

1995 LOCH SURVEY EAST GRAMPIAN & STRATHSPEY

Code N57009 Name LOCH OF SKENE Grid Ref N5784075

Date 19th July 1995 Surveyors TH/WD/GW/SSD/AM Estate

Area 105 ha Altitude 80 m Catchment ha Geology 34

Water colour VERY PALE BROWN Clarity CLEAR Boat used YES Secchi disc depth SHALLOW m
100 > 2m visibility (label)

Loch type 10A* Edge type(s) S286 (u); S9a; S19a; S14a; S28a (NVC codes)

Status SSSI LOCH OF SKENE RAMSAR SPA Access 1 Road/houses present (underline)

Land use % Open water Semi-natural Forestry Agriculture

Substrate types (underline main type, tick others present)

- Bedrock
- Boulders (>30cm max. diam.)
- Stones (5-30cm diam.)
- Gravel (4-50mm diam.)
- Sand (0.1-4mm diam.)
- Silt (<0.1mm diam.)
- Organic mud
- Peat
- Artificial embankment

USES AND DAMAGE

Use	Observations
Adjacent forestry	<u>Mature pine woods to N.W./W. Native & young plantations to east.</u>
Agricultural pollution	<u>RPB report enrichment from agricultural land + 2 storage treatment ponds in catchment</u>
Edge trampling	<u>Trampling near boat house / trees</u>
Fishing (edge/boat)	<u>Boat house - 1 boat. Evidence of some bank fishing</u>
Litter	
Shooting	<u>Several artificial islands - shooting hides. Spent cartridges are frequent.</u>
Water abstraction	

FAUNA

- | | | | | |
|---------|-------------------------|------------------------|-------------|-----------------------------------|
| Mammals | Birds | Reptiles | Fish | Dragonflies & other invertebrates |
| | <u>Tufted Duck</u> | Amphibians | <u>PIKE</u> | <u>Erythemis cyathigerum</u> |
| | <u>Mute Swan 60+</u> | <u>Bufo bufo</u> | | <u>Pyrrhosoma nymphula</u> |
| | <u>Osprey</u> | <u>Rana temporaria</u> | | |
| | <u>Common Sandpiper</u> | | | |
| | <u>Sedge Warbler</u> | | | |
| | <u>Hallard</u> | | | |
| | <u>Teal</u> | | | |
| | <u>Common Tern</u> | | | |

SPECIES DIVERSITY

Edge 23

Open water 12

Total 33

WATER CHEMISTRY

Alkalinity 1.06 meq/l

Conductivity 510 µS/cm

p.H. 10.09

RARE SPECIES

Rare in RPB area Lm Per Ppu

National Ela Cher PFr

* Note: Loch is possible to type to SA or B. Nineteenth century records indicate a SA but recent enrichment has drifted floristic type to eutrophic end but with some
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1995 EAST GRAMPIAN & STRATHSPEY LOCH SURVEY: AQUATIC PLANT SPECIES LIST

