NAME	LOCATION & HABITAT	COLLECTOR	DATE & COMMENTS		
Juncus bufonis L.	Lough Gowna at woodville Co Longford Stony shore of lake	M. Scannell	15.7.1968		
Sparganium minimum Wallr.	Killasee Co Longford Boghole by canal	R.L.P.	13.6.1898	1	
Lemna polyrhyza L.	Below Ballymahon Co Longford Ditch by L. Ree	R.L.P.	19.8.1900		
Potamogeton lucens L.	Near Priest's Island Co Longford Habitat: In L.Re	R.L.P.	28.6.1899		
Potamogleton gramineus	Peninsula stretching into L.Gowna at Wood ville Co Longfo Shore of lake – washed up	rd	15.7.1968 Det:J.E.Dandy	1971	
п	Lough Gowna Co Longt'ord	R.L.P.	12.6.1900 Det: J.E.Dandy	· 1959	
11	River Inny Ballymahon Co Longford	R.Vowell	July 1885 Det:	JED '	59
n	River Inny Lough Ree	R.Vowell	August 1886	it programme	tt .
п	River Inny Co Longford	R.M.Barrington	1886	11	ŧį
Potamogeton x zizii	Quaker Island Lough Ree Incherlaun Co Longford	R. Vowell	28.6.1885	11	11
P. x sparganifolio	ns River Inny Co Longford	R.M. Barringto	n 8.8.1886 Two specimes	11 11	11
. 11	River Inny Below Bally- mahon,Co.Long	R. Vowell	3.6.1885 two specimens	s "	11

NAME	LOCATION & HABITAT	COLLECTOR	DATE & COMMENTS
Potamogeton berch- ioldii Fieb.	River Inny Co Longford	R.M.Barrington	8.9.1886 Det:JED '59
P. crispus L.	Killashee Co Longford	R.L.P.	13.6.1898 "
Scirpus setaceus	Woodville Lough Gowna Co Longford Gravelly shore of lake	M.Scannell	15.7.1968
Scirpus cespitosus L	. Lough Kinale	R.L.P.	
Eleocharis acicularis Roem & Schultz.	"At Woodville, a peninsula of land protruding into the middle of the lake (Gowna) Co. Longford" Habitat: stony shore of L.Gowna	M. Scannell	15.7.1968
Eriophorum vaginatur L.	n Lough Kinale Co Longford	R.L.P.	April 4 and May 17 1885
Eriophorum angustifolium Honck	Killasee . Co Longford Marsh by canal	R.L.P.	13.6.1898
Rhynchospora alba(L Vahl.) Derrrymacar Lough Ree	R. Vowell	9.8.1886
R. fusca (L.) Ait.f	. L. Ree below Ballymahon, Co Longford. Bog by L. Ree	R.L.P.	19.8.1900 2 specimens
Schoenus nigricans	L. Lough Kinale Co Longford	R.L.P.	17.5.1885
	Habitat:L. Kinale		

NAME	LOCATION & HABITAT	COLLECTOR	DATE
Carex diandra Schrank	By canal south of of Longford Habitat:Marsh	R.L.P.	June 1898
Ħ	Near Derrymacar Lough Ree	R. Vowell	29.6.1885 2 specimens
	Inny, Longford Marshy Wood	S.A.Stewart	10.6.1883
11	Killashee Co Longford Marsh by canal	R.L.P.	13.6.1898
Carex paniculata L.	Derrymacar Lough Lough Ree	R. Vowell	29.6.1885
11	Killashee Co Longford Marsh by canal	R.L.P.	13.6.1898
C. otrubae Podp.	Longford Town Edge of canal	R.L.P.	13.6.1898
C. curta Gooden	N. base of Carn Clonhugh, Co. Longford (Corn Hill) Habitat: Wet ditch	R.L.P.	12.6.1898 2 specimens
C. elata All.	Islands of L.Ree	e R. Vowell	June 1885
" "	Killashee Co. Longford Marsh by canal	R.L.P.	13.6.1898
C. acuta L.	Temple's Island Inner L. Ree	R. Vowell	June 1885
C. nigra Reichard	Finea Co Longfo	rd R.L.P.	16.5.1895
11	Islands of L.Re	ee R.Vowell	June 1885 2 specimens County not specified
11	Killashee Co Longford Canal odge	R.L.P.	13.6.1898

