

Persisting introductions: a new bryophyte recording category

Previous generations of bryologists in Britain have not been very concerned about the native status of our mosses and liverworts. It is only in recent decades that bryologists have commented on presumed introductions and provided lists of them (Crundwell, 1985; Hill & Preston, 1998; Preston, 2010). In the various editions of the *Census Catalogues* and the annual *New Vice-county Records* lists, no distinction has been made between native and introduced species. Indeed, on present evidence it is impossible to know whether certain species, such as *Scopelophila cataractae*, have been introduced or have occurred at one time in natural habitats. Likewise, species that occur in weedy or cultivated habitats may be transported in soil on vehicles and footwear. This is no less true of many presumed native bryophytes, including tuber-bearing species of *Dicranella* and *Bryum*, for example. In practice, no meaningful distinction between ‘native’ and ‘introduced’ status can be made when recording these ruderal species at particular sites.

However, a problem has become apparent recently, concerning species that have clearly been introduced for some length of time but

have not spread from the point of introduction. Prime examples are the species that occur on the trunks of tree ferns outdoors, but have not spread into the adjacent environment (*Leptotheca gaudichaudii*, *Calomnion complanatum* and *Dicranoloma menziesii* – see Holyoak & Lockhart, 2009). *Achrophyllum dentatum* may be regarded as similar: it has been recorded on several occasions in glasshouses and ferneries, but outdoors has persisted only in an artificial grotto in Cornwall (Rumsey, 2001). This problem extends to native species that are transported along with their substrate to localities well outside their normal range. For example, in 2009 I found a patch of *Neckera crispa* on a limestone block in landscaped grounds near Bricket Wood in Hertfordshire, a county where this species had not previously been recorded. Almost certainly it was imported on its substrate and has persisted *in situ*, in this case for at least 40 years.

In future issues of *New Vice-county Records*, such persisting introductions will be recorded, but will be distinguished from native species and established introductions. Persisting introductions are defined as species that have been introduced to their present location with their substrate and have not (or scarcely) spread

beyond that substrate. Species that spread into, and exist independently, in the surrounding environment are regarded as established introductions. An obelisk (†) after the v.-c. number will be used to indicate persisting introductions, as in the following example:

210.2. *Neckera crispa*. 20†: on side of limestone block in landscaped grounds, Bricket Wood, TL143019, 2009, Blockeel 38/226.

If such a species is subsequently found to occur naturally in the vice-county, a new voucher can be submitted to remove the obelisk from the existing record, in the same way that brackets can be removed from a vice-county when a post-1960 record is verified.

There is little value to the vice-county recording scheme in including transitory occurrences of species that hang on for only for a few years after artificial translocation (though it might be worth publicizing them by other means if they are of unusual interest). Persisting introductions will be recorded as new vice-county records only if there is evidence that they have persisted for more than 10 years. It will not always be possible to be certain that a species was introduced with its substrate, and a cautious approach will be adopted. A new vice-county record occurring on imported rocks or plants will be assumed to have been introduced with its substrate unless there is evidence of colonization after the substrate was put in place. Species that are moved around in plant-pots belong to the 'imported' category and should be recorded in the same way as tree-fern epiphytes, unless they spread beyond the immediate confines of the pot. It need hardly be said that species colonizing artificial substrates such as concrete and tarmac after they have been laid should be treated as normal ('natural') occurrences.

The following vice-county records listed in Hill *et al.* (2008) and Rothero (2009) are regarded as persisting introductions and should be marked with an obelisk:

22.20. *Grimmia trichophylla*. 29†
(Porley *et al.*, 2004)

123.1. *Leptotheca gaudichaudii*. 1†, H1†

124.1. *Calomnion complanatum*. H1†

125.1. *Achrophyllum dentatum*. 1†

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New vice-county records

Hepaticae

Unless otherwise stated, all records are from 2009.

- 1.2. *Anthoceros agrestis*. **77**: damp soil of ruts in new plantation, Cardowan Moss, NS654673, 2002, Watson; **H38**: clay-loam soil on edge of stubble field, 35 m alt., A22 near Toy and Kirkland, J51885651, 2008, Holyoak 08-535.
- 2.1. *Phaeoceros laevis*. **10**: Shanklin Chine, SZ585811, 2009, Snow; **35**: abundant on bare soil at foot of bank by path, 45 m alt., Llanfihangel Ystum Llywern Church, SO433139, Bosanquet; **77**: damp soil of ruts in new plantation, Cardowan Moss, NS654673, 2002, Watson; **H3**: barley stubble field, 90 m alt., Fahy's Crossroads, S of, W503472, 2009, Preston and Bosanquet; **H4**: damp edge of forestry track, 140 m alt., Ballincourneenig, N of, W537652, 2009, Preston; **H26**: water-logged soil near septic tank, Manulla, Station Road, M217873, 2009, Walsh; **H40**: stubble field, 40 m alt., Dundooan, C85253570, 2008, Holyoak 08-643.
- 2.1. *Blasia pusilla*. **H1**: on rotting log in wet ditch, Sneem, NW of, V65956894, 2009, Pannell; **H4**: damp forestry track, 140 m alt., Ballincourneenig, N of, W537652, 2009, Preston.
- 3.1. *Sphaerocarpos michelii*. **20**: sandy soil of uncultivated strip by *Brassica* crop, 95 m alt., Hill End Farm, Sandridge, TL173119, 2008, Tipper.
- 5.1.a. *Marchantia polymorpha* subsp. *polymorpha*. **68**: river, Hepden Burn, NT81S, 2009, O'Reilly and McCutcheon; **H2**: wet shaded crevice between boulders in coastal stream, Kerry Head, N side, Q687321, 2009, Preston; **H3**: foot of bridge over river, 40 m alt., Manch Bridge, W29255210, 2009, Bosanquet; **H4**: river bank, 170 m alt., Kishkeam Bridge, R202083, 2009, Bosanquet.
- 5.1.b. *Marchantia polymorpha* subsp. *ruderalis*. **75**: soil at edge of driveway, 30 m alt., Eglington Country Park, NS319421, 2009, Carter; **H26**: earth bank in garden, Manulla, Station Road, M217873, 2009, Walsh.
- 5.1.c. *Marchantia polymorpha* subsp. *montivagans*. **66**: by runnel, 670 m alt., Sallygrain Head, Burnhope, NY791387, 2009, Corner and Roberts; **107**: stones in shallow stream, 170 m alt., Glen Sletdale, NC922125, 2006, Pool.
- 9.1. *Conocephalum conicum*. **38**: stream bank, 115 m alt., Shuckburgh, SP519613, 2009, Carter; **60**: Woodwell and Bottoms Wood, Silverdale, SD463745, 2009, Wynn; **75**: wet masonry on shaded roadside bank, 90 m alt., River Ayr E of Haugh, NS512254, 2009, Preston; **77**: shaded sandstone cliff, 150 m alt., Rotten Calder Water, E side, NS656525, 2009, Chamberlain; **63**: muddy soil on stream bank, Anston Brook, Anston Stones Wood, SK5382, 2009, Wall 9-1; **H2**: shaded earthy stream bank, 5 m alt., Tarbert, R06584773, 2009, Preston and Bosanquet; **H4**: base of wall by stream, 65 m alt., Tuough Bridge, W513621, 2009, Preston; **H6**: E wall of cathedral, Lismore Cathedral, X049986, 2009, Preston and Bosanquet.
- 9.2. *Conocephalum salebrosum*. **75**: shady mossy rock face by river in valley, 195 m alt., Ness Glen W bank, NS47760231, 2009, Long 38287; **94**: cleft under *Calluna* in wooded gully on limestone, 465 m alt., Glen Builg N of Loch Builg, Glen Avon, NJ18700468, 2009, Long 38393; **H1**: species-rich ledge on calcareous cliff, Lough Gough, near, V83858388, 2009, Preston; **H1**: on sloping rock near foot of base-rich cliff, 675 m alt., Brandon Mountain, Q46601122, 2009, Rothero comm. Preston; **H36**: edge of river bank within woodland strip, River Derg, H36438771, 2009, Hanson.
- 10.1. *Riccia cavernosa*. **C**: drying mud in draw-down zone by SW-most inlet stream, 33 m alt., St Saviour's Reservoir, Guernsey, WV27, 2009, Bates.
- 10.9. *Riccia glauca*. **75**: rare in cereal stubble field, Loans, near, NS343313, 2009, Bosanquet; **76**: muddy flush in pasture, Harelaw Braes, NS489598, 2000, Watson; **77**: plough lines of new plantation, Cardowan Moss, NS650674, 2002, Watson.
- 10.10. *Riccia subbifurca*. Delete **34**: fields, near Bromsberrow, 1912, Knight, specimens from near Bromsberrow *R. commutata* 1912 and *R.*

- warnstorffii* 1920 (CHM) are *R. glauca* det. Paton fid. Lansdown.
- 10.11. *Riccia crozalsii*. **45**: locally dominant on seasonally damp thin soil over sandstone, 15 m alt., Skokholm, N side of track to Quay, SM74130514, 2009, Bosanquet, conf. Paton.
- 10.13. *Riccia beyrichiana*. **69**: thin soil over limestone, 20 m alt., Humphrey Head, SD392736, Nelson.
- 14.2. *Pellia neesiana*. **76**: burn sides, Cample Burn, NS305623, 2001, Watson; **H4**: damp forestry track, 305 m alt., Glennamucklagh West, R215082, 2009, Bosanquet.
- 16.2. *Fossombronina angulosa*. **H2**: bank of small stream in coastal valley, Kerry Head, N side, Q687321, 2009, Preston; **H9**: shaded clifflets in narrow sheltered coastal inlet, 5 m alt., Loop Head, Q73995039, 2007, Bosanquet and Preston.
- 16.4. *Fossombronina pusilla*. **69**: rutted track, 10 m alt., Border Moss Wood, SD346867, 2009, Adams, J. and Nelson; **H2**: poached pasture, 5 m alt., Tarbert, N of, R071480, 2009, Bosanquet and Preston; **H38**: wheat stubble field, Orlock, J548830, 2003, Weyl, conf. Holyoak.
- 16.6. *Fossombronina wondraczekii*. **H38**: bare soil in peaty flush, Conlig, J491762, 2005, Weyl, conf. Holyoak.
- 16.8. *Fossombronina incurva*. **17**: draw-down zone of old gravel pit, 20 m alt., Papercourt Marshes, TQ03475614, 2009, Wallis; **22**: in open area of *Ulex minor* heathland, 100 m alt., Greenham Common, SU50786442, 2009, Porley.
- 16.9. *Fossombronina fimbriata*. **44**: rare in open vegetation where sheep track crosses flush by stream, 316 m alt., Pont ar Wysg, S of, SN81952707, 2009, Bosanquet.
- 17.2. *Moerckia flotoviana*. **4**: damp sand in open dune slack, 90 m alt., Braunton Burrows, SS45883270, 2008, Holyoak 08-658, det. Blackstock.
- 18.1. *Pallavicinia lyellii*. **76**: exposed peat near ditch, Flow Moss, W end, NS548473, 2001, Watson, conf. Hodgetts, new to Scotland; **H2**: 4+ patches on *Molinia* tussocks in peat cutting, 40 m alt., Shronowen Bog W, Q99534043, 2009, Bosanquet; **H3**: *Molinia*-dominated acidic mire near coast, 80 m alt., NW of Knocknamaddree, Goleen, V78143013, 2007, McNutt and O'Neill 584/07.
- 20.1. *Metzgeria violacea*. **69**: *Salix* in wet woodland, 10 m alt., Rusland Moss, SD331884, 2009, Blockeel 38/291.
- 20.2. *Metzgeria consanguinea*. **39**: rotten trunk in open oak/birch woodland, Threap Wood, SK061430, 2009, Callaghan 780.
- 20.5. *Metzgeria leptoneura*. **75**: damp moderately base-rich rock, 220 m alt., Ness Glen below Loch Doon, NS47760225, 2009, Rothero 19051; **H3**: wet rocks, Lough Nambrackderg, W0364, 2009, Lonell and Rothero.
- 20.6. *Metzgeria pubescens*. **36**: N-facing limestone rock face, The Doward, SO557157, 2009, Sleath.
- 22.2. *Riccardia chamedryfolia*. **75**: lane bank, 95 m alt., Lindsayston, NS286007, 2009, Bosanquet; **H18**: in wet part of raised bog, 60 m alt., Clara Bog, N23312983, 2009, Hodgetts 7550.
- 22.3. *Riccardia incurvata*. **42**: with *Haplomitrium* on steep stream bank, 450 m alt., Craig y Fro, S of, SN97742031, 2009, Bosanquet; **H5**: damp rushy track in forestry, 205 m alt., Gortroche Forest, W717955, 2009, Bosanquet.
- 22.4. *Riccardia palmata*. Place **24** in (): the only dated records are 1952 and 1954 (Recorder's Notebook), an undated mastercard record is likely to refer to the 1950s, fid. CDP; **37**: decorticated wood, Great Bog, New Parks, Wyre Forest, SO747762, 2009, Lawley; **65**: rotten log, Combe Scar, near Gawthrop, Dentdale, SD6787, 2007, Wall 72-4; **68**: fallen tree boles near stream, Black Burn, NU090005, 2009, McCutcheon and Steele; **H4**: conifer stump in humid Spruce plantation, 315 m alt., Cummery Connell South, R263166, 2009, Bosanquet.
- 22.5. *Riccardia latifrons*. **75**: decaying conifer log in stack at edge of ride, Polmath Burn, N side of B741 E of, NS5410, 2009, Preston; **H4**: pile of peat in humid Spruce plantation, 315 m alt., Cummery Connell South, R263166, 2009, Bosanquet.
- 23.1. *Porella platyphylla*. **H12**: unshaded small ledges of rock outcrop near estuary, Wexford, NW of, T016232, 2009, Holyoak 09-64B.
- 23.2. *Porella cordaeana*. **16**: wall of old river workings in flood plain, 25 m alt., Haysden Country Park, Tonbridge, TQ566460, 2009, Hendy.
- 23.3. *Porella arboris-vitae*. **H3**: side of boulder in sheltered gully, 340 m alt., Nowen Hill gully, W143536, 2009, Moore and Hodd.
- 23.5. *Porella pinnata*. **H3**: foot of bridge over river, 40 m alt., Manch Bridge, W29255210, 2009, Bosanquet.

- 24.1. *Radula complanata*. **76**: young crack willow, White Cart, Pollok CP, Glasgow, NS554615, 2003, Watson.
- 27.1. *Aphanolejeunea microscopica*. **75**: rocks in wooded ravine, 220 m alt., Ness Glen below Loch Doon, NS47740215, 2009, Rothero 19050; **75**: side of large boulder by river in valley, 200 m alt., Ness Glen W bank, NS47760227, 2009, Long 38289.
- 28.3. *Cololejeunea minutissima*. **7**: ash in wet woodland, Sandpool Farm, Somerford Keynes, SU01689409, 2009, Pilkington; **16**: on sycamore, 120 m alt., The Rookery, High Elms, TQ446629, 2009, Hendy; **24**: on ash, 90 m alt., Rushbeds Wood, near Brill, SP67221545, 2009, Wright; **24**: thin branch of willow, 50 m alt., River Ouse, S of Olney, SP886508, 2009, Tipper; **32**: on elder, 90 m alt., Whiston Quarry, SP842603, 2007, Flagmeier, incorrectly listed in *Field Bryology* 95 as *Microlejeunea ulicina*; **42**: abundant on two *Fraxinus* trunks, 240 m alt., Blackrock quarry, SO218127, 2009, Bosanquet; **53**: *Fraxinus* trunk in woodland, 115 m alt., Morkery Wood, SK946182, 2009, Hodgetts 7518; **69**: overgrown roadside hedge bordering wet woodland, 10 m alt., Back o' th' Fell Road, High Newton, SD415834, 2003, Adams, J. and Nelson; **71**: *Salix* and *Lonicera* in wet woodland, 95 m alt., Earystane Nature Reserve, N of Colby, SC234716, 2009, Blockeel 38/286; **99**: on ash tree, Duchess Wood, Helensburgh, NS28538366, 2009, Flagmeier.
- 29.1. *Colura calyptrifolia*. **57**: on willow among thinned pines, near Errwood Dam, Goyt Valley, SK018759, 2009, Bamforth and Bamforth; **58**: on willow in old railway cutting, Millbrook Sidings, SD97450093, 2009, Bamforth; **69**: old willow under spruce in plantation, 180 m alt., Esthwaite Intake, SD3495, 2009, Blockeel 38/290; **75**: abundant on oak trunk, 30 m alt., Corsehillsmuir Wood, Kilwinning, NS317436, 2009, Ghullam and Fisk.
- 30.1. *Drepanolejeunea hamatifolia*. **H38**: steep granitic rock in ravine, 300 m alt., Black Stairs, J364292, 2008, Holyoak 08-513.
- 32.1. *Lejeunea cavifolia*. **76**: branch of bird cherry, Earn Water, Loganswell, NS512515, 2005, Watson.
- 32.3. *Lejeunea patens*. **77**: shaded rocks by a stream, Monksfoot, NS790285, 2009, Chamberlain and Kungu; **H38**: underside of large granite block by stream, 285 m alt., Black Stairs, J36462925, 2008, Holyoak 08-511.
- 34.1. *Microlejeunea ulicina*. Delete **32**: record from Whiston Quarry 2007 in *Field Bryology* was an error for *Cololejeunea minutissima*; **63**: *Quercus* sp., Limb Valley, SK29888333, 2009, Egan.
- 35.1. *Ptilidium ciliare*. **H2**: blanket bog, 830 m alt., Mangerton, V97858109, 2009, Flagmeier and Hodd; **H38**: acid grassland on rocks, Horse Island, J597606, 2005, Weyl, conf. Holyoak.
- 39.1. *Herbertus stramineus*. **70**: on vertical calcareous rock ledges, 683 m alt., Piers Gill ravine, N side of Scafell Pike, NY21350788, 2009, Long 38417.
- 41.3. *Kurzia trichoclados*. **75**: mossy bank under tall *Calluna* on N-facing bouldery slope, 395 m alt., The Tauchers, Mulwharchar, NX45798746, 2009, Long 38348; **H14**: peaty bank by track in forestry plantation, 400 m alt., Slieve Bloom, Gorteennameale, N2702, 2009, Hodgetts 7611.
- 42.2. *Lepidozia pearsonii*. **75**: mossy bank under tall *Calluna* on N-facing bouldery slope, 421 m alt., The Tauchers, Mulwharchar, NX45758745, 2009, Long 38350.
- 44.3. *Lophocolea heterophylla*. **112**: on pile of dead wood in plantation 7, 90 m alt., Kergord Plantations, Mainland, HU393545, 2009, Hodgetts 7671.
- 44.4. *Lophocolea semiteres*. **57**: industrial waste, Holbrook, SK443810, 2009, Egan and Lake; **69**: leached area of slag bank, 5 m alt., Ulverston, SD307770, 2003, Adams, J. and Nelson; **75**: open areas on old landscaped slag head, 190 m alt., Knockshinnoch Lagoons, NS61361315, 2009, Preston.
- 44.6. *Lophocolea fragrans*. **112**: deeply shaded wet rocks at base of deep, narrow cleft in coastal cliff, 50 m alt., Foula, Da Sneck o da Smaalie, HT951382, 2009, Hodgetts and Gear 7643.
- 45.2. *Chiloscyphus pallescens*. **75**: muddy river bank, 20 m alt., River Erskine, Drybridge, NS359366, 2009, Bosanquet; **77**: flushed peat in valley mire, Roughrigg Reservoir, NS8264, 1989, Watson; **H3**: fen by lough, 104 m alt., Garranes Lake, W1747, 2009, Bosanquet and Preston.
- 48.2. *Plagiochila porelloides*. **29**: humic soil by beech trunk in planted wood, 40 m alt., Beechwood Nature Reserve, TL48495437, 2009, Shanklin, conf. Preston.

