

3. **C. balonensis**, *Lindl. in Mitch. Trop. Austr.* 148. Apparently perennial, erect, branching, 6 in. to 1 ft. high or rather more. Leaves thick and fleshy, the lower ones oblong-spathulate or obovate, 1 in. long or less, the upper ones linear or lanceolate, often above 2 in. Flowers large, purple, in loose terminal racemes, on pedicels of about 1 in. Bracts scarious, acuminate, mostly opposite, but only one of each pair has a flower in its axil. Sepals very broad and obtuse, herbaceous, obscurely veined, with a scarious margin. Petals very broadly obovate, fully  $\frac{3}{4}$  in. long. Stamens very numerous; anthers narrow-oblong. Style 3-lobed, the lobes thick and nearly twice as long as the entire base.

**Queensland.** Sandy soil on the Balonne river, *Mitchell*.

NID

PORTULACACEAE

*Calandrinia cyclophylla*

F. muell.

4. **C. polyandra**, *Benth.* Annual, with decumbent or ascending branches of 6 in. to 1 ft. Leaves few, chiefly in the lower part of the stem, thick and fleshy, the lowest broadly linear or almost spatulate, the upper ones narrow-linear, occasionally almost opposite, mostly 1 to 1½ in. long.

Flowers of a red-purple, rather large, few together in a terminal raceme, the pedicels 1 in. or more. Bracts small and scarious. Sepals very broad, rather obtuse, thin and slightly coloured, with scarcely prominent veins. Petals narrow-obovate, about ½ in. long. Stamens very numerous, irregularly united at the base; anthers short. Style divided to the base into 3 linear stigmatic branches. Capsule ovoid or oblong, 3-valved. Seeds very numerous and small, black, minutely pitted.—*Taiinum polyandrum*, Hook. Bot. Mag. t. 4833.

**S. Australia.** Spencer's Gulf, *Warburton*; in the interior, *Victorian Expedition*.

**W. Australia,** *Burges, Drummond, Coll.* 1848, n. 119; Flinders Bay, *Collie*; near Banbury, *Oldfield*; Murchison river, *Sandford*; W. coast, *Bynoe*.

Var. *leptophylla*. Slender, with very narrow leaves 2 to 3 in. long, and few, rather large flowers on long slender pedicels. W. coast, with the commoner form, *Bynoe*.

5. **C. quadrivalvis**, *F. Muell. Fragm.* i. 176. A glabrous annual, with small, oblong-spathulate radical leaves, soon disappearing, and several decumbent or ascending stems, from a few in. to 1 ft. or rather more, and sometimes much branched. Stem-leaves from linear-spathulate to oblong or lanceolate, narrowed into a petiole, the lower ones often above 1 in. long, the upper ones few and small. Flowers small, pink, in loose racemes sometimes branching into panicles; pedicels  $\frac{1}{4}$  to  $\frac{3}{4}$  in. Bracts very small, herbaceous or slightly scarious. Sepals herbaceous, acute, about  $1\frac{1}{2}$  lines long. Petals 6, fully twice as long as the calyx. Stamens numerous, with small anthers. Style divided to the base into 4 linear stigmatic branches. Capsule about as long as the calyx, 4-valved, with numerous small seeds minutely pitted.

**N. Australia.** Sandy places along the Victoria river and in the Macadam range, *F. Mueller.*

NIB

PORTULACACEAE

*Calandrinia schistorrhiza*

N10

PORTULACACEAE

*Calandrinia strophiolata*

F. Muell

N50

PORTULACACEAE

*Calandrinia tappeana*  
W.V. Fitzg.

2. **C. uniflora**, *F. Muell. in Trans. Phil. Inst. Vict.* iii. 41, and *Fragm.* i. 177. Rootstock simple, cylindrical, erect, bearing a dense tuft of narrow-linear leaves of 2 to 4 in. Scapes numerous from amongst the leaves, 8 to 10 in. high, 1-flowered and leafless, except 1 or 2 minute scales. Flowers rather large. Sepals broad and thin, 3 to 4 lines long. Petals usually 6 or 7. Stamens very numerous, the inner ones much longer than the outer; anthers oblong. Styles 4, erect, shortly plumose and stigmatic along their whole length. Capsule about as long as the sepals, 4-valved. Seeds numerous, black and shining.

