



Some under-recorded or misidentified taxa

Fred Rumsey

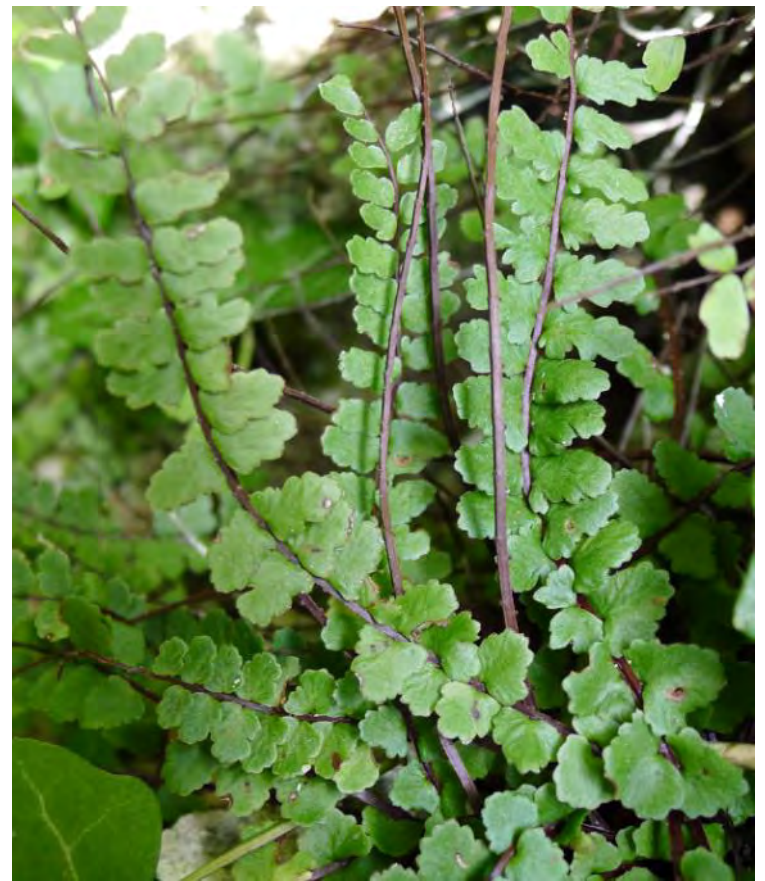




Asplenium trichomanes subspecies

Asplenium trichomanes subsp. *trichomanes*

- Only reliably discriminated by spore measurement (although usually distinguishable in the field)
 - Exospore mean width c. 30 μ m (cf. c.40 μ m + in tetraploids)
- Always found on acidic substrates (but don't guess from substrate alone!)
- Usually montane but at lower altitudes in oceanic areas
- Delicate frond appearance, pinnae well spaced, rather round and +/- medifixed
- Rachis red-brown, slender but persistent – often forming untidy nest at base of plant.



subsp. *pachyrachis*

- Medifixed imbricate pinnae
- Hyaline margin
- Fronds appressed to substrate
- Broad fragile rachis
- Often somewhat glaucous sheen

Asplenium trichomanes nothosubsp.

- *A. trichomanes* nothosubsp. *lusaticum*
(subsp. *trichomanes* x subsp. *quadrivalens*)
 - Shows hybrid vigour – very robust plants in situations where parents meet (partially mortared acid drystone walls, montane cliffs with complex geology, etc.) should be checked for bad spores.
- *A. trichomanes* nothosubsp. *staufferi*
(subsp. *pachyrachis* x subsp. *quadrivalens*)
 - shows hybrid vigour and intermediate in pinna shape
 - always grows with parents. Spores bad.

Huperzia selago subspecies

- *arctica*
 - Always yellow-green
 - Narrow fertile portion with appressed foliage <2/3 length of lower sterile leaves
 - Abundantly bulbiferous
 - Usually not very branched/tufted
 - Decumbent at base



