Plant Crib

BRASSICACEAE (*CRUCIFERAE*)

The BSBI Handbook *Crucifers of Great Britain and Ireland* (Rich 1991) is essential reading for this family.

Specimens for identification should ideally include flowers, ripe fruit and basal and stem leaves, but many species can be named from less material with experience. Measure petals and sepals, and describe the angle that the sepals are held at. Collect material from the main stem, not side branches which often have smaller flowers/fruits, despite what this does to the appearance of the plant concerned!

Key to common Crucifer genera

The following key excludes the rarer natives and casuals covered in the *Crucifer Handbook*. Genera can then be keyed out in the *Crucifer Handbook* (or Stace's *New Flora*). Identification should be confirmed by checking at least fruit and petal sizes against the descriptions in the *Crucifer Handbook*.

Please note:
i) Some leads have more than two couplets.
ii) Taxa with over-lapping characters will key out in both leads.
iii) Population averages are more reliable than single plants.
iv) Full details of how to assess the characters are given in the *Crucifer Handbook*.

1	Flowers without petals	2
1	Petals yellow	4
1	Petals cream to white	22
1	Petals blue, purple, lilac, pink, orange or red	60

Flowers without petals

2	Individual leaflets with stalks	***Cardamine***
2	Leaflets without stalks	3
3	Lateral inflorescences opposite leaf axils	***Coronopus***
3	Lateral inflorescences in leaf axils	***Lepidium***

Petals yellow

4	Stem leaves absent, all leaves in basal rosette	5
4	Upper stem leaves with auricles clasping stem	6
4	Upper stem leaves sessile or stalked	9
5	Leaves toothed or lobed to halfway	***Diplotaxis muralis***
5	Leaves pinnate	***Coincya monensis***
6	Glabrous or with simple hairs only	7
6	At least some forked or stellate hairs present	8
7	Fruits 2-12 mm	***Rorippa***

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7	Fruits 11-71 mm	***Barbarea***
8	Leaves finely divided	***Descurainia sophia***
8	Leaves entire or lobed to halfway	***Arabis***
9	At least some forked or stellate hairs present	10
9	Glabrous or with simple hairs only	11
10	Leaves finely divided	***Descuriania sophia***
10	Leaves entire to shallowly lobed	***Erysimum***
11	Valves absent, fruit indehiscent	12
11	Valves present	14
12	Large glands ('warts') present on pedicels	***Bunias orientalis***
12	Large glands absent	13
13	Petals 11-25 mm	***Raphanus***
13	Petals 4-11 mm	***Rapistrum***
14	Pinnatifid bracteoles present on lower inflorescence	***Erucastrum gallicum***
14	Bracteoles absent	15
15	Beak / persistent style 0-3.5 mm	16
15	Beak / persistent style more than 4 mm	18
16	Seeds in 1 row in each loculus	***Sisymbrium***
16	Seeds in 2 rows in each loculus, at least in middle of fruit	17
17	At least larger fruits more than 23 mm long; petals usually more than 6 mm long	***Diplotaxis***
17	Fruits 5-23 mm; petals usually less than 6 mm long	***Rorippa***
18	At least some flowers with reflexed sepals	***Sinapis***
18	Sepals erect to spreading	19
19	Fruits 7-16 mm, appressed to stem	20
19	At least some larger fruits 16-100 mm, appressed to patent	21
20	Beak swollen with (0-)1(-2) seeds (see also page 130)	***Hirschfeldia incana***
20	Beak linear to conical, sterile	***Brassica nigra***
21	Terminal segment / beak sterile	***Brassica***
21	Terminal segment / beak with (0-)1-4 seeds	***Coincya***
Petals cream to white		
22	Outer petals larger than inner petals, at least on outer flowers	23
22	Petals all ± same size	24
23	Petals less than 2 mm	***Teesdalia nudicaulis***
23	Petals 3-16 mm	***Iberis***
24	Stem leaves absent	25
24	Upper stem leaves with auricles clasping stem	28
24	Upper stem leaves sessile or petiolate	35
25	Petals cut to at least ¼ way	***Erophila***

