

PLANT RECORDS FROM MULL AND THE ADJACENT SMALL ISLANDS

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The Department of Botany, British Museum (Natural History), is engaged in a detailed survey of the vegetation of the island of Mull with its adjacent small islands, e.g. Iona, Ulva, Erraid and the Treshnish Isles (V.C. 103 Mid Ebudes in part). Two years' work has already been completed in the study of the plants in the field and the collation of older records from published sources and herbarium specimens. It is anticipated that after another three years' work a publication of the 'County Flora' type will be produced. An aim of the survey is to account for all the major groups of plants on an equal basis, giving the same prominence to microscopic vegetation such as the freshwater algae, as to the more familiar flowering plants and ferns. An assessment of the geographical and ecological relationships of the flora will be included.

In addition to the large number of our own departmental staff, several botanists, both professional and amateur, have generously co-operated in the progress of this work. This paper, which is concerned solely with the vascular plants, owes much to the contributions of our collaborators, especially Miss U. K. Duncan, A. G. Kenneth and A. McG. Stirling, from whom we have been very grateful to receive voucher specimens for many of their interesting records.

Mull was chosen as the subject for our studies partly because it is an under-worked area, but also as an area in which we could fulfil in some measure the Department's special responsibilities in the study and exploration of the British flora. In spite of the sparseness of published information, we have been surprised to discover the relatively large number of botanists who have collected or recorded on Mull, amounting to no less than seventy, excluding our own survey members. For this reason, we take the opportunity of prefacing these first contributions from our survey with a brief historical account of the exploration of the flora of Mull.

The earliest definite records that we have been able to trace date back to 1772 when John Lightfoot visited the islands in company with Thomas Pennant, the distinguished zoologist. An account of their visit will be found, with a few records, in Pennant's *Tour in Scotland* (1774) and from this we learn that their attentions were mainly devoted to Iona. Several further records resulting from this visit appeared later in Lightfoot's *Flora Scotica* (1777). Lightfoot refers to a record in Ray's *Synopsis* ed. 3, p. 458 (1724) of *Arctous alpinus* mentioned in a letter from Edward Lhwyd to Richard Richardson. The locality was said to be 'for some miles together in that . . . end of Mull, next to Eycolumb-Kill' [Iona]. Lightfoot is of the opinion, based on his own

observations, that the plant was *Arctostaphylos uva-ursi* with which opinion we agree, whilst accepting this as the probable first record for the flora of Mull.

In 1877 George Ross published a paper on the 'Isle of Mull, Mid Ebudes' as No. 5 in the series of County Catalogues of Plants which appeared around this time in the *Reports of the Botanical Locality Record Club*. This list provided an extensive enumeration of the island's flora, but like the others in the series did not give specific localities. A year later, however, he published in the *Transactions and Proceedings of the Botanical Society of Edinburgh* a similar list, but with the addition of localities for the less common species. A number of localised specimens collected by G. Ross from the area between 1876 and 1878 are in the British Museum Herbarium. A few further records for Mull were published by Peter Ewing in short papers in 1890 and 1892, while his *Glasgow Catalogue* (ed. 1, 1892; ed. 2, 1899)—a 'Comital Flora' of the west of Scotland—gives some additional records which may refer to Mull, but are only localised to the vice county level.

The Botanical Exchange Club organised an excursion to Mull in 1939. The advent of the war shortly after prevented the normal publication of an account of this meeting. However, A. J. Wilmott, although he was not present himself on this occasion, salvaged as much information as was possible under war-time conditions and furnished a very creditable account of the itineraries and the more notable discoveries which was finally included in the *Botanical Society and Exchange Club Report* for 1939/40 (1942). Although his list reflects his own critical interest in the distribution of the British flora, he himself admits that he was severely handicapped by the lack of voucher specimens, the whereabouts of which he was unable to trace. As a result, several of his new records are tentative, although some of these have been subsequently confirmed by later work in the field. A member of the party, A. Templeman, published in the same *Report* a note on a visit to Iona and Lunga which he made after the main party had left. In the post-war period a number of short papers and notes have appeared. Miss M. B. Gerrans (1960) published a list of plants she collected in 1958 and presented to the British Museum. There have also been parties sponsored by the B.S.B.I. and the Committee for the Study of the Scottish Flora in 1961 and 1965, both of which have produced valuable information.

