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**THE NEW CENSUS CATALOGUE:
SUPPLEMENTARY LISTS OF DELETED,
RECENT AND REPLACEMENT RECORDS**

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In the preparation of the new *Census Catalogue* (Blockeel & Long, 1998), the principle adopted was that every vice-county occurrence should be supported by an adequately localised record. This was not the case in the early editions of the *Census Catalogues*, which were based in part on unpublished lists without localities. The existence of the Atlas database provided a mechanism for identifying such records. This mechanism was not without its problems. Not all of the early (and more recent) literature and herbarium records are present on the database, and some of the records which are present have minimal details. Nevertheless, as a first step in cleansing the *Census Catalogue* data, the decision was made to remove all vice-county occurrences which were not supported by an Atlas record or other known record.

This exercise has affected the mosses to a much greater extent than the liverworts, as much of the work for the liverworts had already been done in preparation for the Atlas and as a result of taxonomic revisions. It was impossible, without delaying publication of the new edition indefinitely, to conduct full research into the 'missing' moss records for all 153 vice-counties. Nevertheless, in the limited time available, it was possible to reinstate a significant number of entries.

The Atlas database also formed the basis for bracketing vice-county occurrences which had not been refound since 1950. As noted in the introduction to the new edition, David Long and I were conscious of the imperfections of the Atlas data. We had access only to a summary listing and not to details of individual records, and we were therefore unable to investigate or quantify possible sources of errors. It must be expected therefore that brackets have been applied incorrectly in some instances. In any case, many additional records have accumulated since publication of the Atlas. Where these were known to us, we were able to avoid adding brackets to occurrences which lacked a recent (post-1950) Atlas record.

This article documents missing and replacement records identified during research for the section on the mosses in the new edition of the *Census Catalogue*. Specifically its purpose is:

1. To itemise vice-county entries which have been deleted from the *Census Catalogue*. In a few cases (List 1) it is possible to give supporting information; a number of similar deletions have already been reported in recent lists of *New Vice-county Records* in the *Bulletin*. All the remaining deletions are itemised without further comment in List 2. These are the vice-county entries which are not represented on the Atlas database and for which no voucher or reliable record was traced during preparation of the *Census Catalogue*.
2. To document specimens examined in restoring 'missing' and unbracketed records. List 3 documents a small number of records which had been lost in error from the previous edition of the *Census Catalogue*. List 4 documents vouchers verified for recent and replacement records. This list does not preclude the existence of other equally valid specimens. In some instances literature records provided the basis for reinstating early records. Details of these are included in notes which have been

passed to the Recorder for Mosses. Unless otherwise stated, the voucher specimens for these records are deposited in BBSUK.

Members are urged to submit to the Recorder any records they have which might reinstate deleted entries or remove newly added brackets. Localised literature records, if considered sufficiently reliable, will be acceptable for the restoration of old (pre-1950) records in brackets. All recent (post-1950) records should be supported by voucher specimens in the normal way.

List 1: annotated deletions

- 2.6 *Andreaea rothii* a subsp. *rothii*, delete 96, 98, H5, H16, H35, the specimens are intermediate between subsp. *rothii* and subsp. *falcata*, det. B.M. Murray (the specimens in question are, respectively: Cairngorm, ascent from Glenmore, n.d., anon. (E); Glen Etive, 1986, D.G. Long (E); Kildorrery, 1857, I. Carroll (BM); W Salruck, 1900, Gamble (BM); Poison Glen, 1980, Dixon (BM)).
- 4.1 *Polytrichum alpinum*, delete 91, the specimen ('Kincardineshire', June 1837, herb. J. Cruickshanks (E)) is inadequately localised.
- 12.2 *Pleuroidium subulatum*, delete 72, specimen traced (ditch near the powder magazine, Dumfries, March 1840, herb. J. Cruickshanks (E)) is inadequate.
- 20.1 *Rhabdoweisia fugax*, delete 77, specimen traced (Leadhills, n.d., G. Lyon (E)) is *R. crispata*.
- 60.1 *Tortula subulata* c var. *subinermis*, delete 86, specimen traced (near Cowie Moss, 3 July 1895, R. Kidston & J.S. Stirling (E)) is var. *subulata*.
- 86.2 *Tetraplodon mnioides*, delete 80, specimen traced (on dead sheep, Millstone Edge, Liddesdale, 1859, Dr Nichol (E)) is *Splachnum sphaericum*.
- 88.2 *Splachnum ampullaceum*, delete 85, specimen traced (on dung in peaty ground, Bishop Hill, Lomonds, April 1904, W. Evans (E)) is immature and indeterminate.
- 97.28 *Bryum pseudotriquetrum* b var. *bimum*, delete 82, 84, 85, specimens traced (Gullane Links, 16 May 1908, herb. J. McAndrew (E); curling pond, Drumshoreland, June 1917, herb. W. Evans (E); Largo Links, 24 April 1909, herb. W. Evans (E)) lack inflorescences and cannot be referred to this variety with certainty.
- 102.1 *Plagiomnium cuspidatum*, delete 87, specimen traced (Dollar, July 1869, J. Sadler (E)) is *Mnium stellare*.
- 117.1 *Orthotrichum lyellii*, delete 104, specimen traced (Kinloch Castle, Isle of Rhum, 8 August 1934, C.V.B. Marquand (E)) is *Ulota phyllantha*.
- 117.9 *Orthotrichum cupulatum* b var. *riparium*, delete 89, specimen traced (Den of Alyth, July 1957, U.K. Duncan & R.M. Giesy (E)) is *O. rivulare*.
- 117.14 *Orthotrichum pallens*, delete 57, the specimen (Clough Wood, Winster, 1989, T.L. Blockeel (BBSUK)) is *O. pulchellum*, det. Blockeel; delete 75, specimen traced (on elder, Dailly, 14 May 1861, J. Shaw (E), cf. Shaw (1865)) is *O. stramineum*.
- 120.2 *Fontinalis squamosa* a var. *squamosa*, delete 83, specimen traced (Logan Burn, Pentlands, 1898, A. Murray (E)) is *F. antipyretica* var. *gracilis*.
- 123.1 *Leucodon sciuroides* b var. *morensis*, delete 88, specimen traced (Creag an Lochain, Meall nan Tarmachan, 19 July 1959, D.A. Ratcliffe (E)) is var. *sciuroides*.
- 157.4 *Drepanocladus lycopodioides*, delete 64, no voucher known, and the record (Malham, J. Nowell) is considered doubtful by Lees (1888).

- 189.1 *Homomallium incurvatum*, delete H33, the specimen (Marble Arch, Co. Fermanagh, 1993, T. Hallingbäck (BBSUK)) lacks sporophytes and is probably a form of *Hypnum resupinatum*.

List 2: other deletions

- 1.3 *Sphagnum papillosum*: 36, H31, H32.
1.4 *S. palustre* a var. *palustre*: H17, H19, H31, H32.
1.5 *S. magellanicum*: 24, H8.
1.6 *S. squarrosum*: 36, H8.
1.7 *S. teres*: 5, 40, 86.
1.8 *S. fimbriatum*: H34.
1.9 *S. girgensohnii*: 24.
1.11 *S. quinquefarium*: 86.
1.13 *S. capillifolium* b subsp. *rubellum*: H21, H31.
1.14 *S. fuscum*: 87.
1.15 *S. subnitens* a var. *subnitens*: 25, H32.
1.17 *S. molle*: 4, 32, 44, 45, 64.
1.19 *S. compactum*: 37, 39, 46, 56, 76, H17, H18, H19, H32.
1.21 *S. inundatum*: 31, 33, 36, 93, 111.
1.22 *S. denticulatum*: 32, 33.
1.23 *S. contortum*: 86, 87, H2, H8.
1.25 *S. tenellum*: 56, H21, H32.
1.26 *S. cuspidatum*: 34.
1.29 *S. pulchrum*: 64.
2.1 *Andreaea alpina*: 91.
3.1 *Pogonatum nanum*: 56, 77, 100, 102, 111, H1, H3, H34.
3.2 *P. aloides*: 56, H18, H31.
3.3 *P. urnigerum*: 56, H18, H26, H31, H37.
4.1 *Polytrichum alpinum*: 93, H31.
4.2 *P. longisetum*: 80, 85, 100, H21.
4.3 *P. formosum*: H32.
4.5 *P. commune* a var. *commune*: H17, H21; c var. *humile*: 42, 45, 59.
4.6 *P. piliferum*: H11, H15, H18, H21, H32.
4.7 *P. juniperinum*: H17.
4.8 *P. strictum*: 85, H3.
5.1 *Oligotrichum hercynicum*: H1.
6.1 *Atrichum crispum*: 61.
6.3 *A. undulatum* a var. *undulatum*: H19, H31; b var. *gracilisetum*: 38, 56, 70.
7.1 *Tetraphis pellucida*: 109.
9.1 *Diphyscium foliosum*: 77, 85, 109, H21.
10.1 *Buxbaumia aphylla*: 39, 79, 95.
11.1 *Archidium alternifolium*: 89.
12.1 *Pleuridium acuminatum*: 56, 75, 93, 109, H3, H18, H20, H21, H31.
12.2 *P. subulatum*: 33, 77, 86, 92.
13.1 *Pseudephemerum nitidum*: 75, 105, H21.
14.10 *Ditrichum gracile*: H2, H3, H6, H12, H13, H30, H31, H32.
16.1 *Distichium capillaceum*: H3, H21.

- 16.2 *D. inclinatum*: 89, 107.
- 20.1 *Rhabdoweisia fugax*: 58, 86, 93.
- 20.2 *R. crispata*: 40, 45, H16.
- 21.1 *Cynodontium bruntonii*: 93.
- 21.3 *C. jenneri*: 65, 85, 86, 95, 109, 111.
- 22.2 *Oncophorus wahlenbergii*: 87.
- 23.1 *Dichodontium pellucidum*: 56, H31.
- 25.2 *Dicranella schreberiana*: H1, H30.
- 25.4 *D. crispa*: 61, 77, 80, 92, 96, 98.
- 25.5 *D. subulata*: 70, 107.
- 25.8 *D. rufescens*: 54, 75, 107.
- 25.9 *D. cerviculata*: 34, 45, 75, 87, 91, 109, H12.
- 25.10 *D. heteromalla*: H18.
- 26.1 *Dicranoweisia cirrata*: H19.
- 26.2 *D. crispula*: 62, 94, 95.
- 28.1 *Kiaeria falcata*: 100, 102.
- 28.3 *K. starkei*: 109.
- 29.2 *Dicranum bonjeanii*: 56, H1, H4, H6, H9, H13, H17, H19, H21, H24, H30, H31.
- 29.8 *D. fuscescens*: 77.
- 29.9 *D. flexicaule*: 65, 108.
- 30.1 *Dicranodontium uncinatum*: 87, 89.
- 30.3 *D. denudatum*: 40, 109, H12.
- 31.1 *Campylopus subulatus*: 45, 100, H28.
- 31.3 *C. gracilis*: 109, H3.
- 31.4 *C. fragilis*: H21, H24.
- 31.6 *C. flexuosus*: 56, H31, H32.
- 31.9 *C. atrovirens* a var. *atrovirens*: 58, 77, 91, H32; c var. *gracilis*: 70.
- 31.12 *C. brevipilus*: 16, 43, H6.
- 33.1 *Leucobryum glaucum*: 56, 85, 93, H21, H40.
- 34.6 *Fissidens incurvus*: 80.
- 34.7 *F. bryoides*: H13, H31.
- 34.13 *F. exilis*: 70, 79, 95, 109.
- 34.16 *F. osmundoides*: 91.
- 34.18 *F. dubius*: 75.
- 34.19 *F. adianthoides*: H21, H31, H32.
- 36.1 *Encalypta streptocarpa*: H18, H30, H32.
- 36.4 *E. vulgaris*: 27, 76, H16, H20.
- 36.6 *E. ciliata*: 94, 95, 109.
- 37.1 *Eucladium verticillatum*: 107, H15, H32.
- 38.1 *Weissia controversa* a var. *controversa*: H18.
- 38.3 *W. rutilans*: 45, 46, 86, 91, 102, 111.
- 38.5 *W. brachycarpa* a var. *brachycarpa*: 45; b var. *obliqua*: 46, 96, 100, H5, H20.
- 38.6 *W. squarrosa*: 45, 56.
- 38.12 *W. longifolia* b var. *angustifolia*: 33, 36, 37, 40, 56.
- 39.1 *Tortella tortuosa*: H5, H21, H30, H31.
- 39.6 *T. inclinata*: 91.
- 39.8 *T. flavovirens* a var. *flavovirens*: H5, H28.
- 40.1 *Trichostomum brachydontium*: H15, H17.

