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广西楼梯草属五新种

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摘要：描述了在中国广西发现的楼梯草属五新种：小果楼梯草 (*Elatostema microcarpum* W. T. Wang & Y. G. Wei) 在体态方面与荔波楼梯草 (*E. liboense* W. T. Wang) 极为相似，但茎较低矮，不具软鳞片，叶上面无毛，钟乳体较小而可区别。圆序楼梯草 (*E. gyrocephalum* W. T. Wang & Y. G. Wei) 在体态上与浅齿楼梯草 (*E. crenatum* W. T. Wang) 相似，但叶两面均有糙伏毛，侧脉较少，4~6 对，钟乳体较小，长约 0.1 mm 而不同。对序楼梯草 (*E. binatum* W. T. Wang & Y. G. Wei) 在亲缘关系方面与深绿楼梯草 (*E. atroviride* W. T. Wang) 相近，但茎和叶无毛，雄花序托较小，近方形，长度及宽度约 6.5 mm，小苞片较小，长约 1.5 mm，无毛，可以区别。河池楼梯草 (*E. hechiense* W. T. Wang & Y. G. Wei) 似华南楼梯草 (*E. balansae* Gagnep.) 但叶的渐尖头全缘，钟乳体较小，长 0.1~0.15 mm，雌花序苞片顶端无角状突起，可以区别。环江楼梯草 (*E. huanjiangense* W. T. Wang & Y. G. Wei) 可能与樟叶楼梯草 (*E. petelotii* Gagnep.) 有亲缘关系，但后者的叶全缘，钟乳体较大，长 0.3~0.7 mm，侧脉在狭侧 3 条，在宽侧 4 条，雌花序常有长花序梗，而与本种相区别。

关键词：楼梯草属，小果楼梯草，圆序楼梯草，对序楼梯草，河池楼梯草，环江楼梯草，荨麻科，新种

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Five new species of *Elatostema* J. R. et G. Forst. (Urticaceae) from Guangxi, China

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Abstract: Five new species of the genus *Elatostema* (Urticaceae) are described from Guangxi Zhuang Autonomous Region, China: (1) *E. microcarpum* in habit is similar to *E. liboense* W. T. Wang, differing in its lower unscaly stems and its leaves which are glabrous adaxially and have smaller cystoliths; (2) *E. gyrocephalum* in habit is similar to *E. crenatum* W. T. Wang, differing in its strigose leaves with fewer secondary nerves and smaller cystoliths; (3) *E. binatum* is related to *E. atroviride* W. T. Wang, differing in its glabrous stems and leaves, smaller subquadrate staminate receptacles, and smaller glabrous staminate bracteoles; (4) *E. hechiense* in habit is similar to *E. balansae* Gagnep, differing in its entire leaf acumens, smaller cystoliths of leaves, and uncorniculate pistillate bracts; and (5) *E. huanjiangense* is

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probably related to *E. petelotii* Gangnep, differing in its few-crenate leaves with smaller cystoliths and fewer secondary nerves and very short pistillate peduncles.

Key words: *Elatostema*, *Elatostema microcarpa*, *Elatostema gyrocephala*, *Elatostema binatum*, *Elatostema hechiense*, *Elatostema huanjiangense*, Urticaceae, new species

1 小叶楼梯草组 sect. *Weddelia* (H. Schröter)

W. T. Wang

小叶楼梯草系 ser. *Parva* W. T. Wang

小果楼梯草 新种 图 1: E-H

Elatostema microcarpum W. T. Wang & Y. G. Wei, sp. nov. Fig. 1.

Habitu species nova est simillima *E. liboensi* W. T. Wang, quod caulibus 18 cm altis dense atrobrunneo-furfuraceis, foliis supra strigosis, cystolithis majoribus usque ad 0.6 mm longis differt.

