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Southern African Loranthaceae and Viscaceae: new taxa and new combinations*

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ABSTRACT

Two new genera are named: **Pedistylis** Wiens with the type species **P. galpinii** (Schinz ex Sprague) Wiens and **Vanwykia** Wiens with the type species **V. remota** (Bak. & Sprague) Wiens. Three new species and one new subspecies are described: *Plicosepalus* **amplexicaulis** Wiens, *Tapinanthus* **crassifolius** Wiens, *Viscum* **oreophilum** Wiens, and *V. capense* L.f. subsp. **hoolei** Wiens. The following nomenclatural changes are made: *Actinanthella* **wyliei** (Sprague) Wiens, *Tapinanthus* **forbesii** (Sprague) Wiens, *T.* **leendertziae** (Sprague) Wiens, *T. kraussianus* (Meisn.) Danser subsp. **transvaalensis** (Sprague) Wiens, *T. natalitius* (Meisn.) Danser subsp. **zeyheri** (Harv.) Wiens, *Tieghemia* **bolusii** (Sprague) Wiens and *T.* **rogersii** (Sprague ex Burtt Davy) Wiens.

RÉSUMÉ

LORANTHACÉES ET VISCACÉES SUD-AFRICAINES: NOUVEAUX TAXA ET NOUVELLES COMBINAISONS

Deux genres nouveaux sont nommés: **Pedistylis** *Wiens, espèce-type* **P. galpinii** *(Schinz ex Sprague) Wiens, et* **Vanwykia** *Wiens, espèce-type* **V. remota** *(Bak. & Sprague) Wiens. Trois espèces et une sous-espèce nouvelles sont décrites:* Pliosepalus **amplexicaulis** *Wiens,* Tapinanthus **crassifolius** *Wiens,* Viscum **oreophilum** *Wiens, et* V. capense *L.f. subsp.* **hoolei** *Wiens. Les changements suivants sont apportés à la nomenclature:* Actinanthella **wyliei** *(Sprague) Wiens,* Tapinanthus **forbesii** *(Sprague) Wiens,* T. **leendertziae** *(Sprague) Wiens,* T. kraussianus *(Meisn.) Danser subsp.* **transvaalensis** *(Sprague) Wiens,* T. natalitius *(Meisn.) Danser subsp.* **zeyheri** *(Harv.) Wiens,* Tieghemia **bolusii** *(Sprague) Wiens et* T. **rogersii** *(Sprague ex Burtt Davy) Wiens.*

This paper formalizes the new taxa and nomenclatural changes adopted in my recent taxonomic treatment of Loranthaceae and Viscaceae for the Flora of Southern Africa. Except for the recognition of the two families as distinct, the most dramatic change from Flora Capensis is the abandonment of the genus *Loranthus* (*sens. lat.*) in favour of a more restricted generic view involving the recognition of 11 loranthaceous genera. In this view, *Loranthus* is a monotypic genus based on *L. europaeus* Jacq.

Long-standing controversy centres on the number of genera into which the family Loranthaceae (*sens. str.*) should be divided. The extremes of treatment are the 10 genera recognized by Engler [Pflanzenfam. 3,1: 117 (1894)] and the approximately 125 accepted by van Tieghem (in a series of papers in Bull. Soc. bot. Fr. in 1894–96). Danser in an excellent study [Verh. K. Akad. Wet., Sect. 2, 29(6): 1–128 (1933)] recognized 51 genera, but his treatment of the New World groups was not critical. Probably the total number of loranthaceous genera will ultimately stabilize between 60 and 70.

Generic boundaries within Loranthaceae as here recognized are as significant as those in many families and surely more substantive than in some (e.g., Brassicaceae, Boraginaceae, Apiaceae). Contemporary monographic workers in the family have all adopted the restricted generic concept in Loranthaceae and floristic systematists are doing so with increasing frequency. With the exception of the relictual terrestrial root parasitic groups, the alternative is to recognize *Loranthus* as a single genus of worldwide, pantropical, and south temperate distribution. A more detailed discussion of the problem will be published elsewhere.

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With respect to Africa as a whole, Balle [Webbia 11: 541–585 (1956)] recognized 22 genera, which is a sound approximation. The southern African genera are defined on the bases of actinomorphy versus zygomorphy, choripetaly versus sympetaly, other obvious differences in floral and inflorescence characters, and variations in haustorial systems. The genera are in fact identifiable at a glance when the critical features are understood.