NAME	LOCATION & HABITAT	COLLECTOR	DATE & COMMENTS
Carex flacch Schreb.	Inny Junction Co Longford Wood	S.A. Stewart	10.7.1883
C. limosa L.	Newtownforbes Co Longford Wet bog	R.L.P.	13,6,1900
C. caryophyllea Latourr.	Chapel Island Co Longford Shore of L. Ree	R.L.P.	5.6.1897
C. panicea L.	Killashee Co Longford Marsh by canal	R.L.P.	13.6.1898
C. laevigata Sm.	South of Longfor Co Longford Thickets by cana		June 1898
	Killashee Co Longford Bushy place by canal	R.L.P.:	18.6.1898
C. binervis Sm.	Carn Clonhugh Co Longford Corn Hill Heath	R.L.P.	11.6.1898
Carex hostiana DC.	Killashee Co Longford Marsh by canal	R.L.P.	13.6.1898
C. flava L.	Near Longfod Edge of canal	R.L.P.	13.6.1898 Det:Lars Fagerst 1968
C. flava x hostiana	Near Lanesboro Shannon shore	R. Vowell	28.6.1885 County not specified
C. lasiocarpa Ehrh	, Temple's Island Inner L, Ree	d R. Vowell	June 1885 County not specified
C. acutiformis Ehr	Co Longford Edge of cunal	R.L.P.	13.6.1898

NAME	LOCATION & HABITAT	COLLECTOR	DATE & COMMENTS
Carex acutiformis Ehrh.	Kilashee. Canal	R.L.P.	13.6.1898 Fide F. Bennett
C. riparia Curt.	Ballymahon. Drain	R.M. Barrinton	8.8.1886
C. vesicaria L.	Edge of L.Gowna Co Longford Lakeside	R.L.P.	12.6.1900 two specimens
Desmazeria rigida (L) Tutin	Killasee Co Longford Bridge over canal	R.L.P.	13.6.1898
	Ballymahon	R. Vowell	June 1885
Festuca pratensis Huds.	Killashee Co Longford Canal bank	R.L.P.	13.6.1898
Vulpia promoides Gray	Canal Longford Town Wayside	R.L.P.	13.6.1898
Cystopteris fragilis Bernh.	Cashel Lodge 1 km N of Elfeet Bay, L. Ree,	S. Howard	13.9.1985
	Co Longford.		Det: M.Scannell
Dryopteris dilatata A. Gray.	Wood at Rackingham,	David Moore	May 1871 This location could Co
Longford.	Wood.	be Rockingham	4
Dryopteris carthus- iana. H.P. Fuchs	Killashee, Co Longford. Bog bank by canal.	R.L.P.	13.6.1898
11	South of Longford Near canal	I R.L.P.	June 1898
Polypodium australe Fee.	Goat Island (L. Ree)	R.M. Barrington and R.P. Vowell	None given probably June 1885 Det: A.Clive Jermy

DATE & COLLECTOR LOCATION NAME COMMENTS & HABITAT Thelypteris palustris By L.Reo below 19.8.1900 R.L.P. two specimens Ballymahon Shott. Co Longford Spongy marsh May 1871 D.M. 11 Rackingham Could be Rockingham, Co Longford ... Marshy wood .

Botrychium Carn Clonhugh. R.L.P. 12.6.1898 lunaria. Swartz. Co Longford.

Heath -

GENERAL

Complete records are available for only one centre in the county, namely Lanesborough. Records are also available from Ballinamore (Co. Leitrim) and Mullingar (Co. Westmeath). As most of Co. Longford lies in a triangle between these centres the meteorological data which they provide may be taken as representative of the county. The climate of the northern half of the county i.e. Botanical Districts 1, 2A and 4A is best represented by the Ballinamore figures whereas the Lanesborough and Mullingar data would be representative of the southern half of the county, i.e. Botanical Districts 2A, 2B, 3, 4A and 5.

