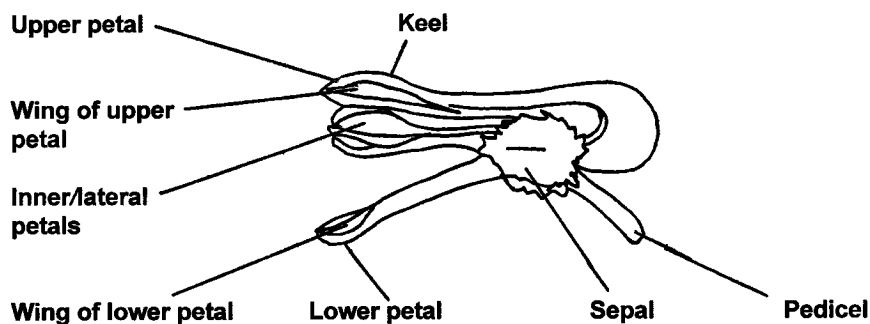


## FUMARIA

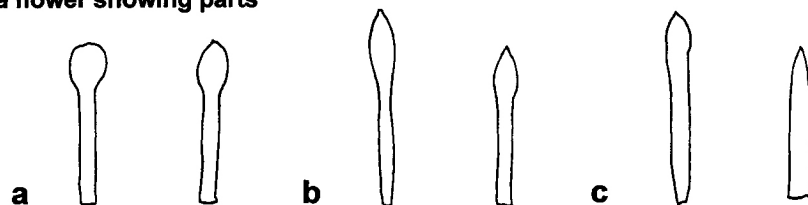
The following key to *Fumaria* covers the species and infraspecific taxa of *Fumaria* recognised following a revision of Pugsley's (1912) monograph. An account of the *F. bastardi*/*F. muralis* complex is given by Sell (1989). It is often easier to name infraspecific taxa than the actual species, hence these are all included. When collection herbarium material, please include mature fruits and describe the flower colour carefully (annotated drawings may help).

Flower characters are the most important and the other characters are subsidiary. When measuring flowers, a number of different flowers from different inflorescences should be selected.

- 1 Leaf lobes flat, oblong, lanceolate or cuneiform (see Figs. g-k); at least some corollas more than 9 mm long; wings of the upper petal turned upwards; lower petal not spathulate (except *F. painteri* and *F. muralis* subsp. *muralis* var. *comubiensis*); fruits smooth or rugose when dry 2
- 1 Leaf lobes channelled or flat, narrower, lanceolate, linear-oblong or linear; corolla not more than 9 mm; wings of the upper petal with broad margins or more or less patent; lower petal distinctly spathulate; fruits more or less rugose when dry 20
- 2 Wings of upper petal dark purple with a broad white margin; lower petal with broad patent margin; fruit c. 3 x 3 mm 2  
***F. occidentalis***
- 2 Wings of upper petal never dark purple with a broad white margin; lower petal with a narrow margin; fruit c. 2.0-2.5(-2.7) x 2.0-2.5(-2.7) mm 3

