

# Survey of *Lagerstroemia* L. (Lythraceae) in Indochina (excl. Thailand) with the description of *Lagerstroemia densiflora*, sp. nov., a new species from Vietnam

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Published on 30 December 2016

De Wilde W. J. J. O. & Duyfjes B. E. E. 2016. — Survey of *Lagerstroemia* L. (Lythraceae) in Indochina (excl. Thailand) with the description of *Lagerstroemia densiflora*, sp. nov., a new species from Vietnam. *Adansonia*, sér. 3, 38 (2): 241-255. <https://doi.org/10.5252/a2016n2a8>

## ABSTRACT

*Lagerstroemia* L. (Lythraceae) in Indochina (Cambodia, Laos, and Vietnam) comprises 21 species. Six species, namely *Lagerstroemia densiflora* W.J.de Wilde & Duyfjes, sp. nov., *L. gagnepainii* Furtado & Srisuko, *L. kratiensis* W.J.de Wilde & Duyfjes, *L. micrantha* Merr., *L. lecomtei* Gagnep., *L. petiolaris* Pierre ex Laness., only occur in Indochine. *Lagerstroemia densiflora* W.J.de Wilde & Duyfjes, sp. nov., from Vietnam, is new to science; it differs from the most similar *Lagerstroemia duperreana* Pierre ex Gagnep. by a compact and densely flowered inflorescence, the calyx tube smooth and unridged, the pseudopedicel at anthesis 3-4 mm long, in fruit 4-5 mm long, and the glabrous capsules with a smooth surface. For each species the original reference, typification, spot- characters and distribution are presented. There are two keys to the species, one for flowering and one for fruiting material.

## KEY WORDS

Lythraceae,  
*Lagerstroemia*,  
Indochina,  
Cambodia,  
Laos,  
Vietnam,  
lectotypification,  
new species.

## RÉSUMÉ

*Étude de Lagerstroemia* L. (Lythraceae) en Indochine (à l'exception de la Thaïlande) et description d'une nouvelle espèce du Vietnam, *Lagerstroemia densiflora*, sp. nov.

Dans cette mise au point, 21 espèces du genre *Lagerstroemia* L. (Lythraceae) sont reconnues en Indochine (Cambodge, Laos et Vietnam). Six espèces, à savoir *Lagerstroemia densiflora* W.J.de Wilde & Duyfjes, sp. nov., *L. gagnepainii* Furtado & Srisuko, *L. kratiensis* W.J.de Wilde & Duyfjes, *L. micrantha* Merr., *L. lecomtei* Gagnep. et *L. petiolaris* Pierre ex Laness. sont endémiques d'Indochine. *Lagerstroemia densiflora* W.J.de Wilde & Duyfjes, sp. nov., de Vietnam, est nouvelle pour la science, celle-ci ressemble à *L. duperreana* Pierre ex Gagnep., mais en diffère par son inflorescence compacte et multiflore, son tube calicinal lisse et non côtelé, son pseudopédicelle de 3-4 mm de long à l'anthèse, et de 4-5 mm de long en fruit, sa capsule à surface lisse et glabre. Pour chaque espèce sont mentionnés les références bibliographiques, ainsi que la typification, quelques caractères typiques, et la distribution. Deux clés sont présentées, l'une pour les spécimens en fleurs et l'autre pour les spécimens en fruits.

## MOTS CLÉS

Lythraceae,  
*Lagerstroemia*,  
Indochina,  
Cambodge,  
Laos,  
Vietnam,  
lectotypification,  
espèce nouvelle.

INTRODUCTION

In connection with the study of *Lagerstroemia* L. for Flora of Thailand, also those taxa of Indochina were taken into account. By going through the material in the Paris herbarium one unidentified collection from Vietnam appeared to represent an undescribed species.

Based on the genus account by Furtado & Srisuko (1969) and the revision of *Lagerstroemia* for the *Flora of Thailand* (De Wilde *et al.* 2014) it appeared that the flora treatment by Gagnepain (1921) for Indochina needed some revision as expressed in the keys and enumeration of species presented below.

With the new species *Lagerstroemia densiflora*, sp. nov., the number of *Lagerstroemia* species in Cambodia, Laos and Vietnam now is 21. In the account for Indochina by Gagnepain (1921) it was 27, in the revision by Furtado & Srisuko (1969) it was 23. For Thailand De Wilde *et al.* (2014) accepted 18 species.

In the enumeration, for each species the relevant literature, typification, a brief compilation of characters for comparison (under the heading ‘Spot-characters’), distribution, and miscellaneous notes are presented. For species descriptions we refer to Gagnepain (1921), Furtado & Srisuko (1969), De Wilde & Duyfjes (2013), and De Wilde *et al.* (2014).

KEY TO FLOWERING SPECIMENS OF *LAGERSTROEMIA* L. IN INDOCHINA

(Petals measured in the dry state; the pseudopedicel is the narrowed shorter or longer stipe of the base of the calyx tube)

- 1. Ovary glabrous ..... 2
- Ovary hairy ..... 12
- 2. Flowers small, the bud 1.5-2 mm diam. .... 13. *L. micrantha* Merr.
- Flowers larger, the bud 5 mm diam. or more ..... 3
- 3. Flower bud (excluding pseudopedicel) globose ..... 4
- Flower bud obovoid ..... 7
- 4. Flower bud smooth, un-ridged, glabrous, 5-7 mm diam. Petals with claw *c.* 10 mm long, claw about as long as blade (cultivated) ..... 8. *L. indica* L.
- Flower bud ridged, short-hairy or glabrous, 5-15 mm diam. Claw of petals much shorter than the blade ..... 5
- 5. Flower bud *c.* 5 mm diam., thinly hairy; petals *c.* 15 mm long ..... 7. *L. gagnepainii* Furtado & Srisuko
- Flower bud 8-15 mm diam., hairy or glabrous; petals 20 mm long or more ..... 6
- 6. Flower bud glabrous, 12-15 mm diam. .... 12. *L. macrocarpa* Kurz
- Flower bud thinly hairy, 8-11 mm diam. .... 17. *L. speciosa* (L.) Pers.
- 7. Flower bud (calyx tube) not ridged. Inflorescence compact ..... 4. *L. densiflora* W.J.de Wilde & Duyfjes, sp. nov.
- Flower bud (calyx tube) ridged, sometimes faintly ridged only. Inflorescence compact or lax ..... 8
- 8. Ridges (faint) 12, twice the number of calyx lobes ..... 5. *L. duperreana* Pierre ex Gagnep.
- Ridges 5-9, all alternating with as many calyx lobes ..... 9
- 9. Flowers large, petals 20 mm long or more. Calyx lobes (6-)7-9 ..... 15. *L. ovalifolia* Teijsm. & Binn.
- Flowers smaller, petals less than 10 mm long. Calyx lobes (5 or) 6 ..... 10
- 10. Calyx with large ear-like auricles, at anthesis resembling calyx lobes, alternating with the calyx lobes ..... 20. *L. venusta* Wall. ex C.B. Clarke
- Calyx without large auricles ..... 11
- 11. Inflorescences compact, short, 3-8 cm long. Leaves beneath with simple hairs all over ..... 21. *L. villosa* Wall. ex Kurz
- Inflorescences lax, 8-25 cm long. Leaves glabrescent or with minute hairs along the midrib beneath ..... 3. *L. crispa* Pierre ex Laness.
- 12. Calyx lobes glabrous within ..... 13
- Calyx lobes (in upper part) *hairy within* ..... 15
- 13. Petiole 1-2 cm long. Petals including claw *c.* 30 mm long ..... 16. *L. petiolaris* Pierre ex Laness.
- Petiole less than 1 cm long. Petals including claw less than 30 mm long ..... 14
- 14. Lower surface of leaves hairy; venation scalariform. Calyx tube with low ridges ..... 19. *L. tomensosa* C.Presl
- Lower surface of leaves glabrous; venation reticulate. Calyx tube with conspicuous winged ridges ..... 9. *L. kratensis* W.J.de Wilde & Duyfjes
- 15. Calyx tube not or obscurely ridged ..... 16
- Calyx tube with prominent ridges or wings ..... 19

16. Inflorescences mostly lateral. Margin of petals fimbriate. Leaf venation scalariform (introduced) ..... 11. *L. loudonii* Teijsm. & Binn.  
 — Inflorescences terminal. Margin of petals entire or erose. Leaf venation scalariform or reticulate ..... 17
17. Flower bud obovoid, sessile, i.e. (almost) without pseudopedicel. Leaf venation scalariform ..... 1. *L. calyculata* Kurz  
 — Flower bud ± abruptly narrowed into (short) pseudopedicel. Leaf venation reticulate ..... 18
18. Petals 15-30 mm long. Longer stamens 6, radially dimorphic ..... 2. *L. cochinchinensis* Pierre ex Laness.  
 — Petals 12-15 mm long. Longer stamens 9-11, asymmetrically dimorphic ..... 14. *L. noei* Craib
19. Calyx tube with 5 or 6 ridges ..... 10. *L. lecomtei* Gagnep.  
 — Calyx tube with 12(-14) ridges ..... 20
20. Calyx tube obtusely (broadly) ridged, without or with small auricle (knob-like appendix) at the sinuses between the lobes. Ridges not winged ..... 6. *L. floribunda* Jack  
 — Calyx tube acutely ridged, in bud with small inward-curved auricle at the sinuses. Ridges winged, wings 2-3 mm high ..... 18. *L. spireana* Gagnep.

