

## A short rush through the British Nanocyperion

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With its tendency to moist summers, Great Britain lies towards the limit of distribution of the more Continental *Nanocyperion* (Ellenberg 1988). In addition, many of the possible habitats for the alliance have been destroyed by changes in land-use in recent times. Moreover, such vegetation has not so far excited much interest among British ecologists, although the distribution of those alliance character species which occur in the country has been catalogued in detail along with the rest of our flora (Perring and Walters 1962). The UK National Vegetation Classification (NVC), now being published as *British Plant Communities* (Rodwell 1991 et seq.), is providing an opportunity to assemble existing relevés of *Nanocyperion* vegetation, to collate the associations which have been recognised and to relate them to their counterparts elsewhere in Europe. This paper offers only a preliminary summary of this work, with brief descriptions of the communities recognised so far.

The *Allium schoenoprasum-Plantago maritima* community was noted by Coombe and Frost (1956) but first systematically characterised by Hopkins (1983). It occurs in shallow erosion pans developed below seasonal seepage lines on the serpentine rocks of The Lizard, a coastal heathland with a warm oceanic climate in

Cornwall, south-west England. Water flow ceases in late spring leaving the pans to bake dry on the sunny valley slopes. The open or patchy cover of vegetation has constant *Allium schoenoprasum*, *Plantago maritima* and *Scilla verna* among a sparse turf of *Festuca ovina*, *Agrostis stolonifera*, *Agrostis canina* and *Koeleria macrantha* with small sprigs of *Calluna vulgaris* and mats of *Thymus praecox*. *Juncus bufonius*, the nationally rare *Juncus capitatus* and *Aira caryophyllea* are characteristic annuals of the community with *Scilla verna*, occasional *Scilla autumnalis* and *Isoetes hystrix* - another very rare plant in Britain - also completing most of their growth outside the season of drought. Other distinctive plants in the community include *Sagina subulata*, *Herniaria ciliolata* and *Trifolium bocconei*. Bryophytes are not numerous but *Riccia beyrichiana* and *Riccia bifurca* can form extensive carpets over the soil surface during the winter months.

A rather different habitat is provided for the alliance in shallow depressions developed from periglacial ground-ice hollows in Cambridgeshire (Preston & Whitehouse 1986; Preston 1989). These are now incorporated into arable fields which are ploughed each autumn and sown with wheat or barley, but they often flood in winter. The standing water kills

the young crop and the bare moist ground that is exposed as the water recedes in spring is colonised by the *Lythrum hyssopifolia*-*Juncus bufonius* community. By harvest time, a dense vegetation cover is established with constant *Lythrum hyssopifolia*, *Juncus bufonius*, *Plantago major* ssp. *intermedia*, *Polygonum persicaria*, *Polygonum aviculare* and *Bryum klinggraeffii*. *Kickxia elatine* and *Kickxia spuria* are quite frequent, but rare weeds of the *Spergularietalia* and *Papaveretalia* communities from nearby well-drained chalk fields are typically absent. Ephemeral bryophytes of this vegetation include *Riccia cavernosa*, *Riccia glauca*, *Riccia subbifurca*, *Riccia warnstorffii* with *Physcomitrella patens* and *Pottia starkeana* ssp. *minutula*.

In man-made places which are not subject to summer drought nor subsequently disturbed, *Nanocyperion* vegetation of this kind in Britain is quickly succeeded by other communities such as dense stands of *Bidention* vegetation. In fact, in Britain, the boundary between the *Bidention* and the *Nanocyperion* is rather difficult to define: species of the latter alliance often occur in small numbers in open places among stands of the former and some assemblages seem to be intermediate in character. For example, the NVC recognises a *Lythrum portula*-*Ranunculus flammula* community of muddy pond margins and periodically wetted track ways. This vegetation is sometimes dominated by *Lythrum portula* but usually comprises a rather open mosaic of the two constants with amphibious perennials like *Eleocharis palustris*, *Callitriche stagnalis*, *Littorella uniflora*, *Polygonum hydropiper* and *Polygonum persicaria*. Annual companions include *Juncus bufonius* and *Filaginella*

*uliginosa* (= *Gnaphalium uliginosum*), with *Bryum klinggraeffii*, *Pohlia carnea* and *Pohlia camptotrachela*.