- 40.2 *T. crispulum*: 77.
40.3 *T. tenuirostre* b var. *holtii*: 50.
44.1 *Dialytrichia mucronata*: 80.
45.1 *Pseudocrossidium hornschuchianum*: 96.
45.2 *P. revolutum*: 33, 105, 107, H18, H19, H30.
46.1 *Bryoerythrophyllum recurvirostrum*: H18, H19, H31.
46.2 *B. ferruginascens*: 5, 59, 75, 86.
47.1 *Leptodontium flexifolium*: 46, 109, 111, H35.
48.1 *Hymenostylium recurvirostrum*: 45, 46, 83, H1, H10, H18, H21, H30, H31, H33, H35, H40.
49.1 *Anoetangium aestivum*: 43, 77, 78.
51.3 *Gymnostomum aeruginosum*: H31.
53.2 *Barbula unguiculata*: H18, H30.
54.1 *Didymodon acutus*: 33, 43, 56, 58, H26.
54.3 *D. rigidulus*: H19.
54.8 *D. vinealis*: 72, 80, 88, 97, H34.
54.9 *D. insulanus*: H17, H31, H32.
54.12 *D. sinuosus*: H17.
54.13 *D. tophaceus*: H15, H17, H18, H31, H32, H33, H37.
54.14 *D. spadiceus*: 33, 45, 76, 87, H31, H32.
54.15 *D. fallax*: H31.
54.17 *D. ferrugineus*: 38, 56, 75, 86, 91, H1.
57.1 *Pterygoneurum ovatum*: 27, 45, 56, 70, 95.
58.3 *Aloina aloides*: 75, 77, 85, 95, H2, H12, H16, H17, H20, H21, H27, H30.
60.1 *Tortula subulata* a var. *subulata*: 76, H3, H31, H32, H34; b var. *angustata*: 57, 59.
60.8 *T. muralis* b var. *aestiva*: 3, 16, 36, 38, 50, 56, 57, H38.
60.11 *T. atrovirens*: 46.
60.12 *T. lanceolata*: 56, 109.
60.13 *T. wilsonii*: H3.
60.14 *T. viridifolia*: 26, 58, 82.
60.15 *T. modica*: 70, 78.
60.16 *T. truncata*: H32.
60.17 *T. protobryoides*: 56, 70.
60.18 *T. acaulon* a var. *acaulon*: 73, H3; b var. *pilifera*: 85; c var. *schreberiana*: 61.
61.1 *Microbryum starckeanum*: 32.
61.3 *M. rectum*: 37, H20.
61.4 *M. curvicolle*: 56.
61.5 *M. floerkeanum*: 5.
62.3 *Hennediella heimii*: 26, 56, 70, 76, 86, H3, H31.
63.1 *Acaulon muticum*: 34, 45, 46, 77, 80, 100.
65.1 *Syntrichia ruralis*: 56, 73, 76, 87, H16.
65.2 *S. ruraliformis*: H31, H37.
65.4 *S. intermedia*: 56, 102.
65.5 *S. princeps*: 72, 91.
65.7 *S. laevipila* a var. *laevipila*: 94, 100, H5, H32; b var. *laevipilaeformis*: 15, 33, 34, 37, H18.
65.8 *S. papillosa*: 34, 39, 56, 77.
65.9 *S. latifolia*: 94.

- 66.1 *Cinclidotus fontinaloides*: 96, 100, H7, H21, H32, H38, H39.
68.1 *Schistidium maritimum*: 92, H20.
68.2 *S. rivulare*: 61, 102.
68.9 *S. strictum*: 36, 59, 85, 100.
68.12 *S. confertum*: 80.
69.19 *Grimmia trichophylla*: 109, H32.
69.22 *G. austrofunalis*: 86.
69.23 *G. decipiens*: 45, 80, 109.
69.24 *G. elatior*: 92.
69.25 *G. curvata*: 91.
70.2 *Racomitrium aciculare*: H11, H15, H18, H31, H32.
70.3 *R. aquaticum*: 79.
70.4 *R. fasciculare*: H15, H31, H32.
70.10 *R. lanuginosum*: H19.
71.1 *Ptychomitrium polyphyllum*: 107, H17, H18, H21.
73.1 *Campylostelium saxicola*: 65.
74.1 *Blindia acuta*: 77.
75.1 *Seligeria pusilla*: 15, 58, 70, 86.
75.6 *S. recurvata*: 40, H30.
75.8 *S. calcarea*: 37.
76.1 *Brachydontium trichodes*: 75, 91, 102.
78.1 *Funaria hygrometrica*: H19.
79.1 *Entosthodon attenuatus*: 75.
79.2 *E. fascicularis*: 28, 33, 70, 77, 83, 86, 87, 88, 89, H16.
79.3 *E. obtusus*: 77, 87, H5.
80.1 *Physcomitrium pyriforme*: 77, 80, 86, 87, 95, 97, H3.
81.1 *Aphanorhegma patens*: 33, 56.
83.1 *Ephemerum recurvifolium*: 5, 28, 58.
83.5 *E. serratum* a var. *serratum*: 36, 40, 91, 95; b var. *minutissimum*: H38, H39.
85.1 *Tayloria lingulata*: 98.
86.2 *Tetraplodon mnioides*: 42, 43, 76, 77, 87, 93, 102, 109.
88.1 *Splachnum sphaericum*: 102.
88.2 *S. ampullaceum*: 16, 32, 45, 46, 56, 91, 100, H17.
89.1 *Schistostega pennata*: 37.
92.1 *Leptobryum pyriforme*: 33, 72, 86, 91.
93.1 *Pohlia elongata* a subsp. *elongata* var. *elongata*: 78, H2; b subsp. *elongata* var. *acuminata*: 70, H2.
93.3 *P. cruda*: 40.
93.4 *P. nutans*: H31.
93.5 *P. obtusifolia*: 100.
93.10 *P. bulbifera*: 68.
93.11 *P. annotina*: 56, 111.
93.16 *P. lutescens*: 73.
93.19 *P. wahlenbergii* b var. *glacialis*: 70, 100, 110; c var. *calcarea*: 14, 34, H39.
95.1 *Plagiobryum zieri*: 77.
96.1 *Anomobryum julaceum* a var. *julaceum*: 45, 46, 85, H21.
97.4 *Bryum calophyllum*: 70.
97.8 *B. pallens*: H19, H31.

- 97.9 *B. turbinatum*: 96.
97.13 *B. algovicum* var. *rutheanum*: H31.
97.17 *B. imbricatum*: 70, 77, 86, 108, H2, H3, H8, H15.
97.18 *B. intermedium*: 5, 70, 77, 89, 95, 105, 107, 108, H31.
97.28 *B. pseudotriquetrum* a var. *pseudotriquetrum*: H31; b var. *bimum*: 9, 13, 14, 15, 39, 40, 43, 45, 56, 57, 72, 73, 75, 94, 104, 105, 108, 109, H1, H2, H4, H5, H8, H13, H18, H21, H27, H30, H31, H33, H34, H37, H39.
97.30 *B. caespitium*: 94, 96, 100, 105, H2, H5, H6, H9, H12, H13, H15, H18, H19, H20, H21, H28, H30, H31, H32, H34, H35, H37, H38, H39, H40.
97.38 *B. radiculosum*: 44, 70.
97.51 *B. alpinum*: 91.
98.1 *Rhodobryum roseum*: 56, H1.
99.1 *Mnium hornum*: H19.
99.5 *M. marginatum* a var. *marginatum*: 58, 79, 95.
99.6 *M. stellare*: 79, 107.
100.1 *Cinclidium stygium*: 91.
101.1 *Rhizomnium punctatum*: H31.
101.3 *R. pseudopunctatum*: 36, 56, 80, 82, 109.
102.1 *Plagiomnium cuspidatum*: 27, 72, 77, H9, H13.
102.4 *P. elatum*: 46.
103.1 *Pseudobryum cinclidioides*: 80, 87.
104.1 *Aulacomnium palustre*: H10, H19, H21.
107.1 *Amblyodon dealbatus*: 94.
109.1 *Plagiopus oederianus*: 75, 77, 91.
110.1 *Bartramia halleriana*: 77, 91, 95.
110.2 *B. pomiformis*: 56, H19, H21.
110.3 *B. ithyphylla*: 5, H1, H21.
112.5 *Philonotis fontana*: 56, H14, H15, H18.
112.8 *P. calcarea*: H8, H21.
112.9 *P. cernua*: H3.
113.1 *Breutelia chrysocoma*: 77, H11, H18, H21, H31, H32.
115.1 *Amphidium lapponicum*: 80, 91.
115.2 *A. mougeotii*: 56, H5, H9, H31.
116.1 *Zygodon viridissimus* a var. *viridissimus*: 76, H18, H31; b var. *stirtonii*: 73, 77.
116.3 *Z. conoideus*: 92, H17.
117.1 *Orthotrichum lyellii*: 58, 76, 94, H1.
117.2 *O. striatum*: 33, 56, 102, 109, H32, H37.
117.3 *O. speciosum*: 86, 91.
117.4 *O. affine*: H16, H17, H18, H27, H31, H32.
117.5 *O. rupestre*: 8, 37, 76, 77.
117.9 *O. cupulatum* a var. *cupulatum*: 9, 33, 44, 75, 77, 86, H40; b var. *riparium*: 14, 32, 39, 42, 50, 51, 80, 85, 109, H8, H9, H26, H33, H38.
117.10 *O. rivulare*: 58, 97, 102, 103.
117.11 *O. sprucei*: 76, 77, 86.
117.12 *O. stramineum*: 34, 58, 108.
117.13 *O. tenellum*: 33, 34, 77, 85, 87, 105, H32.
117.14 *O. pallens*: 59, 92, H16, H17.
117.16 *O. diaphanum*: 111, H1.

- 118.1 *Ulota coarctata*: 92.
 118.2 *U. drummondii*: 70.
 118.3 *U. crispa*: 51, 56, H17, H19, H31.
 118.4 *U. bruchii*: 24, 51, 111.
 118.6 *U. hutchinsiae*: 109, H5.
 118.7 *U. phyllantha*: 36, 77, H18, H19, H31.
 120.1 *Fontinalis antipyretica* a var. *antipyretica*: H31; b var. *gracilis*: 39, 45, 86, 97, 103, H1, H12, H21, H38, H39; c var. *gigantea*: 46, 70, 89, H25, H39; d var. *cymbifolia*: 21, 32, 64.
 120.2 *F. squamosa* a var. *squamosa*: 40, 77; b var. *curnowii*: 58; c var. *dixonii*: 103.
 121.1 *Climacium dendroides*: 56, H31.
 122.1 *Cryphaea heteromalla*: 25, 56, 80, H17, H35.
 123.1 *Leucodon sciuroides* a var. *sciuroides*: 56; b var. *morensis*: 90.
 125.1 *Pterogonium gracile*: 16, 79, H5.
 128.2 *Neckera crispa*: 109, H15, C.
 128.3 *N. pumila*: 28, 56, 77, H32.
 128.4 *N. complanata*: H18, H31.
 129.1 *Homalia trichomanoides*: 109, H3, H35.
 130.1 *Thamnobryum alopecurum*: H32.
 131.1 *Pterigynandrum filiforme* a var. *filiforme*: 86.
 133.1 *Hookeria lucens*: 93.
 136.1 *Myrinia pulvinata*: 14, 58, 86.
 138.1 *Leskea polycarpa*: 108, H8, H19, H21.
 140.2 *Pseudoleskea incurvata*: 85, 87.
 143.3 *Anomodon viticulosus*: 75, 76, H3, H10, H13, H15, H19, H20, H31, H34, H38.
 144.1 *Heterocladium heteropterum* b var. *flaccidum*: 39, 75, H34, H39.
 144.3 *H. dimorphum*: 86, 96.
 145.1 *Thuidium abietinum* a subsp. *abietinum*: 45, 94; b subsp. *hystricosum*: 7.
 145.3 *T. delicatulum*: H21.
 145.4 *T. philibertii*: 24, 37.
 147.1 *Palustriella commutata* a var. *commutata*: H15; b var. *falcata*: 8, H15, H32; c var. *virescens*: 61.
 150.1 *Campyllum stellatum* a var. *stellatum*: H21, H31, H32, H38; b var. *protensum*: 99, H9, H31, H32.
 151.1 *Campyliadelphus chrysophyllus*: 77, 100, H4, H32.
 151.2 *C. elodes*: 40, 50.
 152.1 *Campylophyllum calcareum*: 85.
 153.1 *Amblystegium serpens* a var. *serpens*: H19, H31, H32.
 153.2 *A. fluviatile*: H15.
 153.3 *A. tenax*: 32, 56, 86, H9.
 153.4 *A. varium*: 56, H24.
 154.1 *Leptodictyum riparium*: 80, H4.
 156.1 *Warnstorfia fluitans*: 77, H20.
 156.2 *W. exannulata*: 15.
 157.1 *Drepanocladus polygamus*: 102, H31, H32, H35.
 157.2 *D. aduncus*: H4, H15.
 157.3 *D. sendtneri*: 56, 86, H31.
 157.4 *D. lycopodioides*: 32, 69.

- 160.1 *Sanionia uncinata*: 5, 45.
161.1 *Hygrohypnum ochraceum*: 111.
161.5 *H. eugyrium*: 40, 45, 75, 79.
161.8 *H. duriusculum*: 92.
163.1 *Scorpidium scorpioides*: 77, H8, H20, H32.
164.1 *Calliergon stramineum*: H26.
164.3 *C. cordifolium*: 33, 77, H1, H5.
164.4 *C. giganteum*: 5, 46, 75, 77.
166.1 *Isoetecium myosuroides* a var. *myosuroides*: H31; b var. *brachythecioides*: 92.
166.2 *I. alopecuroides*: H30, H31.
166.3 *I. holtii*: H3.
168.1 *Homalothecium sericeum*: H18, H31.
168.2 *H. lutescens*: 72, 92, H15, H30, H31, H32.
169.1 *Brachythecium albicans*: 77, H31.
169.3 *B. glareosum*: 86.
169.7 *B. rivulare*: H31.
169.11 *B. velutinum*: 94, H7, H8, H34, H40.
169.14 *B. populeum*: 93, H5, H7, H11, H15, H28, H37.
169.15 *B. plumosum*: 56, H32.
170.2 *Scleropodium cespitans*: H3.
171.1 *Cirriphyllum piliferum*: 93, H15, H34.
172.1 *Rhynchostegium riparioides*: H17, H32.
172.2 *R. alopecuroides*: H21.
172.3 *R. murale*: 75, 92, 94, H40.
172.4 *R. confertum*: 109, H13, H18, H19, H32, H33, H40.
173.1 *Eurhynchium striatum*: H31.
173.5 *E. pumilum*: 86, H1, H3, H19.
173.7 *E. hians*: 107, H5, H30.
173.9 *E. speciosum*: 109.
173.10 *E. crassinervium*: H19, H30.
174.1 *Rhynchostegiella tenella*: 76, H32.
174.3 *R. curviseta*: 34.
174.4 *R. teneriffae*: 45.
175.1 *Entodon concinnus*: 92, H33.
176.1 *Pleurozium schreberi*: 33.
180.3 *Plagiothecium denticulatum* a var. *denticulatum*: 93; b var. *obtusifolium*: 42, 72, 86.
180.4 *P. ruthei*: 104.
180.5 *P. curvifolium*: 77, 104.
180.8 *P. platyphyllum*: H21.
180.9 *P. cavifolium*: 45, 87, 93, 95, 107.
180.10 *P. succulentum*: 32, H15, H38.
180.11 *P. nemorale*: 94, 109.
180.12 *P. undulatum*: H11, H24, H31, H32.
181.2 *Isopterygiopsis pulchella*: H21.
183.1 *Herzogiella striatella*: 86, 109.
190.9 *Hypnum imponens*: 98.
190.11 *H. lindbergii*: 45, 75, 91.