- 48.3. *Plagiochila asplenioides*. **112**: on damp soil on steeply sloping shaded burnside in plantation 7, 90 m alt., Kergord Plantations, Mainland, HU393545, 2009, Hodgetts 7669.
- 48.4. *Plagiochila britannica*. **H6**: one patch on cathedral wall, 20 m alt., Lismore Cathedral, X049986, 2009, Bosanquet and Preston; **H34**: rock in wooded river valley, 60 m alt., Cloghan More, River Finn, H045979, 2009, Hodgetts 7623.
- 48.8. *Plagiochila bifaria*. **75**: N-facing crag on conglomerate, Byne Hill, S of Girvan, NX18369516, 2009, Hill; **112**: among rocks at top of steep N-facing slope, 400 m alt., Foula, Da Sneug, HT947396, 2009, Hodgetts and Gear 7632.
- 48.9. *Plagiochila punctata*. **75**: vertical rock face by river in valley, 205 m alt., Ness Glen W bank, NS47740209, 2009, Long 38292.
- 48.10. *Plagiochila exigua*. **110**: on rock in small burn, 60 m alt., Burn on N side of Beannan a'Deas, S of Uig, Lewis, NB05492960, 2009, Rothero 19147.
- 49.1. *Adelanthus decipiens*. **87**: on large rock in oak woodland on steep W-facing slope, 40 m alt., Glen Falloch Woods SSSI, NN32271988, 2009, Rothero 19001.
- 51.1. *Pedinophyllum interruptum*. **42**: on periodically wet limestone face below *Fagus*, 400 m alt., Craig y Cilau, SO189156, 2009, Bosanquet and Motley, conf. Paton, new to Wales; **H36**: bare rock in wooded gorge, 90 m alt., Strabane Glen, H3599, 2009, Hanson.
- 52.4.a. *Cephalozia macrostachya* var. *macrostachya*. **H18**: among *Sphagnum* in raised bog, 100 m alt., Raheenmore Bog, N43593236, 2009, Hodgetts 7540.
- 52.5. *Cephalozia leucantha*. **60**: among *Sphagnum subnitens* in flush on moorland hillside, Leek Beck, SD653793, 2009, Callaghan 714.
- 52.6. *Cephalozia lunulifolia*. **H18**: among *Sphagnum* in raised bog, 100 m alt., Raheenmore Bog, N43633212, 2009, Hodgetts 7539.
- 52.7. *Cephalozia pleniceps*. **40**: on *Sphagnum subnitens* by flush, Callow Hollow, Long Mynd, SO426916, 2009, Lawley.
- 52.8. *Cephalozia loitlesbergeri*. **75**: in *Leucobryum* hummock on hummocky bog, 222 m alt., Grey Hill SE slope, NX16319236, 2009, Long 38315; **H14**: creeping amongst *Sphagnum magellanicum* in raised bog, 110 m alt., Caher Bog, S26579143, 2009, Hodgetts 7581; **H18**: with *Leucobryum glaucum* in raised bog, 100 m alt., Raheenmore Bog, N43503229, 2009, Hodgetts 7542.
- 52.9. *Cephalozia connivens*. **76**: peaty bank, East Girt Hill, NS2862, 2003, Watson; **H4**: pile of peat in humid spruce plantation, 315 m alt., Cummery Connell South, R263166, 2009, Bosanquet; **H18**: in raised bog, 100 m alt., Raheenmore Bog, N43413213, 2009, Hodgetts 7538.
- 52.10. *Cephalozia crassifolia*. **H3**: frequent large patches on shaded ground under *Rhododendron*, 20 m alt., Castletownshend Wood North, W187320, 2009, Bosanquet.
- 53.1. *Cladopodiella fluitans*. **70**: bog, Birky Shank, Butterburn Flow, NY660759, 2008, O'Reilly.
- 55.1. *Nowellia curvifolia*. **18**: on two rotting beech logs, 90 m alt., Lesser Wake Valley Pond, Epping Forest, TQ418981, 2008, Adams, K; **21**: decorticated log, 120 m alt., Stanmore Common, TQ163937, 2008, Duckett; **55**: rotten log, Grace Dieu Wood, SK43551784, 2009, Woodward.
- 56.2. *Odontoschisma denudatum*. **H18**: on bare peat in degraded raised bog, 50 m alt., Pollagh Bog, N20892594, 2009, Hodgetts 7552.
- 56.3. *Odontoschisma elongatum*. **H1**: algal gunk by lough, 290 m alt., Lough Akinkeen, W01516516, 2009, Bosanquet and Preston; **H1**: exposed peaty mud by lough, 480 m alt., Lough Googh, Macgillycuddy's Reeks, V84248387, 2009, Long 38505.
- 58.3. *Cephaloziella rubella*. **H6**: bank of ditch on disturbed area of hillslope, 15 m alt., Knockmahon, X43779903, 2008, Holyoak 08-129A, det. Paton.
- 58.6. *Cephaloziella divaricata*. **29**: open community on railway balast, 5 m alt., Stanground Wash Nature Reserve, TL20809760, 2008, Preston, det. Long.
- 58.7. *Cephaloziella stellulifera*. **H10**: damp silty mine spoil, 180 m alt., Lackamore, R78846027, 2008, Holyoak 08-207, conf. Paton; **H12**: damp silty clay of copper-mine spoil at edge of trackway, 105 m alt., Caim Cross Roads, SW of, S88524095, 2008, Holyoak 08-280, conf. Paton.
- 58.8. *Cephaloziella massalongi*. **4**: steep damp silty clay-mine spoil on unshaded S-facing slope, 240 m alt., South Zeal, SX64999294, 2009, Holyoak 09-32B; **H20**: crevices in stone wall on old lead mine,

- 285 m alt., Vale of Glendasan, T09879819, 2008, Holyoak 08-100, conf. Blackstock; **H21:** soil among rocks on slope of lead-mine spoil, 215 m alt., Ballycorus disused lead mines, O22562089, 2008, Holyoak 08-89, conf. Blackstock.
- 58.9. *Cephaloziella nicholsonii*. **3:** soil at base of N-facing bank of mine spoil, 100 m alt., Brook Wood E, SX714674, 2009, Holyoak, conf. Paton; **H6:** bank of damp sand on slope of mine spoil, 12 m alt., Knockmahon, X43799902, 2008, Holyoak 08-137, conf. Paton; **H10:** hole in bank of fine-grained mine spoil, 95 m alt., Shallee, R80647128, 2008, Holyoak 08-213, conf. Paton; **H12:** steep silty clay of copper-mine spoil, 105 m alt., Caim Cross Roads, SW of, S88574087, 2008, Holyoak 08-283, conf. Blackstock; **H20:** unshaded metamorphic rocks on old lead mine, 295 m alt., Vale of Glendasan, T09869810, 2008, Holyoak 08-106, conf. Blackstock.
- 58.11. *Cephaloziella turneri*. **H3:** earth bank by estuary, 5 m alt., Castletownshend Wood south, W187319, 2009, Bosanquet.
- 59.1. *Gymnocolea inflata*. **H18:** among *Sphagnum* in raised bog, 100 m alt., Raheenmore Bog, N43, 2009, Hodgetts 7536.
- 60.2. *Barbilophozia kunzeana*. **40:** on *Sphagnum subnitens* in small mire by pool, 280 m alt., Long Mynd, Nover's Hill, SO45369509, 2009, Hodgetts 7530, conf. Blackstock; **43:** block of rock, Rhulen Hill, SO138490, 2009, Lawley.
- 60.4. *Barbilophozia atlantica*. **76:** rocks, Walls Hill, S Johnstone, NS4158, 1993, Watson.
- 63.1. *Sphenolobopsis pearsonii*. **99:** vertical face of huge boulder by pool in wooded ravine, 230 m alt., Ben Glas burn, S side, Loch Lomond, NN32611841, 2008, Rothero 18162.
- 66.2. *Lophozia ventricosa*. **H14:** through *Sphagnum* in damp heath, 450 m alt., Slieve Bloom, Wolf-trap Mountain, N2604, 2009, Hodgetts 7608; **H38:** thin soil among rocks on hillside, 340 m alt., Slieve Donard, J35772889, 2008, Holyoak 08-498.
- 66.6. *Lophozia excisa*. **41:** damp coal waste at lip of spoil heap, 150 m alt., Cefn-coed, S of Abernant Farm, SN787026, 2009, Hodgetts 7532.
- 66.7. *Lophozia perssonii*. **8:** chalky soil on track across downland, 130 m alt., Silk Hill, Salisbury Plain, SU18974704, 2009, Preston and Botham; **12:** calcareous soil of rifle butt, Tidworth, near, SU25764792, 2009, Branson.
- 66.11. *Lophozia incisa*. **39:** soft sandstone on woodland bank, Threap Wood, SK05284309, 2009, Callaghan 784.
- 66.13. *Lophozia bicrenata*. **H20:** damp clayey soil among stones in mine spoil, 240 m alt., Connary Hall, near, T21088391, 2008, Holyoak 08-98.
- 67.3. *Diplophyllum obtusifolium*. **68:** edge of forestry track, 460 m alt., Uswayford, NW of, NT882149, 2008, O'Reilly and McCutcheon; **105:** soil by outflow of culvert, 200 m alt., Gleann Mor, roadside near bridge, NH180769, 2008, Rothero 18129.
- 68.1. *Douinia ovata*. **H3:** N-facing rock face above lake, 266 m alt., Lough Nambrackderg, W03476410, 2009, Hodd.
- 69.3. *Scapania calcicola*. **94:** soil in scree below limestone cliffs, 420 m alt., Foyal's Crag, Glen Avon, NJ17010942, 2009, Long 38361.
- 69.4. *Scapania cuspiduligera*. **H27:** on compacted calcareous sand mounds in machair, 10 m alt., Achill Island, NW of Lough Doo, F705097, 2009, Lockhart and Campbell 2009/16a.
- 69.5. *Scapania scandica*. **76:** burnside rock, Netherton, NS5749, 2000, Watson; **H5:** edge of forestry track, 160 m alt., Glengoura Upper, W973892, 2009, Bosanquet and Preston.
- 69.6. *Scapania curta*. **57:** on gritty soil on bank by path on steep slope in field, 80 m alt., Chevinside, S of Belper Bridge, SK340471, 2009, Blockeel 38/310.
- 69.11. *Scapania nemorea*. **58:** rock near stream in damp upland valley, Fernilee Reservoir, W side, SK0177, 2008, Owen, conf. Hanson.
- 69.12. *Scapania irrigua*. **H36:** wet heath, Bessy Bell, eastern slopes, H40308140, 2009, Hanson.
- 69.14. *Scapania paludicola*. **40:** flush, Catbatch, Long Mynd, SO415968, 2009, Lawley.
- 69.19. *Scapania aequiloba*. **H39:** unshaded damp clay of slope near coast, 20 m alt., Fallowvee, D28452528, 2008, Holyoak 08-625, conf. Blackstock.
- 69.22. *Scapania ornithopodioides*. **H2:** on ledge in coire, 750 m alt., Mangerton, Horse's Glen above Lough Erhogh, V98268133, 2009, Flagmeier.
- 70.1. *Mylia taylorii*. **76:** edge of peat bank, Burnt Hills mire, NS277637, 2001, Watson.
- 70.2. *Mylia anomala*. **H4:** on *Sphagnum* in moorland valley mire, 320 m alt., Taurbeg NE, R236114, 2009, Bosanquet; **H14:** through *Sphagnum austini*

- in raised bog, 90 m alt., Portlaoise, N of Clonreher, N4402, 2009, Hodgetts 7621.
- 71.1. *Acrobolbus wilsonii*. **108**: in bryophyte mats on face of broken sandstone crags above sea, 108 m alt., seacliffs N of An Staca, Sheigra, NC18486118, 2009, Rothero 19341, colony found by A.B.G. Averis.
- 74.3. *Calypogeia azurea*. **76**: rock face, Tod's Burn, Brownside, Gleniffer Braes, NS4860, 1995, Watson.
- 74.6. *Calypogeia sphagnicola*. **75**: among *Sphagnum*, Dalmellington Moss, NS455064, 2009, Chamberlain, Long and Kungu (E); **75**: on *Sphagnum papillosum* in peat cutting, Shewalton Moss, NS34253555, 2009, Bosanquet; **H2**: on *Sphagnum rubellum* in cutover bog, 7 m alt., Aghacoora Bog, Q870265, 2009, Bosanquet and Preston; **H18**: among *Sphagnum* in raised bog, 60 m alt., Clara Bog, N23142978, 2009, Hodgetts 7545.
- 74.8. *Calypogeia arguta*. **H14**: shaded earth crevice in road cutting, 430 m alt., Slieve Bloom, The Cut, N2904, 2009, Hodgetts 7600; **H18**: soil declivities on heathy slopes beneath heather, 430 m alt., Slieve Bloom, Glenletter, N2504, 2009, Hodgetts 7602.
- 75.2. *Leiocolea gillmanii*. **H35**: calcareous coastal dune slack amongst fen vegetation, 3 m alt., Rosapenna, SE of, C124379, 2009, Lockhart, Campbell and Smyth.
- 75.3. *Leiocolea bantriensis*. **43**: with *L. collaris* in flush, Tylcau Hill, SO141765, 2009, Lawley; **75**: shaded base-rich rocks in humid ravine, 190 m alt., Ness Glen, NS477023, 2009, Moore; **76**: flush, Earn Hill, NS230755, 1998, Watson.
- 75.5. *Leiocolea collaris*. **43**: with *L. bantriensis* in flush, Tylcau Hill, SO141765, 2009, Lawley.
- 75.7. *Leiocolea badensis*. **6**: calcareous soil, Fairy Cave Quarry, Nettlebridge, ST656477, 2009, Branson; **H5**: edge of surfaced forestry track, Glenagaer Wood, W638965, 2009, Bosanquet.
- 78.2. *Jungermannia pumila*. **H14**: damp shaded rock face by road, 430 m alt., Slieve Bloom, The Cut, N2904, 2009, Hodgetts 7597; **H38**: steep soil on bank above river, 30 m alt., Shimna River, Tollymore Forest Park, J352323, 2008, Holyoak 08-537.
- 78.4. *Jungermannia borealis*. **94**: in bryophyte mat over wet limestone by burn in ravine, 520 m alt., Ailnac Bhuilg, S of Inchroary, NJ183067, 2009, Rothero 19207.
- 78.5. *Jungermannia exsertifolia*. **75**: rocks in river, Dalblair gorge, NS648192, 2009, Bosanquet.
- 79.2. *Nardia scalaris*. **H14**: trackside in forestry plantation, 400 m alt., Slieve Bloom, Gorteennameale, N2702, 2009, Hodgetts 7617.
- 80.1. *Solenostoma sphaerocarpum*. **H14**: damp shaded rock crevices in road cutting, 430 m alt., Slieve Bloom, The Cut, N2904, 2009, Hodgetts 7605.
- 80.3. *Solenostoma gracillimum*. **H4**: damp forestry track, 305 m alt., Glennamucklagh West, R215082, 2009, Bosanquet; **H14**: trackside in forestry plantation, 400 m alt., Slieve Bloom, Gorteennameale, N2702, 2009, Hodgetts 7615.
- 80.5. *Solenostoma hyalinum*. **77**: marsh, Darnick Street, Glasgow, NS613666, 1989, Watson, det. Hodgetts.
- 80.6. *Solenostoma paroicum*. **75**: steep bank by river, Dalblair gorge, NS648192, 2009, Bosanquet; **76**: rocks by burn, Shepherd's Burn, Garvock Hill, NS2569, 2007, Watson.
- 84.2. *Anthelia juratzkana*. **110**: bare skeletal soil on erosion terrace on exposed ridge, 670 m alt., Uisneabhal Mor NE ridge, North Harris, NB120087, 2009, Rothero 19327; **H1**: on dry eroded mineral soil on N side of exposed ridge, 590 m alt., N side of Slievanea ridge above Connor Pass, Q511057, 2009, Rothero and BBS 19137.
- 85.2. *Gymnomitrium obtusum*. **76**: boulder scree, Turnave Hill, NS331611, 2003, Watson; **112**: rock crevices in outcrop at top of steep N-facing slope, 400 m alt., Foula, Da Sneug, HT947396, 2009, Hodgetts and Gear 7630.
- 85.4. *Gymnomitrium crenulatum*. **71**: sparsely with *Diplophyllum albicans* in recess in low slate rock outcrop, 470 m alt., South Barrule, towards summit, SC2575, 2009, Blockeel 38/271; **87**: on large boulder on open slope, 210 m alt., Upper Glen Falloch, NN37352327, 2009, Rothero 19039; **H31**: sloping metamorphic rock, 540 m alt., Carlingford Mountain, N slope, J16681240, 2008, Holyoak 08-277.
- 86.1.c. *Marsupella emarginata* var. *pearsonii*. **104**: wet gravelly soil, 570 m alt., Coire Lagan, NG444209, 2008, Carter; **H1**: flushed rock, 450 m alt., Lough Akinkeen, W01466483, 2009, Bosanquet and Preston.

- 86.4. *Marsupella funckii*. **77**: patches on gravel, Powbrone Burn, Dungavel, NS6834, Watson; **107**: fine gravel at side of old track, 150 m alt., Allt Rugaidh Bheag, Strath Oykel, NC351052, 2008, Rothero 18081.
- 86.13. *Marsupella alpina*. **75**: almost vertical intermitterntly flushed rock face, 440 m alt., Craigbraneoch Hill W slope, NS62990536, 2009, Long 38270.

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Musci

Unless otherwise stated, all records are from 2009.

