FICUS TRIVIA (MORACEAE) REDEFINED

C. C. Berg

Ficus trivia Corner (Moraceae) is redefined, discussed, and compared with related species.

Keywords. China, Ficus pedunculosa-group, Vietnam.

INTRODUCTION

The Ficus pedunculosa-group of subg. Ficus sect. Ficus subsect. Frutescentiae Sata (see Berg & Corner, 2005: 90) constitutes a group of about 20 species, predominantly of shrubs or treelets with intermittent growth and *Terminalia*-branching. The species were weakly defined and, even with more material at hand, barely definable, partly due to the lack of prominent differentiating characters and considerable infraspecific variation leading to the establishment of numerous names. This situation has created a tangle of partly incorrectly applied names and confusing information in the literature and on herbarium sheets. Some disentangling has already been done (Berg, 2007) and is to be continued, particularly in the phytogeographic centre of this group, in order to test species delimitation in the field. Somewhere in the middle of the tangle there are several distinctive specimens, including the types of *Ficus cuneata* H.Lév. & Vaniot, a later homonym and, therefore, renamed F. trivia by Corner (1960), and of F. stapfii H.Lév. On labels of these and other specimens and in the literature (Rehder, 1929, 1936) these specimens have been linked to Ficus erecta Thunb., F. gasparriniana Miq., F. heteromorpha Hemsl., F. pandurata Hance and F. tuphapensis Drake.

The material to be included in *Ficus trivia* is characterised by the presence of relatively long stipules which are coriaceous, brown appressed-puberulous to subsericeous, and red when fresh (Léveillé, 1911), probably due to the abundance of submicroscopic red pluricellular trichomes. As in many other species of *Ficus* subsect. *Frutescentiae* the stipules are subpersistent at the shoot apices, with short internodes, and clustered to form a kind of terminal bud. Due to their size and texture (and, when fresh, colour) these clusters of stipules are conspicuous in *Ficus trivia*, as depicted in Chang (1984: fig. 12,1). There are two forms, defined by the diameter of the petioles, which in some collections are about twice as thick as in others. This difference led to the description of *Ficus trivia* var. *temuipetiola* S.S.Chang, which is depicted in Chang (1984:

Bergen Museum, University of Bergen, Allégate 41, 5007 Bergen, Norway; Nationaal Herbarium Nederland, Universiteit Leiden Branch, PO Box 9514, Leiden, The Netherlands. E-mail: berg@nhn.leidenuniv.nl

fig. 12,2). One of the syntypes of *Ficus cuneata*, *Bodinier* 2363, was designated as a lectotype by Rehder (1929: 129) and consequently for *F. trivia* by Corner (1960: 427). This specimen has relatively slender petioles (1–1.2 mm in diameter) but distinctly pedunculate figs. The other syntype, *Cavalerie et al.* 1531, has petioles twice as thick (c.2 mm).

It is not clear from descriptions what *Ficus trivia* var. *laevigata* S.S.Chang (1984: 118) actually is, even with the emended description adopted by Zhou Zhekun & Gilbert (2003: 55). This increases doubt about the identity and homogeneity of the taxon adopted as *Ficus trivia* in the latter publication.

Ficus trivia shows close affinities to the more common *F. erecta* which differs in the often longer petioles (which are usually noticeably variable in length on the same twig), the chartaceous and white-hairy stipules, the more markedly acuminate apex of the lamina, the generally longer peduncle, and often also the larger fig receptacle.

The species also shows affinities to the far more common *Ficus heteromorpha* which differs in having petioles of variable length on the same twig, the (coriaceous) stipules which are mostly only ciliolate, and by the sessile figs.

Ficus bistipulata Griff., which includes material that had been identified as *F. gasparriniana* (currently a synonym of *F. neriifolia* Sm.; see Berg, 2007), is another species showing affinities to *F. trivia*, from which it differs in the subglabrous and chartaceous stipules, and the distinctly acuminate apex of the lamina.

Ficus pandurata differs from *F. trivia* in the chartaceous and glabrous stipules, the sparse or absent indumentum on the upper surface of the lamina, the sparse indumentum confined to the main veins of the lamina beneath, and the flat margin of the lamina.