- 192.1 *Ctenidium molluscum* b var. *fastigiatum*: 39, 70, H2, H9, H28; c var. *condensatum*: 5, 39, 40, 85, 86, 111, H1, H2, H6, H33, H39; d var. *robustum*: 70, 110, H1, H2, H6, H39.
- 193.1 *Hyocomium armoricum*: 40, 55.
- 194.1 *Rhytidiadelphus triquetrus*: 56, H31.
- 194.4 *R. loreus*: 56, H17, H31.
- 195.1 *Hylocomium brevirostre*: 39, 40, 86.
- 195.4 *H. splendens*: 56.

List 3: 'lost' records

- 39.4 *Tortella nitida*, re-instate 7, see record published in *Transactions of the British Bryological Society* 4: 370 (limestone wall, Conkwell, near Bath, 4 March 1961, J. Appleyard, voucher in BBSUK).
- 157.2 *Drepanocladus aduncus*, reinstate H16, the specimen cited when the entry was deleted (*Bulletin of the British Bryological Society* 54: 31) is not the voucher for the original vice-county record (Roundstone, August 1957, J. Appleyard, see *Transactions of the British Bryological Society* 3: 488).
- 161.3 *Hygrohypnum luridum* a var. *luridum*, remove brackets from 21, see record published in *Transactions of the British Bryological Society* 5: 645 (stone wall of Richmond railway bridge, 1967, F. Ambrose); several other recent records known, comm. Adams.
- 179.1 *Orthothecium rufescens*, re-instate H35, see record published in *Transactions of the British Bryological Society* 5: 646 (on N-facing calcareous schistose rocks, Slieve League, near Carrick, 1300 ft, 6 September 1967, H.J.B. Birks, H.H. Birks & D.A. Ratcliffe, voucher in BBSUK).

List 4: vouchers for recent and replacement records

- 1.3 *Sphagnum papillosum*, by pools on blanket bog, 410 m alt., Duddy Bank, NT66 (81), 23 May 1992, D.G. Long 22291 (E).
- 1.4 *Sphagnum palustre* a var. *palustre*, on damp sandy-peat soil by shallow pond, Collyweston Great Wood, TF00 (32), 19 December 1997, M.J. Wigginton.
- 1.6 *Sphagnum squarrosum*, wet ground in woodland, Tinney's Firs, Redlynch, SU21 (8), 4 November 1997, R.C. Stern.
- 1.7 *Sphagnum teres*, in flush on W-facing moorland slope, 300 m alt., Walkers Clough, Upper Derwent Valley, SK19 (57), December 1991, T.L. Blockeel 20/709 (herb. Blockeel).
- 1.8 *Sphagnum fimbriatum*, boggy margin of moorland loch, 360 m alt., Kingside Loch, NT31 (79), 27 August 1976, D.G. Long 5251 (E).
- 1.9 *Sphagnum girgensohnii*, on steep wooded bank, 330 m alt., Upper Dove Valley, near Tenterhill, SK06 (39), April 1991, T.L. Blockeel 20/021; on flat surface below small cliff by moorland stream, lower part of Black Den, Woodlands, SK18 (57), 9 February 1997, T.L. Blockeel 26/020.
- 1.10 *Sphagnum russowii*, open wet moorland, 400 m alt., Carnau Lladron, N. of Pantmaenog Forest, SN03 (45), 20 September 1991, J. Hambly.
- 1.11 *Sphagnum quinquefarium*, in rocky hollow in oak woodland, 280 m alt., Ladybower Wood, SK28 (57), March 1990, T.L. Blockeel 19/029.

- 1.13 *Sphagnum capillifolium* subsp. *rubellum*, Landford Bog, Landford, SU21 (8), 4 November 1997, R.C. Stern.
- 1.14 *Sphagnum fuscum*, hummocks in bog with *S. imbricatum*, 30 m alt., Duich Moss, Islay, NR35 (102), 2 September 1991, G.P. Rothero 91/028.
- 1.17 *S. molle*, Ridgehead Moss, near Avonbridge (86 in ()), 7 August 1903, W. Evans (E).
- 1.19 *Sphagnum compactum*, wet heathland, Plaitford Common, Plaitford, SU21 (8), 3 December 1997, R.C. Stern.
- 1.24 *Sphagnum platyphyllum*, small flush above hydro road, 525 m alt., Morenish, below Meall nan Tarmachan, NN53 (88), 14 July 1997, A.G. Payne.
- 1.26 *Sphagnum cuspidatum*, at edge of pool, Skipwith Common, SE63 (61), July 1993, T.L. Blockeel 22/270.
- 1.30 *Sphagnum fallax* a subsp. *fallax*, boggy ground, Plaitford Common, Plaitford, SU21 (8), 3 December 1997, R.C. Stern.
- 2.6 *Andreaea rothii* a subsp. *rothii*, on unshaded, sloping faces of blocks of granitic rock, above and inside disused, water-filled quarry, Long Downs, SW73 (1), 21 May 1996, D.T. Holyoak 96-183; on steep, exposed face of boulder of granitic rock, Rough Tor, Bodmin Moor, SX18 (2), 6 November 1993, D.T. Holyoak 93-149A; b subsp. *falcata*, on millstone grit by stream, Crowden Great Brook, Longendale, SE00 (58), June 1987, T.L. Blockeel 16/106.
- 3.1 *Pogonatum nanum*, upturned root of windblown tree, Southleigh Wood, Warminster, ST84 (8), 18 May 1994, R.C. Stern; quarry, W of Balerno (83 in ()), 20 October 1909, herb. J. McAndrew (E); Pass of Lenny, NN50 (87 in ()), 1824, R.K. Greville (E).
- 3.2 *Pogonatum aloides*, on side of ditch by path, Strawberry Wood, Black Park, TQ08 (24), 19 March 1995, S.V. O'Leary; edge of ride by watery gully on acidic clay soil, Assington Thicks, TL93 (26), 12 February 1995, D.F. Strauss.
- 3.3 *P. urnigerum*, old sandpit, Lodge Wood, North Charford, SU11 (8), 4 November 1997, R.C. Stern; scantily colonised sand by side of pond, ca 30 m alt., Bacton Woods, ca 4 km east of North Walsham, TG33 (27), 15 December 1996, C.R. Stevenson.
- 4.1 *Polytrichum alpinum*, on rocks by small waterfall in open ravine, ca 290 m alt., Linn Dean Water, Soutra, NT45 (82), 19 May 1990, D.G. Long 18101 (E).
- 4.2 *Polytrichum longisetum*, woodland floor, the 'Thicks', Staverton Park, Wantisden, TM35 (25), 5 February 1995, R.J. Fisk (herb. Fisk); on soil at Strensall Common, SE66 (62), 24 July 1996, J.M. Blackburn.
- 4.5 *Polytrichum commune* a var. *commune*, in vegetation beside path growing amongst leaf mould and gritty soil, Sane Copse, Yardley Chase, SP85 (32), 29 April 1989, F.A. Higgs, and on wet peat, Dallington Heath, SP76 (32), 23 November 1997, M.J. Wigginton.
- 4.6 *Polytrichum piliferum*, open area of cinder-covered ground, Yardley Chase, SP85 (32), 4 March 1989, F.A. Higgs, and one small patch, on damp peat, Dallington Heath, SP76 (32), 23 November 1997, M.J. Wigginton.
- 4.8 *Polytrichum strictum*, amongst *Sphagnum palustre* in 'flooding bog' at edge of Barnby Broad, TM49 (25), 23 February 1992, R.J. Fisk (herb. Fisk).
- 11.1 *Archidium alternifolium*, in soil pockets on bare ground by reservoir, 185 m alt., Linacre Reservoirs, west of Chesterfield, SK37 (57), October 1994, T.L. Blockeel 23/270; on wet acidic soil, 190 m alt., at eastern end of Lockwood Reservoir near Moorsholm, NZ61 (62), 5 September 1992, J.M. Blackburn; soil in damp flush, 40 m

- alt., slope of hill N of Whiteheugh, St Abbs Head, NT96 (81), 22 March 1992, D.G. Long 21807 (E).
- 12.2 *Pleuridium subulatum*, on bare clay, 10 m alt., Smess Trackway, Hollym Carrs Reserve, TA32 (61), 8 February 1997, P.J. Cook; Kirkhaughs, New Galloway (73 in ()), March 1893, herb. J. McAndrew (E); prope Cherrybank (88 in ()), May 1887, R.H. Meldrum (E); Gateside, Kincardine (91 in ()), May 1869, J. Sim, herb. R.H. Meldrum (E).
- 14.6 *Ditrichum heteromallum*, under *Fagus* on slope, ca 130 m alt., wooded valley below Humber Kirk, NT46 (82), 25 April 1994, D.G. Long 25307 (E).
- 14.9 *Ditrichum flexicaule*, on thin soil on flat limestone rock surface, Dovedale, SK15 (57), 29 December 1996, T.L. Blockeel 25/303.
- 16.1 *Distichium capillaceum*, on calcareous rocks by stream, Saltersgate Beck, north of Pickering, SE89 (62), April 1984, T.L. Blockeel.
- 20.2 *Rhabdoweisia crispata*, Leadhills (77 in ()), G. Lyon, n.d., as *R. fugax* (E); Glen Callater (92 in ()), July 1916, herb. W. Smith (E).
- 21.3 *Cynodontium jenneri*, rocks in field, N of Ballingear, New Galloway (73 in ()), October 1886, herb. J. McAndrew (E); on soil on top of small rock face, 635 m alt., S-facing crags at head of Kirkton Glen, Balquhidder, NN52 (87), 28 May 1978, D.G. Long 6787 (E).
- 25.1 *Dicranella palustris*, wet rocks on Lomonds (85), 15 June 1968, H.L. Caldwell (E).
- 25.4 *Dicranella crista*, Blair Athol (89 in ()), November 1859, Miss McInroy (E); Gateside, Kincardine (91 in ()), n.d., J. Sim, herb. R.H. Meldrum (E).
- 25.8 *Dicranella rufescens*, near vertical silty-clay bank, Badby Wood, SP55 (32), 23 November 1997, M.J. Wigginton.
- 25.9 *Dicranella cerviculata*, bank of pond, Donhead St Andrew, ST92 (8), 14 February 1997, R.C. Stern; Crianlarich (88 in ()), July 1901, herb. W. Smith (E).
- 29.2 *Dicranum bonjeanii*, on hummock in basic flush, 330 m alt., burn NW of Scald Law, Pentland Hills, NT16 (83), 7 May 1978, D.G. Long 6715 (E).
- 29.10 *Dicranum elongatum*, Ousdale, Caithness (109 in ()), 2 June 1903, D.E. Lillie (GL).
- 29.13 *Dicranum montanum*, on bole of ash tree, ca 200 m alt., Dovedale Wood, SK15 (39), 30 December 1997, T.L. Blockeel 26/684; on elder tree branch at side of path, Swithland Wood, SK51 (55), 1 April 1989, D.W. Ballard.
- 30.2 *Dicranodontium asperulum*, on peat in shady hollow by loch, 640 m alt., SE side of Dubh Loch, Glen Muick, NO28 (92), 31 August 1987, D.G. Long & B.M. Murray 14797 (E).
- 30.3 *Dicranodontium denudatum*, Strachan (91 in ()), n.d., J. Sim, herb. R.H. Meldrum (E).
- 31.4 *Campylopus fragilis*, on humus on limestone rock ledge, One Ash Grange, Cales Dale, SK16 (57), 9 March 1997, T.L. Blockeel 26/059 (herb. Blockeel); Kinkell, St Andrews (85 in ()), July 1901, herb. W. Smith (E).
- 31.5 *Campylopus pyriformis* a var. *pyriformis*, on damp peat, Dallington Heath, SP76 (32), 23 November 1997, M.J. Wigginton.
- 31.6 *Campylopus flexuosus*, on wet rotten stump with *Plagiothecium denticulatum* and *Dicranella heteromalla*, Sane Copse, Yardley Chase, SP85 (32), 4 January 1989, F.A. Higgs.
- 31.9 *Campylopus atrovirens* b var. *falcatus*, Druim Bealach na Gaoithe, Assynt, NC03 (108), 11 February 1993, G.P. Rothero 93/004.

