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TILIACEAE

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TILIACEAE

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Trees or shrubs, rarely herbs, with stellate or simple hairs. Leaves alternate, simple, stipulate, rarely palmately lobed. Inflorescence axillary, cymose, rarely flowers solitary. Flowers bisexual, rarely unisexual (plants then monoecious), hypogynous, actinomorphic, bracteate. Sepals (3-) 4-5, free or connate into 4-5-lobed campanulate calyx, valvate, caducous. Petals (3-) 4-5, free, glandulose or not at the base, imbricate. Stamens (8-) 10-indefinite, free or basally connate into a tube or 5-10 bundles, inserted on thalamus or androphore; anthers dithecous. Ovary 2-5 (-10)-carpelled and loculed, syncarpous or rarely carpels free, sessile, superior; ovules anatropous, (1-) 2-many per locule on axile placenta; style simple with capitate or lobed or simple stigma. Fruit a variously dehiscent capsule or indehiscent fleshy drupe or berry, rarely a nut, with or without appendages. Seeds glabrous, mostly endospermic.

A family of 50 genera and nearly 500 species, distributed in tropical and temperate areas, mainly in Brazil and South East Asia. 2 genera and 3 species are reported from Libya.

+ Trees. Cyme with winged peduncle due to adnation of persistent membranous bract. Fruit an ovoid-globose nut. (cultivated) 1.**Tilia***
— Herbs, rarely undershurubs. Cyme without winged peduncle. Fruit a capsule 2.**Corchorus**

1. **TILIA***

Linn.,SP.Pl.514.1753; Gen.Pl.ed.5.230.1754

Trees. Leaves petiolate, with caducous stipules, oblique, cordate or truncate at the base, undivided, serrate or denticulate. Inflorescence an axillary or terminal cyme; peduncle winged due to adnation of persistent membranous bract. Flowers yellowish-white, actinomorphic, hypogynous, fragrant, protandrous. Sepals 5, free. Petals 5, free, rarely absent. Stamens 10-80, free or 5-adelphous; staminodes rarely present. Ovary pentacarpellary, 5-loculed; each locule 2-ovuled; style with 5-lobed stigma. Fruit a 1-3-seeded, 3-5-ribbed, pubescent nut.

A genus with c. 50 species, distributed in north temperate zone, south to Indo-China and Mexico; known from a single cultivated species in Libya.

*__Tilia platyphyllos__ Scop., Fl. Carn. ed. 2. 1.:373. 1772; Keith, Prelim. Check List Lib. Fl. 2:966. 1965.

Up to 50 m tall tree, with spreading branches and pubescent young twigs, hairs simple. Leaves broadly ovate, abruptly acuminate, cordate at the base, 6-12 × 5-11 cm, serrate, glabrescent above, pale green and pubescent beneath; petiole 3-5 cm long, hairy. Cyme usually (2-) 3 (-5)-flowered, pendulous. Bracts glabrous. Flowers yellow-white. Staminodes absent. Nut woody, subglobose to pyriform, strongly 3-5-ribbed, 8-10 mm long, tomentose.

Type: Described from Carniola (N. Yugoslavia).

Distribution: Central and South Europe to Turkey, N. Iran, North-Eastern Russia (Siberia), S.W. Sweden and Northern France.

A very variable species in amount of pubescence and sometimes split into a number of infraspecific ranks. Known from a few cultivated trees in Tripoli (Sidi Mesri). It is said to be drought intolerant (Keith, l.c.).

2. **CORCHORUS**

Linn.,Sp.Pl.529.1753; Gen.Pl.ed.5.234.1754.
Antichorus Linn.,Syst.Nat.ed.12.2:264.1767.

Herbs or undershrubs. Leaves stipulate, petiolate, serrate or crenate. Inflorescence a short peduncled, 1-5-flowered cyme. Flowers yellow, 4-5-merous, shortly pedicellate, bracteate. Sepals (4-) 5, free. Petals (4-) 5, free, equalling or longer than sepals. Stamens 8-many with versatile anthers. Ovary 2-5-carpellary, syncarpous, 2-5-loculed; locules multi-ovulate; style with simple, papillate or undulate stigma. Fruit a linear-oblong or subglobose, loculicidally dehiscent capsule. Seeds pendulous or horizontal, numerous.

