

## THE NORTH WALSHAM AND DILHAM CANAL: A FRUITFUL PLACE FOR ADVENTIVES AND ALIENS

Suki Pryce, North Walsham and Dilham Canal Trust Wildlife Officer, Dec 2020

The North Walsham and Dilham Canal (NWDC) is a partly-restored canal in the North Norfolk area, cutting through what was once the meandering course of the upper River Ant. Despite – or even because of – the restoration, the Canal corridor is surprisingly rich in different habitats, biodiversity, and plants. I began plant-recording there in 2017, and since then (and helped with IDs and surveying by members of the Norfolk Flora Group) nearly 400 plant taxa have been found in the approximately 4 miles of the restored area. These include many intriguing ‘out-of-place’ plants, and it has seemed worthwhile to wonder how these arrived at the Canal.

**Substrates** Most of these adventives occur on the sides and shoulders of the embankments which enclose both the canal bed and also the ditches (‘back sokes’) on their outer sides. The embankments have been built up using a wide range of imported fill, over a period of several years. To serve its engineering function as a reasonably stable, self-binding but also free-draining medium, this fill mostly comprises light, sandy/gravelly loams. The fill is mainly supplied by a local skip-hire firm, and judging by the taxa which have been found along the Canal, it seems that many of them have come from gardens, farmland, wasteland, industrial, urban, or coastal areas. Table 1 shows the adventives found so far, and attempts to group them according to the likely source of the substrate in which they arrived.

**Effects of Management on Habitats** The tops of the embankments are regularly mown and provide a fairly short-sward habitat which may extend to the ‘shoulders’. The *Anemone blanda*, *Limnanthes douglasii* and *Lathyrus latifolius* were found in this sort of habitat. The inner (canal) sides are rough-cut around 2-4 times per year, resulting in a medium height (typically up to 60-100 cm) habitat which seems to favour a very wide range of taxa which can tolerate a certain amount of competition. Interesting perennial aliens persisting in these sorts of areas include *Euphorbia oblongata*, *Geum quellyon*, and *Sidalcea malviflora*. The soke bank sides are cut less frequently (from once a year to once every four years), and provide a more tall-herb habitat where substrates are richer. Where they are poorer, this habitat resembles that of the inner canal banks, and the *Allium trifoliatum*, for example, was found in this sort of spot.

Ongoing maintenance work such as reprofiling the embankments, desilting sokes, removing woody plants, plus natural phenomena such as bank slippages, create occasional disturbance which must also help the growth of new adventive propagules. (Perhaps the strangest of these was a single tiny small-leaved hard-to-determine specimen on a gravelly ditch-side slippage site. Many of us tried and failed to ID it, but it was our VC Recorder Bob Ellis who suggested *Lysimachia maritima* Sea Milkwort. By what route did this coastal plant arrive in the Ant valley, one wonders?)

**Now You See Them . . .** The Canal embankments are still being built up sporadically, so new fill - with all its unknown propagules - is still being introduced to the corridor. But even in the fairly stable, undisturbed areas, new taxa seem to appear out of the blue, may disappear in a year (*Calandrinia ciliata*, *Anemone blanda*, *Limnanthes douglasii*), may persist, and then again may reappear after a year or two’s absence. For example, what seemed to be a well-established patch of *Galega officinalis* some 30 square metres in size on a ditch-side in 2019 had

disappeared without trace in 2020. Yet a patch of *Potentilla argentea* has survived since I've known the site on a quite competitive 'shoulder' location, despite being pretty out-of-place there. And the solitary patch of the annual alien *Absinthia artemisiifolia* found in 2018 didn't reproduce itself in 2019: instead a single specimen was back in 2020, but 200 metres away from its predecessors. Finally, how do perennials I've never seen in previous years, such as *Primula veris*, *Leucjum aestivum*, and *Anemone x hybridus*, suddenly appear - apparently out-of-the-blue - as well-established clumps in undisturbed areas? I have suspected guerrilla gardening, but no-one has owned up to it . . .

**Conclusion** How long this wealth of adventives will continue to appear once the sections of Canal involved are fully restored, and the substrates settle down, we don't know. But for now, the site continues to be a treasure trove for fans of adventives and aliens.