**N. Australia.** Victoria river, near the main camp, *F. Mueller*.  
The species is nearly allied to two Chilian ones, *C. rupestris*, Barn., and *C. graminifolia*, Philippi.



3. **P. australis**, Endl. *Atakta*, 7, t. 6. Apparently decumbent and much branched, the stipular and involueral hairs copious, but otherwise glabrous. Leaves alternate, oblong, elliptical, thick, under  $\frac{1}{2}$  in. long. Flowers yellow, 1 or 2 together, sessile between 2 to 4 involueral leaves. Stamens numerous. Style elongated, 5- or 6-cleft. Seeds shining, granulate, the funicles united into as many clusters as styles.

**N. Australia.** Gulf of Carpentaria, *Bauer*.—I have seen no authentic specimens, and have taken the above character from Endlicher's description and Bauer's drawing. A specimen of F. Mueller's may be the same plant, and perhaps one of R. Brown's from Broad Sound, but neither are sufficient for determination. It is not improbable that both this species and *P. filifolia* may prove to be forms of the tropical African *P. foliosa*.

7. **P. bicolor**, *F. Muell. Fragm.* i. 171. A minute, prostrate annual, with opposite branches, rarely above  $1\frac{1}{2}$  in. long. Leaves all opposite, broadly ovate or orbicular, scarcely exceeding 2 lines. Flowers as in *P. oligosperma* minute, solitary, terminal, and closely sessile between 4 bract-like floral leaves (appearing pedicellate, with 4 calyx-like bracts at the summit of the pedicel). Sepals not 1 line long. Petals minute, yellow. Stamens about 6. Style with 4 (or sometimes 2?) lanceolate, transparent, very delicate lobes. Capsule short, broad. Seeds several, small, black, granulate.

**N. Australia.** Victoria river, *F. Mueller.*  
**Queensland.** Keppel Bay, *R. Brown.*

*Portulaca clavigera*  
Geesink.

PORTULACACEAE

*Portulaca conspicua*

Donnir

5. **P. digyna**, *F. Muell. Fragm. i. 170.* A procumbent, glabrous annual of a few inches, with dichotomous or opposite branches. Leaves all opposite, ovate obovate or nearly orbicular, 2 to 3 lines long, very shortly petiolate. Stipular hairs very short. Flowers pink, very small, pedicellate, 1 to 3 together, between 2 or 4 involueral leaves, forming dichotomous leafy cymes. Sepals not 2 lines long. Petals 4, rather longer. Stamens about 10. Style long, with 2 long linear stigmatic branches. Ovules about 6, the funicles forming 2 clusters. Capsule elongate-conical, covered in the upper part with oblong papillæ. Seeds 1, 2, or 3, black, smooth, and shining.

**N. Australia.** Upper Victoria river, Hooker's Creek, and Stuart's Creek, *F. Mueller.*

4. **P. filifolia**, *F. Muell. Fragm. i. 169.* Annual, with erect or decum-

bent stems of  $\frac{1}{2}$  to 1 ft., the stipular and involueral hairs long and copious, but otherwise glabrous. Leaves alternate, linear-terete, almost filiform,  $\frac{1}{4}$  to 1 in. long.. Flowers rather large, yellow, 1 to 3 together, sessile between 2 to 4 involueral leaves. Sepals 2 to  $2\frac{1}{2}$  lines, and petals twice as long. Stamens numerous. Style elongated, usually 4-cleft. Seeds shining, granulate, the funicles united in as many clusters as styles.