Field recording cards used by contributors to the B.S.B.I. Distribution Maps Scheme in our area, have been made available to us through the courtesy of Dr F. H. Perring of the Biological Records Centre.

Up to the end of 1967 five parties, amounting in total to some thirty man-weeks in the field, from this Department have visited the islands. As a result of these visits a considerable amount of data has been accumulated, from which we have selected some of the more interesting records for publication as an interim report, which is enriched by numerous records contributed by our collaborators.

In this paper the major critical groups have been excluded, but it is hoped that these will form the basis of a later paper.

SYSTEMATIC LIST

In the following list the British Museum (Natural History) Department of Botany Mull Survey, is referred to as BMMS. Specimens in the British Museum Herbarium are indicated by (BM) or by BMMS and number.

Localities unless otherwise stated are on the mainland of Mull. Further details (e.g. Nat. Grid. ref.) are available in most instances in our files.

The following members of the B.M. Survey are referred to in the list by surname only: Lorna F. Bowden, J. F. M. Cannon, A. Eddy, E. W. Groves, P. W. James, A. C. Jermy, A. Melderis, Elizabeth G. Moyes, R. Ross and Patricia A. Sims.

- 1/4. *LYCOPIDIUM CLAUATUM* L. Three records were published by G. Ross in his 1878 list; these were not included in the *Atlas* map (Perring & Walters, 1962) owing to difficulties in precise localisation. We can now provide three definite localities: S'Airde Beinn, 1965, KENNETH; North Corrie of Ben More, 1966, DUNCAN; Loch a'Ghael, 1967, BMMS 621 (R. ROSS & SIMS).
- 1/5. *DIAPHASIMUM ALPINUM* (L.) Roth *Lycopodium alpinum* L. Omitted for V.C.103 in the *Atlas* as without firm record and noted by Ratcliffe (1963) in his short account of the 1961 B.S.B.I. Field Meeting. There appears to be some ambiguity about his record, as it was not published in "Plant Records", whereas *Lycopodium annotinum* was recorded with apparently identical data from the same field meeting. We have the following firm records: S.E. side of Ben More, 1966, DUNCAN; S.W. side of Maol nan Sgreuch, 1966, DUNCAN; Ben More summit, 1967, BMMS 1047 (EDDY).
- 21/3 × 8. *DRYOPTERIS ABBREVIATA* (DC.) Newm. × *AEMULA* (Ait.) Kuntze. An Coire, a wooded hill near Loch Buie, on glacial till with a thin cover of mossy peat, 1967, BMMS (EDDY & JERMY 6374). This hybrid, which was here discovered for the first time, is between species of two sections of the genus until now regarded as distantly related. *D. abbreviata* is not normally a woodland plant and these species rarely grow together; where they do, this hybrid should be searched for. For further information see Jermy (1968).
- 25/1. *POLYPODIUM VULGARE* L. agg. Between Salen and the Forsa River, 1958, GERRANS 645 (BM), has been determined by A. C. Jermy as *P. vulgare* × *interjectum*. *P. interjectum* Shivas is known to us from seven localities. The distribution pattern appears to be coastal and in association with old woodlands, and the species has not yet been found at higher locations, as has *P. vulgare s.s.*
- 67/3. *BRASSICA RAPA* L. Accepted by the *Atlas* for V.C. 103 but not plotted. Salen, new housing estate, 1966, DUNCAN; Carsaig Bay, rubbish tip, 1967, BMMS 339 (BOWDEN).
- 122/1. *ELATINE HEXANDRA* (Lapierre) DC. Accepted by the *Atlas* for V.C. 103 but not plotted. Loch Bearnach, in 20-40 cm water on mud, 1967, BMMS 1034 (EDDY).
- 131/5. *CERASTIUM ARCTICUM* Lange. Ben More, N.E. Corrie, 1967, BMMS 337 (EDDY). Appears to be a new vice county record, representing an interesting extension of range to the islands, being paralleled only in the *Atlas* by a pre-1930 record from Skye.
- 137/1. *MINUARTIA VERNA* (L.) Hiern. Iona, coast rocks near Cnoc-nan-bradhan, Some doubt has been cast on this record and confirmation would be very welcome.
- 171/1. *IMPATIENS NOLI-TANGERE* L. Torloisk roadside, 1967, KENNETH. new vice county record, but no doubt an introduction.
- 192/17. *TRIFOLIUM HYBRIDUM* L. Ulva, in field near church on N.E. side, 1965, DUNCAN; new vice county record, but not seen by the recorder on a visit in 1966.
- 220/3(3). *ALCHEMILLA FILICAULIS* Buser subsp. *FILICAULIS*. Rocks, Allt na Teangaidh, 1965, KENNETH; Creach Beinn, Nat. grid. 17/6427, 1965, KENNETH. New vice county record.