Herba perennis, parva. Caules circ. 4 fasciculati, 3–7.5 cm alti, basi 0.7–1 mm crassi, prope apicem patule pilosi, simplices, superne 4–5-foliati. Folia sessilia vel brevissime petiolata; laminae herbaceae, oblique obovatae vel ellipticae, (0.4–) 1.4–5.5 cm longae, (0.25–) 0.4–2 cm latae, apice acuminatae vel acutae, basi oblique cuneatae, margine supra medium denticulatae, supra glabrae, subtus ad nervos villosulae, cystolithis densissimis bacilliformibus 0.2–0.4 mm longis, semitriplinerves, nervis lateralibus 2-jugis obscuris; petioli usque ad 0.6 mm longi; stipulae membranaceae, albae, lineares vel anguste oblongae, 3–4 mm longae, 0.7–1 mm latae, in parte centrali brunneo-lineolatae, sparse pilosae. Inflorescentiae pistillatae singulariter axillares, breviter pedunculatae; pedunculi 2 mm longi, sparse pilosi; receptacula late oblonga, circ. 2.8 mm longa, 2 mm lata, glabra; bracteae circ. 8, triangulares, 0.5–0.8 mm longae, 0.8–1 mm latae, ciliatae; bracteolae densae, spathulato-lineares vel anguste lineares, circ. 0.6 mm longae, 0.1–0.2 mm latae, apice ciliatae. Achenia anguste ovoidea, 0.5 (–0.7) mm longa, longitudinaliter 6-costata.

多年生小草本。茎约 4 条丛生, 高 3~7.5 cm, 基部粗 0.7~1 mm, 近顶端有疏柔毛, 不分枝, 上部具 4~5 叶。叶无柄或具极短柄; 叶片草质, 斜倒卵形或斜椭圆形, 长 (0.4~) 1.4~5.5 cm, 宽 (0.25~) 0.4~2 cm, 顶端渐尖或急尖, 基部斜楔形, 边缘中部之上有小牙齿, 上面无毛, 下面脉上有柔毛, 钟乳体极密, 杆状, 长 0.2~0.4 mm, 半离基三出脉, 侧脉 2 对, 不明显; 叶柄

长达 0.6 mm; 托叶膜质, 白色, 条形或狭长圆形, 长 3~4 mm, 宽 0.7~1 mm, 中央有褐色短线纹, 有疏柔毛, 雌花序单生叶脉, 具短梗; 花序梗长 2 mm, 有疏柔毛; 花序托宽长圆形, 长约 2.8 mm, 宽 2 mm, 无毛; 苞片约 8, 三角形, 长 0.5~0.8 mm, 宽 0.3~1 mm, 有缘毛; 小苞片密集, 匙状条形或狭条形, 长约 0.6 mm, 宽 0.1~0.2 mm, 顶端有缘毛。瘦果狭卵球形, 长 0.5 (~0.7) mm, 有 6 条纵肋。

广西 (**Guangxi**): 环江 (Huanjing), 水源 (Shuiyuan), 石灰岩山洞 (in cave of a limestone hill), 2007-04-25, 韦毅刚 (Y. G. Wei) 07106 (**holotype**, PE; isotype, IBK)。

本种在体态方面与荔波楼梯草 (*E. liboense* W. T. Wang) 极为相似, 但茎较低矮, 不具软鳞片, 叶上面无毛, 钟乳体较小而可区别。在荔波楼梯草, 茎高 18 cm, 密被暗褐色软鳞片, 叶上面被糙伏毛, 钟乳体较大, 长达 0.6 mm。

浅齿楼梯草系 ser. *Crenata* W. T. Wang

圆序楼梯草 新种 图 1: A-D

Elatostema gyrocephalum W. T. Wang & Y. G. Wei, sp. nov. Fig. 2.

Habitu species nova haec est similis *E. crenato* W. T. Wang, quod foliis glabris, nervis lateralibus pluribus 9–10-jugis, cystolithis majoribus 0.5–0.8 mm longis distinguitur.

Herba perennis. Caules circ. 3 fasciculati, 14–30 cm alti, basi 2–4 mm crassi, glabri, vadosae longitudinaliter 4–8-canaliculati, simplices vel 1-ramosi. Folia breviter petiolata; laminae papyraceae, oblique ellipticae vel oblongae, 4.5–12.8 cm longae, 2.5–6 cm latae, apice breviter caudatae, basi oblique cuneatae vel latere latiore rotundatae, margine supra basin obtuse dentatae, supra sparse strigosae, subtus ad costam mediam et nervos laterales pilis circ. 0.12 mm longis strigulosae, cystolithis densiusculis bacilliformibus circ. 0.1 mm longis, penninerves, nervis lateralibus 4–6-jugis; petioli 2–5 mm longi, subglabri; stipulae linearilanceolate vel lineares, 3 mm longae, 0.4–0.8 mm latae,

