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Board of the
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PLANT PORTRAIT

8. *Lepechinia hastata* (A. Gray) Epling (Lamiaceae).

Lepechinia hastata (A. Gray) Epling, *Bull. Torr. Bot. Cl.* 67:511 (1940).

!c. Porsch, *Biol. Generalis.* 6 : t. 31, fig. 7 (1930), flower only.

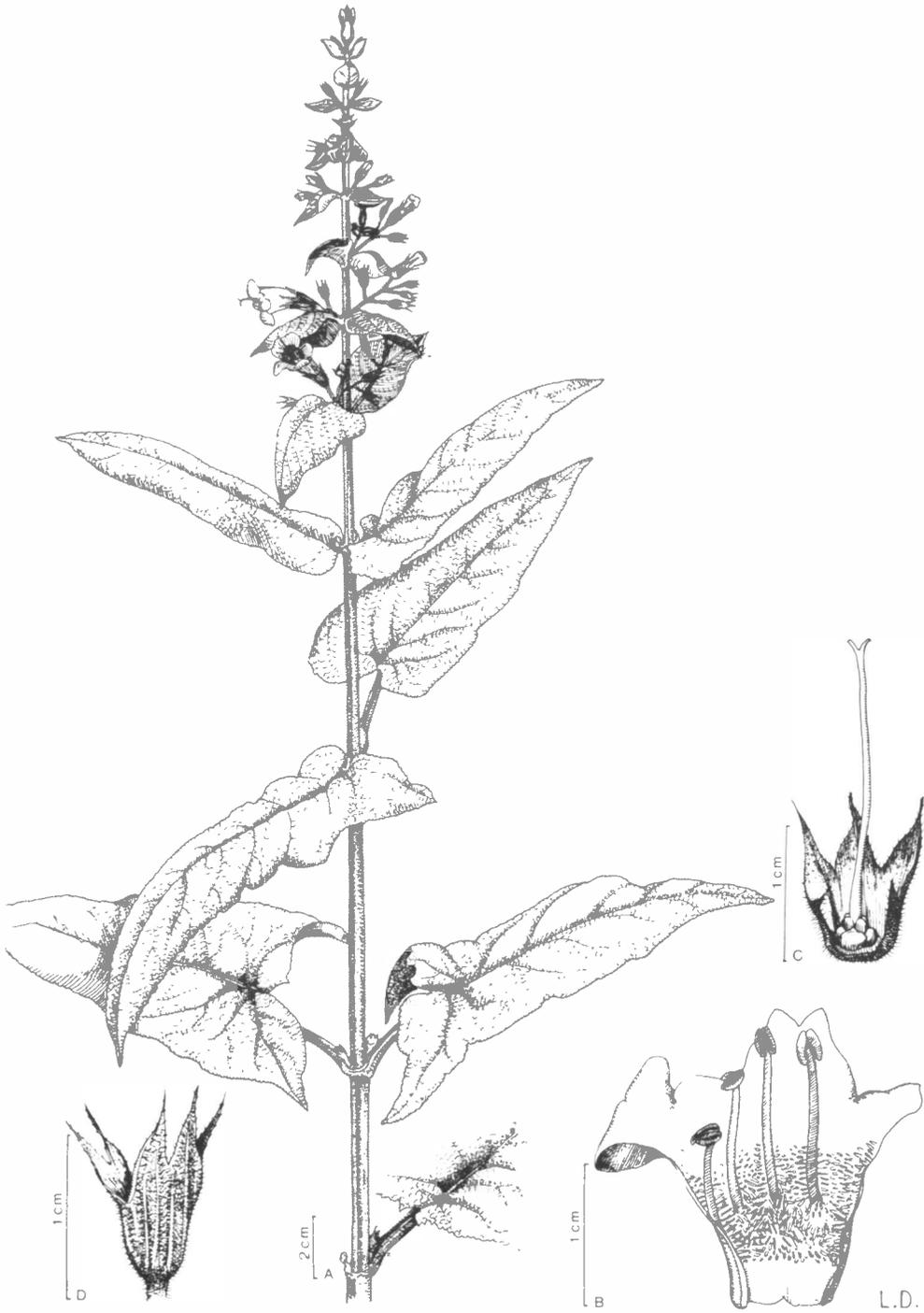
Basionym : *Sphacele hastata* A. Gray, *Proc. Am. Ac.* 5 : 341 (1862).

Flowered Adelaide Botanic Garden on June 24, 1977, accession number 181-74, herbarium voucher AD Herb. Pl. Cult. 6995. Collected by B. Morley, but introduced as seed to Adelaide by T.R.N. Lothian from the Strybing Arboretum in 1974. Originally collected by Gankin and Herbst on Mount Haleakala at 6000 feet, Maui, Hawaii, June 24, 1968.

