



Supplement

The following supplementary materials are available for this article: Yang, L.-F., Xiong, Y.-A., Tan, Y.-H., Tu, Y., Deng, M. 2026 Lectotypifications, new synonymizations, and a new distribution record in selected tropical Asian Fagaceae. *Taiwania* 71(1): 198-208. doi: [10.6165/tai.2026.71.198](https://doi.org/10.6165/tai.2026.71.198)

Table S1. List of key specimens reviewed and studied.

Species	Specimens ID	Localities
<i>Quercus cepifera</i>	<i>P. J. Cavalerie</i> 2341 (E00275485)	Grand arbre au sud de Pin-Fa, Guizhou, China
<i>Quercus cepifera</i>	<i>P. J. Cavalerie</i> 2341 (E00275486)	Grand arbre au sud de Pin-Fa, Guizhou, China
<i>Quercus cepifera</i>	<i>P. J. Cavalerie</i> 2341 (A00034142)	Grand arbre au sud de Pin-Fa, Guizhou, China
<i>Castanopsis eyrei</i>	<i>Eyre</i> 301 (K000832604)	Wang naiching, Hong Kong, China
<i>Castanopsis eyrei</i>	<i>J. Cavalerie</i> 1268 (P00716222)	Pin-fa, Yunnan, China
<i>Castanopsis eyrei</i>	<i>J. Cavalerie</i> 1268 (P00716223)	Pin-fa, Yunnan, China
<i>Castanopsis eyrei</i>	<i>Tsang & W.T. Kwangtung</i> (P06851531)	Tai Mo Shan, Hong Kong, China
<i>Castanopsis eyrei</i>	<i>Y. W. Taam</i> 256 (BR0000030517783)	Sin-fung, Guangdong, China
<i>Castanopsis eyrei</i>	<i>C. M. Tan Lu088</i> (JJF00016744)	Lushan, Jiangxi, China
<i>Castanopsis eyrei</i>	<i>G. C. Zhang</i> 94 (MO1071802)	Heyuan, Guangdong, China
<i>Castanopsis eyrei</i>	<i>J. S. Yue et al.</i> 5387 (PE00224067)	Guixi, Jiangxi, China
<i>Castanopsis eyrei</i>	<i>G. F. Li</i> 84070 (PE00224145)	Nanchuan, Chongqing, China
<i>Castanopsis eyrei</i>	<i>Z. L. Zhang</i> 04279 (PE00273194)	Longquan, Zhejiang, China
<i>Castanopsis eyrei</i>	<i>Z. H. Hu & Y. Q. Kuang</i> 015 (PE01458049)	Henyang, Hunan, China
<i>Castanopsis eyrei</i>	<i>Anonymous s.n.</i> (PE01506508)	Guizhou, China
<i>Castanopsis eyrei</i>	<i>P. P. Chen</i> 11217 (PE01605032)	Hunan, China
<i>Castanopsis eyrei</i>	<i>Li Bo Team</i> 81-6-0099 (PE01605782)	Libo, Guizhou, China
<i>Castanopsis eyrei</i>	<i>Q. H. Lv</i> 4110 (PE01658880)	Guangxi, China
<i>Castanopsis eyrei</i>	<i>X. G. Li</i> 201783 (PE01659793)	Guangdong, xingning, China
<i>Quercus kerrii</i>	<i>A.F.G. Kerr</i> 550 (K000227634)	Doi Sootep, Chiangmai, Thailand
<i>Quercus kerrii</i>	<i>A.F.G. Kerr</i> 550 (K000227635)	Doi Sootep, Chiangmai, Thailand
<i>Quercus kerrii</i>	<i>A.F.G. Kerr</i> 550 (K000227636)	Doi Sootep, Chiangmai, Thailand
<i>Quercus kerrii</i>	<i>A.F.G. Kerr</i> 550 (K000227637)	Doi Sootep, Chiangmai, Thailand