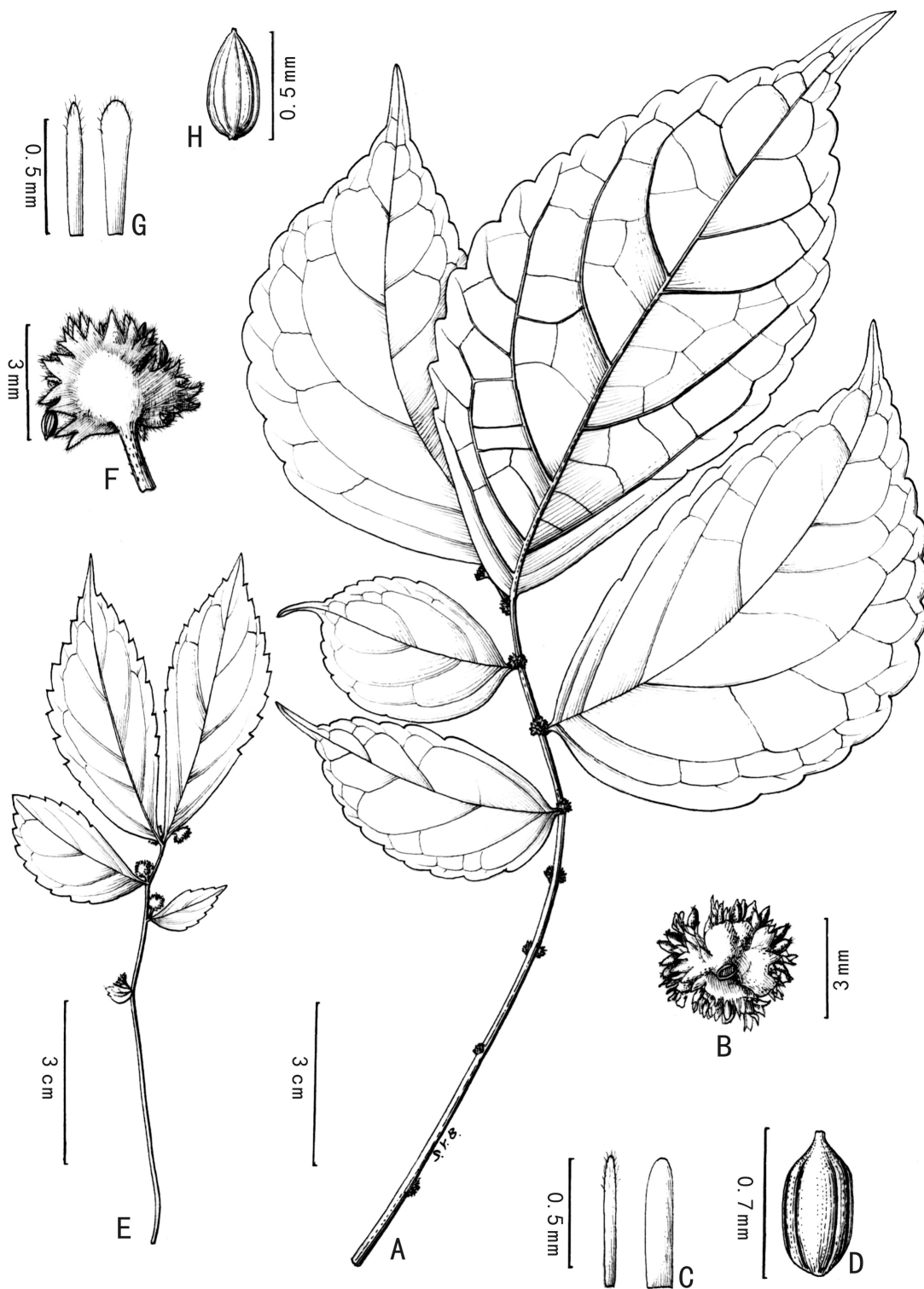


图 1 A-D. 圆序楼梯草 A. 结果的茎; B. 果序 (下面观); C. 小苞片; D. 瘦果。E-H. 小果楼梯草
E. 结果的茎; F. 果序 (下面观); G. 小苞片; H. 瘦果。(孙英宝绘)