- 31.12 *Campylopus brevipilus*, Fulmer Common (24 in ()), 3 July 1895, J. Benbow (BM), comm. O'Leary.
- 34.2 *Fissidens viridulus*, damp calcareous clay in old limestone quarry, Irchester, SP96 (32), 3 December 1997, M.J. Wigginton.
- 34.4 *Fissidens pusillus*, on rocks, Bonchurch landslip, SZ57 (10), 24 April 1981, L. Snow (herb. Snow); on stone, Newbottle Spinney, SP53 (32), 24 October 1996, F.A. Higgs; stones by Danskine Loch nr Gifford, NT56 (82), 20 June 1998, D.F. Chamberlain (E).
- 34.12 *Fissidens rufulus*, on limestone rocks, 51 m alt., in R. Rye in Duncombe Park, Helmsley, SE68 (62), 19 August 1997, C. Rieser & R. Shoubridge.
- 34.13 *Fissidens exilis*, vertical exposure of rather acid loam, embankment of old railway, now pasture, Weston by Welland, SP79 (32), 14 February 1998, M.J. Wigginton; exposed wet clay, Hollym Carrs Nature Reserve, TA32 (61), 3 February 1998, P.J. Cook.
- 34.16 *Fissidens osmundoides*, by South Queich, Ochils (85 in ()), 30 April 1904, herb. W. Evans (E).
- 34.18 *Fissidens dubius*, on top of old limestone wall in sheltered valley, ca 175 m alt., Musden Wood, near Ilam, SK15 (39), 7 December 1997, T.L. Blockeel 26/655.
- 34.19 *Fissidens adianthoides*, turf, Barnack Hills and Holes, TF00 (32), 26 April 1993, F.A. Higgs, and wet base of tree by stream in deep waterlogged cutting by old quarry, Irchester, SP96 (32), 3 December 1997, M.J. Wigginton.
- 36.4 *Encalypta vulgaris*, growing on steep slope of carboniferous limestone hill, Breedon Hill, SK42 (55), 13 March 1989, D.W. Ballard.
- 37.1 *Eucladium verticillatum*, rabbit burrow in old chalk pit, Ranmore, TQ14 (17), 4 November 1987, R.C. Stern.
- 38.5 *Weissia brachycarpa* a var. *brachycarpa*, stubble field, 30 m alt., Stainton Vale Farm, Middlesbrough, TA41 (62), 21 January 1993, J.M. Blackburn; b var. *obliqua*, chalky clay at side of lake in trout farm, Chediston, TM37 (25), 22 June 1994, R.J. Fisk (herb. Fisk).
- 38.12 *Weissia longifolia* a var. *longifolia*, limestone grassland, Charlton Stone Pits, SP53 (32), 26 October 1996, F.A. Higgs; b var. *angustifolia*, turf, Barnack Hills and Holes, old limestone quarry area, TF00 (32), 26 April 1993, F.A. Higgs.
- 39.4 *Tortella nitida*, on sheltered limestone rock face, Dove Dale, west side, between Hall Dale and Mill Dale, SK15 (39), 6 October 1996, T.L. Blockeel 25/264; on south-facing limestone crag, below Bailey Hill, Dove Dale, SK15 (57), 29 December 1996, T.L. Blockeel 25/301 (herb. Blockeel).
- 39.8 *Tortella flavovirens* a var. *flavovirens*, on soil on steep coastal slope, Filey Brig, TA18 (61), 1 September 1996, T.L. Blockeel.
- 40.1 *Trichostomum brachydontium*, crevice in recess of limestone crag, ca 155 m alt., Dovedale, near the junction with Hall Dale, SK15 (39), 30 December 1997, T.L. Blockeel 26/680.
- 40.2 *Trichostomum crispulum*, limestone grassland in 'hills & holes' area of old quarry workings, Collyweston Quarries SSSI, TF00 (32), 22 November 1997, M.J. Wigginton.
- 40.3 *Trichostomum tenuirostre* a var. *tenuirostre*, base-rich sandstone rock ledge on small rock face, W bank of Medwin Water above Medwinhead, Pentlands, NT05 (77), 20 April 1975, D.G. Long (E).
- 45.1 *Pseudocrossidium hornschuchianum*, sandy soil on base of sand pit, ca 35 m alt., SE of Kimberley, nr Wyndham, TF00 (27), 16 December 1995, C.R. Stevenson; on top of

- block of conglomerate ash, ca 80 m alt., shale bing E of Philipstoun, south side of Union Canal, NT07 (84), 12 March 1998, D.G. Long 27439.
- 45.2 *Pseudocrossidium revolutum*, base of old pillar by doorway of church, parish church, Gillingham, TM49 (27), 30 December 1988, R.J. Fisk; on limestone wall at eastern end of Boltby Village, 170 m alt., near Thirsk, SE48 (62), 14 November 1997, J.M. Blackburn; on top of sandstone wall in the town, Appleby-in-Westmorland, NY62 (69), 2 August 1998, T.L. Blockeel 27/232.
- 47.1 *Leptodontium flexifolium*, at base of sandstone wall at edge of field, 325 m alt., Harris Close, near Sheen, SK16 (39), 23 November 1997, T.L. Blockeel 26/653; growing on peaty soil on rocky peak of Ives Head, SK41 (55), 9 October 1989, D.W. Ballard; bare peat of burnt *Callunetum* at ca 1200 ft, Glen Markie, Monadhliath (96), 17 August 1957, D.A. Ratcliffe (E).
- 48.1 *Hymenostylium recurvirostrum*, Grey Mare's Tail (72 in ()), August 1930, R.K. Greville (E); Falls of Clyde (77 in ()), 1848, anon. (E); on dripping rocks, Sheeppath Dean, Lammermuirs, NT77 (82), 28 May 1977, D.G. Long 6066 (E); dripping basic rock outcrop on bank above Acclesmachan Burn at Ochiltree Mill, NT07 (84), 8 October 1975, D.G. Long 4691 (E).
- 50.1 *Gyroweisia tenuis*, damp sandstone rock by pond in disused quarry, Carmelhill nr Kirkliston, NT17 (84), 10 October 1971, D.G. Long & D.F. Chamberlain 1814 (E).
- 51.3 *Gymnostomum aeruginosum*, deep cushions in crevices of mortared-stone wall retaining mine-spoil, N of Crow's Nest, SX26 (2), 1 November 1997, D.T. Holyoak 97-424; on moist limestone in ash woodland, 160 m alt., Dove Dale, near Ilam, SK15 (39), December 1988, T.L. Blockeel 17/499.
- 54.1 *Didymodon acutus*, on rough ground by kerbstones, east side of A6 road, 300 m alt., above Huck's bridge, Borrowbeck, NY00 (69), 1 August 1998, K. Raistrick.
- 54.3 *Didymodon rigidulus*, on limestone, ca 50 m alt., Holt Hall Field Centre, Holt, TG03 (27), 21 October 1989, C.R. Stevenson.
- 54.4 *Didymodon nicholsonii*, tarmac path, Brookside Walk, Mutton Brook, Golders Green, TQ28 (21), 12 October 1990, C. Rieser; at flood level of stream, on concrete support of derelict bridge nr Redlingfield Wood, Denham, TM17 (25), 15 January 1995, R.J. Fisk.
- 54.8 *Didymodon vinealis*, on soil, Pilmoor, near Helperby, SE47 (62), 3 May 1997, J.M. Blackburn; locally abundant along lightly trampled parts of the narrow causeway to Foulney Island, Furness, SD26 (69), 13 September 1998, K. Raistrick.
- 54.10 *Didymodon luridus*, on sandstone plinth in churchyard, Appleby-in-Westmorland, NY62 (69), 2 August 1998, T.L. Blockeel 27/233.
- 54.14 *Didymodon spadiceus*, Den Auchmedden, NJ86 (93 in ()), April 1872, herb. R.H. Meldrum (E).
- 54.17 *Didymodon ferrugineus*, damp calcareous soil by limestone spring, Sutton Heath, TF00 (32), 6 December 1997, M.J. Wigginton.
- 57.1 *Pterygoneuron ovatum*, loose earth on side of disused chalk quarry, Little Blakenham, TM14 (25), 19 January 1991, R.J. Fisk (herb. Fisk); bank of slip road off A14, Risby, TL76 (26), 3 December 1996, R.J. Fisk (herb. Fisk); wall top, Castle Ashby Estate, SP85 (32), 2 May 1996, F.A. Higgs; crumbling bank on low limestone outcrop in old quarry, 230 m alt., Kiln Wood Quarry near Crichton, NT36 (83), 24 January 1988, D.G. Long 14852 (E).

- 58.3 *Aloina aloides*, loose soil on side of disused chalk pit, Little Blakenham, TM14 (25), 19 January 1991, R.J. Fisk (herb. Fisk); chalky clay soil over concrete, ca 30 m alt., Alderford common, Alderford, TG11 (27), 10 October 1992, C.R. Stevenson.
- 59.1 *Leptobarbula berica*, on moist shaded stonework by pond, 25 m alt., Thorpe Hall, Rudston, TA16 (61), August 1989, T.L. Blockeel 18/414.
- 60.1 *Tortula subulata* a var. *subulata*, on soil on old limestone wall, 175 m alt., Mill Dale, near Alstonefield, SK15 (39), 30 December 1997, T.L. Blockeel 26/691; on top of block of conglomerate ash, ca 80 m alt., shale bing E of Philipstoun, south side of Union Canal, NT07 (84), 12 March 1998, D.G. Long 27438.
- 60.5 *Tortula marginata*, at base of church wall, Tatenhill, near Burton upon Trent, SK22 (39), October 1987, T.L. Blockeel 16/339.
- 60.8 *Tortula muralis* b var. *aestiva*, on stone, entrance to Gt Merrible Wood (55), April 1969, F.A. Sowter (LSR).
- 60.11 *Tortula atrovirens*, Troup Head (94 in ()), 1869, J. Ferguson, herb. R.H. Meldrum (E).
- 60.12 *Tortula lanceolata*, roadside bank, Hascot Hill, TM05 (25), 19 January 1991, R.J. Fisk (herb. Fisk); low rock face, by Duddingston Loch, nr Duddingston Church, Edinburgh, NT27 (83), 22 March 1974, D.G. Long 3150 (E).
- 60.14 *Tortula viridifolia*, on rocks in gully on cliff top, ca 60 m alt., gully on E side of Kirk Hill, St Abbs Head, NT96 (81), 22 March 1992, D.G. Long 21810 (E).
- 60.15 *Tortula modica*, on soil on limestone rock outcrop in field, 180 m alt., Mill Dale, near Alstonefield, SK15 (39), 30 December 1997, T.L. Blockeel 26/690; on soil near the hutments, 5 m alt., South Gare, Teesmouth, TA52 (62), 15 January 1992, J.M. Blackburn; soil-filled crevices of low limestone outcrops in pasture, 123 m alt., by the wall, south side of Heversham Head Plantation, near triangulation station, SD58 (69), 31 December 1997, K. Raistrick.
- 60.17 *Tortula protobryoides*, soil-covered concrete at edge of ditch on disused airfield, Parham, TM36 (25), 9 February 1992, R.J. Fisk (herb. Fisk); on soil amongst grass, ca 30 m alt., parish churchyard, Billingford, TG02 (27), 21 January 1990, C.R. Stevenson; soil pocket on limestone grassland slope, 'hills & holes' area of old quarry workings, Collyweston Quarries SSSI, TF00 (32), 22 November 1997, M.J. Wigginton; on waste ground by Thirsk railway station, 28 m alt., Carlton Miniott, SE48 (62), 24 January 1997, J.M. Blackburn.
- 61.2 *Microbryum davallianum*, stubble field, light sandy loam, ca 25 m alt., near ford on by-road, Letheringsett, near Holt, TG03 (27), 21 October 1989, C.R. Stevenson.
- 61.3 *Microbryum rectum*, sandy waste ground, levelled off for development, ca 66 m alt., industrial estate, Holt, TG03 (27), 9 December 1995, C.R. Stevenson; bare soil patch on sloping bank of limestone grassland, Barnack 'Hills & Holes', TF00 (32), 8 December 1997, M.J. Wigginton.
- 61.4 *Microbryum curvicolle*, on open soil patch on horizontal 'ledge' of limestone grassland slope, Collyweston Quarries SSSI, TF00 (32), 22 November 1997, M.J. Wigginton.
- 61.5 *Microbryum floerkeanum*, in stubble field near Round Hill Wood, near Scackleton, SE67 (62), 12 September 1998, J.M. Blackburn.
- 62.3 *Henediella heimii*, on bare ground, and amongst short vegetation at upper limit of tides, between Slitch Ridge and Foulney Island, SD26 (69), 30 August 1998, K. Raistrick; under rocks on cliffs, Poulsallagh, SW of Fanore, M00 (H9), July 1994, J.M. Blackburn.