- 221/1 & 2. *APHANES ARVENSIS* L. agg. A specimen corresponding to the first record for the area by G. ROSS, 1876, has been determined by Dr. S. M. Walters as *A. microcarpa*. All other specimens and critically determined records that have come to our attention have also proved to be this species. Although *A. arvensis* agg. was not shown for Mull in the *Atlas*, it does not appear to be particularly uncommon in the area and we have over ten recent records.
- 235/12. *SEDUM VILLOSUM* L. Beinn na h'Iolaire, 1965, KENNETH; Creach Beinn, Nat. grid. 17/420290, 1967, BMMS 1005 (EDDY). First recorded by STIRLING in 1961 from Beinn na Sreine. These records show a substantial western extension of range.
- 238/1. *UMBILICUS RUPESTRIS* (Salisb.) Dandy. Well known on Iona but only previously known elsewhere in the area on the mainland of Mull near Tavool House. Now recorded from the small island of Erraid, 1967, BMMS (EDDY).
- 252/1. *HIPPOPHAE RHAMNOIDES* L. Recorded for V.C. 103 by Ewing in his *Glasgow Catalogue* ed. 2 (1899). We can now provide a precise locality: Torosay Castle, in fruit, abundant in small area at end of peninsula, 1967, BMMS 1011 (JAMES).
- 254/13. *EPILOBIUM NERTERIOIDES* Cunn. In addition to the well known locality in Aros House Woods shown in the *Atlas*, we can now add the following localities in S.E. Mull: Loch Buie, 1963, H. MILNE-REDHEAD; Creach Beinn, Nat. grid. 17/6427, 1965, KENNETH; Carsaig, to east of bay, 1966, BMMS (JAMES); Laggan Deer Forest, 1967, BMMS (EDDY).
- [258/3. *CIRCAEA ALPINA* L. Originally recorded by G. Ross in his 1877 list and localised as Druiimfin (near Tobermory). A specimen from Ton Dubh Sgairt collected by Templeman during the 1939 B.E.C. Excursion, has been redetermined by Prof. P. H. Raven as *C. intermedia*, which is widespread in Mull. In his paper Prof. Raven (1913) emphasises the frequency with which *C. intermedia* has been misidentified as *C. alpina*, which on present evidence we must conclude does not occur in our area.]
- 272/1. *ERYNGIUM MARITIMUM* L. First recorded by Pennant for Iona in 1772, who described it as frequent, and noted for Iona without comment by G. Ross in his 1878 list. Templeman states that he failed to find it in 1939, but it was indicated as 'rare' on a Distribution Maps Scheme card for Iona in 1955. It has not as yet been located during the B.M. Survey, although reasonably frequent in Coll and Tiree, where suitable habitats are much more widespread.
- 291/1. *CARUM VERTICILLATUM* (L.) Koch. Road to Loch Buie, 1963, ANNE BOWERMAN Coitrynachenchy, Fishnish, 1967, KENNETH (BM). Apparently a new vice county record, and a logical extension to the islands from the adjacent mainland, where it is widely distributed.
- 294/1. *PIMPINELLA SAXIFRAGA* L. Rocks, west side of Ard Dubh, Ardalanish, 1967, KENNETH & STIRLING (BM). Here recorded for the first time from the mainland of Mull, having been previously only known from Iona.
- 320/2. *POLYGONUM OXYSPERMUM* C. A. Meyer & Bunge ex Ledeb. subsp. *RAII* (Bab.) D. A. Webb & A. O. Chater (*P. raii* Bab.). Only shown in the *Atlas* for Iona, but recorded from Calgary Bay by Wilmott (1942). The latter locality has been confirmed: 1966, DUNCAN, (BM), and we are able to add the following additional records: Uisken, 1966, BMMS (JERMY 6102) and 1967, KENNETH & STIRLING (BM); Cnoc an t-Suidhe, below Knockvologan, near Fionnphort, 1967, BMMS 450 (JERMY).
- 335/3. *BETULA NANA* L. A specimen in the Somerset County Museum (TTN) collected by H. H. SLATER is labelled 'Ben Mohr, Mull, 6, 1878'. Through the courtesy of Mr A. D. Hallam, we have been able to examine this specimen and to confirm its identification. The locality is clearly indicated, presumably in the collector's own hand, and must be accepted, assuming that no error has been

