

1996 LOCH SURVEY: STRATHCLYDE* AREA

Code N.S.5105 Name BLACK LOCH Grid Ref N.S.590162
 Date 25/7/96 Surveyors OLL/GLD Estate LOWES FARM
 Area 3.5 ha Altitude 180 m Catchment ha Geology S7
 Water colour PALE BROWN Clarity CLEAR Boat used NO Secchi disc depth m
 Loch type 9 Edge type(s) S9b, S10b, S11, S12, S14, S19a, S4, M13 (NVC codes)
 Status - Access 2b 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	.....
Agricultural pollution	.....
Edge trampling	.....
Fishing (edge/boat)	<u>small amount of bank fishing evidence of samplers + bank</u>
Litter	<u>small amounts i.e. football plastic buckets, bottles</u>
Shooting	.....
Water abstraction	.....

SURROUNDING LAND USE:

cattle grazing
Railway track
Hay meadow

FAUNA

Mammals	Birds	Reptiles Amphibians	Fish	Dragonflies & other invertebrates
	<u>snipe</u> <u>Mute swan</u> <u>Common sand piper</u> <u>Redshank</u> <u>Little grebe</u> <u>Curlew</u> <u>Osprey catcher</u>	<u>Rana temporaria</u>		

SPECIES DIVERSITY

RARE SPECIES

WATER CHEMISTRY

Edge	<u>27</u>	Scarce (*)	Alkalinity	<u>1.36</u> meq/l
Open water	<u>12</u>	Red Data Book (**)	Conductivity	<u>257</u> µS/cm
Total	<u>39</u>		p.H.	<u>6.6</u>

1996 STRATHCLYDE AREA LOCH SURVEY: AQUATIC PLANT SPECIES LIST

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EMERGENT & EDGE SPECIES

Map code	Species	DAFOR
Ac	<i>Acorus calamus</i>
<u>Ag</u>	<u><i>Agrostis stolonifera</i></u>	..LA..
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>	.....
Bom	<i>Bolboschoenus maritimus</i>	.....
Bu	<i>Butomus umbellatus</i>	.....
Cal	<i>Calla palustris</i>	.....
<u>Cap</u>	<u><i>Caltha palustris</i></u>	..O...
Cxat	<i>Carex acuta</i>	.....
Cxaf	<i>Carex acutiformis</i>	.....
Cxa	<i>Carex aquatilis</i>	.....
Cxl	<i>Carex lasiocarpa</i>	.....
Cxli	<i>Carex limosa</i>	.....
<u>Cxn</u>	<u><i>Carex nigra</i></u>	..O...
Cxpc	<i>Carex pseudocyperus</i>	.....
Cxri	<i>Carex riparia</i>	.....
<u>Cxro</u>	<u><i>Carex rostrata</i></u>	..A/LD..
<u>Cxv</u>	<u><i>Carex vesicaria</i></u>	..LF...
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>	.....
Elm	<i>Eleocharis multicaulis</i>	.....
<u>Elp</u>	<u><i>Eleocharis palustris</i></u>	..LA..
Elq	<i>Eleocharis quinqueflora</i>	.....
Elu	<i>Eleocharis uniglumis</i>	.....
<u>Egf</u>	<u><i>Equisetum fluviatile</i></u>	..A/LD..
Eqp	<i>Equisetum palustre</i>	.....
Era	<i>Eriophorum angustifolium</i>	.....
Gld	<i>Glyceria declinata</i>	.....
<u>Glf</u>	<u><i>Glyceria fluitans</i></u>	..LF...
Glm	<i>Glyceria maxima</i>	.....
Gln	<i>Glyceria notata</i>	.....
<u>Hip</u>	<u><i>Hippuris vulgaris</i></u>	..LF...
Hyd	<i>Hydrocotyle vulgaris</i>	.....
Ip	<i>Iris pseudacorus</i>	.....
Iv	<i>Iris versicolor</i>	.....
Jac	<i>Juncus acutiflorus</i>	.....
Jaa*	<i>Juncus alpinoarticulatus</i>	.....
<u>Ja</u>	<u><i>Juncus articulatus</i></u>	..LA..
Jb	<i>Juncus bulbosus</i>	.....
<u>Jc</u>	<u><i>Juncus conglomeratus</i></u>	..A/LD..
<u>Je</u>	<u><i>Juncus effusus</i></u>	..A/LD..
Lit	<i>Littorella uniflora</i>	.....
Lyc*	<i>Lycopodiella inundata</i>	.....
Lyt*	<i>Lysimachia thyrsiflora</i>	.....
Lyp	<i>Lythrum portula</i>	.....
<u>Lys</u>	<u><i>Lythrum salicaria</i></u>	..F....
Ma	<i>Mentha aquatica</i> sp.	..F....
<u>Mt</u>	<u><i>Menyanthes trifoliata</i></u>	..LA..
Mg	<i>Mimulus guttatus</i>	.....
MI	<i>Mimulus luteus</i>	.....
Mm	<i>Mimulus moschatus</i>	.....