KEY TO FRUITING SPECIMENS OF *LAGERSTROEMIA* L. IN INDOCHINA

(The length of the capsule is measured as the portion of the visible part, hence except the portion hidden within the calyx tube; capsule not known in *Lagerstroemia crispa*, possibly shagreen; in *Lagerstroemia gagnepainii* – not in key – capsule possibly smooth, not shagreen, and in *Lagerstroemia micrantha*, capsule possibly smooth, not shagreen.)

1. Capsule small, c. 4 mm long (capsule not seen) ..... 13. *L. micrantha* Merr.  
 — Capsule larger, c. 8 mm long or more ..... 2
2. Petiole 1-2 cm long (leaves small or medium, c. 10 cm long) ..... 16. *L. petiolaris* Pierre ex Laness.  
 — Petiole 1 cm long or less (longer than 1 cm when leaves larger in *L. macrocarpa*) ..... 3
3. Infructescence with crowded capsules (compact) ..... 4  
 — Infructescence lax ..... 5
4. Capsule surface shagreen. Infructescence ± globose ..... 21. *L. villosa* Wall. ex Kurz  
 — Capsule surface smooth, not shagreen. Infructescence longer than broad ..... 4. *L. densiflora* W.J.de Wilde & Duyfjes, sp. nov.
5. Capsule surface smooth, not shagreen ..... 6  
 — Capsule surface shagreen ..... 19
6. Infructescences some or all lateral. Leaf venation scalariform ..... 7  
 — Infructescences terminal. Leaf venation various ..... 8
7. Fruiting calyx lobes hairy at apex within ..... 11. *L. loudonii* Teijsm. & Binn.  
 — Fruiting calyx lobes completely glabrous within ..... 18. *L. tomentosa* C.Presl
8. Capsule large, (15-)20-40 mm long ..... 9  
 — Capsule smaller, 10-18 mm long ..... 10
9. Capsule 25-40 mm long; fruiting calyx lobes c. 2 mm thick ..... 12. *L. macrocarpa* Kurz  
 — Capsule 15-25 mm long; fruiting calyx lobes less than 1 mm thick ..... 17. *L. speciosa* (L.) Pers.
10. Small tree or shrub. [Cultivated.] ..... 8. *L. indica* L.  
 — Tree, growing in the wild ..... 11
11. Pseudopedicel in fruit 7-12 mm long ..... 5. *L. duperreana* Pierre ex Gagnep.  
 — Pseudopedicel in fruit generally shorter, or almost absent ..... 12
12. Calyx tube ridges faint or absent ..... 13  
 — Calyx tube ridges obvious, blunt, sharp, or winged ..... 15
13. Pseudopedicel in fruit 1 mm long or less. Leaf venation scalariform ..... 1. *L. calyculata* Kurz  
 — Pseudopedicel in fruit 2-6 mm long ..... 14
14. Tree 4-30 m tall. Infructescence usually many-fruited (longer stamens 6, symmetrically dimorphic) ..... 2. *L. cochinchinensis* Pierre ex Laness.

- Shrubs or small trees 1-3 m tall. Infructescence usually few-fruited (longer stamens 6-9, asymmetrically dimorphic) ..... 14. *L. noei* Craib
- 15. Calyx tube with 6 ridges or wings..... 16
- Calyx tube with 12 ridges or wings (sometimes fewer in *L. tomentosa*) ..... 17
- 16. Fruiting calyx lobes (sepals) glabrous within ..... 9. *L. kratiensis* W.J.de Wilde & Duyfjes
- Fruiting calyx lobes hairy in upper part within ..... 10. *L. lecomtei* Gagnep.
- 17. Lower leaf surface hairy; venation scalariform..... 19. *L. tomentosa* C.Presl
- Lower leaf surface glabrous; venation not or indistinctly scalariform ..... 18
- 18. Calyx tube ridges obtuse..... 6. *L. floribunda* Jack
- Calyx tube ridges acute or winged ..... 18. *L. spireana* Gagnep.
- 19. Calyx lobes 7-9 ..... 15. *L. ovalifolia* Teijsm. & Binn.
- Calyx lobes 6..... 20
- 20. Calyx lobes alternating with as many calyx lobe-resembling auricles; calyx tube without or with faint ridges ..... 20. *L. venusta* Wall. ex C.B.Clarke
- Auricles absent; calyx tube ridges in fruit not known, presumably undulate (capsule not seen, possibly shagreen) ..... 3. *L. crisa* Pierre ex Laness.

## MORPHOLOGY

Two morphological peculiarities of *Lagerstroemia*, not addressed by previous authors, but here used in characterising species, concern: 1) the orientation and length of the stamens in the flower at anthesis; and 2) the surface structure of the dry fruit (capsule) e.g. as seen in herbarium specimens. Both features are explained in De Wilde & Duyfjes (2013) and De Wilde *et al.* (2014); they are briefly recalled here.

1) The numerous stamens in a *Lagerstroemia* flower can be all of the same shape and size or the outer stamens are larger and/or of a different colour, and they may be placed in a specific position rendering them asymmetric. The main positions can be summarized as shown in Figure 1.

2) The surface structure of the ripe capsule can be smooth (although variously wrinkled on drying), or what we call here 'shagreen', typical for certain species. In the latter case the pale brownish fruit valves decay into fibres, and the surface shows a structure of fine sub-parallel vertical wrinkles, in the Indochinese species found in: *Lagerstroemia crisa* Pierre ex Laness. (presumably), *L. ovalifolia* Teijsm. & Binn., *L. venusta* Wall. ex C.B.Clarke, and *L. villosa* Wall. ex Kurz.

## SYSTEMATICS

### 1. *Lagerstroemia calyculata* Kurz

*Journal of the Asiatic Society of Bengal. Part 2. Natural History* 41 (4): 307 (1872); *Forest Flora of British Burma* 1: 522 (1877). — Gagnep., *Flore générale de l'Indo-Chine* 2: 959 (1921). — Craib, *Flora Siamensis Enumeratio* 1: 719 (1931). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 306, fig. 44 (1969). — P.H.Hô, *An Illustrated Flora of Vietnam* 2 (1): 27, fig. 3670 (1992). — S.Gardner *et al.*, *A Field Guide to Forest Trees of Northern Thailand*: 203 (2000). — W.J.de Wilde *et al.*, *Flora of Thailand* 11 (4): 557, fig. 4 (2014). — Lectotype (here designated): Burma, Karen Country and Hills, Tonkyeghat, Pellowa Zaik, *Kurz 1344* (holo-, M[M-0146394!]; isolecto-, CAL, M!), see Note.

*Lagerstroemia angustifolia* Pierre ex Laness., *Les Plantes utiles des Colonies françaises*: 322 (1886). — Gagnep., *Notulae Systematicae* 3: 355 (1918). — Lectotype (designated by De Wilde & Duyfjes 2013: 98): Vietnam (Bien Hoa, Baochiang), *Pierre 4993* (holo-, P[P04711217!]; isolecto-, Al, BM! GH!, KI, NY!).

SPOT-CHARACTERS. — Tall tree, stem fluted with whitish flaking bark; leaf venation scalariform; flowers nearly sessile; pseudopedicel 1 mm long or less; calyx tube not ridged, densely covered with long stellate-dendroid hairs; calyx lobes densely hairy in upper part within; capsules nearly sessile, small, only *c.* 10 mm long.

DISTRIBUTION. — Myanmar, Thailand, Cambodia, Laos, Vietnam, and northern Peninsular Malaysia.

## NOTE

The typification of *Lagerstroemia calyculata* is somewhat problematic as Kurz mentions in his protologue only 'Martaban' (Burma). The only Kurz collections from Burma of *Lagerstroemia calyculata* known to us are in Calcutta (*Kurz 1344/6*, reads 'Pegu' [*vide* Furtado & Srisuko 1969]) and in Munich (*Kurz 1344*, reads 'Karen Country and Hills. Tonkyeghat, Pellowa Zaik', [2 duplicate-sheets, M-0146394, M-0146395]).