<i>Quercus kerrii</i>	<i>A.F.G. Kerr</i> 550 (P00754003)	Doi Sootep, Chiangmai, Thailand
<i>Quercus kerrii</i>	<i>A.F.G. Kerr</i> 550 (BM001217650)	Doi Sootep, Chiangmai, Thailand
<i>Quercus kerrii</i>	<i>C. C. Fosseus</i> 438 (M0168772)	Doi Sootep, Chiangmai, Thailand
<i>Quercus kerrii</i>	<i>C. C. Fosseus</i> 438 (BM001217649)	Doi Sootep, Chiangmai, Thailand
<i>Quercus kerrii</i>	<i>M. Deng et al.</i> DM27841 (YUKU)	Puer, Yunnan, China
<i>Quercus kerrii</i>	<i>M. Deng et al.</i> DM18972 (YUKU)	Yuanjiang, Yunnan, China
<i>Quercus kerrii</i>	<i>M. Deng et al.</i> DM22418 (YUKU)	Jingdong, Yunnan, China
<i>Quercus kerrii</i>	<i>M. Deng et al.</i> DM23215 (YUKU)	Shuangbai, Yunnan, China
<i>Quercus kerrii</i>	<i>R. Guo</i> DM24486 (YUKU)	Malipo, Yunnan, China
<i>Quercus kerrii</i>	<i>P. S. Zhang</i> DM24486 (YUKU)	Jinghong, Yunnan, China
<i>Quercus kerrii</i>	<i>M. Deng et al.</i> DM25264 (YUKU)	Changjiang, Hainan, China
<i>Quercus dussaudii</i>	<i>M. Dussaud</i> 62 (P00753919)	Route de Vientiane à Luang-Prabang, Ban Pac Sanane, Laos
<i>Castanopsis argyrophylla</i>	<i>J. W. Helfer</i> 4466 (K000395368)	Tenasserim and Andamans, Myanmar
<i>Castanopsis argyrophylla</i>	<i>Hildebrand s.n.</i> (K000395370)	Arakan, Myanmar
<i>Castanopsis argyrophylla</i>	<i>M. Lelland & Maingay</i> 1457/2 (K000395371)	Rangoon, Myanmar
<i>Castanopsis argyrophylla</i>	<i>J. H. Lace</i> 4216 (E00672020)	Paungbain Reserve, Upper Chiudein, Myanmar
<i>Castanopsis argyrophylla</i>	<i>R. W. Capt & I.M.S. MacGregor</i> 810 (E00672024)	Yangon, Myanmar
<i>Castanopsis argyrophylla</i>	<i>P. Srisanga</i> 2164 (HITBC0027045)	Nan, Doi Phu Kha National Park, Thailand
<i>Castanopsis argyrophylla</i>	<i>J. W. Li</i> 2261 (HITBC0028018)	Jinghong, Yunnan, China
<i>Castanopsis argyrophylla</i>	<i>B. Khan s.n.</i> (L1553086)	Upper Burma, Myanmar
<i>Castanopsis argyrophylla</i>	<i>J. F. Maxwell</i> 99-277 (L3793377)	Phiang District, Sayaboury, Laos
<i>Castanopsis argyrophylla</i>	<i>P. Palee</i> 443 (L3800447)	District Pahn, Chiang Rai, Thailand
<i>Castanopsis argyrophylla</i>	<i>P. Y. Mao</i> 5948 (PE00163110)	Simao, Yunnan, China
<i>Castanopsis argyrophylla</i>	<i>P. Y. Mao</i> 6085 (PE00163132)	Simao, Yunnan, China
<i>Castanopsis argyrophylla</i>	<i>P. Y. Mao</i> 6145 (PE00163133)	Simao, Yunnan, China
<i>Castanopsis argyrophylla</i>	<i>B. Khan s.n.</i> (US39366)	Asia-Tropical, Myanmar
<i>Quercus rex</i>	<i>A. Henry</i> 12665 (MO204638)	Szema, Yunnan, China