Fig. 1 A-D. *Elatostema gyrocephalum* W. T. Wang & Y. G. Wei A. Fruiting stem; B. Fruiting inflorescence (lower view);
C. Bracteoles; D. Achene. E-H. *Elatostema microcarpum* W. T. Wang & Y. G. Wei E. Fruiting stem;
F. Fruiting inflorescence (lower view); G. Bracteoles; H. Achene. (Drawn by SUN Ying-Bao)

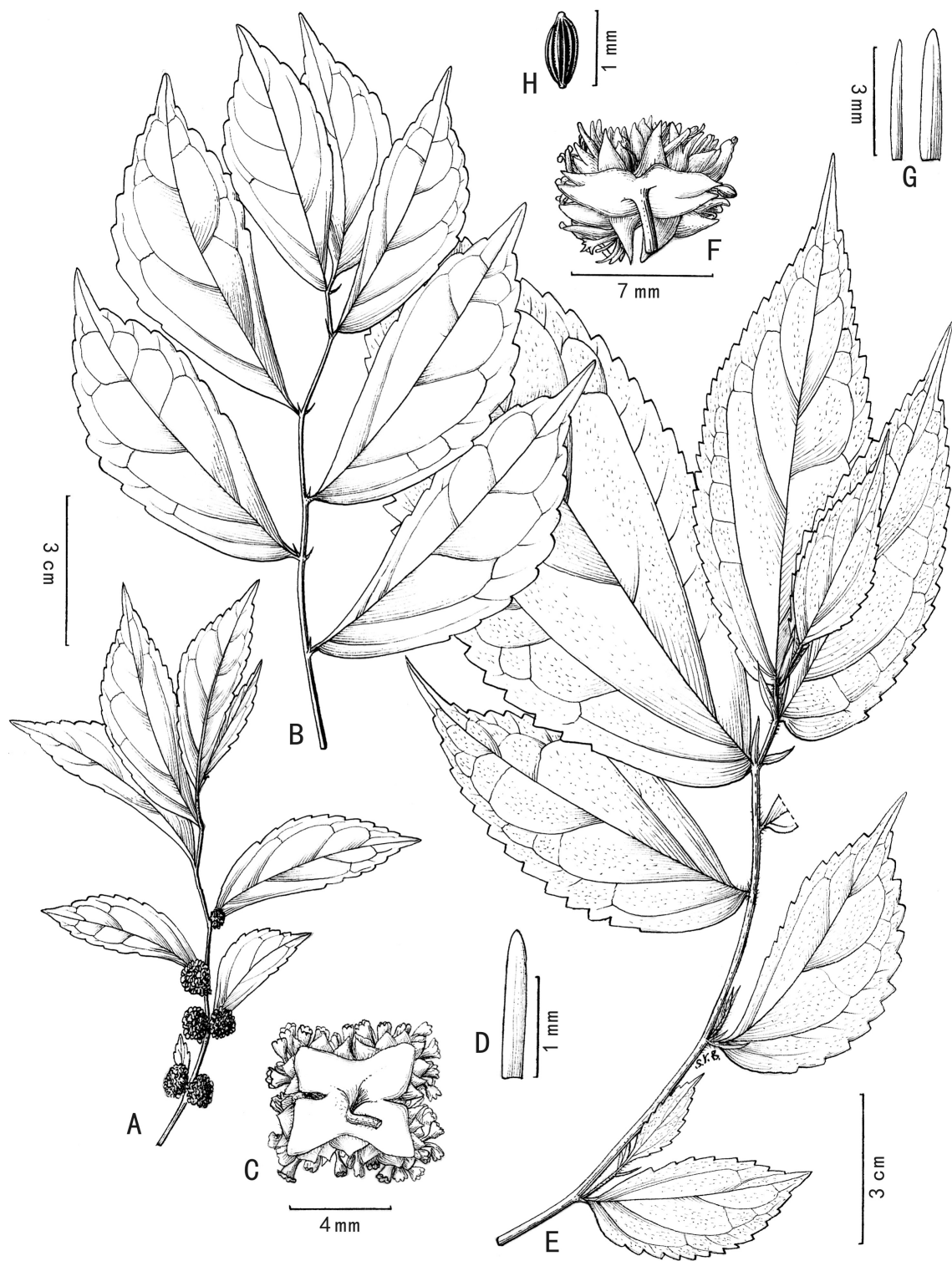


图 2 A-D. 对序楼梯草 A. 一条具雄花序茎的上部; B. 一条具叶茎的上部; C. 雄花序 (下面观);
D. 小苞片. E-H. 河池楼梯草 E. 茎; F. 果序 (下面观); G. 小苞片; H. 瘦果. (孙英宝绘)