Happy to look at possible candidates



Dryopteris pseudodisjuncta

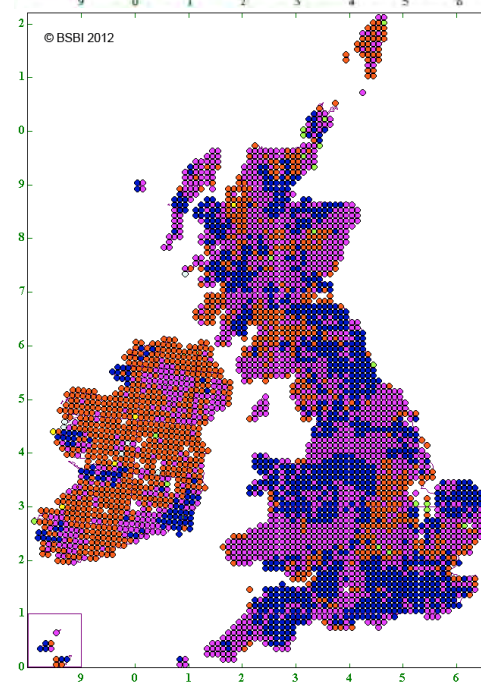
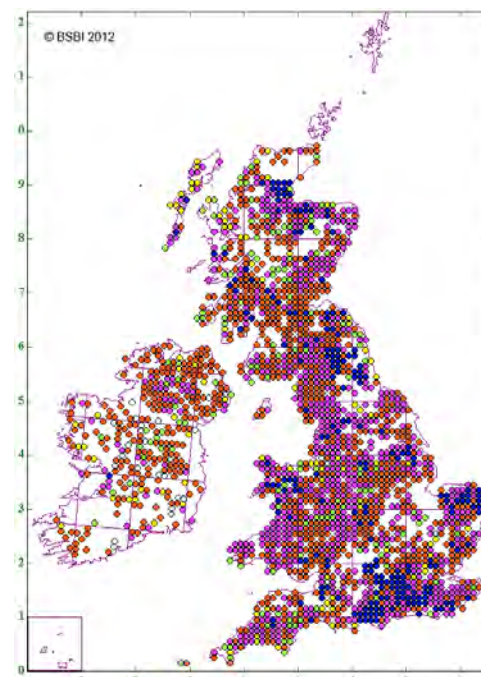
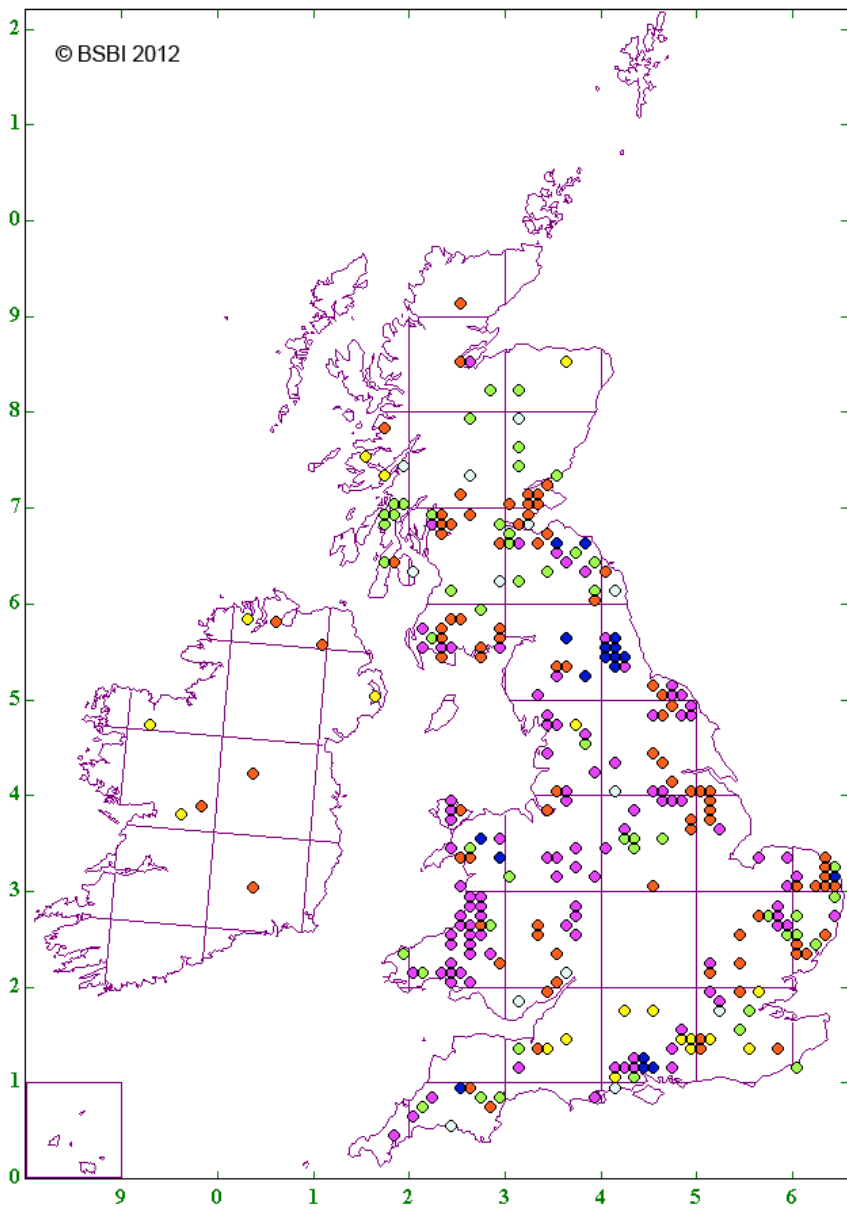