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EMERGENT & EDGE SPECIES

Map code	Species	DAFOR
Ac	<i>Acorus calamus</i>
Ags	<i>Agrostis stolonifera</i>
Al**	<i>Alisma lanceolatum</i>	.....
Apa*	<i>Alisma plantago-aquatica</i>	.....
Apn*	<i>Apium nodiflorum</i>	.....
Bar**	<i>Baldellia ranunculoides</i>	.....
Ber**	<i>Berula erecta</i>	.....
Bu	<i>Butomus umbellatus</i>	.....
Cap	<i>Caltha palustris</i>	0
Cxat**	<i>Carex acuta</i>	.....
Cxai**	<i>Carex acutiformis</i>	.....
Cxa***	<i>Carex aquatilis</i>	.....
Cxl+	<i>Carex lasiocarpa</i>	.....
Cxli#	<i>Carex limosa</i>	.....
Cxn	<i>Carex nigra</i>	0
Cxpc*	<i>Carex pseudocyperus</i>	.....
Cxri**	<i>Carex riparia</i>	.....
Cxro	<i>Carex rostrata</i>	LF
Cxv#	<i>Carex vesicaria</i>	.....
Ca**	<i>Catabrosa aquatica</i>	.....
Civ***	<i>Cicuta virosa</i>	.....
Clm**	<i>Cladium mariscus</i>	.....
Des**	<i>Deschampsia setacea</i>	.....
Ela***	<i>Eleocharis acicularis</i>	LA
Elm	<i>Eleocharis multicaulis</i>	.....
Elp	<i>Eleocharis palustris</i>	0/LF
Elq	<i>Eleocharis quinqueflora</i>	.....
Elu	<i>Eleocharis uniglumis</i>	.....
Egf	<i>Equisetum fluviatile</i>	0
Eqp	<i>Equisetum palustre</i>	.....
Era	<i>Eriophorum angustifolium</i>	.....
Gld	<i>Glyceria declinata</i>	.....
Glf	<i>Glyceria fluitans</i>	R
Glm	<i>Glyceria maxima</i>	.....
Gln#	<i>Glyceria notata</i>	.....
Hip	<i>Hippuris vulgaris</i>	.....
Hyd	<i>Hydrocotyle vulgaris</i>	0
Ip	<i>Iris pseudacorus</i>	0/LF
Iv	<i>Iris versicolor</i>	.....
Jac	<i>Juncus acutiflorus</i>	LF
Jaa***	<i>Juncus alpinoarticulatus</i>	.....
Ja	<i>Juncus articulatus</i>	.....
Jb	<i>Juncus bulbosus</i>	.....
Jc	<i>Juncus conglomeratus</i>	0
Je	<i>Juncus effusus</i>	0/LF
Lit	<i>Littorella uniflora</i>	0
Lyc	<i>Lycopodiella inundata</i>	.....
Lyp*	<i>Lythrum portula</i>	.....
Lys	<i>Lythrum salicaria</i>	.....
Ma	<i>Mentha aquatica</i> sp	0
Mt	<i>Menyanthes trifoliata</i>	.....
Mg	<i>Mimulus guttatus</i>	.....
Ml	<i>Mimulus luteus</i>	.....
Mm	<i>Mimulus moschatus</i>	.....

Map code	Species	DAFOR
Mi x r	<i>Mimulus sp x robertsii</i>	0
Mon	<i>Montia fontana</i>	.....
Myl	<i>Myosotis laxa</i>	0
Msc	<i>Myosotis scorpioides</i>	0
Msec	<i>Myosotis secunda</i>	.....
Oc	<i>Oenanthe crocata</i>	.....
Of	<i>Oenanthe fistulosa</i>	.....
Pam	<i>Persicaria amphibia</i>	0
Pha	<i>Phalaris arundinacea</i>	D
Phr**	<i>Phragmites australis</i>	.....
Pop	<i>Potentilla palustris</i>	0
Rfl	<i>Ranunculus flammula</i>	R
Rh	<i>Ranunculus hederaceus</i>	.....
RI**	<i>Ranunculus lingua</i>	.....
Ro**	<i>Ranunculus omiophyllus</i>	.....
Rs*	<i>Ranunculus sceleratus</i>	.....
Roi	<i>Rorippa islandica</i>	R
Rm	<i>Rorippa microphylla</i>	.....
Rna	<i>Rorippa nasturtium-aquaticum</i>	.....
Rxh**	<i>Rumex hydrolapathum</i>	.....
SI*	<i>Schoenoplectus lacustris</i>	.....
St**	<i>Schoenoplectus tabernaemontani</i>	.....
Spem	<i>Sparganium emersum</i>	.....
Sper	<i>Sparganium erectum</i>	LO
Ta**	<i>Typha angustifolia</i>	.....
TI*	<i>Typha latifolia</i>	.....
Vaa**	<i>Veronica anagallis-aquatica</i>	.....
Vb	<i>Veronica beccabunga</i>	.....
Vc#	<i>Veronica catenata</i>	.....
Vs	<i>Veronica scutellata</i>	.....