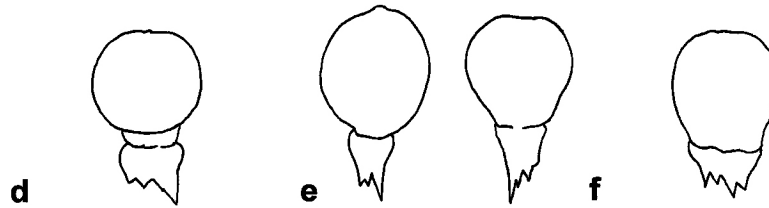


*Fumaria* flower showing parts

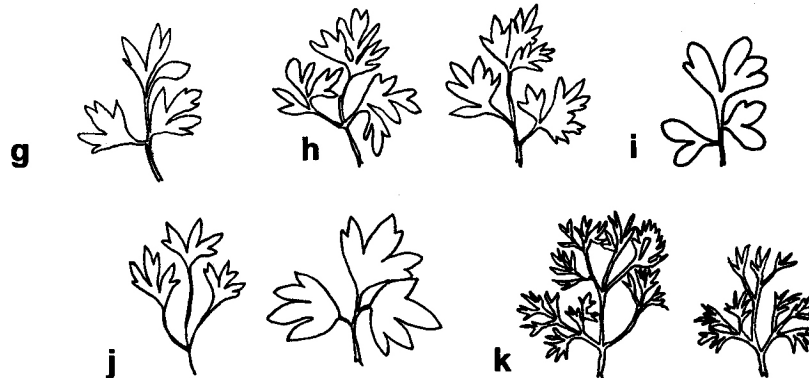


Outlines of lower petals (a) distinctly spathulate, (b) indistinctly spathulate, (c) not spathulate.

# Plant Crib



Outlines of fresh fruits to show fleshy neck (d) distinct fleshy neck, (e) indistinct neck, (f) neck absent.



Outlines of leaf segments (g) oblong, (h) lanceolate, (i) cuneiform, (j) linear-oblong, (k) linear.

- |                             |  |   |
|-----------------------------|--|---|
| 3                           | Pedicels rigidly recurved in fruit; peduncles equalling or longer than raceme; flowers numerous, about 20 or more; fruit with a distinct fleshy neck when fresh (Fig. d)                                       | 4   |
| 3                           | Pedicels rarely recurved in fruit and then usually flexuous; either peduncles shorter than raceme or flowers few, about 12; fruit with an indistinct fleshy neck (Figs. e, f)                                  | 8   |
| 4                           | Corolla pale to deep purple; inflorescence rather lax; upper petal broader and not laterally compressed with wings exceeding the keel  | <b><i>F. purpurea</i></b>   |
| 4                           | Corolla usually creamy, sometimes with a reddish suffusion, rarely red or tinted pink; inflorescence rather dense; upper petal dorsally very narrow and laterally compressed with wings not exceeding the keel | 5   |
| <b><i>F. capreolata</i></b> |  |   |
| 5                           | Flowers deep crimson   | <b><i>F. capreolata</i> subsp. <i>capreolata</i> forma <i>speciosa</i></b>    |
| 5                           | Flowers creamy white or slightly tinted red or pink  | 6   |
| 6                           | Sepals 4.0-6.5 x 2-4 mm; fruit c. 2 x 2 mm or smaller, subglobose, apex very obtuse but not truncate, smooth when dry  | <b><i>F. capreolata</i> subsp. <i>capreolata</i> forma <i>capreolata</i></b>  |
| 6                           | Sepals frequently narrower; fruit c. 2.5 x 2.5 mm, often truncate at apex and more or less rectangular in outline, frequently faintly rugulose when dry  | 7   |
| 7                           | Corolla creamy white, sometimes slightly tinted red; pedicels usually rigidly arcuate-recurved; fruits more or less rectangular in outline and truncate at apex  | <b><i>F. capreolata</i> subsp. <i>babingtonii</i> var. <i>babingtonii</i></b> |
| 7                           | Corolla tinted with pink; pedicels less recurved; fruits rounded but scarcely truncate at apex and rounded in outline  | <b><i>F. capreolata</i> subsp. <i>babingtonii</i> var. <i>devoniensis</i></b> |
| 8                           | Lower petal more or less spathulate (Figs a, b)  | 9   |
| 8                           | Lower petal not spathulate (Fig. c)  | 10  |

