

FLORA OF THE HUMBER ESTUARY (NORTH SIDE AND SPURN)

Peter J Cook MBE, BSc to
Humber Nature Partnership
at Barton upon Humber
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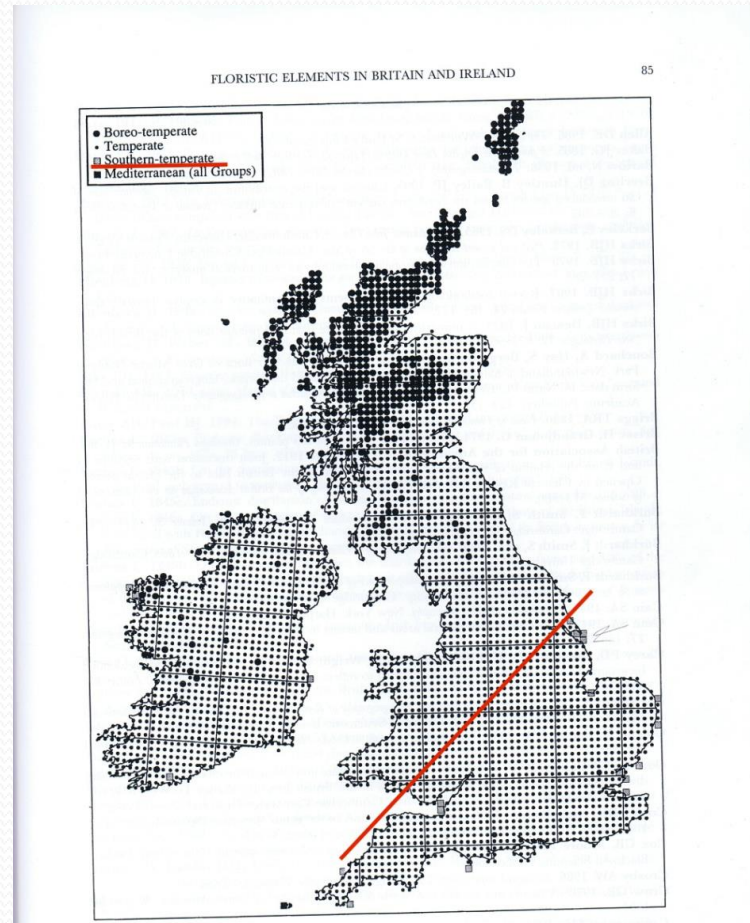
WHO AM I?

- Born in Roos, E. Yorks of farm-working family.
- Birder at Spurn 1962 – 1967.
- Graduated zoology & chemistry & botany, London 1970
- Have roamed the estuary and Spurn, allegedly disturbing birds, since 1988.
- Career in veterinary research/ chemical regulatory science related occupations until 2008. Consultant in REACH management until 2016.
- Various voluntary recorder posts including BSBI recorder from 1998 to present.
- Leader of botanical recording forays at Spurn and estuary 1988-2018.
- Elected Fellow of Linnean Society. Museum of Natural History qualified IdQ botanist; Honoured (MBE) for a major environmental project 2000.
- Surveyor on East Riding Council LWS panel. Phase I and II surveyor for various ecology consultants;
- Have held Officer posts including Divisional Secretary YNU and Chairman (11 years) of South Holderness Countryside Society.

WHY IS THE HUMBER ESTUARY AND SPURN SO INTERESTING TO BOTANISTS?

