLDINGH, Fl. D.W. Ind. Isl. 1: 125. 1909; JOHNSTON, Proc. Bost. Soc. Nat. Hist. 34(7): 234. 1909; URBAN, Symb. Ant. 4: 381. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 268. 1913; Fl. D.W. Ind. Isl. 2: 62. 1914; URBAN, Symb. Ant. 8: 406. 1920.

Annual or perennial, mostly decumbent herb or shrub with a firm taproot; stems woody, more or less hairy with simple or sometimes also dibrachiate or stellate hairs, sometimes the hairs in a longitudinal line. Leaves petiolate; blade ovate, roundish or oblong-lanceolate, acute at the apex, rounded at the base, 2—8.5 × 1.5—4 cm, the margin serrate to crenate, one or both of the lowest teeth ending in an elongate bristle, sparingly pilose, especially on the veins, or glabrate; petioles 0.5—10 (—20) mm long, hairy. Stipules subulate, 5—7 mm long. Flowers 1—3 opposite the leaves or aside the base of the petiole, nearly sessile. Bracts subulate, 5 mm long. Sepals linear, slightly widened near the top, cucullate and distinctly tipped, 4 × 0.5 mm, greenish or often reddish-purple. Petals yellow, obovate to spatulate, as long as the sepals. Stamens 10—12, inserted on the saucer-shaped receptacle; filaments filiform, 3 mm long; anthers minute, versatile, cordate at the base. Ovary 3-locular, 1.5 mm high; style cylindric, 2 mm long; stigma 3-lobed. Ovules numerous in each locule. Capsule 3-locular, narrowly oblong, up to 3 cm long, glabrous, narrowly 3-winged, 3-beaked at the apex, the beaks often bifid. Seeds discoid, scarcely angular, dark-brown, less than 1 mm long.

Tropics of both hemispheres.

Weed, often in muddy waste places.

BONAIRE: Sabana (Arnoldo 503, fl. May); near Rooi Pagaai (Stoffers 516, fl. Nov.); behind a dam near Jatoe Bacoe (Stoffers 644, fl. & fr. Nov.; 655, fr. Nov.); Rincón (Boldingh 7084, fr. Feb.).

CURACAO: hofje near Jan Thiel (Nagelkerken 380, fr. Jan.); Brakkeput (Arnoldo 39, fr. March).

ST. MARTIN: Prince Quarter, 100 m (Arnoldo 3177, fl. & fr. Dec.).

**Corchorus olitorius L.**

LINNAEUS, Spec. Plant. 529. 1753; GRISEBACH, Fl. Br. W. Ind. Isl. 97. 1859 ['1864']; BOLDINGH, Fl. D.W. Ind. Isl. 1: 125. 1909; Fl. Ned. W. Ind. Eil. 269. 1913; URBAN, Symb. Ant. 8: 406. 1920; BRITTON & MILLSPAUGH, Bahama Fl. 262. 1920; FAWCETT & RENDLE, 5(3): 87. 1926; WILLIAMS, Fl. Trinidad & Tobago 1: 106. 1929; LEON & ALAIN, Fl. Cuba 3: 233. 1953; GOODING *et al.*, Fl. Barbados 275. 1965; ADAMS, Flowering plants of Jamaica 456. 1972; Fournet, Fl. Guadeloupe & Martinique 1490. 1978.

Robust annual herb, up to 1.5 m or even more high; branchlets often woody towards the base, terete, glabrous. Leaves petiolate; blade ovate-oblong to lanceolate, acute at the apex, truncate at the base, 8—10 × 1—4 cm, membranaceous, margin mostly regularly serrate, the two lower teeth prolonged and pointing backwards and ending in a long bristle, glabrous but often sparingly pubescent on the veins; petiole 1—1.5 (—2) cm long. Flowers more or less oppositifolious, solitary or 2—3 together, sessile on a short peduncle; peduncle shorter than the petiole. Sepals linear, cucullate, pointed, 7—8 × 1 mm, the 2 mm long point included. Petals yellow, about as long as or slightly longer than the sepals, spatulate, the claw 1 mm long, ciliate. Stamens numerous, in groups; filaments 4—6 mm long; anthers cordate at the base, versatile, 0.75 mm long. Ovary cylindrical, striate, 4 mm high; style cylindrical, 2 mm long; stigma capitate. Ovules many in each locule. Capsule 5-locular, linear, cylindrical, 5—7 cm long, 5-angled, 10-ribbed, each valve ending in a long point, the whole forming a straight beak mostly 5-dentate at the apex. Seeds 20—40 in each locule, triangular-rhomboidal, roughish with raised lines, brownish, 1.5 × 0.7 × 0.5 mm.