Kirkbean Glen, VC.72

All photos: Roger Golding

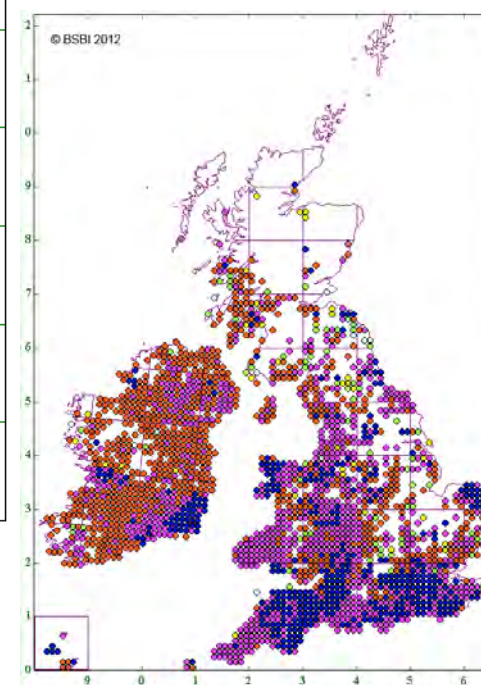
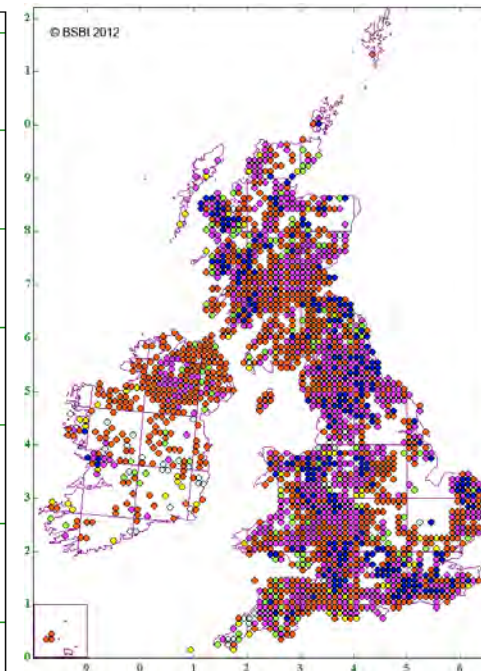
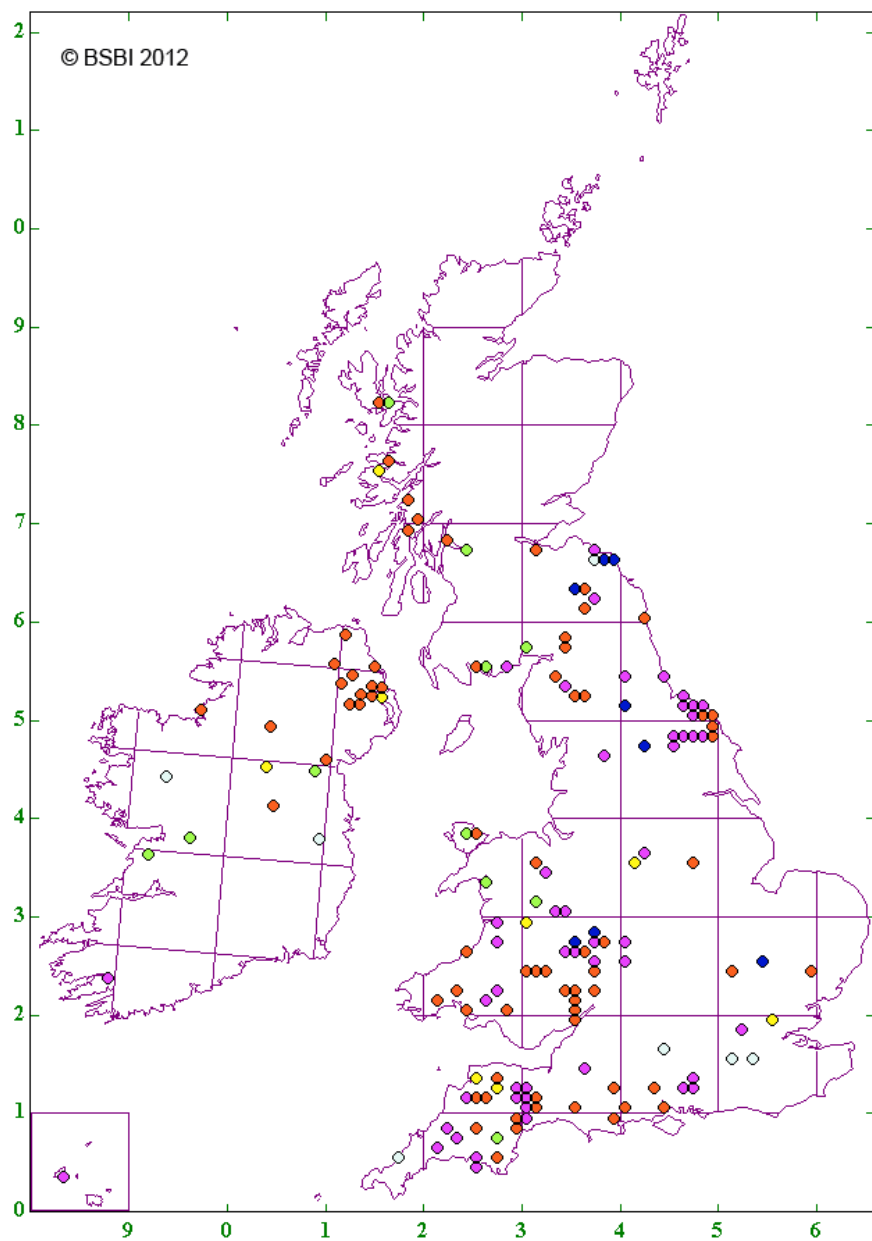
Dryopteris pseudodisjuncta