Ficus tuphapensis differs from *F. trivia* in the densely whitish to brownish hairy semi-amplexicaul to lateral stipules, and in the leafy twig hairs of similar to slightly different length.

The redefinition of *Ficus trivia* will help to define other species of the *F. pedunculosa*-group, at least for those mentioned above.

SPECIES REDEFINITION

- Ficus trivia Corner, Gard. Bull. Straits Settlem. 17: 427 (1960). Ficus cuneata H.Lév. & Vaniot, Mem. Acad. Barcelona 6: 149 (1907), non Blume (1825); H.Lév., Repert. Spec. Nov. Regni Veg. 4: 84 (1907); Rehder, J. Arnold Arbor. 10: 128 (1929); Rehder, J. Arnold Arbor. 17: 78 (1936). Type: China, Guizhou, Kouy-Yang Mts., 16 v 1898, E. Bodinier 2363 (lecto E, designated by Rehder, 1929). Syntype: China, Guizhou, Pin-Fa, 8 vii 1903, J. Cavalerie & Fortunat 1351 (E).
- *Ficus stapfii* H.Lév., Repert. Spec. Nov. Regni Veg. 9: 325 (1911); Rehder, J. Arnold Arbor. 10: 131 (1929); Rehder, J. Arnold Arbor. 17: 81 (1936). Type: Guizhou, Hoang-Tsao-Pa, vi 1909, *J. Esquirol* 1556 (holo E).

Shrub or treelet up to 5 m tall, with internodes mostly clearly different in length, sometimes less so, and then the leaves \pm tufted at the end of branches. *Leafy twigs*

4–5 mm thick, densely to sparsely minutely white puberulous and densely to sparsely brownish to whitish (appressed-)puberulous to hirtellous, smooth, often with conspicuous lenticels below the scars of the stipules; periderm persistent. Leaves spirally arranged; lamina subobovate to oblong, $7-15 \times 2.5-7$ cm, chartaceous to subcoriaceous, apex short-acuminate to subacute to rounded, base obtuse to rounded, margin (sub)entire or minutely and faintly denticulate towards the apex; upper surface brownish to whitish puberulous to hispidulous, \pm scabrous to smooth, lower surface densely to sparsely brownish (appressed-)puberulous on the veins, \pm scabrous to smooth; cystoliths only beneath; lateral veins 5–7 pairs, basal pair different from the other lateral veins, up to 1/3-1/2 the length of the lamina, branched (or unbranched if running close to the margin), most other lateral veins branched or forked away from the margin, tertiary venation loosely scalariform, prominent; waxy glands in the axils of the basal lateral veins; petiole (0.5-)1-3.5 cm long, 1–2 mm thick, brownish puberulous to hirtellous to subglabrous, smooth, the epidermis persistent; stipules 1–1.3 cm long, amplexicaul, coriaceous, densely to sparsely brownish (appressed-)puberulous to subsericeous outside, whitish ciliolate, caducous or subpersistent and tufted at apices of leafy twigs. *Figs* axillary, solitary; with a peduncle 0.2-0.7 cm long or subsessile; basal bracts 3, 1.5-2 mm long, brownish puberulous; receptacle ovoid to subglobose, 0.5-1 cm in diameter when dry, non-stipitate, pale brownish puberulous, red(dish) at maturity, apex slightly protracted or not, ostiole 2-3 mm in diameter, slightly prominent, the outer ostiolar bracts (becoming) patent; internal hairs sparse, short. Tepals dark red, glabrous.

Distribution. China (Guizhou, Yunnan; and according to Corner (1960) also Guangxi and Guangdong), Vietnam.

Habitat and ecology. Montane (e.g. coniferous) forest, at altitudes between 1200 and 2300 m; association with calcareous substrate is not certain.

Additional specimens examined. CHINA. **Yunnan**: 7000 ft, *Henry* 9908 (E). VIETNAM. Quang Ba Distr., Bat Dai Son, 1310 m, 6 iv 2000 (st), *Harder et al.* 5262 (BG); Ha Giang Prov., Meo Vac Distr., Shung Cha Municipality, nr. Lo Loi Phin, 1200–1250 m, 5 x 1999, *Hiep* 3331 (K).