Species c. 100, distributed in warm tropical and subtropical countries; 2 species are reported from Libya.

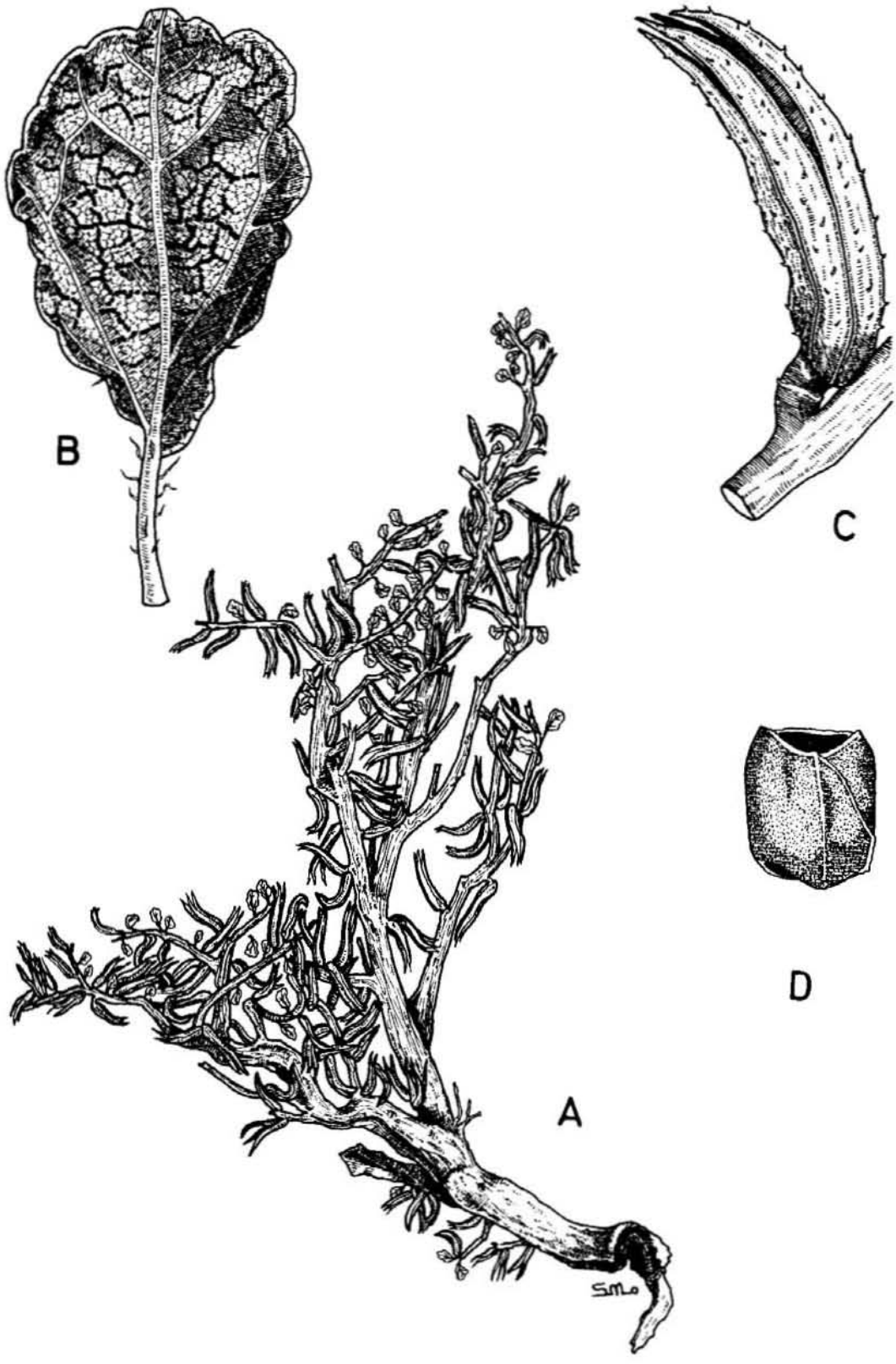


Fig.1 **Corchorus depressus:** A, fruiting plant x 2/3; B, a leaf x 10; C, fruit x 6; D, seed x 20.