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

SPECIES TOTAL

Other edge species

Cxd	<i>Carex viridula</i> ssp. <i>oedocarpa</i> (=C. <i>demissa</i>)	.....
Cxe	<i>Carex echinata</i>	.....
Cxel	<i>Carex elata</i>	.....
Cxp	<i>Carex panicea</i>	.....
Cxpa	<i>Carex paniculata</i>	.....
<u>Gp</u>	<u><i>Galium palustre</i></u>	F
Sa	<i>Senecio aquaticus</i>	.....
Tp	<i>Triglochin palustre</i>	.....
<u>Vp</u>	<u><i>Viola palustris</i></u>	O

Note: * = Scarce plants (occurring in 16-100 10x10km squares in Great Britain) known to occur in the Scottish Environment Agency West Region.

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All species names follow those in Stace 1991.

1996 STRATHCLYDE AREA LOCH SURVEY: AQUATIC PLANT SPECIES LIST

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SUBMERGED & FLOATING SPECIES

Map code	Species	DAFOR	Map code	Species	DAFOR
Api	<i>Apium inundatum</i>	.....	Pob	<i>Potamogeton obtusifolius</i>	...LF... confirmed by C.D. Preston
Af	<i>Azolla filiculoides</i>	.....	Ppec	<i>Potamogeton pectinatus</i>	.....
Bar	<i>Baldellia ranunculoides</i>	.....	Pper	<i>Potamogeton perfoliatus</i>	.....
Cab	<i>Callitriche brutia</i>	.....	Ppol	<i>Potamogeton polygonifolius</i>	.....
Cah	<i>Callitriche hamulata</i>	...Q...	Ppra	<i>Potamogeton praelongus</i>	.....
Cher	<i>Callitriche hermaphroditica</i>	.....	Ppu	<i>Potamogeton pusillus</i>	...R... confirmed by C.D. Preston
Cao	<i>Callitriche obtusangula</i>	.....	Pxsp	<i>Potamogeton x sparganifolius</i>	.....
Cpla	<i>Callitriche platycarpa</i>	.....	Pt*	<i>Potamogeton trichoides</i>	.....
Cas	<i>Callitriche stagnalis</i>	...F...	Pxz	<i>Potamogeton x zizii</i>	.....
Ca	<i>Callitriche sp.</i>	.....	Ra	<i>Ranunculus aquatilis</i>	.....
Ced	<i>Ceratophyllum demersum</i>	.....	Rb	<i>Ranunculus baudotii</i>	.....
Crh	<i>Crassula helmsii</i>	.....	Rc	<i>Ranunculus circinatus</i>	.....
Ela*	<i>Elatine hexandra</i>	.....	Rf	<i>Ranunculus fluitans</i>	.....
Elh*	<i>Elatine hydropiper</i>	.....	Rp	<i>Ranunculus peltatus</i>	.....
Ef	<i>Eleogiton fluitans</i>	.....	Rpse	<i>Ranunculus penicillatus</i>	.....
Ec	<i>Elodea canadensis</i>	...LD...		ssp. <i>pseudofluitans</i>	.....
En	<i>Elodea nuttallii</i>	.....	Rtr	<i>Ranunculus trichophyllus</i>	.....
Fon	<i>Fontinalis antipyretica</i>	.....	Ruc*	<i>Ruppia cirrhosa</i>	.....
Grd	<i>Groenlandia densa</i>	.....	Rum	<i>Ruppia maritima</i>	.....
Hip	<i>Hippuris vulgaris</i>	.....	Spa	<i>Sparganium angustifolium</i>	.....
Hop	<i>Hottonia palustris</i>	.....	Spem	<i>Sparganium emersum</i>	...LF...
Hmr	<i>Hydrocharis morsus-ranae</i>	.....	Spn	<i>Sparganium natans</i>	.....
Hyd	<i>Hydrocotyle vulgaris</i>	.....	Sp	<i>Sparganium sp.</i>	.....
Ise*	<i>Isoetes echinospora</i>	.....	Spp	<i>Spirodela polyrrhiza</i>	.....
Isl	<i>Isoetes lacustris</i>	.....	Sub	<i>Subularia aquatica</i>	.....
Lam	<i>Lagarosiphon major</i>	.....	Uti	<i>Utricularia intermedia</i>	.....
Lg	<i>Lemna gibba</i>	.....	Um	<i>Utricularia minor</i>	.....
Lm	<i>Lemna minor</i>	...A...	Uo	<i>Utricularia ochroleuca</i>	.....
Lmi	<i>Lemna minuta</i>	.....	Us	<i>Utricularia stygia</i>	.....
Lt	<i>Lemna trisulca</i>	...A...	Uva	<i>Utricularia vulgaris/australis</i> agg.	.....
Lit	<i>Littorella uniflora</i>	.....	Ut	<i>Utricularia sp.</i>	.....
Lob	<i>Lobelia dortmanna</i>	.....	Zan	<i>Zannichellia palustris</i>	.....
Lun	<i>Luronium natans</i>	.....	.....	.....	.....
Lyp	<i>Lythrum portula</i>	.....	.....	.....	.....
Mal	<i>Myriophyllum alterniflorum</i>	.....	.....	.....	.....
Maq	<i>Myriophyllum aquaticum</i>	.....	.....	.....	.....
Msp	<i>Myriophyllum spicatum</i>	.....	.....	.....	.....
Nf**	<i>Najas flexilis</i>	.....	Cha	<i>Chara sp.</i>	.....
Nua	<i>Nuphar advena</i>	.....	Nit	<i>Nitella sp.</i>	.....
Nul	<i>Nuphar lutea</i>	...LD...			
Nup*	<i>Nuphar pumila</i>	.....		SPECIES TOTAL	.....
Na	<i>Nymphaea alba</i>	...LD...			
Nyp	<i>Nymphoides peltata</i>	.....		
Pam	<i>Persicaria amphibia</i>	.....		
Pil*	<i>Pilularia globulifera</i>	.....		
Pal	<i>Potamogeton alpinus</i>	...LA... conf. by C.D. Preston			
Pbe	<i>Potamogeton berchtoldii</i>	.....		
Pcol*	<i>Potamogeton coloratus</i>	.....		
Pxco	<i>Potamogeton x cooperi</i>	.....		
Pcr	<i>Potamogeton crispus</i>	.....		
Pfil*	<i>Potamogeton filiformis</i>	.....		
Pfr	<i>Potamogeton friesii</i>	.....		
Pgr	<i>Potamogeton gramineus</i>	.....		
Pxl	<i>Potamogeton x lintonii</i>	.....		
Plu	<i>Potamogeton lucens</i>	.....		
Pn	<i>Potamogeton natans</i>	...LF...			
Pxn	<i>Potamogeton x nitens</i>			

