



Supplement

The following supplementary materials are available for this article: Yang, L.-F., Tu, Y., Luo, Y., Deng, M. 2025 Resolving the taxonomic status of *Lithocarpus lycoperdon* (Fagaceae) and establishing a new synonym. *Taiwania* 70(2): 353-360. doi: 10.6165/tai.2025.70.353

Table S1. Morphological comparison of *Lithocarpus* species co-occurring in the mid-elevation of Da-Wei Mountain National Nature Reserve, southeastern Yunnan, China.

| Species name | Leaf shape | Leaf size (L × W) cm | Leaf texture | Leaf secondary vein pattern | Color of the leaf abaxial surface | Nut size (H × W) cm | Nut shape | Seed scar | Cupule shape | Cupule size (H × diam.) cm | The hair on the acorns | Shape of the acorn top |
|-----------------------------|---|----------------------|-----------------------------------|-----------------------------|-----------------------------------|---------------------|-----------------------|-----------|--|----------------------------|------------------------|------------------------|
| <i>Lithocarpus confinis</i> | Oblong to lanceolate; margin entire, | 5–13 × 1.2–3.5 | Thickly papery | Irregularly spaced | Shining green without waxy layer | 1–1.8 × 1.4–2 | Globose | Concave | Plate-shaped, covering nut basal | 0.1–0.3 × 1–1.6 | Glabrous | Rounded |
| <i>L. corneus</i> | Elliptic, obovate–elliptic or ovate; margin dentate, shallowly undulate, or rarely entire | (5–)10–15 × 2–4.5 | Papery to leathery | Regularly spaced | Shining green without waxy layer | 1.5–2.4 × 2.2–3 | Globose to oblate | Convex | Cupular to subglobose, enclosing ca. 1/2 of nut | 2.2–4.5 × 2.5–5.5 | Yellow-gray silky hair | Flat |
| <i>L. dealbatus</i> | Ovate, ovate–elliptic, or lanceolate; margin entire | 7–14 × 2–5 | Thickly papery to leathery | Regularly spaced | Grayish waxy layer | 1–15 × 0.9–1.3 | Globose | Convex | Cupular, enclosing 1/2 to most of nut | 0.8–1.4 × 1–1.8 | Grayish puberulent | Rounded |
| <i>L. gymnocarpus</i> | Elliptic to sometimes obovate–elliptic; usually entire or rarely apically with 1–3 obtuse teeth | 11–13 × 3–5 | Papery | Regularly spaced | Shining green without waxy layer | 2–2.5 × (3–)4.5 | Depressed globose | Concave | Shallowly bowl-shaped, covering basal 1/4 of nut | 1.2–1.5 × 3–3.5 | Glabrous | Broad arc-shaped |
| <i>L. hancei</i> | ovate, broadly elliptic, obovate–elliptic, narrowly elliptic, or lanceolate; margin entire | 5–10 × 2.5–5 | Thinly papery to rigidly leathery | Irregularly spaced | Shining green without waxy layer | 0.8–2 × 0.6–2.5 | Globose | Concave | Shallowly bowl-shaped to plate-shaped, enclosing nearly 1/3 of nut | 0.3–0.7 × 1–2 | Glabrous | Rounded |
| <i>L. megalophyllus</i> | Obovate, obovate–elliptic, or elliptic; margin entire | 14–30 × 6–13 | Rigidly leathery | Regularly spaced | Grayish waxy layer | 2.4–2.8 × 2–2.5 | Globose | Concave | Plate-shaped to cupular, enclosing 1/6–1/3 of nut | 0.4–1 × 2–3 | Glabrous | Rounded |
| <i>L. truncatus</i> | Narrowly oblong to lanceolate; margin entire | 10–25 × 3–7 | Thinly leathery | Regularly spaced | Grayish waxy layer | ca. 3 × 2.6 | Globose-subglobose | Convex | Turbinate to obconic, enclosing most of nut | 2.5–3.5 × 2.5–3 | Yellow-gray silky hair | Flat |
| <i>L. xylocarpus</i> | Narrowly oblong to sometimes lanceolate; margin entire | 9–15 × 2–5 | Leathery | Regularly spaced | Grayish waxy layer | 2–3 × 2–3 | Globose | Convex | Subglobose, completely enclosing nut | 3–4.5 × 3–4.5 | Yellow-gray silky hair | Flat to pointed |
| <i>L. pachylepis</i> | Obovate-oblong to oblong; margin serrate-dentate | 20–35 × 6–11 | Papery | Regularly spaced | Shining green without waxy layer | 1.5–2.5 × 4–6.5 | Depressed globose | Convex | Discoid, covering base of nut | 1.5–3 × 4.5–6 | Yellow-gray silky hair | Flat |
| <i>L. lycoperdon</i> | Oblong to lanceolate; margin entire | 5.1–10.2 × 2.5–2.54 | Leathery | Regularly spaced | Grayish waxy layer | ca. 2.5 × ca. 5 | Depressed globose | Convex | Discoid, covering base of nut | 2.5 × ca. 4.8 | Yellow-gray silky hair | Flat |
| <i>L. cinereus</i> | Oblong to lanceolate; margin entire | 8–17.5 × 2–6.6 | Leathery | Regularly spaced | Grayish waxy layer | 1.6–2.2 × 1.6–2.3 | Globose to subglobose | Convex | Cupular, enclosing 2/3 of nut | 1.6–2.2 × 2–3.2 | Yellow-gray silky hair | Rounded |