Native of the Old World tropics; cultivated and naturalized in many tropical countries.

ST. EUSTATIUS: without loc. (van Groll-Meyer 269, fr.).

**Triumfetta Linnaeus, Spec. Plant. 444. 1753**

Shrubs with a tomentum of usually stellate hairs. Leaves alternate, petiolate; blades entire or lobed, 3—7-palmateveined, margin irregularly serrate and the basal serrations often glandular. Stipules usually large and persistent. Inflorescence mostly axillary, usually consisting of numerous aggregate dichasia. Bracts and bracteoles foliaceous. Flowers hermaphrodite or unisexual by abortion, actinomorphic. Sepals often with apical appendages. Petals sometimes wanting, free, imbricate, often ciliate at the base, glandless. Gonophore short or obsolete, glandular by 5 glands opposite the petals, the glands sometimes united into a ring or wanting. Stamens 5—many, in the pistillate flowers staminodial or wanting; filaments free; anthers versatile, with longitudinal dehiscence. Ovary superior, sessile, ellipsoid to orbicular, covered with spinules, 2—5-locular; style filiform; stigma entire or shortly 2—5-cleft. Ovules 2 in each locule. Fruit a capsule with many spines, indehiscent or loculicidally dehiscent, 2—5-locular and each locule 2-seeded to uni-locular and 1-seeded by abortion. Seeds compressed-ovoid to pyriform. Endosperm present.

A genus of about 150 species throughout the tropics.

Key to the species:

1. Bristles of the fruit retrorsely hispid..... 2  
Bristles of the fruit glabrous, the body cinereous-tomentose.. *T. rhomboidea*
2. Body of the fruit densely tomentose with stellate hairs; petals wanting; stem and axial leaf-surface with large and small stellate hairs..... *T. lappula*  
Body of the fruit glabrous or thinly puberulous, stems and upper leaf-surface with small stellate hairs..... *T. semitriloba*

**Triumfetta rhomboidea** Jacq.

JACQUIN, Enum. Syst. Plant. Carib. 22. 1760; GRISEBACH, Fl. Br. W. Ind. Isl. 96. 1859 ['1864']; BOLDINGH, Fl. D.W. Ind. Isl. 1: 125. 1909; URBAN, Symb. Ant. 4: 383. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 270. 1913; URBAN, Symb. Ant. 8: 407. 1920; ADAMS, Flowering plants of Jamaica 455. 1972; FOURNET, Fl. Guadeloupe & Martinique 1486, fig. 703. 1978; — *Triumfetta bartramia* LINNAEUS, Syst. Nat. ed. 10. 1044. 1759 nom. illig.; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 545. 1924; FAWCETT & RENDLE, Fl. Jamaica 5(3): 81, fig. 37. 1926; WILLIAMS, Fl. Trinidad & Tobago 1: 104. 1929; LEON & ALAIN, Fl. Cuba 3: 238. 1953.

Weedy undershrub, about 1 m or more high; older branches reddish-brown, rough, more or less ridged in age, scurfy clothed with short, dense, stellate tomentum. Leaves petiolate; blades broadly ovate to rhombic-ovate, sometimes obscurely or distinctly 3—5-lobed, abruptly acuminate at the apex, rounded or obtuse at the base, 2.5—9 cm long and up to nearly as wide, margin serrate, the teeth irregular, blunt, usually glandular near the base of the blade, minute stellate hairs on both surfaces and often simple hairs near the margins, upper surface dark-green, lower surface paler to greenish; petioles slender, up to 5 cm long, short stellate-tomentose, scurfy. Stipules linear, 3—5 mm long. Inflorescence axillary, the cymes of 3—5 cymules, condensed in dense nodose clusters; peduncle 1—2 mm long. Bracts narrowly ovate, about 1 cm long petiolate. Flowers hermaphrodite, c. 1 mm long pedicellate; younger buds obovoid, the older ones oblongoid, 5—7 mm long. Sepals narrowly-oblong, deeply cucullate, slightly stellate-pubescent to glabrescent without, brownish within. Petals yellow to brown, obovate to spatulate, shorter than the sepals, about 5—7 × 2—3 mm, with a 1—2 mm long claw. Gonophore very short, less than 0.5 mm long. Glands oblong, very small. Stamens 10 or 15; filaments glabrous, with 4—6 rows of retrorse serrations; anthers 0.5 mm long. Ovary orbicular, c. 1 mm in diam., with numerous recurved spinules; style 5—6 mm long; stigma acute. Fruits small, globose, in dense nodose clusters; body c. 3—4 mm in diam. at maturity, densely cinereous-tomentose, 3-locular; spines 75—100, 1—1.5 mm long, glabrous or nearly so. Seeds ovoid, about 1.5 × 1.0—1.5 mm.