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25	Petals entire or emarginate	26
26	Leaves pinnatifid	***Cardamine***
26	Leaves simple	27
27	Alpine rocks	***Draba norvegica***
27	Aquatic	***Subularia aquatica***
28	At least some forked or stellate hairs present	29
28	Glabrous or with simple hairs only	31
29	Fruits ± triangular	***Capsella bursa-pastoris***
29	Fruits linear to elliptic	30
30	Fruits linear, 17-90 mm long	***Arabis***
30	Fruits elliptic to lanceolate, to 12 mm long	***Draba***
31	Fruits linear; lateral leaflets stalked	***Cardamine***
31	Fruits elliptic to triangular	32
32	1 seed per loculus	***Lepidium***
32	More than 1 seed per loculus	33
33	Fruit winged, at least at apex	***Thlaspi***
33	Fruit not winged	34
34	Fruit ± triangular	***Capsella bursa-pastoris***
34	Fruit ± elliptic	***Cochlearia***
35	At least some branched or stellate hairs present on stem or leaves (× 10 lens)	36
35	Glabrous or with simple hairs	43
36	Petals 1-5 mm	37
36	Petals 5-33 mm	40
37	Fruits linear	38
37	Fruits elliptic to circular	39
38	Annual	***Arabidopsis thaliana***
38	Biennial-perennial	***Arabis***
39	Fruit 1-seeded	***Lobularia maritima***
39	Fruit many seeded	***Draba***
40	Petals 5-9 mm	***Arabis***
40	Petals 9-30 mm	41
41	Seeds flat, winged	***Matthiola***
41	Seeds irregularly cylindrical, not winged	42
42	Petals 9-18 mm	***Malcolmia maritima***
42	Petals 17-30 mm	***Hesperis matronalis***
43	Petals less than 2 mm	44
43	Petals 2-5 mm	46
43	Petals 5-11 mm	52
43	Petals 11-30 mm	59

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44	Lateral inflorescences opposite leaves	***Coronopus squamatus***
44	Lateral inflorescences in leaf axils	45
45	Stem leaves regularly pinnate	***Hornungia petraea***
45	Stem leaves simple to lobed	***Lepidium***
46	Fruits circular to obovate	47
46	Fruits linear to elliptic	48
47	Fruit winged, at least at apex	***Lepidium***
47	Fruit not winged	***Lobularia maritima***
48	Leaves pinnatifid to pinnate	49
48	Leaves entire to weakly lobed	50
49	Fruits ± terete	***Rorippa* (*Nasturtium*)**
49	Fruits ± flattened	***Cardamine***
50	Garlic-scented when crushed; fruits ± terete	***Alliaria petiolata***
50	Not garlic scented; fruits ± flattened	51
51	Annual	***Arabidopsis thaliana***
51	Perennial-biennial	***Arabis***
52	Fruits ± round; inner filaments toothed	***Crambe***
52	Fruits linear to elliptic; filaments not toothed	53
53	Fleshy seashore plant; 2 distinct parts to fruit (like a mitre)	***Cakile***
53	Not fleshy; fruits with 1 distinct part	54
54	Fruits ± flattened	55
54	Fruits ± terete (rounded in cross-section)	56
55	Leaves with distinct leaflets, pinnate to pinnatifid	***Cardamine***
55	Leaves entire to lobed to half way	***Arabis***
56	Fruits 5-26 mm	***Nasturtium***
56	Fruits 30-100 mm	57
57	Smelling of garlic when crushed when fresh	***Alliaria***
57	Not smelling of garlic	***Sisymbrium***
58	Fruits 15-35 mm wide, flat	***Lunaria***
58	Fruits up to 15 mm wide, flat or not	59
59	Valves present on fruits; lateral leaflets stalked	***Cardamine***
59	Valves absent; fruits indehiscent	60
60	Leaves fleshy, glaucous; inner filaments toothed	***Crambe***
60	Leaves thin, green; filaments not toothed	***Raphanus***
	Petals blue purple, lilac, pink, orange or red	
61	Upper stem leaves with auricles clasping stem	62
61	Upper stem leaves sessile or stalked	63

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62	Fruits linear	***Arabis***
62	Fruits elliptic to triangular	return to lead 31
63	At least some forked or stellate hairs present on stem or leaves (× 10 lens)	64
63	Glabrous or with simple hairs only	70
64	Fruits circular to elliptic	65
64	Fruits ± linear	66
65	Petals 2-4.5 mm	***Lobularia maritima***
65	Petals 12-28 mm	***Aubrieta deltoidea***
66	Petals 4-9 mm	***Arabis***
66	Petals 9-30 mm	67
67	Seeds ± irregularly cylindrical	68
67	Seeds flattened	69
68	Petals 9-18 mm	***Malcolmia maritima***
68	Petals 17-30 mm	***Hesperis matronalis***
69	Stigma 2-lobed	***Erysimum***
69	Stigma entire, with or without lateral horns	***Matthiola***
70	Fruits 15-35 mm wide, flat	***Lunaria annua***
70	Fruits up to 15 mm wide, flat or not	71
71	Fruit winged	***Lepidium sativum***
71	Fruit not winged	72
72	Plant hairy	73
72	Plant glabrous	76
73	Fruit 2-4.5 mm, ± circular	***Lobularia maritima***
73	Fruits more than 5 mm, ± linear	74
74	Fleshy seaside plant	***Cakile maritima***
74	Not fleshy	75
75	At least larger petals more than 10 mm	***Erysimum***
75	Petals 4-10 mm	***Arabis***
76	Leaves with distinct leaflets; not fleshy	***Cardamine***
76	Leaves simple to lobed; fleshy	77
77	Fruits with two distinct parts like a mitre	***Cakile maritima***
77	Fruits elliptic with only one part	***Cochlearia***

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