TEMPERATURE

Longford, being inland, is not very much influenced by the moderating effects of the sea on temperature. The winters in the area are significantly colder than those of the maritime counties. Mean daily maximum January temperatures for Lanesborough, Ballinamore and Mullingar are 6.8 degrees C, 6.7 degrees C and 6.5 degrees C respectively. These are among the lowest figures for the entire country. Glengariff (Co. Cork) has a mean daily maximum temperature for the same period of 9.2 degrees C which illustrates the difference.

These low winter temperatures are not compensated by high summer figures. The mean daily maximum summer (July) temperature for Glengarriff is 19.8 degrees C compared to 18.7 degrees C (Lanesborough), 18.3 degrees C (Ballinamore) and 17.9 degrees C (Mullingar). According to the published figures, only Galway, Mayo, Donegal and Monaghan have cooler summers than Co. Longford.

Maximum daily temperatures very rarely exceed 30 degrees C and generally exceed 12 degrees C. First air frosts occur on average in late October and last air frosts in late April. The start of the grass growing season is about mid March and the end of the grass growing season is late November. Snowfalls, in common with the rest of Ireland, are not a significant feature of the climate but they appear to persist for longer periods in north Longford than in the more low lying south of the county.

RAINFALL

There is a significant difference in the rainfall figures for the north and those for the south of the county. The yearly average rainfall for areas within the county varies from the lowest at Ballymahon (Vocational School) - 874 mm - to the highest at Ballinamuck - 1019 mm.

During the period from 1971 to 1980 the area had about 17 "dry spells" (i.e. 15 or more consecutive days to none of which is credited 1.0 mm or more of rainfall). There were about 9 "partial droughts" (i.e. 15 or more consecutive days to none of which is credited 0.2 mm or more) and two "absolute droughts" (i.e. at least 29 consecutive days the mean daily ranfall of which does not exceed 0.2 mm.)

A complete month without any rainfall is quite rare. The rainfall is often made up of small amounts over relatively long periods. The number of wet days (i.e.days with 1.0 mm of rain or more) is around 165. The driest months are usually in spring or early summer.

WIND

Like all inland areas Co. Longford has lower wind speeds than the coastal areas. The mean yearly speed of wind at Mullingar is 8.7 knots compared with 13.2 knots and 15.8 knots for Belmullet and Malin Head respectively over the same period. During the period 1959 to 1982 the maximum gust recorded at Mullingar was 79 knots and the total number of days wth gusts reaching storm force in this period was 244.

SUNSHINE

Over the period 1951 to 1980 the mean annual daily duration of bright sunshine at Lanesborough was 3.24 hours. The month of May was best for sunshine with a mean daily duration of 5.39 hours.

All figures quoted were supplied by the Meteorological Service.

METEOROLOGICAL SERVICE

Monthly and annual averages of mean daily maximum, mean daily minimum and mean daily air temperatures for specified stations over the 30-year period 1951-1980.

		۰C	Mean Max	Daily Min	Mean
County: Leitrim Station: Ballinamore	January February March		6.7 7.3 9.3	0.7 0.7 1.9	3.7 4.0 5.6
Latitude: 54°04'N	April		12.0	3.5	7.8
Longitude: 07°47'W	May		14.9	5.9 8.5	10.4 12.9
Height above	June ,		17.3 18.3	10.3	14.3
MSL: 80 metres	July August		18.2	10.0	14.1
	September		16.1	8.4	12.3
	October		13.3	6.4 "	9.9
	November		9.4	2.8	· 6.1 4.8
	December		7.8	1.8	4.0
	Year		12.6	5.1	8.9
County: Westmeath	January		6.5	1.0	3.8
Station: Mullingar	February		7.0	0.9	4.0
bodo tone mana and	March		9.0	2.1	5.6
Latitude: 53°32'N	April		11.9	3.4	7.7 10.3
Longitude: 07°22'W	May		14.6 17.0	6.0 8.7	12.9
Height above	dune		17.9	10.6	14.3
MSL: 101 metres	July Nugust		17.8	10.0	13.9
	September		16.0	8.7	12.4
	October		13.3	6.6	10.0
	November		9.3	2.9	6.1
	December		7.6	2.0	4.8
·	Year		12.3	5.2	8.8
County: Longford	January		6.8	1.0	3.9
Station: Lanesborough	February		7.4	1.1	4.8
(Doire Dharog)	March		9.5	2.1 3.5	5.8 7.8
Latitude: 53 40 N	April May		12.1 15.0	5.9	10.5
Longitude: 07°56'W	May June		17.6	8.6	13.1
Height above MSL: 46 metres	July		18.7	10.6	14.7
Hell to make the	August		18.4	10.2	14.3
	September		16.4	8.6	12.5 9.9
	October		13.3 9.5	6.4 3.0	6.3
	November December		7.8	2.1	5.0
				5.3	9.0
	Year		12.7	٠,٠	7.0