- Known now from two Scottish sites but believed to have been found elsewhere (including Ireland)
- The long evenly tapering flat pinnules leaving a “v” like sinus are the most easily spotted feature
- The indusium is thin, inflected at margins with a marked central depression, shrivelling eventually
- Rachis scales fairly dense, pale to mid-brown with darker bases. Fine pale scales on costae of pinnae.
- I would welcome specimens of putative examples.



Dryopteris x deweveri

- Shows hybrid vigour
- Usually occurs with both parents
- Intermediate in frond shape and tothing
 - Rather upright fronds
 - Narrowly triangular
 - Dark /mid-green (carthusiana yellower)
 - Scales light/mid-brown with some central darkening
 - Sporangia often fail to dehisce
 - Spores bad



Polystichum x bicknellii

- Usually with both parents although sometimes found alone and then possibly a garden cast out
- Intermediate in frond texture/colour
 - Somewhat glossy and more evergreen/leathery than *setiferum*
- Intermediate in frond shape
 - Fronds taper to base but not as markedly as in *aculeatum* and with a longer rachis below the lowest pinnae
 - Lowest distal pinnule significantly larger than its neighbours (cf. *setiferum*) but less so than in *aculeatum*
- Most spores bad (misshapen/lacking content) although some large and a few good spores present.





Lamiastrum

Photo: H.J. Crouch

Care needed with data entry!

The common plant is not subsp. *galeobdolon*

Please check records – this diploid is reliably recorded from VC.54 but possible elsewhere particularly in the north/eastern part of the spp. range.

No specimen at BM!