- 1.1. *Sphagnum austinii*. **75**: low hummock in mire, 160 m alt., Dalmellington Bog, NS465064, 2009, Rothero GP; **77**: on raised bog, E side of Braehead Moss, NS9651, 1989, Watson K; **H14**: forming hummocks in raised bog, with *S. capillifolium*, *Odontoschisma sphagni* and *Kurzia pauciflora*, 110 m alt., Caher Bog, S26639143, 2009, Hodgetts NG 7586.
- 1.5. *Sphagnum magellanicum*. **H4**: abundant in moorland valley mire, 320 m alt., Taurbeg NE, R236114, 2009, Bosanquet SDS; **H14**: forming carpets in raised bog, 110 m alt., Butterisland Bog, S3191, 2009, Hodgetts NG 7589; **H36**: on raised bog, Tully Bog SAC, H41627596, 2009, Hanson P.
- 1.6. *Sphagnum squarrosum*. **H36**: in birch woodland over former bog, Cullbuck W of Omagh, H3974, 2009, Hanson P.
- 1.7. *Sphagnum teres*. **75**: in flush near burn, Feoch Meadows SSSI E of Barrhill, NX266822, 2009, Hill MO; **H2**: in flushed mire with *Campylium stellatum*, 260 m alt., NE of peat track S of Beennageeha Mountain, Q93322054, 2009, Rothero GP 19121.
- 1.8. *Sphagnum fimbriatum*. **H18**: abundant in bog birch woodland, 40 m alt., Banagher, All Saints' Bog, N011113, 2009, Hodgetts NG 7568; **H2**: in ditch in spruce plantation, Knocknagaun, Q8622, 2009, Lönnell N, conf. Kungu; **H5**: on stream bank, 205 m alt., Gortroche Forest, W714957, 2009, Bosanquet SDS; **H36**: in birch woodland surrounding bog, Tully Bog SAC, H41977580, 2009, Hanson P.
- 1.9. *Sphagnum girgensohnii*. **76**: in woodland, Uplawmoor Wood, NS4355, 1994, Watson K; **H18**: poorly drained peat in 15-year-old 2nd rotation Sitka spruce plantation, 10 km E of Kinnity, N2516907792, 2009, FORESTBIO Team SHKIN1, det. Kelly and Hill TCD.
- 1.10. *Sphagnum russowii*. **H18**: occasional large hummocks under heather and bilberry in bog birch woodland, 40 m alt., Banagher, All Saints' Bog, N01081133, 2009, Hodgetts NG 7569; **H36**: in wet woodland, near Culnaha, H57315697, 2009, Hanson P.
- 1.11. *Sphagnum quinquefarium*. **41**: on bank above footpath in oak woodland, by River Neath, Glamorgan side, SN898087, 2008, Motley GS; **75**: in heather on N-facing slope, 450 m alt., Craigbraneoch Hill, Glen Afton, NS63190548, 2009, Pilkington S; **H14**: damp shaded bank in road cutting, 430 m alt., Slieve Bloom, The Cut, N2904, 2009, Hodgetts NG 7599; **H18**: heathy slopes beneath heather on W-facing hillside, 430 m alt., Slieve Bloom, Glenletter, N2504, 2009, Hodgetts NG 7601.
- 1.12. *Sphagnum warnstorffii*. **76**: in mire, Dargarvel mire, NS371713, 2005, Watson K.

- 1.13.a. *Sphagnum capillifolium* subsp. *capillifolium*. **39**: on sloping very wet moorland, Swineholes, SK045508, 2009, Godfrey M; **66**: 460 m alt., Rough Hill, NY809335, 2009, O'Reilly J, conf. Hill; **69**: in blanket bog, North Edge, Murton Fell, NY7523, 2007, O'Reilly J, conf. Hill; **83**: in M25 *Molinia* grassland, Auchencourt, NT20615721, 2008, O'Reilly J, conf. Hill; **H36**: on wet heath, eastern slopes of Bessy Bell, H40618118, 2009, Hanson P.
- 1.14. *Sphagnum fuscum*. **76**: in blanket bog, Flow Moss, Myres Hill, NS555467, 2003, Watson K; **103**: low hummocks in blanket bog, Ardmeanach, Mull, NM42, 1967, Eddy, A. BM, conf. Hill; **H14**: forming hummocks in raised bog, 110 m alt., Caher Bog, S2691, 2009, Hodgetts NG 7583.
- 1.15.a. *Sphagnum subnitens* var. *subnitens*. **H14**: in fragment of bog woodland in raised bog, with *Cephalozia connivens* etc, 110 m alt., Caher Bog, S26899143, 2009, Hodgetts NG 7587.
- 1.15.b. *Sphagnum subnitens* var. *ferrugineum*. **H18**: occasional tufts in raised bog, 50 m alt., Clonmacnoise, Mongan Bog, N03, 2009, Hodgetts NG 7563.
- 1.17. *Sphagnum molle*. **H18**: small tufts among other Sphagna in raised bog, 60 m alt., Ferbane Bog, N1026, 2009, Hodgetts NG 7556.
- 1.19. *Sphagnum compactum*. **63**: in mire, with *S. palustre* and *S. subnitens*, Thorne Moors, SE717157, 2009, Wall C; **76**: in wet heath, Walls Hill, NS4158, 1993, Watson K.
- 1.20. *Sphagnum subsecundum*. **76**: in fen mire, Knowes, NS3756, 2003, Watson K; **103**: flush on stony peat, Upper Druimfin, Mull, NM55, 1968, Duncan, Miss UK BM, conf. Hill.
- 1.21. *Sphagnum inundatum*. **39**: amongst *Juncus* at edge of pool, Long Mere, Cannock Chase, SJ975207, 2009, Godfrey M.
- 1.22. *Sphagnum denticulatum*. **H14**: wet ditch by track in forestry plantation, 400 m alt., Slieve Bloom, Gorteennameale, N2702, 2009, Hodgetts NG 7609.
- 1.23. *Sphagnum contortum*. **H3**: in flush on hillside, 215 m alt., Carrigierk south, W214609, 2009, Bosanquet SDS.
- 1.24. *Sphagnum platyphyllum*. **69**: in marsh with rushes, 155 m alt., Rusland Heights, SD350882, 2009, Adams J and Nelson W, conf. Hill.
- 1.25. *Sphagnum tenellum*. **H36**: on raised bog, Tully Bog SAC, H42267538, 2009, Hanson P.
- 1.26. *Sphagnum cuspidatum*. **H14**: forming carpets in raised bog, 110 m alt., Butterisland Bog, S3191, 2009, Hodgetts NG 7588; **H36**: in pool on wet heath, eastern slopes of Bessy Bell, H40508128, 2009, Hanson P.
- 1.27. *Sphagnum majus*. **95**: infilled pool with little open water now, in *Sphagnum* carpet along N edge and at E end, pool in former conifer plantation, now felled, 2 km N of Aviemore, NH913155, 2007, Payne AG, conf. Blockeel; **97**: in lawn at edge of bog pool, 395 m alt., mire between Allt na Caim and Allt an Lagain, SW of railway, NN366637, 2009, Rothero GP 19264; **107**: in small pool with *S. denticulatum*, S end of Cnoc an Alaskie, NC488255, Payne AG.
- 1.30. *Sphagnum fallax*. **H14**: bank by track in forestry plantation, 400 m alt., Slieve Bloom, Gorteennameale, N2702, 2009, Hodgetts NG 7610; **H18**: Near edge of raised bog, 100 m alt., Raheenmore Bog, N43, 2009, Hodgetts NG 7535; **H36**: on raised bog, Tully Bog SAC, H42037562, 2009, Hanson P; **H38**: flushed base of shallow gully on N-facing hillslope, with sparse sedges, grasses and rushes, 450 m alt., N slope of Slieve Donard, J35842852, 2008, Holyoak DT 08-500.
- 1.31. *Sphagnum flexuosum*. **6**: in swampy pools amongst *Molinia* under *Salix*, East Harptree Woods, ST556543, 2009, Rumsey FJ and Crouch HJ; **77**: in boggy ground by stream, 295 m alt., below Maurice's Cleuch, Tinto Hill, NS950361, 2009, Kungu EM and Chamberlain DF; **92**: in *Sphagnum/Juncus* mire, SE corner of the Crannach by Ballater, NO396982, 2006, Payne AG, conf. Hill; **96**: in small mire in open area of pine woodland, Rothiemurchus on Speyside, NH93490907, 2007, Payne AG; **107**: in boggy runnel, on Cnoc na Gamhna near Loch Farlary by Golspie, NC775037, 2003, Payne AG, conf. Hill; **108**: in small, grassy mire in midst of extensive blanket bog, The Uair W of Forsinard, NC81795261, 2006, Payne AG, conf. Hill; **H2**: in moorland flush, Slieve Mish Mountains, Q784009, 2009, Callaghan DA 867; **H5**: in flushed field by road, 250 m alt., Tooreen, W650938, 2009, Bosanquet SDS.
- 1.32. *Sphagnum angustifolium*. Delete **57**: the record published in 1994 (Deep Clough, Goyt Valley, S of

- Whaley Bridge, found by M.E. Newton in 1993) is in v.-c. 58 comm. Hill; **63**: in *Juncus* mire on moorland, below Castleshaw Lower Reservoir, SD992092, 2009, Callaghan DA 905; **76**: in bog, moss near Barnbeth, Bridge of Weir, NS3664, 1966, Stirling A McG, E.
- 1.34. *Sphagnum riparium*. **105**: head of flush with *Juncus castaneus*, 750 m alt., in glen running NE from Aonach air Chrith S of Glen Shiel, NH055084, 1991, Payne AG, conf. Hill; **108**: in M6c channel over pool, The Uair W of Forsinard, NC83185149, 2008, Payne AG.
- 2.2.a. *Andreaea rupestris* var. *rupestris*. **75**: on rock slab on crag, 395 m alt., Craigbraneoch Hill, Glen Afton, NS629054, 2009, Rothero GP; **H38**: unshaded, gently sloping surface of granitic block on N-facing hillslope, 360 m alt., N slope of Slieve Donard, J35792879, 2008, Holyoak DT 08-499; **H39**: unshaded sloping top of basalt boulder high on E-facing slope, 335 m alt., N end of Sallagh Braes, D33980596, 2008, Holyoak DT 08-573.
- 2.6.b. *Andreaea rothii* subsp. *falcata*. **71**: on slab of slate in scree, 375 m alt., N side of Cronk ny Arrey Laa, SC2274, 2009, Blockeel TL; **H38**: unshaded sloping surface of granitic block low on hillside, 320 m alt., N slope of Slieve Donard, J35702897, 2008, Holyoak DT 08-495.
- 2.8. *Andreaea megistospora*. **75**: on small exposed rock outcrop, near Floak, NS495495, 2009, Chamberlain DF.
- 4.1. *Atrichum crispum*. Delete **1**: voucher in BBSUK is immature *A. undulatum* comm. Holyoak.
- 5.1. *Oligotrichum hercynicum*. **H3**: on clay bank of forest track, Nowen Hill Plantation, W137543, 2009, Callaghan DA 896; **H14**: trackside in forestry plantation, 400 m alt., Slieve Bloom, Gorteennameale, N2702, 2009, Hodgetts NG 7613.
- 6.1. *Pogonatum nanum*. **43**: on soil bank at side of track, above Fronfelen, upper Lugg Valley, SO182729, 2009, Lawley M; **75**: in rock crevice, near Knocklaugh, below Grey Hill, NX1792, 2009, Lawley M; **81**: on disturbed stony bank of quarry, 430 m alt., Kyles Hill Quarry near Greenlaw, NT72845008, 2009, Long DG 38178.
- 7.1. *Polytrichastrum alpinum*. **76**: on rocky outcrop, Blackwood Hill, NS543484, 2001, Watson K; **91**: on roadside, 150 m alt., road from Glendye Bridge to Glendye Lodge, NO647862, 2009, Kungu EM *et al.*
- 8.1.b. *Polytrichum commune* var. *perigoniale*. **2**: in patchy low grassland on china clay soil tip, 190 m alt., NE of Scarcewater, SW92135501, 2008, Holyoak DT 08-68; delete **9**: no specimen traced, comm. Hill; **17**: on seasonally damp gravelly depressions in heathland restoration area, Hog Hatch/Heath End, NNW of Farnham, SU82454915, 2009, Rumsey FJ; **104**: flushed ground at edge of farm track, 150 m alt., Earlish, Abhainn Bhat, NG3961, 2009, Hodgetts NG 7692.
- 8.4. *Polytrichum strictum*. **H14**: growing through *Sphagnum fuscum* in raised bog, 110 m alt., Caher Bog, S2691, 2009, Hodgetts NG 7584; **H36**: on raised bog, Tully Bog SAC, H42067560, 2009, Hanson P.
- 10.1. *Tetradontium brownianum*. **H2**: on damp vertical rock face below overhang by stream, 280 m alt., Slieve Mish Mountains N of Barnanageehy, Q81080915, 2009, Moore O.
- 12.1. *Diphyscium foliosum*. **81**: on soil bank amongst *Calluna* on rocky W-facing slope, 235 m alt., E bank of Soonhope Burn above Hope Burn, NT53025463, 2009, Long DG and Braithwaite ME 38591.
- 13.1. *Timmia austriaca*. Delete **H28**: the voucher is *T. norvegica* comm. Hodgetts (2004).
- 14.6. *Encalypta ciliata*. **94**: on soil on ledge of SW-facing limestone crag, 500 m alt., crags below Sron nam Broc, E side of Glen Builg, Inchroy, NJ186052, 2009, Rothero GP 19189.
- 16.2. *Entosthodon pulchellus*. **45**: a few tufts on thin soil over limestone, 5 m alt., E side of Brotherton Lake, SR977957, 2005, Bosanquet SDS.
- 16.3. *Entosthodon attenuatus*. **75**: on soil on rock outcrop by upland burn, W of New Cumnock, NS538111, 2009, Graham JJ; **77**: on soil over shale crag, 300 m alt., above track leading to Logan Water Reservoir, NS748369, 2009, Kungu EM and Murdoch P E00323637; **H38**: steep, partly bare, loamy soil exposed on bank above river, shaded by Beech trees, 30 m alt., N bank of Shimna River in NE part of Tollymore Forest Park, J352323, 2008, Holyoak DT 08-536.
- 16.4. *Entosthodon fascicularis*. **64**: on soil in turf overtopping limestone rock ledge in grassland, 230 m alt., below Stainforth Scar, SD824669, 2009, Blockeel TL 38/233; **H2**: on vertical clay bank at edge of small stream, W of Glenderry,

- Q693293, 2009, Lönnell N; **H38**: in stubble field, Groomsport, J550831, 2009, Weyl R, conf. Holyoak.
- 16.5. *Entosthodon obtusus*. **75**: ditch on edge of moorland, 200 m alt., Kirk Hill by Ladywell Wood, NS271045, 2009, Bosanquet SDS; **H5**: on damp rushy track in forestry, 205 m alt., Gortroche Forest, W717955, 2009, Bosanquet SDS.
- 17.1. *Physcomitrium pyriforme*. **69**: on cattle-poached soil by pond, 5 m alt., Humphrey Head, SD388746, 2006, Nelson W; **75**: on disturbed ground, Swan Pond car park, Culzean Country Park, NS223094, 2009, BBS Exc; **H2**: in poached pasture, 5 m alt., N of Tarbert, R071480, 2009, Bosanquet SDS and Preston CD; **H3**: on stream bank, 10 m alt., Clonakilty, W3741, 2009, Bosanquet SDS.
- 18.1. *Aphanorrbegma patens*. **H2**: on bank of river at ford, Glenna River at Ford, R075221, 2009, Fisk RJ; **H5**: on vertical river bank, 30 m alt., River Blackwater 4 km W of Fermoy, W77409826, 2009, Bosanquet SDS.
- 21.1. *Schistidium maritimum*. **76**: on rock by coast, Ashton, W of Gourrock, NS226769, 2001, Watson K; **H2**: on rock of sea cliff in cove, N of Clashmelcon, Q81993677, 2009, Lönnell N and Preston CD; **H21**: on coastal rocks, 5 m alt., Isaac's Bower, Balbriggan, O21416355, 2009, Lyons M, conf. Fisk.
- 21.2. *Schistidium rivulare*. **76**: on stones on reservoir spillway, Gryfe 2 Reservoir, NS2271, 2000, Watson K.
- 21.3. *Schistidium platyphyllum*. **H3**: on rock on edge of lough, 85 m alt., Lough Allua E, W214658, 2009, Bosanquet SDS.
- 21.4. *Schistidium agassizii*. **87**: on rock in river, 130 m alt., Calair Burn below Calair Bridge near Balquidder, NN53892036, 2009, Carey H and Baird K; **106**: on rock in river, 75 m alt., River Oykel near Craggie, NC33840501, 2008, Dobson D.
- 21.5. *Schistidium apocarpum*. **37**: on a boulder by stream, New Parks, Wyre Forest, SO738755, 2009, Lawley M; **48**: on cliff, above Llyn Perfeddau, Y Llethr, SH659263, 2009, Lawley M; **53**: on limestone wall of church, 50 m alt., Leadenham Church, SK950518, 2009, Hodgetts NG 7516; **59**: on mortar of millstone grit wall by reservoir, Watergrove Reservoir, SD913177, 2009, Callaghan DA; **64**: on boulder in gully in limestone gill, 260 m alt., Stainforth Beck, SD8367, 2009, Blockeel TL 38/238.
- 21.6. *Schistidium trichodon*. **94**: on boulder in scree below limestone crag, 442 m alt., valley below Lagganauld by Inchroary, Glen Avon, NJ18220778, 2009, Long DG 38376.
- 21.7. *Schistidium papillosum*. **96**: on rock at edge of burn, 220 m alt., Rhilean Burn, Findhorn valley, NH919395, 2008, Carter RH.
- 21.8. *Schistidium pruinosum*. **47**: on dolerite slabs on crag, Breidden Hill, W crag, SJ28841398, 2009, Bosanquet SDS; **77**: on exposed shale outcrop, 300 m alt., Logan Water Valley, NS749368, 2009, Chamberlain DF and Kungu EM, det. Bosanquet E00323504; **H39**: cushions on near-vertical basalt at base of low NNE-facing crag, 305 m alt., N side of Knock Dhu, D33650695, 2008, Holyoak DT 08-562.
- 21.9. *Schistidium strictum*. **H35**: on limestone in roadside quarry, 170 m alt., Meenavale, G903948, 2008, Hodgetts NG 7497; **H39**: unshaded tops and sides of basalt boulders at foot of slope below crags, 325 m alt., N side of Knock Dhu, D33890686, 2008, Holyoak DT 08-565.
- 21.11. *Schistidium robustum*. **33**: on roadside wall, 250 m alt., between Bisley and The Camp, SO913074, 2008, Lansdown RV; **42**: on limestone block, below Darren, Mynydd Llangattwg, SO2015, 2005, Bosanquet SDS; **50**: on rock in moorland, 400 m alt., near Worlds End, SJ2348, 2008, Carter RH; **66**: on boulder on river bank, Ireshope Burn, Weardale, NY861384, 1997, Wharton TS; **66**: in disused limestone quarry, 300 m alt., Washpool Crags quarry, Bridget Hill, NY9835, 2009, O'Reilly J.
- 21.12. *Schistidium confertum*. Delete **H38**: the record '1910, on basalt rocks, Bellam Hill, Carnlough, CH Waddell (E), det. HH Blom, in Rothero (2004)' is incorrect. The site should be Bellair Hill, Carnlough, which is in H39 comm. Holyoak.
- 21.16. *Schistidium crassipilum*. **14**: fallen from roof, 70 m alt., Barnfield Close, Hastings, TQ808100, 2009, Binns D, conf. Matcham; **46**: on mortared stonework, A485 roadbridge over Afon Wyre, SN646715, 2005, Bates JW 4259; **48**: on concrete block of dam wall, 200 m alt., Trawsfynydd Reservoir, SH674377, 2009, Callaghan DA; **54**: on