### 2. *Lagerstroemia cochinchinensis* Pierre ex Laness.

*Les Plantes utiles des Colonies françaises*: 321 (1886). — Gagnep., *Notulae Systematicae* 3: 356 (1918); *Flore générale de l'Indo-Chine* 2: 956 (1921). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 308, fig. 45 (1969). — P.H.Hô, *An Illustrated Flora of Vietnam* 2 (1): 28, fig. 3671 (1992). — S.Gardner *et al.*, *A Field Guide to Forest Trees of Northern Thailand* 205: 446 (2000). — W.J.de Wilde *et al.*, *Flora of Thailand* 11 (4): 559 (2014). — Lectotype (first-step designated by Furtado & Srisuko [1969]; second-step here designated): Vietnam (cult. in hort. bot. Saigonensis), *Pierre 820* (holo-, P[P01901961!]; isolecto-, P[P01901962, P01901963, P01901964!]).

*Lagerstroemia cochinchinensis* Pierre var. *ovalifolia* Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 310, fig. 46 (1969). — Type: Thailand, Kanburi, *Phusomsaeng ('PS') 2101* (holo-, SING!; iso-, BKF!).

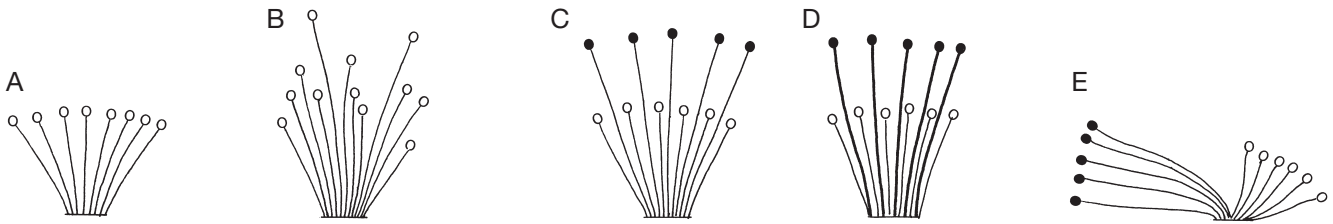


FIG. 1. — Stamens in *Lagerstroemia* (schematically): **A**, stamens monomorphic, all stamens similar in length; **B**, stamens monomorphic, all stamens more or less similar in length; **C, D**, stamens radially dimorphic, outer stamens longer than inner ones, filaments of outer ones in **D** also thicker; **E**, stamens asymmetrically dimorphic, outer stamens longer than inner ones and directed to one side.

*Lagerstroemia balansae* Koehne, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 23 (Beiblätter 57): 35 (1897). — Gagnep., *Flore générale de l'Indo-Chine* 2: 957 (1921). — Craib, *Florae Siamensis Enumeratio* 1: 718 (1931). — P.H.Hô, *An Illustrated Flora of Vietnam* 2 (1): 28 (1992). — H.N.Qin & S.A.Graham, *Flora of China* 13: 278 (2007). — H.N.Qin *et al.*, *Flora of China Illustrations* 13: fig. 294: 1-2 (2008). — Type: Vietnam (Tonkin), *Balansa* 3865 (K!; location of holotype not indicated).

*Lagerstroemia noi* Craib var. *longifolia* Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 314, fig. 49 (1969). — Type: Thailand, Loei, *Dee* 707 (holo-, SING!; iso-, BKF!).

SPOT-CHARACTERS. — Bark light brown, flaking; inflorescences rust coloured densely stellate-dendroid hairy; flower buds obconical; pseudopedicel 2-5 mm long; petals purple, fading white with age; stamens radially dimorphic; capsules *c.* 15 mm long, mostly hairy at apex.

DISTRIBUTION. — Myanmar, Thailand, China (Hainan), Cambodia, Laos, Vietnam.

### 3. *Lagerstroemia crispa* Pierre ex Laness. (Figs 2; 3)

*Les Plantes utiles des Colonies françaises*: 322 (1886). — Gagnep., *Notulae Systematicae* 3: 357 (1918); *Flore générale de l'Indo-Chine* 2: 945, fig. 101: 4 (1921). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 228, fig. 14 (1969). — P.H.Hô, *An Illustrated Flora of Vietnam* 2 (1): 24, fig. 3660 (1992). — W.J.de Wilde *et al.*, *Flora of Thailand* 11 (4): 561 (2014). — Lectotype (here designated): Vietnam (Bien Hoa, Baochiang), *Pierre* 4995 (holo-, P[P01901958, Delpy's drawing attached]!; isolecto-, P[P01901957, P01901959]!).

*Lagerstroemia undulata* Koehne, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42 (Beiblätter 97): 52 (1908). — Gagnep., *Flore générale de l'Indo-Chine* 2: 946 (1921). — Craib, *Florae Siamensis Enumeratio* 1: 727 (1931). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 225, fig. 13 (1969). — Type: Thailand, Chiang Mai (Mae Ping), *Hosseus* 530 (holo-, M!; iso-, BM!, E!, K!, L!, P[P05115303], Gagnepain's drawing attached!).

SPOT-CHARACTERS. — Small tree; calyx tube conspicuously crispate-undulate winged, the wings *c.* 2 mm high, continuing into undulate wings at both sides of the sutures of the calyx lobes; ovary glabrous.

DISTRIBUTION. — Thailand, Vietnam (Bien Hoa, Bao Chiang).

### 4. *Lagerstroemia densiflora* W.J.de Wilde & Duyfjes, sp. nov. (Fig. 4)

*Differs from similar Lagerstroemia duperreana* Pierre ex Gagnep. in smooth, not ridged, calyx tube, shorter pseudopedicel in fruit (4-5 mm long), and in densely set flowers in multi-flowered inflorescences.

TYPE. — Vietnam, Annam, Prov. du Binh Thuan, Gia lê, 24.V.1905, *Magnein* 27 (holo-, P[P05179657]!).

DISTRIBUTION. — Vietnam, Annam, Province du Binh Thuan, Gia lê; only known from the type.

HABITAT AND ECOLOGY. — Forest, on sandy loamy soil; flowering and fruiting in May.

ETYMOLOGY. — The epithet refers to the dense, many-flowered inflorescence.

NOTE. — The condition of the stamens, monomorphic or dimorphic, cannot be ascertained in dried flowers.

#### DESCRIPTION

Small tree; bark not recorded. Twigs terete, glabrous, finely longitudinally cracked. Leaves glabrous (glabrescent from minute grey stellate hairs). Petiole 0.5-0.6 cm long. Lamina narrowly elliptic, somewhat broadest below the middle, 11-12 by 3-3.5 cm, base short-cuneate, apex obtuse; lateral veins 10-12 per side; intercostal venation finely scalariform-reticulate. Inflorescences terminal, compact, densely many-flowered, densely finely yellow-brown hairy, hairs sub-stellate, woolly, overall shape of inflorescence narrowly paniculate, apex broadly rounded, *c.* 13 cm long, 4-8 cm wide, composed of 6 or 7 pairs of main branches. Flowers: bracteoles minute, caducous or absent; bud obovoid, 5-6 mm long, apex rounded, without nipple; pseudopedicel at anthesis 3-4 mm long; calyx tube *c.* 5 mm long, smooth (not ridged), auricles absent but minute wart inside at sinus present; calyx lobes 6, reflexed after anthesis, triangular, *c.* 3 mm long, densely hairy in the upper part within; petals pink-purplish, caducous, obovate, *c.* 8 mm long including *c.* 2 mm long claw (estimated), margin entire; stamens numerous, presumably monomorphic (but see Note), 5-6 mm long, anthers *c.* 0.5 mm diam.; ovary subglabrous (i.e. sparsely set with minute whitish ephemeral caducous hairs), subglobose. Capsule glabrous, smooth (not shagreen), ovoid, 5-6(-8) mm long, apex rounded with minute narrow style-remnant; valves 6; fruiting calyx smooth, not ridged, calyx lobes reflexed, hairy at apex within; fruiting pseudopedicel 4-5 mm long.



FIG. 2. — Delpy's drawing on flower details and fruit of the holotype of *Lagerstroemia crisper* Pierre ex Laness., Pierre 4995 (P01901958).

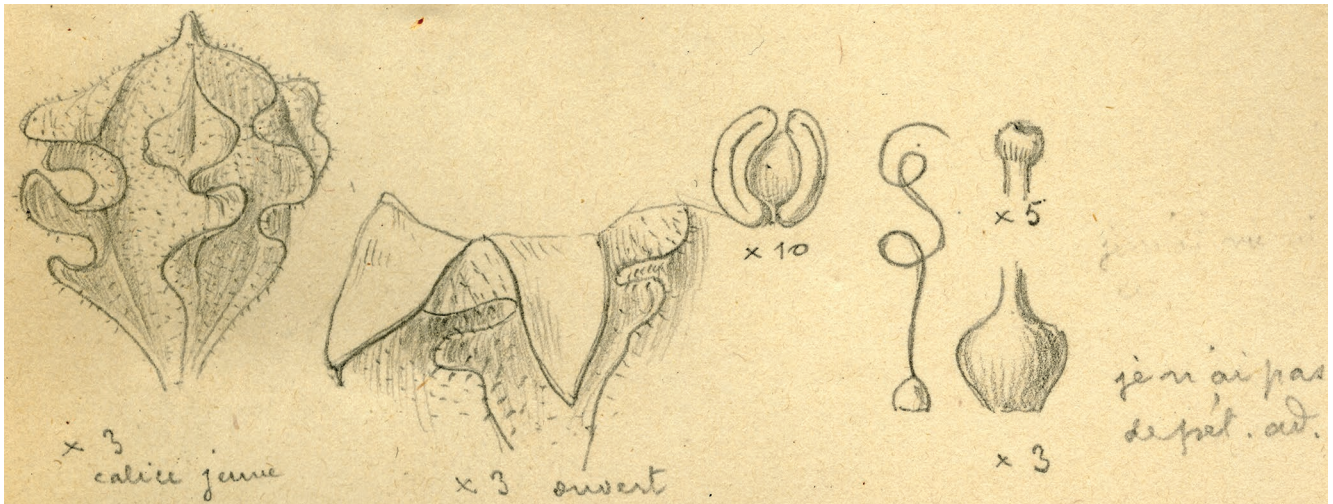


FIG. 3. — Gagnepain's drawing on flower details of the isotype of *Lagerstroemia undulata* Koehne, Hosseus 530 (P05115303).

