Loch Cleat

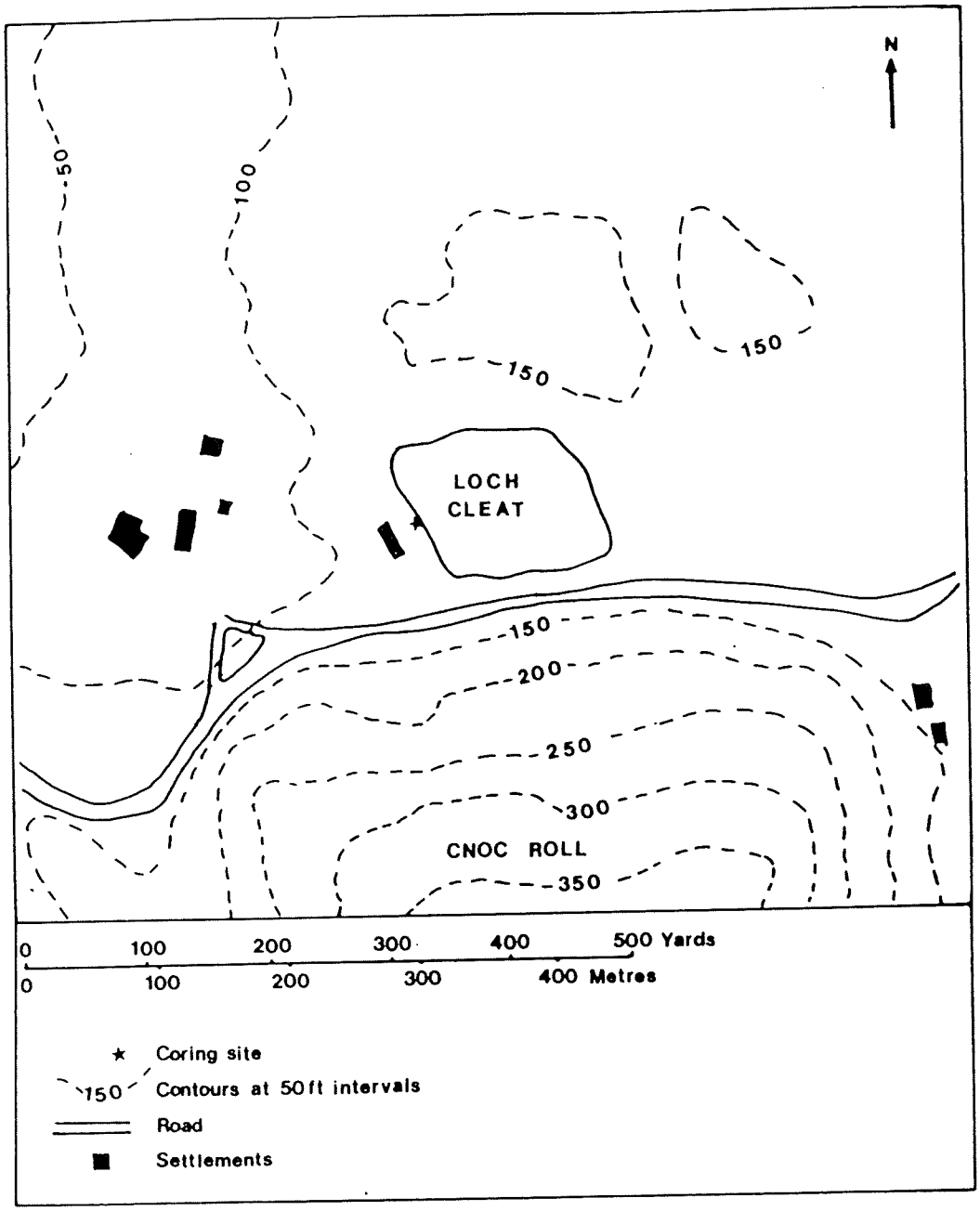


Figure 56. Map of the Loch Cleat area showing the coring site and the surrounding topography.

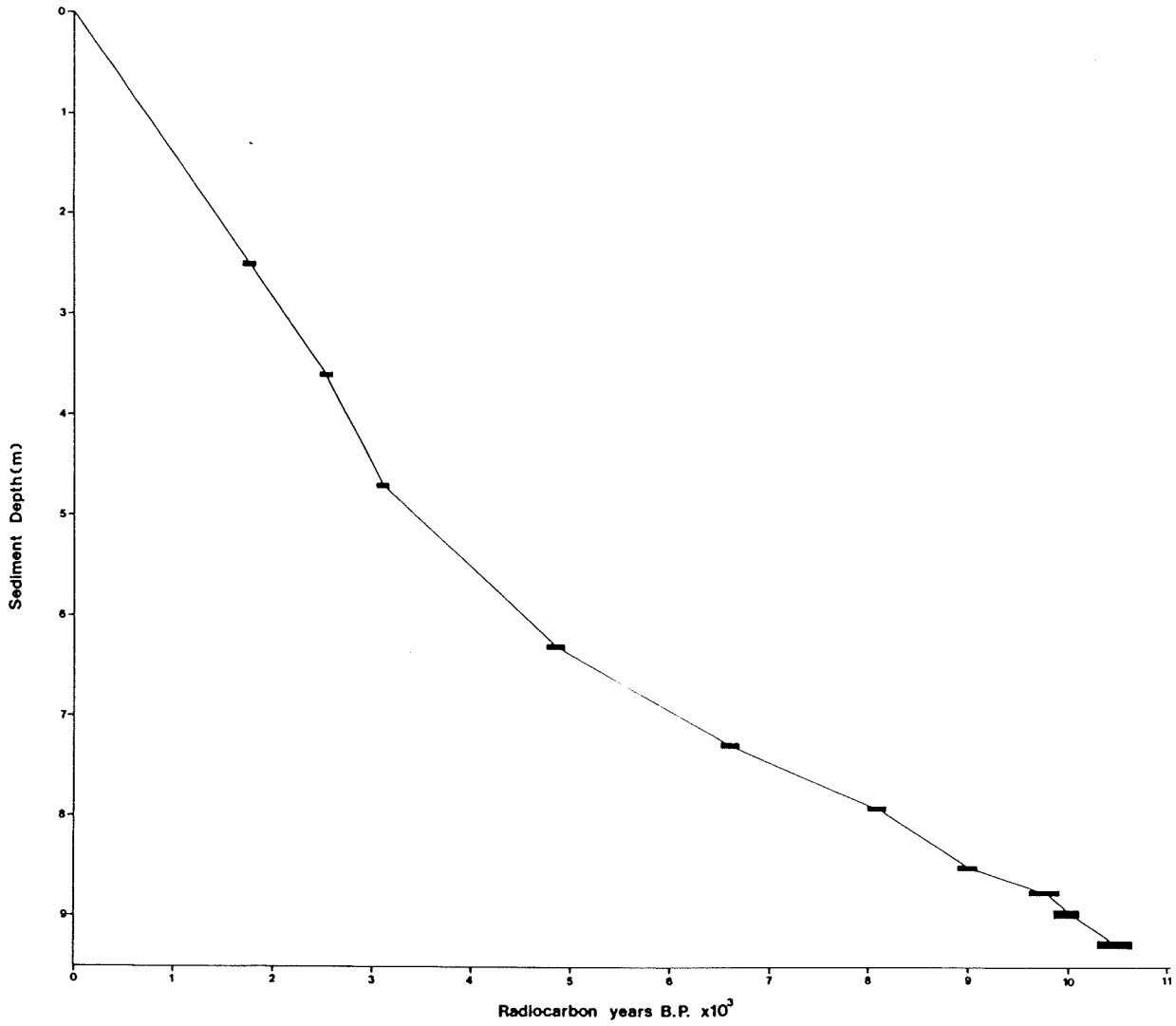


Figure 59. Plot of radiocarbon age against sediment depth for the Loch Cleat core. The depth of sediment used for each sample and the possible error of the age determinations are shown by the vertical and horizontal components of the shaded rectangles.

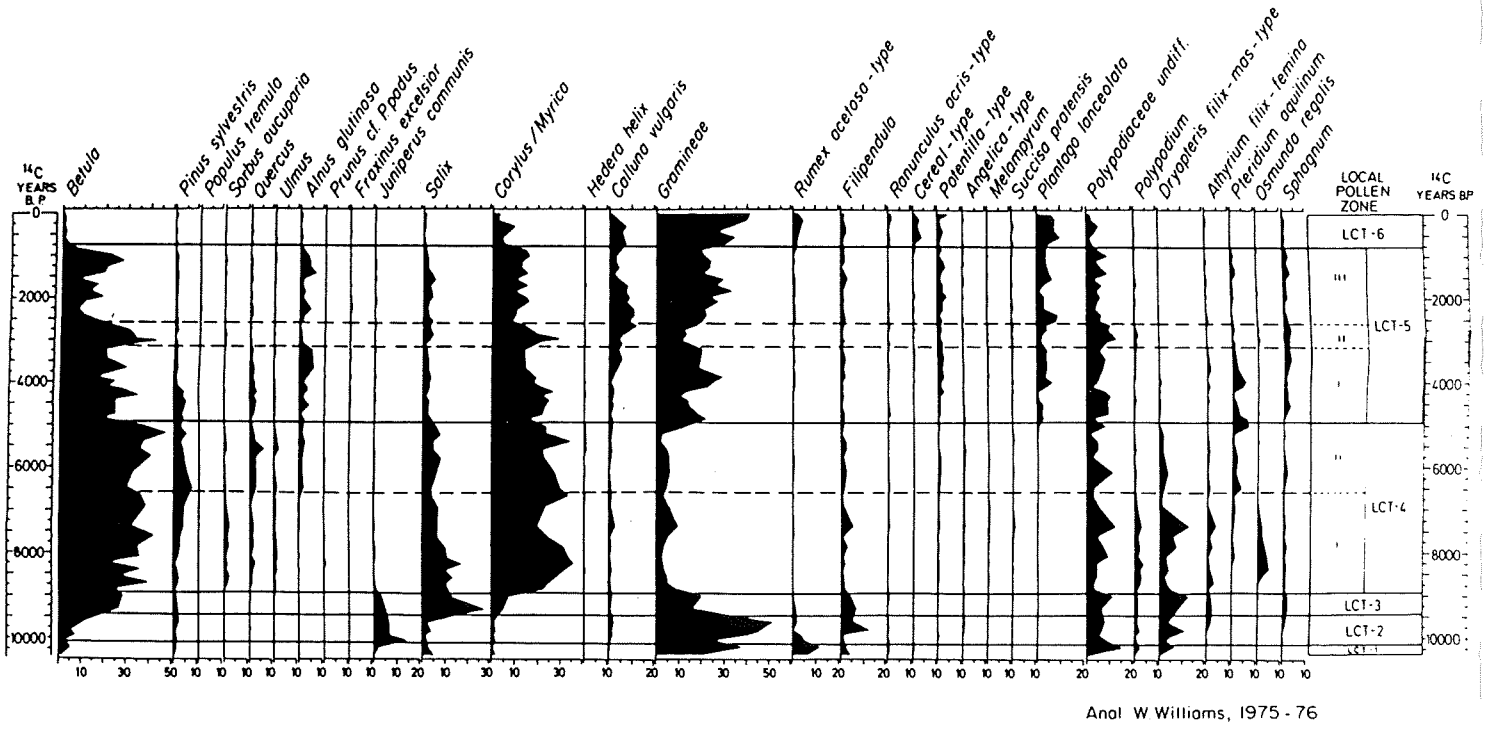


Figure 9. Post-glacial pollen diagram from Loch Cleat, Isle of Skye. Major pollen and spore types only are shown and are plotted against radiocarbon age based on ten radiocarbon dates. Scale at base of diagram shows percentages for black silhouettes. All values are percentages of total determinable pollen. Undiff. = undifferentiated.

Loch Fada

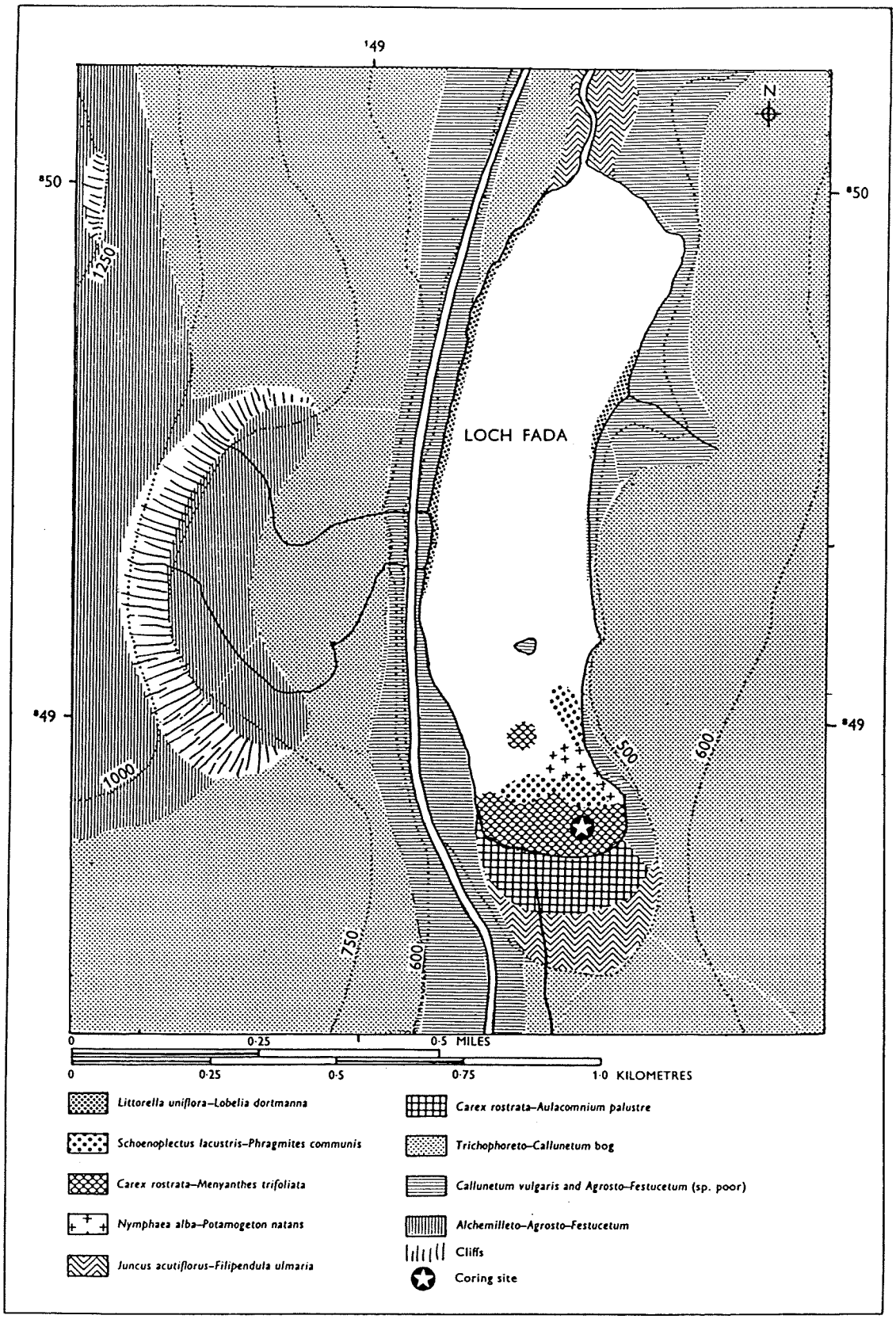


Figure 15. Sketch map of Loch Fada and its surrounds, showing vegetation, topography, and the location of the coring site. Contours are shown in feet, and the coordinates refer to the National Grid. Vegetational types follow Chapter 4.

Loch Fada, N.Skye

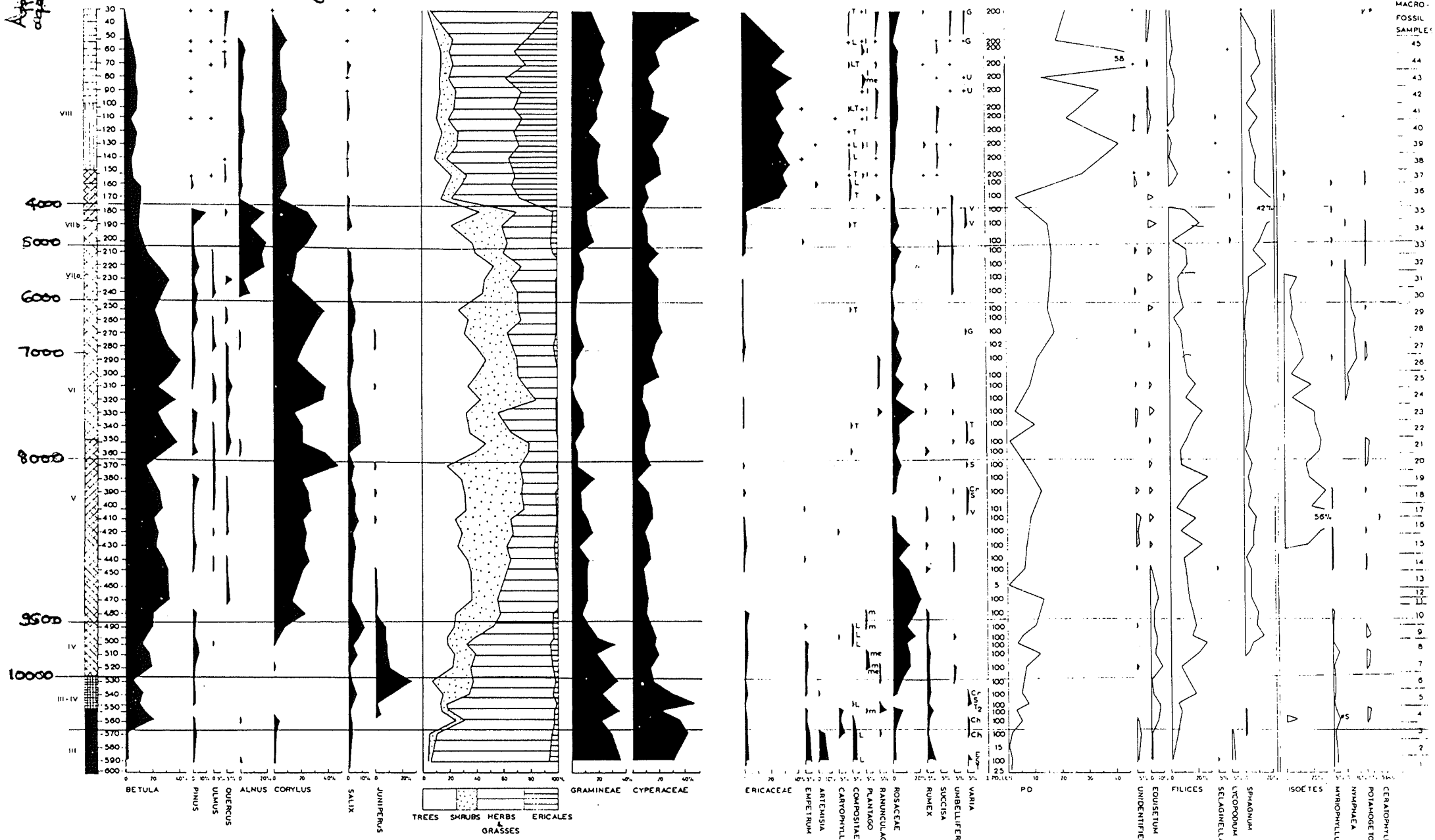


FIG. 11. Loch Fada: Pollen diagram. Letter symbols: In *Compositae* column: L = Liguliflorae. In *Plantago* column: l = *lanceolata*, m = *maritima*, me = *media*. In Varia column: *Ch* = *Chenopodiaceae*, Cr = *Cruciferae*, E = *Epilobium*, G = *Galium*, S = *Scrophulariaceae*, T = *Thalictrum*, U = *Urtica*, V = *Valeriana*. pcs = pieces.

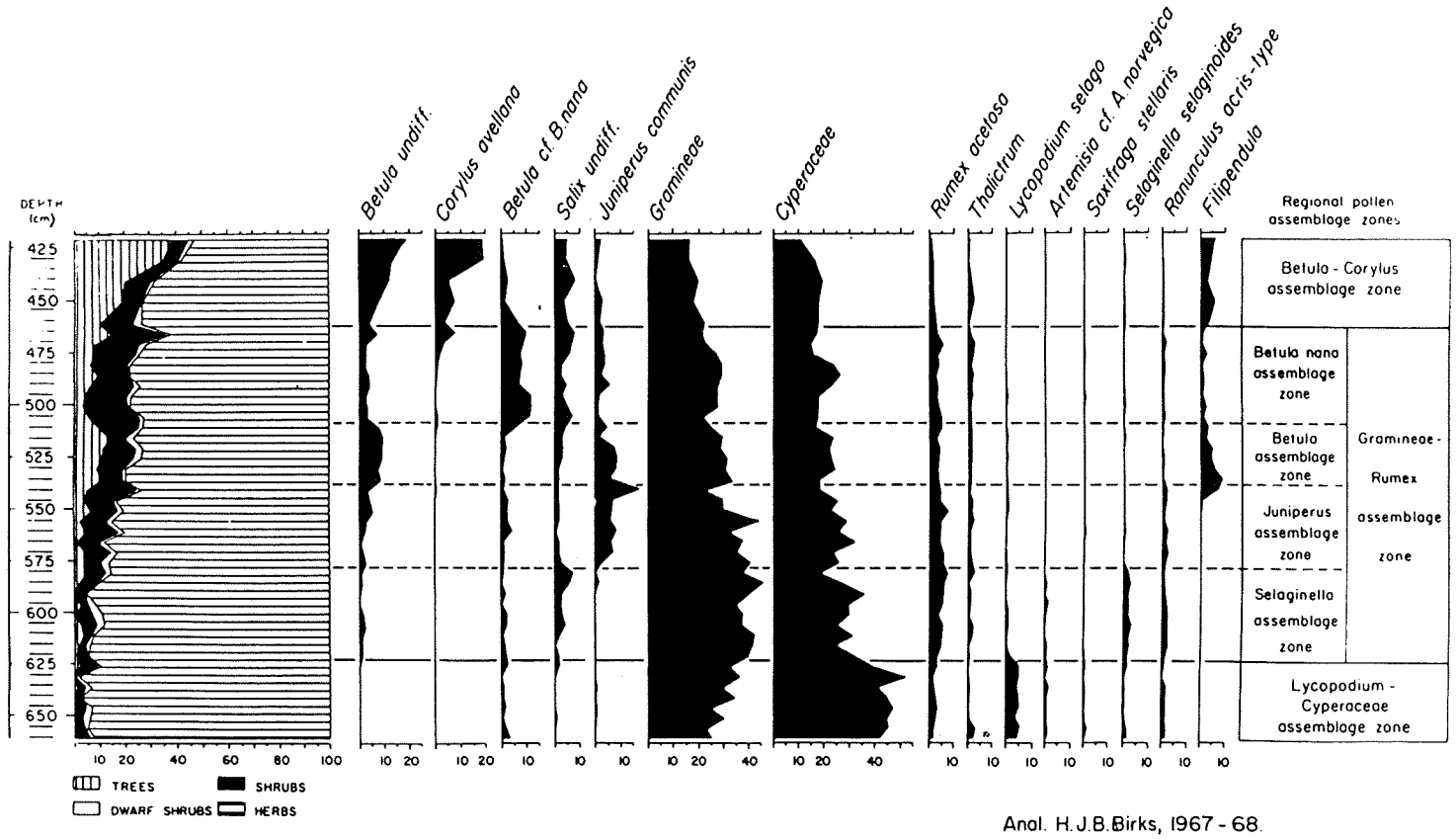


Figure 3. Late-glacial and early post-glacial pollen diagram from Loch Fada, Isle of Skye. Major pollen and spore types only are shown. Scale at base of diagram shows percentages for black silhouettes. All values are percentages of total determinable pollen and spores. Undiff. = undifferentiated.

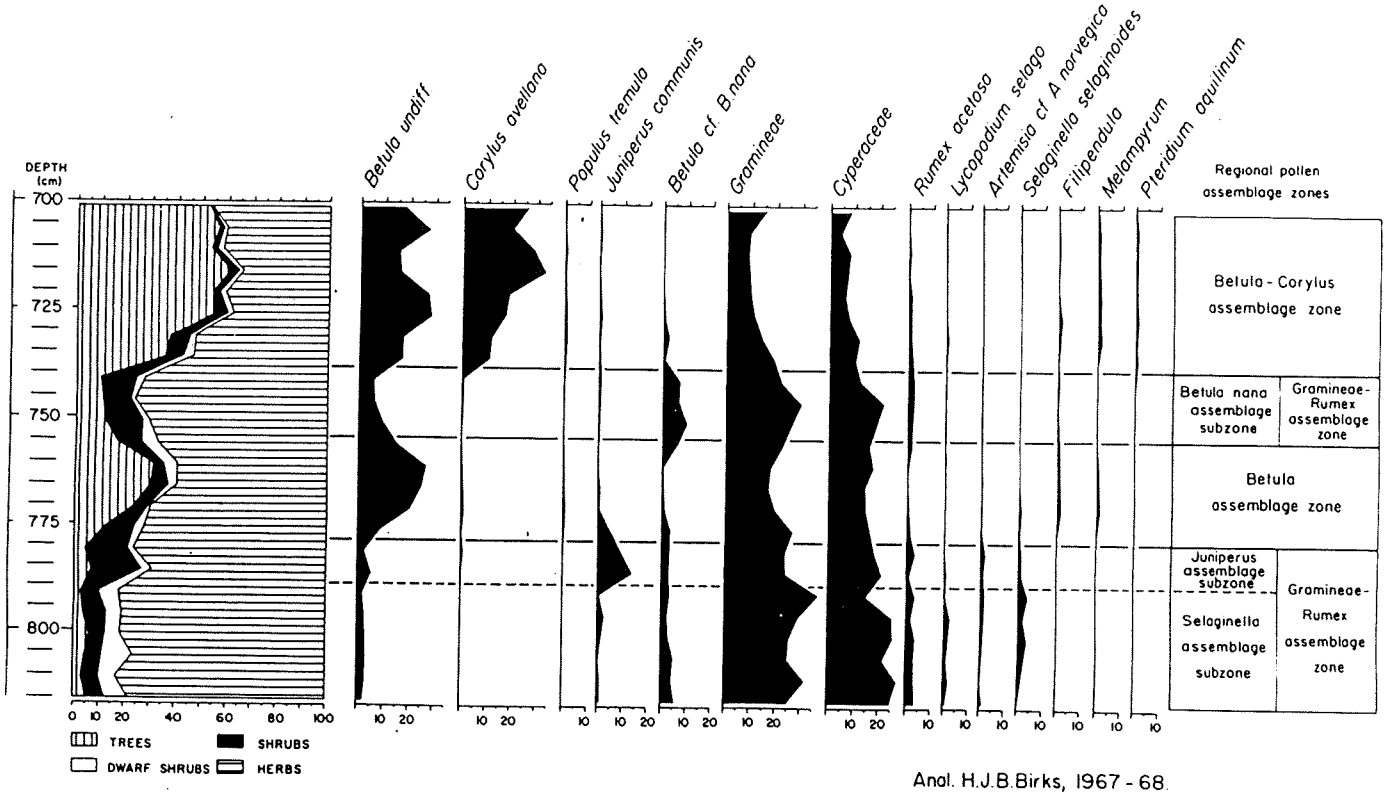


Figure 2. Late-glacial and early post-glacial pollen diagram from Loch Meodal, Isle of Skye. Major pollen and spore types only are shown. Scale at base of diagram shows percentages for black silhouettes. All values are percentages of total determinable pollen and spores. Undiff. = undifferentiated.