- The Humber estuary is at the extreme northern limit of the Southern-temperate Major Biome Category.
- This Major Biome category is made up of 6 different Eastern Limit Categories.
- It is also an extreme outpost of the Mediterranean Biome typified in Britain by the flora of the Scilly Isles but strangely reflected in a high species count here.
- This nothing to do with Climate change
- Together these concentrate many rare and scarce plant species into a small area consisting mainly of fresh and salt marshes, swamps and sand dunes in the estuary. This concentration is not due to habitat specificity, Species noted in red on the following lists are known to occur in these habitats above this limit line.
- *This talk is too short to go into the meaning and importance of these Biome Categories but in conservation terms they help to determine whether or not a rare plant is existing in its rightful place..*

DISTRIBUTION OF THE DOMINANT MAJOR BIOME CATEGORIES IN BRITISH ISLES



EXAMPLES OF PLANTS OF THIS BIOME FOUND IN THE ESTUARY (1)

- Dittander
- Hemlock Water-dropwort
- Corn Parsley
- Purple Glasswort
- Early Hair-grass
- Silver Hair-grass
- Lesser Hawkbit
- Hard-grass
- Pyramidal orchid

EXAMPLES OF PLANTS OF THIS BIOME FOUND IN THE ESTUARY (2)

- Slender Hare's-ear
- Frog Rush
- Sea Rush
- Narrow-leaved Bird's-foot Trefoil
- Early Forget-me-not
- Dwarf Eelgrass
- Sea Spleenwort

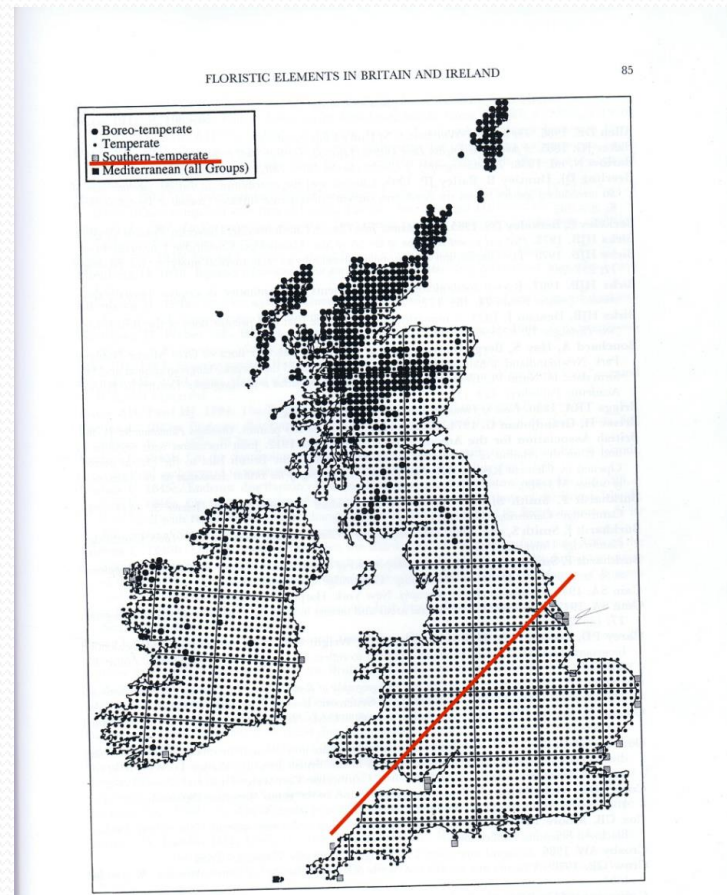
EXAMPLES OF PLANTS OF THIS BIOME FOUND IN THE ESTUARY (3)

- Sand Cat's-tail
- Brackish Water-crowfoot
- Knotted Clover
- Lesser Chickweed
- Strawberry Clover
- Sea Pearlwort

EXAMPLES OF PLANTS OF THIS BIOME FOUND IN THE ESTUARY (4)

- Wild Celery
- Spiny Rest-harrow
- Prickly Saltwort
- Sea Blite
- Distant Sedge
- Long-bracted Sedge
- Sea Holly
- Cudweed

MEDITERRANEAN BIOME PLANTS IN THE HUMBER ESTUARY



EXAMPLES OF PLANTS OF THE MEDITERRANEAN BIOME (1)

- Sea Bindweed
- Sea Fern-grass
- Tree Mallow
- Incurved Hard-grass
- Suffocated Clover
- Knotted Hedge-parsley
- Sea Beet
- Sea Purslane

EXAMPLES OF PLANTS OF THE MEDITERRANEAN BIOME (2)

- Divided Sedge
- Stone Parsley
- Rough Clover
- Foxtail Fescue
- Fern-grass
- Bee Orchid

WHY ARE PLANTS IMPORTANT TO THE ESTUARY?