Another rather similar NVC association, an expansion of an assemblage first described by Birse (1984), is the *Rorippa palustris*-*Filaginella uliginosa* community. This has scattered individuals of *Filaginella*, *Juncus bufonius* and *Lythrum portula*, along with *Bidens tripartita*, among sometimes dense *Rorippa islandica*, *Polygonum persicaria*, *Polygonum hydropiper* and *Polygonum aviculare*. The community is a characteristic pioneer of ponds which dry out in summer or the exposed margins of permanent water bodies but, as Birse (1984) noted, it can be of fairly long-standing though it eventually progresses to *Bidention* vegetation.

A number of other assemblages have been noted in fragmentary form in just a very few places in Britain and also in Ireland. For example, Birse (1984) described a *Hypericum humifusum*-*Pohlia annotina* community from a group of periodically flooded sandpits in south-west Scotland. This had a short open field layer of *Hypericum*, *Filaginella uliginosa*, *Sagina procumbens*, *Sagina subulata* and the New Zealand adventive *Epilobium nerterioides* with an extensive cover of bryophytes - mostly *Pohlia annotina*, *Blasia pusilla*, *Nardia scalaris* and *Polytrichum umigerum*. In Ireland, Braun-Blanquet & Tüxen (1952) reported a *Centunculus minimus*-*Isolepis setacea* community from a single roadside in Connemara. They considered this a fragment of the *Cicendietum filiformis* Allorge 1922 which White & Doyle (1982) thought might prove to be more widely distributed in the south-west of



Ireland. Braun Blanquet & Tüxen also recorded fragments of the *Isolepido-Stelarietum* (Koch 1926) Moor 1936 from Ireland.

White & Doyle (1982) considered that two further *Nanocyperion* assemblages - the *Centunculo-Anthocerotetum punctati* (Koch 1926) Moor 1936 and the *Cypero-Limoselletum* (Oberdorfer 1957) Korneck 1960 - might be found in Ireland, based on the occurrence there of some of the characteristic species. In Great Britain, too, a search of the known localities of the alliance character species, encouraged by the enthusiasm of our colleagues in the Plantensociologische Kring Nederland, will probably reveal more associations.

#### Acknowledgments

I am very grateful for discussion and correspondence with Dr John Hopkins of the UK Joint Nature Conservation Committee, Dr David Coombe of Cambridge University and Mr Chris Preston of the Institute of Terrestrial Ecology.

#### Een kennismaking met met het *Nanocyperion* van de Britse eilanden

Hoewel de Britse eilanden niet in het zwaartepunt van de verspreiding van het *Nanocyperion* liggen en veel van de potentiële groeiplaatsen in de loop van de tijd zijn vernietigd door veranderingen in het landgebruik, heeft het Dwergbiezenverbond toch opvallend weinig aandacht gekregen bij de Engelstalige plantensociologen. De weinige literatuurgegevens maken onder meer melding van *Allium schoenoprasum*-*Plantago maritima*-ge-

meenschap in Cornwall, een *Lythrum hyssopifolia*-*Juncus maritima*-gemeenschap in Cambridgeshire, en verder van een aantal fragmentair ontwikkelde of uiterst zeldzame *Nanocyperion*-gemeenschappen alsmede van enkele overgangsvormen met het *Bidention*. Dit 'overzicht' maakt bovenal duidelijk dat er grote leemten in kennis bestaan en dat er door de Britse plantensociologen nog heel veel moois te ontdekken valt.

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