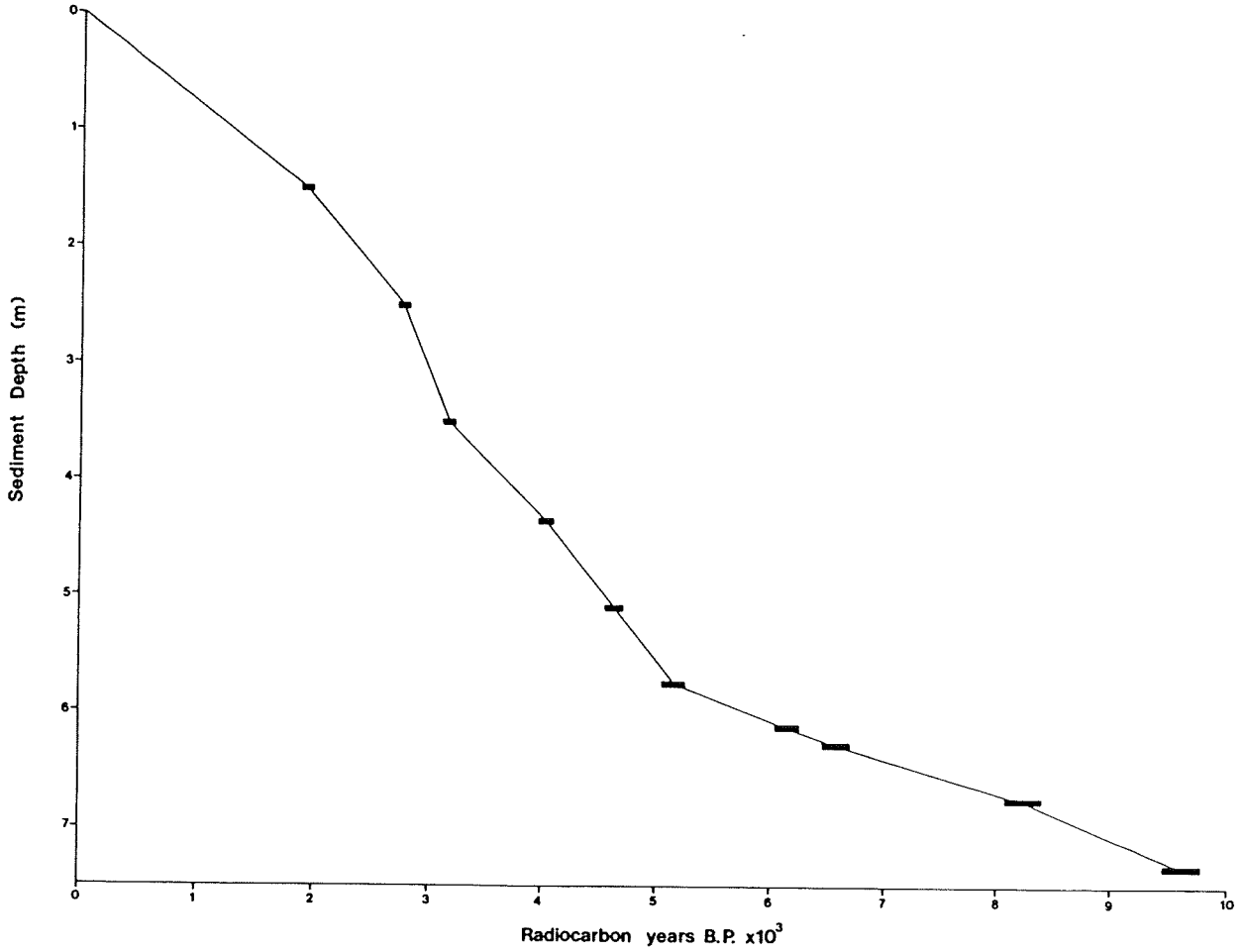


Figure 36. Plot of radiocarbon age against sediment depth for the Loch Meodal core. The depth of sediment used for each sample and the possible error of the age determinations are shown by the vertical and horizontal components of the shaded rectangles.

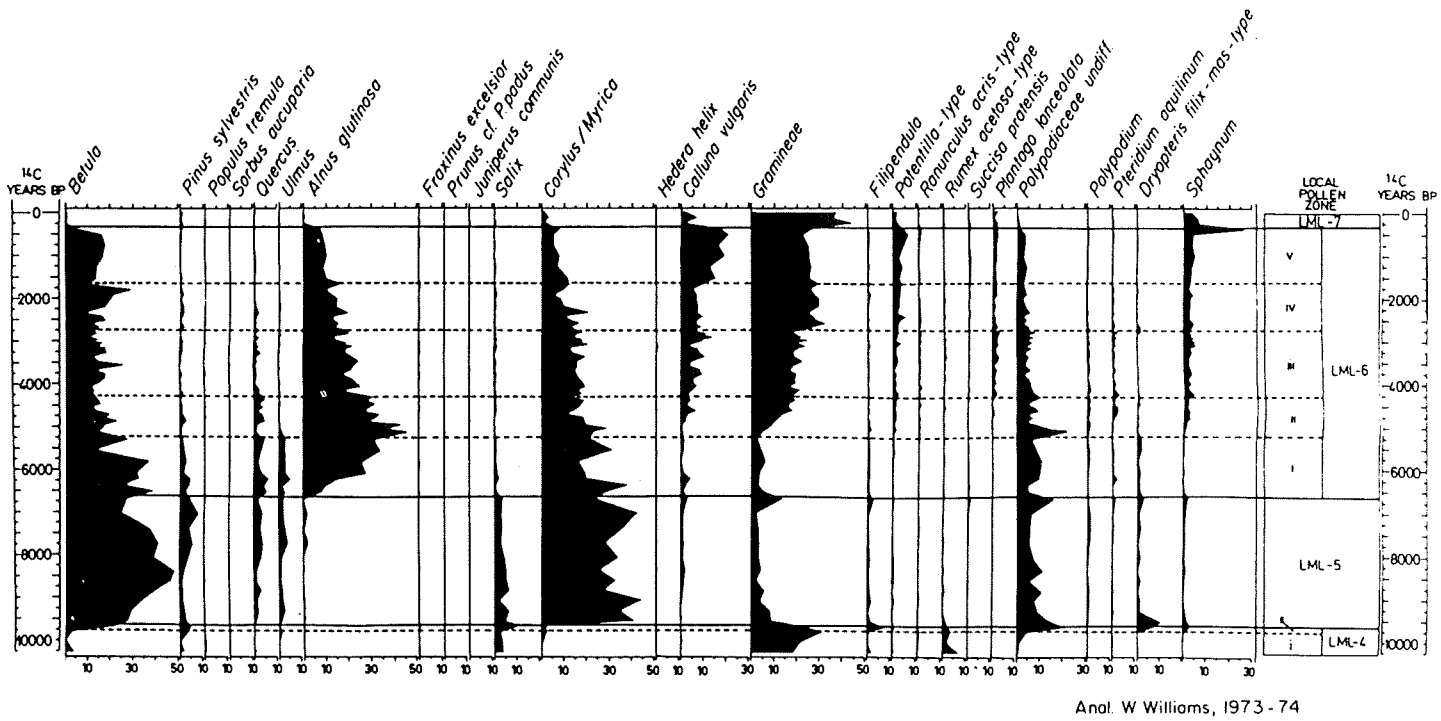


Figure 8. Post-glacial pollen diagram from Loch Meodal, Isle of Skye. Major pollen and spore types only are shown and are plotted against radiocarbon age based on ten radiocarbon dates. Scale at base of diagram shows percentages for black silhouettes. All values are percentages of total determinable pollen. Undiff. = undifferentiated.

The Storr & Trotternish Ridge landforms

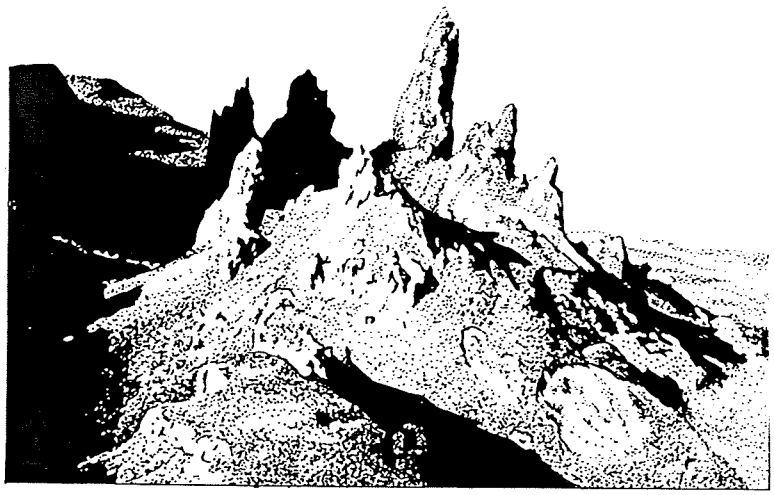


Figure 5.1: The Old Man of Storr and other pinnacles of slipped rock, Coire Faoin, The Storr.

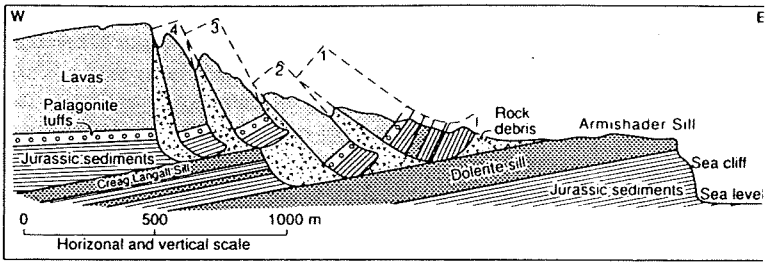


Figure 5.2: Reconstructed cross-section through the Storr landslide. Based on Anderson and Dunham (1966).

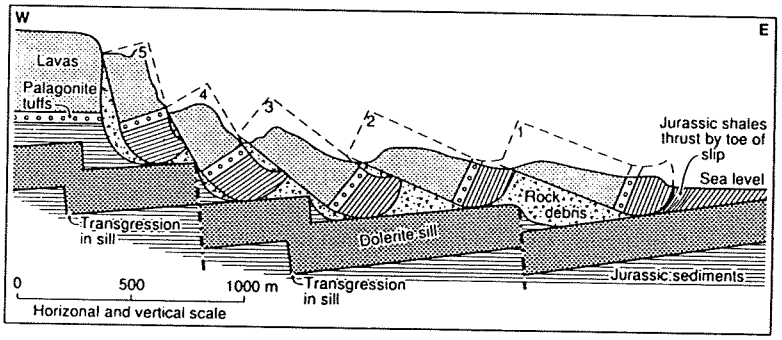


Figure 5.3: Reconstructed cross-section through the Quiraing landslide. Based on Anderson and Dunham (1966).

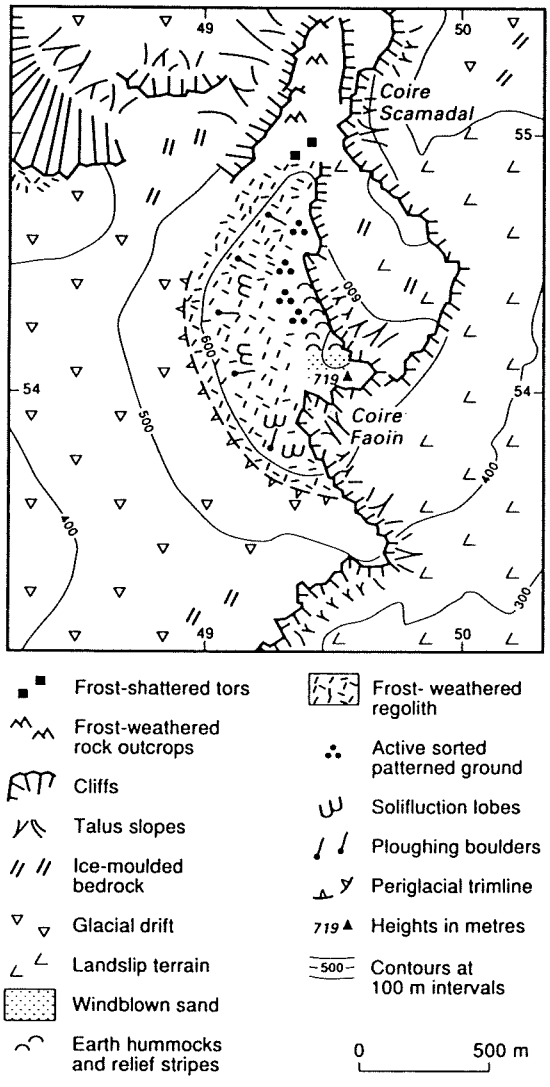


Figure 4.1: Geomorphological map of The Storr, the highest peak in Trotternish

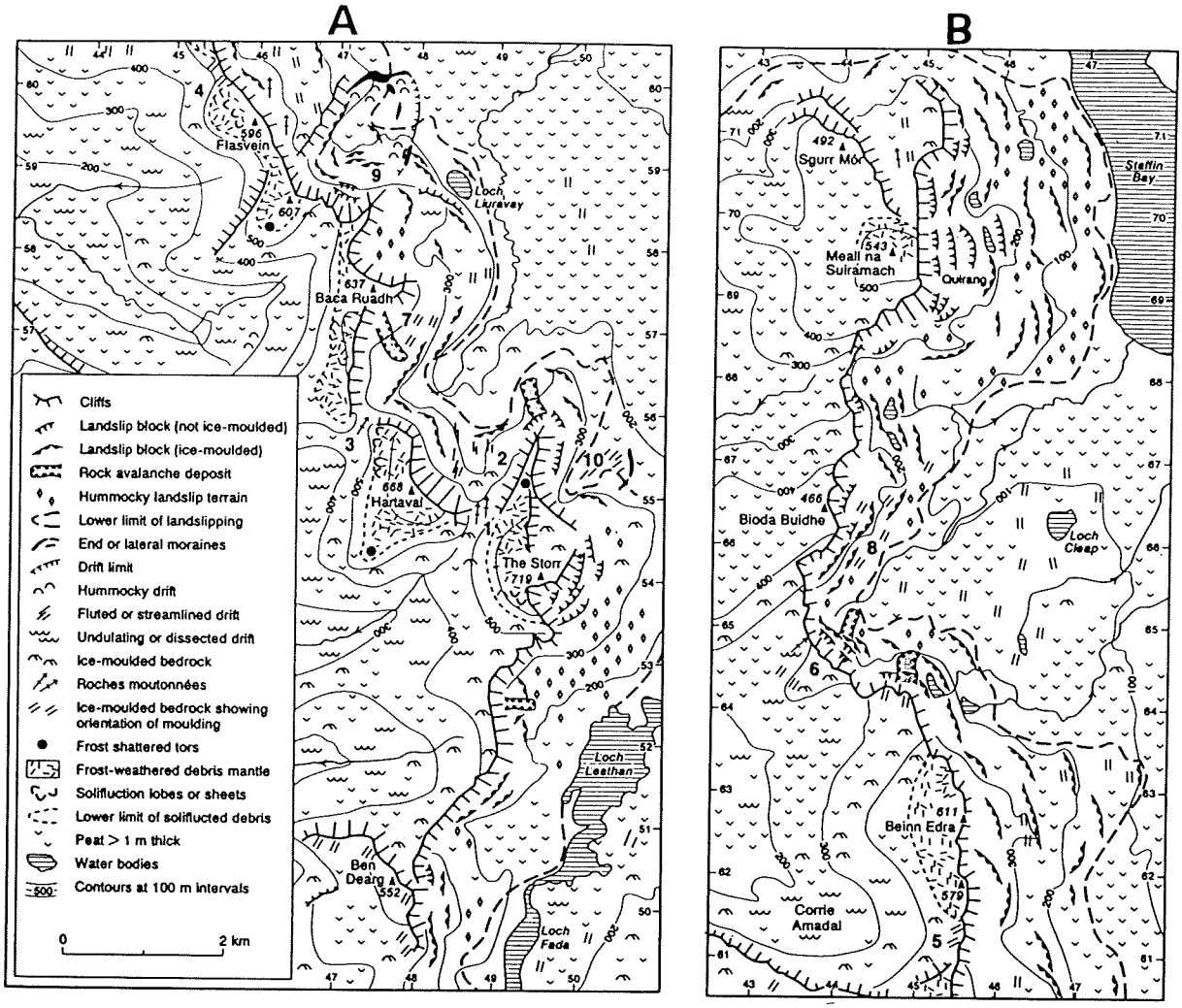


Fig. 2. Geomorphological map of the Trotternish Escarpment. (A) Southern half. (B) Northern half.

Table 4.1

Influence of lithology on the distribution of periglacal features

Lithology:	Granite or granophyre	Gabbro or eucrite	Basalt above trimline	Basalt below trimline	Torridon Sandstone
Type area:	Red Hills	Cuillins and Bla Bheinn	Trotternish Escarpment	Trotternish Escarpment	Kyleakin Hills
Frost regolith	Widespread	Localised	Widespread	-	-
Tors	-	-	Localised	-	-
Boulder lobes	Widespread	-	Localised	-	-
Active solifluction	-	-	Widespread	-	-
Ploughing boulders	-	-	Localised	-	-
Turf-banked terraces	Widespread	-	Localised	-	-
Earth hummocks	-	-	Localised	Localised	-
Active frost sorting	Localised	Localised	Widespread	Widespread	-
Deflation scars	Widespread	Localised	Widespread	Widespread	Localised
Windblown sand	-	-	Localised	-	-
Talus	Localised	Localised	Localised	Widespread	Localised
Avalanche tongues	Localised	Localised	-	-	-
Debris flows	Widespread	Localised	Localised	Localised	-

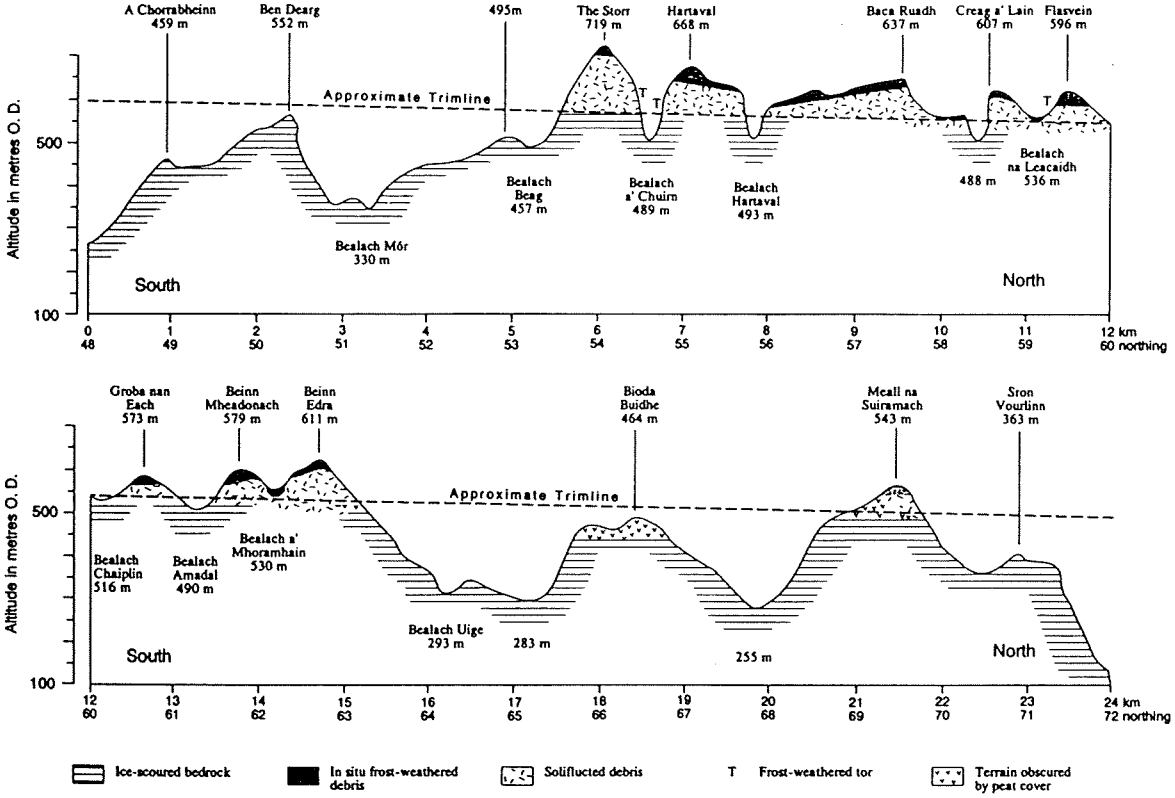


Fig. 5. Relief of the Trotternish Escarpment plotted against a north-south projection plane, and showing the lower limits of *in situ* frost weathered detritus, soliflucted debris, the altitudes of frost-shattered tors, and the upper limit of glacially-scoured bedrock.

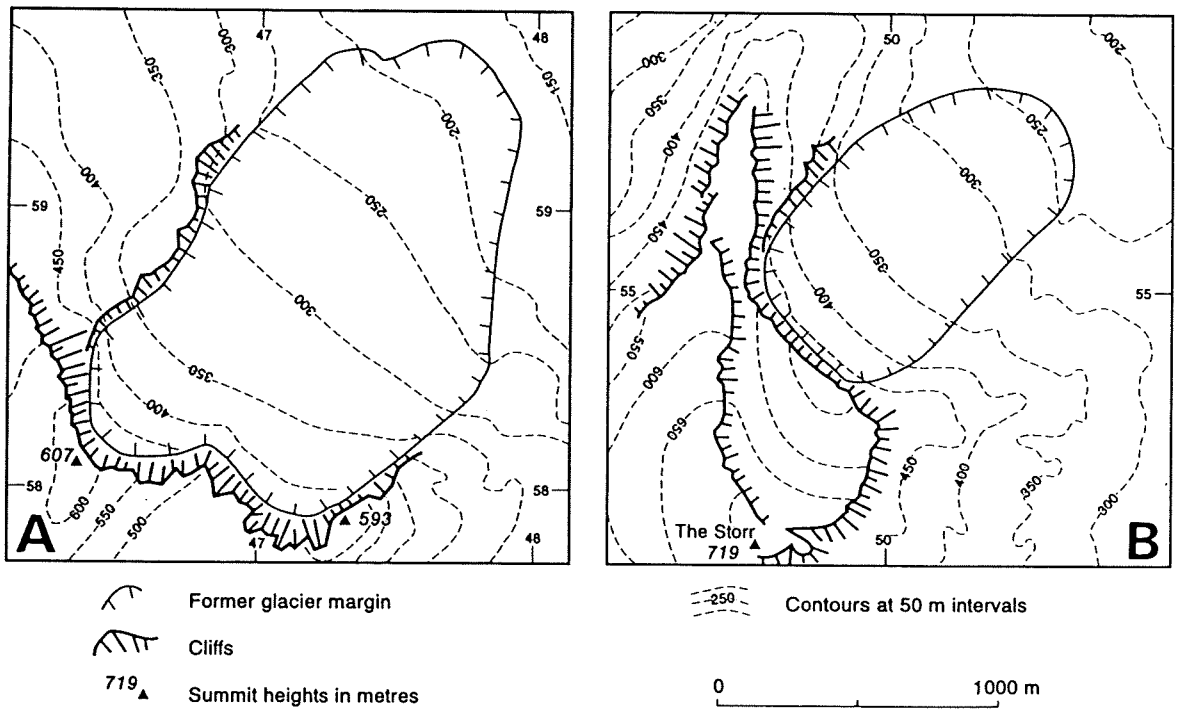


Fig. 6. Contoured reconstruction of the dimensions of two locally-nourished readvance glaciers that developed on the east side of the Trotternish Escarpment after the wastage of the last ice sheet. (A) the Cuithir Glacier; (B) the Scamadal Glacier.