Common weedy species of lowland tropics of both hemispheres; reported from most of the West Indian Islands.

In open places.

Vernacular name: wild maho (Windward Group).

SABA: Booby Hill, 600 m (Arnoldo 3292, fl. & fr. Dec.).  
Island?: (Boldingh s.n., fl.; probably St. Eustatius).

**Triumfetta lappula L.**

LINNAEUS, Spec. Plant. 444. 1753; GRISEBACH, Fl. Br. W. Ind. Isl. 95. 1859 ['1864']; DUSS, Fl. phan. Ant. franç. 88. 1897; JOHNSTON, Proc. Bos. Soc. Nat. Hist. 34(7): 234. 1909; URBAN, Symb. Ant. 4: 384. 1910; Symb. Ant. 8: 408. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 545. 1924; FAWCETT & RENDLE, Fl. Jamaica 5(3): 84. 1926; WILLIAMS, Fl. Trinidad & Tobago 1: 105. 1929; QUESTEL, Fl. Isl. St. Bartholomew 146. 1941; LEON & ALAIN, Fl. Cuba 3: 238. 1953; ADAMS, Flowering plants of Jamaica 456. 1972; FOURNET, Fl. Guadeloupe & Martinique 1486. 1978; — *Triumfetta semitriloba* auct. non JACQUIN; BOLDINGH, Fl. D.W. Ind. Isl. 1: 125. 1909 p.p.; Fl. Ned. W. Ind. Eil. 270. 1913 p.p.

Weedy undershrub, 0.5—1.5 m or even more high; branches with coarse, scurfy, ferruginous tomentum of stellate hairs. Leaves petiolate; blade broadly ovate and often pandurate, often with 3—5 shallow lobes or angles, 4—12 × 3—11 cm, acuminate at the apex of the terminal and lateral lobes, cuneate, obtuse or rounded at the base, the lower leaves truncate at the base, margin serrate, the serrations unequal and blunt, usually glandular, the upper surface slightly pubescent to tomentose by stellate hairs, the hairs near the margin often simple; petioles up to 9 cm long, stout, very densely and coarse tomentose. Stipules ovate-triangular, 5—6 mm long. Inflorescence axillary, the cymes of 2 or rarely 3 cymules, generally condensed; rhachis with tomentum as the branches; peduncle 2—3 mm long. Bracts elliptic, very rarely somewhat 3-lobed. Flowers hermaphrodite, 1—2 mm long pedicellate; the buds narrowly oblongoid, 3—5 mm long, slightly constricted in the middle, apical appendages very short or rarely wanting. Sepals (linear-)oblong, 4—5 mm long, densely stellate-tomentose without, glabrescent and yellowish within. Petals wanting. Gonophore obsolete. Glands wanting. Stamens 10, 15 or 5; filaments glabrous, smooth. Ovary ovoid, 1.0—1.5 mm long with numerous recurved spinules; style about 3 times as long as the ovary; stigma acute, sometimes very shortly 2-fid. Fruit globose, at maturity the body 3 mm in diam., slightly stellate-pubescent, 3—4-locular or 2-locular by abortion; spines c. 50, slender, 2—3 mm long, retrorsely pilosulous. Seeds pear-shaped, 1.5—2 mm long and 1.0—1.5 mm wide.

Widespread in tropical America, less abundant in the Old World tropics.

In open places, a nuisance in cultivated plots.

Vernacular name: wild maho (Windward Group).

SABA: between Windwardside and Hellsgate (Boldingh 1663, st. June).

St. EUSTATIUS: on the slope of the cliff near Oranjestad (Boldingh 56, fr. May).

St. MARTIN: from Cul de Sac to Marigot Hill, 0—200 m (Boldingh 2635, st. Aug.).