- 63.1 *Acaulon muticum*, on soil on old wall top, 245 m alt., road leading to Pikey Park, Spottiswoode policies, NT65 (81), 25 October 1995, D.G. Long 25992 (E).
- 65.1 *Syntrichia ruralis*, Benan Head, Arran (100 in ()), 9 August 1869, A. Craig Christie (E).
- 65.3 *Syntrichia norvegica*, below S face of An Stuc, 760 m alt., Lawers NNR, NN64 (88), 24 July 1996, G.P. Rothero 96/105.
- 65.5 *Syntrichia princeps*, rock ledge on agglomerate rock, lower waterfall, Logan Burn, Pentlands, NT16 (83), 4 September 1998, D.F. Chamberlain & D.G. Long (E).
- 65.7 *Syntrichia laevipila* a var. *laevipila*, on old *Acer* at edge of field, ca 15 m alt., grounds of Tynninghame House, NT67 (82), 12 July 1990, D.G. Long 18355 (E); b var. *laevipilaeformis*, Shanklin (10 in ()), July 1927, C.H. Binstead (BBSUK); bark of dead ?oak, near Church Shrimpling, TM18 (27), 4 February 1996, R.J. Fisk, and bark of old hawthorn in roadside hedge, Broome, TM39 (27), 27 February 1996, R.J. Fisk.
- 65.8 *Syntrichia papillosa*, on base of S wall of church and nearby graves, Twyford churchyard, SP62 (24), 5 March 1994, S.V. O'Leary; trunk of willow on bank of R. Waveney, Homersfield, TM28 (25), 27 February 1992, R.J. Fisk (herb. Fisk); on sycamore, Bollihope Burn, White Kirkley, NZ03 (66), 18 June 1994, G.G. Graham; bark of dead ?elm, Low House, R. Eden, NY54 (70), 13 December 1986, F.J. Roberts.
- 65.9 *Syntrichia latifolia*, on root of alder tree, ca 160 m alt., by R. Dove, below Ravens Tor, Dovedale, SK15 (39), 30 December 1997, T.L. Blockeel 26/678; R. Tay near Errol (89 in ()), May 1888, R.H. Meldrum (E).
- 66.1 *Cinclidotus fontinaloides*, vertical wall of lock, R. Nene, Water Newton, TL19 (32), 8 December 1997, M.J. Wigginton.
- 68.1 *Schistidium maritimum*, on Silurian rock outcrops by the coast, Mearness Point, Leven Estuary, 1 km SE of Greenodd, SD38 (69), 24 September 1996, K. Raistrick.
- 68.2 *Schistidium rivulare*, Kenly Dene, Fife (85 in ()), November 1852, anon. (E).
- 69.7 *Grimmia donniana*, Five Barrows Hill, SS73 (4), 6 November 1996, Mrs I. Perry.
- 69.18 *Grimmia funalis*, on face of Ingletonian rock by stream in ravine, Twisleton Glen, Beezley Falls, Ingleton, SD77 (64), February 1985, T.L. Blockeel (herb. Blockeel).
- 69.19 *Grimmia trichophylla*, Old Hall, Wemyss Bay (76 in ()), June 1866, herb. G.E. Hunt (E).
- 70.3 *Racomitrium aquaticum*, on wet basaltic rock slabs, 120 m alt., N slope of Traprain Law, NT57 (82), 12 November 1993, D.G. Long 25041 (E).
- 70.5 *Racomitrium macounii* subsp. *alpinum*, steep rocky slope, on seepage under rock overhang, ca 500 m alt., Juanjorge cliffs, Glen Clova, NO27 (90), 17 May 1994, D.G. Long & G.P. Rothero 25341 (E), and on irrigated granite slabs on SW-facing slope, 500 m alt., Bachnagairn, Glen Clova, NO27 (90), 21 May 1995, G.P. Rothero 93/042.
- 70.8 *Racomitrium heterostichum*, stone wall near Bronaber, S of Trawsfynydd, SH73 (48), June 1986, M.O. Hill, f. *obusum* (herb. Hill); on stone of derelict wall in area of marsh and tall grassland, ca 1 km west of Llanddona, SH57 (52), 28 August 1997, T.L. Blockeel 26/609; on boulders by burn, ca 34 m alt., Bizzle Burn above Dunsdale, Cheviot, NT82 (68), 21 July 1984, D.G. Long 12187 (E); drystone wall of acidic rocks, ca 300 ft alt., near Yalnotry, Newton Stewart (73), 9 April 1953, D.A. Ratcliffe (E); on stone wall by track, ca 130 m alt., near Bunkle Manse, NT85 (81), 29 April 1990, D.G. Long 18002 (E).
- 70.9 *Racomitrium himalayanum*, on large mica-schist blocks in scree, ca 910 m alt., gully at foot of SW cliffs, Ben Lawers, NN64 (88), 28 June 1990, D.G. Long 18327 (E), and on exposed face of large calc-schist boulder, 1000 m alt., below Creag Loisgte, Ben

- Lawers, NN64 (88), 8 July 1996, G.P. Rothero 96/109; on exposed calc-schist boulder at base of slope below W-facing crags, 700 m alt., Coire Daingean, Beinn Achaladair, NN34 (98), 14 August 1996, G.P. Rothero 96/108.
- 70.11 *Racomitrium ericoides*, sparsely in thin limestone turf at foot of craggy hillside, 395 m alt., Anthony Hill, Buxton, SK07 (57), 8 June 1997, T.L. Blockeel 26/237 (herb. Blockeel); rocky bank by burn, open moorland valley, 180 m alt., lower Carrifran Glen, Moffatdale, NT11 (72), 4 June 1998, D.G. Long 27743 (E); gravelly ground in disused quarry, ca 360 m alt., Traprain Law quarry, NT57 (82), 8 May 1995, D.G. Long 25909 (E).
- 70.13 *Racomitrium canescens*, stone quarry, Stonesfield (23), 27 April 1947, E.C. Wallace (NMW), and later by E.F. Warburg in 1951 and 1958 (Perry & Jones, 1998).
- 71.1 *Ptychomitrium polyphyllum*, on rocks in hollow, ca 80 m alt., shale bing E of Philipstoun, south side of Union Canal, NT07 (84), 12 March 1998, D.G. Long 27457.
- 72.1 *Glyphomitrium daviesii*, on moderately exposed coastal gneiss rocks and old stone dyke in coastal woodland, 3 m alt., Creag an Spardain, Assynt, NC23 (108), 23 April 1992, G.P. Rothero 92/035.
- 75.6 *Seligeria recurvata*, on sandstone boulder in flush, ca 180 m alt., Fangrist Burn below Heriot's Dyke, NT64 (81), 22 April 1990, D.G. Long 17984 (E); limestone blocks in stream in disused quarry, Petershill Quarries, Bathgate Hills, NS96 (84), 21 October 1975, D.G. Long 4696 (E).
- 79.1 *Entosthodon attenuatus*, Pentlands (83 in ()), July 1897, A. Murray, herb. J. McAndrew (E).
- 79.2 *Entosthodon fascicularis*, fallow field adjoining Stockton Wood, 200 m alt., Stockton, ST93 (8), 2 March 1994, R.C. Stern; Brownhall (72 in ()), April 1841, herb. J. Cruickshanks (E); Gateside (91 in ()), n.d., herb. R.H. Meldrum (E).
- 79.3 *Entosthodon obtusus*, damp soil on rock-ledge in ravine, steep rocky moorland valley, 320 m alt., Carrifran Glen, below Carrifran Gans, Moffatdale, NT11 (72), 4 June 1998, D.G. Long 27759 (E).
- 80.1 *Physcomitrium pyriforme*, boggy field trampled by cattle, ca 320 m alt., Upper Linn Dean Water, Soutra, NT45 (82), 21 May 1990, D.G. Long 18126 (E); on soil in marshy field, 100 m alt., Ford near Pathhead, NT36 (83), 28 June 1987, D.G. Long 14158 (E).
- 83.1 *Ephemerum recurvifolium*, chalky clay, roadside bank, Metfield (25), 28 November 1994, R.J. Fisk (herb. Fisk); bare soil patch on steep bank of limestone quarry in field, Sutton Heath, TL09 (32), 6 December 1997, M.J. Wigginton.
- 83.5 *Ephemerum serratum* b var. *minutissimum*, fallow field, Stoughton Lodge Farm (55), September 1969, F.A. Sowter (LSR).
- 86.2 *Tetraplodon mnioides*, West Heath, Moorfoot Hills, NT24 (83), September 1997, C. Dixon.
- 88.2 *Splachnum ampullaceum*, very old cattle dung in bog, Midgeholme Moss, NY66 (70), 7 June 1987, F.J. Roberts.
- 89.1 *Schistostega pennata*, deep narrow rock cleft on cliff, Beacon Hill, Woodhouse Eaves, SK51 (55), 12 June 1983, L.E. Hall.
- 92.1 *Leptobryum pyriforme*, on brick at base of warehouse wall, ca 9 m alt., near Wensum Lodge, Norwich, TG20 (27), 4 October 1987, C.R. Stevenson; on old bonfire site, with *Funaria hygrometrica*, Pitsford Nature Reserve, SP77 (32), 20 November 1997, C. Christie, comm. F.A. Higgs.

- 93.3 *Pohlia cruda*, basic rocks on wooded bank, nr E Kerse Mains, Bo'ness, NS98 (84), 26 January 1975, D.G. Long & D.F. Chamberlain 4185 (E).
- 93.8 *Pohlia filum*, nr Leuchars, Tentsmuir (85 in ()), 2 June 1904, W. Evans (E).
- 93.11 *Pohlia annotina*, damp bare sand amongst other pioneer species, ca 30 m alt., Bacton Woods, North Walsham, TG33 (27), 29 September 1996, C.R. Stevenson.
- 93.19 *Pohlia wahlenbergii* c var. *calcareae*, Luccombe Chine, Shanklin (10 in ()), July 1927, C.H. Binstead (BBSUK).
- 94.1 *Epipterygium tozeri*, riverbank, near Brooklands Copse, High Street Green, Chiddingfold, SU93 (17), 19 January 1989, R.C. Stern.
- 97.13 *Bryum algovicum* var. *rutheanum*, sandy soil by path, Lackford Wildfowl Reserve, TL87 (26), 9 July 1993, D.F. Strauss; on sandy cliffs between Alar Gap and Hazel Grove, Saltburn, TA62 (62), 28 May 1993, J.M. Blackburn; mortar on stone podium at entrance to Blawhorn Moss NNR, NT86 (84), 20 July 1996, D.F. Chamberlain.
- 97.22 *Bryum stirtonii*, in calcareous, flushed turf with *Bryum pseudotriquetrum*, 920 m alt., Meall Corranaich, Lawers NNR, NN64 (88), 27 June 1996, G.P. Rothero 96/103.
- 97.28 *Bryum pseudotriquetrum* b var. *binum*, base of wet bank on calcareous clay, Easton Hornstocks, TF00 (32), 14 December 1997, M.J. Wigginton; banks of Allermuir Burn, Pentlands (83 in ()), 29 December 1900, W. Evans (E); Lawers Burn, low down (88 in ()), July 1930, C.H. Binstead, herb. J.B. Duncan (E).
- 97.38 *B. radiculosum*, on shaded stonework, towpath by R. Thames at Marlow, SU88 (24), 1 May 1994, S.V. O'Leary; on mortar, ca 30 m alt., Wymondham Abbey, Wymondham, TG10 (27), 8 November 1987, C.R. Stevenson; on stony woodland road, Denton Wood, SP85 (32), 15 April 1991, F.A. Higgs; soil-filled crevices between bricks of railway bridge, Stapleford Park, SK81 (55), 11 February 1990, D.W. Ballard.
- 97.49 *Bryum muehlenbeckii*, periodically irrigated ledges on calc-schist crag in small ravine, 900 m alt., Meall Garbh, Lawers NNR, NN64 (88), 27 August 1996, G.P. Rothero 96/106.
- 98.1 *Rhodobryum roseum*, limestone grassland slope in open area amongst rank *Bromus erectus*, 'hills & holes', Collyweston Quarries SSSI, TF00 (32), 22 November 1997, M.J. Wigginton; on roadside bank, 170 m alt., Ingleby Bank, near Stokesley, TA50 (62), August 1997, J.M. Blackburn; in shady places below junipers, on humus, Tynron Juniper Wood, nr Penpont (72), 4 April 1957, D.A. Ratcliffe (E); short turf, nr Logan Burn Waterfall, Pentlands (83), September 1977, D.F. Chamberlain (E); Wharry Glen, Bridge of Allan (86 in ()), 12 July 1891, herb. W. Evans (E); turf on steep hillside, 660 m alt., head of Kirkton Glen, Balquidder, NN52 (87), 28 October 1979, D.G. Long 8889 (E).
- 99.5 *Mnium marginatum* a var. *marginatum*, Dirleton (82 in ()), June 1869, J. Sadler (E).
- 99.6 *Mnium stellare*, with *Mnium hornum* in Ravenstone Road Copse, SP85 (32), 20 March 1997, F.A. Higgs.
- 100.1 *Cinclidium stygium*, flushed turf on margin of loch on limestone, 275 m alt., Loch Mhaolach-coire, Inchnadamph, Assynt, NC21 (108), 1 August 1996, G.P. Rothero 96/104.
- 101.1 *Rhizomnium punctatum*, Gight Woods, near Methlick, NJ83 (93), July 1997, J. Jackson.
- 102.1 *Plagiomnium cuspidatum*, damp grassy area by church, Devizes, SU06 (8), 2 March 1992, R.C. Stern; on very rotten stump near the river, Hanging wood by the Evenlode at East End, Northleigh (23), 18 December 1949, E.W. Jones (NMW), see also Jones

