



ASTER

1. Michaelmas daisies

The account of *Aster* in Ontario by Semple, Heard & Xiang ChunSheng (1996) is recommended. Other taxa are also naturalised. Due to the confusion with historical records, records for *A. novi-belgii* sensu stricto should be documented separately. When collecting material, please note flower colour.

British key by P. F. Yeo

- 1 Inflorescence branches and involucre of flower-heads densely glandular-hairy; ray-florets reddish or pink *A. novae-angliae* L.
- 1 Inflorescence branches and involucre of flower heads not glandular-hairy; ray-florets usually bluish or white 2
- 2 Lower leaves tapering into a long, distinctly winged petiole, middle and upper leaves sessile, ± amplexicaul, all glaucous (pruinose) on both faces; involucre bracts whitish with a diamond green in the tip, closely appressed; ray-florets violet-blue *A. laevis* L.
- 2 Lower leaves sessile or with unwinged petioles; leaves at most somewhat pruinose beneath 3
- 3 Upper leaves ± distinctly auricled and amplexicaul 4
- 3 Upper leaves not or very slightly auricled and amplexicaul 5
- 4 Middle stem leaves mostly 2.5-5 times as long as wide; all involucre bracts erect and ± appressed; ray-florets finally bluish, sometimes white initially *A. × versicolor* Willd.
- 4 Middle stem leaves mostly 4-10 times as long as wide; outer involucre bracts loosely spreading or recurved; ray-florets usually violet-blue *A. novi-belgii* L. sensu stricto
- 5 Leaves usually indistinctly auricled; involucre bracts up to 7 mm, somewhat loosely appressed; ray-florets initially white then violet-blue *A. × salignus* Willd.
- 5 Leaves without auricles; involucre bracts less than 5.5 mm, all appressed; flower-heads like daisies, the ray-florets white *A. lanceolatus* Willd.

Notes

1. *A. × versicolor* (?*A. laevis* × *A. novi-belgii*) includes some late-flowering, tall, broad-leaved plants quite different from the general run of *A. novi-belgii*.
2. *A. novi-belgii* is difficult to find in typical form; many naturalised Michaelmas daisy colonies seem to be hybrid swarms centred on this species.
3. Some material keying out as *A. × salignus* (?*A. lanceolatus* × *A. novi-belgii*) is probably *A. lanceolatus* subsp. *hesperius* (Gray) Semple & Chmiel.; it is difficult to distinguish clearly.

Plant Crib

European study by Hoffmann

A study of the North American asters in Europe by Hoffmann (1996) includes a key to 27 taxa, some of which have not yet been found in the wild in Europe, and another key to the most commonly naturalised species. A translation of this (kindly approved by Dr. Hoffmann) is presented here. It contains two species additional to those in the key above: *A. parviflorus* Nees (*A. tradescantii* of some European authors) and *A. tradescantii* L. Many herbarium specimens of *A. parviflorus* are recorded from Europe by Hoffmann, but only one of *A. tradescantii*. The key is offered here for trial; I have not had an opportunity to apply it to British material. Further details in Hoffmann (1996).

Hoffmann worked with a measuring lens showing intervals of 0.1 mm. The limb of the disc corolla is the bulging part including the five lobes.

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|---|--|---|---|
| 1 | Plant glandular | <i>A. novae-angliae</i> L. | |
| 1 | Plant eglandular | | 2 |
| 2 | Lobes of disc corollas (45-)50(-60)% of length of limb; whole of leaf under-surface usually hairy | <i>A. parviflorus</i> Nees | |
| 2 | Lobes of disc corollas usually less than 50% of length of limb; leaf under-surface usually glabrous, if clearly hairy then corolla lobes much shorter than 50% of the limb | | 3 |
| 3 | Involucral bracts subequal, rarely the outer only half as long as the inner; green patch of outer involucral bracts almost completely filling the surface | (<i>A. novi-belgii sensu lato</i>) | 4 |
| 3 | Involucral bracts clearly imbricate (overlapping at edges, like diagonal roof-tiles), the outer rarely more than half as long as the inner and less filled by the green patch | | 5 |
| 4 | Involucral bracts usually only 0.7 mm wide or less; stem leaves weakly auricled, leaves usually narrowly lanceolate | <i>A. × salignus</i> Willd. | |
| 4 | Involucral bracts usually wider than 0.7 mm; stem leaves clearly auricled, usually half-clasping the stem; leaves narrow-lanceolate to lanceolate | <i>A. novi-belgii</i> L. sensu stricto | |
| 5 | Involucral bracts ± 1 mm wide, the green patch rhombic and usually filling only the upper half (but running down as a narrower green stripe as far as the base); stem leaves almost glabrous on the surfaces, ± stem-clasping, the lower narrowed into a stalk-like part; plant with a bluish bloom in the fresh state | <i>A. laevis</i> L. | |
| 5 | Involucral bracts usually to 0.8 mm wide, with green patch lanceolate and extending ± to the base; stem leaves (almost) sessile to stem-clasping, not narrowed into a stalk; plant not bloomed | (<i>A. lanceolatus sensu lato</i>) | 6 |
| 6 | Stem leaves lanceolate, usually only weakly auricled at the base; heads of medium size (diameter of involucre more than 3-4 mm or, when pressed, (7-)8-11 mm); number of involucral bracts usually more than 35; size of involucral bracts (4-)4.5-6 × 0.5-0.7 mm | <i>A. lanceolatus</i> Willd. sensu stricto | |
| 6 | Stem leaves linear-lanceolate, usually sessile, more rarely auricled; heads small (diameter of involucre up to 3 mm or, when pressed, 5-7(-8) mm); number of involucral bracts usually only 30-35; size of involucral bracts 3-4(-4.5) × 0.45-0.6 mm | <i>A. tradescantii</i> L. | |

References Hoffmann, H. M. (1996). *Feddes Repertorium* **107**: 163-188.
Semple, J. C., Heard, S. B. and Xiang ChunSheng (1996). The Asters of Ontario (*Compositae: Asteraceae*), ed. 2. *University of Waterloo Biology Series* **38**. Pp. 94.

Author P. F. Yeo, February 1998.

Plant Crib

2. *Aster tripolium* varieties

Two varieties of *A. tripolium* L. can be distinguished on the presence or absence of ray florets: var. *tripolium* has spreading whitish or blue-purple ray florets, whilst these are absent in var. *discoideus* Rchb. Intermediate, partially-rayed forms may also be produced where both varieties are present (Gray 1966); these should be recorded as 'intermediate'. Other characters are given in Burt (1970).

Var. *tripolium* is widespread around the coasts on salt marshes, etc., and occurs rarely inland. Var. *discoideus* is not infrequent in similar places in England and Wales but is rare elsewhere. It occurs in proportionally greater numbers on the lower zones of salt marshes. Records of the two varieties are of interest in relation to the spread of *Spartina*, with var. *discoideus* disproportionately affected.

References Burt, B. L. (1970). *Biol. J. Linn. Soc.* **2**: 233-238.
Gray, A. J. (1966). *Proc. BSBI* **6**: 274.