# Plant Crib

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- 9 Corolla 8.5-10 mm; sepals 3.5-4.0 x 2.0-2.5 mm *F. muralis* subsp. *muralis* var. *cornubiensis*  
 9 Corolla 10-11 mm; sepals 3.0-3.5 x c. 1.5 mm *F. × painteri*
- 10 Sepals 2.0-3.5 mm, elliptical, more or less serrate; bracts less than 1/2 as long as pedicel; upper petal laterally compressed; lower petal with patent margins; fruits rugose when dry 11
- 10 Sepals 2.7-5.0 mm, elliptical or ovate, sub-entire or dentate; bracts more than 1/2 as long as pedicel; upper petal more or less dorsally compressed; lower petal with erect or patent margins; fruits smooth or slightly rugulose when dry 13
- F. bastardii***
- 11 Upper petal without blackish wings *F. bastardii* var. *bastardii*  
 11 Upper petal with blackish wings 12
- 12 Plants rather dwarf; corolla rather blunt at apex; fruits c. 2 x 2 mm *F. bastardii* var. *gussonei*  
 12 Plant diffuse and straggling; corolla very acute at apex; fruits c. 2.5 x 2.5 mm *F. bastardii* var. *hibernica*
- F. muralis/F. reuteri*** (some forms of *F. muralis* also key out elsewhere)
- 13 Sepals entire or nearly so; racemes much exceeding peduncles in length 14  
 13 Sepals dentate; raceme shorter than or equalling peduncles in length 15
- 14 Sepals 3-5 mm; corolla 11-13 mm; lower petals with patent margins *F. reuteri*  
 14 Sepals 2.7-3.0 mm; corolla c. 10 mm; lower petal with erect margins *F. muralis* subsp. *neglecta*
- 15 Sepals 4.0-5.0 x 2.5-3.0 mm 16  
 15 Sepals 3.0-4.0 x 1.5-2.7 mm 18
- 16 Fruits c. 2.5 x 2.5 mm, nearly square in profile, slightly rugulose when dry  
*F. muralis* subsp. *boraei* var. *ambigua*  
 16 Fruits c. 2.5 x 2.0 mm, obovate and rounded-obtuse in profile, usually smooth when dry 17
- 17 Plant robust; pedicels stout; corolla 10-12 mm, rose-pink *F. muralis* subsp. *boraei* var. *major*  
 17 Plant slender; pedicels slender; corolla 10-11 mm, pale pink *F. muralis* subsp. *boraei* var. *gracilis*
- 18 Fruits 1.7-2.0 x 1.7-2.0 mm, subglobose to subglobose-obovoid  
*F. muralis* subsp. *boraei* var. *britannica*  
 18 Fruits 2.0-2.5 x 1.7-2.0 mm, ovoid-orbicular, subacute or apiculate 19
- 19 Corolla 9.0-11.0 mm, pale pink; wings of upper petal not particularly broad; lower petal with narrow erect margins  
*F. muralis* subsp. *muralis* var. *muralis*  
 19 Corolla 8.5-10 mm, lilac-pink; upper petal with broad wings; lower petal sub-spathulate with patent margins *F. muralis* subsp. *muralis* var. *cornubiensis*
- 20 Sepals not more than 1.2 x 1.0 mm; corolla 5-6 mm 21  
 20 Sepals at least 1.5 x 1.0 mm; corolla at least 6 mm 24
- 21 Leaf lobes flat; racemes shortly peduncled; bracts shorter than pedicels in fruit; flowers pale pink  
*F. vaillantii*  
 21 Leaf lobes channelled; racemes subsessile; bracts equalling or longer than pedicels in fruit; flowers white or tinged with pink 22
- F. parviflora***
- 22 Fruit acute at apex *F. parviflora* var. *acuminata*  
 22 Fruit rounded or with a beak at apex 23
- 23 Fruit rounded at apex *F. parviflora* var. *parviflora*  
 23 Fruit with short beak at apex *F. parviflora* var. *symei*
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# Plant Crib