SPECIES TOTAL

23

Other edge species

Cxd	<i>Carex viridula</i> ssp. <i>oedocarpa</i> (=C. <i>demissa</i>)	.....
Cxe	<i>Carex echinata</i>	.....
Cxp	<i>Carex panicea</i>	.....
Cxpa**	<i>Carex paniculata</i>	.....
Gp	<i>Galium palustre</i>	LO
Sa	<i>Senecio aquaticus</i>	.....
Tp	<i>Triglochin palustre</i>	.....
Vp	<i>Viola palustris</i>	0/LF

Surrounding land use:

Woodland - conifer/broadleaved
Improved grassland

Note: **/*# = plants in Highland/North East/ Tay River Purification Board area occurring in >100 10x10km squares in Great Britain but which still need special protection (Palmer & Newbold 1983)
***# = plants in Highland/North East/ Tay River Purification Board area occurring in <100 10x10km squares in Great Britain requiring special protection (Palmer & Newbold 1983)

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SUBMERGED & FLOATING SPECIES

Map code	Species	DAFOR
Api**#	<i>Apium inundatum</i>
Apd	<i>Aponogeton distachyos</i>
Bar**#	<i>Baldellia ranunculoides</i>	.....
Cah	<i>Callitriche hamulata</i>	.....
Cher***##	<i>Callitriche hermaphroditica</i>	F
Cpia	<i>Callitriche platycarpa</i>	.....
Cas	<i>Callitriche stagnalis</i>	.....
Ca	<i>Callitriche sp.</i>	R
Ced**#	<i>Ceratophyllum demersum</i>	.....
Cra**	<i>Crassula aquatica</i>	.....
Crh	<i>Crassula helmsii</i>	.....
Ela***##	<i>Elatine hexandra</i>	.....
Elh##	<i>Elatine hydropiper</i>	.....
Ef ⁺	<i>Eleogiton fluitans</i>	.....
Ec	<i>Elodea canadensis</i>	A
En	<i>Elodea nuttallii</i>	.....
Fon	<i>Fontinalis antipyretica</i>	.....
Grd**	<i>Groenlandia densa</i>	.....
Hip	<i>Hippuris vulgaris</i>	.....
Hop**	<i>Hottonia palustris</i>	.....
Hyd	<i>Hydrocotyle vulgaris</i>	.....
Isl	<i>Isoetes lacustris</i>	.....
Ise***##	<i>Isoetes echinospora</i>	.....
Jb	<i>Juncus bulbosus</i>	.....
Lm*	<i>Lemna minor</i>	0
Lt**#	<i>Lemna trisulca</i>	.....
Lit	<i>Littorella uniflora</i>	LF
Lob	<i>Lobelia dortmanna</i>	.....
Lun	<i>Luronium natans</i>	.....
Mal	<i>Myriophyllum alterniflorum</i>	.....
Msp	<i>Myriophyllum spicatum</i>	.....
Nf***##	<i>Najas flexilis</i>	.....
Nul*	<i>Nuphar lutea</i>	.....
Nup***##	<i>Nuphar pumila</i>	.....
Na	<i>Nymphaea alba</i>	.....
Pam	<i>Persicaria amphibia</i>	LF
Ph [#]	<i>Persicaria hydropiper</i>	.....
Pil***##	<i>Pilularia globulifera</i>	.....
Pal	<i>Potamogeton alpinus</i>	.....
Pbe	<i>Potamogeton berchtoldii</i>	.....
Pcol***##	<i>Potamogeton coloratus</i>	.....
Pcom**#	<i>Potamogeton compressus</i>	.....
Pcr*	<i>Potamogeton crispus</i>	F
Pfil***##	<i>Potamogeton filiformis</i>	.....
Pfr***##	<i>Potamogeton friesii</i>	0
Pgr	<i>Potamogeton gramineus</i>	.....
Plu**#	<i>Potamogeton lucens</i>	.....
Pn	<i>Potamogeton natans</i>	.....
Pxne	<i>Potamogeton x nericius</i>	.....
Pxn	<i>Potamogeton x nitens</i>	.....
Pob*	<i>Potamogeton obtusifolius</i>	.....
Pxo	<i>Potamogeton x olivaceus</i>	.....
Ppec*	<i>Potamogeton pectinatus</i>	.....
Pper	<i>Potamogeton perfoliatus</i>	F/LA