- & Perry (1998); on old wall in woodland, ca 245 m alt., near Spottiswoode House, NT64 (81), 13 January 1996, D.G. Long 26018 (E); in lawn, Royal Botanic Garden, Edinburgh (83), 21 April 1976, D.F. Chamberlain (E); shady boulders in wood, below Abercorn Church, NT07 (84), 6 January 1974, D.G. Long 3043 (E).
- 102.2 *Plagiomnium affine*, in deep shade near Engine Pond, Castle Ashby, SP85 (32), 30 January 1993, F.A. Higgs.
- 102.4 *Plagiomnium elatum*, swampy base-enriched ground in *Salix* carr, Whitewater, TF00 (32), 13 December 1997, M.J. Wigginton.
- 102.5 *Plagiomnium ellipticum*, in very wet fen, ca 20 m alt., Swannington Uppgate, ca 3 km NW of Taverham, TG11 (27), 27 April 1991, C.R. Stevenson.
- 103.1 *Pseudobryum cinclidioides*, in flushed bog at head of burn, 790 m alt., Ben Chonzie, NN72 (88), 16 July 1994, G.P. Rothero 94/123, , and flushes on NE-facing slope, ca 650 m alt., S ridge of Ben Chonzie, above Glen Turret, NN72 (88), 4 October 1995, D.G. Long & G.P. Rothero 25969 (E); Paldy Hill (91 in ()), J. Sim, herb. R.H. Meldrum (E); in large flush system on plateau N of Cairn of Claise, 980 m alt., NO17 (92), 18 August 1997, G.P. Rothero 97/010; Camster (109 in ()), 15 July 1902, D. Lillie (E).
- 104.1 *Aulacomnium palustre*, damp grassland, slope of old quarry, Gretton, SP89 (32), 24 January 1998, M.J. Wigginton.
- 104.3 *Aulacomnium androgynum*, base of tree, West Common Plantation, Waldon, West Grimstead, SU22 (8), 3 December 1997, R.C. Stern; crevices in steep rock face in rocky birch woodland, 150 m alt., An Ciomhleum, S side of Loch Assynt, NC22 (108), 16 May 1998, G.P. Rothero 98027.
- 107.1 *Amblyodon dealbatus*, ditches on sand dunes, Bethaven Bay, nr Dunbar, NT67 (82), 20 March 1976, D.F. Chamberlain & D.G. Long B.272 (E); bare soil at edge of basic flush, 330 m alt., by outflow stream from Bonaly Reservoir, Pentland Hills, NT26 (83), 23 July 1977, D.G. Long 6101 (E).
- 110.1 *Bartramia halleriana*, Lamlash (100 in ()), June 1909, herb. J. McAndrew (E).
- 110.3 *Bartramia ithyphylla*, on side of block of conglomerate ash on N-facing slope, ca 80 m alt., shale bing E of Philipstoun, south side of Union Canal, NT07 (84), 12 March 1998, D.G. Long 27445; Gight Woods, near Methlick, NJ83 (93), March 1998, J. Jackson.
- 112.5 *Philonotis fontana*, bog, Farnham Common SU98 (24 in ()), 18 July 1893, J. Benbow (BM), comm. O'Leary.
- 112.7 *Philonotis seriata*, stony flush, south of Loch Mhaolach-Coire, Inchnadamph, Assynt, NC21 (108), 1 August 1996, G.P. Rothero.
- 112.8 *Philonotis calcarea*, silt-covered woodwork of lock gates, Burnt Mill Lock, Kennet and Avon Canal, Great Bedwyn (8), 18 November 1992, R.C. Stern.
- 113.1 *Breutelia chrysocoma*, in basic hillside flush, 70 m alt., Sanddale, Thornton Dale, SE88 (62), 15 November 1997, J.M. Blackburn.
- 117.1 *Orthotrichum lyellii*, trunk of old elder in small copse, nr Dunwich, TM47 (25), 11 February 1990, R.J. Fisk (herb. Fisk).
- 117.2 *Orthotrichum striatum*, on large sloping willow bough in willow carr, near R. Waveney, Lopham Middle Fen, TM07 (27), 16 January 1994, D.F. Strauss.
- 117.4 *Orthotrichum affine*, on elder in limestone valley, ca 270 m alt., near Slade House, 2.5 km west of Ilam, SK15 (39), 7 December 1997, T.L. Blockeel 26/657; on *Sambucus* on N-facing slope, ca 80 m alt., shale bing E of Philipstoun, south side of Union Canal, NT07 (84), 12 March 1998, D.G. Long 27443.

- 117.9 *Orthotrichum cupulatum* var. *cupulatum*, stonework of mill stream, south of church, Worton, ST95 (8), 8 July 1992, R.C. Stern; wall of remains of Roman fort, Burgh Castle, TG40 (25), 3 October 1993, R.J. Fisk (herb. Fisk); b var. *riparium*, R. South Esk, Gladhouse (83), 28 May 1975, D.F. Chamberlain (E); boulders, Lawers Burn (88 in ()), August 1902, J.B. Duncan (E); sandstone rock at edge of stream, West Water nr Edzell Castle (90), April 1965, U.K. Duncan (E).
- 117.10 *Orthotrichum rivulare*, tree trunks by river, Falls of Clyde (77), 3 January 1986, D.F. Chamberlain (E).
- 117.12 *Orthotrichum stramineum*, on elder, Park Wood, SU89 (24), 2 March 1993, S.V. O'Leary & J.W. Bates; in small quantity on elder at edge of copse, Kedleston Hall, near Derby, SK34 (57), May 1996, T.L. Blockeel 25/052; on *Sambucus racemosa*, ca 210 m alt., Dawyck Arboretum, NT13 (78), 4 February 1993, D.G. Long 23247 (E); Huntly (93 in ()), July 1880, J. Ferguson (E).
- 117.13 *Orthotrichum tenellum*, on branch of field maple by stream, Great Briddlesford Copse, Isle of Wight (10), 18 October 1992, J.W. Bates; on sloping branch of large willow at the edge of carr, Thorpeness, TM45 (25), 23 October 1997, D.F. Strauss; on thin trunk of *Crataegus monogyna*, deciduous woodland, Fermyn, SP98 (32), 10 January 1998, M.J. Wigginton; on *Sambucus* on silty river bank, ca 20 m alt., R. Tweed near Lochton, NT73 (81), 3 March 1991, D.G. Long 19415 (E); old sycamore trunk, Heriot Churchyard (83), 26 June 1976, D.F. Chamberlain & D.G. Long (E).
- 117.15 *Orthotrichum pumilum*, on lower bole of *Juglans* in parkland, ca 70 m alt., The Burn, Edzell, NO57 (91), 15 April 1996, B.J. Coppins & A.M. Coppins 16839 (E).
- 117.17 *Orthotrichum pulchellum*, branch of dead elder, roadside bank, Wissett, TM37 (25), 24 March 1991, R.J. Fisk; on elder at side of track by reservoir, Ladybower Reservoir, SK18 (57), July 1994, T.L. Blockeel 23/144; on *Sambucus nigra* trunk in mixed deciduous woodland, Alderley Edge, SJ87 (58), 23 July 1997, M.E. Newton; elder trunk in wood, near Abercorn Church, NT07 (84), 6 January 1974, D.G. Long 3045 (E).
- 118.3 *Ulota crispa*, ash bark in Old Pastures, near Yardley Hastings, SP85 (32), 16 April 1991, F.A. Higgs, and on branch of *Cornus* sp., edge of lake, Thrapston, SP97 (32), 27 October 1990, M.J. Wigginton; sallow by stream between Cyffylliog and Nantglyn, SJ05 (50), February 1973, M.O. Hill (herb. Hill).
- 118.4 *Ulota bruchii*, epiphytic on sallow in fen carr area, ca 30 m alt., Buxton Heath, TG12 (27), 29 December 1994, C.R. Stevenson; growing on bark near water in Sane Copse near Yardley Hastings, SP85 (32), 15 February 1996, F.A. Higgs; on bole of deciduous tree by reservoir, Ogston Reservoir, SK36 (57), January 1996, T.L. Blockeel 25/007; bole of tree, by R. Bollin, Styal, Wilmslow, SJ88 (58), January 1993, T.L. Blockeel 22/021; hazel coppice, Gight Woods, near Methlick, NJ83 (93), July 1997, J. Jackson.
- 118.7 *Ulota phyllantha*, on *Salix caprea*, Deerleap Wood, Wotton, near Dorking (17), 29 April 1996, R.C. Stern; with *Orthotrichum diaphanum* on elder at the edge of Cold Oak Copse near Castle Ashby, SP85 (32), 22 March 1996, F.A. Higgs; on bole of tree by R. Bollin, Styal, Wilmslow, SJ88 (58), January 1993, T.L. Blockeel 22/020; on *Sambucus* on dry roadside bank, ca 210 m alt., roadside below Glencorse Reservoir, Pentland Hills, NT26 (83), 31 July 1977, D.G. Long 6146A (E).
- 120.1 *Fontinalis antipyretica* b var. *gracilis*, Ben-y-Gloe (89 in ()), July 1891, herb. W. Smith (E); c var. *gigantea*, in clear pool at edge of R. Dove, near Milldale, Dove Dale, SK15 (57), December 1994, T.L. Blockeel 23/320.

- 121.1 *Climacium dendroides*, on moist limestone rock ledge, facing NE, ca 210 m alt., west bank of R. Dove, foot of Wolfscote Dale, SK15 (39), 28 June 1998, T.L. Blockeel 27/135.
- 122.1 *Cryphaea heteromalla*, on stonework of small bridge, Twyford, SP62 (24), 5 March 1994, S.V. O'Leary; large patch on mature elder in scrub, Market Weston Fen, TL97 (26), 8 January 1998, D.F. Strauss; branch of elder, sand pit, Stanly Hills, Aldeby, TM49 (27), 23 February 1996, R.J. Fisk; on ± vertical trunk of *Sambucus nigra*, edge of woodland, White Water, TF00 (32), 2 December 1997, M.J. Wigginton; on branch of a sycamore tree, Deepdale, near Buxton, SK07 (57), April 1989, T.L. Blockeel 18/245.
- 123.1 *Leucodon sciuroides* a var. *sciuroides*, on limestone rocks on dale side, Gratton Dale, SK25 (57), December 1994, T.L. Blockeel 23/298 (herb. Blockeel); on basic stone wall, 100 m alt., Duncombe Park, Helmsley, SE68 (62), 19 August 1997, C.C. Townsend; b var. *morensis*, Holme House, New Galloway (73 in ()), June 1895, J. McAndrew (E).
- 124.1 *Aniitrichia curtispindula*, on old *Fraxinus*, 3 m above ground, wooded margin of floodplain, 225 m alt., between Gamescleugh and Annelshope, Ettrick Valley, NT21 (79), 13 May 1998, D.G. Long & B.J. Coppins 27704 (E).
- 125.1 *Pterogonium gracile*, rocks on low rocky slope, 130 m alt., west end of Traprain Law, NT57 (82), 10 February 1998, D.G. Long 27424 (E).
- 128.2 *Neckera crispa*, on limestone outcrop on steep slope, ca 170 m alt., Dovedale, between Mill Dale and Hall Dale, SK15 (39), 30 December 1997, T.L. Blockeel 26/677; Falls of Clyde (77 in ()), June 1903, herb. W. Evans (E); Benlister Burn, Lamlash, Arran (100 in ()), June 1909, J. McAndrew (E).
- 131.1 *Pterigynandrum filiforme* a var. *filiforme*, on old *Acer* trunk, 180 m alt., grounds of Leith Hall, Kennethmont, NJ52 (93), 23 June 1990, D.G. Long 18299 (E); b var. *majus*, rocks by stream, near Loch Brandy, Clova, NO37 (90 in ()), May 1938, U.K. Duncan (E); Dalwhinnie (96 in ()), June 1892, herb. W. Evans (E).
- 133.1 *Hookeria lucens*, damp ground, 100 m alt., Tinney's Firs, Redlynch, SU21 (8), 21 September 1995, R.C. Stern.
- 138.1 *Leskea polycarpa*, boulder in river, ca 30 m alt., R. Almond W of Cramond Br., NT17 (84), 6 March 1977, D.G. Long 5523 (E).
- 143.1 *Anomodon longifolius*, at base of limestone band on crag with *A. viticulosus*, 250 m alt., Craignavie, Killin, NN53 (88), 28 May 1996, G.P. Rothero 96/107.
- 143.3 *Anomodon viticulosus*, epiphytic on elder, ca 75 ft alt., near Mill House, West Acre, TF71 (28), 29 March 1987, C.R. Stevenson; on shaded limestone in wooded valley, 215 m alt., Beresford Dale, 4 km north of Alstonefield, SK15 (39), 21 September 1997, T.L. Blockeel 26/622.
- 144.1 *Heterocladium heteropterum* b var. *flaccidum*, Glenlee Glen, New Galloway (73 in ()), October 1899, anon. (E); on sandstone rock, Bilstone Glen, nr Polton (83 in ()), 6 February 1903, W. Evans (E).
- 145.1 *Thuidium abietinum* a subsp. *abietinum*, in open vegetation on ledges of S-facing calc-schist crag, 880 m alt., Cam Chreag, Meall Garbh, Lawers NNR, NN53 (88), 24 June 1996, G.P. Rothero 96/101.
- 145.3 *Thuidium delicatulum*, sandy soil on rocks by river, The Burn, foot of Glen Esk (91), October 1959, U.K. Duncan (E), see also Duncan (1960).
- 145.4 *Thuidium philibertii*, chalk grassland by side of bat refuge, ca 30 m alt., Alderford Common, Alderford, TG11 (27), 10 October 1992, C.R. Stevenson; sand dunes by