LORANTHACEAE

Pedistylis *Wiens*, gen. nov.

Frutices magni forsan 2 m alti excedentes, glabri, plantis veterioribus haustoria dilatissima hospite formantibus. *Rami juvenes* saepe dense lenticellis tecti, ramorum veterium nodis plerumque tumidissimis. *Folia* opposita-subopposita, plerumque oblonga, saepe leviter falcata, longitudine maxime variabilia (50–) 70–80 (–120) × 10–20 mm, penninervia, venis subtus saepe elevatis. *Petioli* 8–10 mm longi. *Inflorescentiae* axillares vel saepe binatim in nodis tumidis ramorum veterium, umbellis 2(3) floribus, pedunculis et pedicellis crassis quoque circiter 5 mm longis. *Flores* pentameri radialiter congruentes (tubus sine fissura unilaterali). *Corollae* flavae, sympetalae, lobis reflexis et circiter tubus longitudine aequantibus. *Alabastra* matura 70–80 mm longa. *Filamenta* matura a 90° vel magis recurva, rubescentia, ad basim loborum affixa. *Styli* deorsum curvati ad apices curvamine lata (180° vel magis) peda simulantes, rubescentes; stigmata late ovoidea. *Baccae* ellipsoidea, circa 20 × 12 mm, flavovirentes, sparse verrucosae. Florens Februario ad Aprilem.

Type species: *P. galpinii* (Schinz ex Sprague) Wiens.

Large shrubs perhaps exceeding 2 m high, glabrous, older plants forming much enlarged (up to 1 m across!) haustorial connections with the host. *Younger branches* often densely lenticelled, the nodes of older branches usually greatly swollen. *Leaves* opposite-subopposite, mostly oblong, often slightly falcate, highly variable in length (50–) 70–80 (–120) × 10–20 mm, penninerved,

veins often raised on the lower surface. *Petioles* 8–10 mm long. *Inflorescences* axillary or often in pairs on the swollen nodes of older branches, 2(3)-flowered umbels, with stout peduncles and pedicels, each about 5 mm long. *Flowers* 5-merous, radially symmetrical (tube without a unilateral split). *Corollas* yellow, sympetalous, lobes reflexed and about as long as the tube. *Mature buds* 70–80 mm long. *Filaments* at maturity curving outward about 90° or more, becoming reddish, attached at the base of the lobes. *Styles* bending downward near the apex in a broad curve for 180° or more (as a shepherd's crook), becoming reddish. *Stigmas* broadly ovoid. *Berries* ellipsoid, ca. 20×12 mm, yellow-green, with scattered warts. Flowering approximately February through April. $n=9$.

A monotypic genus narrowly restricted to the lowveld of the south-eastern Transvaal, and adjoining Swaziland and Mozambique; an isolated genus without apparent close relatives.

Pedistylis galpinii (*Schinz ex Sprague*) *Wiens*, comb. nov.

Loranthus galpinii Schinz ex Sprague, in F.C. 5(2): 112 (1915). Type: from the eastern Transvaal, *Galpin* 896 (K, PRE).
Emelianthe galpinii (Schinz ex Sprague) Danser in Verh. K. Akad. Wet., Sect. 2, 29(6): 53 (1933).

Vanwykia *Wiens*, gen. nov.*

Frutices moderati vel magni forsan 1 m vel altiores, stolonibus haustoriis in paginae hospitis extendentes. *Caules* crassi et robusti, ramis foliis 3–5 mm latis. *Rami juvenes* dense brevi-tomentosi. *Folia* subopposite-spiralia, rare fasciculata, plerumque obovata, apicibus rotundatis, cuneata, 50–60×30–40 mm, dense pallide-flava-tomentosa ubi juvenia, glabra et late coriacea ubi veteria. *Petioli* 4–6 mm longi. *Umbellae* in nodis dilatatis ramorum veterium saepe fasciculatae, 3–6 floribus, tomento pallide flavo saltem 1 mm lato omnino tectae (trichomata verticillis ab axe centrali exorientebus). *Pedunculi* 4–5 mm longi. *Flores* pentameri, sympetali, 40 mm longi, pedicellis brevibus 1–2 mm longi et bracteis conspicuis oblongo-linearibus 4–5 mm longis. *Corollae* bilateraliter congruentes (tubus tantum fissura brevi 4–6 mm longa), lobis erectis ad apices aliquantum incurvatis. *Antherae* 4 mm longa. *Filamenta* ad basim loborum corollarum affixa, admodum erecta, sed incurvata et massam centralem pollinis formantia. *Styli* infra incrassati et pubescentes, supra teniores et glabri. *Stigmata* ellipsoidea. *Baccae* incognitae.