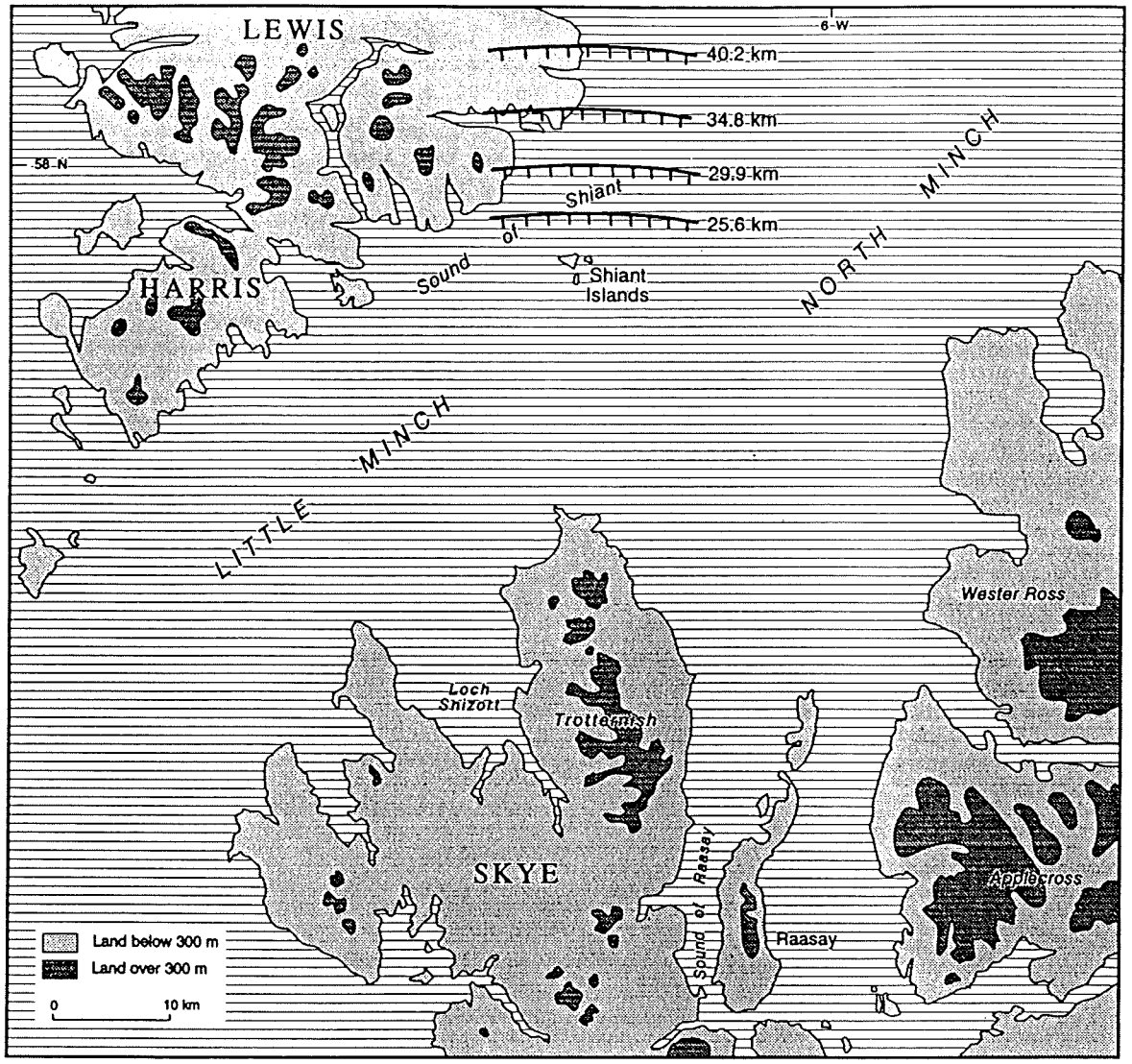


Fig. 9. Possible maximum lateral extent of the last Scottish ice sheet in the Minches, estimated from the gradient and altitude of the periglacial trimline that descends from south to north along the Trotternish Escarpment. These estimated ice margins assume continued northwards ice movement, and do not take into account possible deflection by ice moving north-west from Wester Ross.

TABLE 2. **Calculation of the lateral extent of the last ice sheet from trimline data**

Assumed depth to seabed (metres)	Altitude of ice-sheet surface (metres)	Ice-sheet thickness (h) (metres)	Trimline gradient (α) (m/km)	Basal shear stress (τ) (kPa)	Distance (L) to ice-sheet margin (kilometres)	Lateral extent of ice sheet to north of Trotternish (kilometres)
1. Storr-Beinn Mheadonach transect						
60	543	603	5.6	30	54.0	34.8
120	543	663	5.6	33	59.4	40.2
2. Storr-Meall na Suiramach transect (maximum trimline gradient)						
60	508	568	7.0	35	40.6	25.6
120	508	628	7.0	39	44.9	29.9

Devensian late-glacial

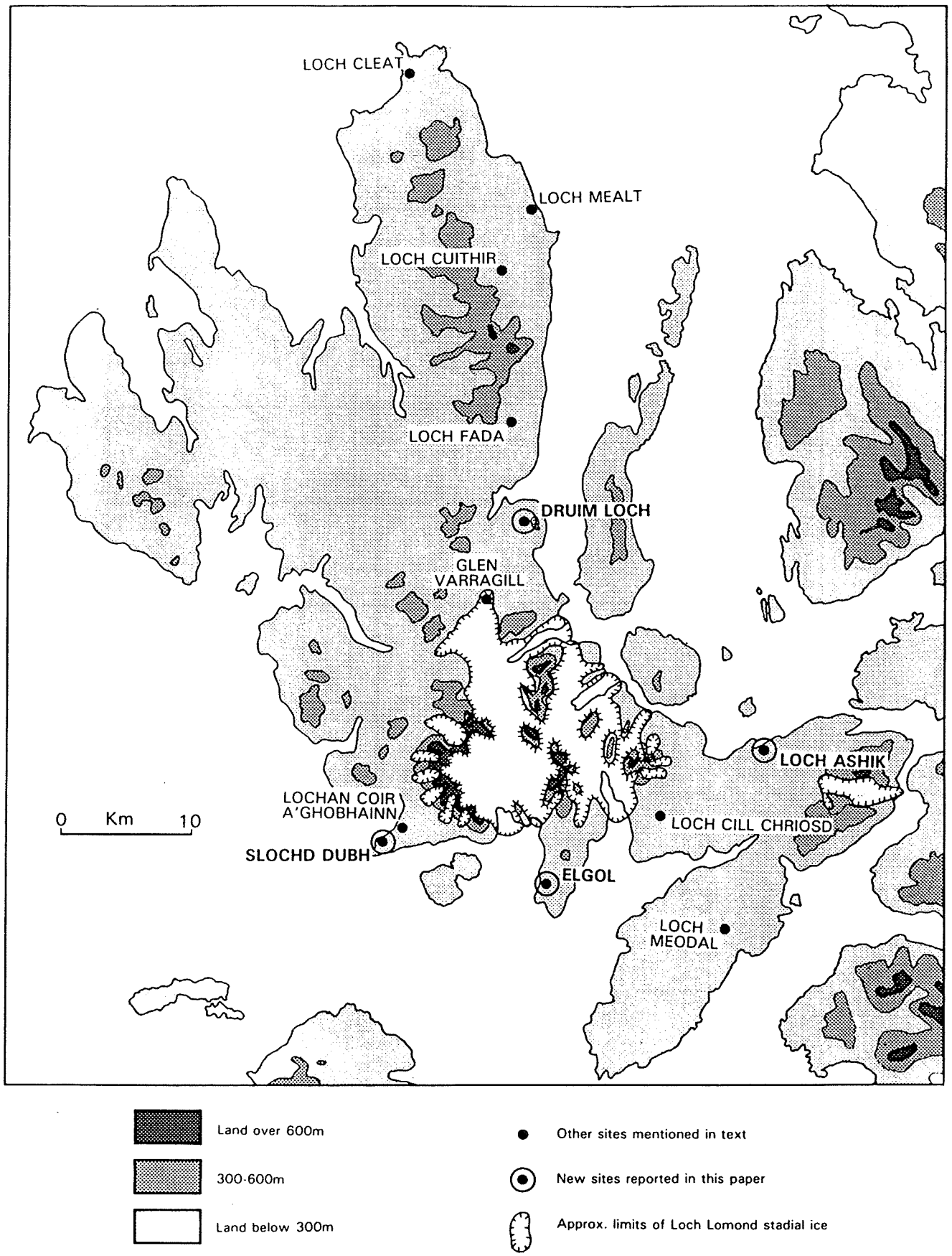


FIG. 2. The Isle of Skye showing the location of pollen sites and the limits of the Loch Lomond Stadial glaciers around the Cuillin Hills and in the Kyleakin Hills.

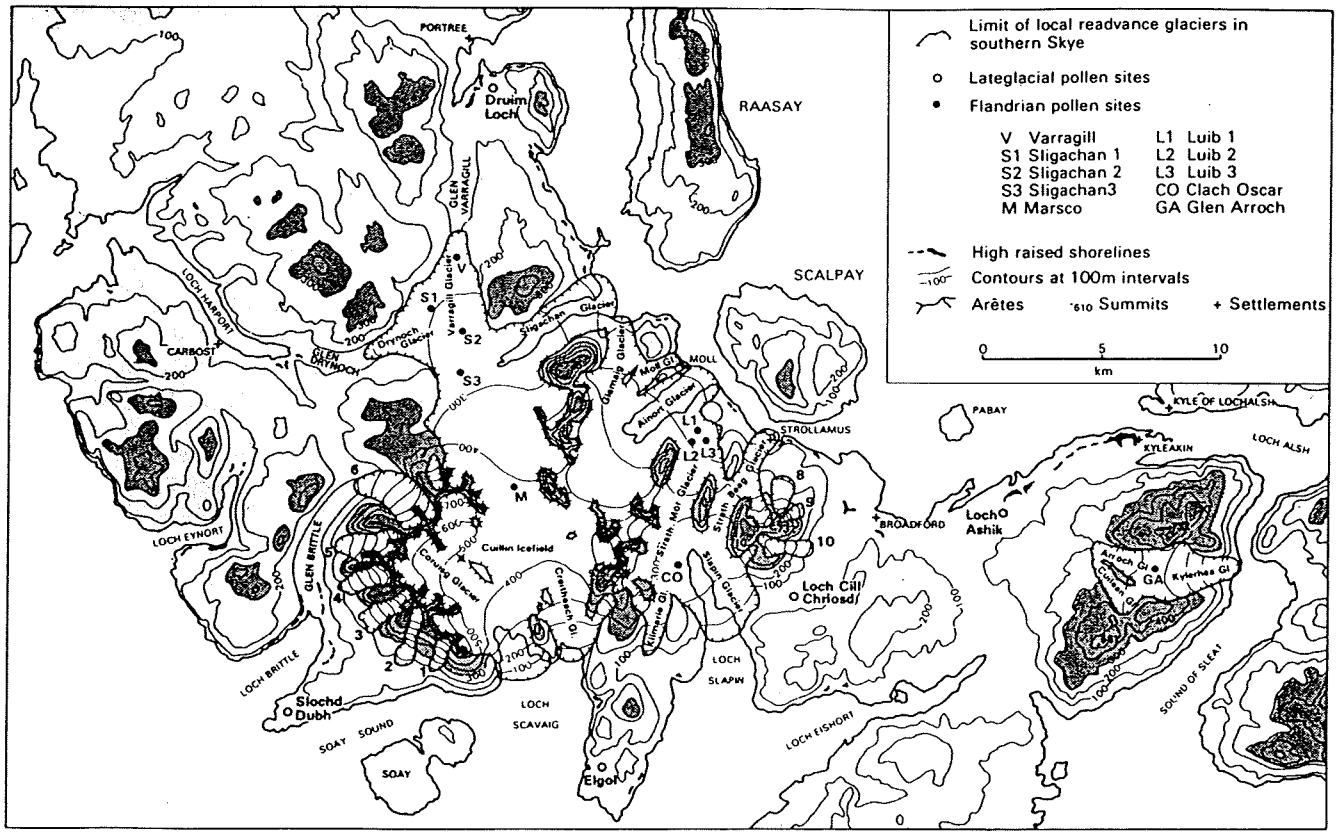


Figure 3 Loch Lomond Readvance ice limits, raised shorelines and pollen sites in south-central Skye.

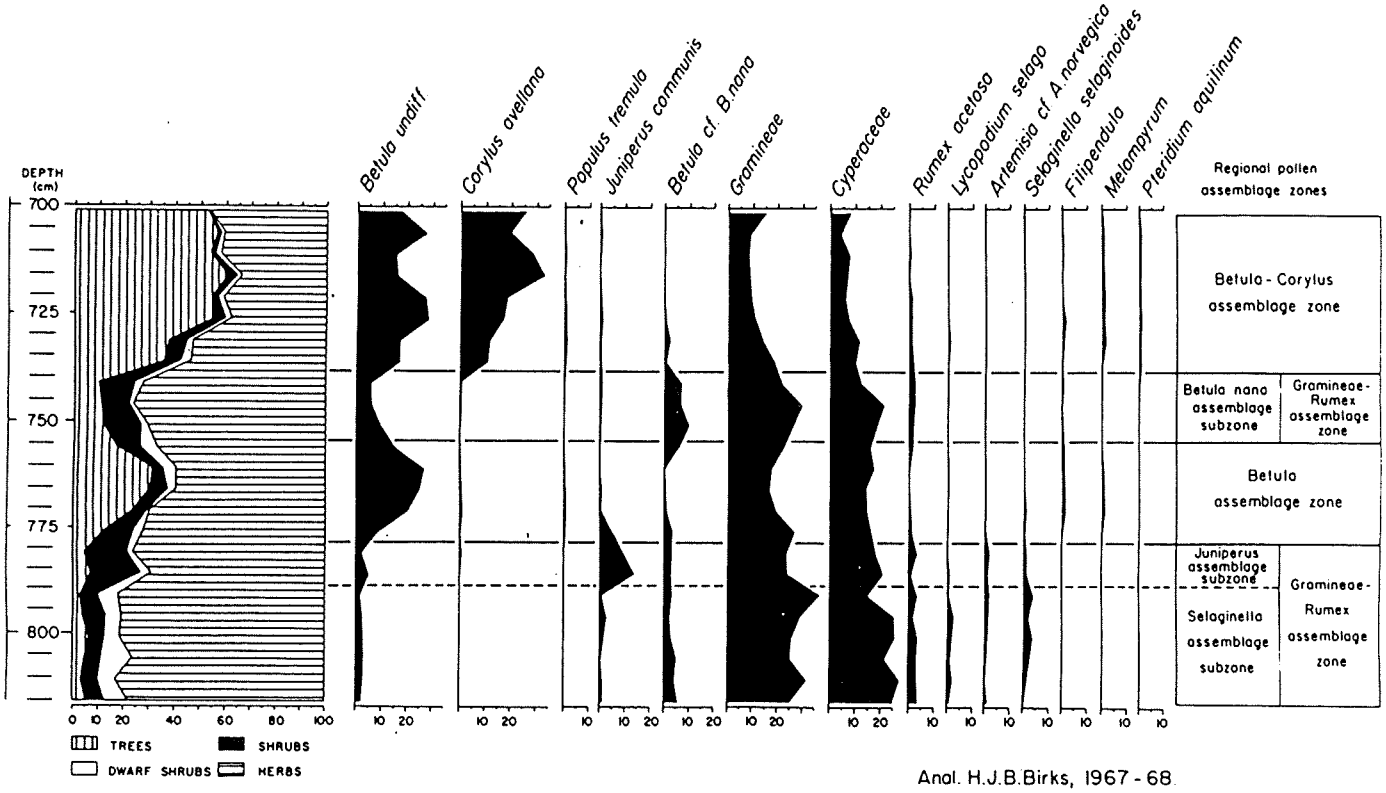


Figure 2. Late-glacial and early post-glacial pollen diagram from Loch Meodal, Isle of Skye. Major pollen and spore types only are shown. Scale at base of diagram shows percentages for black silhouettes. All values are percentages of total determinable pollen and spores. Undiff. = undifferentiated.

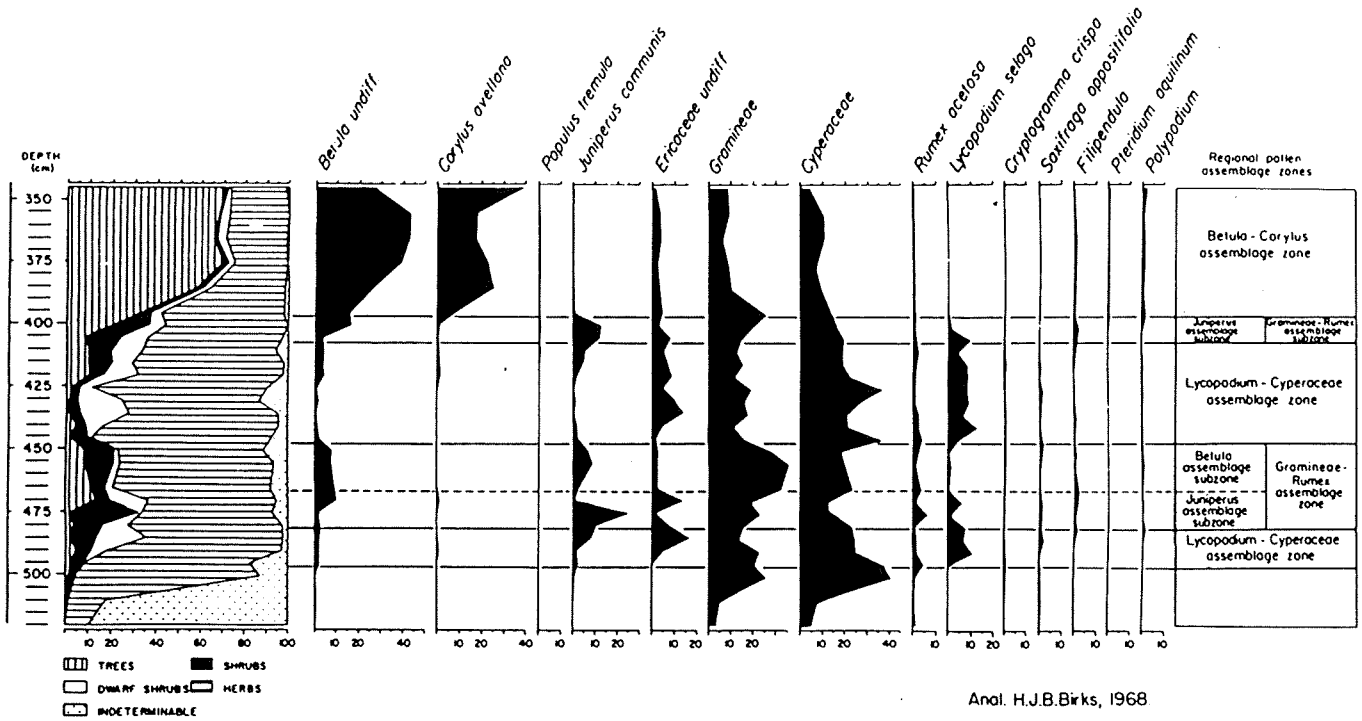


Figure 4. Late-glacial and early post-glacial pollen diagram from Loch Cill Chriosd, Isle of Skye. Major pollen and spore types only are shown. Scale at base of diagram shows percentages for black silhouettes. All values are percentages of total determinable and indeterminable pollen and spores. Undiff. = undifferentiated.

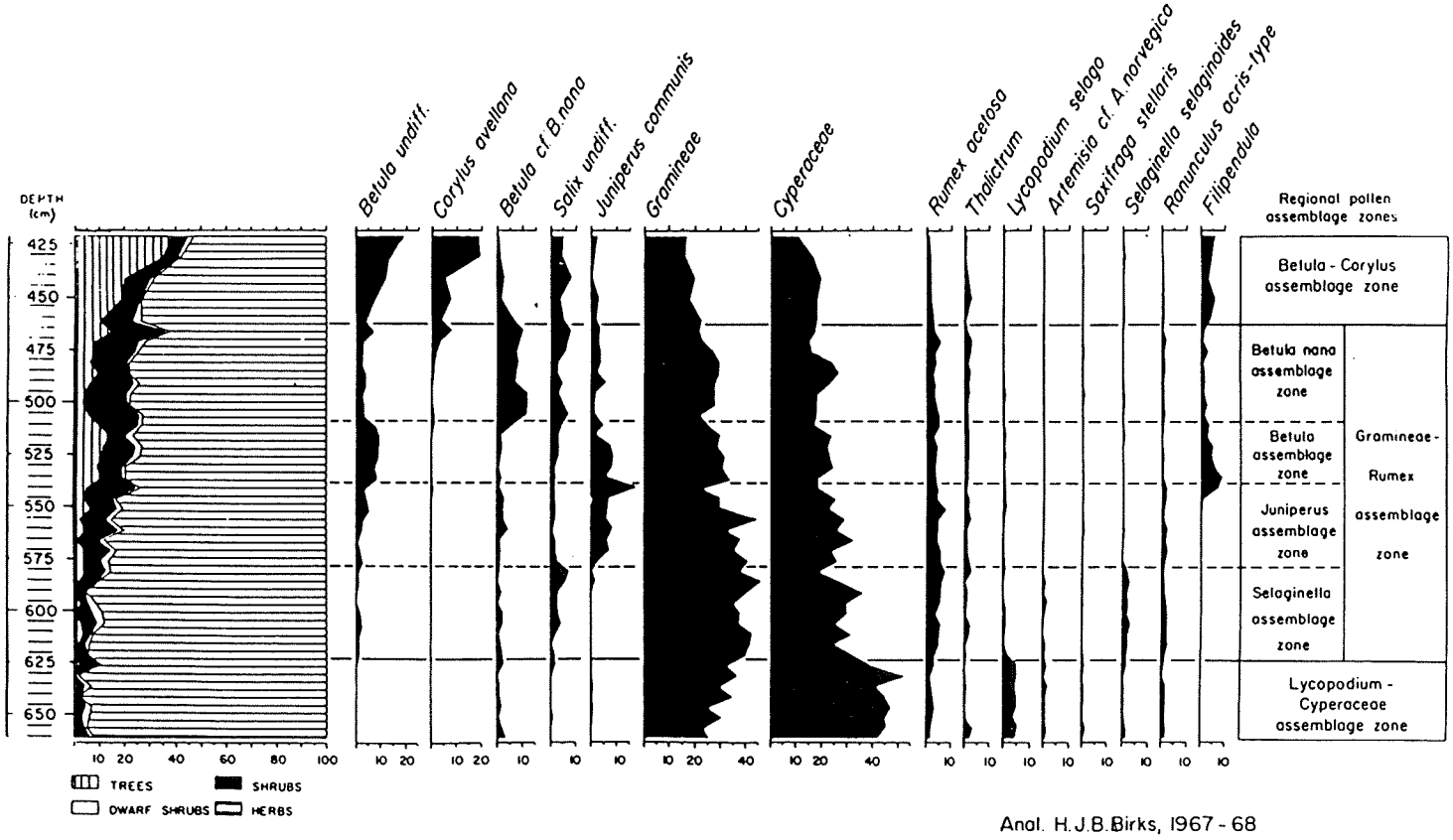


Figure 3. Late-glacial and early post-glacial pollen diagram from Loch Fada, Isle of Skye. Major pollen and spore types only are shown. Scale at base of diagram shows percentages for black silhouettes. All values are percentages of total determinable pollen and spores. Undiff. = undifferentiated.

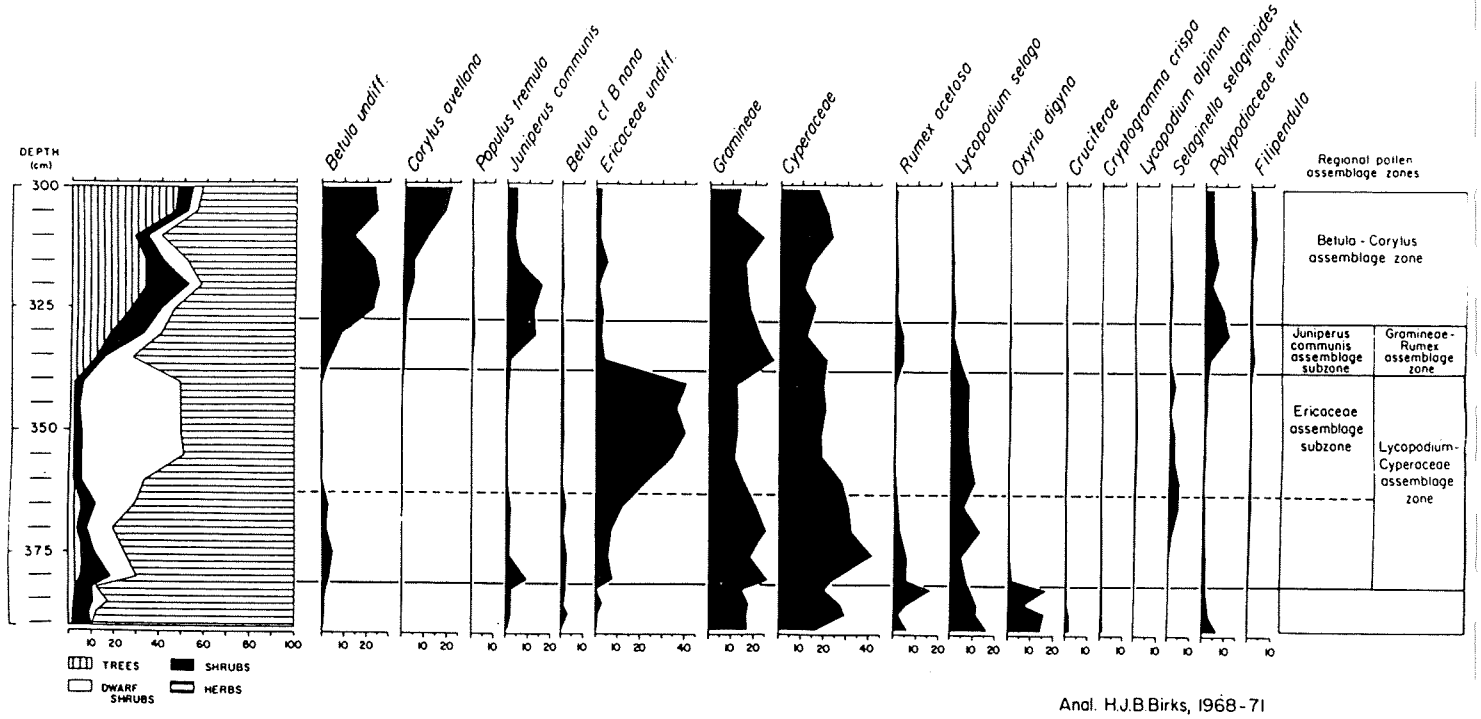


Figure 5. Late-glacial and early post-glacial pollen diagram from Lochan Coir'a'Ghobhainn, Isle of Skye. Major pollen and spore types only are shown. Scale at base of diagram shows percentages for black silhouettes. All values are percentages of total determinable pollen and spores. Undiff. = undifferentiated.