+ Prostrate. Leaves elliptic to broadly elliptic, up to 2 cm long. Stamens 8-10. Capsule up to c. 20 × 2 mm, usually ± curved with c. 2 mm long beak — 1.**C.depressus**

— Erect. Leaves lanceolate to ovate-lanceolate, more than 2 cm long. Stamens numerous. Capsule usually 40-70 × 4-5 mm, usually straight, with 4-5 mm long beak — 2.**C.olitorius**

1. **Corchorus depressus** (Linn.) Stocks in Proc. Linn. Soc. 1:367. 1848; Christensen in Dansk. Bot. Arkiv. 4(3):34. 1922; Quezel & Santa, Nouv. Fl. Alger. 2:630. 1963 (Fig. 1).

Antichorus depressus Linn.,Mant.1:64.1767; *Corchorus antichorus* Raeusch, Nom.Bot.ed.3.158.1797.

A prostrate, glabrous perennial, with many, up to 30 cm long, spreading branches from the woody rootstock. Leaves with up to 2.5 cm long, filiform hairy petiole; lamina 3-nerved, elliptic to broadly elliptic, 4-18 (-20) × 2-9 mm, crenate-serrate, without basal setose appendages, obtuse; stipules linear-falcate, c. 2 mm long. Cymes 2 (-1)-flowered, leaf-opposed. Flowers 6-8 mm across, yellow; bracts linear. Sepals linear-oblong, 3-4 mm long, acute. Petals obovate-spathulate, equalling sepals, obtuse. Stames 8-10. Ovary tetracarpellary, 4-locular; style as long as the ovary with 4-lobed stigma. Capsule oblong-cylindrical, up to 20 × 2 mm, ± curved with c. 2 mm long beak, 4-loculed; locules transversally septate. Seeds balckish-grey, 1-1.5 mm long, obliquely-truncate.

Type: Herb.Linn.487/1 (LINN).

G-8 Gebel Uweinat, 7.11.1968, *L.Boulos* 3324 and 3290 (ULT).

Distribution: Cape Verde Islands, tropical & north Africa eastwards to Pakistan & India.

This species has been recorded for the first time from the arid south-eastern part of Libya (Gebel Uweinat) but may be found in Tibesti also.