Type species: *V. remota* (Bak. & Sprague) Wiens.

Moderate to large shrubs perhaps 1 m or more high, spreading by haustoria-bearing surface runners. *Stems* stout and robust, leaf-bearing shoots 3–5 mm thick. *Young branches* densely short tomentose, older branches glabrous. *Leaves* subopposite-alternate, rarely fascicled, mostly obovate, rounded apically, cuneate to the base, 50–60×30–40 mm, densely yellowish-white tomentose when young, glabrous and thickly coriaceous with age. *Petioles* 4–6 mm long. *Umbels* often fascicled on the swollen nodes of older branches, 3–6-flowered, completely covered by a dense yellowish-white tomentum at least 1 mm thick (the trichomes with whorls arising from a central axis). *Penducles* 4–5 mm long. *Flowers* 5-merous, sympetalous, 40 mm long, with short pedicels 1–2 mm long and conspicuous oblong-linear bracts 4–5 mm long. *Corollas* bilaterally symmetrical (the tube bearing only a short split 4–6 mm long), lobes erect, somewhat incurved apically. *Anthers* 4 mm long. *Filaments* attached at the base of the corolla lobes, essentially erect, but curving inward to form a central, collective anther mass. *Styles* thickened and pubescent below, thinner and glabrous above. *Stigmas* ellipsoid. *Berries* unknown.

A genus with 1 (possibly 2) species in south-eastern Africa. Related to *Septulina*, *Bakerella* in Madagascar, and especially to the larger Asian genus, *Taxillus*.

Vanwykia remota (*Bak. & Sprague*) *Wiens*, comb. nov.

Loranthus remotus Bak. & Sprague in Fl. Trop. Afr. 6(1): 327 (1910).

Plicosepalus amplexicaulis *Wiens*, sp. nov., a *P. kalachariense* foliis amplexicaulibus sagittatis, corolla basi albida manifeste differt; a *P. sagittifolio* corollae colore, foliis dissimile formatis non fasciculatis differt.

Frutices mediocris staturae circa 1 m alti; rami bubalini ad brunnei; internodia 30–40 mm. *Folia* sessiles, lineares ad lineari-oblonga, 40–50×6–10 mm, plerumque triplinerves, pallide cinereo-viridia, amplexicaules, lobis basalibus sagittatibus 6–8 mm longis. *Umbellae* axillares, singulares vel binatae, floribus ternis vel quaternis. *Pedunculi* pedicellique plusminusve aequantes, 7–9 mm longi. *Corollae* sub anthesi 45–50 mm longae, basi impolitae albae, lobis puniceis (in alabastris maturis impolitis purpureis). *Filamenta*, *styli* et *stigmata* punicei (ut lobi); style flexu singulari basali. *Baccae maturae* ellipsoidales. 11×7 mm. *Florens* Junio et Julio (fortasse longius). $n=9$.

Moderate-sized shrubs perhaps 1 m high; *branches* buff to brown; *internodes* 30–40 mm. *Leaves* sessile, linear to linear-oblong, 40–50×6–10 mm, usually 3-nerved, light grey-green, amplexicaul, basal lobes sagittate, 6–8 mm long. *Umbels* axillary, borne singly or in pairs, 3–4-flowered. *Peduncles* and *pedicels* approximately equal, 7–9 mm long. *Corollas* at anthesis 45–50 mm long, dull white basally, the lobes bright red, (dull purplish in older buds). *Filaments*, *styles*, and *stigmas* bright red (as the lobes); *styles* with a single basal bend. *Berries* ellipsoid at maturity, 11×7 mm. *Flowering* in June and July (possibly longer). $n=9$.

TYPE.—Kruger National Park, Balule Camp, *Wiens* 4681 (K, holo.; PRE; UT).

A parasite on *Acacia*, apparently restricted to the lowveld of the eastern Transvaal in the Kruger National Park and adjoining areas.

The species is clearly distinguished from *P. kalachariensis* by the amplexicaul, sagittate leaves and basally whitish corolla. The species is also distinct from *P. sagittifolius* of eastern and north-eastern Africa, the latter having a differently coloured corolla and differently shaped, often fascicled leaves.

Tapinanthus crassifolius *Wiens*, sp. nov.