### 5. *Lagerstroemia duperreana* Pierre ex Gagnep.

*Notulae Systematicae* 3: 358 (1918); *Flore générale de l'Indo-Chine* 2: 948 (1921). — Craib, *Florae Siamensis Enumeratio* 1: 720 (1931). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 285, fig. 36 (1969). — P.H.Hô, *An Illustrated Flora of Vietnam* 2 (1): 26, fig. 3666 (1992). — W.J.de Wilde *et al.*, *Flora of Thailand* 11 (4): 561 (2014). — Lectotype (first-step designated by Furtado & Srisuko 1969; second-step here designated): Vietnam (Bien Hoa, Mt. Mu-xoai), *Pierre* 4998 (holo-, P[P01901956]!; isolecto-, P[P04711318, P04711369, P04711370, P04711371, P04711390, P04804870, P04807004, P04807005]!, SING!).

*Lagerstroemia thorelii* Gagnep., *Notulae Systematicae* 3: 362 (1918); *Flore générale de l'Indo-Chine* 2: 947, fig. 101: 5-7 (1921). — Lectotype (first-step designated by De Wilde & Duyfjes 2013: 98; second-step here designated): Cambodia (Stung treng), *Thorel* 2241 (holo-, P[P04711354]!; isolecto-, A!, BM!, E!, K!, P[P04711352]!, PH!).

SPOT-CHARACTERS. — Bark light brown, flaking; leaves, inflorescences, ovaries, capsules all glabrous; pseudopedicel long, 6-12 mm long; calyx lobes conspicuous densely whitish hairy in upper part within.

DISTRIBUTION. — Thailand, Cambodia, Laos, Vietnam.

#### NOTE

In the treatment of De Wilde & Duyfjes (2013: 93) *Lagerstroemia duperreana* was segregated into two varieties, viz. var. *duperreana*, and var. *saxatilis* W.J.de Wilde & Duyfjes. Of these only var. *duperreana* is known from Cambodia, Laos and Vietnam. As the variety *saxatilis* is found in sandstone areas in Thailand (Ubon Ratchathani Province) very near the Cambodian border it may possibly occur in Cambodia.

### 6. *Lagerstroemia floribunda* Jack

*Malayan Miscellaneous* 1 (5): 38 (1820). — Gagnep., *Flore générale de l'Indo-Chine* 2: 953 (1921). — Craib, *Florae Siamensis Enumeratio* 1: 721 (1931). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24:

329, fig. 55-56 (1969). — P.H.Hô, *An Illustrated Flora of Vietnam* 2 (1): 29, fig. 3675 (1992). — S.Gardner *et al.*, *A Field Guide to Forest Trees of Northern Thailand*: 204: 445 (2000). — W.J.de Wilde *et al.*, *Flora of Thailand* 11 (4): 563 (2014). — Neotype (designated by Furtado & Srisuko, 1969): Peninsular Malaysia, Penang, *King s.n.* (holo-, SING[SING0082712]!).

*Lagerstroemia anisoptera* Koehne, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 4 (4): 407 (1883). — Gagnep., *Flore générale de l'Indo-Chine* 2: 952 (1921). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 321, fig. 51 (1969). — P.H.Hô, *An Illustrated Flora of Vietnam* 2 (1): 29, fig. 3676 (1992). — Type: Vietnam (Pulo Condor), *De Lanessan s.n.* (holo-, P[P01901965]!).

SPOT-CHARACTERS. — Bark light brown, flaking; inflorescences short-hairy rust coloured; calyx tube c. 12-ridged; ovary densely hairy; capsules hairy, especially at apex.

DISTRIBUTION. — Myanmar, Thailand, Cambodia, Laos, Vietnam, Peninsular Malaysia.

#### NOTES

In the treatment of De Wilde *et al.* (2014: 563), *Lagerstroemia floribunda* was segregated into three varieties, viz. var. *floribunda*, var. *cuspidata* Wall. ex C.B.Clarke (1879: 577), and var. *sublaevis* Craib (1931: 722). Of these only var. *floribunda* occurs in Cambodia, Laos and Vietnam. *Lagerstroemia floribunda* is extensively planted in Thailand as an ornamental tree.

### 7. *Lagerstroemia gagnepainii* Furtado & Srisuko (Fig. 5)

*Garden's Bulletin Singapore* 24: 287, fig. 38 (1969). — P.H.Hô, *An Illustrated Flora of Vietnam* 2 (1): 26, fig. 3667 (1992).

*Lagerstroemia glabra* Gagnep., *Notulae Systematicae* 3: 359 (1918), nom. illeg., not *Lagerstroemia glabra* Koehne, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 41: 102 (1908). — Type: Vietnam, *Berton s.n.* (holo-, P[P01902040]!, Gagnepain's drawing attached!).

DISTRIBUTION. — Vietnam.

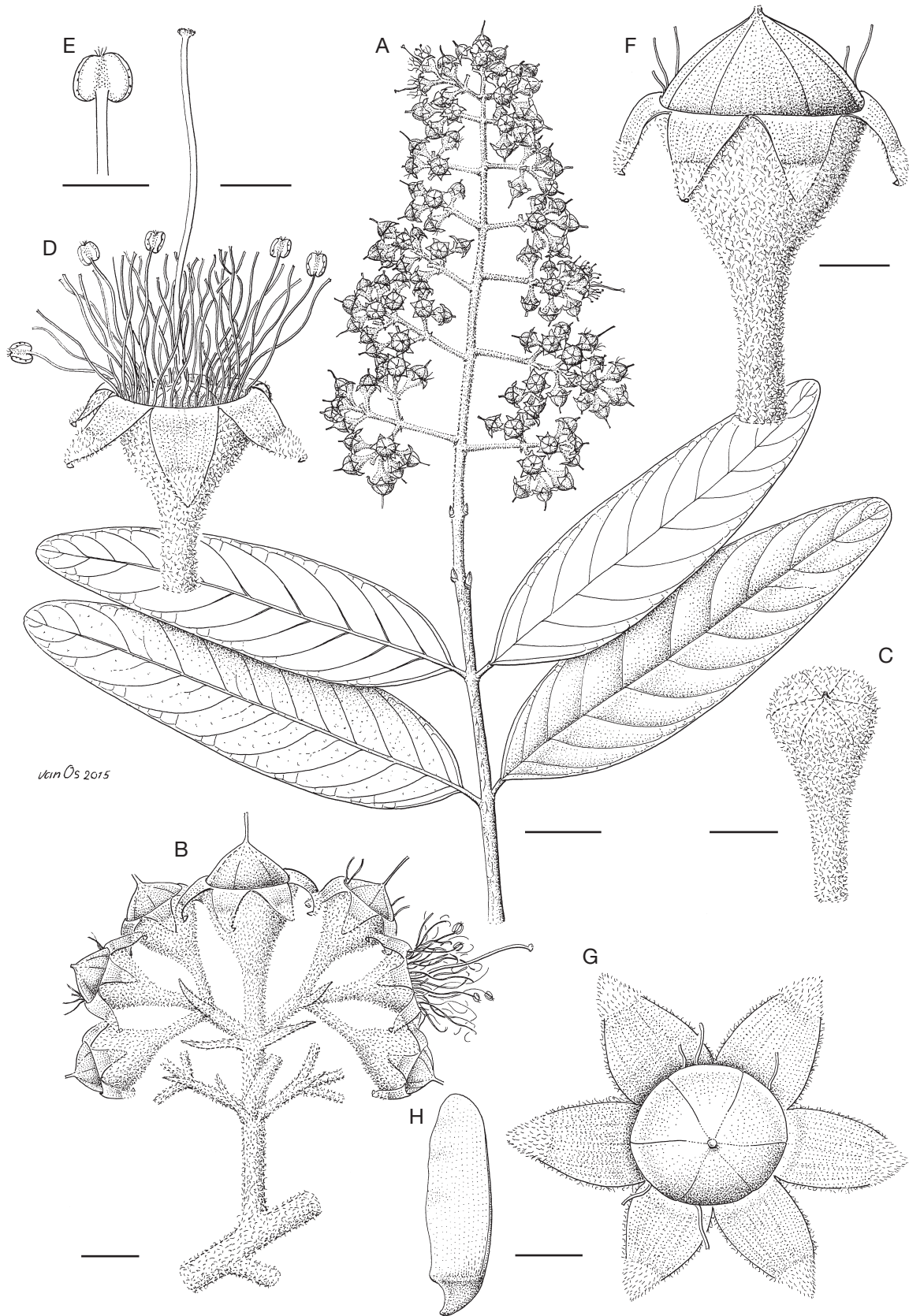


FIG. 4. — *Lagerstroemia densiflora* W.J. de Wilde & Duyfjes, sp. nov., *Magnein* 27 (P05179657): **A**, habit of flowering twig; **B**, detail of inflorescence; **C**, flower bud; **D**, flower; **E**, stamen; **F**, **G**, capsule with fruiting calyx, note calyx lobes hairy within; **H**, seed. Scale bars: A, 2 cm; B, 4 mm; C, D, F-H, 2 mm; E, 1 mm.