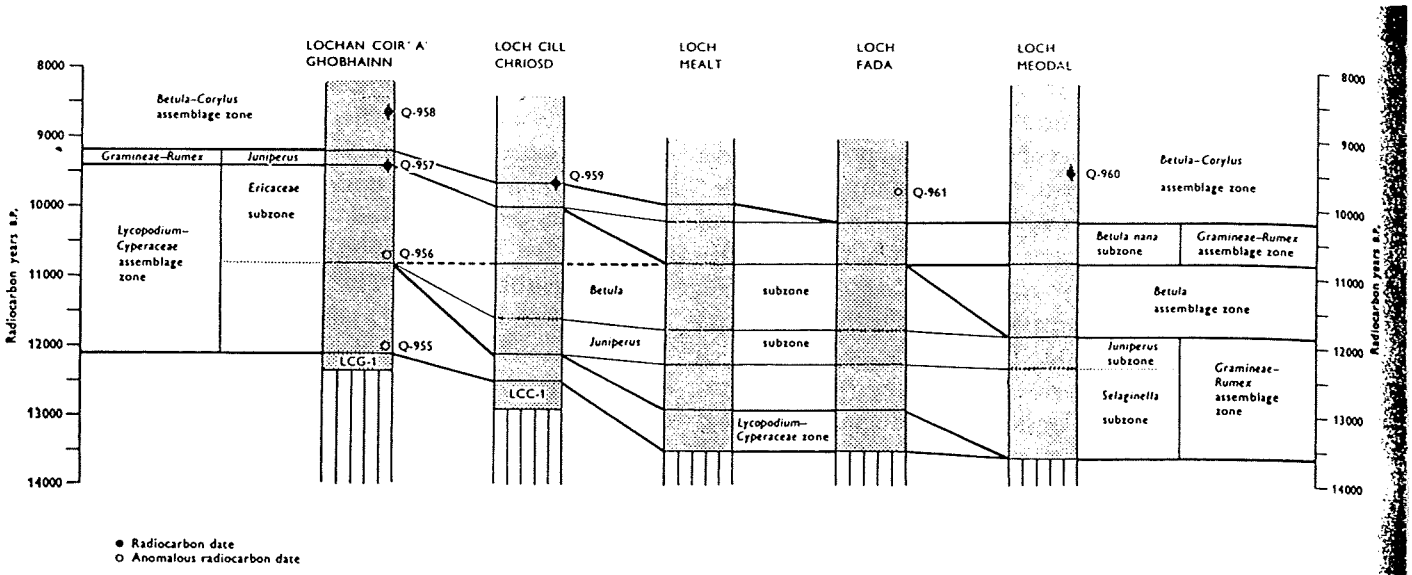


Figure 27. Correlation chart of Late-Devensian and early Flandrian pollen zones on the Isle of Skye. Radiocarbon dates are shown by solid circles; the vertical line indicates the reported single standard deviation. Anomalous radiocarbon dates are shown by open circles, and they are plotted by stratigraphic position, not age.

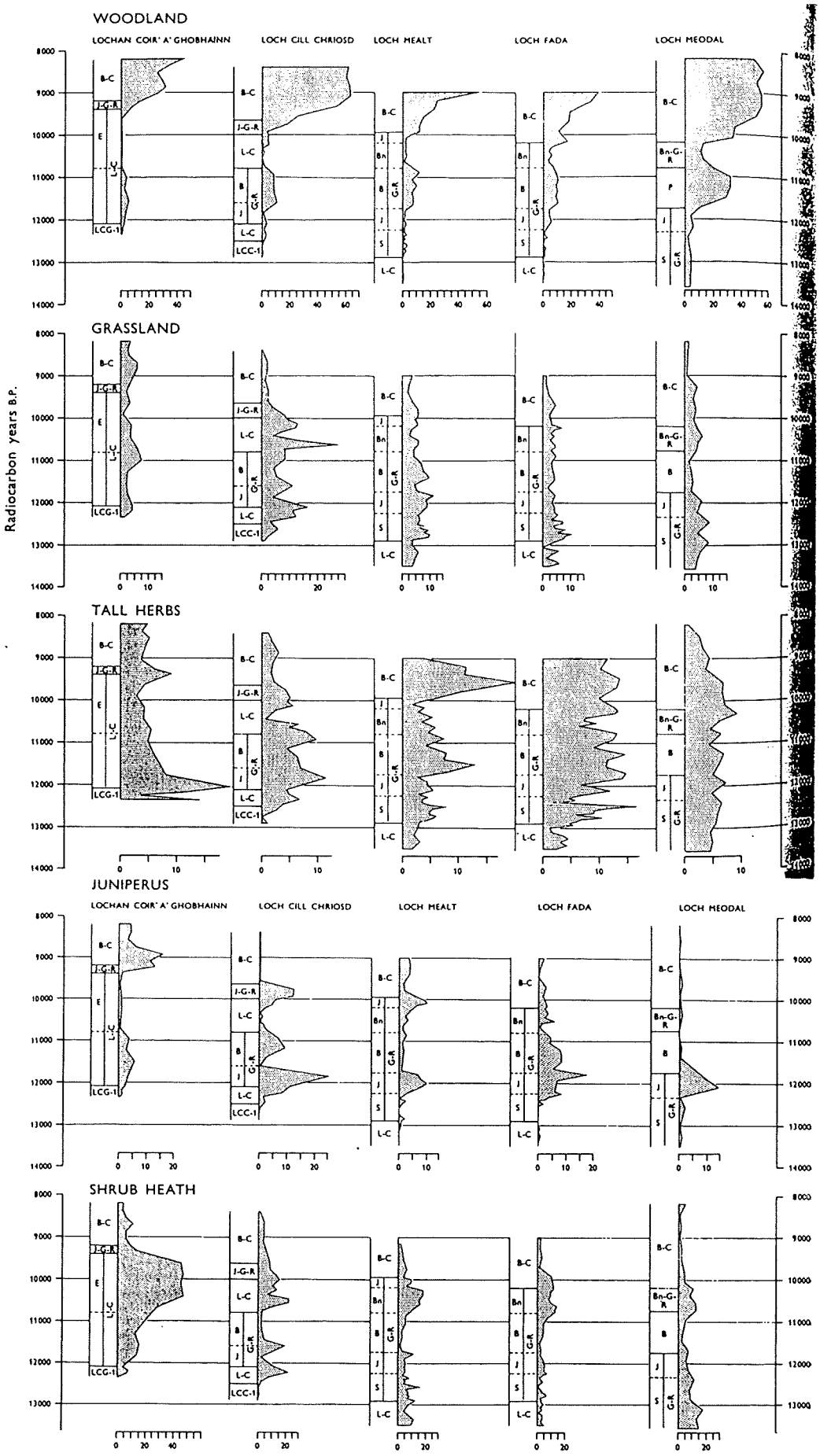


Figure 32. Summation curves for five groups of pollen and spore types based on the present ecological preferences of the taxa concerned at the five sites investigated. The groups are defined in Chapter 14 and are expressed as percentages of total determinable pollen and spores, excluding obligate aquatic taxa. A constant vertical scale of radiocarbon years B.P. is used, based on the correlation chart in Fig. 27, and the sample levels are distributed within each pollen zone at distances proportional to their initial intervals of sampling. Scale at base of each curve gives percentages for shaded silhouette. The pollen assemblage zones are also shown. Abbreviations: *B* = *Betula*, *Bn* = *Betula nana*, *C* = Cyperaceae, *E* = Ericaceae, *G* = Gramineae, *J* = *Juniperus*, *L* = *Lycopodium*, *R* = *Rumex*, *S* = *Selaginella*.

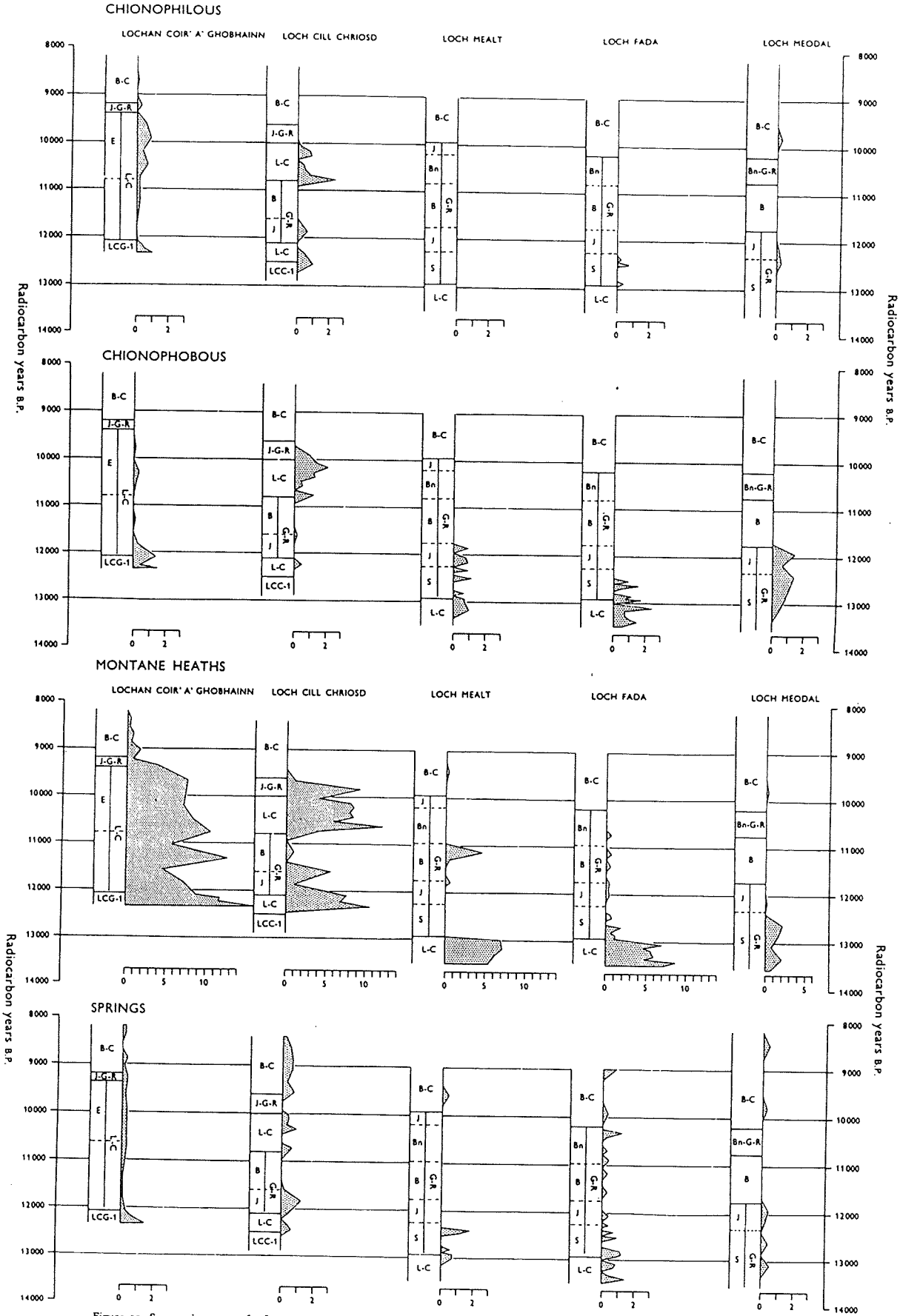


Figure 33. Summation curves for four groups of pollen and spore types based on the present ecological preferences of the taxa concerned. See Chapter 14 and caption to Figure 32 for further explanation and abbreviations.

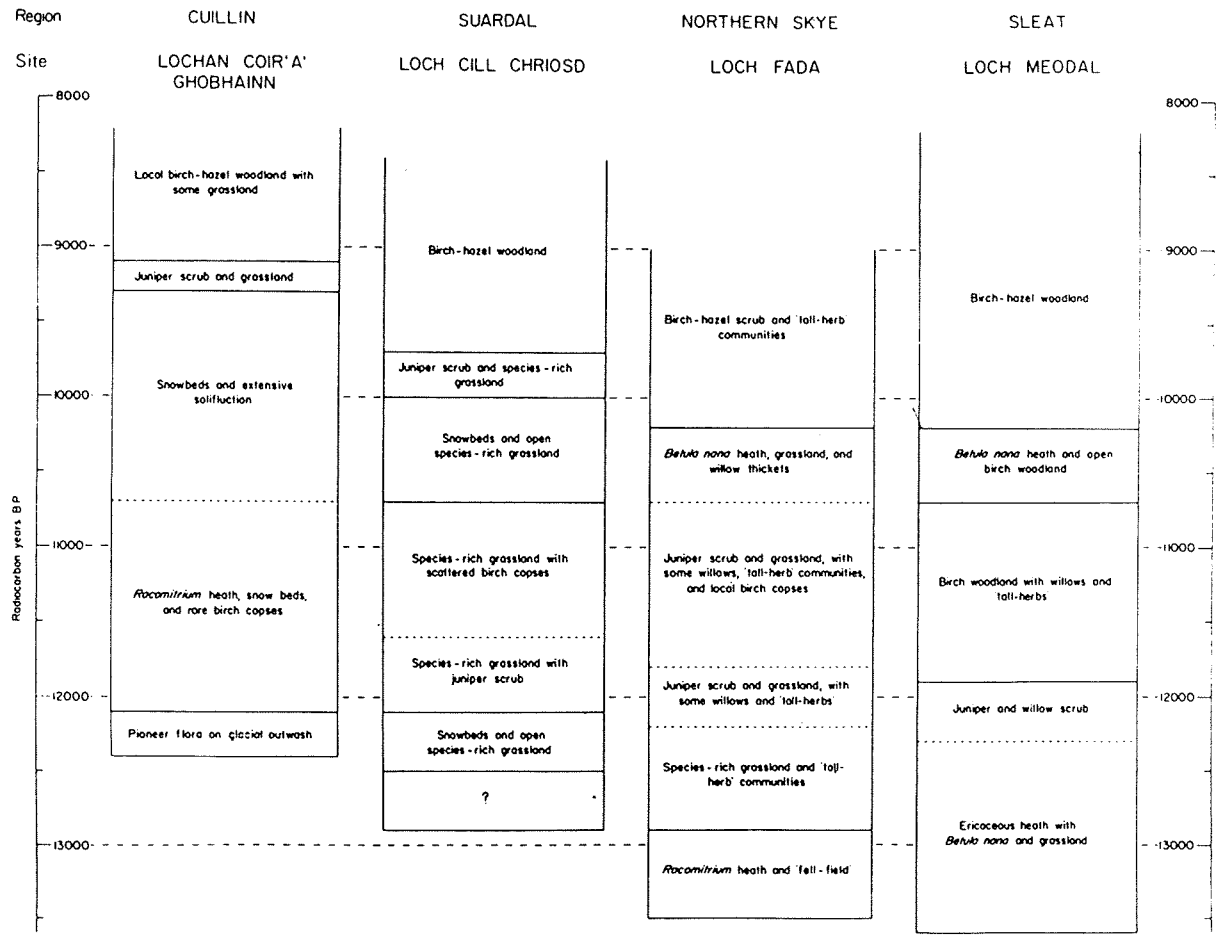


Figure 6. Generalised comparison of the inferred late-glacial and early post-glacial vegetational history of the Isle of Skye based on Lochan Coir'a'Ghobhainn, Loch Cill Chriosd, Loch Fada, and Loch Meodal.

TABLE 12.2. *Comparison of the percentage of floristic elements in the Late-Devensian flora and the present vascular plant flora of Skye*

Floristic Element	Late Devensian Flora		Modern Flora	
	Total	Per-centage	Total	Per-centage
1. Atlantic				
(*a*) Southern Atlantic	0	0	11	1.8
(*b*) Northern Atlantic	0	0	6	1.0
(*c*) Widespread Atlantic	4	2.5	35	5.9
(*d*) Mediterranean Atlantic	0	0	1	0.2
Total	4	2.5	53	8.9
2. Sub-Atlantic				
(*a*) Southern Sub-Atlantic	0	0	8	1.4
(*b*) Northern Sub-Atlantic	4	2.5	6	1.0
(*c*) Widespread Sub-Atlantic	14	8.8	102	17.3
Total	18	11.3	116	19.7
3. Continental				
(*a*) Southern Continental	5	3.1	18	3.1
(*b*) Northern Continental	17	10.7	73	12.4
(*c*) Widespread Continental	1	0.6	29	4.9
Total	23	14.4	120	20.4
4. Northern–Montane	5	3.1	14	2.4
5. Arctic–Subarctic	4	2.5	14	2.4
6. Arctic–Alpine	20	12.6	39	6.6
7. Arctic–Alpine/Alpine	1	0.6	0	0
8. Alpine	0	0	1	0.2
9. Widespread Species	42	26.0	229	38.7
10. North American	1	0.6	1	0.2
11. Endemic	0	0	1	0.2
12. Unclassified	40	25.0	2	0.3
13. Introduced	1	0.6	.	.
	159		589	

TABLE 12.3. *Comparison of the percentage representation of floristic elements in the Late-pollen flora (excluding macrofossils) and the modern pollen flora of Skye*

Floristic Element	Late-Devensian Flora		Modern Flora	
	Total	Per-centage	Total	Per-centage
1. Atlantic				
(*a*) Southern Atlantic	0	0	3	1.5
(*b*) Northern Atlantic	0	0	1	0.5
(*c*) Widespread Atlantic	4	2.8	12	5.8
(*d*) Mediterranean Atlantic	0	0	0	0
Total	4	2.8	16	7.8
2. Sub-Atlantic				
(*a*) Southern Sub-Atlantic	0	0	0	0
(*b*) Northern Sub-Atlantic	3	2.1	3	1.5
(*c*) Widespread Sub-Atlantic	13	9.0	29	14.1
Total	16	11.1	32	15.5
3. Continental				
(*a*) Southern Continental	5	3.4	5	2.4
(*b*) Northern Continental	15	10.4	22	10.7
(*c*) Widespread Continental	1	0.7	4	1.9
Total	23	14.5	31	15.1
4. Northern–Montane	5	3.4	4	1.9
5. Arctic–Subarctic	4	2.8	4	1.9
6. Arctic–Alpine	18	12.4	18	8.8
7. Arctic–Alpine/Alpine	1	0.7	0	0
8. Alpine	0	0	0	0
9. Widespread Species	37	25.7	56	27.2
10. North American	1	0.7	1	0.5
11. Endemic	0	0	0	0
12. Unclassified	37	25.7	43	21.0
13. Introduced	1	0.7	.	.
	144		205	

TABLE 12.4. *Contribution of floristic elements to the Late-Devensian pollen flora and pollen rain of Skye*

Floristic Element	Percentage of total pollen flora	Percentage of total pollen rain
1. Atlantic		
(*a*) Southern Atlantic	0	0
(*b*) Northern Atlantic	0	0
(*c*) Widespread Atlantic	2.8	0.39
(*d*) Mediterranean Atlantic	0	0
Total	2.8	0.39
2. Sub-Atlantic		
(*a*) Southern Sub-Atlantic	0	0
(*b*) Northern Sub-Atlantic	2.1	1.11
(*c*) Widespread Sub-Atlantic	9.0	7.17
Total	11.1	8.27
3. Continental		
(*a*) Southern Continental	3.4	0.04
(*b*) Northern Continental	10.4	9.90
(*c*) Widespread Continental	0.7	0.22
Total	14.5	10.17
4. Northern–Montane	3.4	5.17
5. Arctic–Subarctic	2.8	0.22
6. Arctic–Alpine	12.4	14.46
7. Arctic–Alpine/Alpine	0.7	0.002
8. Alpine	0	0
9. Widespread Species	25.7	3.45
10. North American	0.7	0.002
11. Endemic	0	0
12. Unclassified	25.7	57.87
13. Introduced	0.7	0.002

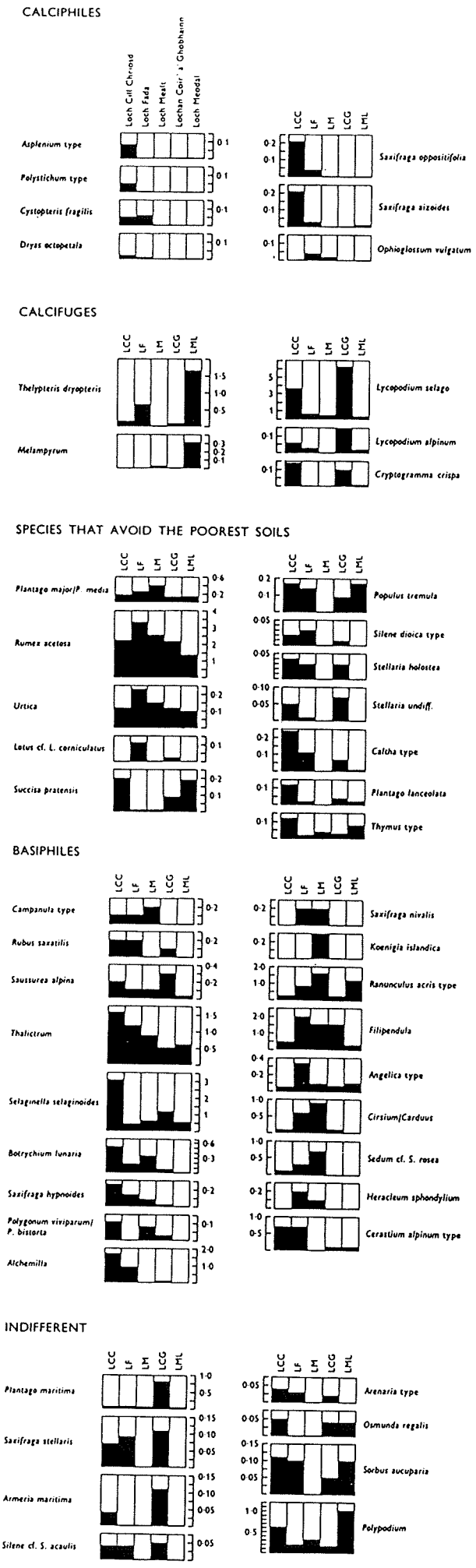


Figure 34. Relative frequencies for pollen and spore types of taxa that occur in the present edaphic categories defined in Chapter 5, expressed as a percentage of the total number of determinable pollen and spores, excluding obligate aquatic taxa. Pollen totals: Loch Cill Chriosd 8433; Loch Fada 10504; Loch Mealt 9215; Lochan Coir' a' Ghobhainn 21757; Loch Meodal 9074.

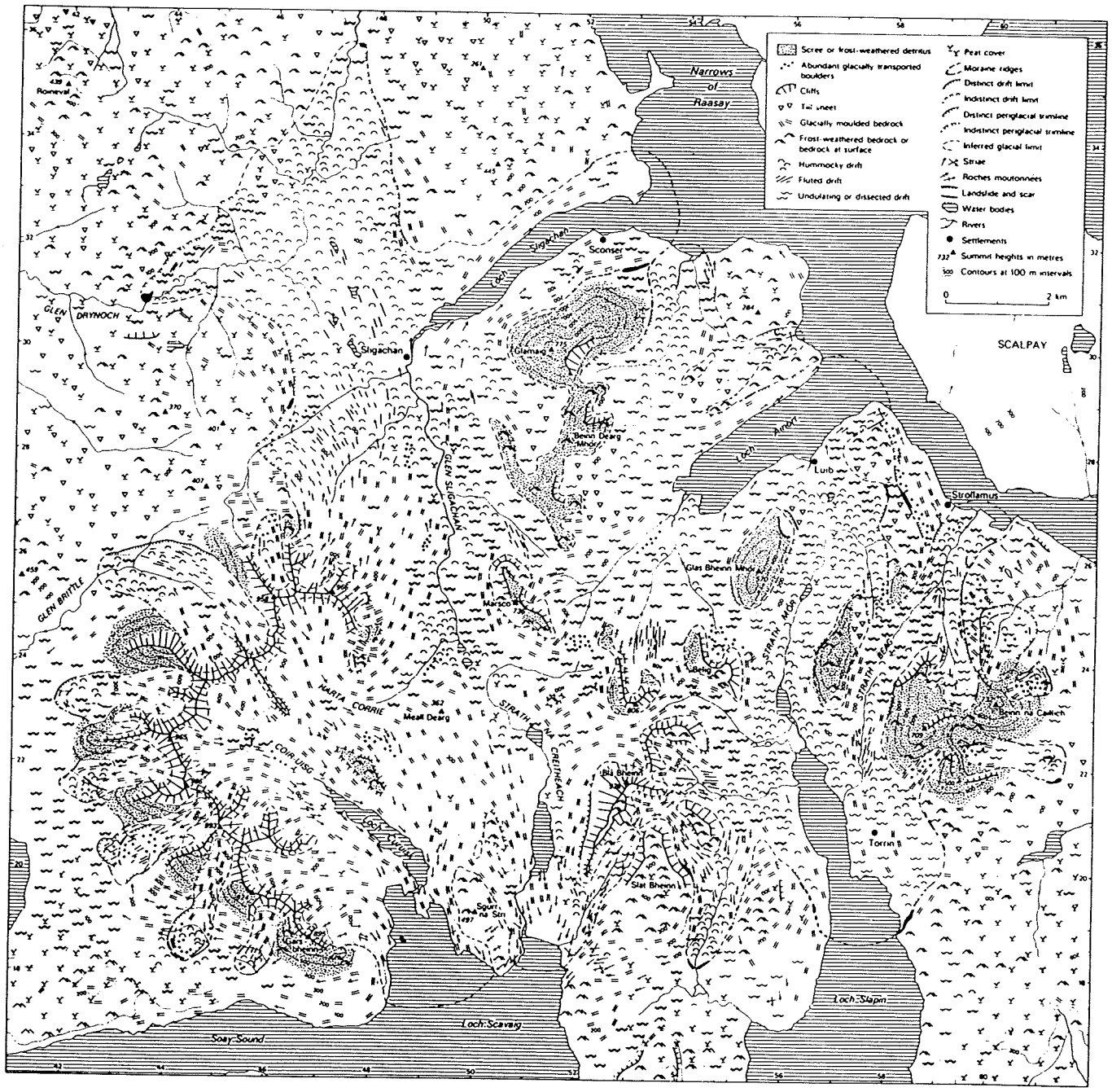
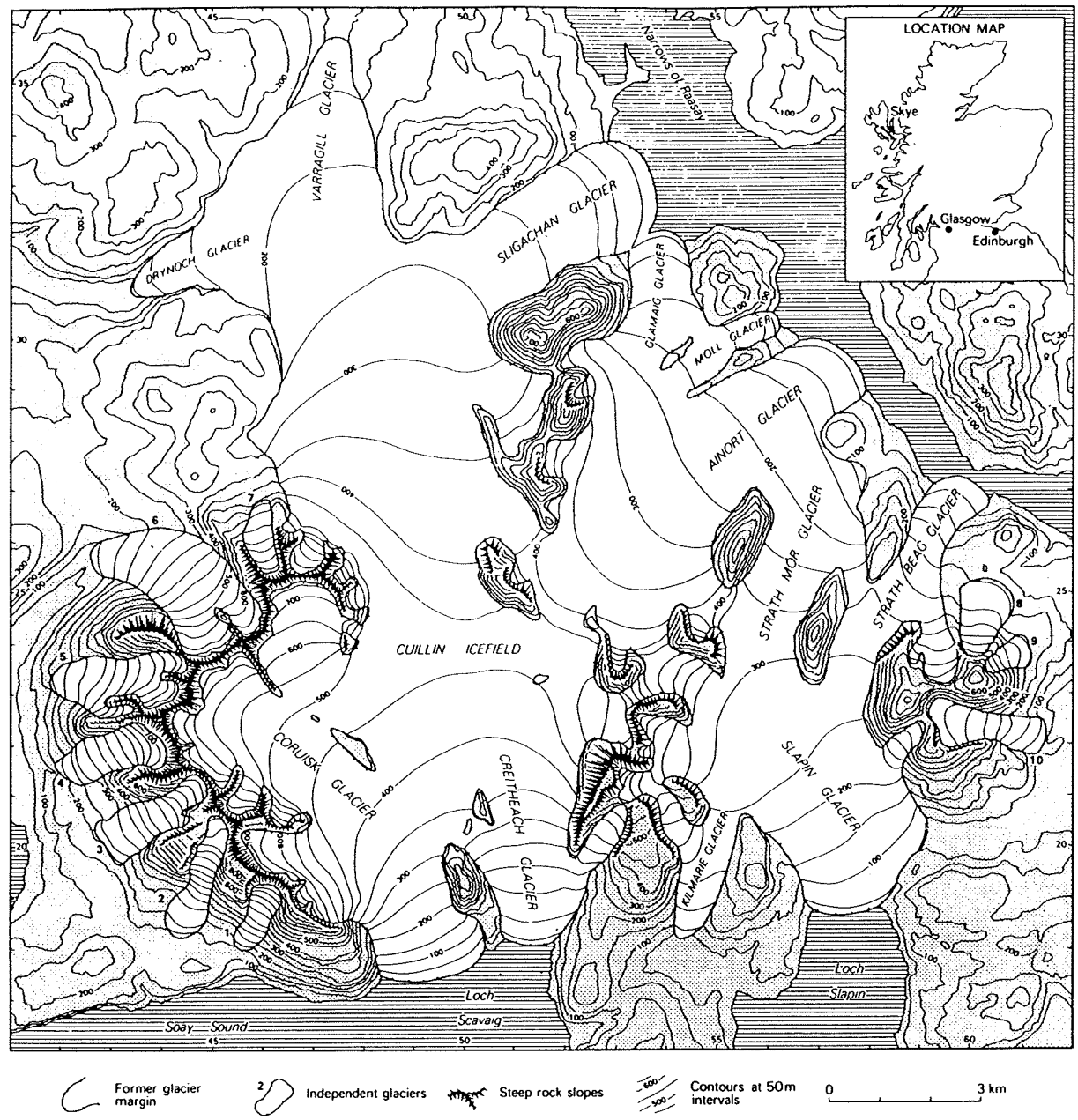


Figure 3 Glacial geomorphology of the Cuillin Hills, Blà Bheinn and Red Hills.