Frutices dense ramosi usque ad 1 m alti vel altiori, plusminusve glabri. *Caules* satis crassi, succulenti, fulvi, lenticellis primum fuscis deinde cinereis. *Folia* opposita-subopposita ad dispersa ramis lateralibus succulentis satis brevibus (50–100 mm longis) portata; laminae succulentae, plerumque ovatae ad late lanceolatae, amplitudine variabiles (40–) 60–80 (–110) ×30–50 (–110) mm, saepe leviter falcatae, penninerves; petioli 15–20 mm longi, latere abaxiali complanati. *Umbellae* axillares et extra-axillares, in ramis lateralibus foliatis dense aggregatae, plerumque floribus quaternis. *Pedunculi* 2–4 mm longi, circum pedicellos aequantes. *Corollae* 40–45 mm longae, vitellinae prope apicem fasciis rubris, tumore basale oblongo conspicuo; tubi 7–9 mm infra lobos erectos

* Named after Pieter van Wyk, author of *Trees of the Kruger National Park* (1973).

fissi. *Filamenta* infra antheram dente parvo. *Styli* infra stigma constricti. *Baccae* obovatae, 10–12 mm altae, albidae-aurantiacae. Hierne florens.

Densely branched shrubs to 1 m or more high, essentially glabrous. *Stems* relatively thick, succulent and beige-coloured with dark brown lenticels when young, grey with age. *Leaves* opposite-subopposite to scattered, borne on relatively short (50–100 mm long) succulent lateral branches; blades succulent, mostly ovate to broadly lanceolate, variable in size (40–) 60–80 (–110) × 30–50 (–110) mm, often slightly falcate, penninerved; petioles 15–20 mm long, flattened abaxially. *Umbels* axillary and extra-axillary, densely crowded on the short lateral, leaf-bearing branches, mostly 4-flowered. *Peduncles* 2–4 mm long, approximately equalling the pedicels. *Corollas* 40–45 mm long, orange-yellow with red bands near the apex, with a conspicuous oblong basal swelling, the tubes split 7–9 mm below the erect lobes. *Filaments* with a small tooth below the anther. *Styles* constricted below the stigma. *Berries* obovate, 10–12 mm high, whitish orange. *Flowering* in winter.

TYPE.—Transvaal, Kruger National Park, Pafuri area, *Codd & Dyer* 4637 (PRE, holo.; K).

A parasite on *Sclerocarya*; apparently restricted to the north-eastern Transvaal; to be expected in adjoining Rhodesia and Mozambique.

Actinanthella wyliei (*Sprague*) *Wiens*, comb. nov.

Loranthus wyliei Sprague in Kew Bull.: 70,78 (1915). Type: Natal, Ngoya Forest Reserve, *Wylie* s.n. (K, holo.!; PRE!).

Tapinanthus forbesii (*Sprague*) *Wiens*, comb. et stat. nov.

Loranthus oleifolius (Wendl.) Cham. & Schlechtd. var. *forbesii* Sprague in Fl. Cap. 5(2): 118 (1915). Lectotype: Mozambique, Delagoa Bay, *Forbes* s.n. (K!).

Tapinanthus leendertziae (*Sprague*) *Wiens*, comb. et stat. nov.

Loranthus oleifolius (Wendl.) Cham. & Schlechtd. var. *leendertziae* Sprague in Fl. Cap. 5(2): 118 (1915). Type: Transvaal, Potgietersrus, *Leendertz* 1142 (K, holo.!; PRE!).

Tapinanthus kraussianus (*Meisn.*) *v. Tieghem* subsp. **transvaalensis** (*Sprague*) *Wiens*, comb. et stat. nov.

Loranthus kraussianus Meisn. var. *transvaalensis* Sprague in Fl. Cap. 5(2): 119 (1915). Type: Transvaal, near Barberton, *Galpin* 879 (K, holo.!; PRE!).

Tapinanthus natalitius (*Meisn.*) *Danser*, subsp. **zeyheri** (*Harv.*) *Wiens*, comb. et stat. nov.

Loranthus zeyheri Harv. in Fl. Cap. 2: 576 (1862). Type: Transvaal, Magaliesberg, *Zeyher* 751 (K, holo.!; PRE!).

Tieghemia bolusii (*Sprague*) *Wiens*, comb. nov.

Loranthus bolusii Sprague in Kew Bull.: 81 (1915). Type: Mozambique, Delagoa Bay, 29 km from Lourenço Marques (Maputo), *Bolus* 9764 (K, holo.!; PRE!).