- gravestone, Cockerington Churchyard, TF382888, 2008, Lammiman F and Rieser C; **58**: on silt at edge of car park, 200 m alt., Werneth Low, SJ960936, 2008, Hanson P; **61**: on church wall, 15 m alt., Patrington Church, Holderness, TA316226, 2009, Martin P; **71**: on mortared wall, 30 m alt., W of St John's on the Kirk Patrick road, SC267817, 2009, Blockeel TL; **91**: on stonework of old bridge, 150 m alt., Glendye Bridge, NO651860, 2009, Kungu EM *et al.*; **92**: on cement wall by road, 200 m alt., below the church, Lumphanan, NJ583047, 2009, Kungu EM *et al.*; **101**: on concrete masonry by lane, 10 m alt., Crinan Basin, NR787943, 2000, Pool M; **H40**: unshaded horizontal concrete of top of roadside wall, on slope above coast, 50 m alt., Downhill, C74983596, 2008, Holyoak DT 08-628.
- 21.17. *Schistidium elegantulum*. **37**: on calcareous stone in garden, Bewdley, SO787748, 2009, Lawley M; **44**: on concrete, 140 m alt., Llansawel Chapel, SN618362, 2008, Bosanquet SDS; **60**: on limestone wall in open woodland, Woodwell, SD464743, 2009, Callaghan DA; **64**: on lightly shaded limestone rock in grassland, 230 m alt., below Stainforth Scar, SD824669, 2009, Blockeel TL 38/234; **66**: on mortar of wall at edge of quarry, 280 m alt., Bowlees, Teesdale, NY907285, 1999, Wharton TS; **75**: on top of mortared stone wall, Barrhill cemetery, NX238822, 2009, Lawley M; **H3**: on wall of church building, Dromore, W0645, 2009, Lönnell N.
- 21.17.a. *Schistidium helveticum*. **47**: on dolerite slabs on crag, Breidden Hill, W crag, SJ28851397, 2009, Bosanquet SDS; **94**: on calcareous conglomerate in ravine, 420 m alt., conglomerate pillar area, Water of Ailnack, W of Tomintoul, NJ144148, 2008, Blockeel TL *et al.* 37/320, det. Blockeel, new to British Isles.
- 22.11. *Grimmia longirostris*. **47**: on dolerite crag, Breidden Hill, SJ28861397, 2009, Bosanquet SDS; **106**: on boulder on loch margin, 190 m alt., SW side of Loch Morie, NH527757, 2009, Rothero GP 19226.
- 22.15. *Grimmia incurva*. **97**: on dry flat rock in deep crevice in acid N-facing scree, 635 m alt., Coire a' Bhric Beag, Leum Uilleim, NN33446475, 2009, Rothero GP 19276.
- 22.17. *Grimmia orbicularis*. **34**: on limestone boundary wall, 100 m alt., St Saviour's Church, Tetbury, ST888934, 2008, Martin P, conf. Porley.
- 22.18. *Grimmia torquata*. **H3**: on slightly basic rock face in gully, 330 m alt., Nowen Hill, W143534, 2009, Bosanquet SDS.
- 22.19. *Grimmia funalis*. **H3**: on rock outcrop on hillside, 360 m alt., Mount Gabriel, V933350, 2009, Bosanquet SDS; **H38**: unshaded, gently sloping top of block of granitic rock 1.5–2 m above water in small stream, 285 m alt., base of Black Stairs, J36462925, 2008, Holyoak DT 08-510.
- 22.20. *Grimmia trichophylla*. **38**: sandstone parapet of castle, 50 m alt., Warwick Castle, SP283646, 2009, Hodgetts NG 7624; **76**: on rock outcrop, Barochan, NS4169, 1998, Watson K.
- 22.21. *Grimmia lisae*. **77**: on boulder, 325 m alt., below Maurice's Cleuch, Tinto Hill, NS9535, 2009, Kungu EM and Chamberlain DF.
- 22.24.a. *Grimmia hartmanii*. **75**: on rocks beside burn, Ness Glen below Loch Doon, NS478023, 2009, Graham JJ.
- 22.25. *Grimmia decipiens*. **75**: on S-facing igneous rock, 150 m alt., Byne Hill S of Girvan, NX17919439, 2009, Bosanquet SDS.
- 22.27. *Grimmia ramondii*. **75**: on igneous rocks, 140 m alt., Byne Hill S of Girvan, NX18019442, 2009, Bosanquet SDS; **H3**: on rock ledge in gully, 350 m alt., Nowen Hill, W143536, 2009, Bosanquet SDS.
- 23.3. *Racomitrium aquaticum*. **H14**: damp shaded rock face by road, 430 m alt., Slieve Bloom, The Cut, N2904, 2009, Hodgetts NG 7598; **H38**: flushed, gently sloping, granitic rock of outcrop on N-facing slope near stream slightly shaded, 320 m alt., below Black Stairs, J36452923, 2008, Holyoak DT 08-515.
- 23.7. *Racomitrium affine*. **45**: on sloping face of tor in woodland, 125 m alt., Ty Canol NNR, SN092371, 2005, Bosanquet SDS; **76**: on stones in wall, 80 m alt., Knapps Loch, Kilmaccolm, NS365684, 2009, Stevenson CR; **H39**: unshaded tops and sides of basalt boulders at foot of slope below crags, 325 m alt., N side of Knock Dhu, D33890686, 2008, Holyoak DT 08-566.
- 23.8. *Racomitrium heterostichum*. **H38**: unshaded sloping surface of granitic block low on hillside, 320 m alt., N slope of Slieve Donard, J35702897, 2008, Holyoak DT 08-496.
- 23.11. *Racomitrium ericoides*. **3**: on sandy soil at base of waste stone heap, 320 m alt., Merrivale Quarry, Dartmoor, SX54787523, 2008, Jeffery

- R; **39**: on blast-furnace spoil, Harts Hill, Dudley, SO922885, 2009, Godfrey M; **68**: on track, 430 m alt., above Uswayford, NT883147, 2008, O'Reilly J and McCutcheon D, conf. Smith; **70**: in disused limestone quarry, 580 m alt., Whitestones, NY7737, 2007, O'Reilly J; **H1**: at side of track, track leading to Lough Mhorain, Q4808, 2009, Fisk RJ; **H3**: on soil in old sand quarry, Drumore, W064457, 2009, Lönnell N; **H14**: side of forestry track, 400 m alt., Slieve Bloom, Gorteenameale, N2702, 2009, Hodgetts NG 7595.
- 23.13. *Racomitrium canescens*. **8**: chalky horizontal ground, with *Abietinella* and *Entodon*, 100 m alt., rifle butts NE of Bulford Camp, SU20184522, 2009, Hill MO.
- 24.1. *Ptychomitrium polyphyllum*. **76**: on wall, Ryat Linn Reservoir, SE Glasgow, NS517571, 2003, Watson K.
- 26.1. *Blindia acuta*. **3**: in gravelly flush, Hollow Tor Bog, Dartmoor, SX7276, 2009, Pilkington S *et al.*
- 28.2. *Seligeria acutifolia*. **94**: on vertical limestone rock face by burn, 460 m alt., Ailnac Builg ravine, Glen Bhuilg above Inchrory, NJ18150671, 2009, Long DG 38403; **H39**: in steep damp crevice under small overhang on chalk block on N-facing undercliff slope, 260 m alt., West Torr (Greenanmore), D21504081, 2008, Holyoak DT 08-602.
- 28.11. *Seligeria patula*. **42**: in deep, wet hole in limestone cliff, 380 m alt., Craig y Cilau, SO18331658, 2009, Bosanquet SDS; **65**: on wet vertical limestone rock face, 295 m alt., Kisdon Force, Keld, Swaledale, NY898009, 2009, Blockeel TL 38/259.
- 28.12. *Seligeria oelandica*. **42**: 8 patches amongst *S. patula* on permanently wet limestone cliff, 380 m alt., Craig y Cilau, SO18461625, 2009, Bosanquet SDS and Motley GS.
- 29.1. *Archidium alternifolium*. **75**: on damp earth in grassland, foot of Byne Hill near Girvan, NX184946, 2009, BBS Exc; **76**: on mud on reservoir margin, Harelaw Reservoir, NS309733, 2002, Watson K; **77**: on mud, Culter Waterhead, NT036279, 2001, Watson K, det. Long.
- 30.1. *Fissidens viridulus*. **70**: on soil in flood zone of river, River Eden, Lacy's Caves W of Lazonby, NY564383, 2009, Lawley M; **99**: on soil, Endrick Bank, Mainland South, NS48, 1980, Stirling A McG; **H2**: on lane bank, 5 m alt., Tarbert, R065477, 2009, Bosanquet SDS and Preston CD; **H3**: on soil bank beside stream, below St Michael's Church, Castlefreke, W334361, 2009, Callaghan DA 899.
- 30.3. *Fissidens pusillus*. **75**: on sandstone rocks by burn, Craufurdland Water near Fenwick, NS478427, 2009, Hill MO.
- 30.4. *Fissidens gracilifolius*. **H6**: on stone in deep gutter, 20 m alt., by Cathedral, Lismore, X049986, 2009, Bosanquet SDS and Preston CD.
- 30.5. *Fissidens incurvus*. **H2**: on lane bank, 5 m alt., Tarbert, R065477, 2009, Bosanquet SDS and Preston CD; **H3**: on stream bank, 65 m alt., Tuough Bridge, W513621, 2009, Preston CD; **H12**: on steep soil in short sparse vegetation on steps on path, 10 m alt., NW of Wexford, T01582321, 2009, Holyoak DT 09-63; **H18**: earthy bank by lane, 90 m alt., Oldcroghan, near Kilduff Bog, N4631, 2009, Hodgetts NG 7534.
- 30.6.a. *Fissidens bryoides* var. *bryoides*. **38**: on soil on steep NE-facing slope in deciduous woodland, 200 m alt., Arlescote Wood, Edge Hill, SP392482, 2009, Carter RH.
- 30.7. *Fissidens rivularis*. **37**: on stone by river, River Severn downstream from Bewdley, SO79067501, 2009, Lawley M.
- 30.8. *Fissidens monguillonii*. **H3**: foot of bridge over river, 40 m alt., Manch Bridge, W29255210, 2009, Bosanquet SDS.
- 30.9. *Fissidens crassipes*. **31**: on silty brickwork at water level by river, 3 m alt., W side of River Great Ouse at Brownhill Lock, Bluntisham, TL36937272, 2009, Preston CD; **H3**: on rock in stream, Leap Woodland, W202367, 2009, Callaghan DA 900.
- 30.10. *Fissidens rufulus*. **34**: on stone in stream, Court Wood, Wye Valley, SO569155, 2009, Lawley M; **39**: on damp sandstone by stream, Worrall's Grove, Eymore Wood, Upper Arley, SO768798, 2009, Lawley M.
- 30.14. *Fissidens osmundoides*. **76**: on flushed rock, Hole of Spango, NS2474, 1998, Watson K; **H38**: soil among rocks shaded under large block in edge of small stream, 285 m alt., base of Black Stairs, J36462925, 2008, Holyoak DT 08-509.
- 30.15.b. *Fissidens taxifolius* var. *pallidicaulis*. **4**: on clay bank at side of stream, 100 m alt., NE of Pancrasweek Church, SS29920604, 2009, Jeffery

- R; **106**: on wet rocks above burn, 50 m alt., RSPB reserve Fairy Glen Rosemarkie, NH72635859, 2009, Rothero GP 19034.
- 30.20. *Fissidens fontanus*. H5**: 5 cm strip just below summer river level at foot of bridge over river, 50 m alt., River Blackwater at Killavullen, W647997, 2009, Bosanquet SDS.
- 31.1. *Pleuroidium acuminatum*. 75**: on bare ground by graves, Cumnock cemetery, NS5719, 2009, Hill MO; **H12**: on soil on shaded bank, 75 m alt., John F Kennedy Arboretum, S of New Ross, S7219, 2009, Bosanquet SDS and Preston CD; **H31**: on soil in winter wheat stubble, Station Road, Castlebellingham, O09, 2009, Synnott D.
- 31.2. *Pleuroidium subulatum*. 8**: at base of anthill in grassland, Enford Down, Salisbury Plain, SU094498, 2009, Hill MO; **21**: mole hill, 50 m alt., Pymme's Brook, Arnos Park, TQ286940, 2009, Duckett JG; **H2**: on peaty spoil, 5 m alt., Tarbert Island, W of causeway, R07454908, 2009, Bosanquet SDS and Preston CD; **H3**: on soil near foot of wall, St Mathew's churchyard, Church Cross, W063326, 2009, Lönnell N.
- 32.1. *Pseudephemerum nitidum*. 27**: on bare soil in hoof prints in pasture, 8 m alt., Stratton Strawless, TG21672160, 2009, Ghullam M.
- 33.1. *Trichodon cylindricus*. H38**: near-vertical soil of bank above river near old building N-facing and part-shaded, 230 m alt., N of Black Stairs, J36422954, 2008, Holyoak DT 08-504.
- 34.4. *Ditrichum plumbicola*. H20**: on thin soil crust over protosol among rocks on slope of lead-mine spoil, 290 m alt., Vale of Glendasan, T09879816, 2009, Holyoak DT 09-84.
- 34.5. *Ditrichum heteromallum*. H14**: trackside in forestry plantation, 400 m alt., Slieve Bloom, Gorteennameale, N2702, 2009, Hodgetts NG 7614; **H38**: with *Pogonatum aloides* on steep damp sandy soil of bank about 0.7 m above water near edge of stream part-shaded, 255 m alt., N of Black Stairs, J36472937, 2008, Holyoak DT 08-507.
- 34.6. *Ditrichum zonatum*. 77**: on rocky outcrop, 460 m alt., Maurice's Cleuch, Tinto Hills, NS95253524, 2009, Kungu EM.
- 34.8. *Ditrichum flexicaule*. 64**: on flat area of quarry spoil, 200 m alt., Craven lime works, Stainforth, SD8266, 2009, Blockeel TL 38/232; **76**: on rocks, 80 m alt., Knapps Loch, Kilmacolm, NS365684, 2009, Stevenson CR; delete **29**: all material from v.-c. 29 is *D. gracile* comm. Preston (Preston and Hill 2006)
- 34.9. *Ditrichum gracile*. 17**: on chalky soil in light scrub, 140 m alt., Juniper Top, Box Hill, TQ182524, 2006, Wallis HW; **25** in (): Stuston Common, TM1378, 1919, Mayfield A NWH 159/954.436; **39**: on limestone outcrop, Hall Dale, SK1353, 2008, Godfrey M; **67**: in M10 flush on crumbling bank, Andrew's Hill, NY653773, 2008, O'Reilly J; **75**: on hummocks in *Schoenus* flush on hillside, 215 m alt., NW side of Grey Hill, S of Girvan, NX159 925, 2009, Rothero GP 19241; **91**: on base of conglomerate sea cliff, 5 m alt., near Dunnottar Castle, NO880839, 2009, Kungu EM *et al.*; **94**: on limestone outcrop, 360 m alt., Water of Ailnack, Delnabo, NJ154156, 1986, Long DG and Paton JA E00323227; **112**: limestone rock crevices in W-facing cliff, 30 m alt., Mainland, White Ness, HU3844, 2009, Hodgetts NG 7685; **H18**: pathside on way to raised bog, with *Didymodon fallax*, 80 m alt., Clonyhurk, N4712, 2009, Hodgetts NG 7618; **H39**: base of steep, quarried, N-facing exposure of hard chalk rock slightly shaded, 45 m alt., Straidkilly, D30201643, 2008, Holyoak DT 08-544.
- 36.2. *Distichium inclinatum*. 94**: in flush over limestone on bank of burn, 540 m alt., top of Ailnac Bhuilg, S of Inchrory, NJ18420671, 2009, Rothero GP 19209.
- 42.2. *Rhabdoweisia crispata*. H5**: in crevice in rock face, 155 m alt., Toorgarriff Mass Rock, W683902, 2009, Bosanquet SDS.
- 43.3. *Cynodontium jenneri*. 75**: in crevice on acid crags, 395 m alt., Craigbranceoch Hill, Glen Afton, NS62930542, 2009, Rothero GP.
- 45.1. *Dichodontium pellucidum*. H14**: in ditch at side of forestry track, 400 m alt., Slieve Bloom, Gorteennameale, N2702, 2009, Hodgetts NG 7596.
- 45.2. *Dichodontium flavescens*. 73**: on more or less basic rocks at side of river below waterfall, 100 m alt., N side of Polharrow Burn below Waulker's Linn, NX58588531, 2009, Rothero GP 19048; **77**: on rocks by stream, 235 m alt., Cessnock Water, Monksfoot, NS792285, 2009, Kungu EM and Chamberlain DF; **94**: on wet rocks by burn in limestone ravine, 500 m alt., Ailnac Bhuilg, S of Inchrory, NJ183067, 2009, Rothero GP 19202.

