

**STORCKIELLA AUSTRALIENSIS SP. NOV. (CAESALPINIACEAE)
FROM NORTHERN QUEENSLAND: A NEW GENERIC RECORD
FOR AUSTRALIA**

by

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ABSTRACT

Storckiella australiensis J. H. Ross & B. P. M. Hyland sp. nov. is described from the Cook District of northern Queensland and the characters that distinguish it from other species are given. This constitutes the first record of the genus *Storckiella* Seeman for Australia.

TAXONOMY

The account of Caesalpinaceae for the Flora of Australia is being prepared by one of us (J. H. R.) and this opportunity is taken of describing a new species of *Storckiella* Seem. from northern Queensland.

Storckiella australiensis J. H. Ross & B. P. M. Hyland, sp. nov., affinis incertae; ab omnibus speciebus staminibus 5(6) filamentis brevibus, et foliolis paucioribus majoribus, differt.

Arbor usque ad 35 m alta, caule usque ad 120 cm diametro, anteridibus praedita. Folia imparipinnata: petiolus 2-6 cm longus; rhachis 2-11.5 cm longa; foliola (3)5, obovato-elliptica vel oblonga, 6.5-21 cm longa, 2.5-9.7 cm lata, basi cuneata, apice acuta vel acuminata, coriacea, costa et nervis lateralibus satis obviis; stipulae late ovatae, 3-4 × 2-3 mm, imbricatae, gemmam terminalem includentes, mox caducae. Inflorescentiae paniculatae, terminales vel axillares, 15-25 cm longae. Flores hermaphroditi. Sepala 5, late ovata, 5-8 mm longa, 3-6 mm lata, externe et interne ferrugineo-sericea, in alabastro imbricata, sub anthesi reflexa. Petala 5(6), elliptica 7.5-10 mm longa, 3-4 mm lata, libera, armeniaca. Stamina 5(6), libera, omnia fertilia; filamenta 0.8-1.2 mm longa; antherae basifixae, loculae rimia brevibus lateralibus apicalibus dehiscentes. Ovarium sessile, usque ad 4.5 mm longum et usque ad 1.5 mm latum, compresso-planum, basi et margine ferrugineo-sericeum. Legumen elliptico-oblongum, compresso-planum, 5-11 cm longum, 2.8-4 cm latum, dorsale late alatum, coriaceum, glabrum. Semina 1-2(5), applanata, ± reniformia, 7-10 mm longa, 10-16 mm lata, albuminosa.

Tree up to 35 m tall, stem up to 120 cm diameter at breast height and conspicuously buttressed in mature plants. *Bark* less than 2.5 cm thick, smoothish, with conspicuous pale or rust-coloured mostly horizontally elongated lenticels; outer blaze varying from pink to reddish-brown and texture from fibrous to granular; inner blaze pink, fibrous and with conspicuous ripple marks. *Subrhytidome layer* variable but generally showing shades of pink and red. *Heartwood* (tree 40 cm d.b.h.) pink to pale brown, with conspicuous tangential bands of parenchyma, ripple marks prominent. Young branchlets with numerous oval lenticels. *Leaves* imparipinnate, spirally arranged, rusty sericeous when young but soon becoming glabrous: petiole 2-6 cm long, terete, inconspicuously sulcate adaxially; rhachis 2-11.5 cm long; petiolules 5-15 mm long, wrinkled when dried, sulcate above; leaflets (3)5, opposite or subopposite, without stipellae, lamina obovate-elliptic or obovate-oblong, 6.5-21 cm long, 2.5-9.7 cm wide, cuneate basally, acute or acuminate apically, coriaceous, margins entire but slightly undulate, the lateral veins curved, 8-15 on either side of the midrib and forming loops well inside the blade margin, forming an angle of 50-60° with the midrib. *Stipules* broadly ovate, mostly 3-4 mm long, 2-3 mm wide, overlapping and enclosing the terminal bud, rapidly caducous, glabrous within, rusty sericeous outside and with ciliate margins. *Inflorescences* paniculate, terminal or axillary, 15-25 cm long, much-branched; lateral racemose branches 3-6 cm