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- 24 Sepals 3.5-4.0 x 2.0-2.5 mm; fruits smooth when dry *F. muralis* subsp. *muralis* var. *cornubiensis*  
24 Sepals 1.5-3.5(-4.0) x 0.7-3.8 mm; fruits rugose when dry 25
- 25 Leaf-lobes channelled; bracts longer than pedicels; fruit rounded at apex *F. densiflora*  
25 Leaf-lobes flat; bracts shorter than pedicels; fruit truncate or retuse at apex 26
- F. officinalis*  
26 Racemes 20- to 60-flowered; sepals 2.5-3.8 x 0.9-2.2 mm 27  
26 Racemes 5- to 20-flowered; sepals 1.2-2.5 x 0.7-1.9 mm 28
- 27 Pedicels robust; corolla 7-9 mm, purplish-pink; fruits c. 2.0 x 2.5-3.0 mm  
*F. officinalis* var. *officinalis*  
27 Pedicels slender; corolla c. 7 mm, pale purplish-pink; fruits c. 2.0 x 2.5 mm  
*F. officinalis* var. *elegans*
- 28 Leaves glaucous; corolla pale pink; fruits c. 2.0 x 2.5-3.0 mm, obreniform in outline, retuse at apex  
*F. officinalis* var. *minor*  
28 Leaves less glaucous; corolla deeper pink; fruits 2.0-2.5 x 2.0-2.5 mm, rounded, truncate but not retuse at apex and often with a small persistent apiculus  
*F. officinalis* var. *wirtgenii*

**References** Pugsley, W. H. (1912). *Journal of Botany* **50**: 1-76.  
Sell, P. D. (1989). *BSBI News* **51**: 24-26.

**Author** P. D. Sell, January 1988.

## Distribution of *Fumaria* taxa

The taxa are listed below in alphabetical order with notes on their distribution. Many of the endemic varieties have not been recorded recently.

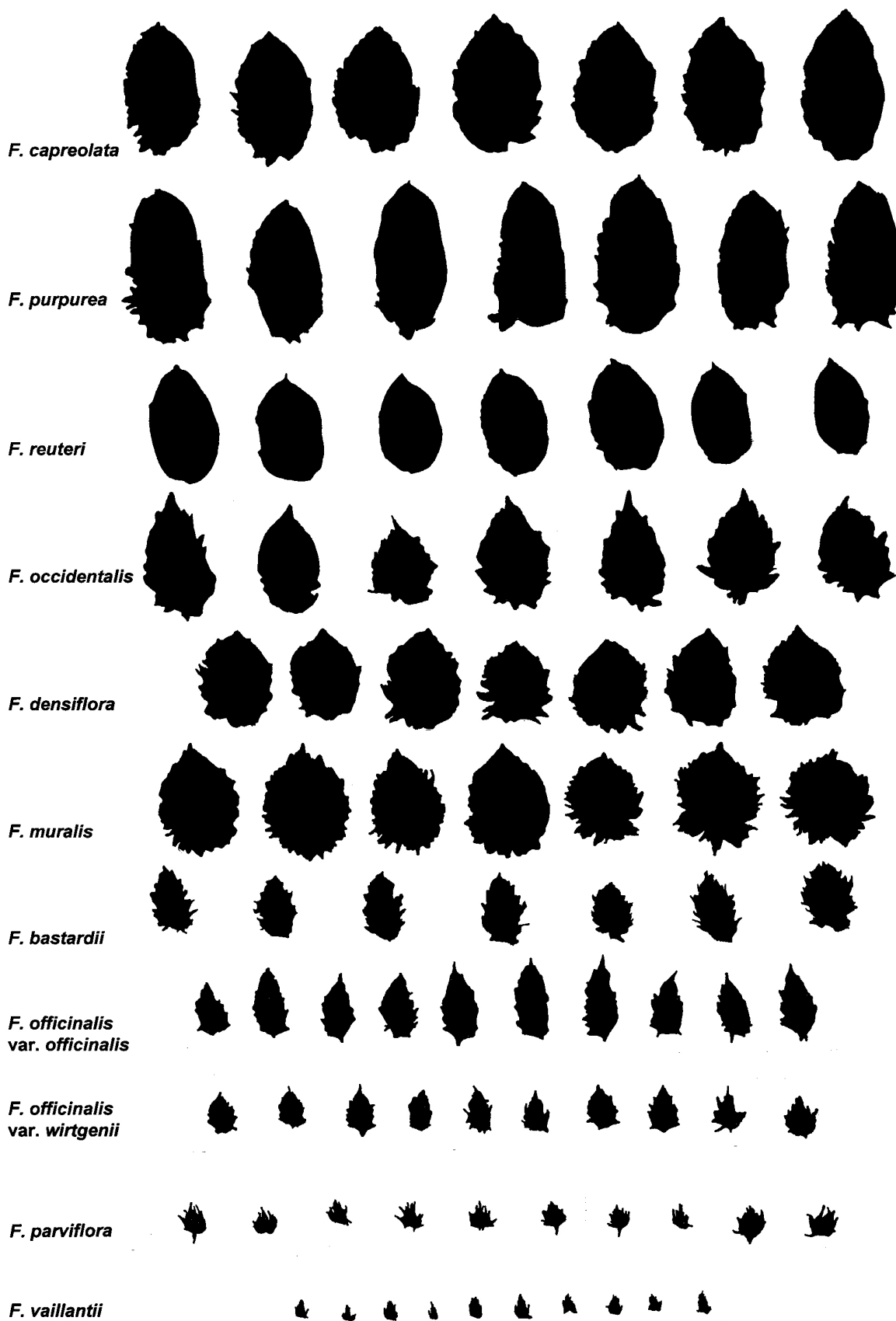
*F. bastardii* Boreau: widespread (*Scarce Plants*).