- 45.3. *Dichodontium palustre*. **H14**: trackside in forestry plantation, 400 m alt., Slieve Bloom, Gorteennameale, N2702, 2009, Hodgetts NG 7616.
- 46.2. *Dicranoweisia crispula*. **57**: on mortared gritstone wall, 290 m alt., Kinder Reservoir, Hayfield, SK059886, 2009, Blockeel TL 38/261.
- 47.2. *Arctoa anderssonii*. **108**: on soft calcareous schist on exposed NW-facing crag, 550 m alt., Ben Hope, crags on NW side, NC47935104, Rothero GP, new to British Isles.
- 49.1. *Glyphomitrium daviesii*. **H3**: on exposed rock of low crag on knoll, near Lough Bog, W16046184, 2009, Lönnell N.
- 52.3. *Dicranella crispa*. **43**: on soil on streambank, Tylcau Hill, SO135763, 2009, Lawley M.
- 52.5. *Dicranella varia*. **76**: on waste ground, Royal Ordnance factory, Bishopton, NS4370, 2005, Watson K.
- 52.7. *Dicranella rufescens*. **75**: on damp gravel in eroding gully of small tributary burn, 362 m alt., by Afton Water below Craigbreanoch Hill, NS62830534, 2009, Long DG 38266; **H2**: in damp gully at side of forest track, Knockmunnanon, R025241, 2009, Fisk RJ.
- 52.8. *Dicranella cerviculata*. **H2**: on roadside bank through forestry plantation, 150 m alt., Knockannanooon, R02482418, 2009, Kungu EM; **H36**: on bare ground in area of scrub/grassland, McKean's Moss ASSI, C36770290, 2009, Hanson P.
- 52.9. *Dicranella heteromalla*. **H18**: roadside ditch in W-facing heathland, 430 m alt., Slieve Bloom, Glenletter, N2504, 2009, Hodgetts NG 7604.
- 53.5. *Dicranum majus*. **7**: woodland floor in open acid woodland, Savernake Forest, Marlborough, SU23006495, 2009, Pilkington S.
- 53.6. *Dicranum spurium*. **75**: in grassy heath on SE-facing slope, Grey Hill SSSI, S of Girvan, NX16319252, 2009, BBS Exc.
- 53.8. *Dicranum fuscescens*. **H3**: on acid rock outcrop on N-facing slope, hill S of Lough Nambrackdearg, Carrig Mountain, W1560, 2009, Rothero GP 19114.
- 53.9. *Dicranum flexicaule*. **112**: among rocks on steep N-facing hillside, with mixed hepatic mat species, 80 m alt., Foula, Da Sneug, HT948396, 2009, Hodgetts NG and Gear S 7626.
- 53.12. *Dicranum tauricum*. **75**: on birch in wet peaty woodland at edge of bog, Dykeneuk Moss SSSI, NS34634759, 2009, Ellis RG and Pilkington S.
- 53a.1 *Dicranoloma menziesii*. **H1†**: in moss mat on horizontal top and steep side of prostrate 'trunk' of old *Dicksonia* tree-fern in sheltered woodland garden, Garinish Island, V691632, 2008, Holyoak DT, 08-176.
- 55.1. *Dicranodontium uncinatum*. **75**: on mossy bank under tall *Calluna* on N-facing bouldery slope below cliffs, 395 m alt., The Tauchers, Mulwharchar S of Loch Doon, NX4579.8746, 2009, Long DG 38347.
- 56.2. *Campylopus subulatus*. **H3**: on shaded forestry track, 180 m alt., Gurteen Forest, W227614, 2009, Bosanquet SDS.
- 56.4. *Campylopus gracilis*. **H3**: on flushed rock face in gully with *C. atrovirens*, 400 m alt., Nowen Hill, W14445343, 2009, Bosanquet SDS.
- 56.7. *Campylopus flexuosus*. **H14**: damp shaded rocks in road cutting, 430 m alt., Slieve Bloom, The Cut, N2904, 2009, Hodgetts NG 7606.
- 56.10.b. *Campylopus atrovirens* var. *falcatus*. **H3**: on thin peaty soil over acid sandstone on steep N-facing slope, Carrig Mountain, W151602, 2009, Lönnell N.
- 56.13. *Campylopus brevipilus*. **H18**: in raised bog, with *Odontoschisma sphagni*, 100 m alt., Raheenmore Bog, N43, 2009, Hodgetts NG 7537.
- 57.1. *Leucobryum glaucum*. **H14**: forming hummocks in raised bog, with *Odontoschisma sphagni* and *Cephalozia connivens*, 90 m alt., Portlaoise, N of Clonreher, N4402, 2009, Hodgetts NG 7622.
- 57.2. *Leucobryum juniperoideum*. **7**: on woodland floor, Savernake Forest, Marlborough, SU23006495, 2009, Pilkington S.
- 58.1. *Scopelophila cataractae*. **4**: on steep damp mine spoil near base of slope, 210 m alt., Bampfylde Mine N of Heasley Mill, SS73763279, 2009, Holyoak DT 09-29.
- 60.1.a. *Weissia controversa* var. *controversa*. **76**: on soil on rock ledge, Gimblet Burn, Kelly Cut Clyde Muirshiel Regional Park, NS233709, 2005, Watson K.
- 60.1.b. *Weissia controversa* var. *crispata*. **11**: on steep S-facing skeletal soil in chalk downland, 220 m alt., Butser Hill, Birdcage, SU720201, 2009, Hodgetts NG 7529; **42**: rare on dry limestone cliff, 420 m alt., Craig y Cilau, SO18781577, 2009, Bosanquet SDS and Motley GS; **57**: on soil on limestone rock ledge, 250 m alt., foot of Peter Dale, 2 km W of

- Tideswell, SK130753, 1999, Blockeel TL 28/390; **75:**, Turnberry, NS2005, 1967, Stirling A McG; **H18** in (): on a wall in Wood, limestone, Birr, in Wood of Birr, N00, 1949, Fanning AP BBSUK, det. Holyoak.
- 60.2. *Weissia perssonii*. **H2:** in dense cushion on soil on top of large boulder in coastal cliff grassland, 50 m alt., Kerry Head, Q688321, 2009, Moore O.
- 60.3. *Weissia rutilans*. **66:** on soil in old limestone quarry, 300 m alt., Washpool Crags quarry, Briget Hill, NY9835, 2009, O'Reilly J, conf. Chamberlain; **75:** on disturbed soil in cemetery, New Cumnock cemetery, NS615124, 2009, BBS Exc. E00255889.
- 60.4. *Weissia condensata*. Delete **H33:** voucher 'Monawilkin, Ghullam, 2005' in BBSUK is *W. controversa* agg. comm. Holyoak.
- 60.5.a. *Weissia brachycarpa* var. *brachycarpa*. **77:** on small clay bank at head of tiny spring in grassland, 55 m alt., Todd's Well near Provan Hall, Glasgow, NS667666, 2009, Moore O; **88:** on disturbed soil by ditch, 270 m alt., SW of Cleavage Hills, NO049130, 2009, Chamberlain DF and Kungu EM.
- 60.5.b. *Weissia brachycarpa* var. *obliqua*. **77:** on soil overlying water tank, 260 m alt., Woodend, N of Tinto Hill, NS946366, 2009, Kungu EM and Chamberlain DF; **91:** on conglomerate sea cliff, near Dunnottar Castle, NO880836, 2009, Kungu EM E; **H2:** on disturbed ground in graveyard, 40 m alt., NE Castle Island, R008107, 2009, Bosanquet SDS and Preston CD.
- 60.7. *Weissia rostellata*. **H40:** damp clay-loam soil in stubble field, with sparse low herbs and grasses, 30 m alt., Lower Quilley (by A2 W of Coleraine), C80343323, 2008, Holyoak DT 08-648.
- 60.12.b. *Weissia longifolia* var. *angustifolia*. **33:** on low bank on N edge of field, 260 m alt., above Green hatch Farm near Couley, SO955146, 2008, Lansdown RV.
- 61.1. *Tortella tortuosa*. **H38:** top of mortared-stone wall of parapet of bridge over river part-shaded by woodland edge, 150 m alt., by Glen River in Donard Wood, J37012993, 2008, Holyoak DT 08-502.
- 61.2. *Tortella bambergerei*. **H3:** on rock outcrop on hillside, 360 m alt., Mount Gabriel, V93303487, 2009, Bosanquet SDS.
- 61.3. *Tortella densa*. **77:** on rock ledge, 600 m alt., Gana Hill near summit, NS9501, 1997, Watson K.
- 61.5. *Tortella nitida*. **75:** on rock of outcrop on S-facing hillside, 231 m alt., S end of Grey Hill, S of Girvan, NX16089237, 2009, Long DG 38317; **H5:** frequent on E-facing wall, 20 m alt., St Coleman's Cathedral, Cloyne, W917676, 2009, Bosanquet SDS and Preston CD.
- 61.7. *Tortella inclinata*. **H38:** unshaded gravelly sand with sparse low vegetation of bryophytes, lichens and herbs in open area of dune-heath, 10 m alt., Murlough Dunes, NE of Newcastle, J39763336, 2008, Holyoak DT 08-540.
- 61.9. *Tortella flavovirens*. **97:** on rock by sea, 3 m alt., Doune, Knoydart, NG704036, 2005, Chamberlain DF E00110364.
- 62.4. *Trichostomum hibernicum*. **75:** on wet slabby more or less basic rocks in wooded ravine, 220 m alt., Ness Glen below Loch Doon, NS477020, 2009, Rothero GP; **H3:** on flushed rock face in gully, 350 m alt., Nowen Hill, W143534, 2009, Bosanquet SDS.
- 65.1.a. *Hymenostylium recurvirostrum* var. *recurvirostrum*. **91:** on slumped sea cliff, 5 m alt., by the lighthouse at Girdle Ness, NJ971054, 2009, Kungu EM *et al.*
- 68.1. *Gymnostomum viridulum*. **42:** on damp soil on limestone in quarry, 280 m alt., W side of quarry, Blackrock, SO21931287, 2009, Bosanquet SDS; **H12:** on mortar of old wall, 30 m alt., St Mary's Church, New Ross, S721276, 2009, Bosanquet SDS and Preston CD.
- 71.1. *Micromitrium tenerum*. **14:** on mud on draw-down zone of reservoir, 25 m alt., Powdermill Reservoir, Brede High Woods, TQ80251980, 2009, Howarth P, det. Wallis, conf. Hodgetts.
- 72.2. *Ephemerum sessile*. Delete **H29:** voucher 'NW end of Rinn Lough, Holyoak DT 00-706 2000' in BBSUK is *E. hibernica* comm. Holyoak; delete **H35:**, voucher 'path to Mevagh Church, Rosguill Peninsula, Warburg, 1962' in BBSUK is *E. serratum* agg. comm. Holyoak.
- 72.6. *Ephemerum serratum*. **66:** on soil in field, Field N of Norman's Riding Wood, NZ164609, 2009, McCutcheon D, conf. Hodgetts.
- 72.7. *Ephemerum minutissimum*. **21:** mole hill, 50 m alt., Pymme's Brook, Arnos Park, TQ286940, 2009, Duckett JG; **H39:** with other low mosses on part-bare, unshaded, loamy soil near edge

- of stubble field, 150 m alt., E of Lagavara (S of Ballintoy), D04814223, 2008, Holyoak DT 08-612; **H40**: unshaded, mainly bare, loamy soil in stubble field, 40 m alt., Dundooan (N of Coleraine), C85273570, 2008, Holyoak DT 08-644.
- 74.2. *Dialytrichia saxicola*. **22**: on detaching and fallen dead bark of beech tree at bottom of scarp wood by ditch emptying into river, 30 m alt., Quarry Wood, Bisham, 1 km S of Marlow, SU858854, 2005, Bates JW 4157; **23**: on silty riverside concrete with *Syntrichia latifolia*, E side of River Thames, S of bridge at Wallingford, SU61018926, 2009, Porley RD and Preston CD.
- 75.1. *Pseudocrossidium hornschuchianum*. **69**: at edge of rough track, 5 m alt., track from Mawflat Lane, Walney Island, SD198641, 2009, Adams J and Nelson W; **H2**: on compacted soil at entrance to commercial premises, 35 m alt., Castleisland, R002101, 2009, Bosanquet SDS and Preston CD; **H31**: on compacted sand in dune slack, Baltray, O17, 2008, Synnott D.
- 75.2. *Pseudocrossidium revolutum*. **7**: on dry stone wall with *Tortella nitida*, Winsley, ST811616, 2009, Presland J; **76**: on concrete at side of loch spillway, 70 m alt., Knapps Loch, Kilmacolm, NS364685, 2009, Stevenson CR.
- 76.2. *Bryoerythrophyllum ferruginascens*. **94**: on soil over limestone at base of scree, 415 m alt., scree below Craig Bhuilg, S of Inchroary, NJ180070, 2009, Rothero GP 19198.
- 77.2. *Leptodontium gemmascens*. **4**: on degraded thatch roof, 160 m alt., S wall of cemetery, Winkleigh Parish Church, SS63280807, 2009, Jeffery R.
- 78.1.b. *Barbula convoluta* var. *sardoa*. **75**: on earth bank at edge of path, 130 m alt., path leading to Kilkerran Castle, NS292007, 2009, Kungu EM; **H23**: earthy bank beneath hedge in lane, 45 m alt., Ballaghkeeran, N0744, 2009, Hodgetts NG 7554.
- 78.2. *Barbula unguiculata*. **76**: on stonework of reservoir, near Cairnkibbuck, Kilmacolm, NS365707, 2008, Watson K.
- 79.1. *Didymodon acutus*. **37**: on soil, Alton brownfield site, Long Bank, Wyre Forest, SO753743, 2009, Lawley M.
- 79.3. *Didymodon rigidulus*. **H14**: stone parapet of bridge over river, 240 m alt., Slieve Bloom, Moncknew Bridge, N307023, 2009, Hodgetts NG 7592.
- 79.4. *Didymodon nicholsonii*. **7**: on tarmac of driveway, opposite St Anne's Church, Bowden Hill, ST938679, 2009, Pilkington SL; **48**: on soil accumulation in centre of steep tarmac lane leading down to river, Afon Pennal near Pennal Isaf, SH704017, 2009, Bates JW 4455; **H2**: on tarmac of lane, 3 m alt., Ballyard, Tralee, Q831133, 2009, Preston CD; **H3**: on path, St Michael's Church, Castlefreke, W333363, 2009, Preston CD; **H12**: on tarmac of pavement, 30 m alt., near St Mary's Church, New Ross, S72062768, 2009, Bosanquet SDS and Preston CD.
- 79.6. *Didymodon umbrosus*. **33**: on damp paving stone in margin of gutter at base of wall, 10 m alt., Whitminster Church, SO760091, 2009, Lansdown RV.
- 79.7. *Didymodon vinealis*. **H5**: on wall top, 14 m alt., Ballymaloe, W951675, 2009, Bosanquet SDS and Preston CD.
- 79.8. *Didymodon insulanus*. **38**: on concrete by outflow, 115 m alt., Wormleighton reservoir, Oxford canal, SP448515, 2009, Carter RH; **H38**: vertical mortar on wall beside parking area slightly shaded, 5 m alt., near Castle Espie, J49046728, 2008, Holyoak DT 08-518.
- 79.9. *Didymodon luridus*. **38**: on concrete by outflow, 115 m alt., Wormleighton reservoir, Oxford canal, SP448515, 2009, Carter RH; **75**: on stones near house, Carnell, SE of Kilmarnock, NS4632, 2009, Hill MO; **91**: on waste ground, 20 m alt., by the lighthouse at Girdle Ness, NJ971054, 2009, Kungu EM *et al.*; **H12**: on mortar of wall, 30 m alt., St Mary's Church, New Ross, S72142764, 2009, Bosanquet SDS and Preston CD.
- 79.11. *Didymodon sinuosus*. **70**: on shallow soil on cliff, Lacy's Caves W of Lazonby, NY564384, 2009, Lawley M; **H6**: on calcareous wall by castle, 20 m alt., Lismore, X0498, 2009, Bosanquet SDS and Preston CD; **H12**: on shaded gravestone, 30 m alt., St Mary's Church, New Ross, S721276, 2009, Bosanquet SDS and Preston CD.
- 79.13. *Didymodon spadiceus*. **4**: on sandy debris at base of concrete weir, 55 m alt., River Lyd, S side, Marystow, SX41168490, 2002, Jeffery R; **76**: on rocks by waterfall, Brock Burn, Ryat Linn, Glasgow, NS517571, 2003, Watson K; **77**: on basic rock face by river, River Calder at Crossbasket, NS6757,

- 1990, Watson K; **H18**: roadside ditch in W-facing heathland, 430 m alt., Slieve Bloom, Glenletter, N2504, 2009, Hodgetts NG 7603; **H39**: with other mosses on steep damp basalt of low crag on N-facing chalk undercliff, 275 m alt., West Torr (Greenanmore), D21454084, 2008, Holyoak DT 08-604.
- 79.16. *Didymodon ferrugineus*. **77**: on ledge of shale outcrop, 300 m alt., W side of Logan Water below the reservoir, NS74783672, 2009, Chamberlain DF E00323500; **H31**: on flat ground in old dune system, by the River Boyne, Baltray, O17, 2008, Synnott D; **H39**: with other mosses on base of steep, quarried, N-facing exposure of hard chalk rock slightly shaded, 45 m alt., Straidkilly, D30201643, 2008, Holyoak DT 08-545; **H40**: with other low mosses on part-bare sand of disturbed area in dune slack, 5 m alt., Ballymaclary N.R., C69793634, 2008, Holyoak DT 08-639.
- 82.2. *Aloina rigida*. **67**: East Chevington Nature Reserve, NZ29U, 2008, O'Reilly J, det. Chamberlain.
- 82.3. *Aloina aloides*. **75**: on roadside cutting with calcareous seepage, Chapeldonan N of Girvan, NS19340011, 2009, Graham JJ; **H2**: on mortar between stones of shrine in churchyard, 180 m alt., Knocknagashel Church, R059208, 2009, Kungu EM.
- 82.4. *Aloina ambigua*. **8**: on very disturbed chalk, 150 m alt., tank training area SE of Everleigh, Salisbury Plain, SU210497, 2009, Preston CD *et al.*
- 83.1. *Tortula subulata*. **76**: on rock ledge, Carrot Burn near Eaglesham, NS5748, 2000, Watson K.
- 83.1.a. *Tortula inermis*. **94**: on calcareous conglomerate in ravine, 420 m alt., conglomerate pillar area, Water of Ailnack, W of Tomintoul, NJ144148, 2007, Rothero GP, det. Blockeel, new to British Isles.
- 83.8. *Tortula canescens*. **H5**: on coastal slope below path, below fisherman's path W of carpark, Ballycotton, W99216338, 2009, Bosanquet SDS and Preston CD, det. Hodgetts.
- 83.9. *Tortula muralis*. **H14**: on concrete wall top, 110 m alt., Shangownagh, S294905, 2009, Hodgetts NG 7591.
- 83.12. *Tortula atrovirens*. **74**: on soil, West Tarbert, Mull of Galloway, NX1330, 1990, Chamberlain DF E00323226.
- 83.14. *Tortula lanceola*. **8**: chalky soil overlying concrete, 155 m alt., Rushall Down, near Tilshead, SU070494, 2009, Hill MO.
- 83.15. *Tortula wilsonii*. **H21** in (): vouchers 'coastal rocks at Carnoon Bay, Lambay, Synnott 1988' and 'S of Scotch Point, Lambay Island, Synnott, 1988' are both *T. viridifolia* comm. Holyoak; replace with 'Howth, O23, 1860, Moore D, conf. Holyoak; **H3** in (): earth on walls, Sherkin Island, W02, 1934, Jones EW NMW, conf. Holyoak.
- 83.16. *Tortula viridifolia*. **91**: on soil on slumped sea cliff, 5 m alt., Girdle Ness, NJ97180544, 2009, Kungu EM *et al.*; **H2**: on clay behind wall in grazed coastal grassland, W of Glenderry, Q693293, 2009, Lönnell N.
- 83.17. *Tortula modica*. **1**: on partly bare patches of sandy soil along path at edge of dunes, edge of Upton Towans, SW576392, 1997, Holyoak DT 97-407; **H5**: on disturbed ground in graveyard, 20 m alt., Cloyne Cathedral, W917676, 2009, Bosanquet SDS and Preston CD.
- 83.18. *Tortula truncata*. **H2**: on soil at edge of grass verge by car park, 2 m alt., S side of River Shannon at Tarbert Island, R07744920, 2009, Bosanquet SDS and Preston CD.
- 84.1.a. *Phascum cuspidatum* var. *cuspidatum*. **75**: in cereal stubble field, Loans, NS343313, 2009, Bosanquet SDS; **H38**: unshaded, mainly bare, loamy soil at edge of stubble field, by track, 20 m alt., S of Ballydrain, J49286549, 2008, Holyoak DT 08-532.
- 84.1.c. *Phascum cuspidatum* var. *schreberianum*. **33**: on soil on broken rocky ground, 250 m alt., Barton Bushes SSSI, SP111260, 2009, Lansdown RV.
- 84.1.d. *Phascum cuspidatum* var. *papillosum*. **2**: on partly bare soil at edge of grassland in car park field near coast, Talland Bay, SX225515, 1999, Holyoak DT 99-25.
- 85.2.a. *Microbryum davallianum* var. *davallianum*. **45**: on soil in crevices of earth-capped wall, 120 m alt., E side of chapel yard, Resthaven Chapel, SN143100, 2007, Bosanquet SDS; **H2**: on sandy soil in barley-stubble field, 7 m alt., Ballymacquin, Q764260, 2009, Bosanquet SDS and Preston CD.
- 85.3. *Microbryum rectum*. **H3**: on bare soil on low cliff facing the sea, Dirk Cove Dundeady, W3432, 2009, Fisk RJ.
- 86.3. *Henmediella beimii*. **24**: on soil in gap between kerb and tarmac of footpath, 80 m alt., minor road

