

A KEY TO THE IDENTIFICATION OF THE MALE FLOWERS OF BRITISH DIOECIOUS SPECIES

R. TINKLIN

The problem of dioecious species is often encountered by students whose experience is insufficient to enable them to place a plant in its family with confidence. The artificial key to identification provided in the *Flora of the British Isles* (Clapham, Tutin and Warburg, 1962) can usually be employed successfully with female plants but ignorance of the ovary characters renders the identification of male plants impossible except by repeated trial and error. In an attempt to rectify this difficulty a simple key to male dioecious plants has been constructed which it is intended should be introduced as an additional alternative at number 13 in the key to families.

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|---|--|-------------------------|
| 1 | Aquatic plants or plants rooted in permanently waterlogged soil | 2 |
| | Land plants | 5 |
| 2 | Shrubs or trees | 3 |
| | Herbs | 4 |
| 3 | Shrub strongly aromatic when bruised; bogs and fens | <i>Myrica gale</i> |
| | Not aromatic | <i>SALICACEAE</i> |
| 4 | Leaves with many large spinous teeth (Hickling Broad) | <i>Najas marina</i> |
| | Leaves not as above | <i>HYDROCHARITACEAE</i> |
| 5 | Hemiparasite; somewhat woody evergreen on branches of trees; leaves yellowish-green, rather tough and leathery | <i>Viscum album</i> |
| | Free-living plants | 6 |
| 6 | Trees or shrubs | 7 |
| | Herbs, or if shrubby then small, prostrate with dense leaves oblong, 4-6 mm long | 13 |
| 7 | Leaves reduced to small scarios scales; bearing broad dark green flattened leaf-like cladodes | <i>Ruscus aculeatus</i> |
| | Plant with photosynthetic leaves | 8 |
| 8 | Plant armed with thorns or spiny leaves | 9 |
| | Plant unarmed | 11 |

		R. TINKLIN		
9	Plant with dark shiny leaves with spines at margins Plant with thorns	<i>Ilex aquifolium</i>		10
10	Leaves stipulate, petioled Leaves exstipulate, sessile or subsessile	<i>Rhamnus catharticus</i> <i>Hippophaë rhamnoides</i>		
11	Flowers in catkins Flowers in erect racemes or axillary panicles	SALICACEAE		12
12	Flowers in erect racemes, yellow-green, 4-6 mm diameter Flowers in axillary panicles appearing before leaves, purplish	<i>Ribes alpinum</i> <i>Fraxinus excelsior</i>		
13	Climbers or twiners Non-climbers			14 16
14	Leaves palmately lobed Leaves broadly ovate, deeply cordate at base; flowers in axillary racemes; no tendrils	<i>Tamus communis</i>		15
15	Plant with tendrils; flowers in axillary corymbs, 12-18 mm diameter Plant without tendrils; flowers about 5 mm diameter in axillary or terminal panicles	<i>Bryonia cretica</i> L. (<i>B.dioica</i> Jacq.) <i>Humulus lupulus</i>		
16	Flowers in umbels or involucrate heads Flowers not as above			17 21
17	Flowers in umbels; leaves tripinnate with filiform segments (S.W. England) Flowers in involucrate heads (Compositae)	<i>Trinia glauca</i>		18
18	Leaves woolly Leaves hairless or only moderately pubescent			19 20
19	Leaves 1-4 cm long mainly in rosettes; creeping stolons; plant 5-20 cm tall Flowering stems erect, 30-100 cm tall; leaves 6-10 cm long	<i>Antennaria dioica</i> <i>Anaphalis margaritacea</i>		
20	Rhizomatous with large radical leaves 10-50 cm wide, cordate at base Leaves less than 10 cm wide, more or less ovate lanceolate, not cordate, margins with fine bristle-like teeth; receptacles flat with dense chaffy scales	<i>Petasites</i> spp. <i>Serratula tinctoria</i>		
21	Flowers green to yellow Flowers coloured or white (sometimes dingy white)			22 25
22	Leaves with stinging hairs Leaves without stinging hairs	<i>Urtica dioica</i>		23
23	Inflorescence terminal; flowers tetramerous; stock very thick and fleshy Flowers in clusters or whorls	<i>Rhodiola rosea</i> L. (<i>Sedum rosea</i> (L.) Scop.)		24

- 24 Flowers in clusters on pedunculate axillary spikes; perianth segments 3; stamens 8-15 *Mercurialis* spp.
Flowers in whorls on simple or branched inflorescence; perianth segments 3 + 3; stamens 6 *Rumex* spp.
- 25 Leaves scarious, small and triangular; cladodes needle-like; flowers dingy white *Asparagus officinalis*
Leaves photosynthetic 26
- 26 Flowers polypetalous 27
Flowers gamopetalous 28
- 27 Flowers red (rarely white), scentless, in many-flowered terminal clusters *Silene dioica*
Flowers white, slightly scented, in few-flowered terminal clusters *Silene alba*
- 28 Prostrate woody plant; flowers 1-3, axillary, 1-2 mm diameter, globular; leaves dense 4-6 mm long, dark green, oblong *Empetrum nigrum*
Nonwoody stoloniferous plant, erect; flowers 5 mm diameter; leaves 2-3 cm long elliptic to ovate; stem leaves sessile, pinnatifid *Valeriana dioica*

REFERENCE

CLAPHAM, A. R., TUTIN, T. G. & WARBURG, E. F. (1962). *Flora of the British Isles*, 2nd ed. Cambridge.