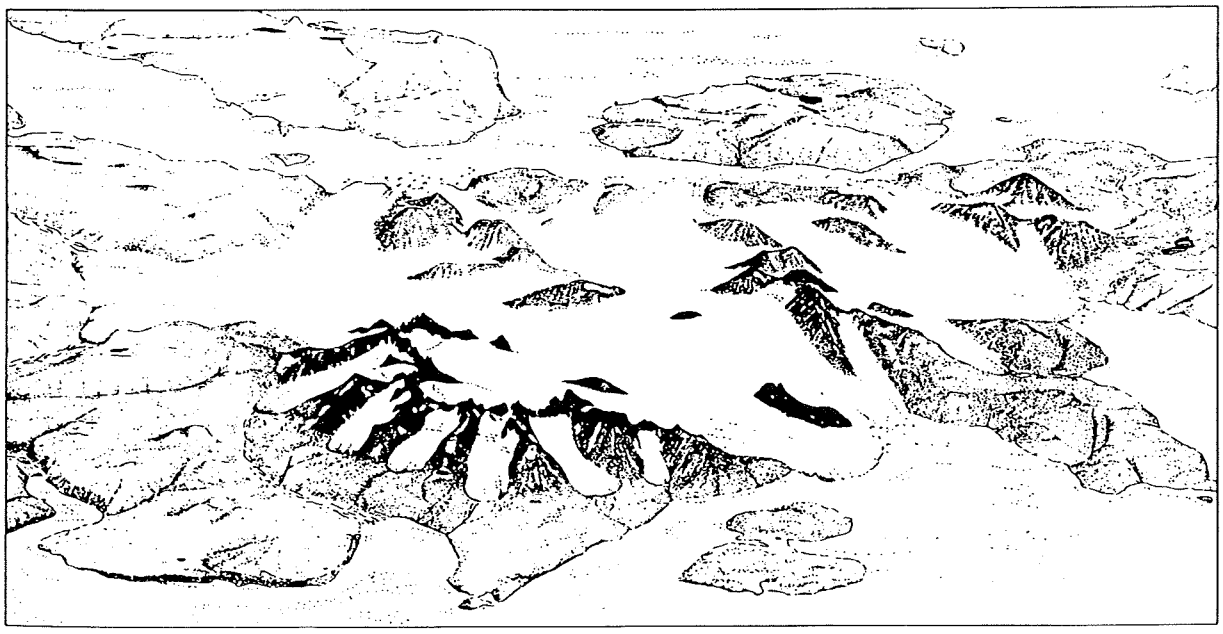


Figure 4 Reconstruction of the dimensions of the Cuillin Icefield and other former glaciers in the area of the Cuillin Hills, Blà Bheinn and Red Hills. The lower diagram is an oblique view of the Cuillin Icefield and surrounding corrie glaciers drawn by D. I. Benn, and reproduced here with his permission.

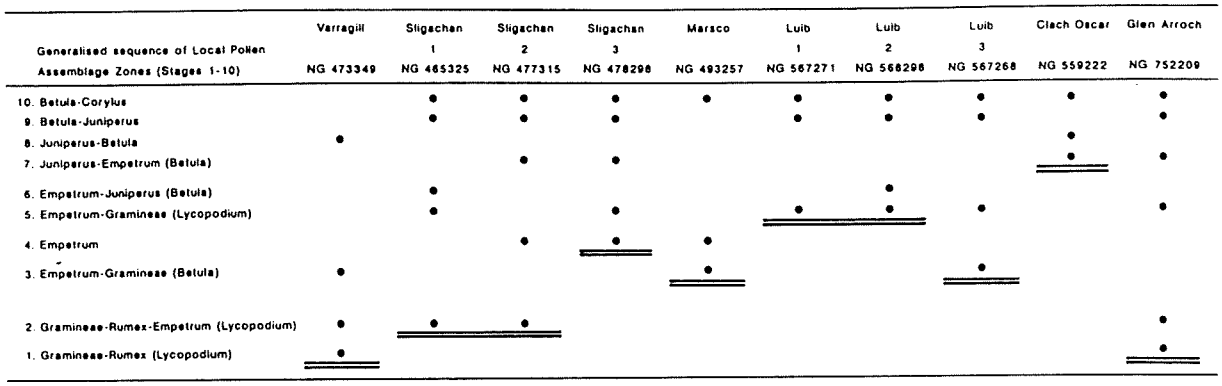


Figure 8.1: Generalised sequence of early Flandrian pollen zones in the Scottish Highlands and the earliest zone identified in each of the 10 sites from Skye located within the Loch Lomond Stadial ice limits.

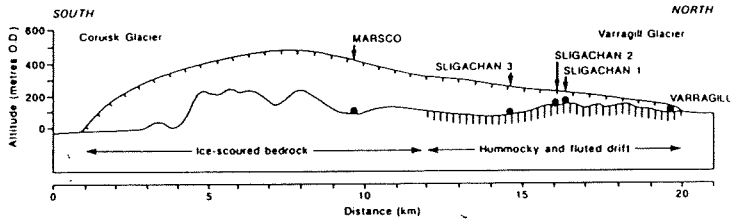


Figure 8.2: Location of Flandrian sites in the Sligachan-Varragill area and generalised profile of the Cuillin Icefield.

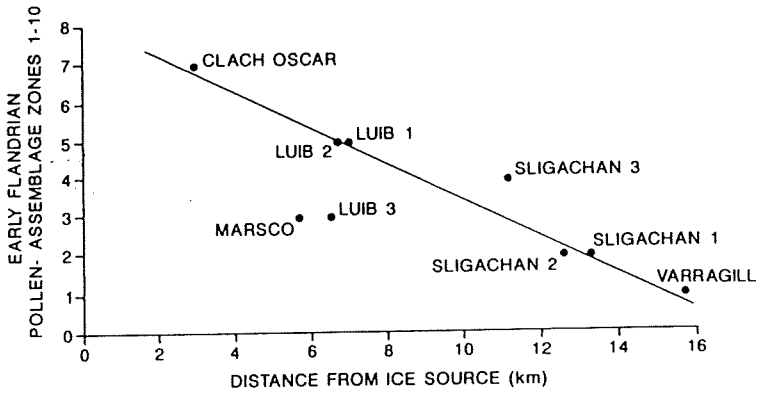
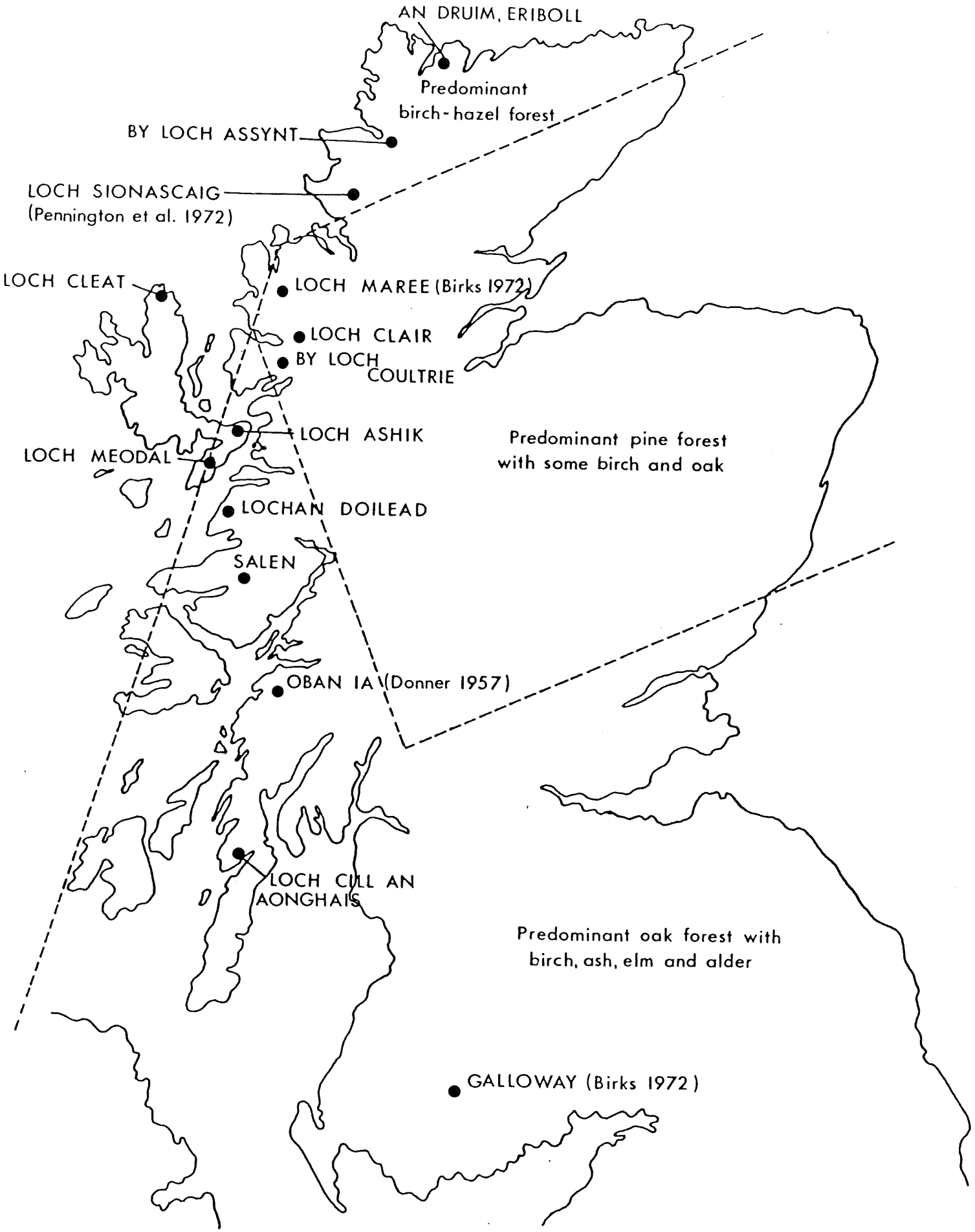
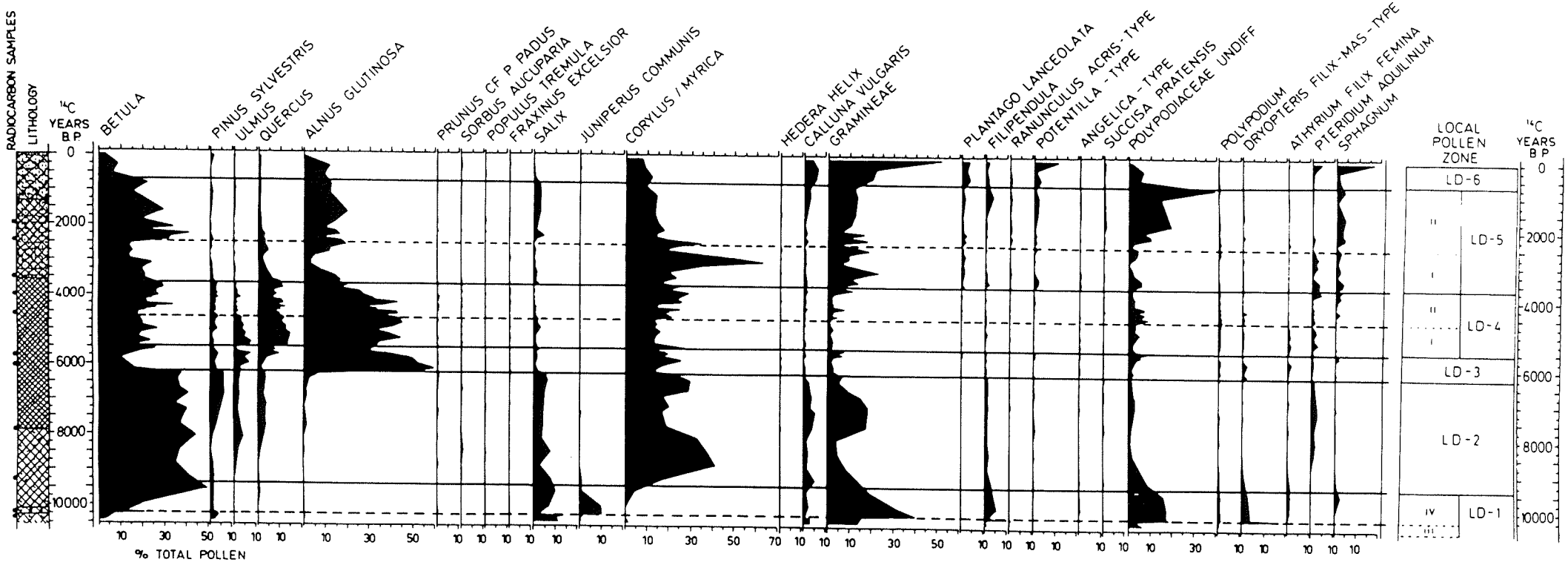


Figure 8.3: Earliest pollen zone recorded for nine sites located within the Loch Lomond Stadial ice limits plotted against distance from ice source.

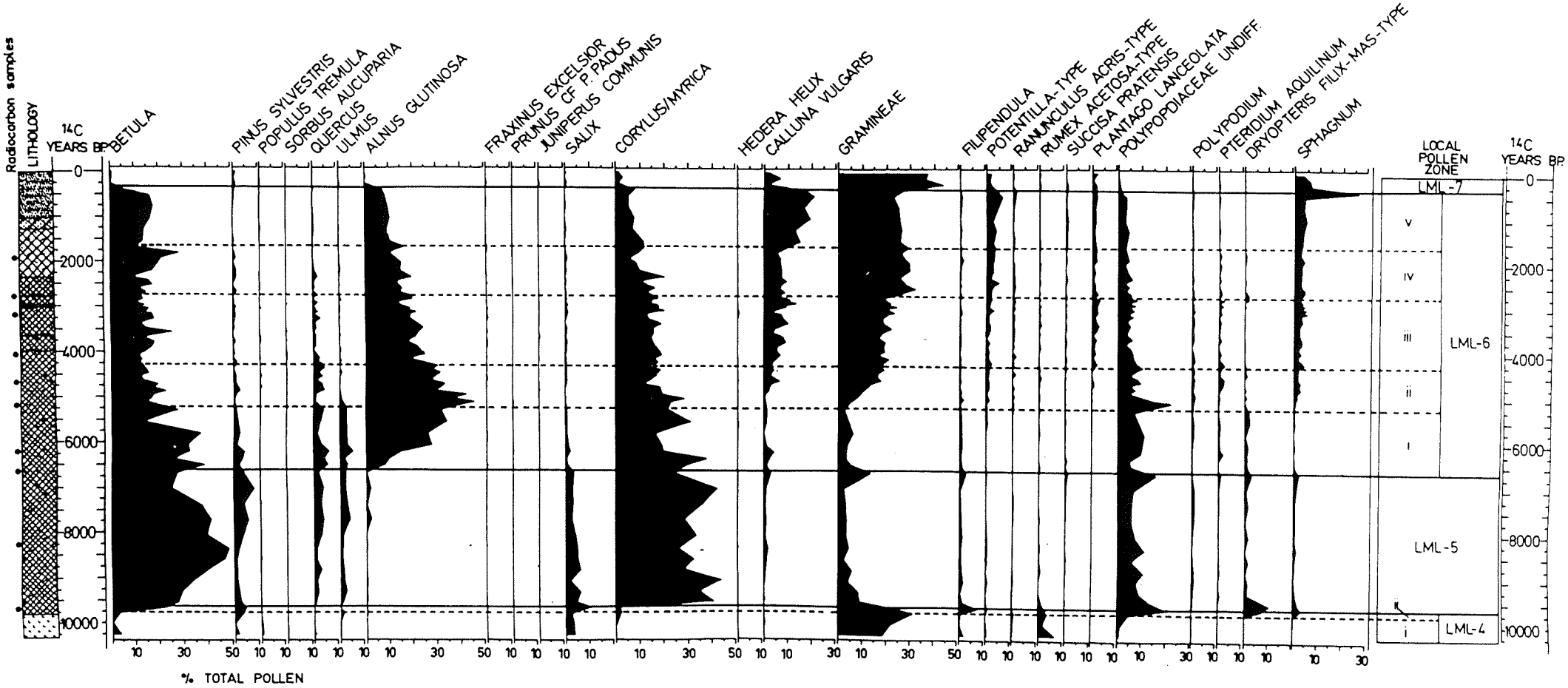
Holocene vegetational history


AN DRUIM, ERIBOLL
Predominant
birch-hazel forest
BY LOCH ASSYNT
LOCH SIONASCAIG
(Pennington et al. 1972)
LOCH CLEAT
LOCH MAREE (Birks 1972)
LOCH CLAIR
BY LOCH
COULTRIE
LOCH ASHIK
LOCH MEODAL
Predominant pine forest
with some birch and oak
LOCHAN DOILEAD
SALEN
OBAN IA (Donner 1957)
LOCH CILL AN
AONGHAIS
Predominant oak forest with
birch, ash, elm and alder
GALLOWAY (Birks 1972)

LOCHAN DOILEAD, MORAR PENINSULA. ANAL. W. WILLIAMS. 1974 - 75.

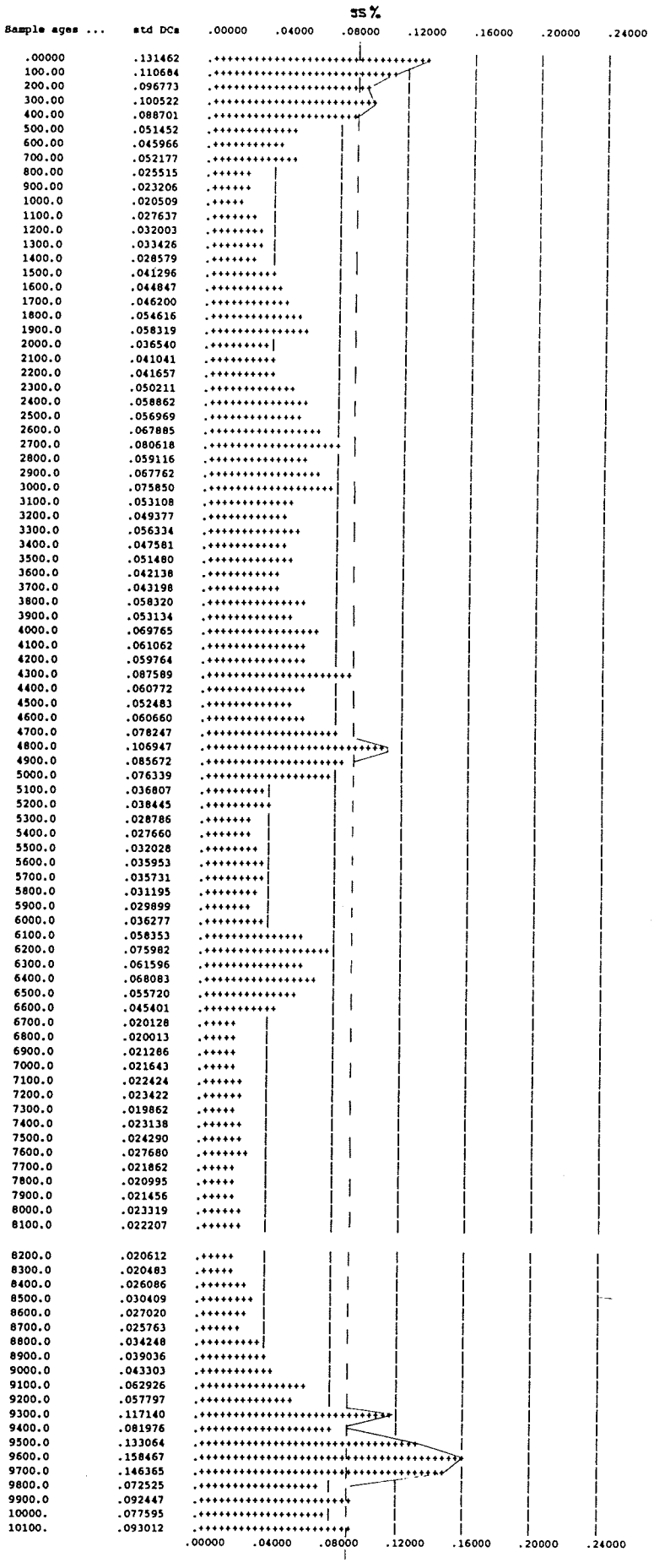


LOCH MEODAL, ISLE OF SKYE. ANAL. W. WILLIAMS. 1973-74.