Map code	Species	DAFOR
Ppol	<i>Potamogeton polygonifolius</i>	.....
Ppra***##	<i>Potamogeton praelongus</i>	.....
Ppu*	<i>Potamogeton pusillus</i>	A
Pr**#	<i>Potamogeton rutilus</i>	.....
Pxsp	<i>Potamogeton x sparganifolius</i>	.....
Pxz	<i>Potamogeton x suecicus</i>	.....
Pxz	<i>Potamogeton x zizii</i>	.....
Ra**	<i>Ranunculus aquatilis</i>	.....
Rb***##	<i>Ranunculus baudotii</i>	.....
Rc ⁺	<i>Ranunculus circinatus</i>	.....
Rf**#	<i>Ranunculus fluitans</i>	.....
Rp*	<i>Ranunculus peltatus</i>	.....
Rpen***##	<i>Ranunculus penicillatus</i>	.....
	ssp. <i>penicillatus</i>	.....
Rpse**#	<i>Ranunculus penicillatus</i>	.....
	ssp. <i>pseudofluitans</i>	.....
Rtr**#	<i>Ranunculus trichophyllus</i>	.....
Rum**#	<i>Ruppia maritima</i>	.....
Spa* [#]	<i>Sparganium angustifolium</i>	.....
Spem	<i>Sparganium emersum</i>	.....
Spn	<i>Sparganium natans</i>	.....
Sp	<i>Sparganium sp.</i>	R
Spp [#]	<i>Spirodela polyrhiza</i>	.....
Sta	<i>Stratoides aloides</i>	.....
Sub***##	<i>Subularia aquatica</i>	.....
Uti* [#]	<i>Utricularia intermedia</i>	.....
Um [#]	<i>Utricularia minor</i>	.....
Uo	<i>Utricularia ochroleuca</i>	.....
Us	<i>Utricularia stygia</i>	.....
Uva	<i>Utricularia vulgaris/australis</i> agg.	.....
Ut	<i>Utricularia sp.</i>	.....
Zan**#	<i>Zannichellia palustris</i>	.....
Myr	<i>Myriophyllum sp.</i>	R
Cha	<i>Chara sp.</i>	.....
Nit	<i>Nitella sp.</i>	.....
	SPECIES TOTAL	<u>12</u>

Other species not included in total:

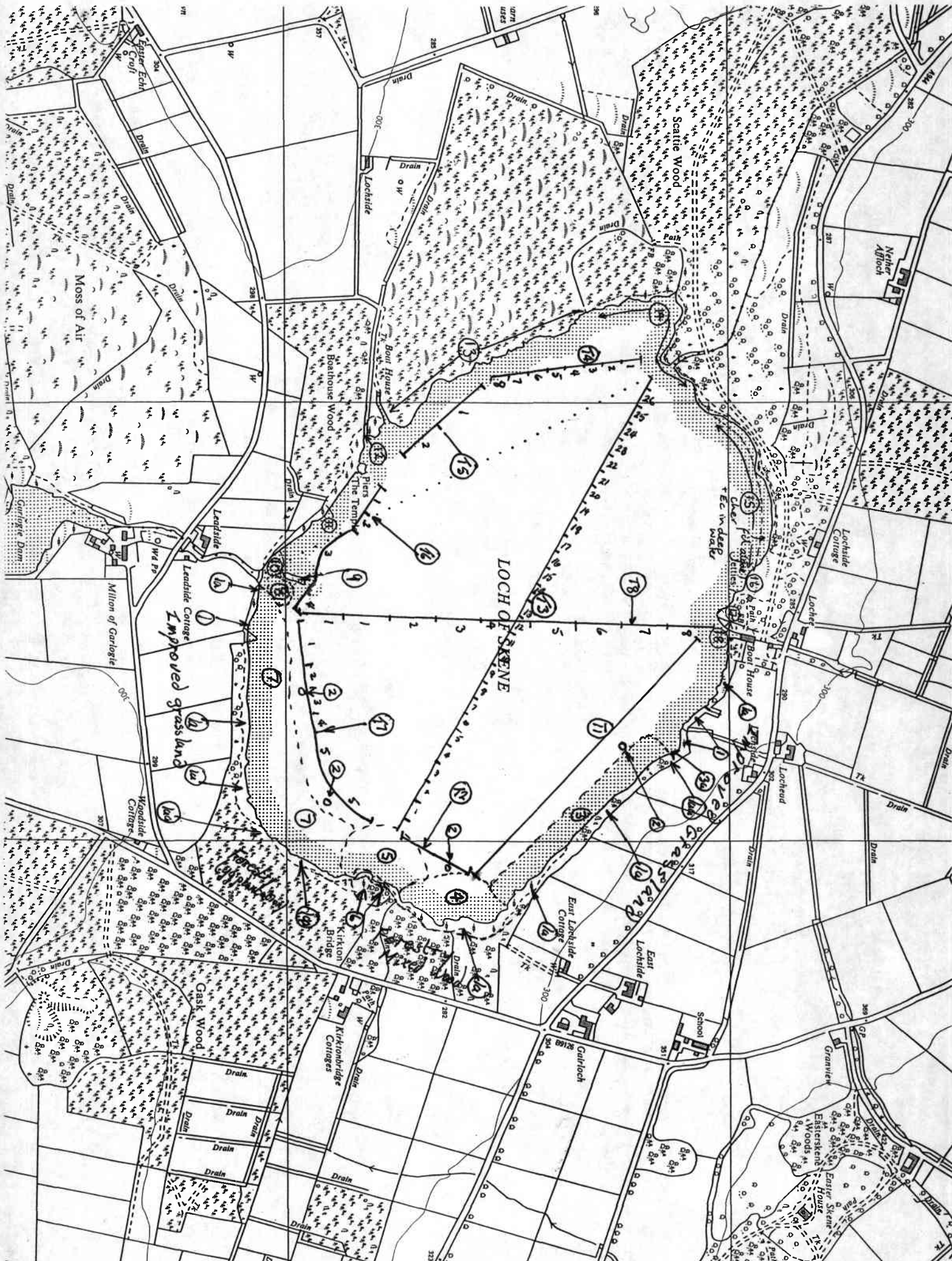
Sphag	<i>Sphagnum sp.</i>	.....
FA	<i>Filementous algae</i>	F

Specimens:

Chara sp.	.....
Nitella sp.	.....
Potamogeton sp.	<i>P. (43/95) P. (44/95) x 2 P. (45/95, 46/95) P. (47/95)</i>
Utricularia sp.

id confirmed by C. D. Preston

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LAT 57° 09'

07

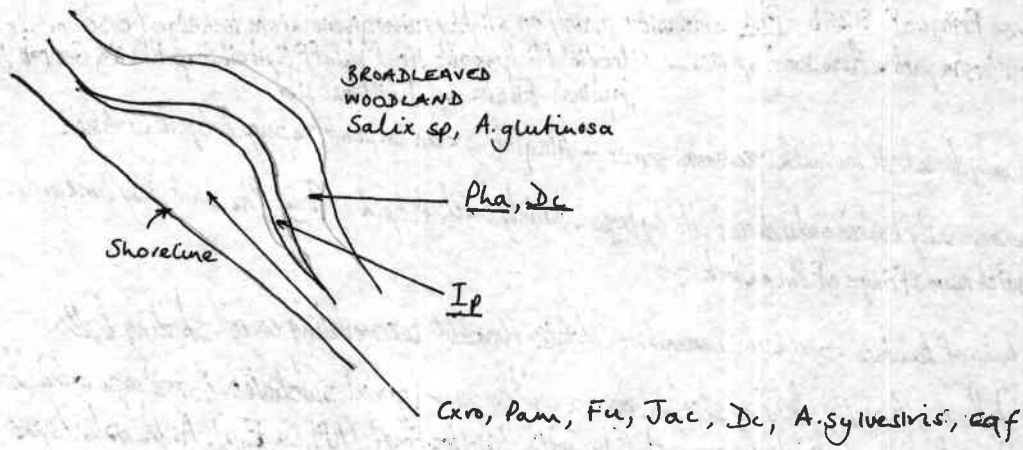
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N57009 19541995 Loch of Skene N5784075

