

### 3. AIZOON, Linn.

ASTROACEAE

Calyx free, deeply 4- or 5-lobed. Petals none. Stamens indefinite, usually about 20, inserted at the top of the calyx-tube, free, but more or less in clusters alternating with the lobes. Ovary superior, enclosed in the calyx-tube, 5-celled or in the Australian species 4-celled, with 2 or more ovules in

each cell; styles as many as cells, filiform, stigmatic along the inner side. Capsule surrounded by the persistent calyx, depressed, opening loculicidally in as many valves as cells, or in the Australian species the valves split septically.—Herbs or undershrubs. Leaves alternate or rarely opposite, without stipules. Flowers solitary or divaricately cymose.

The genus is chiefly African, and especially S. African, but extending to N. Africa and S. Europe. The only Australian species is endemic, and differs from the African ones in habit, in its 4-merous flowers, in the calyx valvate, not imbricate in the bud, and in the dehiscence of the capsule. In this respect it is more nearly allied to *Gunnia*, to which it ought perhaps to be referred, but the stamens are numerous as in *Aizoon*. The opposite leaves occur also in one of the S. African species.

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AIZOACEAE

*Aizoon zygophylloides*

NIB

AIZOACEAE

*Glinus lotoides*

NED

AIZOACEAE

Glinus oppositifolius

NSB

~~AE~~  
AIZOACEAE

*Glinus orygioides*

8. MOLLUGO, Linn.

ARIZOACEAE

(Glinus, Linn.; Trigastrotheca, P. Muell.)

Calyx-segments 5, persistent. Petals none. Stamens few or many, free, sometimes with the addition of a few staminodia, of which 1 to 5 external ones represent petals, alternating with the calyx-segments. Ovary 3- to 5-celled, with several ovules in each cell; styles as many as cells, linear or clavate. Capsule membranous, enclosed in the persistent calyx, opening loculicidally in as many valves as cells. Seeds with a smooth or granulate testa, the funicle sometimes thickened into a small white arillus or strophiole, with or without a filiform appendage.—Erect or diffuse herbs, mostly annual. Radical leaves rosulate, but often disappearing before the flowering. Stem-leaves alternate, but often clustered in the axils so as to appear verticillate. Stipules very small and fugacious. Flowers small, the pedicels usually clustered in the axils, sometimes forming cymes, umbels, or racemes.

The genus is abundantly difused over the warmer regions of the globe, extending into Europe and North America. Of the five Australian species, three are very common in Asia and Africa, two of them extending also to tropical America, the other two are endemic.

SECTION I. **Glinus**.—Seeds strophiolate, with a filiform appendage (resembling a funicle) more or less encircling them.

- Softly tomentose. Flowers rather large, in axillary clusters. Stamens about 10 to 15 . . . . . 1. *M. Glinus*.
- Quite glabrous. Flowers rather large, in terminal clusters. Stamens about 15 . . . . . 2. *M. orygioides*.
- Glabrous or slightly pubescent. Flowers rather small, in axillary clusters. Stamens under 10 . . . . . 3. *M. Spergula*.

SECTION II. **Mollugo**.—Seeds without any strophiola.

- Glabrous, decumbent. Flowers rather large in loose axillary cymes or racemes. Stamens 5, the filaments much dilated at the base . . . . . 4. *M. trigastrotheca*.
- Glabrous, filiform, and small. Flowers small, on filiform pedicels. Stamens 5, the filaments not dilated . . . . . 5. *M. Cerviana*.

5. **M. Cerviana**, *Ser. in DC. Prod. i. 392*. A little slender glabrous annual of a few in., with filiform branches. Leaves in distant clusters, linear, mostly under  $\frac{1}{2}$  in. long, the radical ones sometimes shorter and oblong. Pedicels filiform, longer than the leaves. Calyx-segments about  $\frac{1}{2}$  line long when in flower, lengthening to nearly 1 line. Stamens usually 5, the filaments filiform from the base. Styles 3, short, distinct, stigmatic towards the end. Seeds numerous, small, without any appendage to the funicle.—Fenzl in *Ann. Wien. Mus. i. 379*; F. Muell. *Fragm. ii. 148*.