<i>Quercus rex</i>	A. Henry 12665 (MO204637)	Szema, Yunnan, China
<i>Quercus rex</i>	A. Henry 12665 (A00034185)	Szema, Yunnan, China
<i>Quercus rex</i>	A. Henry 12665 (E00275401)	Szema, Yunnan, China
<i>Quercus rex</i>	A. Henry 12665 (US00089628)	Szema, Yunnan, China
<i>Quercus rex</i>	A. Henry 12665 (US00089627)	Szema, Yunnan, China
<i>Quercus rex</i>	A. Henry 12665 (NY00253779)	Szema, Yunnan, China
<i>Quercus rex</i>	A. Henry 12665 (A00034184)	Szema, Yunnan, China
<i>Quercus rex</i>	A. Henry 12665 (K000832130)	Szema, Yunnan, China
<i>Quercus rex</i>	A. Henry 12665 (K000832131)	Szema, Yunnan, China
<i>Quercus rex</i>	A. Henry 12665 (NY00253780)	Szema, Yunnan, China
<i>Quercus rex</i>	E. Poilane 24.906 (K000832191)	Szema, Yunnan, China
<i>Quercus rex</i>	Anonymous s.n. (K000832129)	Szema, Yunnan, China
<i>Quercus rex</i>	M. Deng et al. DM27872 (YUKU)	Simao, Yunnan, China
<i>Quercus rex</i>	M. Deng DM1914 (YUKU)	Xishuangbanna, Yunnan, China
<i>Quercus rex</i>	Y. J. Zhou DM24490 (YUKU)	Mengla, Yunnan, China
<i>Quercus rex</i>	P. S. Zhang DM25163 (YUKU)	Jinghong, Yunnan, China
<i>Quercus rex</i>	M. Deng & L. F. Yang DM26882 (YUKU)	Simao, Yunnan, China
<i>Quercus rex</i>	M. Deng et al. DM18930 (YUKU)	Simao, Yunnan, China
<i>Quercus rex</i>	M. Deng et al. DM18934 (YUKU)	Jinghong, Yunnan, China
<i>Castanopsis lanceifolia</i>	Anonymous 3733 (K001119912)	Goyalpara, India
<i>Castanopsis lanceifolia</i>	Griffith s.n. (P06856346)	East Bengal
<i>Castanopsis lanceifolia</i>	P. Y. Wang et al. WPY37 (HITBC)	Yingjiang, Yunnan, China
<i>Castanopsis lanceifolia</i>	T. R. Chand 6170 (MICH1337333)	Cherrapunjee, Meghalaya, India
<i>Castanopsis lanceifolia</i>	W. N. Koelz 30749 (MICH1337334)	Khasi Hills, Meghalaya, India
<i>Castanopsis lanceifolia</i>	T. R. Chand 2001 (MICH 1337335)	Pynursla, Meghalaya, India
<i>Castanopsis lanceifolia</i>	W. N. Koelz 23763 (MICH 1337330)	Pynursla, Meghalaya, India
<i>Castanopsis lanceifolia</i>	G. Mann 13/86 (US287284)	Southern face of the Khasi Hills., Meghalaya, India
<i>Castanopsis lanceifolia</i>	N. Young 4 (US150057)	Khasia Hills, Meghalaya, India
<i>Castanopsis lanceifolia</i>	J. D. Hooker & T. Thomson s.n. (P06856357)	Khasia, Meghalaya, India
<i>Castanopsis lanceifolia</i>	W. S. Kurz 20495 (BM000907540)	Assam, India
<i>Castanopsis lanceifolia</i>	J. D. Hooker & T. Thomson (O-V2163134)	Khasia Hills, Meghalaya, India
<i>Castanopsis lanceifolia</i>	Griffith s.n. (US39966)	Assam, India
<i>Castanopsis armata</i>	F. Hamilton 3736 (K001119915)	Goalpara, India
<i>Castanopsis armata</i>	F. Hamilton 3736 (K001119916)	Goalpara, India
<i>Castanopsis armata</i>	F. Hamilton 3736 (K00112088)	Goalpara, India
<i>Castanopsis armata</i>	G. Mann s.n. (P06858677)	Kulsi River Kamrup, Assam, India
<i>Castanopsis armata</i>	G. Mann s.n. (L1553057)	Kulsi River Kamrup, Assam, India
<i>Castanopsis armata</i>	B. Khan s.n. (P06858679)	Chittagong, Bangladesh
<i>Castanopsis armata</i>	B. Khan s.n. (P06858678)	Chittagong, Bangladesh
<i>Castanopsis armata</i>	G. King 481 (L1553055)	Chittagong, Bangladesh
<i>Castanopsis armata</i>	G. King 481 (L1553054)	Chittagong, Bangladesh
<i>Castanopsis armata</i>	G. Mann 6 (US150190)	The Khasia Hills, India
<i>Castanopsis armata</i>	G. King 188 (L1553053)	Chittagong, Bangladesh
<i>Castanopsis armata</i>	A. B. Rao 39151 (L1553051)	Kamrup Distr, Assam, India
<i>Castanopsis tribuloides</i>	Buchanan s.n. (BM000521988)	Harain Hutty, Nepal
<i>Castanopsis tribuloides</i>	Buchanan s.n. (BM000521989)	Suembu, Nepal
<i>Castanopsis tribuloides</i>	Buchanan s.n. (BM000521895)	Harain Hutty, Nepal
<i>Castanopsis tribuloides</i>	Buchanan s.n. (BM000521899)	Nepal
<i>Castanopsis tribuloides</i>	G. Watt 5918 (K000832663)	Manipur Sirohifur, India
<i>Castanopsis tribuloides</i>	G. Watt 6508 (K000832662)	Manipur Ching Sow village, India
<i>Castanopsis tribuloides</i>	B. Balansa 564 (P00639022)	Ouonbi, Tonkin, Vietnam
<i>Castanopsis tribuloides</i>	N. Wallich 2764 (K000832664)	Amkansh
<i>Castanopsis tribuloides</i>	G. Watt s.n. (P00713413)	Munipur, India
<i>Castanopsis tribuloides</i>	G. Watt 5025 (P00713412)	Lingli, Manipur, India
<i>Castanopsis tribuloides</i>	W. Roxburgh s.n. (BM015176771)	Hawang, Myanmar
<i>Castanopsis ferox</i>	F. De Silva 2765B (K000639576)	Bangladesh
<i>Castanopsis ferox</i>	N. Wallich 2765A (K001117047)	Nepal
<i>Castanopsis ferox</i>	N. Wallich 2765A (K001117046)	Nepal
<i>Castanopsis ferox</i>	N. Wallich 2765A (E00301128)	Nepal
<i>Castanopsis ferox</i>	N. Wallich 2765A (K000832665)	Nepal