LAT 57° 10'

- ① Edge community: dense fringe of S28b Pha community mainly on slightly raised ground above lock edge (c 30cm) - organic soils with boulders in part. Associated species - Urt dio Mi Rn rob Rrep Val off Epil cil Gap Rbs ida Gerrob Rigel syl Anthr syl Tripl inod Fil ulm Ip Roi Mont sibr
 Mainly dense beds but with occasional scrub - Aln glut Sx cin Sx pent Sx purp Bet pub Crat mon
- ①a In these areas Pha community backed on landward site by trees - mainly birch Bet pub ①aa Pha backed by Birch and mature Pinus syl.
- ①b Stand of Fag syl with narrow fringe of Pha on lock edge
- ② Small artificial islands built of boulders - tall herb communities Urt dio Rn rob accommodating small shooting butts.
- ③ Shore → Open water shallows. A gently shelving shoreline over pebble sand gravel substrates. Above exposed shore varying from (10) 20-40m wide. Dominated by a broad dense lawn of Ela with hit (loc. Freg) (RPI, Ca, Elp). As the water deepens the Ela disappears giving way to Filamentous algae with occasional Ppu in an open community. ③a open sandy beach (Lm)
- ④ Sheltered bay area. Open water with dense Filamentous algae with occasional Ec Pcr Ppu Cherm Pper Br in shallows over a sand (pebble) bed. Shore / littoral shallow water: open community of Filamentous algae Ppu Ela. Beach open Ela sand
- ⑤ Small headland with a very gently shelving shoreline over a sandy substrate supporting an open community of Fil. algae Ppu Ela (Sp)
- ⑥ Small stream inflow - moderate flow. Banks overhauled by Pha (Ca) in water. Narrow beach edge zone of S28: Pha backed by Birch wood over a damp ground Se / Des casp community Msc Rn rac Trif rep Hol lan
- ⑦ Extensive area of shallows over sandy bed. Dense growth of Fil. algae overgrowing Ppu
- ⑧ Outfall channel - deep water: Fila. algae Ppu Cherm
- ⑨ Large island - artificial - large boulder shore steeply shelving, open. Top supports a rank grassland with scrub and trees.
- ⑩ Sheltered bay behind island: Lawns of Ela on mud flats on shore and extending into bay. Dense 'sticks' of Fila algae extending to island.
- ⑪ Stretch of shoreline: Silt / sand substrate - Cher, Ec in deeper water. Ela and hit in shallows. From edge bands of emergent vegetation - Elp, Cxro and Pha. Marshy area on bank: Cxro, Sphagnum sp, Polytrichum sp. Vp, Pop, Carex curta, Je, Jac, Eqf, Hyd, Angelica sylvestris.
 Field behind supporting marshy grassland: Jc, Jc
- ⑫ Small inflow drain: Mentha sp, Ec, Lm, Gf
- ⑬ N.W shoreline dominated by Psyl overhanging waters edge, largely excluding submerged vegetation. Pha fringe at bank edge patchy - only appearing where shading light. Also Cxn, Msc, Cardamine pratensis, Rubus fruticosus.
 Woodland: Pinus sylvestris, Betula pubescens with understorey of Calluna vulgaris, Deschampsia flexuosa
 Woodland grading into C. vulgaris heath behind with immature P. sylvestris
- ⑭ Large bay: Submerged vegetation dense: Ec, Ppu, Cher + Fila algae on surface. Patchy stands of Pam, Cxro, (hm) in shallows and on wetted edge. Dense band of Pha on bank extending back to Salix sp, Alnus glutinosa woodland
- ⑮ Bay: Thick layer of Fila algae washed up in shallows. Cher in deeper water. On wetted edge: Elp, Pam, Cxro, Sper. Continuous band of Pha on bank.
- ⑯ Small area of marshy grassland extending back to woodland

⑩ cont.