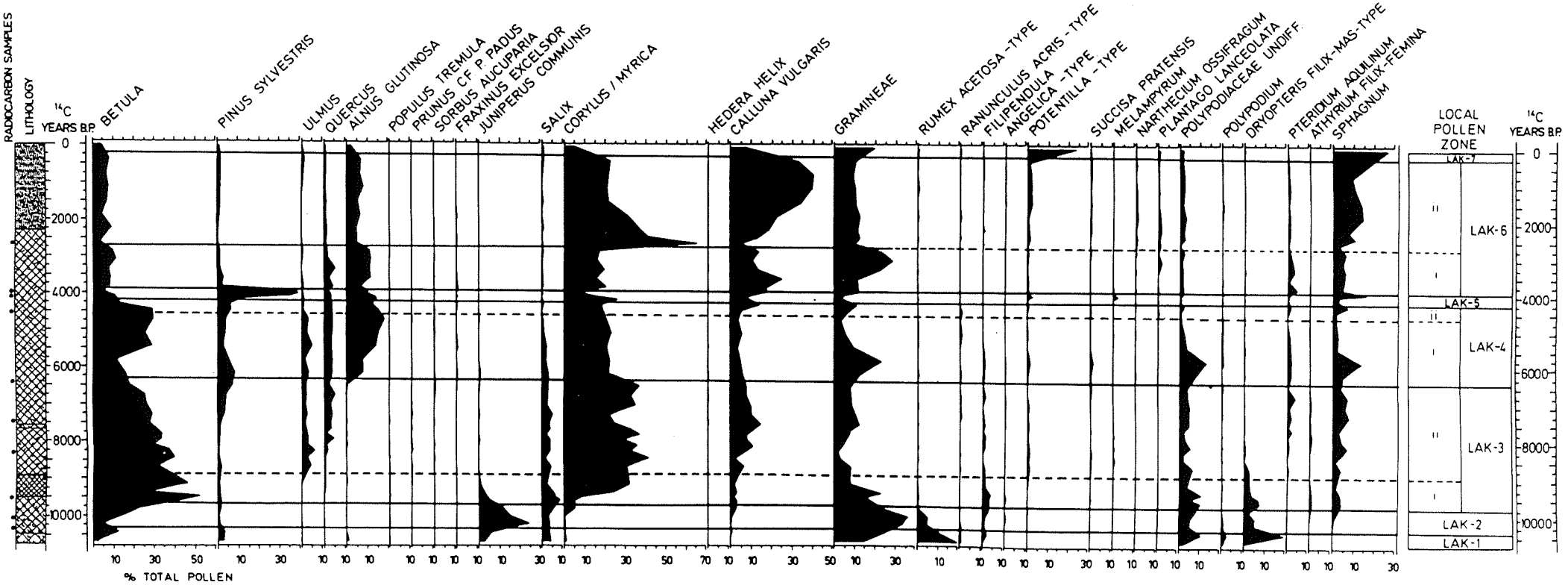


Loch Meodal

Stratigraphic plot of standardised DCs with TSU 100.00
(using chord distance)

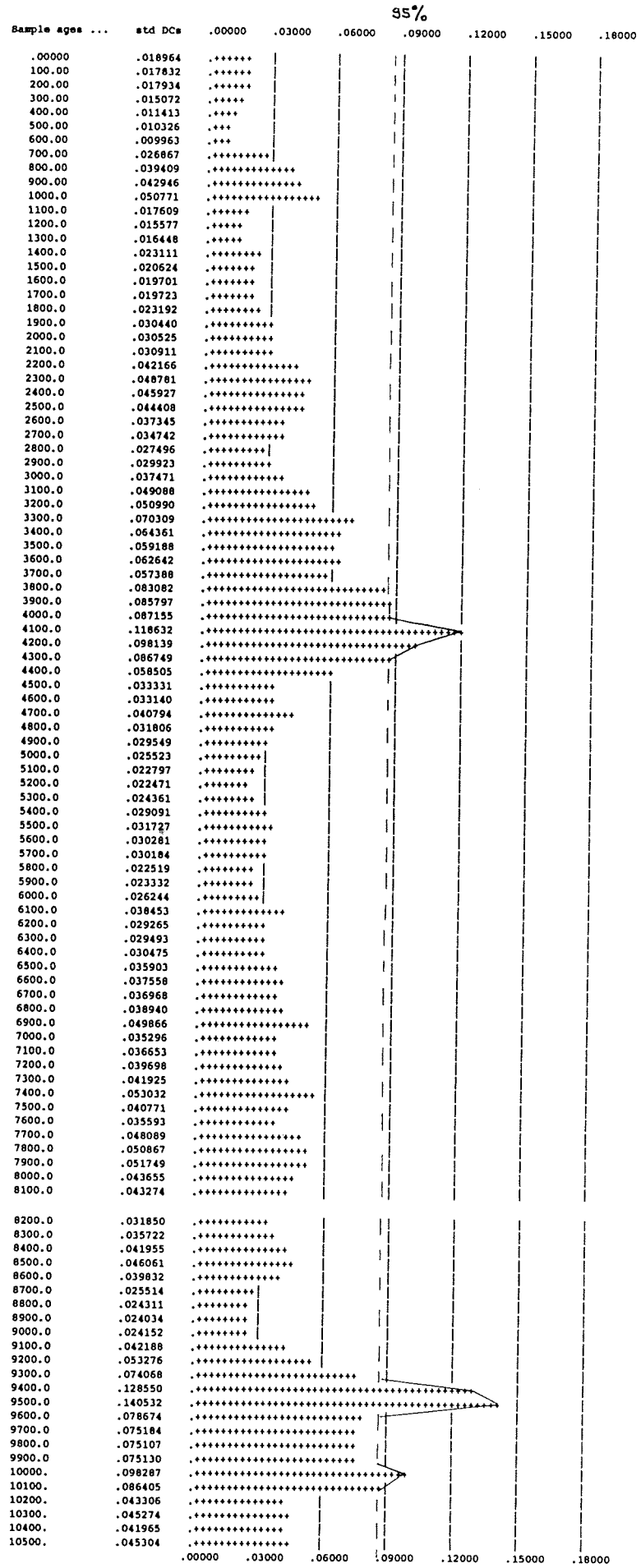


LOCH ASHIK, ISLE OF SKYE. ANAL. W. WILLIAMS, 1975.

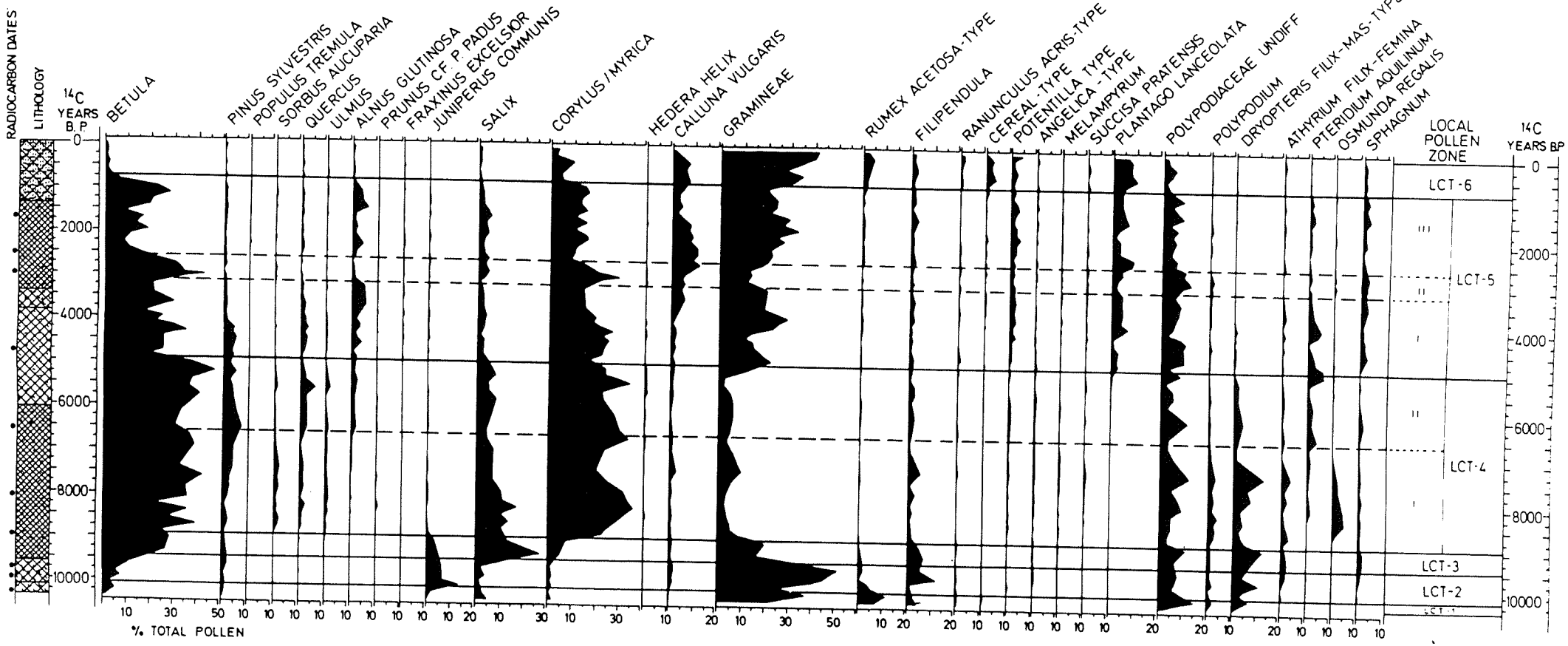


Loch Ashik

Stratigraphic plot of standardised DCs with TSU 100.00
(using chord distance)



LOCH CLEAT. ISLE OF SKYE. ANAL. W. WILLIAMS 1975-76



Loch Cleat

Stratigraphic plot of standardised DCs with TSU 100.00
(using chord distance)

95%

Sample ages ...	std DCs	.00000 .03000 .06000 .09000 .12000 .15000 .18000
.00000	.053120	.+++++++++++++++++ | | | | | |
100.00	.026790	.+++++++++| | | | | |
200.00	.031317	.++++++++++ | | | | |
300.00	.052834	.+++++++++++++++++ | | | | |
400.00	.068224	.++++++++++++++++++++++++ | | | |
500.00	.087426	.++++++++++++++++++++++++++++++| | | |
600.00	.096752	.++++++++++++++++++++++++++++++++| | |
700.00	.095819	.++++++++++++++++++++++++++++++++| | |
800.00	.089854	.+++++++++++++++++++++++++++++ | | |
900.00	.100205	.++++++++++++++++++++++++++++++++| | |
1000.0	.100912	.++++++++++++++++++++++++++++++++++| |
1100.0	.081613	.++++++++++++++++++++++++++++ | | |
1200.0	.080389	.++++++++++++++++++++++++++++ | | |
1300.0	.051574	.++++++++++++++++ | | | |
1400.0	.068454	.++++++++++++++++++++++ | | | |
1500.0	.043755	.++++++++++++++ | | | |
1600.0	.044464	.++++++++++++++ | | | |
1700.0	.049097	.++++++++++++++++ | | | |
1800.0	.054114	.+++++++++++++++++ | | | |
1900.0	.045245	.++++++++++++++ | | | |
2000.0	.061145	.++++++++++++++++++++ | | | |
2100.0	.045941	.++++++++++++++ | | | |
2200.0	.042935	.++++++++++++++ | | | |
2300.0	.049098	.++++++++++++++++ | | | |
2400.0	.056679	.++++++++++++++++++| | | |
2500.0	.076960	.++++++++++++++++++++++++++ | | |
2600.0	.094967	.++++++++++++++++++++++++++++++++| | |
2700.0	.092587	.++++++++++++++++++++++++++++++++ | |
2800.0	.073306	.++++++++++++++++++++++++ | | |
2900.0	.095661	.++++++++++++++++++++++++++++++++| |
3000.0	.091766	.++++++++++++++++++++++++++++++++ | |
3100.0	.049644	.++++++++++++++++ | | | |
3200.0	.042974	.++++++++++++++ | | | |
3300.0	.038504	.+++++++++++++ | | | |
3400.0	.036858	.++++++++++++ | | | |
3500.0	.036438	.++++++++++++ | | | |
3600.0	.041120	.++++++++++++++ | | | |
3700.0	.033237	.++++++++++++ | | | |
3800.0	.037664	.++++++++++++++ | | | |
3900.0	.064297	.++++++++++++++++++++ | | | |
4000.0	.064477	.++++++++++++++++++++ | | | |
4100.0	.064493	.++++++++++++++++++++ | | | |
4200.0	.068888	.++++++++++++++++++++++ | | | |
4300.0	.068271	.++++++++++++++++++++++ | | | |
4400.0	.078154	.+++++++++++++++++++++++++ | | | |
4500.0	.040117	.++++++++++++++ | | | |
4600.0	.035217	.++++++++++++ | | | |
4700.0	.057276	.++++++++++++++++++| | | |
4800.0	.055280	.+++++++++++++++++ | | | |
4900.0	.046551	.++++++++++++++++ | | | |
5000.0	.046038	.++++++++++++++++ | | | |
5100.0	.053827	.+++++++++++++++++ | | | |
5200.0	.066914	.++++++++++++++++++++ | | | |
5300.0	.072820	.++++++++++++++++++++++++ | | | |
5400.0	.046607	.++++++++++++++++ | | | |
5500.0	.038783	.++++++++++++++ | | | |
5600.0	.040202	.++++++++++++++ | | | |
5700.0	.022949	.++++++++ | | | | |
5800.0	.014996	.+++++ | | | | |
5900.0	.013862	.+++++ | | | | |
6000.0	.013949	.+++++ | | | | |
6100.0	.023488	.++++++++ | | | | |
6200.0	.018380	.++++++ | | | | |
6300.0	.018269	.++++++ | | | | |
6400.0	.032159	.++++++++++++ | | | |
6500.0	.059964	.++++++++++++++++++++ | | | |
6600.0	.035621	.++++++++++++ | | | |
6700.0	.029319	.++++++++++ | | | |
6800.0	.032865	.++++++++++++ | | | |
6900.0	.017192	.++++++ | | | | |
7000.0	.017323	.++++++ | | | | |
7100.0	.017659	.++++++ | | | | |
7200.0	.018355	.++++++ | | | | |
7300.0	.018972	.++++++ | | | | |
7400.0	.028380	.++++++++++| | | | |
7500.0	.035044	.++++++++++++ | | | |
7600.0	.043686	.+++++++++++++++ | | | |
7700.0	.037123	.++++++++++++ | | | |
7800.0	.029043	.++++++++++ | | | |
7900.0	.034461	.++++++++++++ | | | |
8000.0	.032242	.++++++++++++ | | | |
8100.0	.034359	.++++++++++++ | | | |
8200.0	.030811	.++++++++++ | | | | |
8300.0	.038993	.+++++++++++++ | | | |
8400.0	.057896	.++++++++++++++++++| | | |
8500.0	.066483	.++++++++++++++++++++\ | | |
8600.0	.082161	.++++++++++++++++++++++++++\ | |
8700.0	.081090	.++++++++++++++++++++++++++\ | |
8800.0	.097014	.++++++++++++++++++++++++++++++\ |
8900.0	.112750	.++++++++++++++++++++++++++++++++++\ |
9000.0	.056611	.++++++++++++++++++\ | | | |
9100.0	.051646	.+++++++++++++++++ | | | |
9200.0	.053195	.++++++++++++++++++ | | | |
9300.0	.054495	.++++++++++++++++++ | | | |
9400.0	.048150	.++++++++++++++++ | | | |
9500.0	.052635	.++++++++++++++++++ | | | |
9600.0	.063058	.++++++++++++++++++++ | | | |
9700.0	.061992	.++++++++++++++++++++ | | | |
9800.0	.138907	.++ | |
9900.0	.114166	.++++++++++++++++++++++++++++++++++\ | |
10000.	.080775	.++++++++++++++++++++++++++++\ | | |
10100.	.067224	.++++++++++++++++++++++\ | | | |
10200.	.047637	.++++++++++++++++ | | | | |
		.00000 .03000 .06000 .09000 .12000 .15000 .18000

Average rate-of-change for Loch Ashik, Loch Cleat, Loch Meodal

95 %

Sample ages ...	avg DCs	#sam	.00000 .03000 .06000 .09000 .12000 .15000 .18000
.00000	.067849	3	.++++++++++++++++++++++++
100.00	.051769	3	.++++++++++++++++++ |
200.00	.048675	3	.+++++++++++++++++ |
300.00	.056143	3	.++++++++++++++++++++|
400.00	.056113	3	.++++++++++++++++++++|
500.00	.049735	3	.++++++++++++++++++ |
600.00	.050894	3	.++++++++++++++++++ |
700.00	.058288	3	.++++++++++++++++++++|
800.00	.051593	3	.++++++++++++++++++ |
900.00	.055452	3	.++++++++++++++++++++ |
1000.0	.057397	3	.++++++++++++++++++++|
1100.0	.042286	3	.+++++++++++++++ |
1200.0	.042656	3	.+++++++++++++++ |
1300.0	.033816	3	.++++++++++++ |
1400.0	.040048	3	.+++++++++++++++ |
1500.0	.035225	3	.++++++++++++ |
1600.0	.036337	3	.++++++++++++ |
1700.0	.038340	3	.+++++++++++++++ |
1800.0	.043974	3	.++++++++++++++++ |
1900.0	.044668	3	.++++++++++++++++ |
2000.0	.042737	3	.+++++++++++++++ |
2100.0	.039298	3	.+++++++++++++++ |
2200.0	.042253	3	.+++++++++++++++ |
2300.0	.049363	3	.++++++++++++++++ |
2400.0	.053823	3	.++++++++++++++++++ |
2500.0	.059446	3	.++++++++++++++++++++ |
2600.0	.066732	3	.+++++++++++++++++++++ |
2700.0	.069316	3	.++++++++++++++++++++++ |
2800.0	.053306	3	.++++++++++++++++++ |
2900.0	.064449	3	.+++++++++++++++++++++ |
3000.0	.068362	3	.++++++++++++++++++++++ |
3100.0	.050613	3	.++++++++++++++++ |
3200.0	.047780	3	.+++++++++++++++ |
3300.0	.055049	3	.++++++++++++++++++ |
3400.0	.049600	3	.++++++++++++++++ |
3500.0	.049035	3	.++++++++++++++++ |
3600.0	.048633	3	.++++++++++++++++ |
3700.0	.044608	3	.+++++++++++++++ |
3800.0	.059689	3	.++++++++++++++++++++ |
3900.0	.067743	3	.+++++++++++++++++++++ |
4000.0	.073799	3	.++++++++++++++++++++++ |
4100.0	.081396	3	.+++++++++++++++++++++++ |
4200.0	.075597	3	.++++++++++++++++++++++ |
4300.0	.080870	3	.+++++++++++++++++++++++ |
4400.0	.065810	3	.+++++++++++++++++++ |
4500.0	.041977	3	.+++++++++++++++ |
4600.0	.043006	3	.+++++++++++++++ |
4700.0	.058772	3	.++++++++++++++++++ |
4800.0	.064678	3	.+++++++++++++++++++ |
4900.0	.053924	3	.++++++++++++++++++ |
5000.0	.049300	3	.++++++++++++++++ |
5100.0	.037810	3	.++++++++++++++ |
5200.0	.042610	3	.+++++++++++++++ |
5300.0	.041989	3	.+++++++++++++++ |
5400.0	.034453	3	.++++++++++++ |
5500.0	.034179	3	.++++++++++++ |
5600.0	.035479	3	.++++++++++++ |
5700.0	.029621	3	.++++++++++ |
5800.0	.022903	3	.++++++++ |
5900.0	.022364	3	.++++++++ |
6000.0	.025490	3	.++++++++ |
6100.0	.040098	3	.+++++++++++++++ |
6200.0	.041209	3	.+++++++++++++++ |
6300.0	.036453	3	.++++++++++++ |
6400.0	.043572	3	.++++++++++++++++ |
6500.0	.050529	3	.++++++++++++++++++ |
6600.0	.039527	3	.++++++++++++++ |
6700.0	.028805	3	.++++++++++ |
6800.0	.030606	3	.++++++++++ |
6900.0	.029448	3	.++++++++++ |
7000.0	.024754	3	.++++++++ |
7100.0	.025579	3	.++++++++|
7200.0	.027158	3	.++++++++|
7300.0	.026920	3	.++++++++|
7400.0	.034850	3	.++++++++++++ |
7500.0	.033368	3	.++++++++++++ |
7600.0	.035653	3	.++++++++++++ |
7700.0	.035691	3	.++++++++++++ |
7800.0	.033635	3	.++++++++++++ |
7900.0	.035889	3	.++++++++++++ |
8000.0	.033072	3	.++++++++++++ |
8100.0	.033280	3	.++++++++++++ |
8200.0	.027758	3	.++++++++++|
8300.0	.031733	3	.++++++++++++ |
8400.0	.041979	3	.+++++++++++++++ |
8500.0	.047651	3	.++++++++++++++++++ |
8600.0	.049671	3	.++++++++++++++++++ |
8700.0	.044122	3	.+++++++++++++++ |
8800.0	.051858	3	.++++++++++++++++++ |
8900.0	.058607	3	.++++++++++++++++++++ |
9000.0	.041355	3	.+++++++++++++++ |
9100.0	.052253	3	.++++++++++++++++++ |
9200.0	.054756	3	.++++++++++++++++++ |
9300.0	.081901	3	.+++++++++++++++++++++++++++++ |
9400.0	.086225	3	.++++++++++++++++++++++++++++++
9500.0	.108744	3	.++++++++++++++++++++++++++++++++++++
9600.0	.100066	3	.+++++++++++++++++++++++++++++++++
9700.0	.094514	3	.++++++++++++++++++++++++++++++++
9800.0	.095513	3	.++++++++++++++++++++++++++++++++
9900.0	.093914	3	.+++++++++++++++++++++++++++++++
10000.	.085552	3	.++++++++++++++++++++++++++++++
10100.	.082214	3	.+++++++++++++++++++++++++++++
10200.	.045472	2	.+++++++++++++++ |
10300.	.045274	1	.+++++++++++++++ |
10400.	.041965	1	.+++++++++++++++ |
10500.	.045304	1	.+++++++++++++++ |

.00000 .03000 .06000 .09000 .12000 .15000 .18000

95 %

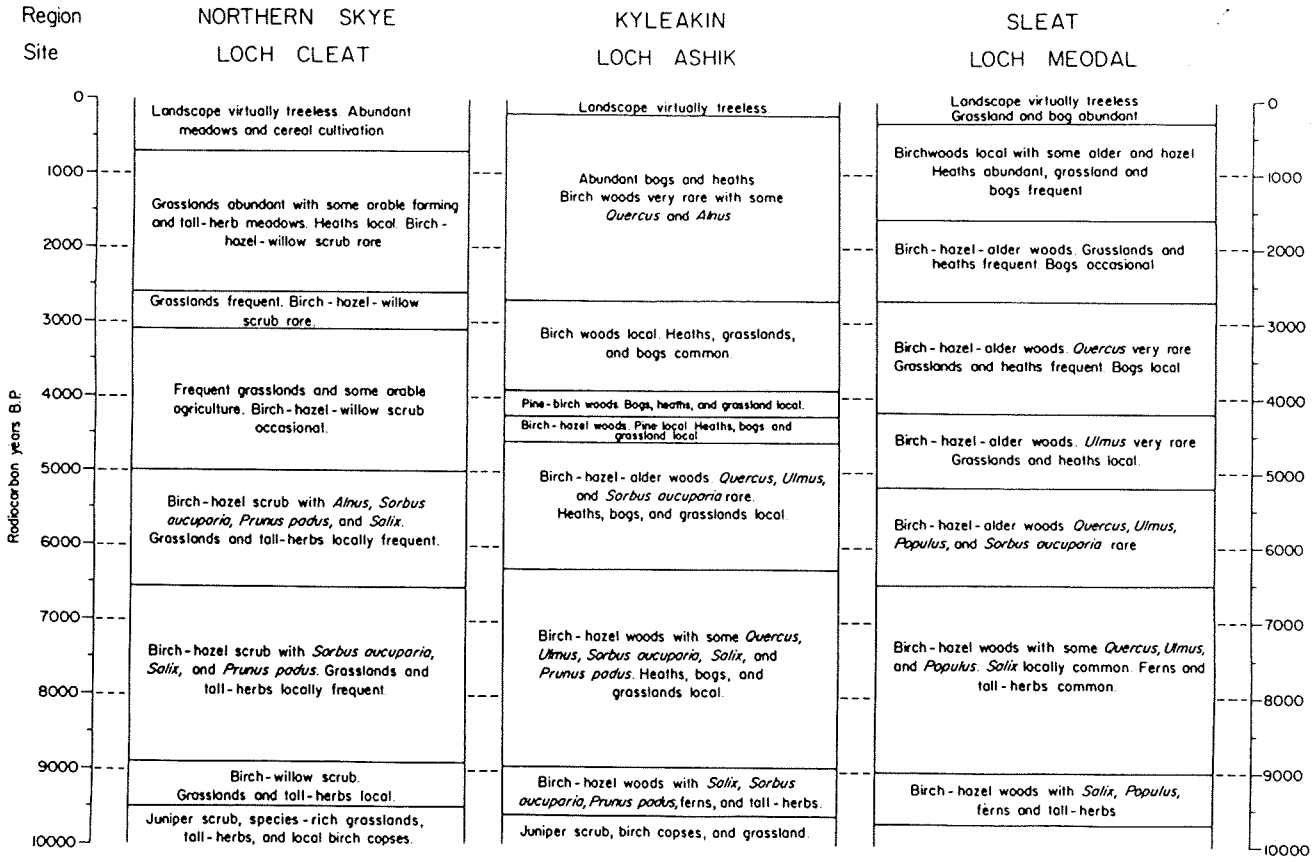


Figure 11. Generalised comparison of the inferred post-glacial vegetational history of the Isle of Skye based on pollen-stratigraphical data from Loch Cleat, Loch Ashik, and Loch Meodal.

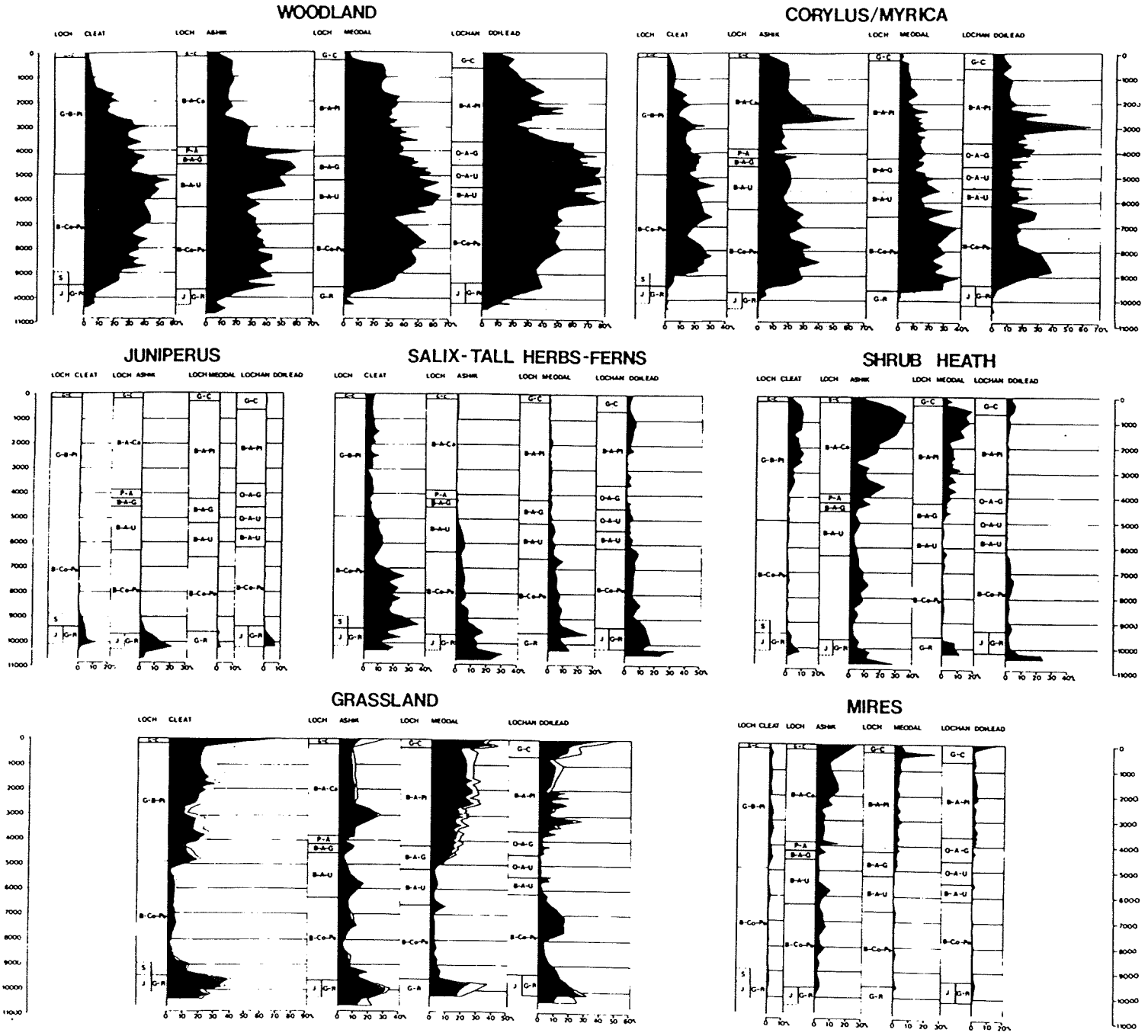


Figure 7.4 Transform pollen percentage curves of selected ecologic physiognomic groups (see Chapter 13) plotted with time (radiocarbon years BP) as the vertical axis for the four sites investigated. The pollen sum is total determinable pollen and spores excluding obligate aquatic taxa. Regional pollen assemblage zones and sub-zones are shown. Abbreviations: A=Alnus B=Betula C=Cyperaceae Ca=Calluna Co=Corylus G=Gramineae J=Juniperus P=Pinus Po=Polypodiaceae Pl=Plantago lanceolata Q=Quercus R=Rumex S=Salix U=Ulmus. In the grassland group for each site the Gramineae pollen percentage curve is shown as an inset.