Table S2. List of specimens that were used for morphological analysis.

| Species | Specimens ID | Localities |
|-------------------------------|---------------------------------------|-----------------------------|
| <i>Lithocarpus pachylepis</i> | L. F. Yang et al. DM27379 (YUKU) | Honghe, Yunnan, China |
| <i>L. pachylepis</i> | L. F. Yang et al. DM27433 (YUKU) | Honghe, Yunnan, China |
| <i>L. pachylepis</i> | L. F. Yang et al. DM27412 (YUKU) | Honghe, Yunnan, China |
| <i>L. pachylepis</i> | L. F. Yang et al. DM27409 (YUKU) | Honghe, Yunnan, China |
| <i>L. pachylepis</i> | L. F. Yang et al. DM27367 (YUKU) | Honghe, Yunnan, China |
| <i>L. pachylepis</i> | L. F. Yang et al. DM27352 (YUKU) | Honghe, Yunnan, China |
| <i>L. pachylepis</i> | L. F. Yang et al. DM27360 (YUKU) | Honghe, Yunnan, China |
| <i>L. pachylepis</i> | L. F. Yang et al. DM27387 (YUKU) | Honghe, Yunnan, China |
| <i>L. pachylepis</i> | L. F. Yang et al. DM27414 (YUKU) | Honghe, Yunnan, China |
| <i>L. pachylepis</i> | L. F. Yang et al. DM27420 (YUKU) | Honghe, Yunnan, China |
| <i>L. pachylepis</i> | E. Poilane 18941(P00744541) | Lung Vân, Thanhhoa, Vietnam |
| <i>L. pachylepis</i> | E. Poilane 18941 (P00744539) | Lung Vân, Thanhhoa, Vietnam |
| <i>L. pachylepis</i> | C. W. Wang 83109 (PE00022963) | Pingbian, Yunnan, China |
| <i>L. pachylepis</i> | C. W. Wang 83109 (PE00022964) | Pingbian, Yunnan, China |
| <i>L. pachylepis</i> | Q. A. Wu & S. W. Yu 1057 (KUN1271471) | Honghe, Yunnan, China |
| <i>L. pachylepis</i> | M. Deng DM485 (KUN0804862) | Shangsi, Guangxi, China |
| <i>L. pachylepis</i> | Anonymous 481 (KUN0502701) | Jinping, Yunnan, China |
| <i>L. pachylepis</i> | D. D. Tao 288 (KUN0502699) | Luchun, Yunnan, China |
| <i>L. pachylepis</i> | S. K. Wu et al. 290 (KUN0772510) | Luchun, Yunnan, China |
| <i>L. cinereus</i> | L. F. Yang et al. DM27406 (YUKU) | Honghe, Yunnan, China |
| <i>L. cinereus</i> | L. F. Yang et al. DM27429 (YUKU) | Honghe, Yunnan, China |
| <i>L. cinereus</i> | L. F. Yang et al. DM27411 (YUKU) | Honghe, Yunnan, China |
| <i>L. cinereus</i> | L. F. Yang et al. DM27389 (YUKU) | Honghe, Yunnan, China |
| <i>L. cinereus</i> | L. F. Yang et al. DM27386 (YUKU) | Honghe, Yunnan, China |
| <i>L. cinereus</i> | L. F. Yang et al. DM27383 (YUKU) | Honghe, Yunnan, China |
| <i>L. cinereus</i> | C. C. Chang 12298 (IBSC0035902) | Shangsi, Guangxi, China |
| <i>L. cinereus</i> | C. C. Chang 12298 (IBK00190905) | Shangsi, Guangxi, China |
| <i>L. lycoperdon</i> | A. Henry 9069 (K000832338) | Honghe, Yunnan, China |
| <i>L. lycoperdon</i> | A. Henry 9069 (NY00253775) | Honghe, Yunnan, China |



Fig. S1 Type specimen of *Lithocarpus lycoperdon* (A. Henry 9069, K000832338).