Fig. 2 A-D. *Elatostema binatum* W. T. Wang & Y. G. Wei A. Upper part of a stem with staminate inflorescences; B. Upper part of a leaf-bearing stem; C. Staminate inflorescence (lower view); D. Bracteole E-H. *Elatostema hechiense* W. T. Wang & Y. G. Wei E. Stem; F. Fruiting inflorescence (lower view); G. Bracteoles; H. Achene. (Drawn by SUN Ying-Bao)

glabrae. Inflorescentiae pistillatae binatim axillares, sessiles, suborbiculares, 2–4 mm in diametro; receptacula suborbicularia, 2–3.8 mm in diametro, 4–lobulata, glabra; bracteae aliquot, triangulares, circ. 0.5 mm longae, ciliatae; bracteolae lineares vel anguste lineares, circ. 0.7 mm longae, 0.1–0.25 mm latae, glabrae vel apice sparse pilosae. Achenia atropurpurea, suboblunga, circ. 0.7 mm longa, obscure longitudinaliter 4-costata.

多年生草本。茎约3条丛生,高14~30 cm,基部粗2~4 mm,无毛,具4~8条浅纵沟,不分枝或有1条分枝。叶具短柄;叶片纸质,斜椭圆形或斜长圆形,长4~12.8 cm,宽2.5~6 cm,顶端短尾状,基部斜楔形或在宽侧圆形,边缘基部之上具钝牙齿,上面疏被糙伏毛,下面中脉及侧脉上被短糙伏毛(毛长约0.12 mm),钟乳体稍密,杆状,长约0.1 mm,羽状脉,侧脉4~6对;叶柄长2~5 mm,近无毛;托叶条状披针形或条形,长3 mm,宽0.4~0.8 mm,无毛。雌花序成对腋生,无梗,近圆形,直径2~4 mm;花序托近圆形,直径2~3.8 mm,4浅裂,无毛;苞片数个,三角形,长约0.5 mm,被缘毛;小苞片条形或狭条形,长约0.7 mm,宽0.1~0.25 mm,无毛或顶端有疏毛。瘦果暗紫色,近长圆形,长约0.7 mm,具4条不明显纵肋。

广西(**Guangxi**): 东兰(Donglan),下勇(Xiayong),石灰岩山洞(in cave on a limestone hill) 2007-04-24,韦毅刚(Y. G. Wei) 07101 (**holotype**, PE; isotype. IBK)。

本种在体态上与浅齿楼梯草(*E. crenatum* W. T. Wang)相似,但叶两面均有糙伏毛,侧脉较少,4~6对,钟乳体较小,长约0.1 mm而不同。在浅齿楼梯草,叶无毛,有9~10对侧脉,钟乳体较大,长0.5~0.8 mm。

2 骤尖楼梯草组 sect. *Elatostema*

骤尖楼梯草系 ser. *Cuspidata* W. T. Wang

对序楼梯草 新种 图2: A-D

Elatostema binatum W. T. Wang & Y. G. Wei, sp. nov. Fig. 4.

Species nova haec est affinis *E. atroviridi* W. T. Wang, quod caulibus superne puberulis, foliis supra strigosis subtus puberulis, inflorescentiarum staminatarum receptaculis majoribus ellipticis 2.7 cm longis, bractiolis majoribus 2–3.5 mm longis apice pilosis recedit.

Herba perennis. Caules circ. 3 fasciculati, 35–45 cm alti, basi 3 mm crassi, glabri, foliiferi 3-ramosi, flo-

riferi simplices, superne 7–9-foliati. Folia breviter petiolata, glabra; laminae herbaceae, oblique obovatae vel ellipticae, 3–8 cm longae, 1–3 cm latae, apice acuminatae, basi oblique cuneatae, margine vulgo supra medium obtuse denticulatae, cystolithis densissimis bacilliformibus 0.1–0.2 mm longis, pennierves, nervis lateralibus 3-jugis, vel semitriplinerves in foliis aliquot parvis, nervis lateralibus 2-jugis; petioli 1–2 mm longi; stipulae lanceolato-lineares, 3–4.5 mm longae, 0.5 mm latae. Inflorescentiae staminatae binatim axillares, breviter pedunculatae; pedunculi circ. 2.5 mm longi, glabri; receptacula subquadrata, longitudine et latitudine circ. 6.5 mm, 4-lobulata, glabra; bracteae nullae; bracteolae multae, lineares, circ. 1.5 mm longae, 0.4 mm latae, glabrae. Flores staminati multi, densi, glabri; pedicelli circ. 1.8 mm longi; tepala 4, elliptica, circ. 0.6 mm longa, 0.3 mm lata; stamina 4, antheris ellipsoideis 0.5 mm longis.