- W of Haversham, Milton Keynes, SP825429, 2009, Tipper CTW; **30**: on roadside above kerb, 60 m alt., Crachnell Hill W of Harrold, SP9456, 2009, Tipper CTW; **32**: in short grass by minor road, 130 m alt., road parallel to A14 W of Rothwell, SP805802, 2009, Tipper CTW; **H3**: trampled ground at landward end of pier, 3 m alt., Burren Pier SSW of Kilbrittain, W504432, 2009, Bosanquet SDS and Preston CD.
- 87.1. *Acaulon muticum*. **27**: on SW-facing roadside bank, 15 m alt., Sloley, TG29382450, 2009, Ghullam M.
- 89.1.a. *Syntrichia ruralis* var. *ruralis*. **H2**: on wall top, 5 m alt., Tarbert, R065477, 2009, Bosanquet SDS and Preston CD; **H3**: on wall top, 10 m alt., Clonakilty, W3741, 2009, Bosanquet SDS; **H36**: at junction of paving and lawn in garden, 5, Coolnagard Gardens, Omagh, H452700, 2009, Hanson P.
- 89.1.b. *Syntrichia ruralis* var. *ruraliformis*. **H38**: unshaded sand with short patchy grassland by path in dunes, 10 m alt., Murlough Dunes, NE of Newcastle, J39773361, 2008, Holyoak DT 08-539.
- 89.3. *Syntrichia montana*. **96**: on open S-facing base-rich crag, 140 m alt., Creag an Fhithich, Glen Liath by Inverfarigaig, NH52202262, 2009, Rothero GP 19377.
- 89.5. *Syntrichia virescens*. **17**: shallow depressions in old tarmac, 50 m alt., Streatham Court, Streatham High Road, TQ303724, 2009, Duckett JG; **21**: shallow depressions in old tarmac, 100 m alt., Stanmore Orthopaedic hospital, TQ 167939, 2008, Duckett JG; **39**: on gravel track, Highgate Common near Enville, SO837987, 2009, Lawley M; **61**: on church wall with *Tortula muralis*, 15 m alt., Patrington Church, Holderness, TA316226, 2009, Martin P.
- 89.6. *Syntrichia laevipila*. **94**: on sycamore, 15 m alt., near Duff House, Banff, NJ689635, 2008, Chamberlain DF E00255726.
- 89.7. *Syntrichia papillosa*. **58**: on mature willow by stream, 60 m alt., Cheadle Hulme, SJ863872, 2009, Lowell J; **75**: on *Sorbus hupabensis*, Auchinchruive estate, NS38212355, 2009, Chamberlain DF; **H2**: on ash tree in street, 35 m alt., N Castle Island, R002101, 2009, Bosanquet SDS and Preston CD; **H3**: on street trees, 10 m alt., Clonakilty, W3841, 2009, Bosanquet SDS.
- 90.1. *Cinclidotus fontinaloides*. **21**: concrete blocks in river Thames, 10 m alt., just below Penton Lock, TQ046693, 2009, Duckett JG.
- 92.2. *Tetraplodon mnioides*. **76**: in bog, West Hyndal, West Renfrew Heights, NS2667, 2000, Watson K; **109**: on hard object on peat bank, on blanket mire by Allt Snitut, ND117427, 2008, Payne AG; **H10**: on dung in extensive raised bog, 35 m alt., Redwood Bog, M91, 2009, Hodgetts NG 7578; **H14**: on dung in raised bog, 110 m alt., Caher Bog, S2691, 2009, Hodgetts NG 7582; **H18**: on dung near margin of bog, 60 m alt., Ferbane Bog, N1026, 2009, Hodgetts NG 7555; **H36**: on raised bog, Tully Bog SAC, H4276, 2009, Hanson P.
- 94.1. *Splachnum sphaericum*. **76**: on dung in marshy grassland, Myres Burn, Myres Hill, NS564463, 2003, Watson K.
- 94.2. *Splachnum ampullaceum*. **45**: on dung below *Sphagnum* in M6d flush, 210 m alt., Waun Llwyd Common, SN155316, 2000, Bosanquet SDS; **77**: on old cowpat over peat, 300 m alt., below Maurice's Cleuch, Tinto Hill, NS95033604, 2009, Kungu EM and Chamberlain DF.
- 96.1. *Meesia uliginosa*. **94**: in flush over limestone on bank of burn, 540 m alt., top of Ailnac Bhuilg, S of Inchrory, NJ18420671, 2009, Rothero GP 19210.
- 97.1. *Amblyodon dealbatus*. **H3**: in cushion on flushed sloping rocks on S-facing slope, near Lough Bog, W16096173, 2009, Lönnell N; **H39**: with other bryophytes on thin soil over wet basalt at foot of flushed N-facing chalk cliff, 275 m alt., West Torr (Greenanmore), D214408, 2008, Holyoak DT 08-605.
- 98.1. *Leptobryum pyriforme*. **H2**: on sandy soil in barley-stubble field, 7 m alt., Ballymacquin, Q764260, 2009, Bosanquet SDS and Preston CD; **H3**: on shaded stonework of church, 40 m alt., St Mary's Church, Desertserges, W389535, 2009, Preston CD.
- 99.1.a. *Zygodon viridissimus* var. *viridissimus*. **38**: on masonry by outflow, 115 m alt., Wormleighton reservoir, Oxford canal, SP448515, 2009, Carter RH; **76**: on rock wall, Limecraig Quarry, Paisley, NS467610, 1995, Watson K.
- 99.2. *Zygodon rupestris*. **16**: on trunk of old apple tree, 12 m alt., Yalding Orchard, TQ688497, 2009, Hendey J; **75**: on elder, 120 m alt., woodland below Kilkerran Castle near Dailly, NS293005,

- 2009, Rothero GP; **76**: on branch of sycamore, Black Cart, Howwood, NS3860, 2003, Watson K.
- 99.3.a. *Zygodon conoideus* var. *conoideus*. **38****: on hawthorn, 200 m alt., Arlescote Wood, Edge Hill, SP392482, 2009, Carter RH; **61**: on elder, Barf Hill Wood, Great Kelk, TA1159, 2009, Wall C; **77**: on old elder by canal, Bishopbriggs Golf Course, NS598711, 2000, Watson K; **112**: on sycamore trunk in 'plantation 4', 60 m alt., Mainland, Kergord plantations, Weisdale, HU393541, 2009, Hodgetts NG 7668; **H14**: ash trunk on riverbank, 240 m alt., Slieve Bloom, Moncknew Bridge, N307023, 2009, Hodgetts NG 7593.
- 100.1. *Orthotrichum lyellii*. **75****: on ash tree, Black Craigs, Afton Water, NS631079, 2009, Chamberlain DF; **92**: on trunk of maple, Cruickshank Botanic Garden Arboretum, Old Aberdeen, NJ937086, 2009, Chamberlain DF.
- 100.2. *Orthotrichum striatum*. **23****: on tree trunk, 150 m alt., Brasenose and Shotover Hill SSSI, SP56970585, 2009, Wright JA; **53**: on trunk of ash tree in woodland, 115 m alt., Morkery Wood, SK946182, 2009, Hodgetts NG 7519; **77**: on shaded willow trunk, 150 m alt., above the Kelvin Burn, Calderglen Country Park, NS65375304, 2009, Chamberlain DF; **H13**: on *Quercus* trunk in woodland, 25 m alt., Tinnahinch Rock, S715437, 2009, Bosanquet SDS.
- 100.4. *Orthotrichum speciosum*. **20****: on *Salix caprea* in mature scrub, 165 m alt., E of Oddy Hill, Wigginton near Tring, SP935109, 2008, Tipper CTW, det. Porley; **66**: on bole of *Salix fragilis* in riparian woodland, 140 m alt., Near Wolsingham, NZ068370, 1999, Wharton TS, det. Blockeel.
- 100.5. *Orthotrichum affine*. **38****: on willow tree by stream, 110 m alt., on Warwickshire bank of valley between Upper Shuckburgh and Newbold Grounds, SP51936137, 2009, James J.
- 100.6. *Orthotrichum rupestre*. **7****: on large sarsen stone in humid valley, Lockeridge Dene near Marlborough, SU14246724, 2009, Pilkington S; **H12**: on unshaded small ledges on rock outcrop, near estuary NW of Wexford, T016232, 2009, Holyoak DT 09-64C.
- 100.9. *Orthotrichum anomalum*. **76****: on concrete at side of loch spillway, 70 m alt., Knapps Loch, Kilmacolm, NS364685, 2009, Stevenson CR; **76**.
- 100.10. *Orthotrichum cupulatum*. **75****: on paving slabs, 100 m alt., Auld Byres Farm, NS429191, 2009, Carter RH; **76**: on concrete of dam, Bennan Loch, NS5250, 2002, Watson K; **111**: on asbestos roof of shed, North Culdigo, Egilsay, HY472301, 2006, Payne AG; **H2**: on concrete block at entrance to roadside quarry, 310 m alt., NW of Knockatee, R075117, 2009, Bosanquet SDS and Preston CD; **H3**: on wall by lough, 90 m alt., Curraghlickey Lake, W234467, 2009, Bosanquet SDS; **H5**: at edge of pavement, 50 m alt., Ballyhooly, W728990, 2009, Bosanquet SDS.
- 100.11. *Orthotrichum rivulare*. **76****: on tree root by river, White Cart at Kirkland, NS571530, 2000, Watson K.
- 100.12. *Orthotrichum sprucei*. **33****: on *Salix fragilis* along margin of river, River Severn near Walmore, SO818230, 2009, Lansdown RV; **H36**: on silt deposits on periodically inundated willow by river, River Finn at Carricklee near Strabane, H32509675, 2009, Hanson P.
- 100.13. *Orthotrichum stramineum*. **21****: leaning *Fraxinus* trunk, 100 m alt., Scratchwood Open Space, TQ201947, 2009, Duckett JG; **30**: on willow by river, 50 m alt., River Ouse at Harrold, SP9657, 2009, Tipper CTW; **58**: on willow, 70 m alt., Brantwood Park, Cheadle Hulme, SJ8686, 2009, Lowell J; **86**: on tree trunk, Pleau Country Park, NW of Falkirk, NS825867, 2008, Chamberlain DF E.
- 100.14. *Orthotrichum tenellum*. **7****: on willow, Swillbrook Lakes Reserve, Somerford Keynes, SU02029368, 2009, Pilkington S; **75**: on *Acer* in grounds, 25 m alt., Auchinchruive estate, NS388234, 2009, Bosanquet SDS; **77**: on Rowan, 220 m alt., Failburn car park blow Tinto Hill, NS965374, 2009, Kungu EM and Chamberlain DF; **H3**: on sycamore in street, 10 m alt., New Bridge, Skibbereen, W118338, 2009, Bosanquet SDS; **H10**: on dead sycamore bough in hedge by farm track, 35 m alt., Ballyoughter, M9909, 2009, Hodgetts NG 7579.
- 100.17. *Orthotrichum diaphanum*. **76****: on willow in scrub, Phoenix, Linwood, NS4564, 2000, Watson K.
- 100.18. *Orthotrichum pulchellum*. **76****: by River Gryfe at Crosslee, NS4166, 2000, Watson K; **99**: on birch, Duchess Wood, Helensburgh, NS28528387, 2009, Flagmeier M.

- 100.19. *Orthotrichum consimile*. **63:** on *Salix*, SW edge of Crowle Moor, SE748142, 2009, Wall C, conf. Blockeel.
- 101.2. *Ulota drummondii*. **75:** on sallow by incised small burn, 200 m alt., Kirk Hill N of Dailly, NS270044, 2009, Rothero GP; **77:** on tree trunk, 255 m alt., Woodend, N of Tinto Hill, NS946367, 2009, Chamberlain DF and Kungu EM; delete **H1:** voucher 'Kenmare, road by N end of bridge, Labeij, 1999' in DBN is *U. bruchii* comm. Holyoak; delete **H10:** voucher 'Keeper Hill S of the Silvermine Mountains, van Melick 1979' in BBSUK is *U. bruchii* comm. Holyoak; delete **H16:** voucher 'Derryclare Wood, Paton, 1994' in BBSUK is *U. bruchii* comm. Holyoak; delete **H21:**, voucher 'N slope of Killakee Mountain, S of Dublin, Paton, 1969' in BBSUK is not determinable comm. Holyoak; delete **H36:** voucher 'Curraghinhalt, Fitzgerald, 1965' in BBSUK is probably *U. bruchii*; replace **H39** in (.), voucher 'Breen Wood near Knocklyad, Fitzgerald, 1964' in NMW is not convincing as a voucher comm. Holyoak; replace with 'on trees in several places, in oak and birch woods, Breen, Glenshesk, D13, 1957, Parker RE, BBSUK, conf. Holyoak.
- 101.3. *Ulota crispa*. **38:** on willow, 110 m alt., Upper Shuckburgh, SP519614, 2009, Carter RH.
- 101.4. *Ulota bruchii*. **112:** on sycamore in 'plantation 7', with *Antitrichia curtispindula*. Also found on larch., 90 m alt., Mainland, Kergord plantations, Weisdale, HU393545, 2009, Hodgetts NG 7670.
- 101.5. *Ulota calvescens*. **75:** on dry area of bog colonised by birches, 190 m alt., Knockshinnock Lagoons, SWT reserve, New Cumnock, NS61101364, 2009, Preston CD; **H14:** on willow branches in ditch by forestry track, 400 m alt., Sieve Bloom, Gorteennameale, N2702, 2009, Hodgetts NG 7594.
- 101.7. *Ulota phyllantha*. **92:** on trunk of maple, Cruickshank Botanic Garden Arboretum, Old Aberdeen, NJ937086, 2009, Chamberlain DF.
- 102.1.a. *Hedwigia ciliata* var. *ciliata*. **57:** on horizontal branch of *Salix*, 205 m alt., on margin of Carsington Reservoir by Shiningford farm, SK246523, 2009, Blockeel TL 38/019; **88:** on large calc-schist boulder below crags, 580 m alt., Sron Dha Mhurcaidh, Ben Lawers SSSI, NN60623884, 2009, Rothero GP 19235.
- 102.2. *Hedwigia stellata*. **20:** on gritstone parapet of railway bridge, 65 m alt., Vicarage Lane, Waterford, TL316149, 2009, Tipper CTW and Saunders AN; **68:** on sandstone rocks near N bank of river, 220 m alt., River Coquet E of Bygate Hall Cottages, NT87270815, 2008, O'Reilly J and McCutcheon D; **69:** on rock on top of dry stone wall, near Field Broughton, Grange-over-Sands, SD38608145, 2009, Adams J; **76:** on rock, Swinesglen, Barochan, NS4069, 1998, Watson K.
- 107.1. *Philonotis rigida*. **3:** on wet E face of quarry, 40 m alt., Cann slate quarry, Cann Wood, Plymbridge, SX52455928, 2008, Jeffery R; **H39:** with other low bryophytes on steep damp basalt of partly shaded wall of ravine, above waterfall, 140 m alt., Glenariff, D212204, 2008, Holyoak DT 08-623.
- 107.3. *Philonotis arnellii*. **4:** on vertical soil on lightly shaded low bank above stream, Waters Meet, SS743485, 2009, Holyoak DT 09-88; **92:** on soil over calcareous rocks on N-facing crag, 500 m alt., Morrone NNR, Braemar, NO132901, 2009, Rothero GP 19312.
- 107.4. *Philonotis caespitosa*. **40:** on wet soil bank, Townbrook Valley, Long Mynd, SO444937, 2009, Lawley M; **75:** in damp crevice of crag, 400 m alt., Craigbranceoch Hill, Glen Afton, NS630055, 2009, Rothero GP; **104:** muddy farm track, 90 m alt., Earlish, Abhainn Bhat, NG392614, 2009, Hodgetts NG 7692; **108:** on damp soil on ledge on more or less base rich crag, 400 m alt., N slopes of the Stack of Glencoul, NC294284, 2009, Rothero GP 19345.
- 107.5. *Philonotis fontana*. **33:** beside stream in grassland on steep slope, 100 m alt., near Snow Farm, Slad Valley, SO883077, 2009, Lansdown RV.
- 107.6. *Philonotis tomentella*. **103:** on wet, peaty ground, 2 m alt., Lochbuie, Mull, NM595245, 1976, Payne AG, det. Watson.
- 107.8. *Philonotis calcarea*. **76:** in basic flush, Earn Hill, Gourrock, NS230755, 1998, Watson K.
- 109.1. *Plagiobryum zieri*. **76:** on rock ledge, 400 m alt., Black Grain Burn, Misty Law, NS286627, 2005, Watson K; **H39:** steep partly bare soil over basalt low on E-facing crag near waterfall almost unshaded, 320 m alt., N end of Sallagh Braes, D33990585, 2008, Holyoak DT 08-572.