Extra	c+	from	• •	_
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Extract from:-						**************************************	s (MM)	FOR	PERT	OD 19	154-19	80					28	/9/19	83	
RAINFALL STATIONS (ALPHA COUN	TY ORDER)	MONTHLY A	ND AN	NUAL A	VERAGE	.5 (tm1)						7777	AUG	SEP	OCT	NOV	DEC	YEAR	
NAME	GRID NO	LAT	LONG	M.TH	OPND	CLSD	JAN	FEB	MAR	APR	MAY	JUN	JUL	HUU	111					
COUNTY LONGFORD ABBEYSHRULE G.S.	N231589	53.34.45N	07.39.05W 07.42.20W	64 90	1952 1930	1969 1975	88 99	60 70	62 72	57 63	67 72	61 71	70 82	83 90	88 93	91 99	88 99	94 108	908 1019	
BALLINAMUCK BALLYMAHON	N194893	53.51.10N	07.42.20W	61	1904	1969	86	61	61	55	64	59	70	83	85	85	87	95	890	
(NEWCASTLE) BALLYMAHON (VOC.SCH.) CLOONDRA G.P.W. DRUMLISH G.S. EDGEWORTHSTOWN G.S. GRANARD G.S. KENAGH (DERRAGHAN)	N337813 N062633	53.33.40N 53.34.05N 53.44.00N 53.49.00N 53.41.40N 53.46.50N 53.37.10N	07.46.15W 07.54.30W 07.45.50W 07.36.30W 07.29.20W 07.54.25W 07.48.50W	58 48 83 104 136 59	1957 1893 1944 1944 1944 1951 1929	1964 1975 1966	82 91 88 96 102 85 89	59 60 66 69 63	58 64 62 66 66 61 64	54 58 55 61 61 54 58	65 66 62 69 66 63 66	57 65 69 69 60 65	70 74 73 78 79 69 74	83 81 84 88 86 82 85	86 86 85 91 93 84 88	87 92 90 98- 97 89 94	85 89 98 98 97	89 96 95 102 107 93 98	874 923 907 983 992 833 935	
KENAGH G.S. KENAGH	N123636	53.37.20N 53.37.30N	•		1970	·	88	61	62	56	64	63	71	84	87	92	90	95	913	
(LOUGH BANNOW) LANESBOROGH	N097639 N044689				1964		87	60	63	55	63	61	71	80	87	90	87	93		
(DOIRE DHAROG) LONGFORD (ST. JOS- EPH'S HOSPITAL) NEWTOWNCASHEL G.S.	N044039 N140749 N040596	53.43.25N	07.47.15W	55	1954 1944		89 84	63 58	64 60	59 52	65 61	65 60	74 71	84 79	89 84	94 88	92 86	97 94	993 876	

HT.M = Height in metres above sea level

OPND = Year station was opened

CLSD = Year station was closed

In common with the rest of the Central Plain of Ireland the geology of Co Longford is dominated by Carboniferous deposits formed in the sea during the warm humld period commencing about 275 million years ago and lasting for over 50 million years. Much of these deposits have been covered by more recent geological activity. The main coverings are glacial drift and bog or alluvium. Older deposits of the Palaezoic are are represented by small areas of Old Red Sandstone and larger beds of Silurian material. The following text describes the main geological features as they outcrop at or near the surface. This gives an overall picture of the underlying strata of the area.