**N. S. Wales.** Towards the Barrier Range, *Victorian Expedition*.

**S. Australia.** Near Lake Gillies, *Burkitt*.

The species is diffused over tropical and subtropical Asia and Africa and southern Europe.

NSB

AFZACEAE

*Mollugo molluginis*



5. **SESUVIUM**, Linn.

AS20ACEAE

Calyx free, deeply 5-lobed. Petals none. Stamens 5, alternating with the calyx-lobes or indefinite, often very numerous, inserted at the top of the tube. Ovary free, enclosed in the calyx, 3- to 5-celled, with numerous ovules in each cell; styles as many as cells, filiform, stigmatic along the inner side, at least towards the end. Capsule surrounded by the persistent calyx, membranous, more or less completely divided by very thin dissepiments, transversely circumsciss about the middle. Seeds several; testa coriaceous, smooth. —Herbs or undershrubs. Leaves opposite, fleshy, without stipules, but sometimes with scarious dilatations of the petiole. Flowers solitary or clustered in the axils or almost cymose, the calyx-lobes usually coloured inside, with more or less scarious margins.

The genus contains about four species, spread over the seacoasts of the tropical and subtropical regions of the globe, the Australian species being the commonest and the most generally diffused both in the New and the Old World.

1. **S. portulacastrum**, Linn. ; DC. Prod. iii. 453. A succulent herb, procumbent or creeping and rooting at the joints. Leaves linear or linear-oblong, contracted below the middle, broader and stem-clasping at the base, mostly 1 to 2 in. long, rather thick, flat above, convex underneath. Pedicels from very short to rather longer than the calyx. Calyx 3 to 4 lines long or sometimes more, the tube turbinate,  $\frac{1}{2}$  to 1 line long; lobes ovate-lanceolate, green on the back, scarious on the margins and pink or purple inside, often shortly mucronate below the end. Stamens very numerous, inserted at the top of the calyx-tube and shorter than its lobes, the filaments sometimes shortly united at the base. Ovary 3- or rarely 4-celled. Capsule ovoid, not exceeding the calyx, circumsciss below the middle.—Bot. Mag. t. 1701.

**N. Australia.** Albert river, Henne.

**Queensland.** E. coast, R. Brown; Port Curtis, M'Gillivray; Howicks Group and sandy shores of the islands of Moreton Bay, F. Mueller; Fitzroy river, Thozet.

**N. S. Wales.** Clarence river, Wilcox.

The styles are free to the base in all the flowers I have examined, but are occasionally 4 in number, as in *Psammanthe marina*, Hance in Walp. Ann. ii. 660, from the Chinese coasts, which appears to be a variety only of *S. portulacastrum*, notwithstanding that the styles are really, as described by Hance, shortly united at the base.

*S. repens*, Roth, to which the Indian specimens are referred in Wight and Arn. Prod. 361, appears to be a variety or rather a state only of *S. portulacoides*, with smaller flowers and shorter and broader leaves, owing, as suggested by Arnott, to want of luxuriance.

2. TETRAGONIA, Linn.

(Tetragonella, Miq.)

RUZICEAE

Calyx-tube adnate to the ovary at the base and usually produced above it; lobes 4 or 5, or rarely 3. Petals none. Stamens indefinite, few or many, inserted at the top of the calyx-tube, free but usually in clusters alternating with the lobes. Ovary inferior, 2- to 8-celled, with 1 pendulous ovule in each cell, the summit convex or conical, and rarely containing a second erect ovule. Styles as many as cells, linear, stigmatic along the inner side. Fruit indehiscent with a hard almost bony endocarp, the herbaceous or almost fleshy epicarp (or persistent calyx) often variously horned or tubercular.— Herbs or undershrubs. Leaves alternate, flat but rather thick, without stipules. Flowers solitary or few together in the axils, sessile or pedicellate, usually of a yellowish or reddish-green.

The species comprises several S. African species, besides a few dispersed over the sea-coasts of New Zealand, the Pacific islands, and some parts of Asia and America. Of the two Australian species, one is also in New Zealand and extratropical S. America and Asia, the other is endemic.

- Flowers usually hermaphrodite, with 3 or usually more styles and ovary-cells. Fruit often horned . . . . . 1. *T. expansa*.
- Flowers mostly unisexual, with 2 or very rarely 3 styles and ovary-cells. Fruit never horned . . . . . 2. *T. implexicoma*.