多年生草本。茎约3条丛生,高35~45 cm,基部粗3 mm,无毛,具叶茎有3条分枝,具花茎不分枝,上部有7~9叶。叶具短柄,无毛;叶片草质,斜倒卵形或斜椭圆形,长3~8 cm,宽1~3 cm,顶端渐尖,基部斜楔形,边缘通常在中部之上具小钝牙齿,钟乳体极密,杆状,长0.1~0.2 mm,羽状脉,侧脉3对,在一些小叶叶脉为半离基三出脉,侧脉2对;叶柄长1~2 mm,无毛;托叶披针状条形,长3~4.5 mm,宽0.5 mm。雄花序成对腋生,具短梗;花序梗长约2.5 mm无毛;花序托近方形,长度及宽度均6.5 mm,4浅裂,无毛;苞片不存在;小苞片多数,条形长约1.5 mm,宽0.4 mm,无毛。雄花多数,密集,无毛;花梗长约1.8 mm;花被片4,椭圆形,长约0.6 mm,宽0.3 mm;雄蕊4,花药椭圆球形,长0.5 mm。

广西(**Guangxi**): 凤山(Fengshan),林峒(Lindong),石灰岩山洞(in cave on a limestone hill) 2007-04-23,韦毅刚(Y. G. Wei) 0779 (**holotype**, PE; isotype, IBK)。

本种在亲缘关系方面与深绿楼梯草(*E. atroviride* W. T. Wang)相近,但茎和叶无毛,雄花序托较小,近方形,长度及宽度约6.5 mm,小苞片较小,长约1.5 mm,无毛而可区别。在深绿楼梯草,茎上部被短柔毛,叶上面有糙伏毛,下面有短柔毛,雄花序托较大,椭圆形,长约2.7 cm,小苞片较大,长2~3.5 mm,顶端有柔毛。

河池楼梯草 新种 图 2: E-H

Elatostema hechiense W. T. Wang & Y. G.

Wei, sp. nov. Fig. 5.

Species nova haec est similis *E. balansae* Gagnep., quod foliorum acuminibus margine denticulatis, cystolithis majoribus usque ad 0.3 mm longis, inflorescentiarum pistillatarum bracteis apice corniculatis statim differt.

Herba perennis. Caules 12–22 cm alti, basi 1.2–3 mm crassi, prope petiolos sparse hispidi vel glabri, simplices vel pauce ramosi, superne 4–5-foliati. Folia breviter petiolata vel sessilia; laminae papyraceae, oblique oblongae vel ellipticae, 4–14 cm longae, 2.5–6 cm latae, apice acuminatae vel longe acuminatae, acuminibus lanceolato-linearibus intergris, basi latere angustiore cuneatae, eo latiore auriculatae, margine denticatae, supra strigosae, subtus ad nervos hispidae, cystolithis densis vel densiusculis bacilliformibus vel punctiformibus 0.1–0.15 mm longis, semitriplinervis, nervis lateralibus latere angustiore 2–3 eo latiore 3–4; petioli usque ad 1 mm longi, glabri; stipulae membranaceae, lanceolato-lineares, 6.5–12 mm longae, 2–2.5 mm latae, glabrae, 1-bunneo-nerves. Inflorescentiae pistillatae singulariter axillares, breviter pedunculatae; pedunculi 3–4 mm longi, glabri; receptacula oblongo-elliptica, 1.8–2 mm longa, 2 mm lata, glabra; bractae circ. 6, triangulares, 2–2.5 mm longae, 1–2 mm latae, glabrae; bracteolae multae, lineares, 1.8–2 mm longae, 0.1–0.2 mm latae, glabrae. Achenia ellipsoidea, circ. 1 mm longa, 0.3–0.4 mm lata, longitudinaliter 6-costata.