- Stem with appressed hairs on the angles only (cf. on faces and angles)
- Bracts and leaves with obtuse terminal tooth (cf. terminal tooth acute)
- Upper bracts ovate >2 x as long as wide (cf. more lanceolate mostly >2 x as long as wide)
- <8 flowers per whorl (cf. most whorls with >8 flowers)
- Shorter less vigorous plant with fewer, smaller flowers and more orbicular less sharply toothed leaves
- Diploid (cf. allotetraploid)
 - Stomata mean length c.25 μm (cf. c.32 μm)

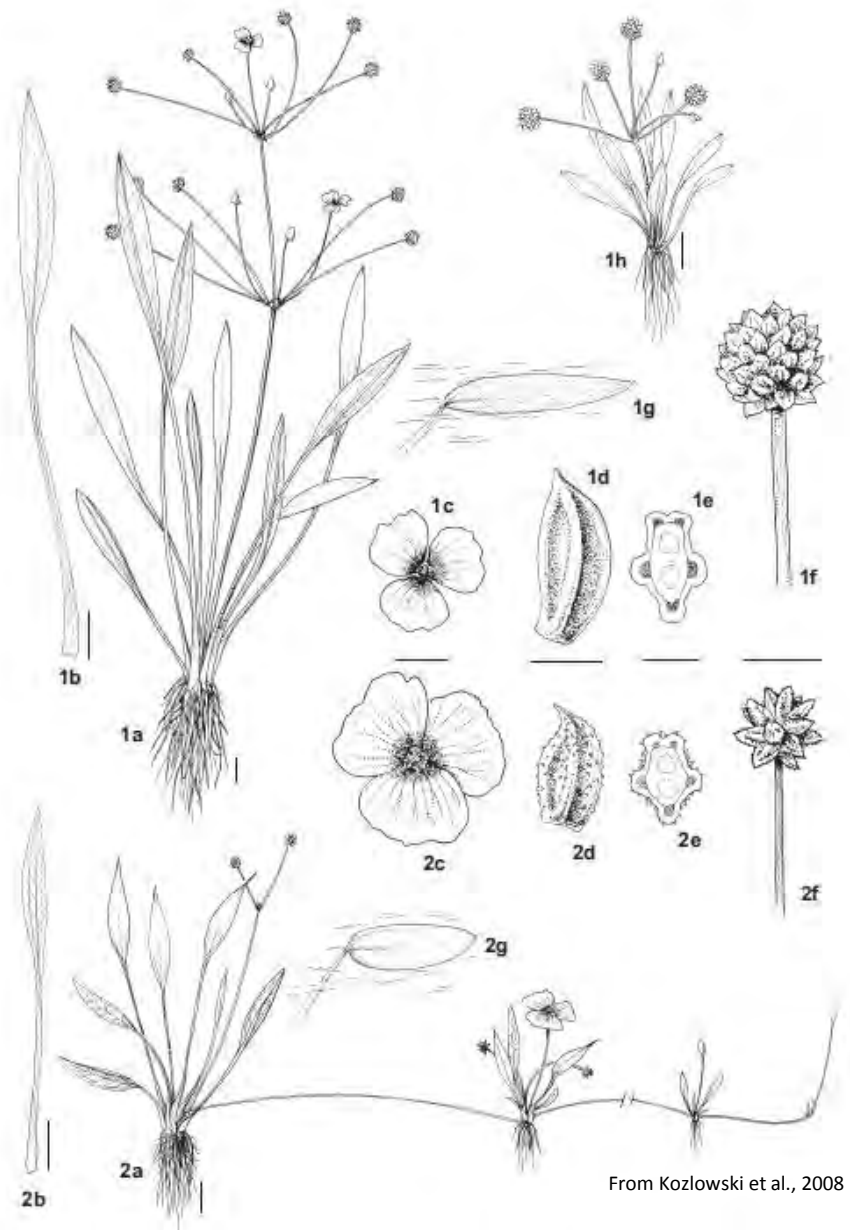


Hyacinthoides hispanica



Hyacinthoides

- *H. hispanica* is much over-recorded, is rare but is present
- The broad leaved, pale- bicoloured flowered plant traditionally called *H. hispanica* is a triploid of uncertain, probably horticultural origin. It should ideally be distinguished and separately recorded. Plants have some leaves 30mm+
- Pure *H. non-scripta* are usually easily identified (nodding unidirectional inflorescence, narrowly tubular flowers of intense colour with strongly reflexed tepals, stamens of unequal height, pollen white/cream)
- The default for all other plants should be *H. x massartiana*
- Only plants with intensely blue pollen, equal length stamens, the outer fused to the tepal for <2/3rds their length should be recorded as *H. hispanica* s. str.



