

## KEY TO THE GENERA OF ALYSSEAE

The number of ovules per ovary is an important character in distinguishing genera of the tribe. It can easily be obtained from the fruit by counting the number of seeds plus aborted ovules, or by counting the number of funicles or their scars from fruits that shed all of its seeds.

1a. Ovules 1 or 2 per ovary.

2a. Annual herbs; septum absent or reduced to a rim; fruit indehiscent, samaroid, usually with setose, barbed, or hooked trichomes; ovules 1 per ovary; .....9. *Clypeola*

2b. Perennial herbs or subshrubs; septum complete; fruit dehiscent, rarely samaroid, without setose, barbed, or hooked trichomes; ovules 2 per ovary (rarely 1 in some *Bornmuellera*).

3a. At least some trichomes malpighiaceus (2-rayed, medifixed), other trichomes 3–6-rayed; fruit inflated or rarely latiseptate .....6. *Bornmuellera*

3b. All trichomes stellate, (6–)8–24-rayed; fruit latiseptate.

4a. Filaments toothless, unappendaged; petals white; style to 0.7 mm .....16. *Lepidotrichum*

4b. Filaments usually toothed, appendaged; petals yellow, rarely creamy white; style usually 1–3 mm ..... 19. *Odontarrhena*

1b. Ovules 4–16 per ovary.

5a. Sepals persistent well after fruit maturity, accrescent; fruit indehiscent or tardily dehiscent; seeds rugose or verrucose, wingless .....8. *Clastopus*

5b. Sepals usually caducous well before fruit maturity, not accrescent; fruit dehiscent; seeds smooth or reticulate, winged, margined, or rarely wingless.

6a. Petals deeply bifid to about middle.

7a. Trichomes a mixture of simple and 2–8-rayed; lateral sepals not saccate at base; Mediterranean region, one cosmopolitan annual weed .....5. *Berteroa*

7b. Trichomes exclusively 8–12-rayed; lateral sepals saccate at base; China, Mongolia .....13. *Galitzkya*

6b. Petals obtuse, rounded, truncate, retuse, or emarginate.

7a. Style (5–)6–10 mm long.

- 8a. Petals purple or crimson red ..... 7. *Brachypus*
- 8b. Petals yellow or white, if pinkish then plants subshrubs.
- 9a. Filaments minutely appendaged at base; anthers apiculate; cotyledons oblique incumbent;  
At least some cauline leaves sinuate or dentate; lateral sepals not saccate at base..... 4. *Aurinia*
- 9b. Filaments unappendaged at base; anthers not apiculate; cotyledons accumbent; cauline  
leaves entire; lateral sepals saccate at base.
- 10a. Fruit inflated.
- 11a. Fruit valves thickened, leathery to subwoody, glabrous outside and inside; ovules  
8–12 per ovary; at least some trichomes malpighiaceae, 2-rayed..... 2. *Alyssoides*
- 11b. Fruit valves papery, pubescent outside and inside; ovules 4 per ovary; all trichomes  
stellate, 12–20-rayed..... 11. *Degenia*
- 10b. Fruit strongly latiseptate.
- 12a. Petals white or rarely pink; ovules 4–8 per ovary; fruit obovate, orbicular, elliptic, or  
cochleariform; style rarely to 5 mm, persistent ..... 14. *Hormathophylla*
- 12b. Petals yellow; ovules 12–16 per ovary; fruit oblong to narrowly elliptic;  
style 7–10 mm, caducous..... 23. *Resetnikia*
- 7b. Style 0.1–3(–4) mm long.
- 13a. Annual herbs.
- 14a. Leaves distally denticulate; fruit margin papillate..... 10. *Cuprella*
- 14b. Leaves entire; fruit margin entire.
- 15b. Ovules 4–8(–16) per ovary; fruit latiseptate, valves glabrous or with simple  
trichomes and/or papillae ..... 18. *Meniocus*
- 15a. Ovules 4 per ovary; fruit fully or unilaterally inflated, valve glabrous or with  
stellate trichomes.
- 16a. Petals yellow; infructescence distinctly elongated; fruit slightly inflated  
unilaterally, variously shaped ..... 3. *Alyssum*
- 16b. Petals white; infructescence subcapitate; fruit fully inflated; globose..... 24. *Takhtajaniella*

13b. Perennial herbs, subshrubs, or shrubs.

17a. Trichomes malpighiaceous or mixed with 3–6-rayed ones, simple trichomes absent .... 6. *Bornmuellera*

17b. Trichomes (6–)8–24-rayed, sessile or stalked, simple ones present or absent.

18a. All filaments unappendaged, toothless, and wingless.

19a. Fruit ovoid to globose-ovoid, strongly inflated; ovules 8–16 per ovary;

cotyledons incumbent ..... 17. *Lutzia*

19a. Fruit obovate, orbicular, elliptic, or cochleariform, strongly latiseptate; ovules 4–8

per ovary; cotyledons accumbent.

20a. Petals yellow, shorter than or subequalling sepals, claw undifferentiated from blade ... 10. *Cuprella*

20b. Petals white or pink, distinctly longer than sepals, claw differentiated from blade.

21a. Fruit replum concealed by valve margins; ovules 4 per ovary; nectar glands 1,

confluent, median glands present ..... 20. *Phyllolepidum*

21b. Fruit replum visible; ovules 4–8 per ovary; nectar glands 4, 1 on each side of lateral

stamen, median glands absent ..... 14. *Hormathophylla*

18b. At least median or lateral filaments appendaged, winged, or toothed.

22a. Stigma strongly 2-lobed, lobes connivent, decurrent ..... 1. *Acuston*

22b. Stigma entire, rarely slightly 2-lobed, lobes neither connivent nor decurrent.

23a. Replum visible, not concealed by distinct valves margin; anthers apiculate

(except for *Alyssum*).

24a. Ovules 4–8(–16) per ovary; leaves dentate, sinuate, or pinnatifid, very

rarely entire; cotyledons obliquely incumbent ..... 4. *Aurinia*

24b. Ovules 4 per ovary; leaves entire; cotyledons accumbent.

25a. Anthers not apiculate; fruit usually dehiscent, 2–4-seeded; seeds usually winged;

valves not veined; style 0.5–3 mm long ..... 3. *Alyssum*

25b. Anthers apiculate; fruit tardily dehiscent, 1-seeded; seeds wingless; valves

reticulate veined; style 2.5–4 mm long ..... 15. *Irania*

23b. Replum not visible, concealed by connate valves margin; anthers not apiculate.

- 26a. Fruit indehiscent, globose or ovoid, inflated and bladderlike ..... 21. *Physoptychis*
- 26b. Fruits dehiscent, oblong, orbicular to ovate, not inflated.
- 27a. Ovules 12–16 per ovary; racemes elongated considerably in fruit, bracteate or  
 ebracteate; style persistent; trichomes 6–8-rayed..... 12. *Fibigia*
- 27b. Ovules 4–8 per ovary; racemes slightly elongated in fruit, ebracteate; style  
 caducous; trichomes 12–20-rayed..... 22. *Pterygostemon*