involved in labelling; in this respect Mr Hallam writes 'I have no reason to believe that H. H. Slater was not an accurate observer'. Recent efforts to refind this station have failed and the possibility that the original specimen may have come from one of the other mountains named Ben More cannot be completely ruled out. We would welcome confirmation of this interesting potential extension of the range of this species westwards.

- 410/1. *ATROPA BELLA-DONNA* L. Recorded by Pennant for Iona in 1772 as 'the fatal belladonna is found here' but not reported since. It seems likely that at that time it may have been persisting as a remnant from cultivation in the garden of the then derelict monastery.
- 413/1. *SOLANUM DULCAMARA* L. Rocky shore west of Carsaig and the Nun's Pass, one plant in crevice of sandstone rock, 1967, KENNETH & STIRLING (BM). New vice county record.
- 420/3. *LINARIA REPENS* (L.) Mill. Salen, roadside near new housing estate, 1966, DUNCAN (BM). A new vice county record for this presumed introduction.
- 428/1. *ERINUS ALPINUS* L. On the wall round the derelict garden of Aros House, 1966, BMMS (CANNON and GROVES 6) and DUNCAN. Presumed to be persisting from earlier cultivation.
- 459/6 × 7. *STACHYS PALUSTRIS* × *SYLVATICA* (*STACHYS* × *AMBIGUA* Sm.). Salen, waste ground near road, 1966, DUNCAN (BM). The first vice county record for this not uncommon hybrid.
- 498/1. *KNAUTIA ARVENSIS* (L.) Coult. Recorded for Mull by Wilmott (1942) but without precise locality. We are able to confirm this: Cliffs to north of Tobermory, 1966, BMMS (CANNON & GROVES).
- 506/7. *SENECIO VISCOSUS* L. Ulva, roadside near pier, 1966, DUNCAN. Craignure, beside telephone kiosk, 1967, KENNETH & STIRLING (BM). New vice county record.
- 516/1. *ANAPHALIS MARGARITACEA* (L.) Benth. Near cottage on Torloisk-Ulva road, 1963, ANNE BOWERMAN; Tobermory, on slope south of the Western Isles Hotel, a remnant from earlier cultivation, 1967, BMMS (MELDERIS).
- [540/1. *CIRSIUM ERIOPHORUM* (L.) Scop. Salen, roadside, 1958, GERRANS 675 (BM), the basis of the published record in Gerrans (1960), has been redetermined as an immature specimen of *C. vulgare*].
- 550/3. *LEONTODON TARAXACOIDES* (Vill.) Mérat. In the *Atlas* for Iona and now recorded for the first time from the mainland of Mull. Calgary Bay, fixed sand behind the beach, 1966, BMMS (CANNON & GROVES 268a).