The post Pliocene (less than one million years old) glacial drift covering is mainly of limestone gravel. This is extensive throughout the county. North Longford is dominated by drumlins which are very indicative of glaciation. The small lakes on the borders of Cos. Leitrim and Cavan are also typical of this topography. Gravel and sand deposits, further indicators of glacial action, are also very much in evidence. Large gravel and sand plts occur at Fernsborough near Derragh Lough, Abbeylara. An extensive esker occurs south of Granard with smaller deposits further to the west at Clonfin. To the north of Granard a long gravel ridge extends from Clooneen to Mullinroe in the Dring area. Further south there are fairly extensive ridges of sand and gravel at Rathreagh between Legan and the Co Westmeath border.

Alluvium occurs along the beds of the Camlin, Inny and Shannon rivers and their tributaries. Another common surface deposit is raised or blanket bog. In south Longford raised bog occurs extesivey between Longford and Clondara and between Lanesborough and Ballymahon with smaller areas extending from Edgeworthstown to Abbeylara. Most of these bogs are in use for machine turf production or electricity generation. In north Longford the bogs are very numerous but smaller in area. Small tracts of blanket bog occur on the high ground in the north of the county being most in evidence on Corn Hill (Carn Clonhugh).

The Carboniferous deposits show a wide degree of variation. In the north-west of the county close to the Co. Leitrim border the limestones and sandstones are not separable from each other and are therefore difficult to identify clearly, but they are mainly Lower Carboniferous deposits. Upper limestone is not much in evidence in Co. Longford but it may extend under the surface drift in a small area at Derrynagreanc Point on Lough Ree. Middle limestone of the dark shaly or Calp type is found extensively around Edgeworthstown extending northwards towards Granard and Ballinalee. There are small areas of middle limestone on Saint's Island, in Drumnee and in Ledwithstown, all in the Lough Ree area and by the Royal Canal at Pake's Bridge. Lower limestone, usually of a light grey colour, forms the most, widespread Carboniferous deposit. From Granard to (P.T.O.)

Ballinglee this type is very extensive. It probably occurs further north but, as already stated, it is not separable into distinct types from the nandstones. The lower limestone is most prominent in the area east of Lough Ree from Lanesborough to Ballymahon. Some distinctive types of limestone also occur in this area. The rocky hills surrounding Cashel Lodge on Lough Ree shore consist of limestone identical to that of the Burren. At Barley Harbour, also on Lough Ree, there is a mixture of pale grey and dark limestones. In the fields by the Athlone - Ballymahon road, about mid-way between Ballymahon and Tang, the soil is quite thin, revealing in many places a limestone described as grey, pink and variegated.

Carbonlferous sandstones are another significant feature in Co. Longford, although they are absent from the extreme south of the county with the exception of a small area by the Legan - Ballymahon road near Abbeyshrule. Small pockets of this type of sandstone occur extenisively at the edges of the high ground south-west of Ardagh and also around Lisduff hill south of Longford town. An overlying layer of black shale also of the Carboniferous series outcrops in even smaller areas at these locations. The sandstones become more abundant from Granard northwards. A thin ribbon of lower carboniferous sandstone from Granard to the Co. Cavan boundary at oustwards Ballywillin. From here It continues, surrounding the north shore of Lough Sheelin. The same series is very evident north of Granard in the Dring area where it is much broken by faulting. The high ground on which the Normana built the Motte of Granard consists mainly of this It also appears to the west on the high ground at sandstone. Aughagreagh near Bunlahy. In north Longford, between Ballinamuck and Drumlish, the same sandatone series appears with smaller deposits extending from Drumlish almost to Lough Forbes.