From Kozłowski et al., 2008

Baldellia ranunculoides* & *B. repens

Baldellia ranunculoides vs *repens*

- Plant with erect inflorescence not proliferating and rooting at its nodes
- Flowers c.15mm dia. Petals not overlapping
- Whorls of infl. to 15-20 flowered
- Up to 45 fruits per head
- Fruit 2.5mm, with acute beak and smooth when ripe
- Self-compatible
- Usually calcicole
- Plant with decumbent inflorescence, creeping and rooting at its nodes
- Flowers to 22mm dia. Petals overlapping
- Whorls of infl. to 5 flowered
- Up to 20 fruits per head (often less)
- Fruit 2mm, with hooked beak and papillose when ripe
- Self-incompatible
- Often in weakly acidic habitats

Extensive hybridisation and introgression would appear to be prevalent where these taxa meet – *B. repens* has an Iberian origin, *B. ranunculoides* a Balkan (Arrigo et al., 2011).

Pure *B. repens* may be very rare here, most difficult to name plants are likely hybrids.



Lemna turionifera

Moorlinch, VC.6

Photo: H.J. Crouch



Nr Henley. VC.23

Photo: R.V. Lansdown

Lemna turionifera

- Fronds rather rounded, obtuse ended – smaller (<3mm) than well grown *L. gibba* (c.5mm).
- Of a rather dirty- brownish-green colour
- With conspicuous reddish mark underneath at point of root emergence (colour can bleed through and be seen from above)
- Distinctly papillose on upper surface (the distal not the largest)
- Usually in good quality macrophyte vegetation.



Lemna minuta, *L. valdiviana* & sources of confusion

Lemna

- *L. minuta* is being over-recorded for small (often indeterminate) plants of *L. gibba/minor*
 - It is thin (rather transparent) and neatly elliptical-oval – not rather opaque and rounded to ovoid
- *L. valdiviana* has been found in some botanic gardens, Garden centres and recently in one or two “wild” locations
 - It has a longer nerve ($>3/4$ of frond length), a more asymmetric shape, the fronds cohering to form bigger butterfly-like clusters and at some times floats sub-surface like *L. trisulca*.



annuus - achene $>3.0\text{mm}$

Scleranthus annuus subspecies

polycarpus - achene $<3.0\text{mm}$

Utricularia intermedia agg.

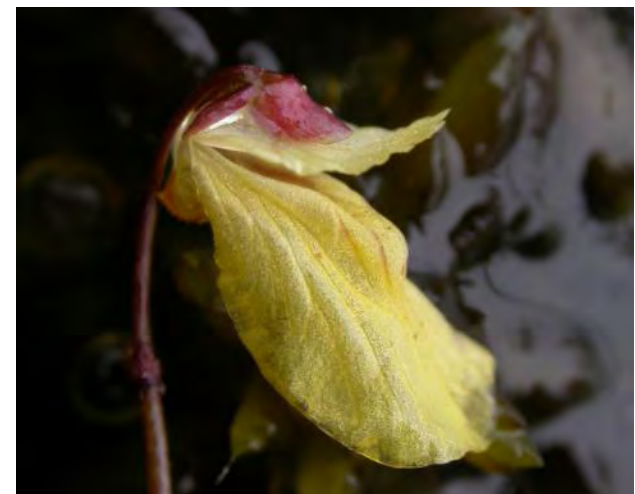
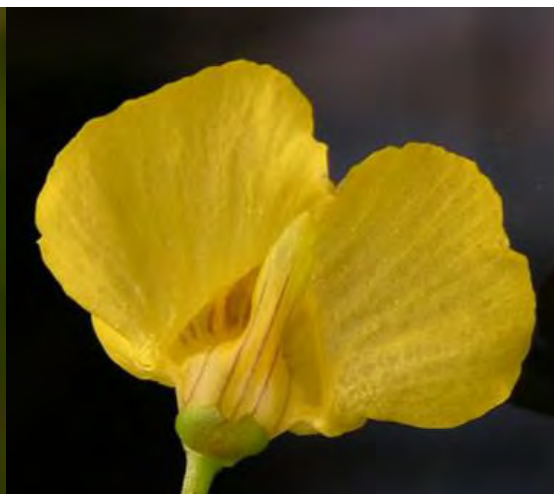
- Easily distinguished by the strongly dimorphic shoots – sometimes weakly present in *U. minor* but that has much smaller traps (<2mm)