POTAMOGETON—all determined by J. E. Dandy.

- 577/5. *POTAMOGETON LUCENS* L. North side of Loch Poit na h-I, 1966, DUNCAN (BM). New vice county record.
- 577/6 × 5. *POTAMOGETON GRAMINEUS* × *LUCENS* (P. × *ZIZII* Koch ex Roth). North side of Loch Poit na h-I, 1966, DUNCAN (BM). New vice county record.
- 577/8. *POTAMOGETON PRAELONGUS* Wulf. Previously known from an unlocalised Mull specimen collected by S. M. Macvicar in 1897. Recently refound at: West side of Loch Peallach, 1966, DUNCAN (BM); South end of Loch a' Ghleannain in 4 ft. of water, 1967, BMMS 260 (JERMY).
- 577/21. *POTAMOGETON PECTINATUS* L. Loch na Cuilce, Dervaig, 1967, KENNETH (BM). A new record for Mull, previously only known in V.C.103. from Tiree.

- 582/1. *ERIOCAULON AQUATICUM* (Hill) Druce (*E. septangulare* With). Indicated in the *Comital Flora* (Druce, 1932) for Iona, but we have not as yet been able to trace the origin of this record, and it has not been taken up by later authors. However, as it is well known from Skye to the north and Coll to the west, and was last year (1967) discovered on the adjacent Ardnamurchan peninsula, we feel that it might well occur in Loch Staoineig in the south of Iona.
- 599/1. *SCILLA VERNA* Huds. Though long known from Iona and the small islands of Staffa and Lunga, this species has been only recently recorded from the mainland of Mull. Rocks east of Ardalanish dunes, 1967, KENNETH & STIRLING (BM).
- 621/C. *CURTONUS PANICULATUS* (Klatt) N. E. Brown. Tobermory, ? planted but persisting in native vegetation, 1967, KENNETH. This species, which superficially resembles a robust form of *Crocospmia* × *crocospmiflora* ('Montbretia') and with which it has been confused, has already been noted by the recorder from V.Cs. 98 and 101. For description see Kent, 1964.
- 624/2. *CEPHALANTHERA LONGIFOLIA* (L.) Fritsch. Originally recorded by G. Ross from a wood on the east side of Ghurrabain, Druimfin, near Tobermory in 1877 (BM). In 1939 the BEC party 'looked for [it] but not found in Aros Woods'—the area surrounding the Ross locality. It has not been found in that area subsequently. In 1967 it was found on the peninsula south-east of Loch Spelve near Portfield by a B.M. Survey party, BMMS 129 (MOYES).
- 655/11. *SCIRPUS CERNUUS* Vahl. Recorded by G. Ross from Iona and confirmed subsequently for the *Atlas*. We have been able to find it on the nearby mainland of Mull on the coast opposite to Erraid. But a gathering collected by G. Ross at Druimfin, near Tobermory (BM), and circulated through the B.L.R.C., is in fact *S. setaceus*.
- 663/10. *CAREX SEROTINA* Mérat. Known definitely to us only from Dervaig and Ulva, near Sailean Ardalum. Specimens of this affinity should be carefully collected with habitat notes, because *C. scandinavica*, a closely related species, with somewhat different habitat preferences, may also be involved.
- [663/17. *CAREX VESICARIA* L. Recorded for V.C. 103 by Ewing in 1899. G. Ross in his 1878 paper notes *C. vesicaria* × *ampullacea* (*rostrata*) from Loch Snail and north of Beinn Buie. A. C. Jermy has reidentified the Ross specimens at the B.M. from these localities as *C. rostrata*. There is, therefore, no evidence as yet for the occurrence of *C. vesicaria* in our area, although it is widely distributed on the adjacent mainland.]
- 663/32. *CAREX HIRTA* L. Previously known only from Iona, but now recorded from Uisken, on the Ross of Mull, 1966, BMMS (JERMY).
- 663/54. *CAREX PANICULATA* L. Further to the old record shown in the *Atlas*, and presumably based on the Ross 1877 List—'Errie' (Erray, near Tobermory), we can now add: North side of Loch Poit na h-I on wet moorland, 1966, DUNCAN; Feith Bhan, near Salen, 1967, BMMS 382 (JERMY).
- [663/55. *CAREX APPROPINQUATA* Schumach. Listed in error in Clapham, Tutin & Warburg (1962) for Mull.]
- 681/2. *MELICA NUTANS* L. Calgary, streamside, 1965, KENNETH. New vice county record.
- [685/4. *AGROPYRON PUNGENS* (Pers.) Roem. & Schult. Recorded by G. Ross from Calgary Bay in his 1878 List. A specimen collected and so named by Ross in 1876 at this locality, has been redetermined by A. Melderis as *A. junceiforme* × *repens*. Both parents are known from Mull, whereas *A. pungens* is not shown in the *Atlas* for north of the border. It is assumed therefore that the original record is an error and the opinion expressed in appendix II of the *Atlas* is confirmed.]