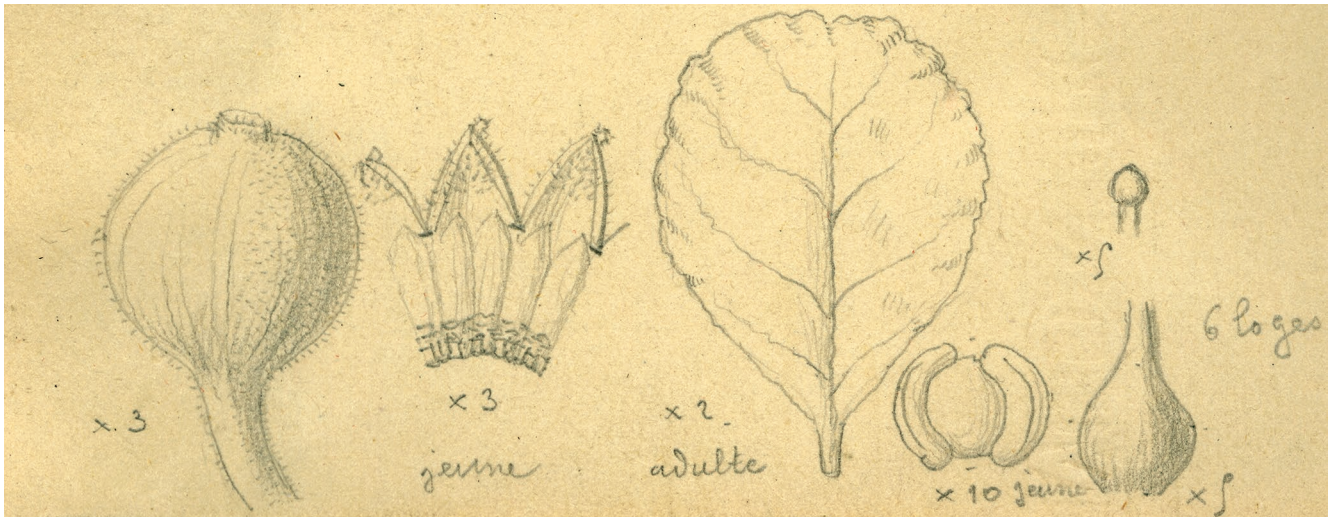


FIG. 5. — Gagnepain's drawing on flower details of the holotype of *Lagerstroemia gagnepainii* Furtado & Srisuko, Berton s.n. (P01902040).

#### NOTE

*Lagerstroemia gagnepainii* is only known from the type. The description with drawing in the protologue is based on a photocopy of the type collection and the accompanying flower diagnosis by Gagnepain. *Lagerstroemia gagnepainii* is very similar and possibly conspecific to *L. duperreana*, from which it seems to differ in the shape of the flower buds (globose vs subovoid in *L. duperreana*). More collections are needed to determine the status of the species.

#### 8. *Lagerstroemia indica* L.

*Systema Naturae* ed. 10, 2: 1076 (1759); *Species Plantarum* ed. 2 (1): 734 (1762). — Gagnep., *Flore générale de l'Indo-Chine* 2: 940 (1921). — Craib, *Florae Siamensis Enumeratio* 1: 724 (1931). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 190, fig. 1 (1969). — H.N. Qin & S.A. Graham, *Flora of China* 13: 278 (2007). — H.N. Qin *et al.*, *Flora of China Illustrations* 13: fig. 295: 1-2 (2008). — W.J. de Wilde *et al.*, *Flora of Thailand* 11 (4): 565 (2014). — Lectotype (designated by Merrill, 1917): "Tsjinkin" in Rumph., *Herbarium Amboinense* (1755) 61, t. 28, fig. 1, ('Habitat in China').

SPOT-CHARACTERS. — Shrub or treelet; leaves nearly sessile; buds small, globose, usually with a c. 8 mm long pseudopedicel; flowers large, petals with a conspicuously long claw; capsules glabrous.

DISTRIBUTION. — Himalayan regions, Myanmar, Thailand, Cambodia, Laos, Vietnam, China; Japan, Indonesia (Ambon, where apparently early introduced); furthermore widely cultivated all over the world as an ornamental shrub or small tree.

#### 9. *Lagerstroemia kratiensis* W.J. de Wilde & Duyfjes (Fig. 6)

*Thai Forest Bulletin (Botany)* 41: 95 (2013). — Type: Cambodia (Sambour, Kratie Isl., Mekong River), *Maxwell 07-453* (holo-, L!; iso-, CMU).

ADDITIONAL MATERIAL EXAMINED. — Cambodia. Kampong Cham, 18.VII.1930, fl., *Béjaud 700* (P[P04711494]!); Kratié, rives du

Mékong, 9.III.1914, fr., *Chevalier 31881* (P[P04711407]!); Kratié, entre Mung Tràng et P. Sophéas, 26.XII.1928, fr., *Poilane 16275* (P[P04711501, P04711502, P04711504]!).

SPOT-CHARACTERS. — Calyx tube 6-winged, wings 2-3 mm high; calyx lobes glabrous within; ovary densely hairy; capsules at apex densely hairy.

DISTRIBUTION. — Cambodia.

#### NOTE

*Lagerstroemia kratiensis*, known from few collections from Cambodia, is similar to *Lagerstroemia lecomtei*, but it differs from the latter, for example, by calyx lobes glabrous within.

#### 10. *Lagerstroemia lecomtei* Gagnep. (Fig. 7)

*Notulae Systematicae* 3: 360 (1918); *Flore générale de l'Indo-Chine* 2: 949, fig. 102: 1-2 (1921). — P.H. Hô, *An Illustrated Flora of Vietnam* 2 (1): 29, fig. 3674 (1992). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 320 (1969). — Type: Vietnam (Annam, between Phan-rang and Tourcham), *Lecomte & Finet 1406* (holo-, P[P01902039]!, Gagnepain's drawing attached!).

SPOT-CHARACTERS. — Calyx tube thickly 6-ridged; calyx lobes hairy within.

DISTRIBUTION. — Vietnam (Annam).

#### 11. *Lagerstroemia loudonii* Teijsm. & Binn.

*Natuurkundig Tijdschrift voor Nederlandsch-Indië* 25: 425 (1863) ('loudoni'); Gagnep., *Flore générale de l'Indo-Chine* 2: 954 (1921). — Craib, *Florae Siamensis Enumeratio* 1: 724 (1931). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 303, fig. 43 (1969). — P.H. Hô, *An Illustrated Flora of Vietnam* 2 (1): 27, fig. 3669 (1992). — S. Gardner *et al.*, *A Field Guide to Forest Trees of Northern Thailand*: 202: 441 (2000). — W.J. de Wilde & Duyfjes, *Thai Forest Bulletin (Botany)* 41: 98 (2013). — W.J. de Wilde *et al.*, *Flora of Thailand*