**Table S2.1.** Principal component analysis (PCA) of leaf characters from *Quercus cepifera* and *Castanopsis eyrei* specimens, and their contributions to PC1, PC2, PC3, and PC4.

Principle component		PC1	PC2	PC3	PC4
Contribution of morphological traits to different components	Leaf blade length	18.4266578	0.131603314	0.412042967	0.050354574
	Leaf blade width	18.65009185	0.081156096	0.268634805	0.008387421
	Leaf shape	0	0	0	0
	Leaf apex	0	0	5.97835E-32	0
	Leaf base	4.52892E-37	2.76992E-31	5.38052E-31	1.95328E-30
	Leaf base shape	0	0	0	0
	Leaf texture	0	0	0	0
	Hairs of leaf	0	0	0	0
	Leaf margin	0.08189445	11.36509814	8.08921E-05	8.538599921
	Lateral veins number	0.159578628	10.53553381	0.64260625	8.657902544
Eigenvalue	Irregular intersecondary veins	0	0	0	0
	Petiole length	1.209578515	0.358875018	18.07749378	0.352393057
Variance explained		1.926390062	1.123613319	0.970042935	0.880381876
Cumulative variance explained		38.52780124	22.47226638	19.4008587	17.60763752
		38.52780124	61.00006762	80.40092632	98.00856383

Table S2.2. Principal component analysis (PCA) of leaf characters from *Quercus dussaudii* and *Castanopsis argyrophylla* specimens, and their contributions to PC1, PC2, PC3, and PC4.

Principle component		PC1	PC2	PC3	PC4
Contribution of morphological traits to different components	Leaf blade length	18.97202277	0.144779601	0.586406402	5.296791229
	Leaf blade width	16.56581262	0.00109368	5.095864596	3.337229107
	Leaf shape	0	0	2.07365E-31	2.82492E-32
	Leaf apex	0	2.99089E-31	0	0
	Leaf base	0	0	0	0
	Leaf base shape	0	0	0	0
	Leaf texture	0	0	0	0
	Hairs of leaf	0	0	0	0
	Leaf margin	0	0	0	0
	Lateral veins number	11.70234946	2.850024913	9.918257256	0.529368374
Eigenvalue	Irregular intersecondary veins	0	0	0	0
	Petiole length	2.504044175	21.26904958	1.222892663	0.004013584
Variance explained		1.989769161	0.970597911	0.672936837	0.366696092
Cumulative variance explained		49.74422902	24.26494777	16.82342092	9.167402294
		49.74422902	74.00917679	90.83259771	100

Table S2.3. Principal component analysis (PCA) of acorn characters from *Quercus dussaudii*, *Q. kerrii*, and *Q. rex* specimens, and their contributions to PC1, PC2, PC3, and PC4.