var. *bastardii*: widespread in Britain, Ireland and Europe.

var. *gussonei* (Boiss.) Pugsley: Channel Islands and Scilly, and Mediterranean.

var. *hibernica* (Pugsley ex Praeger) Pugsley: western Britain and Ireland, endemic.

# Plant Crib



Silhouettes of *Fumaria* sepals (M. G. Daker, December 1997).

# Plant Crib

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*F. capreolata* L. (*Scarce Plants*).

subsp. *babingtonii* (Pugsley) P. D. Sell: Scattered through Britain and Ireland, often near coast.

var. *babingtonii*: Scattered through Britain and Ireland, mostly near coast.

var. *devoniensis* Pugsley: Devon.

subsp. *capreolata*: Channel Islands and Europe.

forma *capreolata*: Channel Islands and Europe.

forma *speciosa* Pugsley: Channel Islands and Europe.

*F. densiflora* DC.: mostly S England and E Scotland, scattered elsewhere (*Scarce Plants*).

*F. muralis* Sond. ex W. D. J. Koch

subsp. *boraei* (Jord.) Pugsley: widespread in Britain and Ireland.

var. *ambigua* Pugsley: S Britain?

var. *britannica* Pugsley: S Britain.

var. *gracilis* Pugsley: S Britain.

var. *major* (Boreau) P. D. Sell: S Britain?

subsp. *muralis*: scattered in S Britain, possibly now extinct (*Critical Supplement*).

var. *muralis*: scattered in S Britain (*Critical Supplement*).

var. *cornubiensis* Pugsley: Cornwall, endemic, probably extinct.

subsp. *neglecta* Pugsley: Cornwall (*Critical Supplement*), endemic, possibly extinct.

*F. occidentalis* Pugsley: Cornwall and Scillies, endemic Red Data Book Species: please document all localities.

*F. officinalis* L.: Widespread.

var. *elegans* Pugsley: mostly SE England.

var. *minor* Hausskn.: mostly SE England, but throughout Britain and Ireland.

var. *officinalis*: widespread.

var. *wirtgenii* Hausskn.: mostly SE England but perhaps over-looked elsewhere. Ireland. (*Critical Supplement*).

*F. × painteri* Pugsley: scattered in S Britain (*Critical Supplement*), possibly extinct.

*F. parviflora* Lam.: mostly S England, rare on E coast (*Scarce Plants*).

var. *acuminata* Clavaud: mostly S England.

var. *parviflora*: mostly S England.

var. *symei* Pugsley: Cambridge, endemic.

*F. purpurea* Pugsley: Endemic, scattered in Britain, Ireland and Channel Islands: possibly over recorded in Lancashire recently and requiring verification.

*F. reuteri* Boiss. (*F. martinii* Clavaud) is protected under Schedule 8 of the Wildlife & Countryside Act 1981 and must not be collected. Once scattered in S England, now Cornwall and I of Wight only: could be over-looked elsewhere.

*F. vaillantii* Loisel.: S England and Europe (*Scarce Plants*).