多年生草本。茎高 12~22 cm, 基部粗 1.2~3 mm, 近叶柄处被疏糙硬毛, 或无毛, 不分枝, 上部有 4~5 叶。叶具短柄或无柄; 叶片纸质, 斜长圆形或斜椭圆形, 长 4~14 cm, 宽 2.5~6 cm, 顶端渐尖或长渐尖(渐尖头披针状条形, 全缘), 基部狭侧楔形, 宽侧耳形, 边缘有牙齿, 上面被糙毛, 下面脉上被糙硬毛, 钟乳体密或稍密, 杆状或点状, 长 0.1~0.15 mm, 半离基三出脉, 侧脉在狭侧 2~3 条, 在宽侧 3~4 条; 叶柄长达 1 mm, 无毛; 托叶膜质, 披针状条形, 长 6.5~12 mm, 宽 2~2.5 mm, 无毛, 有 1 条褐色脉。雌花序单生叶腋, 有短梗; 花序梗长 3~4 mm, 无毛; 花序托长圆状椭圆形, 长 1.8~2 mm, 宽 2 mm, 无毛; 苞

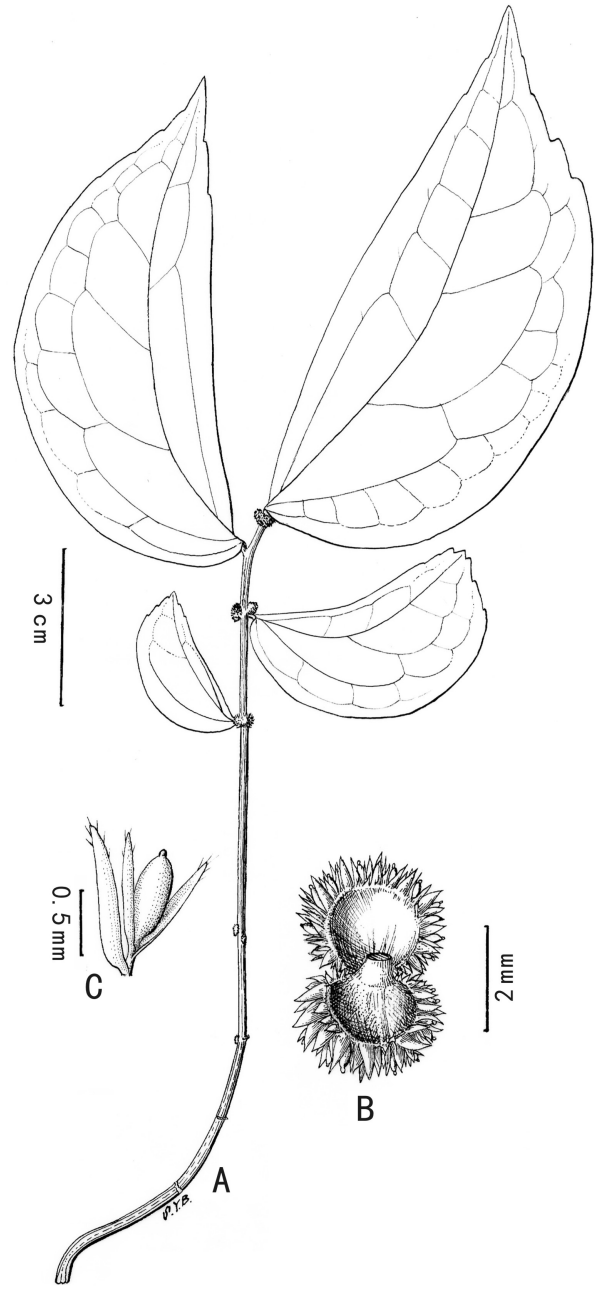


图 3 环江楼梯草 A. 植株全形; B. 雌花序(下面观); C. 小苞片和幼果。(孙英宝绘)

Fig. 3 *Elatostema huanjiangense* W. T. Wang & Y. G. Wei. A. Habit; B. Pistillate inflorescence (lower view); C. Bracteols and one young achene. (Drawn by SUN Ying-Bao)

片约 6, 三角形, 长 2~2.5 mm, 宽 1~2 mm, 无毛; 小苞片多数, 条形, 长 1.8~2 mm, 宽 0.1~0.2 mm, 无毛。瘦果椭圆形球形, 长约 1 mm, 宽 0.3~0.4 mm, 具 6 条纵肋。