SOME CHANGES IN THE WEED FLORA OF MULL

A general consideration of the lists compiled by G. Ross, and of other early information, suggests that there have been considerable changes in the occurrence of weed species in Mull since the latter half of the nineteenth century. For instance, *Euphorbia pepus*, which is described as being 'common in cultivated ground', is now recorded only from Iona and then only rarely. *Polygonum convolvulus*, also described as common, has only been found recently in the grounds of Glen Forsa House and on Iona. Similar examples could be added, while casualties of changing agricultural methods like *Agrostemma githago* and *Avena strigosa*, which was described as 'among corn in all the crofts and farms', can be noted. The former appears to be no longer in Mull, while the latter has not been noted since 1939. It seems clear that the change in the pattern of land use, from one involving much small-scale croft farming with associated large estates to one based on forestry and tourism, has brought about these consequent changes in the weed flora. Other weeds of cultivation and waysides, of more recent introduction into this country, e.g. *Matricaria matricarioides* and *Polygonum cuspidatum*, have of course been recorded from Mull since Ross' time.

For these reasons we shall be specially grateful if visitors to the islands will go out of their way to examine cultivated ground, both arable and in association with houses, and make careful records of all the weeds they encounter.

SPECIES APPARENTLY RESTRICTED TO IONA

After the somewhat austere charms of Mull, the small island of Iona offers a very different aspect to the visitor. The impression is at once of a milder climate, while the incidence of wind-blown shell sand produces large base-rich areas, so conspicuously absent from the main island. A number of species have been recorded from Iona, but not from Mull or the other small islands. Recent work has reduced this total, and it is likely that as a result of further intensive field studies, other species on the list below will be found on the Ross of Mull and possibly extending into Broilass. A few species, e.g. *Leontodon taraxacoides*, have been found only at Calgary Bay on the N.W. of Mull apart from their Iona stations. In its western situation, Calgary is also probably somewhat climatically favoured and has some development of wind-blown sand. Study of the list suggests that the relatively large number of weed species concerned may be due to the comparatively high level of agricultural operations on Iona compared to Mull. Records of any of the species listed below from the area apart from Iona will be very welcome.