**Triumfetta semitriloba Jacq.**

JACQUIN, Select. Stirp. Amer. Hist. 147. 1763; GRISEBACH, Fl. Br. W. Ind. Isl. 96. 1859 ['1864']; DUSS, Fl. phan. Ant. franç. 89. 1897; BOLDINGH, Fl. D.W. Ind. Isl. 1: 125. 1909 p.p.; URBAN, Symb. Ant. 4: 383. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 270. 1913 p.p.; BRITTON & MILLSAUGH, Bahama Fl. 263. 1920; URBAN, Symb. Ant. 8: 408. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 545. 1924; FAWCETT & RENDLE, Fl. Jamaica 5(3): 82. 1926; WILLIAMS, Fl. Trinidad & Tobago 1: 104. 1929; QUESTEL, Fl. Isl. St. Bartholomew 146. 1941; LEON & ALAIN, Fl. Cuba



3: 237, fig. 100. 1953; GOODING *et al.*, Fl. Barbados 276. 1965; ADAMS, Flowering plants of Jamaica 455. 1972; FOURNET, Fl. Guadeloupe & Martinique 1488, fig. 704. 1978.

Undershrub, up to 1.5 m high; branches terete, glabrescent, reddish, branchlets and the axis of the inflorescence rough, scurfy, with short, coarse, stellate tomentum. Leaves petiolate; blade extremely varying in shape and size even on the same plant, usually 3-lobed or -angled, the upper narrower, midlobe acuminate to long-acuminate, lateral lobes blunt, or all lobes narrowly and gradually acuminate at the apex, broadly cuneate, rounded or subcordate at the base, margin serrate, serrations irregular and often glandular, especially near the base, rather densely and coarsely stellate-pubescent on both surfaces (2—) 4—12 (—20) cm long and up to 12 cm wide; petiole slender, 3—6 cm long with stellate hairs often in tufts. Stipules lanceolate, subulate at the apex, 5—8 mm long. Inflorescence axillary or rarely terminal, cymes of 2—3 cymules in the axils of the bracts. Bracts narrowly elliptic, very rarely slightly 3-lobed; peduncle 2—3 mm long. Flowers hermaphrodite, 3 mm long pedicellate; buds narrowly oblongoid, 5—8 mm long, apical appendages 1—2 mm long. Sepals narrowly oblong to elliptic, 5—8 mm long excluded the apical appendages, greenish but often crimson, with stellate pubescence without, yellow-brown and glabrescent within. Petals shorter than the sepals, elliptic to narrowly obovate. Gonophore 0.5—1 mm long, rather slender. Glands oblong. Stamens about 20; filaments glabrous, retrorsely 4-serrate. Ovary ovoid, 1 mm long, with numerous recurved spinules; style 6—8 mm long; stigma acute, rarely 3-partite. Fruit globose, body c. 3 mm in diam., 3-locular; spines 50—75, slender, 2—3 mm long, retrorsely pilosulus at the base from half to three-quarters of their length; each locule 2-seeded (by abortion). Seeds pear-shaped, c. 2 mm long and wide.

Tropical continental America from Florida southwards; West Indies; naturalized in the Pacific Islands and recorded from the Old World tropics.

Roadside weed, also in rough pastures and thickets.

Vernacular name: wild maho (Windward Group).

**SABA:** Windwardside (Arnoldo 3232, fl. & fr. Dec.); slope of The Mountain above Rendez-Vous, 600—680 m (Stoffers 3246, fl. & fr. May); gut between Hellsgate and Mastic Gut, 300—400 m (Boldingh 2063, fr. July); The Mountain near Windwardside, 600 m (Boldingh 2162, fr. July); id., 600—800 m (Boldingh 1792, fr. July); The Mountain, 400 m (Burgers 509, fl. & fr. March); Lower part of Bottom Hill, 250—275 m (Stoffers 2919, fr. Ap.; 3256, fl. May; Boldingh 1398, fr. July; 1415, fl. & fr. July).

**ST. EUSTATIUS:** The Quill, 500 m (Arnoldo 3197, fl. & fr. Dec.; Suringar s.n., fr. May [L]); top of The Quill (Boldingh 198, fr. June); slope of The Quill near Bengalen (Boldingh 711, fr. June; 645, st. June; Suringar s.n., fr. Ap. [L]); Cultuurvlakte (Suringar s.n., fr. Ap. [L]).

**ST. MARTIN:** Mount Paradise, 300—400 m (Boldingh 3215, fl. Dec.; 3243, st. Sept.); near Bethlehem (Boldingh 2665, st. Aug.); hills along western side of Cul de Sac, north of Sentry Hill (Stoffers 2566, fr. March; Suringar s.n., fr. May [L]); Naked Boy Hill, 50—200 m (Boldingh 2705, fr. Aug.); Marigot road (Suringar s.n., fr. May [L]).