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Fig. 1. *Storckiella australiensis*. a — flowering twig, x 1/2; b — flower-bud showing imbricate sepals, x 3; c — open flower showing reflexed sepals and erect stamens, x 3; d — stamen showing short filament and anther dehiscing apically, x 6; e — gynoecium, x 6; f — pod, x 1/2; g — seed, x 1. a-e from Hyland 6357 (QRS 21157); f and g from Hyland 6603 (MEL 601574).

long, sparingly to densely rusty sericeous when young but becoming glabrous. *Flower-buds* ellipsoid. *Flowers* bisexual; pedicels of open flowers 8-11 mm long, sparingly to densely rusty sericeous. *Sepals* 5, broadly ovate, subequal or the outer 2 slightly larger, 5-8 mm long, 3-6 mm wide, sparingly to densely rusty sericeous within and without, imbricate in bud, reflexed at anthesis. *Petals* 5(6), elliptic, 7.5-10 mm long, 3-4 mm wide, apricot, alternating with the sepals. *Stamens* 5(6), free, all fertile, equal, perigynous, alternating with the petals; filaments 0.8-1.2 mm long, glabrous; anthers basifixed, 4-5 mm long, opening by lateral apical slits. *Ovary* sessile, up to 4 × 1.5 mm, compressed, 1-chambered, 4 or 5-ovulate, thinly sericeous basally and on margins but otherwise glabrous; style curved, ± 4 mm long, stigma small, terminal. *Pod* elliptic-oblong, flat, 5-11 cm long, 2.8-4 cm wide, with a wing 6-9 mm wide along the upper suture, apparently tardily dehiscent on the forest floor, brown, leathery, with fairly prominent ± transverse venation, glabrous. *Seeds* irregularly ± reniform, 7-10 mm long, 10-16 mm wide, 1 or 2(-5) per pod, pale chestnut-brown, flattened, wrinkled, albuminous. Germination epigeal, cotyledons orbicular to reniform.

TYPE COLLECTION: Queensland, Cook Distr., Portion 62 Parish of Alexandra, 16°10'S, 145°10'E, 31.viii.1972, B. P. M. Hyland 6357 (MEL 601493 holo.; isotypes QRS and to be distributed to BRI, CANB, K, L).

SELECTED SPECIMENS EXAMINED (5/10):

Queensland — Noah Creek, 16°10'S, 145°20'E, 11.x.1967, B. P. M. Hyland 1079 (BRI 126227, QRS 51864 & 51865). Portion 62, Parish of Alexandra, 16°10'S, 145°25'E, 19.xii.1972, B. P. M. Hyland 6602 (MEL 601577, QRS 21059-21065); Ibidem, B. P. M. Hyland 6603 (MEL 601574, QRS 21068-21074). E/P 41, Oliver Creek, V.C.L. Noah, 16°08'S, 145°22'E, 3.xi.1977, K. Sanderson 1236 (QRS 17096). Noah Creek, 16°06'S, 145°27'E, L. J. Webb & J. G. Tracey 13228 (BRI 279480).

S. australiensis appears to be confined to a very limited area of extremely wet lowland rainforest from about 15 to 25 kilometres north west to north east of Daintree. The annual rainfall is uncertain but apparently exceeds 3.8 metres.

When in flower, *S. australiensis* is very conspicuous and it is surprising that such a large rainforest tree has escaped formal description for so long.

The phyllotaxis in *S. australiensis* can be confusing. At times the leaves appear opposite but close inspection reveals that this effect results from axillary buds producing shoots which outgrow the parent shoot.

The occurrence in Australia of a species of *Storckiella*, a small genus of four species with a disjunct distribution pattern previously known only from Fiji and New Caledonia, is of phytogeographic interest and provides yet another example of the floristic link between these regions.

S. australiensis does not appear to be closely related to any of the other species. *S. australiensis* resembles *S. vitiensis* Seem. from Fiji in being a large forest tree but the latter differs in having flowers with 10(12) stamens which have filiform filaments 9-13 mm long and leaves with 9-15 leaflets (15)30-130 mm long and (8)15-50 mm wide. *S. pancheri* Baill. and *S. comptonii* Bak.f. in New Caledonia differ from *S. australiensis* in being large shrubs or small trees up to 8 m high and in having 4(5) stamens with filiform filaments up to 8 mm long, leaves with 8-13 leaflets 40-48 mm long and 10-25 mm wide, and smaller pods. The occurrence of a different stamen number in each of the three centres of distribution of the genus is of interest.

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