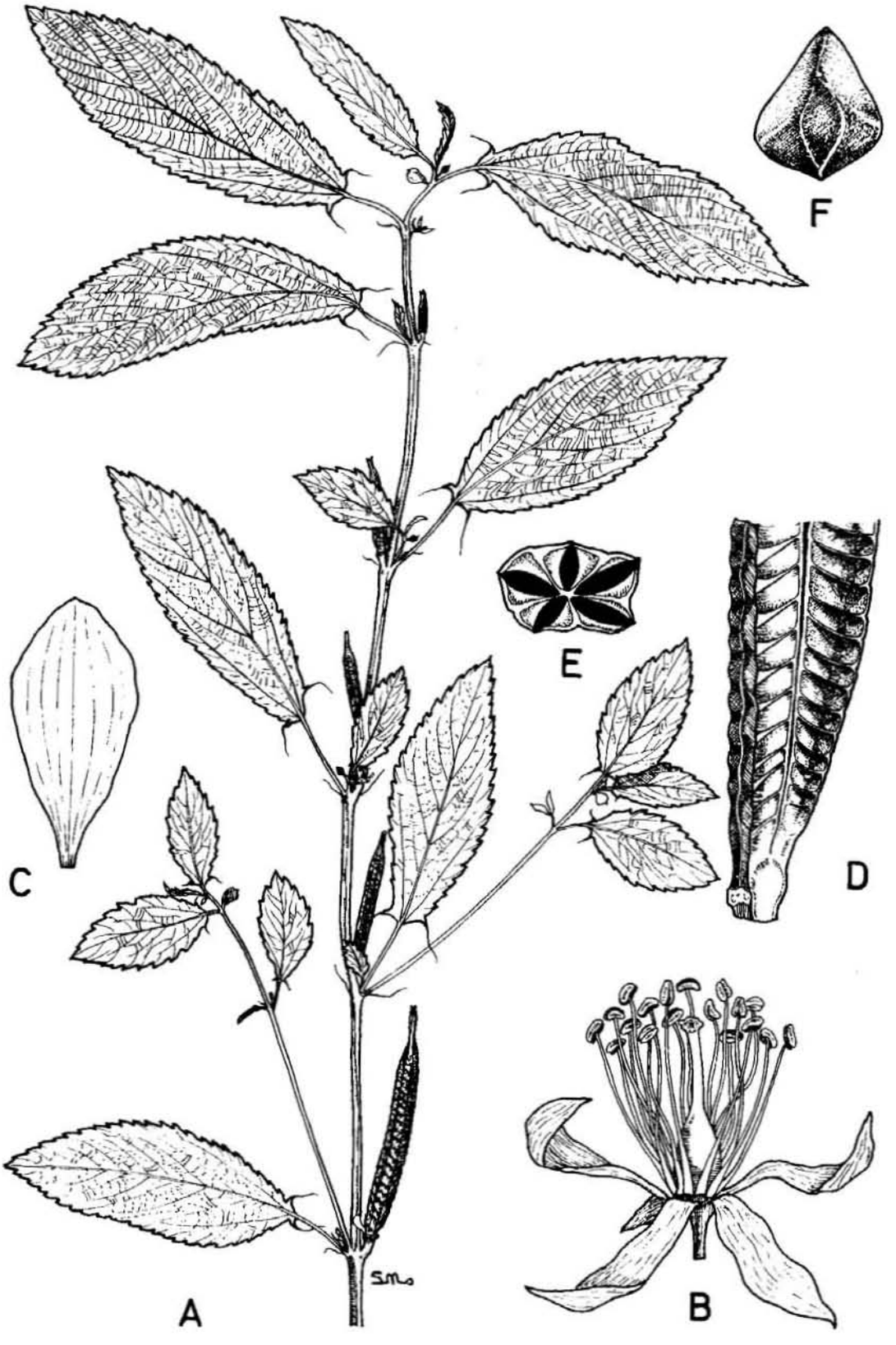


Fig. 2 **Corchorus olitorius:** A, fruiting branch x 2/3; B, flower (petals removed) x 6; C, petal x 6; D, portion of fruit (lower part) x 4; E, T.S. of fruit x 4; F, seed x 10.

A decoction of the plant is said to be used as an emolient and cooling agent or as a tonic with milk and sugar in Asia and Africa.
Flowers: February-May. *Vern.*Melokhiya.

Corchorus olitorius Linn., Sp. Pl. 529. 1753; Quezel & Santa, Nouv. Fl. Alger. 2:630. 1963; Keith, Prelim. Check List Lib. Fl. 1:385. 1965 (Fig.2).

An erect, up to c. 3 m tall, annual herb. Leaves with 1-3 cm long hairy petiole; lamina 3-5-nerved, lanceolate to ovate-lanceolate, 2.5-9 × 1.8-4 cm, serrate, basal serratures retrorse, prolonged downwards, acute or acuminate; stipules subulate, 8-12 mm long. Cyme 1-2-flowered, leaf-opposed. Flowers 12-15 mm across, yellow; bracts subulate. Sepals linear-oblong, 5-7 × 1.5-3 mm, keeled. Petals oblanceolate, 7-8 × 2.5-4 mm, obtuse. Stamens numerous, ± united at the base. Ovary 5-carpelled, 5-loculed, cylindric with 5-lobed stigma. Capsule up to 7 cm long, 4-5 mm across, with 4-5 mm long entire beak; locules 5, transversely septate. Seeds greenish-black.

Type: Described from India, Herb. Linn.691/5 (LINN).

G-8 Gebel Uweinat, 7.11.1968, *L.Boulos* 3176; 3209; 3253 (ULT).

Distribution: Almost all the tropical countries and northern Australia, either in cultivation or naturalized.

It has probably been introduced for cultivation from Sudan (Keith,l.c.) and seems naturalized in South-eastern parts (Gebel Uweinat) of Libya. It is cultivated for its tender shoots used as a pot herb in many parts of Africa including Libya. The plant furnishes fibre of commercial value employed in making ropes and bags, etc.
Flowers: October-December. *Vern.* Melokhiya Sheetani

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