- 110.1. *Anomobryum julaceum*. **H38**: on open sandy shingle in dune heathland, 5 m alt., Murlough NNR, J39763336, 2002, Holyoak DT 02-952.
- 110.2. *Anomobryum concinnatum*. **94**: on thin soil over broken limestone on crag, 435 m alt., above Burn of Little Fergie, Glen Avon, NJ16841143, 2009, Rothero GP 19216; **H1**: in algal mat on wet rock beside stream, above Coomclogherane Lake, V996675, 2009, Callaghan DA 926; **H39**: on steep soil and crumbling near-vertical basalt near base of E-facing basalt crag almost unshaded, 330 m alt., N end of Sallagh Braes, D339059, 2008, Holyoak DT 08-569.
- 111.5. *Bryum uliginosum*. Delete **H35**: voucher 'Rosapenna, C13 HW Lett 1908' in DBN is *B. pseudotriquetrum* var *pseudotriquetrum* comm. Holyoak.
- 111.7. *Bryum turbinatum*. **42** in (): riverside, by the Usk, Junction of Clydach, SO2415, 1884, Ley Rev. A., NMW, conf. Holyoak.
- 111.9. *Bryum weigeli*. **77**: in flush, 400 m alt., Dun Law, NS9113, 1997, Watson K; **80**: in flush, 670 m alt., below Auchope Cairn, Cheviot Burn, NT88991949, 2009, Corner RWM.
- 111.11. *Bryum algovicum*. **75**: on wall of cemetery, 80 m alt., Barrhill cemetery, NX237820, 2009, Preston CD; **H38**: unshaded sandy soil on top of mortared-stone wall near coast, 5 m alt., near Castle Espie, J49016734, 2008, Holyoak DT 08-527.
- 111.14. *Bryum archangelicum*. **H25**: large cushions, on damp N-facing mortared wall of shed with galvanized iron roof, beside road; about 65 m alt., Curraghboy, M92964802, Holyoak DT 04-445 DBN; **H38**: with other low mosses and sparse low *Festuca* on unshaded thin sandy soil on top of mortared-stone wall by estuary, 5 m alt., near Castle Espie, J48996739, 2008, Holyoak DT 08-523.
- 111.15. *Bryum intermedium*. **28**: on unshaded marly sediment at pond edge, 5 m alt., Home-next-the-Sea, TF70814477, 2008, Holyoak DT 08-664; **H38**: with other low mosses and sparse low *Festuca* on unshaded thin sandy soil on top of mortared-stone wall by estuary, 5 m alt., near Castle Espie, J48996739, 2008, Holyoak DT 08-522; **H39**: with other low mosses and sparse low grasses on partly bare, stony ground (chalk) near coast unshaded, 10 m alt., Whitebay Point, D32741516, 2008, Holyoak DT 08-596.
- 111.16. *Bryum donianum*. **42**: several patches on anthill by path, 280 m alt., Blackrock, SO21981289, 2009, Bosanquet SDS.
- 111.18. *Bryum elegans*. Delete **1**: three specimens (BBSUK, NMW) re-examined in 2001 are not *B. elegans* but probably *B. capillare*, comm. Holyoak; **47**: on basic rock, Roundton, Old Church Stoke, SO2994, 1975, EC Wallace NMW, det. Holyoak; **H29**: in crevice near base of limestone crag, 220 m alt., Cloontyrughlish, Glenade, G783475, 2005, Rothero GP.
- 111.20. *Bryum torquescens*. **42**: on anthill by path, 280 m alt., Blackrock, SO21981289, 2009, Bosanquet SDS; **H5** in (): Mallow, W59, 1885, Holt GA DBN, conf. Holyoak; **H9** in (): Shannon, R46, Stewart SA DBN, conf. Holyoak; **H39**: with other low mosses in patchy cover on chalky soil of gravelly slope with slight shade from grasses, 20 m alt., The White Rocks (E of Portrush), C88984075, 2008, Holyoak DT 08-641B.
- 111.21. *Bryum canariense*. **44**: in crevices in S-facing limestone, 220 m alt., Carreg Cennen Castle, SN670191, 2008, Bosanquet SDS, det. Holyoak.
- 111.22. *Bryum creberrimum*. **6**: on stony ground in a clearing, Asham Wood near Frome, ST74, 1983, Appleyard J NMW (first published in *Field Bryology* vol. 89 but inadvertently left out of the *Census Catalogue*); **H4**: in flower pot in churchyard, 5 m alt., Sacred Heart RC Church, Minane Bridge, W743567, 2009, Preston CD, det. Holyoak.
- 111.23. *Bryum pallescens*. **87**: on concrete of bridge below galvanized railings, 40 m alt., footbridge over Allan Water in woods N of Bridge of Allan, NS78769902, 2009, Moore O; **H2**: on ground under masts and associated installations, 250 m alt., Knockanore Mountain, Q910425, 2009, Bingley J, conf. Preston; **H4**: in dense band at foot of building under overhang of corrugated metal roof, 5 m alt., Sacred Heart RC Church, Minane Bridge, W7456, 2009, Preston CD; **H39**: large patches on N- and E-facing mortared-stone wall of farm shed, beneath edge of galvanized iron roof, 175 m alt., Escort, E of Greenanmore, D22024063, 2008, Holyoak DT 08-598.
- 111.24.a. *Bryum pseudotriquetrum* var. *pseudotriquetrum*. **1**: in ditch in old tin settling

- tanks, Reskadinnick, Cambourne, SW64, 1971, Murphy RJ, det. Holyoak; **2:** dripping rock face in old slate quarry, S side of road to Tintagel, SX08, 1961, Murphy RJ, det. Holyoak; **57:** in boggy flush on moorland, 400 m alt., Ashop Clough, SK0890, 2003, Blockeel TL 32/203; **64:** on wet calcareous rocks by small waterfall in gill, Wharfedale 1 km NW of Kettlewell, SD9572, 2009, Blockeel TL 38/251; **92:** in flush by old stone wall, 460 m alt., N side of Craig Leek, Invercauld, Braemar, NO188934, 2009, Rothero GP 19091; **H3:** on flushed rock face by road, 80 m alt., Burke's Bridge Wood, W4348, 2009, Bosanquet SDS; **H18:** among 'brown mosses' in fen at edge of raised bog, 50 m alt., Sharavogue, S051983, 2009, Hodgetts NG 7570; **H39:** with other low bryophytes and sparse low grasses and herbs on damp chalk fragments and soil of unshaded flushed area on floor of old quarry, 25 m alt., just E of Glenarm village, D31421532, 2008, Holyoak DT 08-559.
- 111.24.b. *Bryum pseudotriquetrum* var. *bimum*. **75:** on roadside cutting with calcareous seepage, Chapeldonan N of Girvan, NS193001, 2009, Graham JJ; **H2:** on granite chippings on grave, 40 m alt., graveyard NE of Castleisland, R008107, 2009, Bosanquet SDS and Preston CD.
- 111.25. *Bryum caespiticium*. **H18:** on old sandstone shed, 140 m alt., Cadamstown village, N2208, 2009, Lyons M, det. Preston.
- 111.29. *Bryum gemmiferum*. **70:** on soil in flood zone of river, River Eden, Lacy's Caves W of Lazonby, NY564383, 2009, Lawley M; **H5:** on vertical river bank, 30 m alt., River Blackwater 4 km W of Fermoy, W77409826, 2009, Bosanquet SDS; **H26:** on unshaded calcareous marl in small crevices on tops and sides of limestone boulders in inundation zone of marl-lake, 18 m alt., E shore of L. Carra S of Brownstown, M19667081, 2003, Holyoak DT 03-600 DBN.
- 111.31. *Bryum dichotomum*. **76:** on gravel path in garden, Pollock Country Park, NS55086167, 2009, Chamberlain DF E00255880.
- 111.33. *Bryum radiculosum*. **75:** on stonework of bridge in open parkland by river, 20 m alt., Water of Girvan at Bargany Estate near Dailly, NS24380033, 2009, Long DG 38292; **H3:** on wall of churchyard, 50 m alt., Dromore, W060457, 2009, Preston CD.
- 111.34. *Bryum rudérale*. **H2:** on soil in barley stubble field, 7 m alt., Ballymacquin, Q764260, 2009, Bosanquet SDS and Preston CD; **H5:** on path, 20 m alt., by entrance to St Coleman's Cathedral, Cloyne, W917676, 2009, Bosanquet SDS and Preston CD.
- 111.35. *Bryum violaceum*. **H3:** in barley stubble field, 90 m alt., S of Fahy's Crossroads, townland of Barleyfield, W504471, 2009, Bosanquet SDS and Preston CD; **H39:** with other low mosses on part-bare, unshaded, loamy soil near edge of stubble field, 150 m alt., E of Lagavara (S of Ballintoy), D04834220, 2008, Holyoak DT 08-613.
- 111.36. *Bryum klinggraeffii*. **H40:** unshaded, mainly bare, loamy soil in stubble field, 40 m alt., Dundooan (N of Coleraine), C85253570, 2008, Holyoak DT 08-642.
- 111.37. *Bryum sauteri*. **H39:** with other mosses on part-bare loamy soil at foot of E-facing basalt crag almost unshaded, 330 m alt., N end of Sallagh Braes, D339059, 2008, Holyoak DT 08-570.
- 111.39. *Bryum tenuisetum*. **112:** on earth on root plate of fallen tree in 'plantation 8', 80 m alt., Mainland, Kergord plantations, Weisdale, HU394551, 2009, Hodgetts NG 7679.
- 111.40. *Bryum subapiculatum*. **H10:** by Lough Nahinch, 1965, King ALK DBN, det. Holyoak.
- 111.41. *Bryum bornholmense*. **57:** on bare patch of soil on grassy bank in acid grassland, 185 m alt., Goyt Valley, S of Whaley Bridge, SK008795, 2008, Blockeel TL 37/021, conf. Holyoak; **H2:** on peaty spoil, 5 m alt., Tarbert Island, W of causeway, R07454908, 2009, Bosanquet SDS and Preston CD; delete **H10:** voucher in DBN is *B. subapiculatum* comm. Holyoak.
- 111.43. *Bryum riparium*. **75:** on damp mineral soil in eroded gully, 365 m alt., by Afton Water below Craighbreanoch Hill, NS62840536, 2009, Rothero GP.
- 111.45. *Bryum muehlenbeckii*. **96:** on rocks in river near waterfall, 600 m alt., upper River Tarff, NH448032, 2002, Hodgetts NG 3961, conf. Holyoak.
- 111.48. *Bryum apiculatum*. **1:** on thin silty soil among rocks and gravel in unshaded area on floor of disused gabbro quarry, 65 m alt., Dean Quarries, SW80082024, 2009, Holyoak DT 09-42, det. Holyoak, new to British Isles.

- 112.1. *Rhodobryum roseum*. **75**: on steep mossy bank above burn in wooded glen with *Betula* and *Corylus*, 105 m alt., Penwhapple Glen above Penwhapple Bridge, E of Girvan, NX23659745, 2009, Long DG 38303; **H40**: crevices of gravelly scree of basalt fragments on N-facing slope below crag, among sparse grasses and herbs, 15 m alt., Downhill, C75053608, 2008, Holyoak DT 08-633.
- 114.3. *Poblia cruda*. **76**: on rocky outcrop, Blackwood Hill, NS543484, 2001, Watson K.
- 114.6. *Poblia drummondii*. **43**: on damp track, Newhouse Hill, SO143766, 2009, Lawley M; **H3**: on forestry track, Curteen, W2261, 2009, Fisk RJ.
- 114.10. *Poblia bulbifera*. **76**: on muddy margin of reservoir, Leperstone Reservoir, NS353717, 2002, Watson K; **H31**: on soil in winter wheat stubble, Station Road, Castlebellingham, O09, 2009, Synnott D.
- 114.11. *Poblia annotina*. **76**: on mud on reservoir margin, Harelaw Reservoir, NS3073, 2000, Watson K.
- 114.12. *Poblia prolifera*. **94**: on bare soil under overhanging boulder on steep slope, 390 m alt., Burn of Little Fergie, Glen Avon, NJ167114, 2009, Rothero GP 19219.
- 114.13. *Poblia camptotrachela*. **41**: wet flushed ground at base of spoil heap near old coal mine, 180 m alt., Cefn-coed, S of Abernant Farm, SN790026, 2009, Hodgetts NG 7533; **75**: on poached earth on grassy bank, 100 m alt., E of Haugh on River Ayr Way, NS51182551, 2009, Ghullam M, det. Chamberlain; **85**: on soil in stubble field, 165 m alt., by Clatto Reservoir, NO365076, 2009, Chamberlain DF E00323511; **91**: on damp disturbed gravel on drive, 150 m alt., drive to Glendye Lodge, NO64618624, 2009, Moore O; **92**: on poached ground at edge of small pond, Muir of Dess, NJ555012, 2009, Kungu EM *et al.*; **H2**: in cattle-poached marsh, Muingwee, R033224, 2009, Fisk RJ; **H38**: partly bare, loamy soil near edge of stubble field, slightly shaded by hedgerow, 80 m alt., near A25 N of Saval (NE of Newry), J11873110, 2008, Holyoak DT 08-542.
- 114.16. *Poblia lutescens*. **H3**: on sandy soil on bank in woodland, 30 m alt., S of Bandon River, W of Bandon, W4654, 2009, Preston CD.
- 114.18. *Poblia melanodon*. **H3**: roadside gully, Bandon Woods near Bandon, W4654, 2009, Fisk RJ.
- 115.1. *Epipterygium tozeri*. **37**: soil crevice in river cliff, River Severn above Bewdley, SO77887705, 2009, Lawley M; **H2**: on earth bank at edge of river, 20 m alt., Listowel Bridge over River Feale, Q99434332, 2009, Kungu EM; **H5**: on shaded bank of river, 30 m alt., River Blackwater 4 km W of Fermoy, W774982, 2009, Bosanquet SDS; **H40**: damp, unshaded, clay-loam soil in stubble field, 40 m alt., Lower Quilley (by A2 W of Coleraine), C80353324, 2008, Holyoak DT 08-650.
- 116.5.a. *Mnium marginatum* var. *marginatum*. **39**: on soil under trees on bank of river, River Severn near Arley, SO768799, 2009, Lawley M; **75**: on bank of river, 15 m alt., Water of Girvan at Bargany Estate near Dailly, NS243004, 2009, Bosanquet SDS; **76**: Black Linn, Loch Thom, NS2569, 1997, Watson K.
- 116.5.b. *Mnium marginatum* var. *dioicum*. Delete **61**: locality is in v.-c. 62, comm. J. Blackburn; **62** in (): Mowthorpe Dale, SE6869, 1844, Spruce R, det. Mitten.
- 116.6. *Mnium stellare*. **99**: on soil bank in wooded ravine, Duchess Wood, Helensburgh, NS28728373, 2009, Flagmeier M.
- 119.1. *Plagiomnium cuspidatum*. **77**: on river bank, River Kelvin at Kelvingrove, NS5666, 1998, Watson K; **H3**: in small quantity in turf by path, 55 m alt., Ballynacarriga Castle, W288508, 2009, Bosanquet SDS.
- 119.2. *Plagiomnium affine*. **88**: on roadside boulder in grass, 165 m alt., Pitmeadow near Dunning, NO025128, 2009, Chamberlain DF and Kungu EM; **H38**: with other mosses on unshaded thin sandy soil on top of mortared-stone wall near estuary, 5 m alt., near Castle Espie, J48986740, 2008, Holyoak DT 08-525.
- 119.4. *Plagiomnium elatum*. **76**: in fen, Knowes, NS3756, 2003, Watson K; **H3**: in flushed ground, 360 m alt., N of stream draining from Coomanore Lough, Mullaghmesha, W082503, 2009, Kungu EM.
- 119.5. *Plagiomnium ellipticum*. **32**: in grassland, 45 m alt., Barnack Hills and Holes, TF0704, 2008, Carter RH; **33**: on thin soil over bedrock in grassland, 250 m alt., Barton Bushes SSSI, SP111260, 2009, Lansdown RV; **H36**: in marshy grassland dominated by *Juncus effusus*, near Culnaha, H57285699, 2009, Hanson P.
- 120.1. *Pseudobryum cinclidioides*. **76**: in willow

- carr, Glen Moss, NS366697, 1994, Watson K, det. Hodgetts; **95**: on dry bed of loch with *Calliergon cordifolium*, Loch Roid, Boat of Garten, NH919187, 2007, Payne AG.
- 122.1. *Orthodontium lineare*. **H2**: edge of peat bank in cut-over bog, 35 m alt., Shronowen Bog, Q99534043, 2009, Kungu EM; **H36**: on rotting tree stump in woodland, Mountjoy Forest, H4376, 2009, Hanson P.
- 123.1. *Leptotheca gaudichaudii*. 2†: on trunk of tree fern in garden, 100 m alt., Eden Project, SX047548, 2009, Hodgetts NG 7512.
- 127.1. *Daltonia splanchnoides*. **H5**: rare on 9+ *Salix* by stream in gully through clear-felled conifers, 205 m alt., Gortroche Forest, W71449575, 2009, Bosanquet SDS.
- 128.1. *Hookeria lucens*. **H18**: wet shaded ditch banks in swamp woodland at edge of raised bog, 50 m alt., Sharavogue, S052983, 2009, Hodgetts NG 7571.
- 130.1.b. *Fontinalis antipyretica* var. *gracilis*. **75**: on rocks in burn, Burnnock Water S of Ochiltree, NS5017, 2009, Hill MO.
- 130.2.a. *Fontinalis squamosa* var. *squamosa*. **79**: in river, Ale Water downstream from Ale Moor Reservoir, NT40761565, 2008, Foster T, det. Corner, conf. Porley.
- 132.2. *Palustriella falcata*. **H39**: with other mosses and sparse low sedges at edge of small temporary pool on unshaded open ground near coast, 10 m alt., Whitebay Point, D32831508, 2008, Holyoak DT 08-595.
- 134.1. *Campyllum stellatum*. **29**: on mown ground by spring, Chippenham Fen, TL6469, 2009, Hill MO and Saunders AN; **33**: in sedge flush in area of springs, 240 m alt., Bushley Muzzard SSSI, SO942133, 2009, Lansdown RV.
- 134.2. *Campyllum protensum*. **75**: on vertical stonework by burn, Beoch Lane by Little Rigend hill, NS5311, 2009, Graham JJ, conf. Hill; **H5**: on damp calcareous track, N of Knuttery forest, W634941, 2009, Bosanquet SDS.
- 135.1. *Campyliadelphus chrysophyllus*. **79**: on calcareous clay of scaur, 240 m alt., N side of Ale Water W of Whitslaid, NT42631741, 2009, Corner RWM, conf. Blockeel.
- 136.1.b. *Amblystegium serpens* var. *salinum*. **76**: in sandy flush on coast, Lunderston Bay, NS2073, 2008, Watson K.
- 137.1. *Hygroamblystegium fluviatile*. **23**: on side of canal above water level, 110 m alt., Oxford Canal, Claydon bottom lock, SP466497, 2009, Carter RH; **71**: on concrete of weir, 30 m alt., River Neb W of St John's, SC267818, 2009, Blockeel TL; **76**: on rock in burn, River Gryfe by Duchal, NS3568, 2000, Watson K.
- 137.3. *Hygroamblystegium varium*. **35**: large patches on sluice wall, 5 m alt., Magor Marsh, ST4264 8651, 2006, Bosanquet SDS; **75**: on wet rock, Penwhapple Burn, NX2397, 2009, Lawley M.
- 137.4. *Hygroamblystegium humile*. **3**: on base of reeds, Old Sludge Beds, Exeter, SX952888, 2009, Sleath JD; **53**: on bough of elder in swampy woodland, 50 m alt., Navenby, SK985577, 2009, Hodgetts NG 7517.
- 140.1. *Drepanocladus polygamus*. **75**: in base-rich peat cuttings, Shewalton Moss, NS341354, 2009, Bosanquet SDS.
- 140.2. *Drepanocladus aduncus*. **108**: in flush by burn on shell sand, 20 m alt., Traigh Allt Chailgeag, E of Sangobeg, NC442654, 2009, Rothero GP 19015; **H36**: on wet heath, eastern slopes of Bessy Bell, H4081, 2009, Hanson P.
- 141.1. *Tomentypnum nitens*. **46**: rare in M5 springhead, 0 m alt., Hen-draws, SN550613, 2009, Bosanquet SDS and Birch K; **85**: amongst sedges on base-rich flushed slope, 165 m alt., above Clatto Reservoir, NO364075, 2009, Chamberlain DF E00323510; **109**: locally abundant at head of long flush with *Scorpidium cossonii*, 186 m alt., above Camster Lodge, ND24884205, 2009, Payne AG.
- 142.2. *Sanionia orthothecioides*. **93**: in grassy *Empetrum* heath on N-facing slope above cliffs, Longhaven cliffs just S of the SWT reserve, NK11223861, 2009, Payne AG; **94**: on rocky outcrop dominated by *Armeria* on steep slope, 100 m alt., Cliffs at Troup Head RSPB reserve, NJ82426717, 2006, Payne AG, conf. Long.
- 143.1. *Hygrohypnum ochraceum*. **H4**: on rocks in river, 190 m alt., Rockchapel, R218138, 2009, Bosanquet SDS.
- 143.3. *Hygrohypnum luridum*. **38**: side of lock on canal, 120 m alt., Oxford Canal, Marston Doles, SP464582, 2009, Carter RH; **H3**: on concrete in lowland stream, Schull Town, V927314, 2009, Callaghan DA 886.