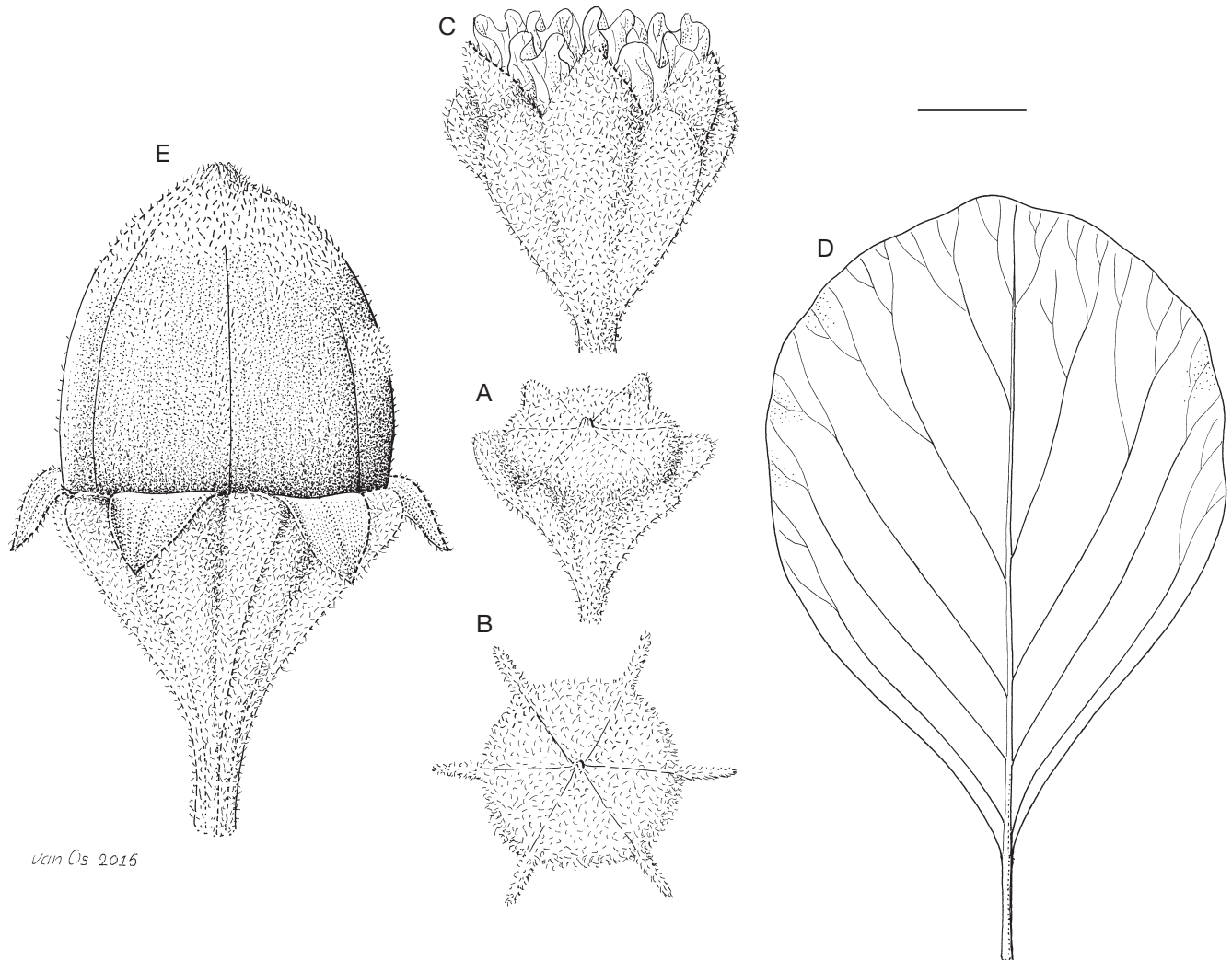


FIG. 6. — *Lagerstroemia kratensis* W.J.de Wilde & Duyfjes: **A**, flower bud; **B**, ditto seen from above; **C**, ditto, opening; **D**, petal; **E**, capsule with fruiting calyx, note calyx lobes glabrous within; **A-D**, Maxwell 07-453 (L, type); **E**, Maxwell 06-962 (L). Scale bar: 3 mm.

11 (4): 569 (2014). — Type: Thailand, Kanchanaburi (Boekit Pet-jaboeri), *Teijsmann 5938* (holo-, U!; iso-, BO! [3 duplicate-sheets]).

SPOT-CHARACTERS. — Medium sized (or tall) tree; bark light brown, thin, cracking and flaking; leaf venation scalariform; inflorescences lateral (axillary); petals fimbriate.

DISTRIBUTION. — Thailand, and elsewhere introduced.

NOTE

*Lagerstroemia loudonii* is endemic to Thailand. In Cambodia, Laos and Vietnam it is only known cultivated as an ornamental tree.

12. *Lagerstroemia macrocarpa* Kurz

*Journal of the Asiatic Society of Bengal. Part 2. Natural History* 42: 234 (1873); *Forest Flora of British Burma*: 524 (1877). — Gagnep., *Flore générale de l'Indo-Chine* 2: 942 (1921). — Craib, *Florae Siamensis Enumeratio* 1: 725 (1931). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 271, fig. 30A (1969). — P.H.Hô, *An Illustrated Flora of Vietnam* 2 (1): 25, fig. 3664 (1992). — S.Gardner *et al.*, *A Field Guide*

*to Forest Trees of Northern Thailand*: 206: 449 (2000). — W.J.de Wilde *et al.*, *Flora of Thailand* 11 (4): 570, fig. 7 (2014). — Lectotype (designated by Furtado & Srisuko, 1969): Myanmar, Pegu, *Kurz 1972* (CAL).

*Lagerstroemia costa-draconis* Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 270, fig. 30D. 1969; P.H.Hô, *An Illustrated Flora of Vietnam* 2 (1): 25, fig. 3663 (1992). — Type: Thailand, Kanchanaburi, *Suvanakoses 1592* (holo-, SING!; iso-, BKF!, KEP).

SPOT-CHARACTERS. — Bark thin, cracking and flaking; flowers large, 60-80 mm wide; stamens numerous, monomorphic; capsules large, 30-40 mm long, with thick fruiting calyx lobes, c. 2 mm thick.

DISTRIBUTION. — Myanmar, Thailand, Cambodia, Laos, Vietnam.

NOTE

*Lagerstroemia costa-draconis* was described as different from *L. macrocarpa* because of its coarsely dentate ornamentation of the ridges of the calyx tube, and its calyx lobes in bud being somewhat thickened in the sutures of the lobes. Among all specimens seen we found these features to be variable, but fresh buds of *L. costa-draconis* from the type area in E Thailand indeed have a more fleshy coarse ornamentation. More field

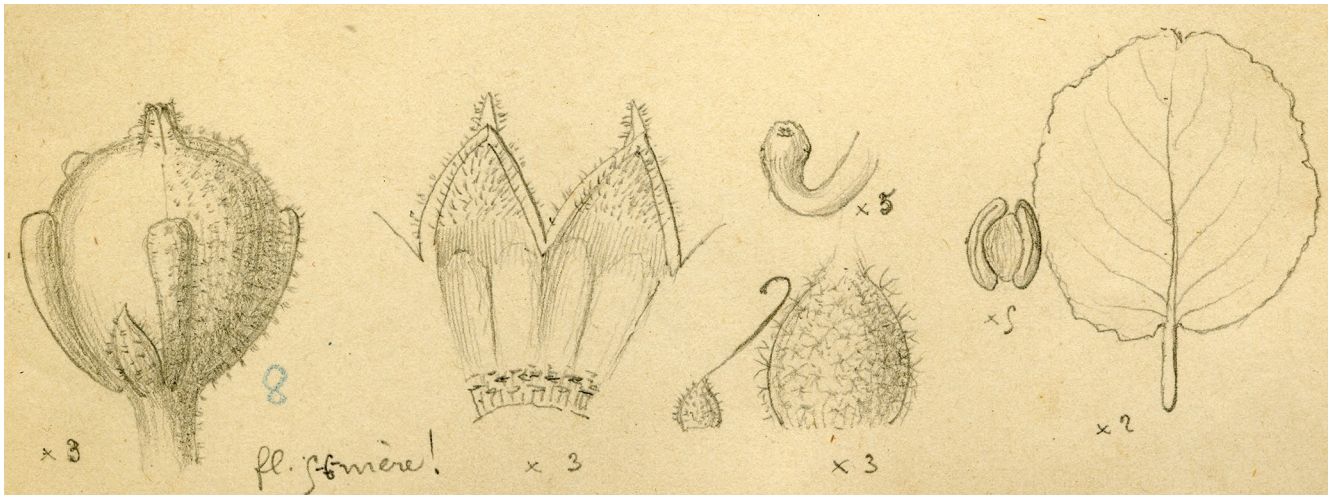


Fig. 7. — Gagnepain's drawing on flower details of the holotype of *Lagerstroemia lecomtei* Gagnep., Lecomte & Finet 1406 (P01902039).

studies are required to decide whether the status of a distinct var. *costa-draconis* would be warranted.

### 13. *Lagerstroemia micrantha* Merr.

*Journal of the Arnold Arboretum* 21: 378 (1940). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 277, fig. 32 (1969). — P.H.Hô, *An Illustrated Flora of Vietnam* 2 (1): 26, fig. 3665 (1992). — Type: Vietnam (Annam, Quang Binh Prov., Kim Bang), *Pételot* 3743 (holo-, A!; iso-, NY!, P[P01902036, P01902037]!).

DISTRIBUTION. — Vietnam (Annam).

#### NOTE

*Lagerstroemia micrantha* is only known from the type. Furtado & Srisuko (1969) mention that it is very similar to *Lagerstroemia subcostata* Koehne (1883: 20), from S China (Kuang-tung = Guangdong) and Taiwan. More collections are needed to determine its real status.