An image of the lectotype is available online through the Herbarium Catalogue of the Royal Botanic Garden Edinburgh. The syntypes of *Ficus cuneata* belong to the same species, although to different forms. Neither syntype belongs to *Ficus heteromorpha* as stated by Corner (1960, 1965). The type of *Ficus stapfii* has incorrectly been included in *F. gasparriniana* Miq. var. *viridescens* (H.Lév. & Vaniot) Corner (1965: 52). However, *Ficus congesta* H.Lév. & Vaniot (1914/15: 429), also referred to the synonymy of *F. gasparriniana* Miq. var. *viridescens* (H.Lév. & Vaniot) by Corner (1965), has a syntype from China, Guizhou, Tien-sen-Kiao, 900 m, v 1910, *J. Esquirol* 2053 (E), which belongs to *F. bistipulata* Griff. (see Berg, 2007). The type of *Ficus cuneata* var. *congesta* H.Lév. & Vaniot (Léveillé, 1907: 84; Léveillé & Vaniot, 1907: 149), *Cavalerie* s.n. from China, Pin-fa, has not been traced (Rehder,

C.C.BERG

1929), and its identity remains dubious. The identity of *Ficus trivia* var. *laevigata* S.S.Chang, in particular as defined by Zhou Zhekun & Gilbert (2003), might represent *F. erecta* to which numerous collections in Chinese herbaria under the name *F. trivia* belong; this is confirmed by the illustration of *F. trivia* in Wu Zheng-yi *et al.* (2004), which lacks the characteristic feature of this species, the accumulation of long stipules.

Acknowledgements

The author is indebted to the European Commission's Research Infrastructure Action via the SYNTHESYS Project which financed a visit to the Royal Botanic Garden Edinburgh that triggered the present study.

REFERENCES

- BERG, C. C. (2007). Precursory taxonomic studies on *Ficus (Moraceae)* for the Flora of Thailand. *Thai For. Bull. (Bot.)* 35: 4–28, t. 1–4.
- BERG, C. C. & CORNER, E. J. H. (2005). *Flora Malesiana*, Ser. I, 17(2). Leiden: Nationaal Herbarium Nederland.
- CHANG, S. S. (1984). New taxa of Moraceae from China (II). Guihaia 4: 113-122.
- CORNER, E. J. H. (1960). Taxonomic notes on *Ficus* Linn., Asia and Australasia, III. subg. *Ficus* and sect. *Ficus. Gard. Bull. Straits Settlem.* 17: 416–441.
- CORNER, E. J. H. (1965). Check-list of *Ficus* in Asia and Australasia with keys to identification. *Gard. Bull. Straits Settlem.* 21: 1–186.
- LÉVEILLÉ, H. (1907). Ficus genus speciebus chinensibus auctum. Repert. Spec. Nov. Regni Veg. 4: 82–86.
- LÉVEILLÉ, H. (1911). Decades Plantarum Novarum. LIV–LVIII. Repert. Spec. Nov. Regni Veg. 9: 321–330.
- LÉVEILLÉ, H. & VANIOT, E. (1907). Los Ficus de Chine. Mem. Real Acad. Ci. Barcelona, Ser. 3, 6: 147–153.

LÉVEILLÉ, H. & VANIOT, E. (1914/15). Flore du Kouy-Tchéou. Le Mans.

- REHDER, A. (1929). Notes on the ligneous plants described by H. Léveillé from eastern Asia. J. Arnold Arbor. 10: 108–132.
- REHDER, A. (1936). Notes on the ligneous plants described by H. Léveillé from eastern Asia. J. Arnold Arbor. 17: 53–82.
- WU, ZHENG-YI, RAVEN, P. H. & HONG, DEYUAN (2004). Flora of China, illustrations, vol. 5. Beijing: Science Press, and St Louis: Missouri Botanical Garden Press.
- ZHOU, ZHEKUN & GILBERT, M. G. (2003). Moraceae. In: WU, ZHENG-YI & RAVEN, P. H. (eds) *Flora of China*, vol. 5. Beijing: Science Press, and St Louis: Missouri Botanical Garden Press.

Received 30 August 2010; accepted for publication 23 February 2011