- sea, SW end Gullane Beach, NT48 (82), 24 February 1974, D.G. Long 3117 (E); turf on limestone, lime workings above Galabraes, Bathgate, NS97 (84), 16 March 1975, D.G. Long 4243 (E).
- 145.5 *Thuidium recognitum*, in moss turf on stable limestone scree, near Peter's Stone, Cressbrook Dale, SK17 (57), October 1993, T.L. Blockeel 22/362 (herb. Blockeel).
- 147.1 *Palustriella commutata* a var. *commutata*, Glenthorne, SS74 (4), 19 August 1994, Mrs I. Perry; on tufa in limestone spring, Sutton Heath, TF00 (32), 6 December 1997, M.J. Wigginton; b var. *falcata*, on tufa in limestone spring, Sutton Heath, TF00 (32), 6 December 1997, M.J. Wigginton; c var. *virescens*, on stone in rocky limestone stream, Cressbrook, SK17 (57), 19 July 1998, T.L. Blockeel 27/164.
- 150.1 *Campylium stellatum* a var. *stellatum*, basic flush, old quarries above Galabraes, Bathgate Hills, NS97 (84), 16 March 1975, D.G. Long 4247 (E); b var. *protensum*, wet bank by limestone spring, Sutton Heath, TF00 (32), 6 December 1997, M.J. Wigginton.
- 151.1 *Campyliadelphus chrysophyllus*, damp sandy slope by sea, by footbridge, Aberlady Bay, NT48 (82), 9 March 1975, D.G. Long 4223 (E).
- 151.2 *Campyliadelphus elodes*, boggy ground by ditch, ca 175 m alt., Lamberton Moor, NT95 (81), 27 February 1991, D.G. Long 19402 (E); in ditches at margin of pine plantation on dunes, ca 3 m alt., Belhaven Bay near Dunbar, NT67 (82), 12 November 1993, D.G. Long 25029 (E).
- 152.1 *Campylophyllum calcareum*, with *Riccardia chamedryfolia*, on limestone rock in deep shaded gully by old quarry, Irchester, SP95 (32), 3 December 1997, M.J. Wigginton.
- 153.3 *Amblystegium tenax*, damp stone by track, W end of Drimmie Wood, N of Blairgowrie (89), 26 September 1978, D.F. Chamberlain & D.G. Long (E).
- 153.4 *Amblystegium varium*, on edging stones of lake and tree roots at water level, Staunton Harold Hall lake, SK32 (55), 10 December 1995, D.W. Ballard.
- 153.5 *Amblystegium humile*, bare muddy ground in very wet woodland, Worton, ST95 (8), 8 July 1992, R.C. Stern; on wet ground, ca 26 m alt., Lopham Fen, ca 2 km S of S Lopham, 8 km W of Diss, TM07 (27), October 1984, A.C. Smith; on bank in improved pasture, by stream, Titchmarsh, TL08 (32), 19 October 1990, M.J. Wigginton.
- 155.1 *Conardia compacta*, vertical calcareous rock face in ravine, ca 30 m alt., Dunglass Dean near old bridge, NT77 (81), 26 December 1989, D.G. Long 17672 (E).
- 156.2 *Warnstorfia exannulata*, amongst *Sphagnum* in pool, Newfield Colliery, Moira, Ashby Woulds, SK31 (55), 12 December 1993, D.W. Ballard; basic flush by moorland stream, nr source of Medwyn Water, Pentlands, NT05 (83), 3 September 1975, D.G. Long 4673 (E).
- 157.1 *Drepanocladus polygamus*, edge of small pool in calcareous fen, Lopham Little Fen, TM07 (27), 11 April 1996, D.F. Strauss; in basic flush on cliffs, ca 5 m alt., Gunsgreen golf course, Eyemouth, NT96 (81), 28 April 1990, D.G. Long 17997 (E).
- 157.2 *Drepanocladus aduncus*, pond at Lamsleaze, Porchfield, SZ49 (10), 5 August 1986, Shepard & L. Snow; on wet ground, Weston Fen, TL97 (26), April 1981, A.C. Smith.
- 159.1 *Tomentypnum nitens*, base-rich flush, ca 355 m alt., stream NW of Scald Law, Pentlands, NT16 (83), 13 November 1977, D.G. Long 6432 (E).
- 161.1 *Hygrohypnum ochraceum*, rocks in stream, Breich Water, nr Addiewell (84), 15 May 1976, D.F. Chamberlain & D.G. Long (E).

- 161.8 *Hygrohypnum duriusculum*, boulder in river at 250 ft alt., The Burn, foot of Glen Esk (91), October 1959, U.K. Duncan (E), see also Duncan (1960); R. Ness, Inverness (96 in ()), November 1910, C. McIntosh, herb. R.H. Meldrum (E).
- 163.1 *Scorpidium scorpioides*, in fen, ca 15 m alt., near Marl Loch, Aberlady Bay, NT48 (82), 4 November 1994, D.G. Long 25713 (E).
- 164.1 *Calliergon stramineum*, bog at N end of Upper Pond, Burnham Beeches, SU98 (24), 7 November 1993, S.V. O'Leary & J.W. Bates; amongst *Sphagnum* on margin of Colony reservoir in oak wood and in pools in Gisborne's Gorse, Charnwood Lodge, SK41 (55), 13 February 1996, D.W. Ballard.
- 164.3 *Calliergon cordifolium*, mostly submerged in small pond, Market Weston Fen, TL97 (26), 8 January 1998, D.F. Strauss; amongst *Juncus effusus* and *Carex* sp., by pond, Collyweston Great Wood, TF00 (32), 19 December 1997, M.J. Wigginton.
- 164.4 *Calliergon giganteum*, edge of swampy *Salix* carr, 230 m alt., near Ramseycleuch Bridge, Ettrick Valley, NT21 (79), 13 May 1998, D.G. Long 27717 (E); field above E Flanders Moss, Stirling (86), 14 May 1979, D.F. Chamberlain (E).
- 168.2 *Homalothecium lutescens*, limestone grassland, Collyweston Quarries SSSI, TF00 (32), 22 November 1997, M.J. Wigginton.
- 169.1 *Brachythecium albicans*, Aberfoyle (87 in ()), June 1913, herb. J. McAndrew (E).
- 169.3 *Brachythecium glareosum*, on sheltered brick wall in garden, Alton Towers, SK04 (39), March 1991, T.L. Blockeel 20/009; soil overlying limestone, Crighton, below the castle, NT36 (83), 21 September 1996, D.F. Chamberlain (E); damp rocks in river gorge, The Burn, foot of Glen Esk (91), November 1959, U.K. Duncan (E), see also Duncan (1960).
- 169.5 *Brachythecium mildeanum*, wettish clay meadow, Nodes Point, St Helens, SZ68 (10), 23 April 1996, Pope & L. Snow.
- 169.8 *Brachythecium starkei*, on soil of upper surface of rocks in crevices of calc-schist block-schree, 1000 m alt., scree below Craig Loisgte, Ben Lawers, NN64 (88), 7 July 1996, G.P. Rothero.
- 169.10 *Brachythecium reflexum*, in crevices of block scree in birch woodland, 500 m alt., below Craig Maud, Glen Clova, NO27 (90), 16 May 1994, G.P. Rothero 94/014.
- 169.11 *Brachythecium velutinum*, Huntly (93 in ()), July 1880, herb. J. McAndrew (E).
- 169.14 *Brachythecium populeum*, on base and roots of ash tree on way down to water level, Granitethorpe Quarry, Sapcote, SP49 (55), 14 April 1991, D.W. Ballard.
- 170.2 *Scleropodium cespitans*, rotting wood in old decoy, woodland, Titchmarsh, TL08 (32), 28 October 1990, M.J. Wigginton.
- 170.3 *Scleropodium tourettii*, on moist ledge in quarry, disused quarry on Silurian shales in deciduous woodland, 275 m alt., Rock of Woolbury, SE of Clun, SO37 (40), 4 February 1995, A.R. Perry 11000 (NMW).
- 172.2 *Rhynchostegium alopecuroides*, on wet rocks in waterfall of N-flowing burn, 410 m alt., Allt a'Bhathaich, Sanctuary, Quinag, NC22 (108), 3 August 1994, G.P. Rothero 94/075.
- 172.3 *Rhynchostegium murale*, shaded scar of calcareous sandstone, old quarry, Twywell, SP97 (32), 15 January 1998, M.J. Wigginton.
- 172.5 *Rhynchostegium megalopolitanum*, growing over ornamental glass chippings on a grave top, Sherington churchyard, SP84 (24), 2 May 1994, F.A. Higgs.
- 173.1 *Eurhynchium striatum*, on ground in *Prunus* thicket, ca 45 m alt., Holt Lowes, ca 1.5 km SE of Holt, TG03 (27), 24 January 1998, C.R. Stevenson.

- 173.5 *Eurhynchium pumilum*, sandy soil on woodland floor, near edge of wood, woods south of Haddiscoe, TM49 (27), 2 November 1996, C.R. Stevenson; in recess at base of limestone crag, 155 m alt., Dovedale, near the junction with Hall Dale, SK15 (39), 30 December 1997, T.L. Blockeel 26/681; shady stream bank, Burton Constable, TA13 (61), 28 January 1997, W.R. Dolling.
- 173.9 *Eurhynchium speciosum*, rocks on edge of R. Avon, Limpley Stoke, ST76 (8), 24 November 1995, R.C. Stern.
- 173.10 *Eurhynchium crassinervium*, on limestone over an archway, Castle Ashby, SP85 (32), 1 September 1995, F.A. Higgs; tree trunk, by R. S Esk, Dalkieth Park (83), 29 October 1978, D.F. Chamberlain (E); on limestone rocks in open ravine, 100 m alt., Calda Burn, by Loch Assynt, NC22 (108), 13 February 1993, G.P. Rothero 93/008.
- 174.1 *Rhynchostegiella tenella*, base of churchyard wall, Blythburgh, TM47 (25), 1 April 1994, R.J. Fisk (herb. Fisk); at base of oolite gravestone, ca 10 m alt., parish churchyard, Caister St Edmunds, Norwich, TG20 (27), 18 January 1992, C.R. Stevenson; on decaying bricks, Patrington railway station, TA32 (61), 20 January 1997, P.J. Cook; shady wall of ruined castle in woodland, 100 m alt., Finlarig Castle, Killin, NN53 (88), 27 September 1981, D.G. Long & A.G. Payne 10015 (E).
- 174.4 *Rhynchostegiella teneriffae*, on wet sandstone under waterfall, Hayburn Wyke, north of Scarborough, TA09 (62), May 1993, T.L. Blockeel 22/206; Castle Campbell Glen, Dollar (87 in ()), June 1858, Dr Nichol, herb. Greville (E).
- 175.1 *Entodon concinnus*, limestone grassland slope in 'hills & holes' area of old quarry workings, Collyweston Quarries SSSI, TF00 (32), 22 November 1997, M.J. Wigginton; on north-west facing bank in calcareous turf, 350 m alt., Minera, Esclusham Mountain, SJ25 (50), 22 September 1996, R.D. Porley; in short calcareous turf, 150 m alt., at western end of Ashberry Reserve, Rievaulx, near Helmsley, SE58 (62), 22 March 1995, J.M. Blackburn.
- 176.1 *Pleurozium schreberi*, in dry grassland with *Calluna*, 40 m alt., Clumber Park, SE of Worksop, SK67 (56), July 1990, T.L. Blockeel 19/342.
- 177.1 *Myurella julacea* b var. *scabrifolia*, sheltered rocky ledge of calc-schist crag, 950 m alt., upper part of Coire Fionn Lairige, Meall na Tarmachan, Lawers NNR, NN53 (88), 16 June 1996, G.P. Rothero 96/102.
- 180.1 *Plagiothecium latebricola*, abundant, Brockhurst Wood, SU98 (24 in ()), 22 April 1896, J. Benbow (BM), comm. O'Leary.
- 180.3 *Plagiothecium denticulatum* b var. *obtusifolium*, wet outcrop, ca 430 m alt., Wythburn, NY31 (70), 31 August 1985, F.J. Roberts.
- 180.8 *Plagiothecium platyphyllum*, springs, Ben Lawers (88 in ()), July 1929, J.B. Duncan (E); in the lee of overhanging rock, above Loch Loch, on E side of Beinn a' Ghlo (89), 15 July 1988, D.F. Chamberlain (E); Allt Coire an t'Sneachda, Cairngorm, 2850 ft (96), 25 July 1956, A.C. Crundwell (E); springs on N-facing hillside, 800 m alt., N slope of Ben More Assynt, NC32 (107), 2 July 1982, D.G. Long 11028 (E).
- 180.10 *Plagiothecium succulentum*, rocky bank of stream, near Pennan Head (93), March 1961, U.K. Duncan *et al.* (E).
- 180.11 *Plagiothecium nemorale*, St Magdalene's, Perth (88 in ()), 30 December 1904, R.H. Meldrum (E).
- 182.1 *Pseudotaxiphyllum elegans*, epiphytic on oak, ca 64 m alt., Holt Country Park, Holt, TG03 (27), 15 March 1987, C.R. Stevenson; on shaded clay, floor of wood, Denton Wood, Yardley Chase, SP85 (32), 28 March 1989, F.A. Higgs; Gight Woods, near Methlick, NJ83 (93), March 1998, J. Jackson.

- 183.1 *Herzogiella striatella*, crevice in block scree below calc-schist crag, 800 m alt., below Creag an Fhithich, Lawers NNR, NN64 (88), 12 July 1996, G.P. Rothero 96/100.
- 183.2 *Herzogiella seligeri*, on rotting log in beech wood, Rassler Wood near Medmenham, SU88 (24), 25 February 1967, E.R.B. Little & J.G. Duckett; on rotting birch in acid woodland, 60 m alt., near the Roman Camp, Runton, TG14 (27), 11 April 1998, C.R. Stevenson.
- 190.4 *Hypnum lacunosum* a var. *lacunosum*, grassland over sand, ca 18 m alt., Sparham Pools reserve, N of Lyng, TG01 (27), 16 October 1994, C.R. Stevenson.
- 190.8 *Hypnum jutlandicum*, on peat and amongst grass, on *Calluna*-grass heath, Dallington Heath, SP76 (32), 23 November 1997, M.J. Wigginton.
- 190.9 *Hypnum imponens*, hollow in *Callunetum* in raised bog, ca 325 m alt., Fala Moor, E of loch, NT45 (83), 2 September 1996, D.G. Long 26685 (E).
- 190.11 *Hypnum lindbergii*, growing on disused quarry spoil heaps, Old Wood, Groby, SK50 (55), 24 May 1986, D.W. Ballard; Station roadside, New Galloway (73 in ()), February 1897, herb. J. McAndrew (E); Goatwood roadside, Aberdour (85 in ()), September 1907, herb. J. McAndrew (E).
- 190.12 *Hypnum callichroum*, on ground among the Lomond Hills (85 in ()), July 1896, J. McAndrew, herb. J.B. Duncan (E).
- 192.1 *Ctenidium molluscum* c var. *condensatum*, on boulders, Cowies Linn (78 in ()), 12 April 1902, herb. W. Evans (E); basic damp soil at edge of woodland track, Torsance nr Stow, NT44 (83), 26 June 1976, D.G. Long 5054 (E); d var. *robustum*, Ben Lawers (88 in ()), July 1883, W. Smith (E).
- 194.4 *Rhytidiadelphus loreus*, on rotting trunk of small tree of *Pinus scotica* on woodland floor, Fermyn Woods, SP98 (32), 10 January 1998, M.J. Wigginton.
- 195.4 *Hylocomium splendens*, on N-facing slope by canal, ca 80 m alt., shale bing E of Philipstoun, south side of Union Canal, NT07 (84), 12 March 1998, D.G. Long 27447.