### 14. *Lagerstroemia noei* Craib

*Bulletin of Miscellaneous Information* 1930: 327; *Flora Siamensis Enumeratio* 1: 725 (1931). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 312 (1969). — P.H.Hô, *An Illustrated Flora of Vietnam* 2 (1): 28, fig. 3672 (1992). — W.J.de Wilde *et al.*, *Flora of Thailand* 11 (4): 572 (2014). — Type (see Note in de Wilde *et al.*, 2014): Thailand, Nakhon Ratchasima (Ban Chum Saeng), *Noe* 246 (holo-, BM!; iso-, BK!, K!).

SPOT-CHARACTERS. — Shrub or small treelet; calyx tube not ridged; calyx lobes hairy in upper part within; ovary hairy; stamens asymmetrically dimorphic.

DISTRIBUTION. — Thailand, Cambodia, Laos.

### 15. *Lagerstroemia ovalifolia* Teijsm. & Binn.

*Natuurkundig Tijdschrift voor Nederlandsch-Indië* 2: 306 (1851); *Nederlandsch Kruidkundig Archief* 3: 410 (1855). — Gagnep., *Flore générale*

*de l'Indo-Chine* 2: 945 (1921). — Craib, *Flora Siamensis Enumeratio* 1: 725 (1931). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 210 (1969). — W.J.de Wilde *et al.*, *Flora of Thailand* 11 (4): 573, pl. 119: 2-5 (2014). — Type: W Java, *Teijsmann & Binnendijk s.n.* (holo-, BO!; iso-, L[L2479644, L2479645]!, U[Hort. bot. 039040]!).

SPOT-CHARACTERS. — Calyx tube 6-9-ridged; number of calyx lobes and petals (6-)7-9; stamens radially dimorphic; ovary glabrous; capsules shagreen, glabrous, fruiting calyx lobes 7-9.

DISTRIBUTION. — Thailand, Cambodia, Laos, Vietnam, Sumatra, Peninsular Malaysia, West Java.

#### NOTE

*Lagerstroemia ovalifolia* may be confused with *L. venusta*, due to the seemingly many-lobed calyx in the latter species, caused by large persistent auricles. In herbarium specimens the leaves below are sometimes conspicuously dark chocolate-coloured, contrasting with the upper surface.

### 16. *Lagerstroemia petiolaris* Pierre ex Laness.

(Fig. 8)

*Les Plantes utiles des Colonies françaises*: 321 (1886). — Gagnep., *Notulae Systematicae* 3: 360; *Flore générale de l'Indo-Chine* 2: 959 (1921). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 297, fig. 41 (1969). — Lectotype (here designated): Cambodia (Samrong Prov.), *Pierre* 928 (holo-, P[P06871977]!; isolecto-, A!, BR!, LI, NY!, P[P01902034, P01902035, P04456522, P04456525; P04457570]!, SING!, US!).

*Lagerstroemia dongnaiensis* Pierre *in sched.* — Voucher specimens: Vietnam, Cochinchine, ad Bao Chiang, IX. 1865, *Pierre* 4999 (P[P05115297, P05115299, P05115300]!).

SPOT-CHARACTERS. — Leaves: petiole *c.* 0.1 cm wide, to 2 cm long; lamina glabrous, to 10 cm long; calyx lobes glabrous within.

DISTRIBUTION. — Cambodia, Vietnam.

#### NOTE

Recognised by its uniquely long petioles in comparison to the smallish leaf blades.

### 17. *Lagerstroemia speciosa* (L.) Pers.

*Synopsis Plantarum* 2 (1): 72 (1807). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 264, fig. 29A (1969). — P.H.Hò, *An Illustrated Flora of Vietnam* 2 (1): 25, fig. 3662 (1992). — S.Gardner *et al.*, *A Field Guide to Forest Trees of Northern Thailand*: 206: 450 (2000). — W.J.de Wilde *et al.*, *Flora of Thailand* 11 (4): 574 (2014). — *Munchausia speciosa* L., *Hausvater* 5: 357 (1770). — Lectotype (designated by Dar in Nasir & Ali, *Flora of West Pakistan* 78, 1975: 3): 'Habitat in Java, China', Herb. Linn. No. 939.1 (LINN!).

*Lagerstroemia reginae* Roxb., *Plants of the Coast of Coromandel* 1: 46, t. 65 (1795). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 261, fig. 29B. 1969; P.H.Hò, *An Illustrated Flora of Vietnam* 2 (1): 24, fig. 3661 (1992). — Lectotype (designated by De Wilde & Duyfjes, 2014: 119): northern India, Circars, *Roxburgh s.n.* (holo-, K!, right hand specimen [K000729731]).

SPOT-CHARACTERS. — Flower buds globose, finely 10-12-ribbed, thinly hairy; flowers *c.* 40 mm wide; fruiting calyx lobes thin, *c.* 1 mm thick.

DISTRIBUTION. — India to New Guinea, including Cambodia, Laos, Vietnam; but see below.

#### NOTES

It is not certain that *Lagerstroemia speciosa* is a native of Indochina. In northern Thailand where it is widely planted as an ornamental tree along roads and other places it is considered not native (Gardner *et al.* 2000).

*Lagerstroemia speciosa* can be confused with *L. macrocarpa*, but the latter has, for example, larger flowers, 60-80 mm wide and thicker fruiting calyx lobes, *c.* 2 mm thick.

### 18. *Lagerstroemia spireana* Gagnep.

(Fig. 9)

*Notulae Systematicae* 3: 362 (1918); *Flore générale de l'Indo-Chine* 2: 951, fig. 102: 4 (1921). — Craib, *Florae Siamensis Enumeratio* 1: 726 (1931). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 321, fig. 51 (1969). — W.J.de Wilde *et al.*, *Flora of Thailand* 11 (4): 575 (2014). — Type: Laos (Camkeut), *Spire* 326 (holo-, P[P05141587], Gagnepain's drawing attached)].

SPOT-CHARACTERS. — Calyx tube and fruiting calyx tube with very well-developed winged ridges, 2-3 mm high; ovary hairy.

DISTRIBUTION. — Thailand, Laos.

#### NOTES

*Lagerstroemia spireana* resembles *L. floribunda*, the latter differs by unwinged low ridges. In NE Thailand *Lagerstroemia spireana* is grown as an ornamental lane tree.

### 19. *Lagerstroemia tomentosa* C.Presl

*Botanische Bemerkungen*: 142 (1844); *Abhandlungen der Königlichen Böhmischen Gesellschaft der Wissenschaften* ser. 5, 3: 572 (1845). — Gagnep., *Flore générale de l'Indo-Chine* 2: 958 (1921). — Craib, *Florae Siamensis Enumeratio* 1: 726 (1931). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 292, fig. 40 (1969). — P.H.Hò, *An Illustrated Flora of Vietnam* 2 (1): 27, fig. 3668 (1992). — S.Gardner

*et al.*, *A Field Guide to Forest Trees of Northern Thailand*: 204: 444 (2000). — H.N.Qin & S.A.Graham, *Flora of China* 13: 278 (2007). — H.N.Qin *et al.*, *Flora of China Illustrations*: 13, fig. 297: 6-8 (2008). — W.J.de Wilde *et al.*, *Flora of Thailand* 11 (4): 576, fig. 8 (2014). — Type: Myanmar, Moulmein, *Helfer herb. Martaban* 257 (holo-, PRC!; iso-, GHI, see note).

*Lagerstroemia tomentosa* C.Presl var. *caudata* Koehne, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42 (Beiblätter 97): 51 (1908). — Craib, *Bulletin of Miscellaneous Information* 1911: 54 (1911). — *Florae Siamensis Enumeratio* 1: 727 (1931). — Lectotype (designated by Craib, 1931): Thailand, *Hosseus* 512, (holo-, M!; isolecto-, BM!, E!, L!, P[P05141599]!).

SPOT-CHARACTERS. — Bark finely or roughly cracking; leaf blade stellate hairy beneath, venation scalariform; inflorescence finely hairy, often lateral (axillary); calyx tube ridged; stamens radially dimorphic; capsules black, glossy, smooth.

DISTRIBUTION. — Myanmar, Thailand, Cambodia, Laos, Vietnam, China (Yunnan).

#### NOTE

According to Furtado & Srisuko (1969) the collection *Reliquiae helferianae* 30 (BM!, BO!, L!, P[P05141602]!), is probably the same as *Helfer* 257, however, *Helfer* 30 is annotated on the label as occurring in "India orientalis, in Bengalia circa Calcuttam".

### 20. *Lagerstroemia venusta* Wall. ex C.B.Clarke

(Fig. 10)

*The Flora of British India* 2: 576 (1879). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 203, fig. 4 (1969). — P.H.Hò, *An Illustrated Flora of Vietnam* 2 (1): 30, fig. 3677 (1992). — S.Gardner *et al.*, *A Field Guide to Forest Trees of Northern Thailand*: 205: 448 (2000). — H.N.Qin & S.A.Graham, *Flora of China* 13: 279 (2007). — W.J.de Wilde *et al.*, *Flora of Thailand* 11 (4): 579 (2014). — Type: Myanmar, *Wallich* 2117 (holo-, K-W).