广西(**Guangxi**): 河池(Hechi), 老河池(Laohechi)。石灰岩山疏林中(in sparse forest on a

limestone hill), 2007-04-25, 韦毅刚 (Y. G. Wei) 07109 (**holotype**, PE; **isotype**, IBK)。

本种似华南楼梯草 (*E. balansae* Gagnep.) 但叶的渐尖头全缘, 钟乳体较小, 长 0.1~0.15 mm, 雌花序苞片顶端无角状突起, 可以区别。在华南楼梯草, 叶的渐尖头边缘有小齿, 钟乳体较大, 长达 0.3 mm, 雌花序苞片顶端有角状突起。

樟叶楼梯草系 ser. **Petelotiana** W. T. Wang

环江楼梯草 新种 图 3

Elatostema huanjiangense W. T. Wang & Y. G. Wei, sp. nov. Fig. 3.

Species nova haec est fortasse affinis *E. petelotii* Gagnep., quod foliis margine integris, cystolithis majoribus 0.3-0.7 mm longis et nervis lateralibus latere angustiore 3 et eo latiore 4 instructis, inflorescentiis pistillatis saepe longe pedunculatis distinguitur.

Herba, parte subterranea ignota. Caulis circ. 15 cm altus, glaber, simplex, circ. 4-foliatus. Folia breviter petiolata, inaequalia, glabra; laminae papyraceae, oblique ellipticae vel oblongo-ellipticae, 3-10 cm longae, 1.4-4.8 cm latae, apice breviter acuminatae, basi latere angustiore cuneatae eo latiore auriculatae, margine prope apicem 2-4-crenatae vel subintegrae, cystolithis densis inconspicuis bacilliformibus 0.1-0.3 mm longis, trinerves, nervis lateralibus inconspicuis latere angustiore 2 eo latiore 3; petioli robusti, 1-3 mm longi; stipulae caducae. Inflorescentiae pistillatae binae axillares, brevissime pedunculatae, multiflorae; pedunculi

robusti, 0.5 mm longi; receptacula oblonga, 2-3 mm longa, 0.8-2 mm lata, glabra, majora medio 2-lobata, minora indivisa; bractelae triangulares, 0.5 mm longa, 0.2-0.3 mm lata, subglabra; bracteolae densae, lineares, 0.5-0.6 mm longae, prope apicem pauci-piliferae. Achenia juvenilia oblonga. circ. 0.5 mm longa, minute stigmatica.

草本, 地下部分情况不明。茎高约 15 cm, 无毛, 不分枝, 约有 4 叶。叶具短柄, 不等大, 无毛; 叶片纸质, 斜椭圆形或长圆状椭圆形, 长 3~10 cm, 宽 1.4~4.8 cm, 顶端短渐尖, 基部狭侧楔形, 宽侧耳形, 边缘近顶端具 2~4 钝齿或近全缘, 钟乳体密集, 不明显, 杆状, 长 0.1~0.3 mm, 三出脉, 侧脉在狭侧 2 条, 宽侧 3 条; 叶柄粗壮, 长 1~3 mm; 托叶早落。雌花序成对腋生, 具极短梗; 花序梗粗壮, 长约 0.5 mm; 花序托长圆形, 长 2~3 mm, 宽 0.8~2 mm, 无毛, 较大的在中部二浅裂, 较小的不分裂; 苞片三角形, 长约 0.5 mm, 宽 0.2~0.3 mm, 近无毛; 小苞片密集, 条形, 长 0.5~0.6 mm, 近顶端有少数短柔毛。幼瘦果长圆形, 长约 0.5 mm, 顶端有小柱头。

广西 (**Guangxi**): 环江 (Huanjiang), 木论保护区 (Mulun Reserve), 红峒 (Hongdong), 2006-04-19, 韦毅刚 (Y. G. Wei), 06128 (**holotype**, PE)。

本种可能与樟叶楼梯草 (*Elatostema petelotii* Gagnep.) 有亲缘关系, 但后者的叶全缘, 钟乳体较大, 长 0.3~0.7 mm, 侧脉在狭侧 3 条, 在宽侧 4 条, 雌花序常有长花序梗, 而与本种相区别。

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