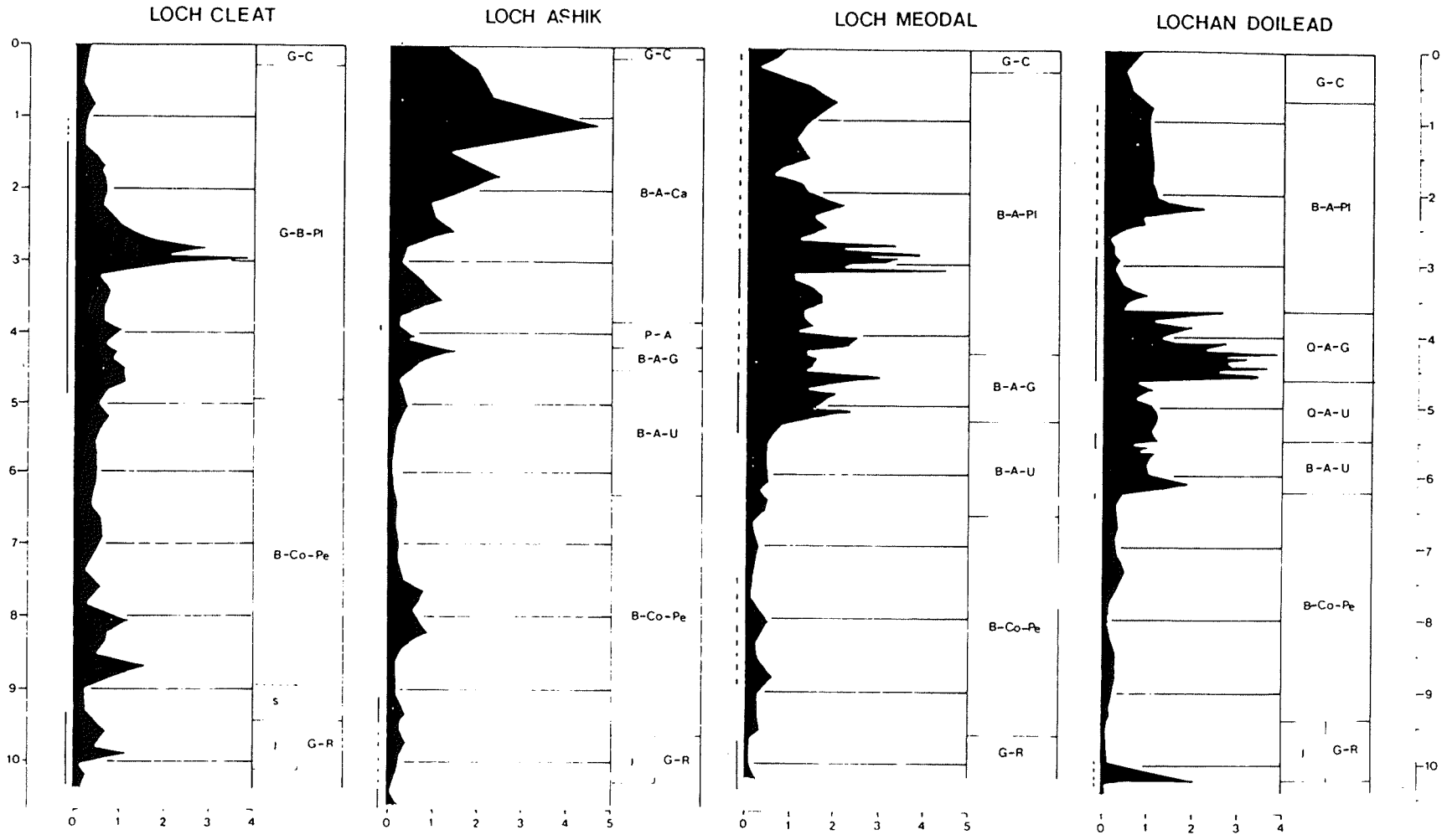


Figure 72 Flandrian total pollen influx curves plotted against time (^{14}C years BP $x10^3$) for the four sites investigated. The scale at the base of each silhouetted profile is $x10^4$ grains cm^{-2} $year^{-1}$. The regional pollen assemblage zones and sub-zones are shown (for abbreviations see Fig 68). — erosion

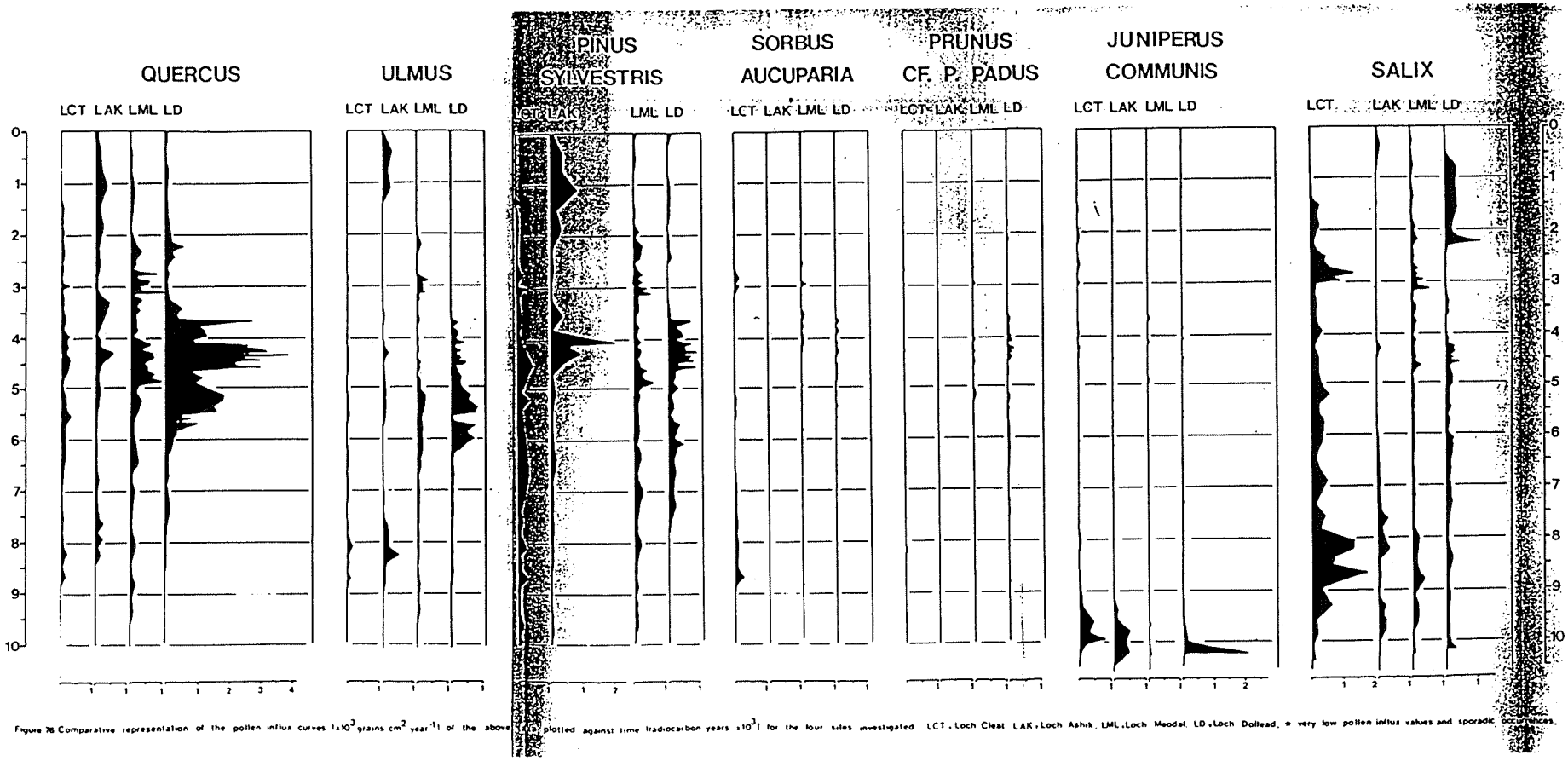


Figure 76 Comparative representation of the pollen influx curves ($\times 10^3$ grains cm^{-2} $year^{-1}$) of the above plotted against time (radiocarbon years $\times 10^3$) for the four sites investigated. LCT, Loch Cleat; LAK, Loch Ashik; LML, Loch Meodal; LD, Loch Dollead. * very low pollen influx values and sporadic occurrences.

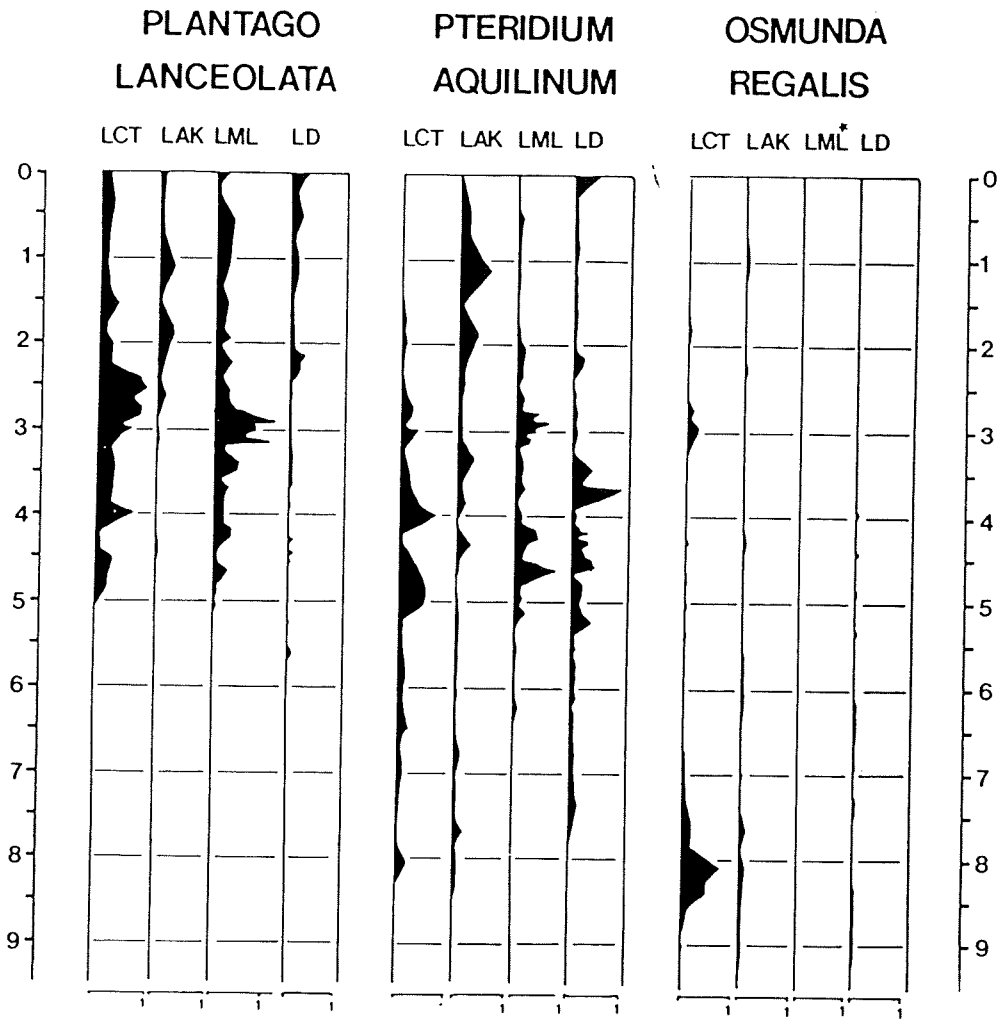


Figure 77. Comparative representation of the Plantago lanceolata, Pteridium aquilinum and Osmunda regalis influx curves (1×10^{3} grains cm^{-2} $year^{-1}$) plotted against time (radiocarbon years B.P $\times 10^{-3}$) for the four sites investigated. LCT: Loch Cleat LAK: Loch Ashik LML: Loch Meodal LD: Lochan Doilead * very low influx values and sporadic occurrences

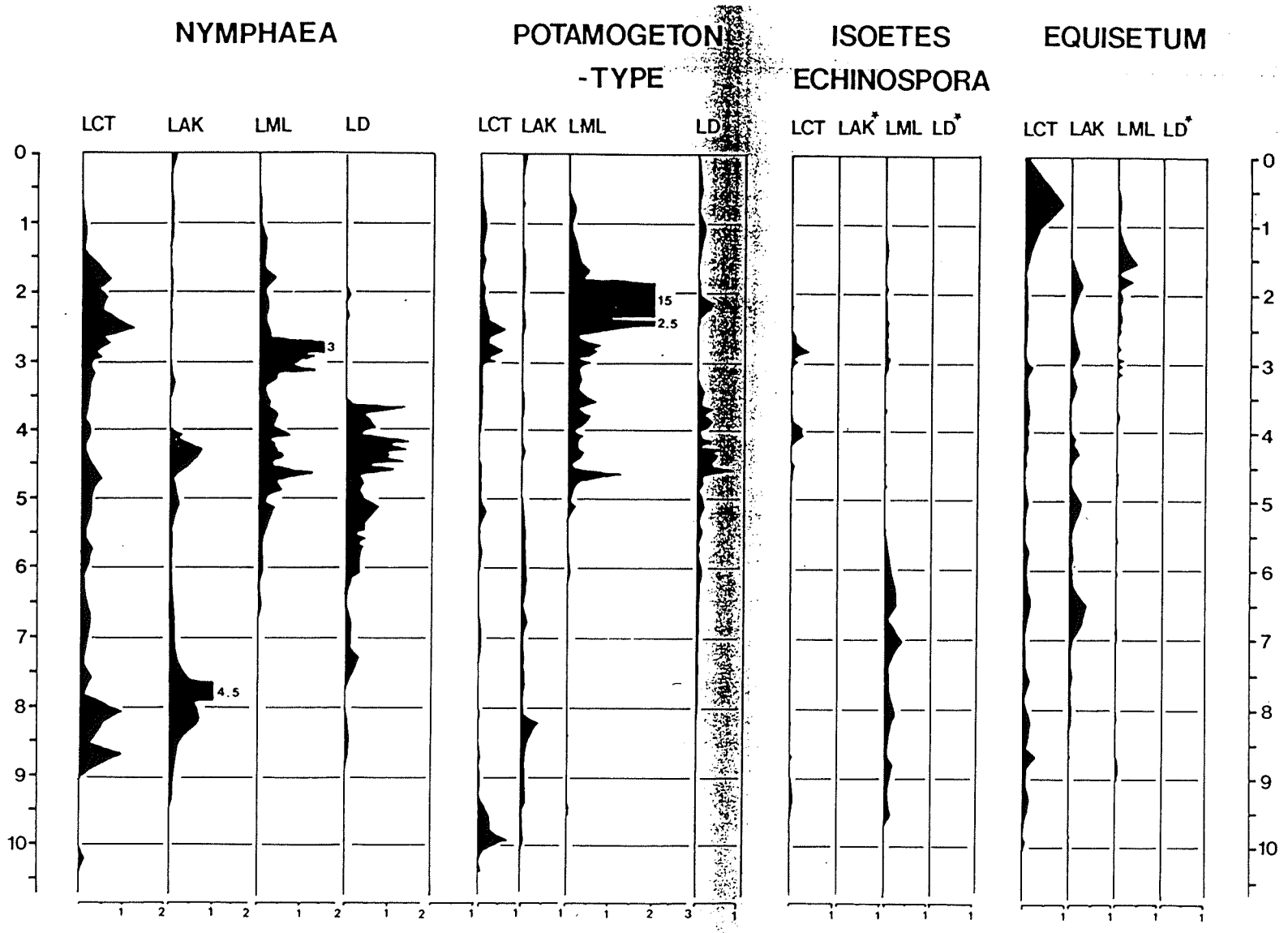


Figure 79. Comparative representation of the Nymphaea and Potamogeton-type pollen, and Isoetes echinospora and Equisetum spore influx curves ($1x10^3$ grains cm^2 $year^{-1}$) plotted against time ($1x10^3$ radiocarbon years B.P.) for the four sites investigated. LCT, Loch Cleat. LAK, Loch Ashik. LML: Loch Meodal. LD, Lochan Doilead. * : very low influx values and sporadic occurrences

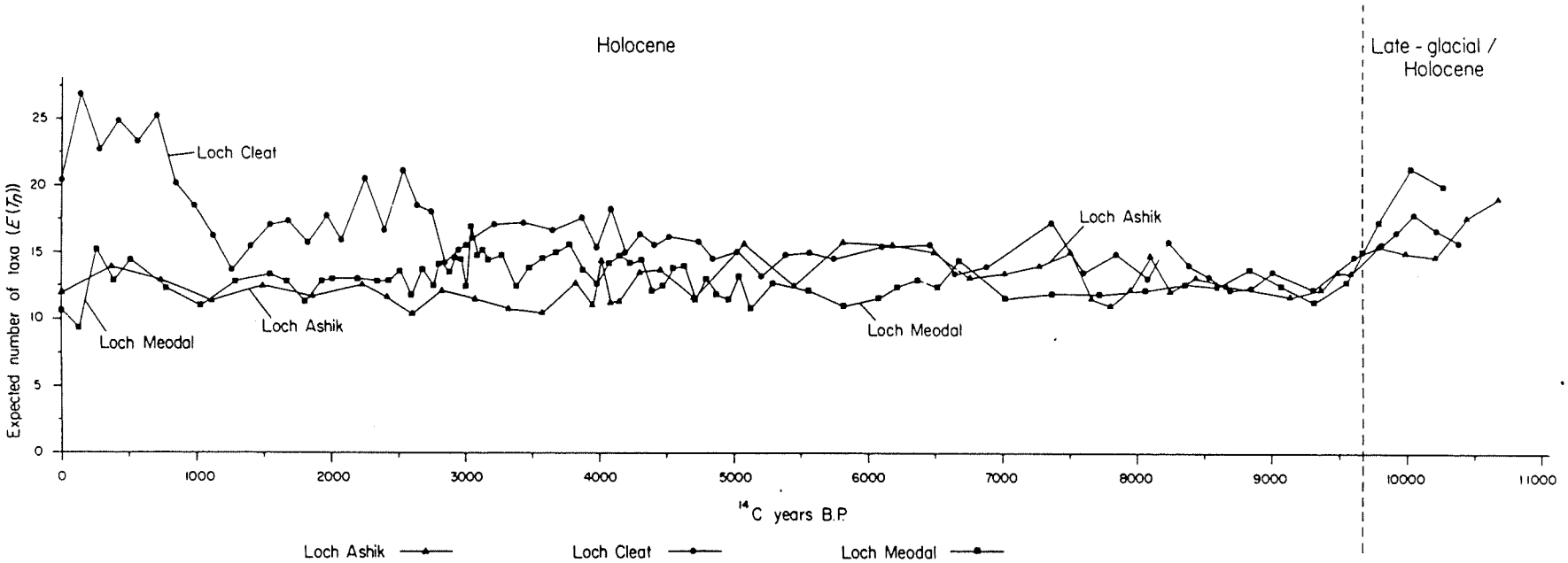


Figure 3 Plot of expected number of pollen and spore taxa ($E(T_n)$) against estimated radiocarbon age of each sample at three sites on the Isle of Skye (Loch Cleat, Loch Ashik, Loch Meodal) for the Holocene and Devensian lateglacial/Holocene transition. $E(T_n)$ is based on the lowest count in the three sequences (n = 142).

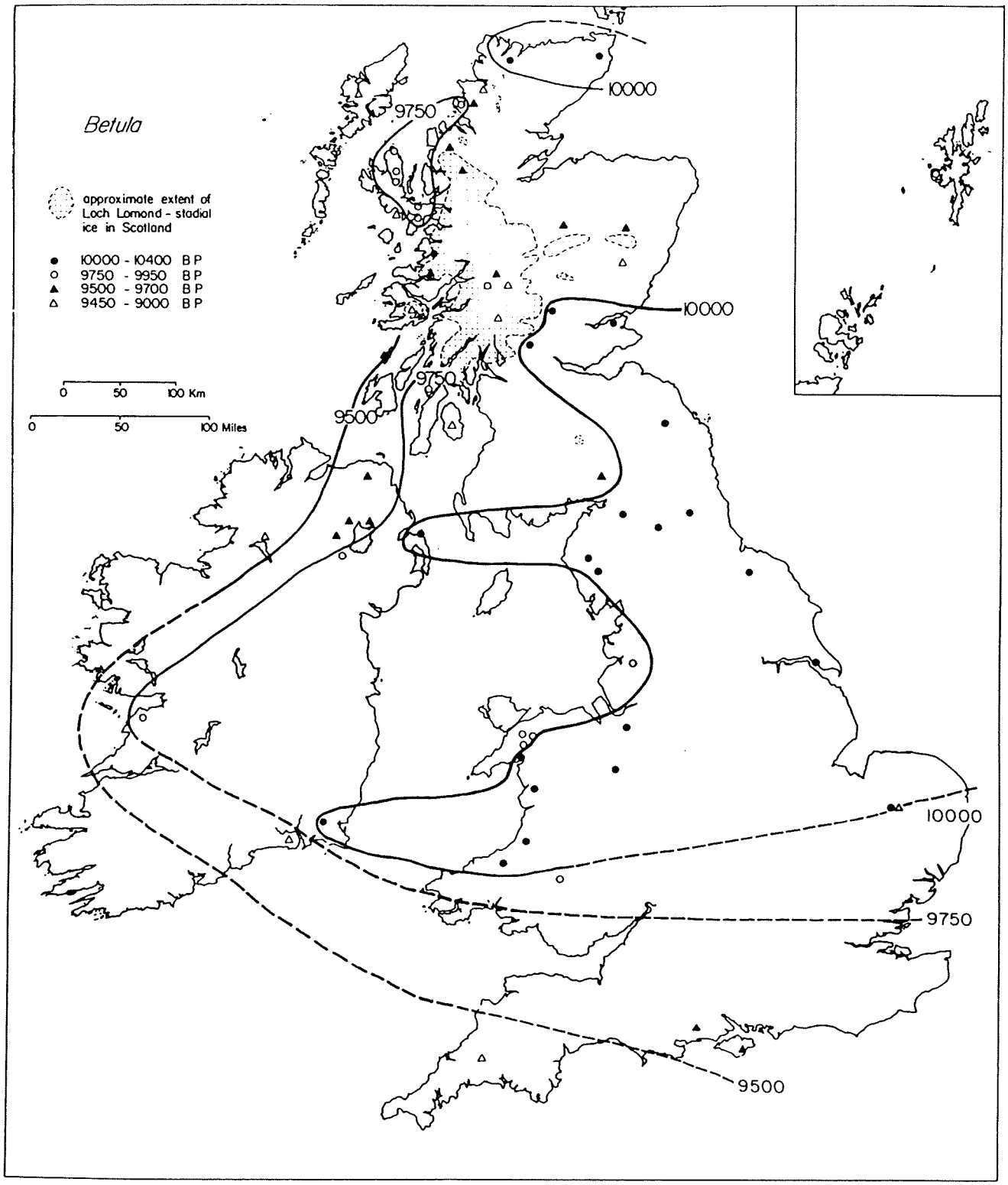


FIG. 2. Isochrone map of the rational limit of *Betula* pollen in the British Isles. The isochrones are based on data indicated by dots and triangles and are shown as radiocarbon years BP. The approximate extent of Loch Lomond Stadial ice in Scotland is also shown (mainly based on Sissons (1983) with minor additions from various other sources).