**N. Australia.** Sandy deserts on Sturt's Creek, *F. Mueller.*

**Queensland.** In the interior, *Mitchell.*

This may be a variety of *P. australis*, and only appears to differ from the tropical African *P. foliosa* in its more slender leaves, and from *P. tuberosa*, Roxb., in the roots not tuberous and in the large flowers.

2. **P. napiformis**, *F. Muell. Herb.* Glabrous, with decumbent or erect stems of 6 in. to near 1 ft., the tap-root thickening into an oblong tuber. Leaves alternate, linear, succulent, apparently terete,  $\frac{1}{2}$  to 1 in. long. Stipular hairs exceedingly minute. Flowers smaller than in *P. oleracea*, usually 3 together, between 2 to 4 involucreal leaves, but not quite sessile. Stamens about 16. Style rather long, 4-cleft at the top. Capsule small, contracted into a short stipes. Seeds smaller than in *P. oleracea*, black and shining, finely granulated.

**N. Australia.** Victoria river and Beagle Valley, *F. Mueller*; N.W. coast, *Bynoe*. The species is allied to the East Indian *P. tuberosa*, Roxb., but the flowers and fruits are much smaller, not so closely sessile, and there are not the long stipular and involucreal hairs of that species.

1. **P. oleracea**, *Lim.*; *DC. Prod.* iii. 353. A low, prostrate, or spreading annual, seldom exceeding 6 in., somewhat succulent, and quite glabrous. Leaves mostly alternate, cuneate-oblong, obtuse, very rarely exceeding  $\frac{1}{2}$  in., usually narrowed into a short petiole, the stipular hairs very minute, and sometimes quite disappearing. Flowers terminal and sessile, between 2 or more floral leaves, rarely solitary, usually several together in little heads which are either single or several in a dichotomous cyme. Sepals not much more than 2 lines long. Petals 5, scarcely longer than the calyx, slightly united at the base, yellow and very fugacious. Stamens 10 to 12 or rarely fewer. Style short, with 5 linear stigmatic lobes. Capsule sessile. Seeds minutely tuberculate, the panicles often united at the base into 5 clusters.—A. Gray, *Gen. Ill.* t. 99; F. Muell. in *Rep. Babb. Exped.* 10.

**N. Australia.** Victoria river, *F. Mueller.*

**Queensland.** In the interior, *Mitchell.*

**N. S. Wales.** Port Jackson, *R. Brown.*

**Victoria.** Sandy banks of Snowy River, *F. Mueller.*

**S. Australia.** Elizabeth Creek, in the interior, *Babbage's Expedition.*

Var. (?) *grandiflora*. Sepals more obtuse, 3 to 4 lines long.—Sturt's Creek, *F. Mueller.*

The species is common in maritime or sandy localities in most tropical countries, extending into the warm parts of the temperate regions, both of the northern and southern hemispheres.



6. **P. oligosperma**, *F. Muell. Fragm.* i. 170. A little slender annual of 2 or scarcely 3 in., with numerous opposite branches. Leaves all opposite, oblong, narrow-lanceolate or linear and semiterete, 3 to 4 lines long. Stipular hairs none or quite microscopic. Flowers very small, pink, terminal, solitary and closely sessile within 2 or 4 involucreal leaves, which do not exceed the calyx-tube, so that the flower appears pedicellate, with 4 calyx-like bracts at the summit of the pedicel. Sepals scarcely 1 line long, and the petals apparently not longer. Stamens about 6, the anthers very transparent. Style divided into 2 to 4 lanceolate, transparent, and very delicate lobes. Seeds few, black, granulate.

**N. Australia.** Victoria river and Sturt's Creek, *F. Mueller*.

The Sturt's Creek specimens have smaller and rather broader leaves, and in the flower I examined the lobes of the style were broader than in those from Victoria river, but both are probably forms of one species, nearly allied to the East Indian *P. quadrifida*, but at once known by the absence of stipular hairs.

NIB

PORTULACACEAE

Portulaca pilosa  
ssp. decipiens

NIB

PORTULACACEAE

Portulaca pilosa  
ssp. pilosa