**Table 1**

**Adventives and Aliens Found Along The North Norfolk and Dilham Canal Restored Sections,  
Grouped By Likely Origins of Imported Fill**

*A = alien R = rare in Norfolk*

**Normally found on poor/dry/sandy/chalky soils:** Chalk Knapweed *Centaurea debeauxii*, Common Centaury *Centaureum erythrea*, Wild Carrot *Daucus carota*, Hoary Cinquefoil *Potentilla argentea* **R**, Sticky Groundsel *Senecio viscosus* **A**, Heath Groundsel *Senecio sylvaticus*

**Normally found on dunes, sea cliffs etc:** Sea Milkwort *Lysimachia maritima* **R**

**Associated with saline environments:** Narrow-leaved Pepperwort *Lepidium ruderae*

**Probably came in on agricultural/countryside soil:** Fool's Parsley *Aethusa cynapium*, Fiddleneck *Amsinckia micrantha* **A**, Wild Oat *Avena fatua* **A**, Sugar Beet *Beta vulgaris ssp vulgaris*, Cockspur *Echinocloa crus-galli* **A**, Bifid Hemp-nettle *Galeopsis bifida* **R**, Hedgerow Crane's-bill *Geranium pyrenaicum*, Scarlet Pimpernel *Lysimachia arvensis*, Musk Mallow *Malva moschata*, White Melilot *Melilotus alba* **R**, Wild Radish *Raphanus raphanistrum*, Soapwort *Saponaria officinalis*, Field Madder *Sherardia arvensis*, Field Penny-cress *Thlaspi arvense*, Alsike Clover *Trifolium hybridum* **R**, Great Mullein *Verbascum thapsus*

**Probably came in on urban /waste ground spoil:** Common Ragweed *Ambrosia artemisiifolia* **A**, **R**, Buddlejia *Buddleja davidii* **A**, Greater Celandine *Chelidonium majus*, Annual Wall-rocket *Diplotaxis muralis*, Perennial Wall-rocket *Diplotaxis tenuifolius* **R**, Canadian Fleabane *Erigeron canadensis* **A**, Jersey Fleabane *Erigeron sumatrensis* **A**, Annual Beard-grass *Polypogon monspeliensis* **A**, Water Bent *Polypogon viridis* **A**, Narrow-leaved Ragwort *Senecio inaequidens* **A**, **R**, Tomato *Solanum lycopersicum* **A** (probably from sewage sludge)

**Probably came in on garden/allotment soil:** Double Sneezewort *Achillea ptarmica flore pleno* **A**, Soft Lady's Mantle *Alchemilla mollis* **A**, Hirsute Garlic *Allium trifoliatum* **A**, Balkan Anemone *Anemone blanda* **A**, Japanese Anemone *Anemone x hybrida* **A,R**, Snapdragon *Antirrhinum majus*, Columbine *Aquilegia vulgaris* **A**, Red Garden Orache *Atriplex hortensis var rubra* **A**, Swiss Chard *Beta vulgaris ssp cicla*, Red-maids *Calandrinia ciliate* **R**, Pot Marigold *Calendula officinalis* **A**, Peach-leaved Bellflower *Campanula persicifolia* **A**, Cornflower *Centaurea cyanus* **A**, Greater Celandine *Chelidonium majus*, Galingale *Cyperus longus*, Californian Poppy *Eschscholzia californica* **A**, Caper Spurge *Euphorbia lathyris*, Balkan Spurge *Euphorbia oblongata* **A, R**, Snowdrop *Galanthus agg*, Goat's-rue *Galega officinalis* **A, R**, Chiloé Avens *Geum quellyon* **A, R**, Jerusalem Artichoke *Helianthus tuberosus* **A, R**, Spanish Bluebell *Hyacinthoides hispanicus* **A**, Broad-leaved Everlasting-pea *Lathyrus latifolius* **R**, Shasta Daisy *Leucanthemum x superbum* **A**, Summer Snowflake *Leucojum aestivum* **A**, Poached Egg Plant *Limnanthes douglasii* **A, R**, Lobelia *Lobelia erinus* **A**, Welsh Poppy *Meconopsis cambrica*, Apple Mint *Mentha x villosa* **A**, Grape Hyacinth *Muscari armeniacum* **A**, Opium Poppy *Papaver somniferum* **A**, Flowering Currant *Ribes sanguineum* **A**, Greek Mallow *Sidalcea malviflora* **A**, Michaelmas Daisy *Symphotrichon agg* **A**, Comfrey 'Hidcote Blue' *Symphytum x hidcotense* **A**, Nasturtium *Tropaeolum majus* **A**, Argentinian Vervain *Verbena bonariensis* **A**