Principle component		PC1	PC2	PC3	PC4
Contribution of morphological traits to different components	Cupule_height	13.9917114	0.13627879	0.111024616	0.008117966
	Cupule_diameter	43.9355772	0.682121462	0.136015465	0.010006335
	Hairs_of_Cupule	0	0	0	0
	Cupule_bracts_number	0.596238754	0.457673514	0.085153571	0.074127031
	Nut_height	0.505664385	0.112215556	0.042196987	0.022313168
	Nut_diameter	5.576420151	1.162831675	0.294164726	0.551860295
	Hairs_of_Nut	0	0	0	0
	Scar_diameter	12.68391839	1.333744591	0.228158251	0.019920127
	Scar_shape	15.94211925	0.820944518	0.102190221	0.010056408
		93.23164953	4.705810106	0.998903835	0.69640133
Eigenvalue		93.23164953	4.705810106	0.998903835	0.69640133
Variance explained		93.23164953	97.93745963	98.93636347	99.6327648
Cumulative variance explained		93.23164953	97.93745963	98.93636347	99.6327648



Fig. S1. Type material of *Quercus cepifera*, P.J. Cavalerie 2341 (A00034142). The leaf is the lectotype of *Q. cepifera*, inside the red (acorns) line belongs to *Lithocarpus litseifolius*.



Fig. S2. Lectotype material of *Quercus cepifera*, P.J. Cavalerie 2341 (E00275486).