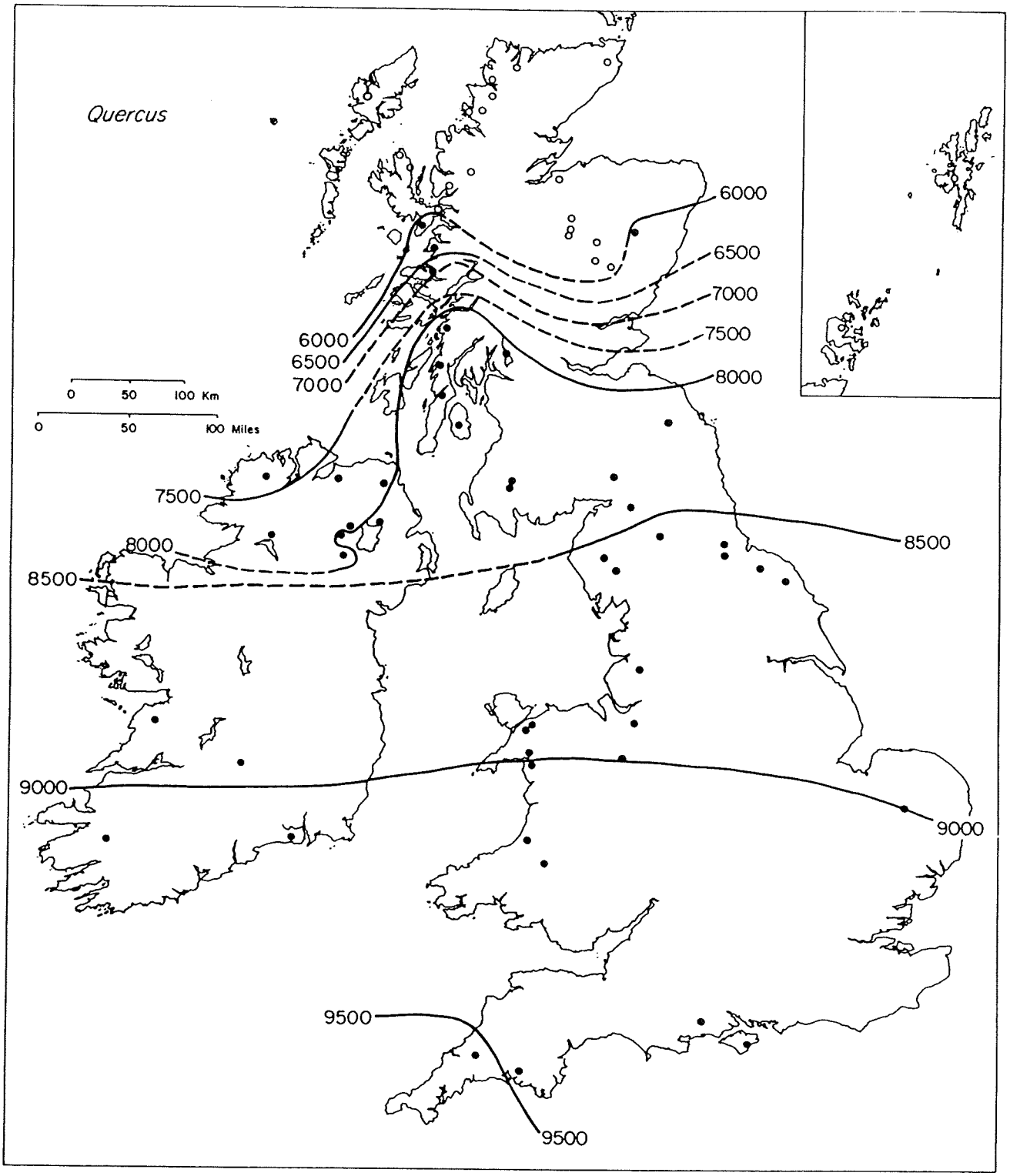


FIG. 5. Isochrone map of the rational limit of *Quercus* pollen in the British Isles. The isochrones are based on data from the sites indicated by dots and are shown as radiocarbon years BP. Sites where there is no pollen-analytical evidence for local presence are shown as open circles.

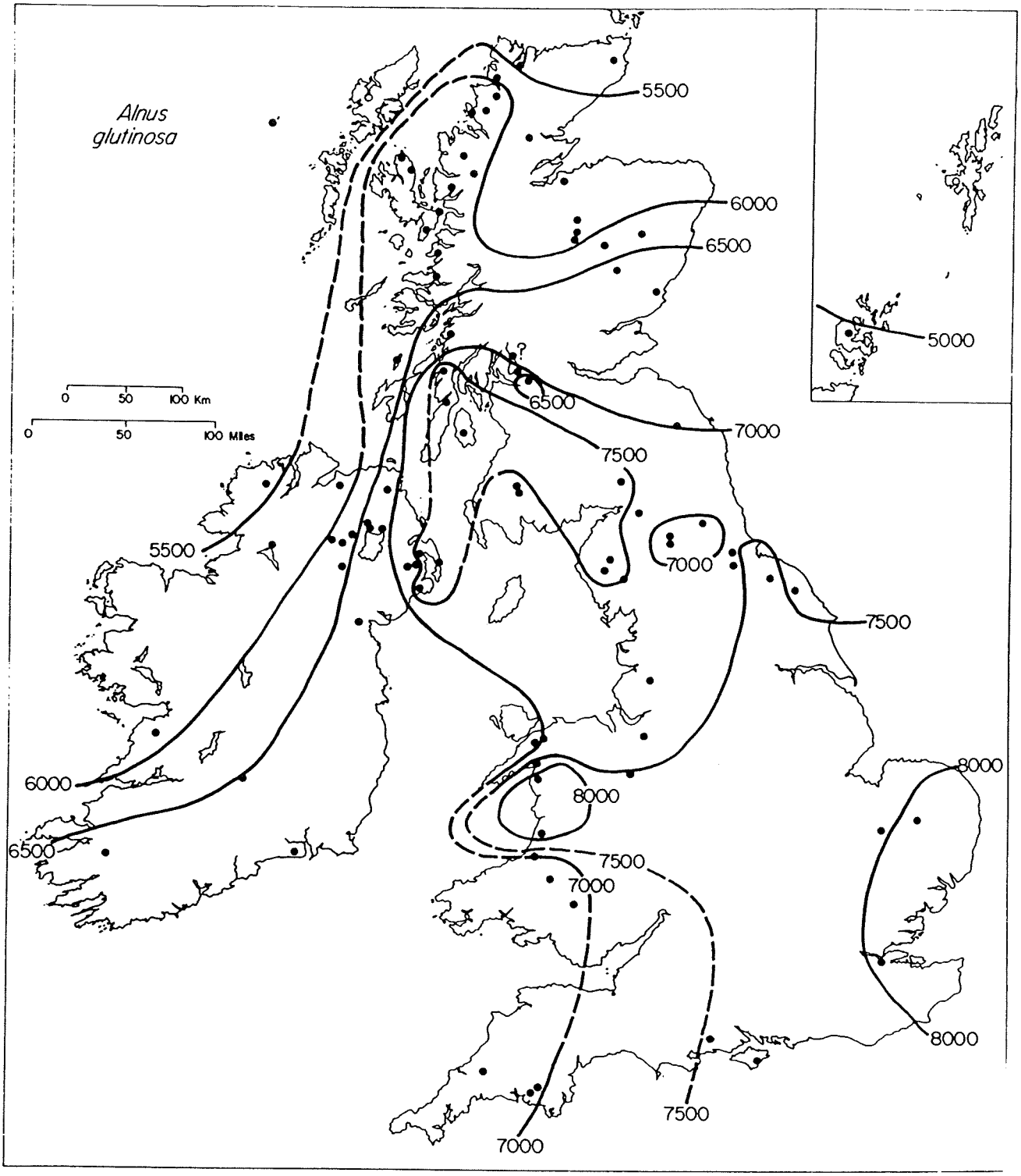


FIG. 7. Isochrone map of the rational limit of *Alnus glutinosa* pollen in the British Isles. The isochrones are based on data from the sites indicated by dots and are shown as radiocarbon years BP. Sites where there is no pollen-analytical evidence for local presence are shown as open circles. The question mark at the east side of Loch Lomond reflects the uncertainty of this date due to a possible 'discontinuity in both sedimentation rate and the sediment' (Stewart *et al.*, 1984) at Dubh Lochan.

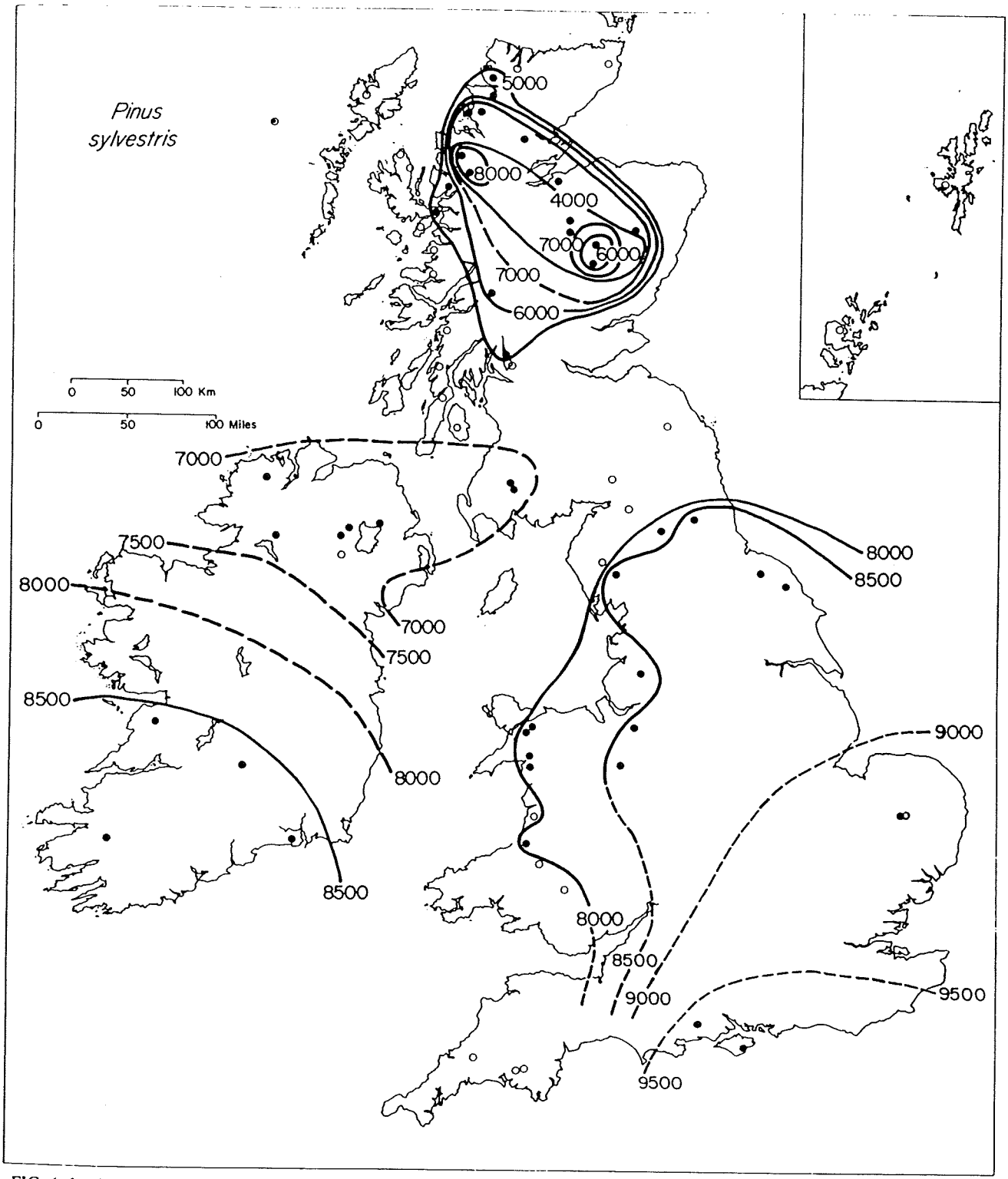


FIG. 6. Isochrone map of the rational limit of *Pinus sylvestris* pollen in the British Isles. The isochrones are based on data from the sites indicated by dots and are shown as radiocarbon years BP. Sites where there is no pollen-analytical evidence for local presence are shown as open circles.

Pinus sylvestris history

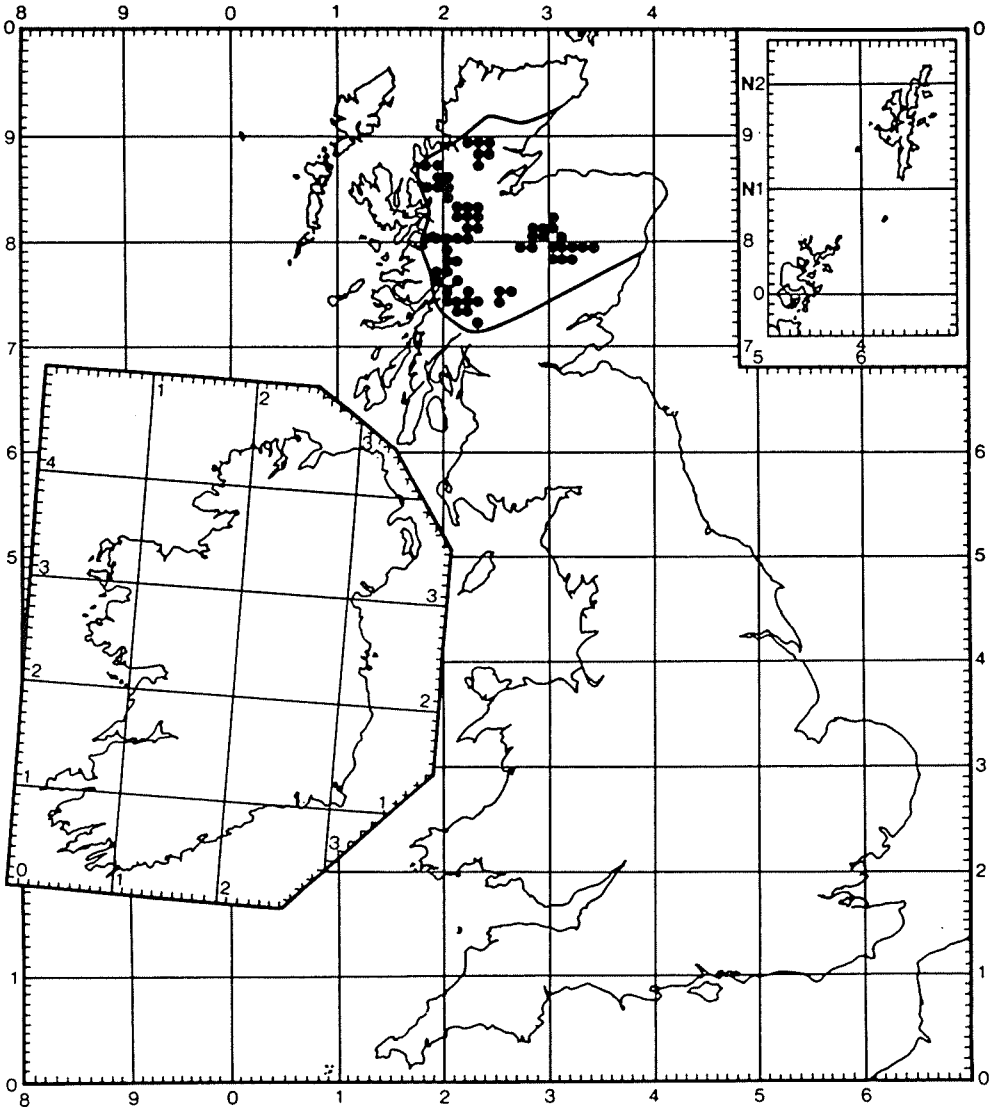


FIG. 1. Presumed natural distribution of *P. sylvestris* in the British Isles today, based on Steven and Carlisle (1959) and Perring and Walters (1962). The area within the line is the probable historical distribution before clearance (McVean and Ratcliffe, 1962).

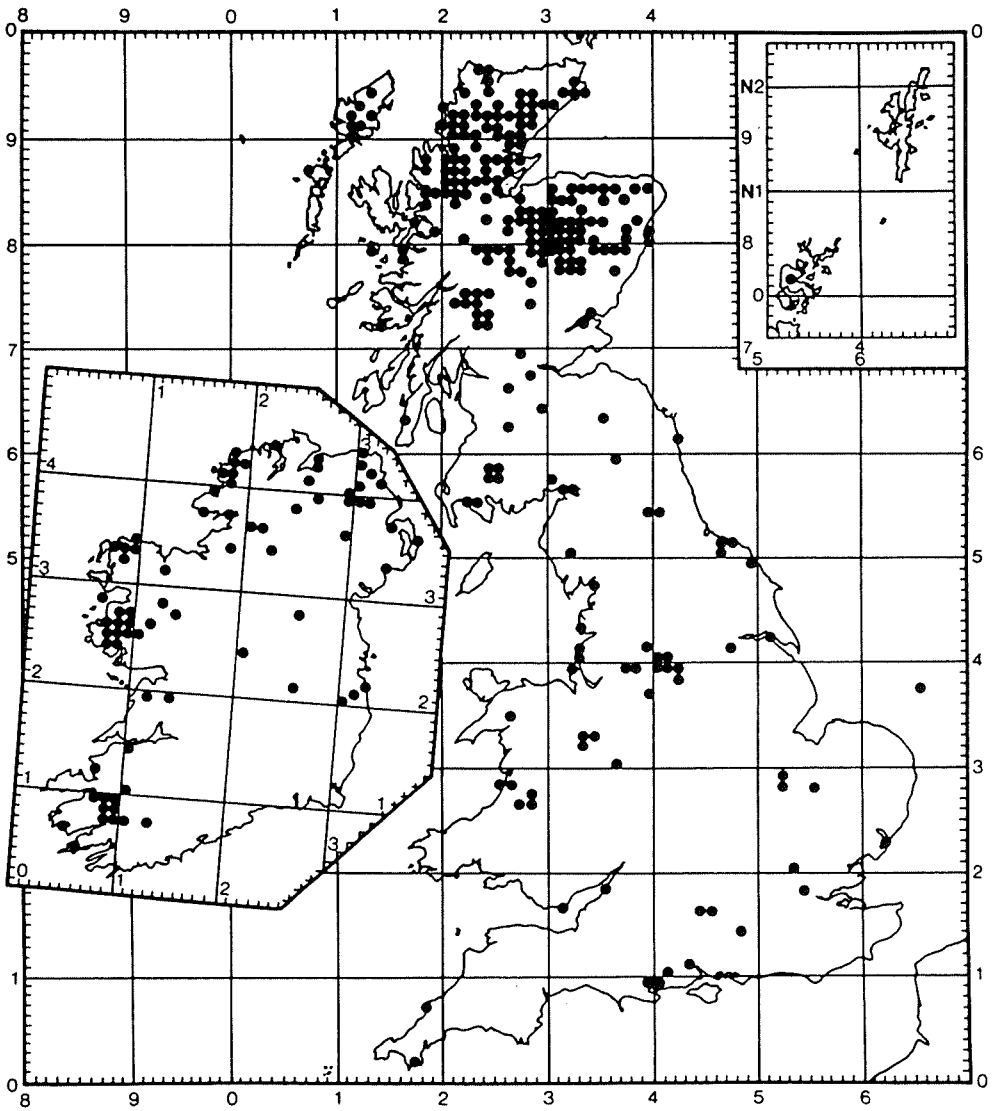


FIG. 2. Distribution of post-glacial macrofossil remains of *P. sylvestris* in the British Isles, plotted by 10 km squares of the National Grid. The reference(s) for each point is available from the author.

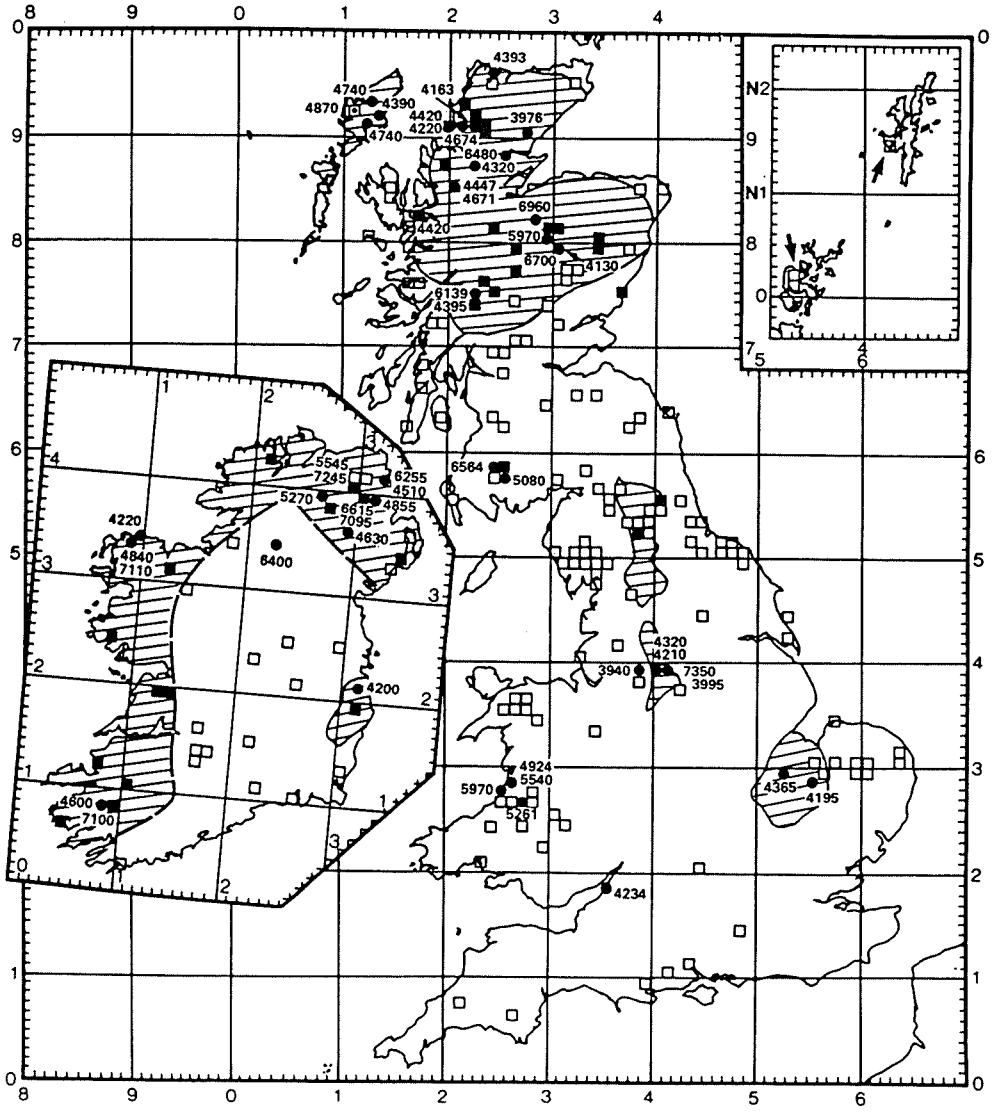


FIG. 6. Distribution of *P. sylvestris* in the British Isles at about 4000 BP (shaded area). Symbols as Fig. 4.

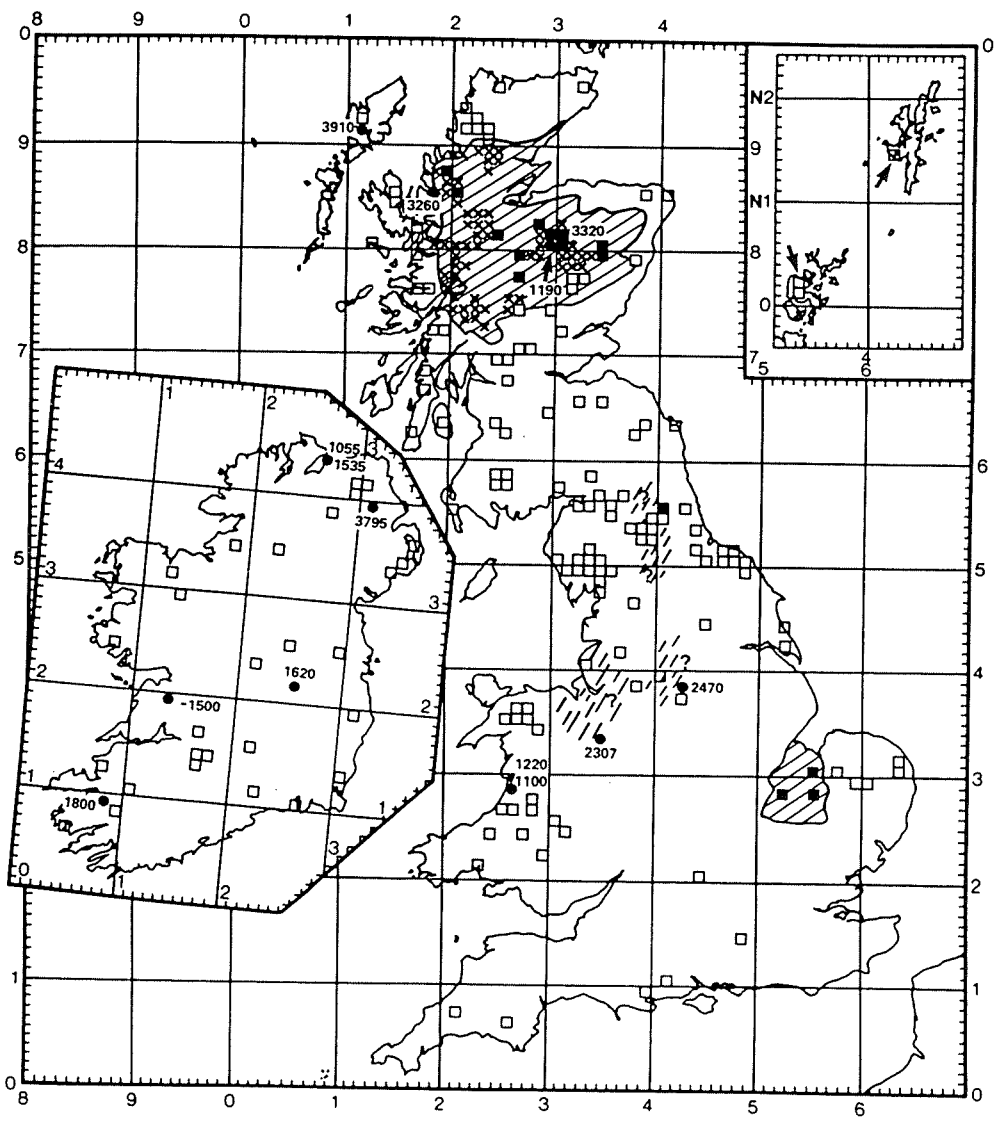


FIG. 7. Distribution of *P. sylvestris* in the British Isles during historic times (shaded area). Symbols as Fig. 4, except X, additional squares where *P. sylvestris* is presumed native today (from Fig. 1).

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