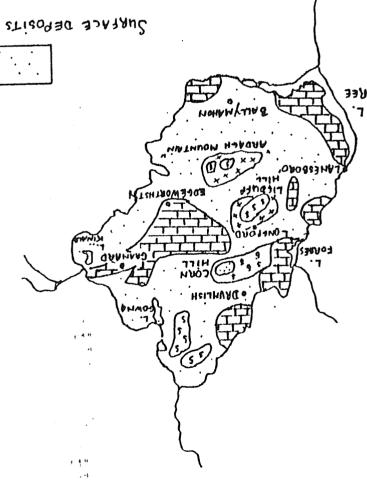
Old red sandstone of the Dervonian period is found at only two locations. It is the dominant rock type on the only significant high ground in south Longford, namely, "Ardagh Mountain", the hill to the south-east of Ardagh village, and Lisduff Hill, to the south of Longford town.

The oldest geological deposits in the county are of Silurian origin, formed from 350 to 320 million years ago. These are are chiefly on the hills of north Longford. The highest point in the county, Carn Clonhugh or Corn Hill between Ballinalee and Drumlish, consists mainly of Caradoc or Bala beds of the Lower Silurian series. Further north townards Ballinamuck and to the west towards Lough Forbes, this type of rock predominates and presumably it underlies most of the extensive glacial drift and bog coverings of north Longford.

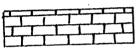
Lower Siturian Bala is also exposed in the Moyne area north-west of Lough Gowna. In the south of the county the Siturian strata remain covered by the more recent deposits except at the highest points of the aforementioned "Ardagh Mountain" and Lisduff Hill where upper Siturian Llandovery deposits appear.

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MAP SHOWING THE MAIN GEOLOGICAL FEATURES



Surface Deposits of Boc on Gencial Daiet.



CARBONIFEROUS LIMESTONES AND SANDSTONES.

K	×	×	x	×	X
×	x	X	×	×	x

DEVONIAN O. R. S.

5	5	S	9	ς	3	
5	9	S	2	<u>S</u>	5] "

SILURIAN DEPORITS.

BOTANICAL DISTRICTS

The county has been divided into five main botanical districts based on the great soil groups as taken from the National Soil Survey (see page LI). This type of division has been selected in an attempt to show the relationship between soil type and vegetation. The divisions are numbered 1 to 5. Some parts of the county are similar in geology and soil although located far apart. These areas have been given the same district number with the letters A or B being used to designate the smaller and seperate sub-district. For example, the high ground near Ardagh village is district 2B.

The following is an outline of the features and localities

within each botanical district and sub-district.

District 1:

The extreme north of the county, parts of Lough Gowna and the series of small lakes on the north west boundary of the county form this district. The area includes the village of Ballinamuck.

District 2:

This is locally known along with district 1 as "North Longford" and often referred to as such in the main text. The main population centre is Granard. Other centres of population include the villages of Ballinalee, Drumlish and Aughnacliffe. Features of interest include Corn Hill or Carn Clonhugh, the highest point in Co. Longford (279m.) and the greater part of Lough Gowna.

Sub-district 2A:

This is small in area, consisting of the high ground near Lisduff to the south of Longford town.

Sub-district 2B:

This is made up of the high ground to the south-west of Ardagh village. Its main feature is a state forest near the summit of the "Ardagh Mountain".

District 31

This is the largest district in area. It encompasses most of Longford. Lowland pastures and meadows are the dominant features. The river Inny, a tributary of the Shannon, runs along the eastern boundary and through the southern end of this district. The Royal canal and its Longford branch which are of significant botanical interest run for about 30km. through this district. Longford town, Edgeworthstown, Lanesborough, Ballymahon and Ardagh are the main population centres.

BOTANICAL DISTRICTS -cont.