- Filter-feeding molluscs and worms in estuarine mud are the feedstock of numerous birds. These organisms are dependent upon suspended organic matter arising from decomposing plant material.
- When I studied ecology it was the case that feeder streams and rivulets, and riparian marshes and swamps were essential to the invertebrate productivity of estuarine mud by delivering these essential nutrients.
- This appears to be no longer the case.

STRESSORS ON RIPARIAN VEGETATION

(1) RARE AND SCARCE SPECIES

- Modern conservation practices, management and development plans place far too much emphasis on the National Vegetation Classification (NVC) scheme. Many of the scarce plants in the estuary occur as associates within well-defined NVC habitats that are sometimes deemed unworthy of protection because of their commonality.
- Single Order conservation, i.e. for birds, ranging from small scale people-management/disturbance control to large scale mitigation schemes potentially decimate or place at-risk long-established and important rare plant sites.

STRESSORS ON RIPARIAN VEGETATION

(2) NUTRITIONAL FEEDSTOCK

- Aggressive ditch and drain maintenance by the Internal Drainage Boards, especially after the 2007 flooding, is often characterized frequent complete removal of reed and weed and the scraping of banks down to bare soil. This has resulted in the loss of several rare plant species along the North bank of the Humber but also in depletion of nutrition
- This practice of removing the sources of organic feedstock into the estuary could be a factor in the apparent declines in bird species.
- The plan to increase the biodiversity of the Humber by one species, the oyster (a filter feeder) may elicit some research into this.

EXAMPLE OF RECENT VEGETATION REMOVAL FROM WATER COURSES



STRESSORS ON RIPARIAN VEGETATION

(3) NUTRITIONAL FEEDSTOCK FROM MARSHES

- Good quality, well zoned, species-diverse salt marshes along the North bank were once rich sources of organic feedstock into the estuary mudflats but vegetation is now largely converted into mutton rather than sustaining the mudflats.
- The broad-brush advisory definition of the different zones of salt marsh do not apply equally well to different salt marshes around the country, but they drive the policy for salt marsh management irrespective of place and quality. They do not help to protect or improve salt marshes and their attendant plants and dependent fauna. Some salt-treated road verges are now more species-diverse as salt marshes than the Humber estuary!

STRESSORS ON RIPARIAN VEGETATION

(4) URBANISATION AND TOURISM

- Development of infrastructure and urbanization for tourism such as car parks and paths has the potential to cause serious loss of green space and is yet another threat. One such is on the drawing board in the form of the Coastal Pathway. It remains to be seen what care will be taken, if any, to avoid foot pressure and the submersion of valuable plant habitat under stone and 'infrastructure'. I am aware of discussion on the prevention of disturbance to birds but expect from experience there will be little or no serious consideration of the fate of plant habitat.

Bird decline in the estuary – a suggested link to vegetation management

- I have recently seen statistics of estuary-wide decrease in the following bird species:
 - Wigeon, Mallard, Pintail, Pochard, Tufted Duck, Golden-Eye.
 - Lapwing, Knot, Dunlin, Bar-tailed Godwit, Curlew, Redshank and Turnstone.

---- **admittedly set against increases in a similar number of species.**

Given the millions of pounds already spent and the acres of agricultural land and established habitat forfeited to habitat creation schemes, isn't it about time questions were asked about food webs and invertebrate productivity in the light of diminished vegetation cover?

CONCLUDING - If.....

"Errors have been made.
Others will be blamed."