6. **TRIANTHEMA**, Linn.

ASZORCERE

(Ancistrostigma, Fenzl.)

Calyx free, more or less deeply 5-lobed. Petals none. Stamens inserted at the top of the calyx-tube, either 5 alternating with its lobes or indefinite. Ovary free or nearly so, enclosed in the calyx, either 2-celled with 2 styles, or 1-celled (reduced to 1 carpel) with 1 excentric or lateral style; ovules 2 or more in each cell, attached to a basal placenta, free or shortly adnate to the partition. Capsule membranous or hard, transversely circumsciss, and when 2-celled the upper portion sometimes separating septicidally into 2 cocci, and in some species, not Australian, divided inside by a transverse partition under the uppermost seed. Seeds orbicular or reniform, the testa often granular.— Prostrate or diffuse herbs, rarely woody at the base. Leaves opposite, the two of each pair unequal in size, the petioles often with a scarious dilatation at the base, but no real stipules. Flowers axillary, solitary or in cymes or clusters. Bracts and bracteoles often somewhat scarious.

The genus is dispersed over the tropical and subtropical regions of the New as well as the Old World. Of the 6 Australian species, 2 are widely distributed over the warmer regions of Asia and Africa, the 4 others are endemic.

Ovary and fruit 2-celled, truncate or concave at the top. Styles 2.

Flowers clustered . . . . . 1. *T. decandra*.

Ovary and fruit 1-celled, with 1 style.

Ovary and fruit truncate or concave at the top. Flowers clustered.

Glabrous or slightly pubescent. Stamens 5. Capsule short and broad . . . . . 2. *T. crystallina*.

Hirsute with long hairs. Stamens about 20. Capsule with a narrow beak . . . . . 3. *T. pilosa*.

Ovary and fruit acute or tapering into the style, or rounded at the top.

Glabrous or sparingly pubescent. Flowers solitary, pedicellate, not very small . . . . . 4. *T. oxycalyptra*.

Hirsute, small and densely tufted. Flowers solitary in the axils, but crowded on the plant, small . . . . . 5. *T. rhynchoalyptra*.

Glabrous. Flowers small, in loose pedunculate cymes . . . . . 6. *T. cypseleoides*.

NIB

AIZOACEAE

Trianthera  
glossostigma

4. **T. oxycalyptra**, *F. Muell. Fragm.* i. 173. Prostrate, rather slender, glabrous or sparingly pubescent. Leaves obovate ovate or spatulate, obtuse or almost acute, mostly under  $\frac{1}{2}$  in. long and narrowed into a long petiole. Flowers solitary, more or less pedicellate. Calyx 3 to 4 lines long; lobes rather longer than the tube. Stamens about 15 to 20. Ovary of 1 carpel, the style terminal; ovules about 4 or 5. Capsule rather broad, acute, circumsciss below the middle. Seeds 2 to 5, superposed, compressed, elegantly marked with radiating rows of papillæ.

**N. Australia.** Sturt's Creek, *F. Mueller.*

3. **T. pilosa**, *F. Muell. Fragm.* i. 174. Procumbent, from a few inches to above 2 ft. in length, hirsute, with spreading hairs, particularly long and dense about the inflorescence. Leaves obovate, narrowed into a rather long petiole, the largest attaining about 1 in. Flowers in axillary sessile clusters. Calyx when full grown about 3 lines long; lobes ovate-lanceolate, very open, as long as the tube. Stamens about 20. Ovary of 1 carpel, the style lateral, below the end, which soon closes round it; ovules 2. Capsule included in the calyx, produced into a cylinder concave or cup-shaped at the top round the style, circumsciss about the middle of the basal seed-bearing portion.

**N. Australia.** N.W. coast, *Bynoe*; Cygnet Bay, *A. Cunningham*; Nichol Bay and De Grey river, *Ridley's Expedition*; desert between Hooker's and Sturt's Creeks, *F. Mueller*; islands of the Gulf of Carpentaria, *R. Brown*.

NIB

AIZOACEAE

*Trianthema portulacastru*



*Trionthema triquetra*

NFB

RIZORACEAE

*Trianthema turgidifolia*

NEG

AIZOACEAE

*Zaleya galericulata*