Fig. S2 Type specimen of *Lithocarpus pachylepis* (E. Poilane 18941, P00744541).

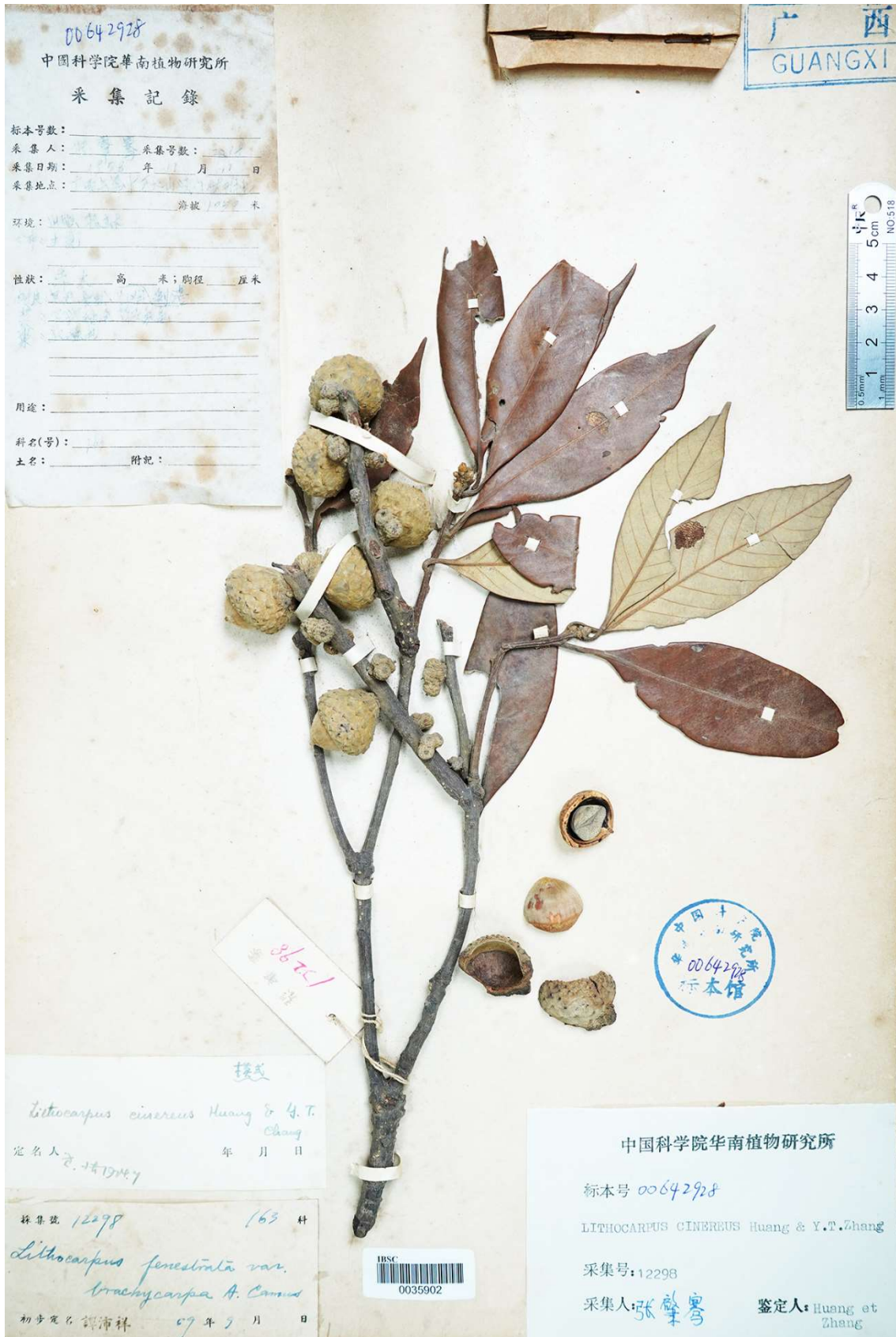


Fig. S3 Type specimen of *Lithocarpus cinereus* (C. C. Chang 12298, IBSC35902).



Fig. S4 Epitype material of *Lithocarpus lycoperdon* (L. F. Yang & Y. Tu DM27386, HITBC).