confirmed by C.D. Preston

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conf. by C.D. Preston

Other species not included in total:
Sphag *Sphagnum sp.*

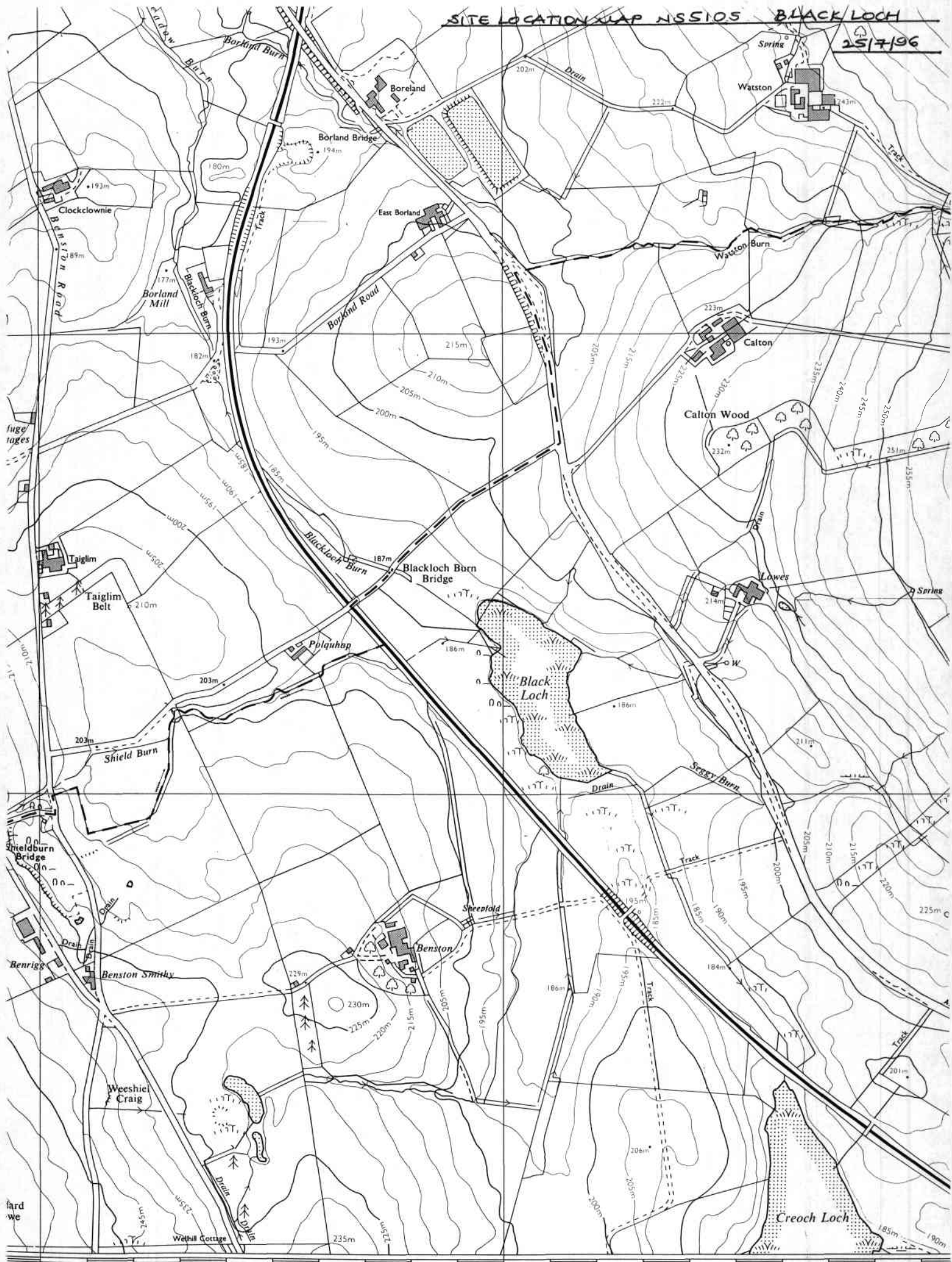
Specimens:
Chara sp.

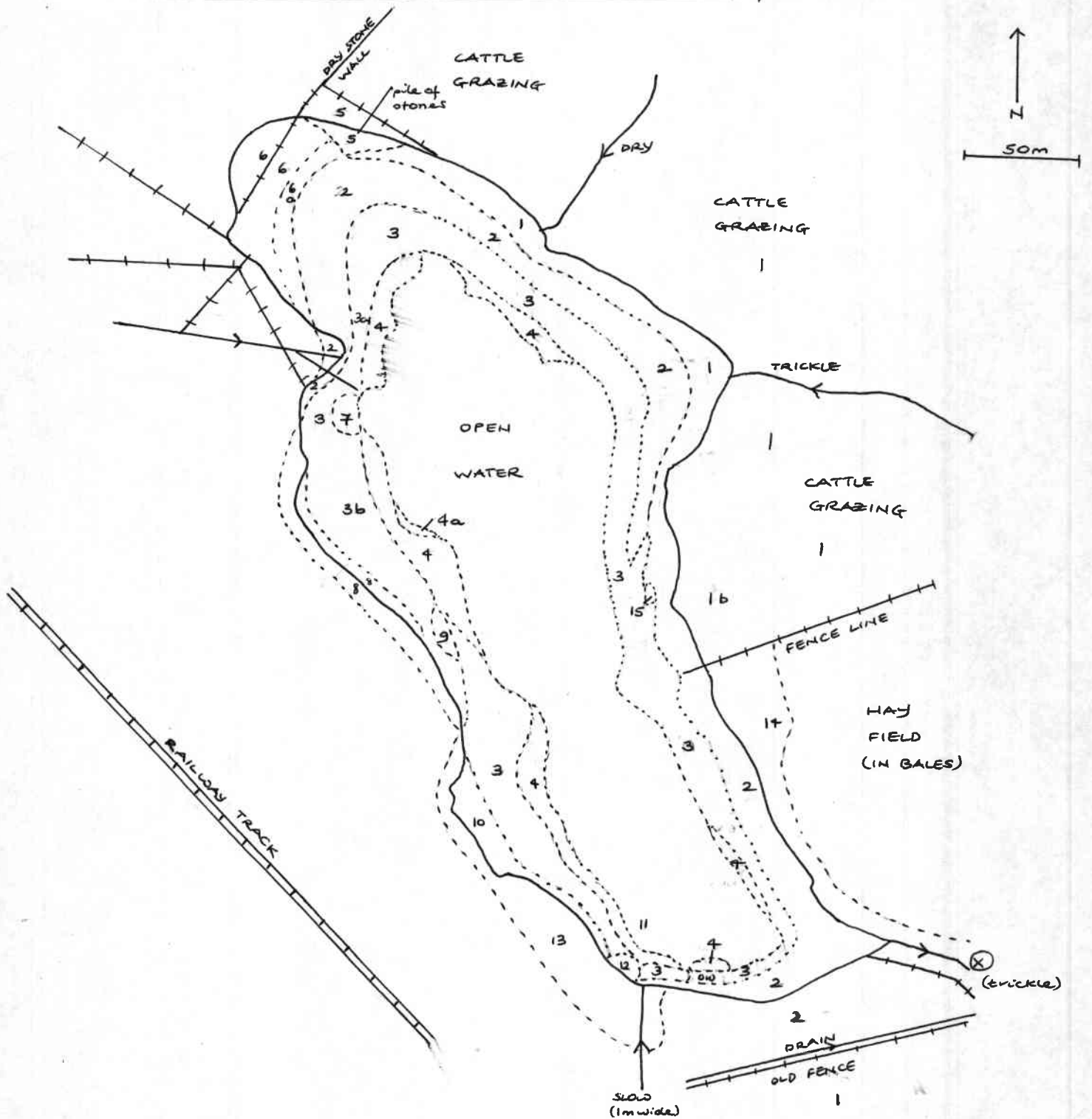
Nitella sp.