Perennial *herb*, c. 2.3 m tall, stems c. 1-1.5 cm thick, four-angled, purplish, closely pubescent, roots fibrous; *leaves* opposite, the largest c. 32 cm long, 15.5 cm wide at widest part, hastate at base becoming ovate on inflorescence, margin serrate-crenate, lobes of hastate leaves c. 9 cm long, leaf base cordate to auriculate, apex acute, adaxially shortly and copiously tomentose, hairs transparent, branched (simple, bi- or tri-furcate), veins impressed, c. 27, purplish, lamina finely rugose, velvety green, abaxially copiously tomentose, hairs transparent, branched as above, punctate with globules of opaque acrid-aromatic exudate in each depression, veins raised, greyish green; *petiole* c. 6.5 cm long, 4 mm thick, semi-circular in cross-section, flattened and purplish above (inflorescence leaves sessile), connected across node by pubescent ridge, vestiture as on lamina; *flowers* in axillary, cymose clusters of c. 15; *peduncles* elongating with age, c. 1.3 cm long at anthesis, purplish; *pedicels* elongating with age, c. 1.2 cm long at anthesis, purplish, pubescent; *bracts* linear c. 1.1 cm long, purplish, pubescent, *sepals* 5, fused at base, somewhat bilabiate, c. 1.1 cm long, upper 3 lobes c. 8 mm long, lower 2 lobes c. 6 mm long, triangular, purple, pubescent, 12-nerved at base, mouth closed after anthesis; *corolla* 4-lobed, gamopetalous, purple-magenta, slightly zygomorphic, c. 2.3 cm long; tube 1.8 long, c. 3 mm diameter at base, widening gradually to 7 mm at mouth, externally pubescent, hairs multicellular, simple or bifurcate, purple, internally pubescent at base, hairs unicellular, simple, clavate, glistening; posterior lobe emarginate, erect, c. 2 mm long; laterals c. 3 mm long, erect; anterior lobe c. 6 mm long, ovate, reflexed; *stamens* 4, exerted 7 mm at anthesis, posterior pair of filaments c. 1.6 cm long, anterior pair c. 1.4 cm long, glabrous, purple, inserted on middle of tube; *anthers* 2-celled, blackish-purple, divergent at anthesis, each cell c. 1.7 mm long, linear, pollen pale yellow; *style* 3 cm long, simple, glabrous, purple; *stigma* bifid, lobes acute, exerted 1 cm at anthesis; *ovary* segments 4, green, surrounding base of style, glabrous, disk yellowish, glandular; *fruit* 4 nutlets, glossy black, 5 mm long, 2.5 mm wide, apically blunt, basally constricted into a short neck.

My colleague, Mr P. Trezise, drew attention to this tall growing herb with attractive foliage and large inflorescences of small purple-magenta flowers. It was raised from seed collected from the Strybing Arboretum, San Francisco, by Mr T.R.N. Lothian in 1974. Plants were put out into the Adelaide garden on November 6, 1975, as a *Salvia* species.

I am grateful to Dr R.M. Harley of Kew who kindly confirmed identification of the plant as *L. hastata*. The most recent treatment of *Lepechinia* Willd., is that of Epling (1948), who states that *L. hastata* is the type species of section *Thyrsiflorae* Epling, and one of the two species in the section, (which is characterised by an open paniculate inflorescence having cymose branches). It is the inflorescence structure which distinguishes *L. hastata* from the most closely allied species, the Chilean *L. salviae* (Lindl.) Epling in sect. *Speciosae* Epling (illustrated as *Stachys salviae* Lindl. by M. Hart in *Edward's Botanical Register* . . . (1829) t. 1226, and W. J. Hooker as *Sphacele lindleyi* Benth. in *Curtis's Bot. Mag.* (1830) t. 2993.), introduced into England about 1826.



a. flowering shoot, b. dissected corolla, c. dissected calyx showing gynoecium, d. calyx from above.

Epling (1948) continues that *L. hastata* occurs in the Sierra La Laguana, San Francisquito Mts, and La Chuperosa, and on the summit of Socorro Island, and Revillagigedo Islands of Mexico, as well as Maui in the Hawaiian Islands. Hillebrand (1888) noted that the species grows only on eastern Maui "where the gregarious plant forms an interrupted belt round Haleakala at an elevation of 2000-3000 ft above the sea; most plentiful at Ulupalakua". Such a discontinuous distribution may indicate that *L. hastata* has been introduced to Hawaii (particularly as 36 of Epling's 38 taxa are either North or South American, and the Old World *L. stellata* (Cordem.) Epling from Reunion Island is known only as a fragmentary herbarium specimen in the Jardin des Plantes, Paris. If native to Maui, there may be an interesting problem to solve, in order to account for the distribution of the taxon. Hillebrand (1888) made the comment that the flowers are often attacked by a dipteran insect so that seeds are seldom found.

The native Hawaiian name for *L. hastata* is 'pakaha', but Neal (1965) does not mention the species being cultivated in Hawaiian gardens, nor does Kuck & Tongg (1958). Chittenden (1956), Bailey (1949), Robinson (1889) and Nicholson (n.d.) do not mention *L. hastata*, and to our knowledge its garden merit has not hitherto been acknowledged. It is a good subject for the back of a sunny herbaceous border, having decorative leaves when vegetative, resembling those of *Salvia canariensis* L., although larger. In late autumn or early winter it bears distinctive but not showy inflorescences, at a time when there is a dearth of flowering material in gardens, at least in South Australia. It is most likely frost tender. After flowering, the old shoots are cut back to ground level in order to induce a new flush, but otherwise the plants receive no special treatment. The only other species of *Lepechinia* mentioned in horticultural literature are *L. salviae* (syn. *Sphacele lindleyi* Benth.), *L. chamaedryoides* (Balbis) Epling from Chile (syn. *Sphacele campanulata* Benth.), and the Californian *L. calycina* (Benth.) Epling, but none are common. Perhaps one objection to *L. hastata* is its heavy pungent smell, as noted by Hillebrand (1888), persisting like that of rosemary.

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