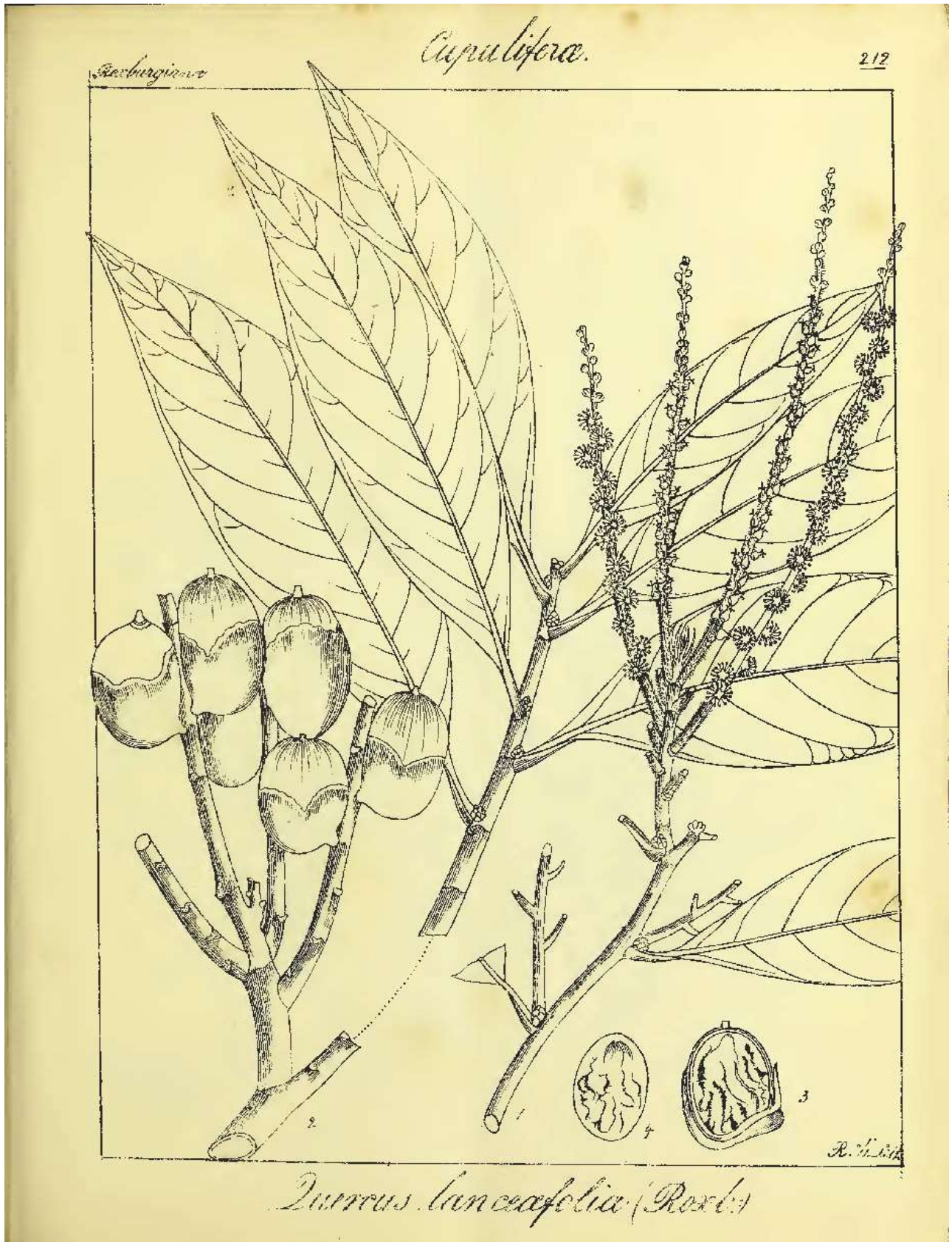


Fig. S3. Illustrations of *Castanopsis lanceifolia*.



Fig. S4. Type material of *Castanopsis lanceifolia* (P. Y. Wang *et al.* WPY37) was collected from Yingjiang County, Yunnan Province, China.