- ⑦ Grassy area extending from track to shoreline: *Trifolium repens*, *Je*, *Ranunculus repens*, *Mentha sp.*, *H. lanatus*, *Elp*, *Pam*...
- ⑧ S.E facing shore adjacent to boat house: Small stands of *Pcr* in shallows. *Ppu*, *Pper*, *Pcr*, *Ec* washed up on shore. *Ela* on sand/gravel beach. On bank - stand of *Pha* + *Urtica dioica*, *Chamaecrista angustifolium*, *Cap*, *Epilobium cilliastrum*

BOAT TRANSECTS

(11) Open water 1-2m deep supporting a continuous dense layered growth/aquatic macrophytes. Community uniform over whole length of transect a mosaic of local dominants. Overall Ppu most abundant but Per Cherm Ec are all frequent - also abundant with locally beds of Pperf; Pfr is occasional throughout. Fil algae is fairly common but is not limiting to macrophyte growth.

(12) Open water > 1m deep: Fil algae dominant Ppu abundant Ec.

- (13)
- 1 Filalg Ppu Ec Per (Pfr)
 - 2 Filalg Ppu Ec
 - 3 " " " "
 - 4 Ppu Filalg Cherm Ec
 - 5 Ppu Cherm Filalg
 - 6 Ppu Cherm Filalg
 - 7 Ppu Cherm Filalg (Pperf)
 - 8 Ppu Ec Filalg
 - 9 Ppu Ec (Pperf Filalg)
 - 10 Ppu Ec (Filalg)
 - 11 " " " "
 - 12 Ppu Ec (Filalg Pfr)
 - 13 Ppu Ec Pperf
 - 14 Ppu Ec
 - 15 " " " "
 - 16 Ec Ppu Filalg
 - 17 Ec Ppu Filalg
 - 18 Ppu Ec Filalg
 - 19 " " " "
 - 20 " " " "
 - 21 " " " Per
 - 22 " " " "
 - 23 " " " Per
 - 24 Ec Ppu Filalg
 - 25 Ec Cherm Filalg Ppu
 - 26 " " " " "

in descending order of abundance →
water > 1m deep

- (14)
- 1 Ec (Filalg)
 - 2 Ec Ppu (Filalg)
 - 3 Ec Ppu Per (Filalg)
 - 4 Ec Ppu (Filalg)
 - 5 Ec Ppu Cherm (Filalg)
 - 6 Ec Ppu (Filalg)
 - 7 Ec Ppu Cherm (Filalg)
 - 8 Ec Ppu Per (Filalg)

- (15)
- 1 Ppu Ec Cherm Per Pperf Filalg
 - 2 Ec Ppu (Filalg)

- (16) 1 Ppu Pcr Cherm
 2 Cherm Ppu Filalg (Pcr)
 3 Filalg Ppu Cherm - shallow water
 4 Pperf

- (17) 1 Filalg Pperf Ppu Ec
 2 Filalg Ppu
 3 Filalg Ppu Pcr
 4 Filalg Ppu Pcr Ec
 5 Filalg (" " " - sparse to dead)

- (18) 1 Pperf Filalg
 2 Pperf Ppu Ec
 3 " " "
 4 Ec Ppu
 5 " "
 6 Ppu Ec
 7 Ppu Pcr Ec
 8 Ppu Pcr Pper Ec
 9 Pperf Ppu Filalg
 10 Ec Ppu Filalg
 11 Pcr Ppu Ec Filalg

The shallow waters around the loch but especially on the sheltered southern and eastern sides support a dense growth of filamentous algae with little or dying aquatic macrophytes. However this blanket thins rapidly in deeper water 1 → 1.5 m where it is replaced by a very dense and diverse macrophyte community completely covering the loch floor. Beyond this in the main body of the loch there is a structurally simpler community dominated by Ppu with Ec and very little filamentous algae. Once again this is a dense and continuous carpet.