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HEPATICAE

D.G. LONG

The records listed below result from researches made during preparation of the new *Census Catalogue* (Blockeel & Long, 1998). They represent vice-county records for which no post-1950 record was traced either in the literature or in the bryophyte database held by the Biological Records Centre at the Institute of Terrestrial Ecology, Monks Wood. Without these

voucher specimens, the records would therefore have been bracketed in the *Census Catalogue*. The records may be regarded, therefore, as normal amendments to the vice-county listings already incorporated in the *Census Catalogue*, but for which no published source exists.

- 1.1 *Haplomitrium hookeri*, on damp partly bare ground by stream, Mosedale Beck, Wasdale Head, NY10 (70), 1988, T.L. Blockeel 17/347 (BBSUK).
- 4.1 *Blepharostoma trichophyllum*, on face of wet grit rock in seepage area by springs in oak woodland, Padley Gorge, Grindleford, SK27 (57), 1992, T.L. Blockeel 21/415 (BBSUK).
- 5.1 *Trichocolea tomentella*, on wet grit rock by stream in wooded valley, 100 m alt., Shining Cliff Wood, near Ambergate, SK35 (57), 1989, T.L. Blockeel 18/479 (BBSUK).
- 7.1 *Kurzia pauciflora*, Bohemia Bog, Rookley, SZ58 (10), 1980, L. Snow (BBSUK).
- 8.1 *Lepidozia reptans*, Slievenabawnoge (H21), 1959, A.L.K. King (DBN).
- 8.3 *Lepidozia cupressina*, growing through *Scapania* in rock cleft, Raven's Glen, Glencree (H20), 1966, A.L.K. King (DBN); 1200 ft, Glasavullaun, Glenasmole (H21), 1954, A.W. Stelfox (DBN).
- 9.2 *Bazzania tricrenata*, boulder scree, 1800 ft, Cuilcagh (H33), 1959, J.W. Fitzgerald (DBN).
- 10.8 *Calyptogeia arguta*, side of ditch in woodland, Blackhall, Termonfeckin (H31), 1967, D.M. Synnott (DBN).
- 12.9 *Cephalozia connivens*, base of tree trunk beside stream, ca 50 m alt., Holt Lowes, Holt, TG03 (27), 1991, C.R. Stevenson (BBSUK); on rotten log in wet ground in mixed birch wood, 8 m alt., Skipwith Common, SE63 (61), 1993, T.L. Blockeel 22/271 (BBSUK); Rahan Bog (H18), 1952, A.L.K. King (DBN).
- 13.1 *Nowellia curvifolia*, fallen log, Blairadam Wood, Kelty (85), 1971, H.L. Caldwell (E).
- 14.1 *Cladopodiella fluitans*, amongst *Sphagnum*, 180 m alt., Fen Bog YWT Reserve, SE89 (62), 1997, J.M. Blackburn (BBSUK); on *Sphagnum* at water's edge, Achadh Mor, Oldany, Assynt, NC03 (108), 1993, G.P. Rothero (BBSUK).
- 14.2 *Cladopodiella francisci*, on damp peat among sparse *Molinia* by pool on edge of disused copper mine, Parys Mountain, SH49 (52), 1992, T.H. Blackstock & M.J.M. Yeo (BBSUK).
- 17.1 *Odontoschisma sphagni*, bog west of Newport (H10), 1959, A.L.K. King (DBN).
- 21.5 *Barbilophozia attenuata*, on rotting stump, ca 30 m alt., Bacton Woods, ca 4 km east of North Walsham, TG33 (27), 1996, C.R. Stevenson (BBSUK); Slievenabawnoge Mountain (H21), 1959, A.L.K. King (DBN).
- 23.5 *Lophozia sudetica*, turf bank on summit, Ballincollig Hill (H2), 1953, A.P. Fanning 1478 (DBN); Carrigasimon Hill near Virginia (H30), 1955, A.L.K. King (DBN).
- 23.13 *Lophozia bicrenata*, under *Calluna* on heath, Budby South Forest, SK66 (56), 1985, T.L. Blockeel (BBSUK).
- 24.8 *Leiocolea turbinata*, ca 30 m, Alderford Common, NW of Norwich, TG11 (27), 1991, C.R. Stevenson (BBSUK); on stone beside old sulphur spring, near Leixlip (H19), 1969, A.L.K. King (DBN).
- 28.1 *Anastrophyllum minutum*, sandstone boulder amongst *Calluna* by moorland stream, Upper Medwyn Water Valley, Pentland Hills, NT05 (83), 1975, D.G. Long 4665 (E); bare peat in *Callunetum* on N-facing slope, Dodder Valley (H21), 1970, D.M. Synnott (DBN).

- 29.1 *Tritomaria exsectiformis*, on sandstone rocks under trees, 215 m alt., Blythe Juniper Wood, Blythe Water, NT54 (81), 1996, D.G. Long 26107 (E).
- 29.3 *Tritomaria quinqueidentata*, by Two-mile River, N side of Carlingford Mountain (H31), 1966, D.M. Synnott (DBN).
- 32.9 *Jungermannia gracillima*, side of ditch, ca 30 m alt., Bacton Woods, North Walsham, TG33 (27), 1996, C.R. Stevenson (BBSUK).
- 33.1 *Nardia compressa*, wet ground by stream, 800 ft alt., Owennaglush River, Glendun (H39), 1951, J.W. Fitzgerald (DBN).
- 34.1 *Marsupella emarginata* b var. *aquatica*, ca 1500 ft alt., above Dothie Valley, on county boundary (44), 1952, I.M. Vaughan (NMW).
- 35.4 *Gymnomitrium crenulatum*, ca 2000 ft alt., The Eagle's Rocks, Slive Donard (H38), 1958, A.W. Stelfox (DBN).
- 35.5 *Gymnomitrium apiculatum*, hepatic mat in late snow bed, 1200 m alt., plateau by No 3 Gully, summit of Ben Nevis, NN17 (97), 1990, G.P. Rothero 90/239 (E).
- 38.11 *Scapania nemorea*, north side of Trumpet Hill, Carlingford Peninsula (H31), 1966, D.M. Synnott (DBN).
- 38.12 *Scapania irrigua*, moist grass with *Sphagnum*, ca 10 m alt., Sugar Fen, Pott Row, King's Lynn, TF62 (28), 1987, C.R. Stevenson (BBSUK).
- 38.13 *Scapania degenii*, calcareous flush, Holmwith, Teesdale, NY82 (66), 1968, J.A. Paton 5625 (BBSUK).
- 38.21 *Scapania gracilis*, damp N-facing slope, mossy bank amongst *Calluna*, 160 m alt., old bing by Breich Water near Addiewell, NT06 (84), 1998, D.G. Long 27689 (E); on Slievenabawnoge (H21), 1959, A.L.K. King (DBN); rock on Feede Mountain (H31), 1966, D.M. Synnott (DBN).
- 41.2 *Chiloscyphus pallescens*, among reeds, SW end of Gladhouse Reservoir, NT25 (83), 1972, D.F. Chamberlain (E).
- 44.1 *Saccogyna viticulosa*, by waterfall, Two-mile river, N side of Carlingford Mountain (H31), 1966, D.M. Synnott (DBN).
- 45.1 *Pedinophyllum interruptum*, on moist limestone rock face in shaded N-facing woodland, Flag Dale near Wormhill, SK17 (57), 1993, T.L. Blockeel 22/012 (BBSUK); on moist shaded limestone cliff, Glen of Clab, M20 (H9), 1994, T.L. Blockeel 23/172 (BBSUK).
- 46.6 *Plagiochila spinulosa*, rock ledges in ravine, 310 m alt., Logan Burn Waterfalls, Pentland Hills, NT16 (83), 1976, D.G. Long 5128 (E); Coumshingaun, Comeragh Mountains (H6), 1966, D.M. Synnott (DBN); cleft, W-facing cliff, Benevenagh (H40), 1990, D.M. Synnott (DBN).
- 50.1 *Pleurozia purpurea*, Garra Plateau above Carnlough (H39), 1990, D.M. Synnott (DBN).
- 51.6 *Radula carringtonii*, in mats on wall of shallow gully in crag above sea, 300 m alt., the high sea cliffs on Clare Island, L68 (H27), 1994, G.P. Rothero (BBSUK).
- 52.1 *Ptilidium ciliare*, ericaceous heath, ca 40 m alt., Bawdeswell Heath, ca 1 km SW of Bawdeswell, TG02 (27), 1990, C.R. Stevenson (BBSUK).
- 53.1 *Porella platyphylla*, shady cliffs under trees, 105 m alt., W end of Easter Craiglockhart Hill, NT27 (83), 1996, D.G. Long 26039 (E); on wall by lagoon, 5 m alt., east side of Broad Lough N of Wicklow, T39 (H20), 1997, D.G. Long 27350 (E); shaded tree trunk, Lucan Demesne (H21), 1952, A.L.K. King (DBN).
- 53.2 *Porella cordaeana*, wall of old Abbey, Drogheda (H31), 1967, D.M. Synnott (DBN), det. J.A. Paton.

- 53.3 *Porella arboris-vitae*, shady cliffs under trees, 105 m alt., W end of Easter Craiglockhart Hill, NT27 (83), 1996, D.G. Long 26041 (E); under trees in heavy shade, E shore of Lough Gowna (H30), 1966, A.L.K. King (DBN).
- 54.5 *Frullania dilatata*, on old *Sambucus*, 160 m alt., Binny Craig near Ecclesmachan, NT07 (84), 1998, Long 27462 (E); S-facing cliffs by sea, 1 km E of Rosyth Church, NT68 (85), 1981, B.J. Coppins (E).
- 56.1 *Marchesinia mackaii*, on rock face in cleft of limestone crag, sheltered by *Ribes alpinum*, 200 m alt., Dovedale Wood, SK15 (39), 1997, Blockeel 26/685 (BBSUK).
- 60.1 *Lejeunea cavifolia*, damp shale in wooded valley, near Abercorn, NT07 (84), 1971, D.G. Long 1244 (E).
- 60.5 *Lejeunea hibernica*, by waterfall at foot of small ravine, 40 m alt., N side of Kylemore Lough, L75 (H16), 1994, D.G. Long *et al.* 25582 (E).
- 62.2 *Cololejeunea rossettiana*, epiphytic on moss, Downton Gorge NNR, SO47 (36), 1996, M. Lawley (BBSUK).
- 72.1 *Riccardia multifida*, peat in base-rich flush, 1200 ft alt., Garval Syke, upper Medwin Water, Pentland Hills, NT05 (83), 1975, D.G. Long *et al.* 4669 (E), det. J.A. Paton.
- 72.2 *Riccardia chamedryfolia*, damp soil in old quarry, Caen Hill, Devizes, ST96 (8), 1993, R.C. Stern (BBSUK).
- 72.4 *Riccardia palmata*, log in old woodland, 180 m alt., Birky Bank near Crichton Castle, NT36 (83), 1993, D.G. Long 25053 (E).
- 72.5 *Riccardia latifrons*, bare peat on blanket bog, 260 m alt., Balerno Common near Threipmuir, Pentland Hills, NT16 (83), 1978, D.G. Long 7142 (E).
- 73.1 *Metzgeria fruticulosa*, elder bush, below Stewart House, Nedd, Assynt, NC13 (108), 1992, I.M. Evans (BBSUK).
- 73.3 *Metzgeria furcata*, on bole of *Acer*, 165 m alt., Hinkley Wood, Ilam, SK15 (39), 1997, T.L. Blockeel 26/658 (BBSUK).
- 76.1 *Targionia hypophylla*, soil on ledge of south-facing limestone crag, 155 m alt., Dovedale near the junction with Hall Dale, SK15 (39), 1997, T.L. Blockeel 26/679 (BBSUK).
- 80.1 *Reboulia hemisphaerica*, stone wall in hedgebank, Teffont Evias, ST93 (8), 1991, R.C. Stern (BBSUK); damp shady cleft on S-facing rocky basalt slope, 190 m alt., Binny Craig near Ecclesmachan, NT07 (84), 1998, D.G. Long 27463 (E).
- 82.1 *Marchantia polymorpha* a subsp. *polymorpha*, semi-submerged in fen, Cors Bodwrog, north of Gwalchmai, SH47 (52), 1986, T.H. Blackstock (BBSUK); b. subsp. *ruderalis*, floor of the excavated stoke yard in Roman settlement, Letocetum by Watling Street, Brownhills (39), 1991, T.H. Blackstock & E.A. Howe (BBSUK); on gravel in car park, Bangor Museum, SH57 (49), 1989, T.H. Blackstock (BBSUK); with *Conocephalum*, *Lunularia* and *Pellia endiviifolia* growing in sheets over masonry at mouth of spring, Fountains Abbey, SE26 (64), 1991, T.H. Blackstock (BBSUK).
- 84.1 *Riccia cavernosa*, on exposed mud of pond, Thorpe Hall, Rudston, near Bridlington, TA16 (61), 1989, T.L. Blockeel 18/412 (BBSUK).
- 85.2 *Anthoceros agrestis*, stubble field, by Alderfen Nature Reserve, TG31 (27), 1998, J.B. Mott (BBSUK).

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