

ARCTIUM

Stace's *New Flora* follows the generic revision of *Arctium* by Duistermaat (1996) which should now be adopted for recording. However, Duistermaat's treatment should be tested in detail against British and Irish material before older records are rejected. The second account below, by F. H. Perring from *Plant Crib* (1988), provides the traditional British Isles view.

Please state which treatment you are following (*sensu* Duistermaat or *sensu* Perring) to prevent confusion. *A. lappa* is the same in both treatments. The other taxa can be recorded as '*A. minus* agg.' if you are unsure of the segregates. Involucral measurements should be made on mature terminal heads of the main stem at the end of the season. Capitula sizes are measured on fresh heads, including deflexed and patent bracts. Note capitulum size before pressing. Specimens should consist of the terminal synflorescence; the lower side branches may be easier to collect but have smaller capitula and shorter peduncles.

1. Treatment following Duistermaat (1996)

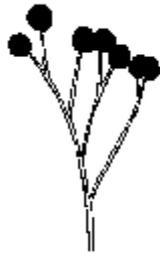
Duistermaat's treatment differs significantly from previous British and Irish accounts in two respects. First, the inclusion of *A. pubens* in the very variable *A. minus*. Duistermaat (1996) found continuous variation in capitulum size from *A. minus* to *A. pubens* and was unable to find any other characters to separate the taxa. The putative origin of *A. pubens* as an *A. lappa* × *A. minus* hybrid was not supported.

Second, the concept of *A. nemorosum*. It is a species with larger heads and broader involucral bracts than *A. minus*. In *A. minus* the capitula may be sessile or long-pedunculate in the terminal part of the synflorescence, the corolla may be glandular-hairy or glabrous, and longer or shorter than the involucre, whereas in *A. nemorosum* the capitula are sessile in the terminal part of the synflorescence and the corolla glabrous and shorter than the involucre. Duistermaat (1996) regards *A. nemorosum* as a plant of woodland or shaded disturbed places, mostly on calcareous soils and absent from acidic soils. It is apparently absent from SW England and Ireland and its occurrence there should therefore be re-assessed.

The key below is adapted from Duistermaat (1996). A synflorescence is a group of heads (being Asteraceae, each head is obviously an inflorescence in its own right, hence synflorescence for a group of heads).

- 1 Petiole of basal leaves solid (at least at base); capitula in the terminal parts of the synflorescence with peduncles at least 2.5 cm long; synflorescence ± corymbose (Fig. a); capitula (2.4-)3.0-4.7 × 2.0-3.3 cm *A. lappa* L.
- 1 Petiole of basal leaves hollow (at least at base); synflorescence racemose (Fig. b) to subcorymbose; capitula in the terminal parts of the synflorescence with peduncles sessile or up to 2 cm long; if pedicels more than 2 cm long then synflorescence racemose; capitula 1.5-4.0 × 1.9-2.4 cm 2
- 2 Capitula in the terminal parts of the synflorescence sessile; middle involucral bracts (1.6-)1.7-2.5 mm wide; involucre exceeding the corolla by 1.2-6.0 mm; capitula 2.7-4.0 × 1.9-2.9 cm *A. nemorosum* Lej.
- 2 Capitula pedunculate or sessile; middle involucral bracts up to 1.6 mm wide; involucre shorter or longer than corollas; capitula 1.5-3.2 × 1.1-2.4 cm *A. minus* (Hill) Bernh.

Plant Crib



a



b

Synflorescences (a) ± corymbose (*A. lappa*), (b) racemose (*A. minus*, *A. nemorosum*).

Arctium lappa × *A. minus* has been recorded but is very variable. It usually combines the corymbose synflorescence of *A. lappa* with the hollow petiole of *A. minus*. The involucre is glabrous or somewhat hairy, and the corolla often equals the involucre bracts. *A. minus* × *A. nemorosum* has not been confirmed.

2. Treatment by F. H. Perring

Specific limits within this genus cannot be clearly defined, each species showing great variation in hairiness of leaves and capitula and florets. All taxa are interfertile and, although they are normally autogamous, out-breeding sometimes occurs. This has resulted in innumerable intermediates which are fully fertile and breed true from seed.

The involucre measurements apply to mature capitula from August onwards. *A. minus* usually has capitula scattered along the branches whereas in *A. nemorosum* a few (3-4) are clustered at the top. 'Pure' *A. minus* only occurs in SW England where *A. nemorosum* is absent, and 'pure' *A. nemorosum* in NW Scotland where *A. minus* is absent. Elsewhere intermediate taxa are frequent.

1	Synflorescence corymbose; peduncles 3-10 cm; petioles solid	<i>A. lappa</i> L.
1	Synflorescence not corymbose; peduncles absent or up to 4 cm; petioles hollow	2
2	Involucre 15-18 × 15-25 mm in fruit (i.e. at the end of the season); florets longer than involucre bracts	<i>A. minus</i> Bernh.
2	Involucre 20-25 × 30-35 mm in fruit; florets about as long as involucre bracts	3
3	Involucre straw-coloured; peduncles 1-4 cm	<i>A. pubens</i> Bab.
3	Involucre green or tinged with dark purple; peduncles less than 1 cm	<i>A. nemorosum</i> Lej.

Reference Duistermaat, H. (1996). *Gorteria*, Supplement 3.