- 143.5. *Hygrohypnum eugyrium*. **4:** on sandstone block 1.5 m above water level at edge of river, Wester Wood, SE of Lynmouth, SS733487, 2009, Holyoak DT 09-91; **75:** on rocks in burn, 200 m alt., River Afton below Craighbraneoch Hill, NS627054, 2009, Moore O.
- 145.1. *Warnstorfia fluitans*. **77:** on raised bog, Saughs Moss, NS6469, 1989, Watson K.
- 147.1. *Straminergon stramineum*. **H4:** on *Sphagnum* in moorland valley mire, 320 m alt., Taurbeg NE, R236114, 2009, Bosanquet SDS; **H5:** in flushed field by road, 250 m alt., Tooreen, W650938, 2009, Bosanquet SDS.
- 149.1. *Scorpidium revolvens*. **63:**, Ruddle Clough, Upper Holme Valley, SE1203, 2007, Lake H, conf. Blockeel; **67:** in basic flush on whin outcrop, 220 m alt., East Bogg, NY7467, 2009, McCutcheon D and Simkin J; **73:** on flushed rock slab on bank of burn, 410 m alt., by small burn on the NE slopes of Craignelder, NX517884, 2009, Rothero GP 19045; **91:** in flush below cliff, 10 m alt., Girdle Ness, NJ970054, 2009, Kungu EM *et al.*; **H18:** wet fen at edge of raised bog, 50 m alt., Sharavogue, S051983, 2009, Hodgetts NG 7573.
- 149.2. *Scorpidium cossonii*. **60:** in calcareous flush on moorland hillside, Leck Beck, SD653793, 2009, Callaghan DA 708; **68:** in flushed coastal grassland, Bamburgh, NU13S, 2008, O'Reilly J and C, conf. Hill; **76:** in base-rich flush, Dargarvel mire, NS371713, 2005, Watson K.
- 150.1. *Calliargon cordifolium*. **77:** in fen on loch margin, 235 m alt., Porterhall Lochan, NS799363, 2009, Kungu EM and Murdoch P.
- 150.2. *Calliargon giganteum*. **77:** amongst meadowsweet by standing water, 90 m alt., Chatelherault Country Park, NS739523, 2009, Chamberlain DF.
- 151.1. *Leskea polycarpa*. **H36:** on silted willow at side of river, Blackwater River, H6552, 2009, Hanson P.
- 157.2. *Thuidium delicatulum*. **76:** in flushed mire in fen, Black Loch near Mearns, NS503517, 1995, Watson K.
- 160.1. *Scorpiurium circinatum*. **36:** on shaded limestone, The Dowards, Symonds Yat, SO557156, 2009, Sleath JD.
- 163.2. *Platyhypnidium lusitanicum*. **H5:** on rock in stream gully, 205 m alt., Gortroche Forest, W714957, 2009, Bosanquet SDS.
- 164.2. *Rhynchostegium confertum*. **76:** on wall, by entrance to Pollock Country park, NS559616, 2009, Chamberlain DF; **H39:** basalt of ledge low on wall beside road verge almost unshaded, 55 m alt., White Park Bay, D01444358, 2008, Holyoak DT 08-609.
- 165.1. *Rhynchostegiella tenella*. **106:** on bedrock in floor of cave, NE of Berryhill shore N of Rosemarkie, NH766617, 2006, Payne AG.
- 165.3. *Rhynchostegiella curviseta*. **37:** on base of stone bridge over river, River Severn at Bewdley, SO78757545, 2009, Lawley M; **39:** on base of sandstone retaining wall by stream, Worrall's Grove, Eymore Wood, Upper Arley, SO768798, 2009, Lawley M.
- 165.4. *Rhynchostegiella teneriffae*. **97:** on limestone slab by burn in ravine, 15 m alt., Allt na Samhnachain, Loch Aline SSSI, NM69364596, 2009, Rothero GP 19257.
- 166.1. *Cirriphyllum piliferum*. **H36:** on earth bank around mixed woodland, W of Aughnacloy near Blackwater River, H6752, 2009, Hanson P.
- 166.2. *Cirriphyllum crassinervium*. **38:** on flat stone grave in churchyard, 180 m alt., Ratley, SP383473, 2009, Carter RH; **76:** roots of sycamore by river, White Cart, Linn Park, NS583585, 2002, Watson K; **96:** on slabby base-rich rocks at base of crag, 270 m alt., Creag nan Clag, SW of Loch Duntelchaig, NH601289, 2009, Rothero GP 19044.
- 167.1. *Oxyrrhynchium pumilum*. **46:** on clay soil on tree root in shady lane leading to beach, 35 m alt., Near Wallog, SN5985, 1986, Bates JW 1602; **75:** earth bank by burn, 20 m alt., Culzean Castle estate, NS4525, 2009, Ghullam M; **H3:** on earth in rock crevice, 3 m alt., Burren Pier SSW of Kilbrittain, W504432, 2009, Bosanquet SDS and Preston CD; **H38:** on acid wet wall, Helen's Bay railway station, J457821, 2008, Weyl R, conf. Holyoak.
- 167.2. *Oxyrrhynchium hians*. **H5:** shaded ground near wall of cathedral, 20 m alt., St Coleman's Cathedral, Cloyne, W917676, 2009, Bosanquet SDS and Preston CD.
- 167.3. *Oxyrrhynchium schleicheri*. **44:** rare on earth bank among low limestone outcrops, 80 m alt., below E end of castle, Dinefwr Castle, SN613216, 2009, Bosanquet SDS.
- 167.4. *Oxyrrhynchium speciosum*. **38:** on side of lock

- on canal, 120 m alt., Oxford Canal, Marston Dales, SP464582, 2009, Carter RH; **43**: on a boulder in stream, Disgwylfa Hill, Newchurch, SO221515, 2009, Lawley M; **112**: in base-rich mire, Tingwall meadow, Loch of Tingwall, Mainland, HU414427, 2006, Harvey P, det. Payne, conf. Blockeel; **H18**: on organic detritus in swamp woodland at edge of raised bog, 50 m alt., Sharavogue, S052983, 2009, Hodgetts NG 7572.
- 169.4. *Sciuro-hypnum populeum*. **76**: on waste ground, Phoenix, Linwood, NS4564, 2000, Watson K; **112**: on rock in 'plantation 6', 30 m alt., Mainland, Kergord plantations, Weisdale, HU396542, 2009, Hodgetts NG 7677; **H36**: on stem in hazel coppice, Grange Wood ASSI, H4184, 2009, Hanson P.
- 170.1. *Brachythecium albicans*. **76**: on rock outcrop in pasture, near Langbank, NS3773, 1998, Watson K; **77**: in damp grassland, Cathkin Braes, near mast, NS6158, 1991, Watson K.
- 170.3. *Brachythecium glareosum*. **H27**: on moraine gravel, Ballytoohy Beg, Clare Island, L68, 1998, Synnott D.
- 170.5. *Brachythecium mildeanum*. **36**: on edge of gravel path, Whitfield House, Allensmore, SO421335, 2009, Sleath JD; **43**: at edge of track, Tylcau Hill, SO134765, 2009, Lawley M; **75**: on gritty track by sea, Black Neuk S of Girvan, NX1795, 2009, Hill MO; **H6**: in car park, 2 m alt., N side of River Blackwater W of Cappoquin, X088997, 2009, Bosanquet SDS and Preston CD.
- 171.1. *Scleropodium cespitans*. **56**: in silt on concrete blocks by river, 10 m alt., River Trent near Averham, SK769534, 2009, Blockeel TL 38/231; **75**: on rock by river, River Ayr by Auchinchruive, NS391235, 2009, Chamberlain DF; **H3**: on shaded road edge, 90 m alt., Keenrath Bridge, W187566, 2009, Bosanquet SDS; **H5**: on silage clamp and walls, 14 m alt., Ballymaloe, W951675, 2009, Bosanquet SDS and Preston CD.
- 173.1. *Brachytheciastrum velutinum*. **99**: on rock near stream, Duchess Wood, Helensburgh, NS28528387, 2009, Flagmeier M.
- 177.2. *Calliergonella lindbergii*. **H18**: on grassy track in farmland, 80 m alt., Shinrone, S of Killybaskea Bog, S066917, 2009, Hodgetts NG 7577.
- 178.1. *Taxiphyllum wissgrillii*. **39**: on boulder in deciduous woodland, Worrall's Grove, Eymore Wood, Upper Arley, SO772799, 2009, Lawley M.
- 179.1. *Pylaisia polyantha*. **40**: on elder in hedgerow by lane, near Cefn Einion, Clun, SO282866, 2009, Lawley M.
- 181.4. *Hypnum andoi*. **76**: on tree trunk, Ferryhill Plantation, NS4072, 1994, Watson K; **112**: on tree trunks and dead wood in 'plantation 4', 60 m alt., Mainland, Kergord plantations, Weisdale, HU393541, 2009, Hodgetts NG 7675.
- 181.9. *Hypnum callichroum*. **H3**: in turf in gully through crags above lough, Lough Nambrackdearg, W0364, 2009, Lönnell N.
- 182.1. *Ptilium crista-castrensis*. **54**: on horizontal willow bole in willow carr, Haxey Grange Fen, SW of Haxey, SK737973, 2009, Wall C.
- 183.1.b. *Ctenidium molluscum* var. *condensatum*. **76**: rock ledges by burn, Feeder burn to Raith Burn, NS2962, 2003, Watson K; **H1**: in flushed turf below more or less basic crag, 700 m alt., E-facing crags above E valley on Brandon Mountain, Q465115, 2009, Rothero GP 19133.
- 184.1. *Hycomium armoricum*. **40**: on soil on bank of stream, Catherton Common, SO646793, 2009, Lawley M.
- 186.1.b. *Heterocladium heteropterum* var. *flaccidum*. **75**: on overhanging sandstone rocks by river, River Ayr at Failford, NS4525, 2009, Hill MO.
- 186.2. *Heterocladium wulfsbergii*. **H2**: on boulder in stream in open valley, 302 m alt., Barnangeehy Valley, Slieve Mish Mountains, Q81070905, 2009, Long DG 38524.
- 189.3. *Rhytidiadelphus subpinnatus*. **41**: on bank above footpath in oak woodland, by River Neath, Glamorgan side, SN898087, 2008, Motley GS; **69**: in flood zone of stream in wet woodland, 50 m alt., Dale Park Beck, FC estate Grisedale, SD348915, 2009, Adams J and Nelson W.
- 189.4. *Rhytidiadelphus loreus*. **7**: in birch wood over acid soil, Savernake Forest, Marlborough, SU22816480, 2009, Pilkington S; **27**: in wet area in mixed woodland, 45 m alt., Brick-kiln Wood Barningham Hall, Matlaske Country Park, TG15233544, 2009, Norfolk and Suffolk Bryological Group; **55**: on dry stone wall, Ulverscroft Nature Reserve, SK49251257, 2009, Woodward SF 59807b.
- 190.1. *Loeskeobryum brevirostre*. **H18**: forming deep cushions in bog birch woodland, 40 m alt., Banagher, All Saints' Bog, N011113, 2009, Hodgetts NG 7567.

- 195.1. *Platydictya jungermannioides*. **75**: on ledge of crag in gorge, N end of Ness Glen below Loch Doon, NS4702, 2009, Chamberlain DF E; **90**: on conglomerate cliff above river, 90 m alt., Den of Airlie by river below castle, NO29495164, 2009, Rothero GP 19245; **H3**: in crevice in base-rich rock outcrop, 350 m alt., Nowen Hill, W14365365, 2009, Bosanquet SDS.
- 197.3.a. *Plagiothecium denticulatum* var. *denticulatum*. **76**: on wall, in plantation at Knockenae, NS4554, 1994, Watson K.
- 197.3.b. *Plagiothecium denticulatum* var. *obtusifolium*. **91**: in crevice amongst boulders, 300 m alt., Stack of Birnie, NO667810, 2009, Kungu EM *et al.*
- 197.4. *Plagiothecium laetum*. **75**: on rotten stump in open *Betula* and *Sorbus* woodland on S-facing valley slope, 110 m alt., N bank of Feoch Burn above Feoch Bridge, Barrhill, NX25658222, 2009, Long DG 38335.
- 197.5. *Plagiothecium curvifolium*. **77**: on stream bank under trees near waterfall, 225 m alt., S of Redford Bridge, North Medwin, NT016484, 2009, Kungu EM and Chamberlain DF.
- 197.7. *Plagiothecium cavifolium*. **112**: among rocks at top of steep N-facing slope, with mixed hepatic mat species, 400 m alt., Foula, Da Sneug, HT947396, 2009, Hodgetts NG and Gear S 7634; **H1**: in crevice of damp more or less basic crag, 700 m alt., E-facing crags above E valley on Brandon Mountain, Q465115, 2009, Rothero GP 19134.
- 197.10. *Plagiothecium undulatum*. **7**: woodland floor in open acid woodland, Savernake Forest, Marlborough, SU23006495, 2009, Pilkington S.
- 198.1. *Isopterygiopsis muelleriana*. **H1**: in crevice at base of moderately base-rich E-facing crag, 720 m alt., broken crags above Lough Googh, Macgillycuddy's Reeks, V838839, 2009, Rothero GP 19126.
- 198.2. *Isopterygiopsis pulchella*. **H38**: with other mosses in steep crevice of granitic crag above stream N-facing and slightly shaded, 300 m alt., base of Black Stairs, J36462924, 2008, Holyoak DT 08-512.
- 200.2. *Herzogiella seligeri*. **21**: decorticated oak trunk, 100 m alt., woodland S of the Concert lake, Hampstead Heath, TQ273872, 2009, Duckett JG.
- 201.1. *Entodon concinnus*. **H39**: with other bryophytes on sparsely vegetated N-facing clay slope near coast, 25 m alt., Fallowvee, D28452528, 2008, Holyoak DT 08-621; **H40**: very short vegetation in sandy edge of dune slack, 5 m alt., Ballymaclary N.R., C69693650, 2008, Holyoak DT 08-637A.
- 202.1. *Platygyrium repens*. **21**: leaning *Fraxinus* by stream, 120 m alt., Stanmore Common, TQ159939, 2009, Duckett JG.
- 205.1. *Cryphaea heteromalla*. **38**: on willow tree by stream, 110 m alt., on Warwickshire bank of valley between Upper Shuckburgh and Newbold Grounds, SP51936137, 2009, James J; **75**: on tree trunk, 20 m alt., Eglinton Country Park, NS318422, 2009, Carter RH.
- 208.1. *Antitrichia curtipendula*. **81**: on moderately old *Acer* in garden grounds, N side of Mellerstain House, NT646392, 1980, Corner RWM, conf. Long.
- 209.1. *Pterogonium gracile*. **106**: on boulder on loch margin, 190 m alt., SW side of Loch Morie, NH528757, 2009, Rothero GP 19227; **109**: conglomerate outcrop close to river, N bank of River Thurso, NE of Dirlot Gorge, ND131489, 2009, Payne AG, conf. Blockeel.
- 210.2. *Neckera crispa*. **20†**: on side of limestone block in landscaped grounds, Bricket Wood, TL143019, 2009, Blockeel TL 38/226.
- 210.3. *Neckera pumila*. **H38**: on field maple, NW of Killyleen, J521534, 2009, Weyl R, conf. Holyoak.
- 210.4. *Neckera complanata*. **38**: on concrete by outflow, 115 m alt., Wormleighton reservoir, Oxford canal, SP448515, 2009, Carter RH.
- 211.1. *Homalia trichomanoides*. **21**: old concrete wall, 100 m alt., Moat Mount off the A1, TQ211943, 2009, Duckett JG and Sheahan M-C; **76**: on tree root by river, White Cart at Linn Park, NS582594, 2001, Watson K.
- 214.1.a. *Isothecium myosuroides* var. *myosuroides*. **38**: on bole of beech tree at edge of woodland, 210 m alt., Edge Hill, SP378478, 2009, Carter RH.
- 214.1.b. *Isothecium myosuroides* var. *brachythecioides*. **70**: turf in block scree, 610 m alt., Hind Cove, Pillar, NY178121, 2008, Cameron F; **109**: in open *Festuca* grassland with *Sanionia orthothecioides*, top of cliffs at Dunnet Head, ND207767, 2005, Payne AG.

- 214.3. *Isoetecium holtii*. **H3**: on boulder beside lough, Lough Nambrackdearg, W0364, 2009, Callaghan DA 887; **H38**: on siliceous metamorphic rock exposed about 1 m above water level at edge of river (in inundation zone), shaded by Beech trees, 30 m alt., N bank of Shimna River in NE part of Tollymore Forest Park, J352323, 2008, Holyoak DT 08-538.
- 216.3. *Anomodon viticulosus*. **21**: old concrete wall, 100 m alt., Moat Mount off the A1, TQ211943, 2009, Duckett JG and Sheahan M-C; **75**: on vertical side of rock in old quarry, 100 m alt., old quarry at Old Dailly, NS23350128, 2009, Moore O; **H3**: on slate wall beside road, below St Michael's Church, Castlefreke, W334361, 2009, Callaghan DA 898.

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- Rothero, G.P. (2004). Distribution of taxa within the *Schistidium apocarpum* complex in the British Isles. *Field Bryology* 84, 2–6.

The Field Studies Council (FSC) runs several bryophyte identification courses at many of its centres around the UK. For full details of all the courses available, see the website (www.field-studies-council.org), telephone 0845 345 4071 or email enquiries@field-studies-council.org

As an example of some of the courses available in 2010, the following have been communicated to the Editor.

25–30 July 2010

Bryophytes for National Vegetation Classification

Rhyd-y-Crenau, The Draper's Field Centre, Betws-y-Coed, Conwy LL24 0HB

For everyone with a professional or amateur interest in bryophytes and their role in identifying types of plant communities.

Tutor Dr Martha Newton. Details from Mr D. Moncrieff (t 01690 710494; f 01690 710458; e enquiries.rc@field-studies-council.org)

16–20 August 2010

Mosses and Liverworts of Wetland and River Habitats

Malham Tarn Field Centre, Settle, North Yorkshire BD24 9PU

An opportunity to examine many of the significant ecological indicator species of these valuable and intriguing habitats.

Tutor Dr Martha Newton. Details from Mr A. Pickles (t 01729 830331; f 01729 830658; e enquiries.mt@field-studies-council.org)

23–27 August 2010

Identifying Mosses and Liverworts

Preston Montford Field Centre, Montford Bridge, Shrewsbury, Shropshire SY4 1DX
Individual guidance in identification and ecology at all levels.

Tutor Dr Martha Newton. Details from Ms S. Townsend (t 0845 330 7378; f 01743 851066; e enquiries.pm@field-studies-council.org)