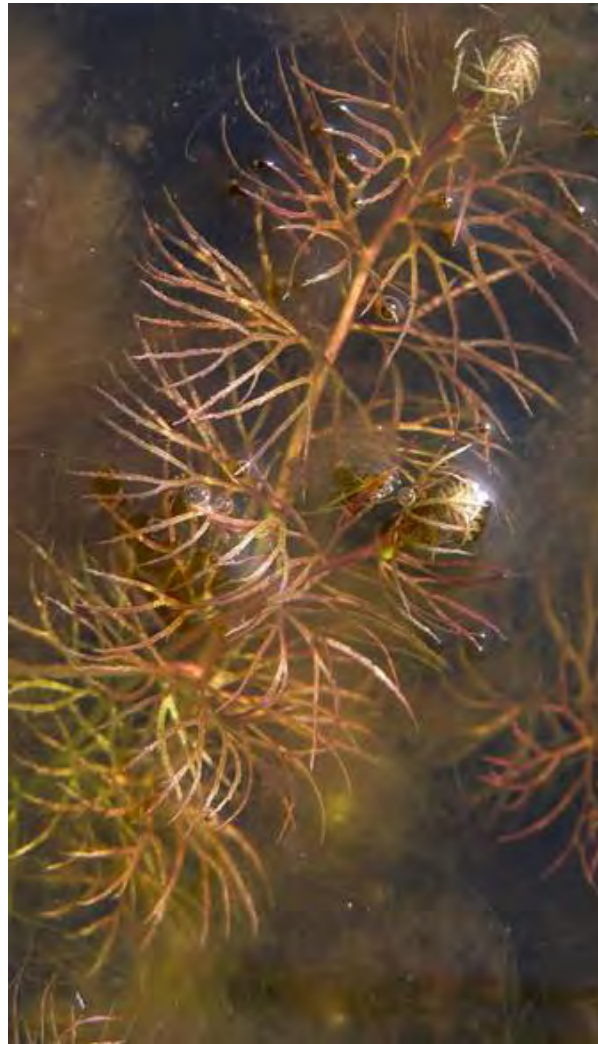
- *U. intermedia* is over-recorded!
- *U. ochroleuca* – is almost certainly of hybrid origin (*U. intermedia* x *U. minor*)
- *U. stygia* – is probably of the same origin.
- Best distinguished by the trap hairs but care is needed!
- Please send me material!



Photo: A. Fleischmann



Photos: A. Fleischmann

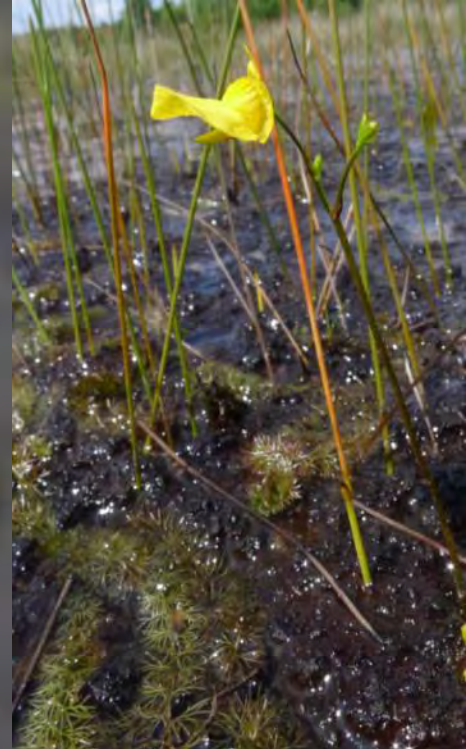


“Typical” foliage gives hope for discrimination

- Traps present/absent
- Segment apex obtuse/acute
- Number/shape of bristle teeth on margins



The reality!







U. ?bremii



U. minor