*Lagerstroemia quinquevalvis* Koehne, *Das Pflanzenreich* (Engler) 17, IV.216: 268 (1903). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 224 (1969). — P.H.Hò, *An Illustrated Flora of Vietnam* 2 (1): 24, fig. 3659 (1992). — Vietnam (Tonkin, Muong de Bip, near Tu Phap), *Balansa* 3866 (holo-, P[P00966749]); iso-, K!, US!).

*Lagerstroemia corniculata* Gagnep., *Notulae Systematicae* 3: 357 (1918); *Flore générale de l'Indo-Chine* 2: 943, fig. 101: 1-3 (1921). — Lectotype (first-step designated by De Wilde & Duyfjes, 2013: 98, second-step here designated): Cambodia, *Thorel* 2162 (holo-, P[P05140514], Gagnepain's drawing attached); isolecto-, BM!, K!, NY!, P[P05140513, P05140515, P05140516]!).

SPOT-CHARACTERS. — Auricles the same shape and size as the 6 calyx lobes by which the calyx in both flowers and capsules appears as having 12 similar lobes.

DISTRIBUTION. — Myanmar, Thailand, China (Yunnan), Cambodia (Stung-Treng), Laos, Vietnam (Tonkin).

#### NOTE

*Lagerstroemia venusta* may be confused with *L. ovalifolia* the latter with larger flowers (flower bud 11-16 mm long), more true calyx lobes, 6-9, and none or very small auricles.



FIG. 8. — Delpy's drawing on flower and fruit details of the isolectotype of *Lagerstroemia petiolaris* Pierre ex Laness., *Pierre 928* (original herbarium collection not found).

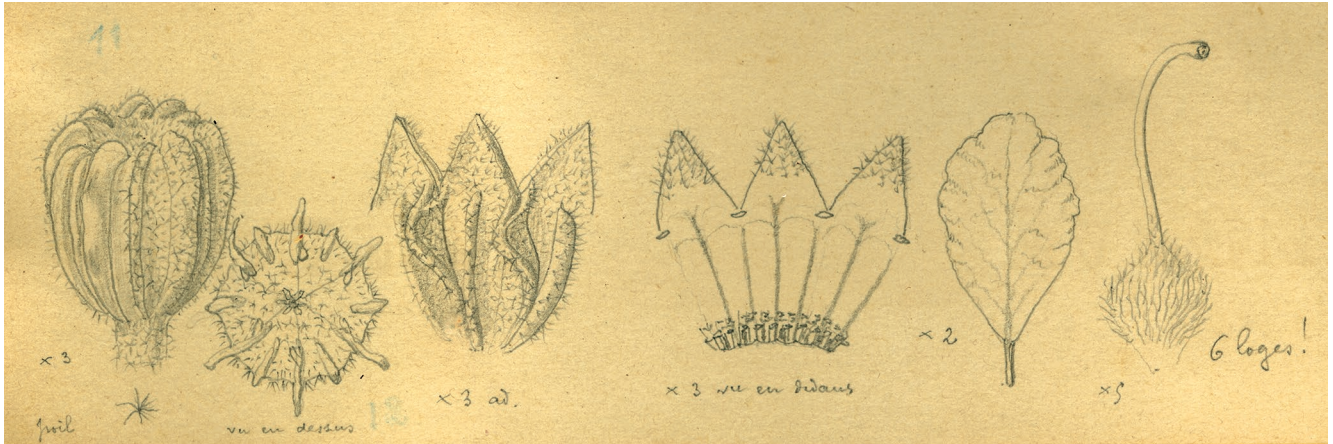


FIG. 9. — Gagnepain's drawing on flower details of the holotype of *Lagerstroemia spireana* Gagnep., *Spire* 326 (P05141587).

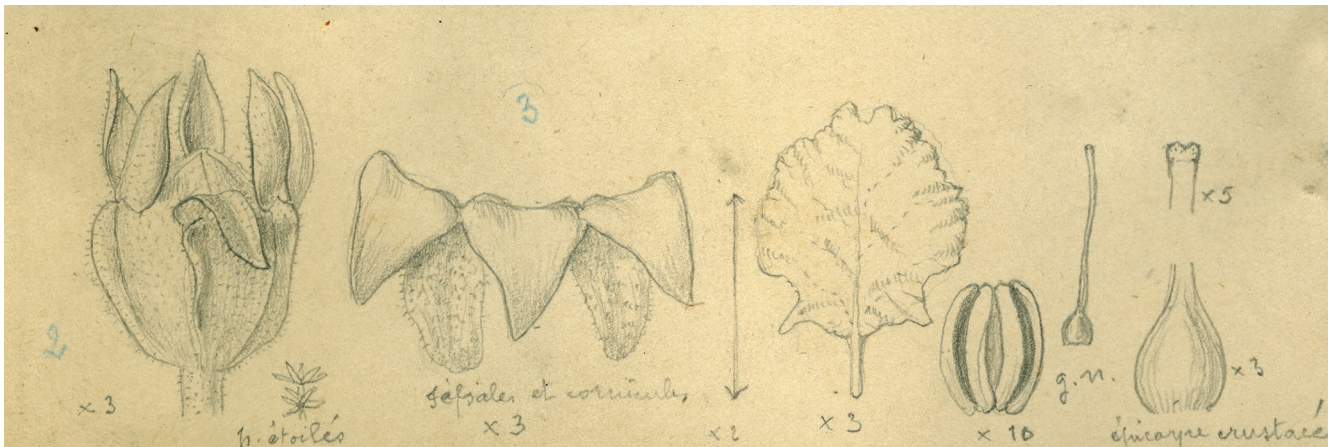


FIG. 10. — Gagnepain's drawing on flower details of the hololectotype of *Lagerstroemia corniculata* Gagnep., *Thorel* 2162 (P05140514).

## 21. *Lagerstroemia villosa* Wall. ex Kurz

*Journal of the Asiatic Society of Bengal. Part 2. Natural History* 42, 4: 234 (1873); *Forest Flora of British Burma* 2: 524 (1877). — C.B. Clarke in Hook.f., *The Flora of British India* 2: 578; Gagnep., *Flore générale de l'Indo-Chine* 2: 947 (1921). — Craib, *Flora Siamensis Enumeratio* 1: 728 (1931). — Furtado & Srisuko, *Garden's Bulletin Singapore* 24: 205, fig. 5 (1969). — S. Gardner et al., *A Field Guide to Forest Trees of Northern Thailand*: 203: 442 (2000). — H.N. Qin & S.A. Graham, *Flora of China* 13: 279 (2007). — W.J. de Wilde et al., *Flora of Thailand* 11 (4): 580 (2014). — Lectotype (designated by Furtado & Srisuko, 1969): Myanmar (Pegu), *Kurz* 1343 (holo-, CAL).

SPOT-CHARACTERS. — Bark dark, cracked; leaves densely simple hairy; inflorescences compact, finely densely hairy; ovary glabrous; capsules finely striate (shagreen), glabrous.

DISTRIBUTION. — Myanmar, Thailand, Laos (only known from Vidal 1362 [P05140488!]), China (Yunnan, no specimens seen).

### DUBIOUS SPECIES

#### *Lagerstroemia nervosa* Pierre ex Laness.

*Les Plantes utiles des Colonies françaises*: 322 (1886).

### NOTE

We have not found a specimen in P or in another herbarium representing this taxon. The protologue describes a tree 30–35 m tall, with a 40–60 cm wide trunk. Moreover is indicated that it has the same wood characteristics as *Lagerstroemia petiolaris*.

We received the following additional information from Thierry Deroin (P): “in the Louis Pierre’s slide library at P, are kept 4 slides of *Lagerstroemia* sp. (2 for wood anatomy, 1 for petiole, 1 for lamina), associated with an envelope with rough anatomical sketches and a reference to ‘Pierre 1819’ (possibly a specimen?). In the general collection, however, the latter is not present”.

### Acknowledgements

We thank the Curators of BK, BKF, BM, BO, E, L, P, and SING for allowing us to consult their collections, Thierry Deroin (P) who provided the analytical drawings by Delpy and Gagnepain and Grégoire Flament (Direction des Collections, MNHN) who digitalized the drawings. We gratefully acknowledge the Singapore fellowship, by which we could study the specimens formerly seen by Furtado and Srisuko.

Our friend Phongsak Phonsena (BKF) organized fieldtrips in Thailand in areas bordering Cambodia and Laos, which greatly helped in understanding the local *Lagerstroemias*. Finally we thank the Leiden artist Jan van Os who prepared the drawings.

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*Submitted on 5 February 2016;  
accepted on 25 May 2016;  
published on 30 December 2016.*