Potamogeton sp. Pal 15/7/96 j. Pbe 15/7/96... Pot 15/7/96

Utricularia sp.

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Black Loch is an excellent example of a hydrosereal succession from open water to willow/birch thicket. The hazardous nature of the emergent vegetation stands made accurate mapping of the stands difficult and sampling of the open water limited.

① Je dominated mire with trampling by cattle + Ja, *Trifolium repens*, *Ran repens*, *Holcus lanatus*, *Cynosurus cristatus*, *Mentha* sp., *Anthoxanthum odoratum*, *Gp*, *Myl*, *Stellaria alpine*, *Filipendula ulmaria*, *Deschampsia cespitosa*, *Angelica sylvestris*, *Msc*, *Rumex acetosa*, *Vicia cracca*, *Valeriana officinalis*, *Epilobium palustre*, *Mow*

① a as ① + Cxro, AgS, EgF, Elp, Lt, Pha clumps, Cas, (RfL), Vb (wetter than ①)
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 ① b Cxro, Elp, Hip, Lm, EgF (Je clumps), Pop wet



- ② Dense Phr stands + Cxro, Lm, Lt, Nt, (Sper), (Gf), AgS, Msc, AgS
- ③ a : Egff + Nul, Na, Lm, Lt, Ec, Pal
- ③ b : Egff + Pop, Lm, Ec, Pal, Cxro, Hip, Lt, Pu, Pob (Nul/Sper)
- ④ Na + Nul (varied dominance) in open water; ④a with Sper off Lily bed
- ⑤ Ja + Lychnis flou-cuculi, Angelica sylvestris, Trifolium repens, Pop, Cxu, Carex curta, Filipendula ulmaria, Msc, Cap, Gp, Valeriana officinalis
- ⑥ Betula pubescens thicket + Salix cinerea, S. pentandra over Filipendula ulmaria, Pop, Lychnis flou-cuculi, Msc, AgS, Gp, Poa trivialis, Vp, Prunella vulgaris, Ranunculus repens, Cxro, Rorippa sp.
- ⑥ b At edge of thicket: Phr + Egff, Lm, Pop, Stachys palustris, (TL) with open mud patches of Lm, Pop, Cap, AgS, Cxv, Lys, Scutellaria galericulata.
- ⑦ Mute swan loafing area with shallow water over mud/pond + Pob, Ec, (Ppu), cal
- ⑧ Narrow Pha strip → willow thicket
- ⑨ Dense floating Nt mat + Msc, Lm, Egff, Mentha sp.
- ⑩ Cxro with occ. Pha clumps + Lm, AgS, Je, Pop, Lys, Sper
- ⑪ In open water Ec, Lt, (Pob)
- ⑫ Open bank area with evidence of fishing / camp site (Pedicularis palustris) (Mi)
- ⑬ Birch willow thicket + Cxv.
- ⑭ Willow thicket backed by Filipendula ulmaria, Ja, Jc, Pha
- ⑮ SL stand