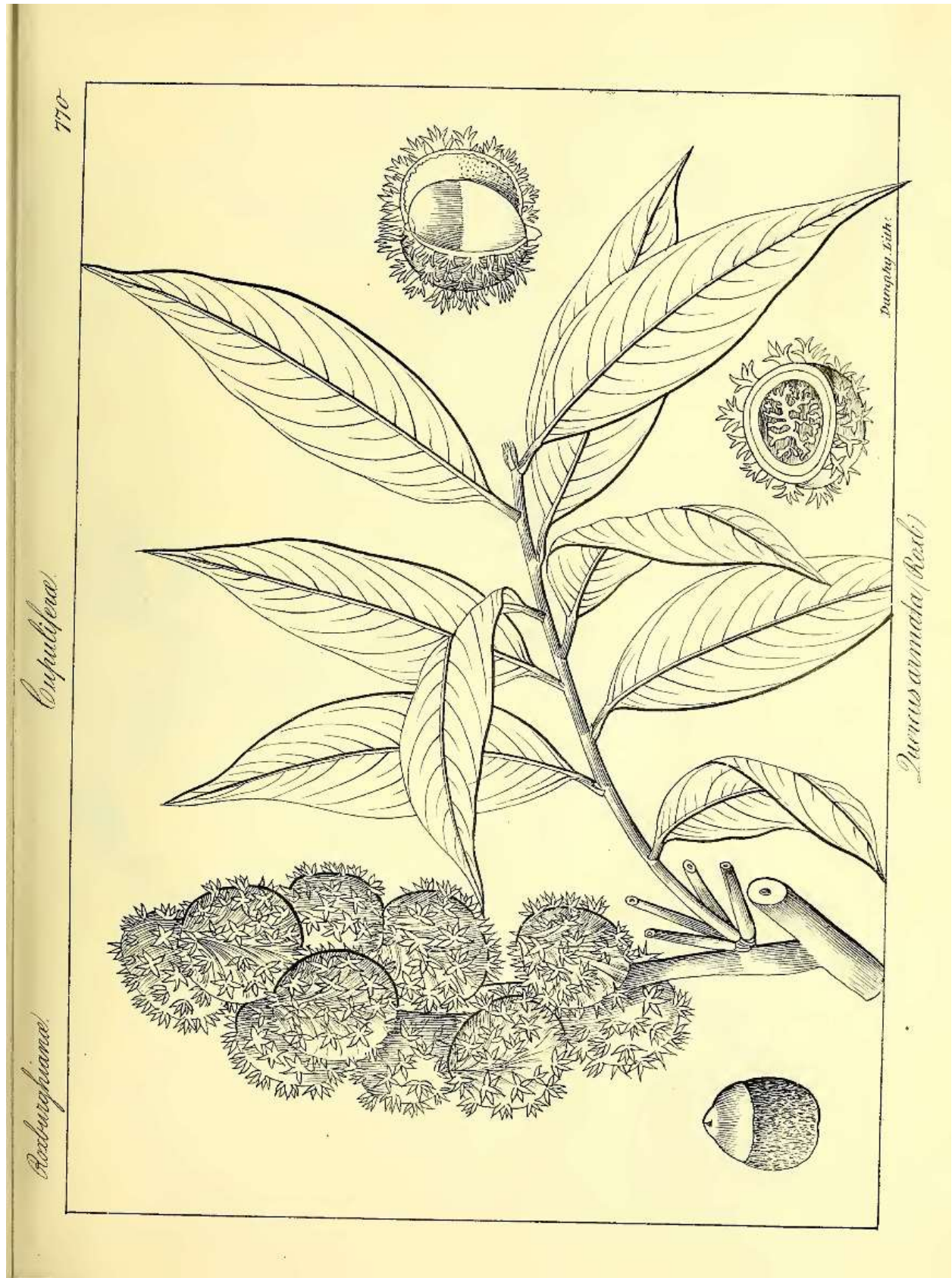


Fig. S5. Illustrations of *Castanopsis armata*.



Fig. S6. Type material of *Castanopsis armata* (F. Hamilton 3736, Wallich no. 3736, K001119916).



Fig. S7. Type material of *Castanopsis tribuloides* (Buchanan s.n., BM000521988).