District 4:

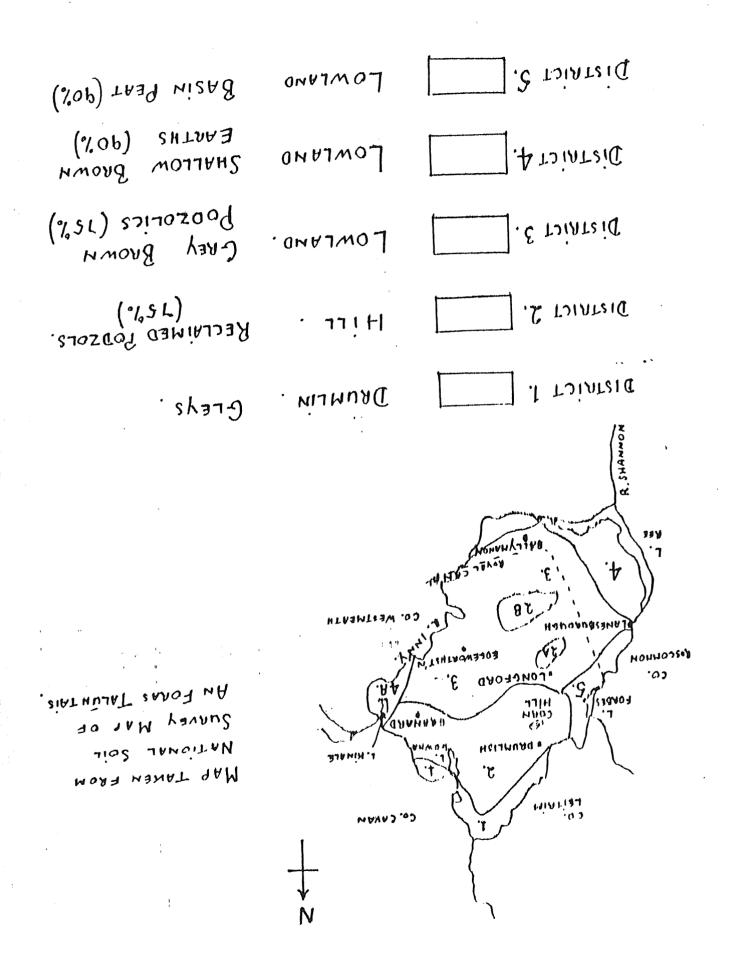
The area between Lanesborough and Ballymahon, the main part of the east shore of Lough Ree and its surrounding wetlands make up this district. There is extensive bogland in the area, much of which is in peat production. This area has been the chief focus of attention for botanists to date. Newtowncashel is the main centre of population.

Sub-district 4A:

This district is very similar in topography to district 4 but is widely separated from it, being in the north east of the county. Its main features are extensive boglands and the wetlands surrounding Lough Kinale and Derragh Lough. There is some forestry near Derragh. The only village in the area is Abbeylara.

District 5:

This district is dominated by the bogland and wetland along the Shannon banks from Roosky to Lanesborough. Lough Forbes and the Camlin river are also significant features. The Royal canal joins the Shannon at Clondara in this district. The village of Newtownforbes is the principal population centre.



EXPLANATION OF THE MAIN TEXT

The sequence of species in the main text follows that of the "Census Catalogue of the Flora of Ireland". (1972.) 1987

The scientific name of each species is given together with its naming authority. The names follow those of the 1972 "Census Catalogue" with some exceptions for recent revisions in "Flora Europaea"

Common names, where they exist, accompany each scientific name. Some commonly used local or lrish names are also included.

On the next line is given a list of the numbers of the botanical districts or sub-districts in which the species has been recorded. Brackets used around these numbers indicate that a species is of uncertain occurrence, rare, or declining in occurrence.

The next lines of text give details of each record, listed according to date recorded.

Map references are given with most of the records. These references are all taken from the standard 1/2 inch to the mile 0.S. map for the area (Sheet 12), as published by the Ordinance Survey of Ireland. Names and spelling of townlands are taken from the above map wherever feasable.

The rest of each untry refers to records made by institutes or individuals apart from the author.

The following abbrevations are used to denote most of these records:-

- H.&R. : Records made by Hessel and Rubers.
- R.L.P. : Records made by Robert Lloyd Praeger.
- B.&V. : Rocords made by Harrington and Vowell.
- DBN. : Where a specimen for the county is preserved in the National Herbarium

to the second se

C.C.: Where a species from the vice-county (H.24) has been recorded in the "Census Catalogue" (1972)