Tieghemia rogersii (*Sprague ex Burtt Davy*) *Wiens*, comb. nov.

Loranthus rogersii Sprague ex Burtt Davy, Fl. Transv. 2: 465 (1932). Type: Transvaal, Waterpoort, *Rogers* 21507 (K, holo.!; PRE!).

VISCACEAE

Viscum capense *L.f.* subsp. **hoolei** *Wiens*, subsp. nov. *

Plantae monoeciae, internodia saepe quam 10 mm longiora.

TYPE.—Cape, Slaaikraal Farm, 8 km northwest of Grahamstown, *Wiens & Hoole* 5385 f (K, holo.; PRE; UT).

Plants monoecious. Internodes often exceed 10 mm in length.

Viscum oreophilum *Wiens*, sp. nov.

Frutices dioecii foliosi vulgo 0,5–1m alti, plerumque atrovirentes. *Rami* juniores complanati, sexcostati, costae proxime infra folia interdum prominentiorae, rami vetustiores teretes; internodia basalia ramorum juniorium (15–) 25–35 × 3–4 mm; noda plerumque dilatata. *Folia* late oblanceolato-obovata, (25–) 30–40 × 12–20 mm, apice rotundato-obtuso, conspicue triplinervia e basi cuneata; petioli lamina haud distinguibiles, circa 3–4 mm longi. *Flores staminatae* dichasiis sessilibus, cupulis bracteatis subtenti, plerumque 1(2) in quaque axilla sed ad 8 in nodis terminalibus. *Flores pistillati* singulares cupulis bracteatis solitariis in axillis ramorum juniorum. *Baccae* ellipsoideae-globosae, 5–6 mm altae, laeves, clare aurantiae, pedicellum relative longum (4 mm) ad maturitatem evoluentae, styli persistentes. Florens Augusto et Septembre. $n = 14$.

Dioecious leafy shrubs mostly 0,5–1 m high, usually dark green. *Younger branches* flattened, 6-ribbed, the ribs immediately below the leaves sometimes more prominent; older branches rounded; basal internodes of younger branches (15–) 25–35 × 3–4 mm; nodes often dilated. *Leaves* broadly oblanceolate-obovate (25–) 30–40 × 12–20 mm, apically rounded -obtuse, conspicuously 3-nerved from the cuneate base; petioles indistinct from the blade, ca. 3–4 mm long. *Staminate flowers* in sessile dichasia subtended by bracteal cups, these mostly 1(2) per axil but to 8 on terminal nodes. *Pistillate flowers* 1 per bracteal cup, these solitary in the axils of younger stems. *Berries* ellipsoid-rounded, 5–6 mm high, smooth, bright orange, developing a relatively long (4 mm) pedicel at maturity, the styles persistent. *Flowering* in August and September. $n = 14$.

TYPE.—Swaziland, near Mbabane, *Compton* 27859 holo.; (PRE, NBG).

Parasitic on *Pterocelastrus*, the only known indigenous host (also on *Prunus persica*). Recorded from the highlands of Swaziland, the adjoining eastern Transvaal and the Soutpansberg.

UITTREKSEL

Twee nuwe genera word publiseer: **Pedistylis** *Wiens met die tipespesie* **P. galpinii** (*Schinz ex Sprague*) *Wiens en* **Vanwykia** *met die tipespesie* **V. remota** (*Bak. & Sprague*) *Wiens. Drie nuwe spesies en een nuwe subspesie word beskryf*: Plicosepalus **amplexicaulis** *Wiens*, Tapinanthus **crassifolius** *Wiens*, Viscum **oreophilum** *Wiens, en* V. capense L. f. *subsp.* **hoolei** *Wiens. Die volgende nomenklatoriese veranderings word gemaak*: Actinanthella **wyliei** (*Sprague*) *Wiens*, Tapinanthus **forbesii** (*Sprague*) *Wiens*, T. **leendertziae** (*Sprague*) *Wiens*, T. kraussianus (*Meisn.*) *Danser subsp.* **transvaalensis** (*Sprague*) *Wiens*, T. natalitius (*Meisn.*) *Danser subsp.* **zeyheri** (*Harv.*) *Wiens*, Tieghemia **bolusii** (*Sprague*) *Wiens, en* T. **rogersii** (*Sprague ex Burtt Davy*) *Wiens*.

* Named after Mr Thomas Hoole, naturalist and owner of Slaaikraal Farm, Grahamstown.