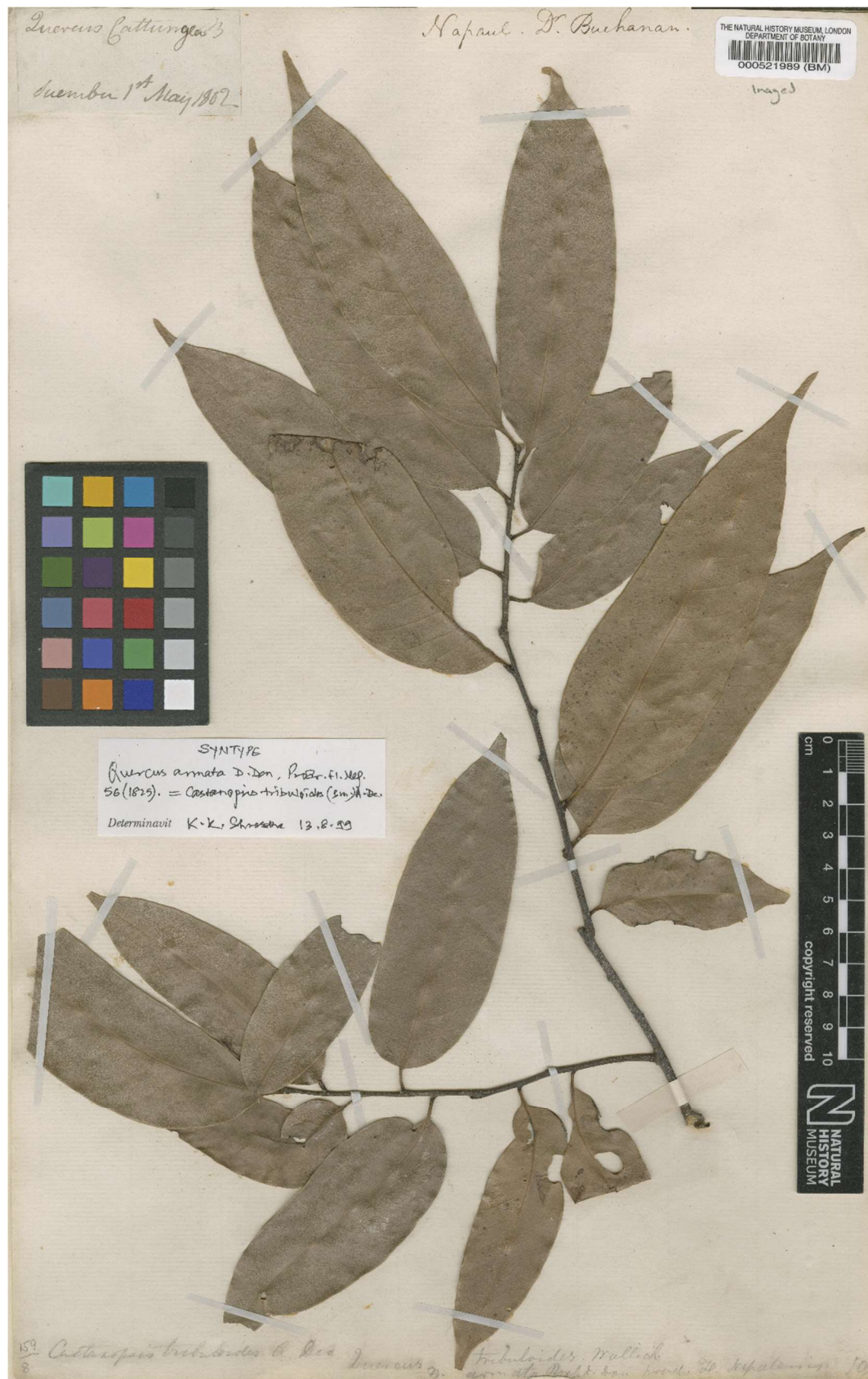


Fig. S8. Type material of *Castanopsis tribuloides* (Buchanan s.n., BM000521989).



Fig. S9. Type material of *Castanopsis tribuloides* (Buchanan s.n., BM000521895).



A

II. CUPULIFERÆ. *Rich., Kunth.*

QUERCUS. *Linn. Gen.* 495. *Juss. Gen.* 410.

- * *Cupulis armatis sphaericis, nuces omnino instar capsulae obboventibus; foliis integerrimis. Castanopsis.*

1. *Q. armata*, foliis lanceolatis acuminatis integerrimis glabris subtus glaucis, fructibus sessilibus spicatis, cupulis capsulaeformibus globosis tomentosis spinis ternatis divergentibus armatis dein disruptis, nucibus ovatis mucronulatis.

Quercus armata. Roxb. Corom. 3. t. 296.

Q. tribuloides. Wallich in Litt.

Q. Catungia. Hamilton MSS.

Hab. ad Narainhetty et Suembu Nepalensium. Hamilton. Wallich. h. Floret Maio et Junio. Fructificat Novembri.

B

10. ***C. tribuloides***, *A. DC. in Seem. Journ. Bot.* i. (1863) 182; *Prodr.* xvi. ii. 111 (*excl. C. armata*); branchlets glabrous or pubescent, leaves petioled from lanceolate to oblong acuminate or caudate glabrous or hoary beneath or silvery rarely pubescent entire or coarsely serrate above the middle, nerves 6–10 pairs arched slender raised beneath, nervules finely reticulate, involucre small globose finely tomentose covered with long slender or short substellate spines or tubercles in sessile subsessile or stipitate clusters.

Tropical, subtropical and lower temperate HIMALAYA, and all the hill ranges of TRANSGANGETIC INDIA to BURMA.

An exceedingly variable tree (40–60 ft.), or possibly more than one species are included here, to determine which a study of the flowers of both sexes on the living plants is necessary. The involucre is largest and spines longest in var. *longispina*; they are smaller with shorter spines in *tribuloides*, *ferox* and *echidnocarpa* successively.

C. TRIBULOIDES PROPER; leaves usually small lanceolate 4–6 in. rarely serrate, spines close-set slender $\frac{1}{4}$ – $\frac{1}{3}$ in. often curved, nuts usually solitary.

Fig. S10. Taxonomic treatments of *Castanopsis tribuloides* and *C. armata* by D. Don (1825) in *Prodromus Florae Nepalensis* (A) and J. D. Hooker (1888) in *The Flora of British India* (B).



Fig. S11. Illustrations of *Castanopsis ferox*.



Fig. S12. Type material of *Castanopsis ferox* (N. Wallich 2765A, E00301128).



Fig. S13. Type material of *Castanopsis ferox* (N. Wallich 2765A, K001117046).



Fig. S14. Type material of *Castanopsis ferox* (N. Wallich 2765A, K000832665).