<i>Allium vineale</i>	<i>Euphorbia pepus</i>
<i>Apium inundatum</i>	<i>Fumaria bastardii</i>
<i>Brassica napus</i>	<i>Fumaria officinalis</i>
<i>Bromus sterilis</i>	<i>Papaver dubium</i>
<i>Cakile maritima</i>	<i>Peplis portula</i>
<i>Carduus acanthoides</i>	<i>Potamogeton berchtoldii</i>
<i>Centranthus ruber</i>	<i>Raphanus raphanistrum</i>
<i>Chenopodium bonus-henricus</i>	<i>Sedum telephium</i>
<i>Coronopus squamatus</i>	<i>Veronica polita</i>
<i>Eryngium maritimum</i>	

REFERENCES

- CLAPHAM, A. R., TUTIN, T. G. & WARBURG, E. F. (1962). *Flora of the British Isles*, 2nd ed. Cambridge.
- DANDY, J. E. (1958). *List of British Vascular Plants*. London.
- DRUCE, G. C. (1932). *Comital Flora of the British Isles*. Arbroath.
- EWING, P. (1890). A Contribution to the Topographical Botany of the West of Scotland. *Proc. Trans. Nat. Hist. Soc. Glasgow*, New Series, 2, 309-321.
- EWING, P. (1892). Second Contribution to the Topographical Botany of the West of Scotland. *Ibid*, 3, 159-160.
- EWING, P. (1892). Third Contribution to the Topographical Botany of the West of Scotland. *Ibid*, 3, 161-165.
- EWING, P. (1892). *Glasgow Catalogue of Native and Established Plants, being a contribution to the Topographical Botany of the western and central counties of Scotland*. 1st ed. Glasgow.
- EWING, P. (1896). Contribution to the Topographical Botany of the West of Scotland, *Proc. Trans. Nat. Hist. Soc. Glasgow*, New Series, 4, 199-214.
- EWING, P. (1899). *Glasgow Catalogue . . .*, 2nd ed. Glasgow.
- GERRANS, M. B. (1960). Notes on the Flora of the Isle of Mull. *Proc. bot. Soc. Br. Isl.*, 3, 369.
- JERMY, A. C. (1968). Two new hybrids involving *Dryopteris aemula* (Aiton) Kuntze. *Br. Fern Gaz.*, 10, 9-12.
- KENT, D. H. (1964). *Curtonus paniculatus* (Klatt) N.E. Br., in Plant Notes. *Proc. bot. Soc. Br. Isl.*, 5, 344.
- LIGHTFOOT, J. (1777). *Flora Scotica*, 1st ed. London.
- PENNANT, T. (1774). *A Tour in Scotland and Voyage to the Hebrides 1772*. Chester and London.
- PERRING, F. H. & WALTERS, S. M., ed. (1962). *Atlas of the British Flora*. London.
- RATCLIFFE, D. (1963). B.S.B.I. Field Meeting in Mull 1961. *Proc. bot. Soc. Br. Isl.*, 5, 94.
- RAVEN, P. H. (1963). *Circaea* in the British Isles. *Watsonia*, 5, 262.
- RAY, J. (1724). *Synopsis Methodica Stirpium Britannicarum*, 3rd ed. Ed. by J. J. Dillenius. London.
- ROSS, G. (1877). Isle of Mull, Mid Ebudes. *Rep. Bot. Loc. Rec. Club for 1876*, 188.
- ROSS, G. (1878). On the flora of Mull. *Trans. Proc. bot. Soc. Edinb.*, 13, 234.
- TEMPLEMAN, A. (1942). Iona and Lunga in Report on Excursions arranged in 1939. *Rep., botl Soc. Exch. Club Br. Isl.*, 12, 249-250.
- WILMOTT, A. J. (1942). V.-C. 103. The Island of Mull in Report on Excursions arranged in 1939. *Rep. botl Soc. Exch. Club Br. Isl.*, 12, 236-249.